

METHOD STATEMENT



CLIENT: Haringey Council

PROJECT: Tangmere House Demolition

DOCUMENT REFERENCE: MS161-21

ISSUE NO: 01

ANTICIPATED START DATE: 03/10/2021

DURATION: 14 Weeks

THIS ISSUE

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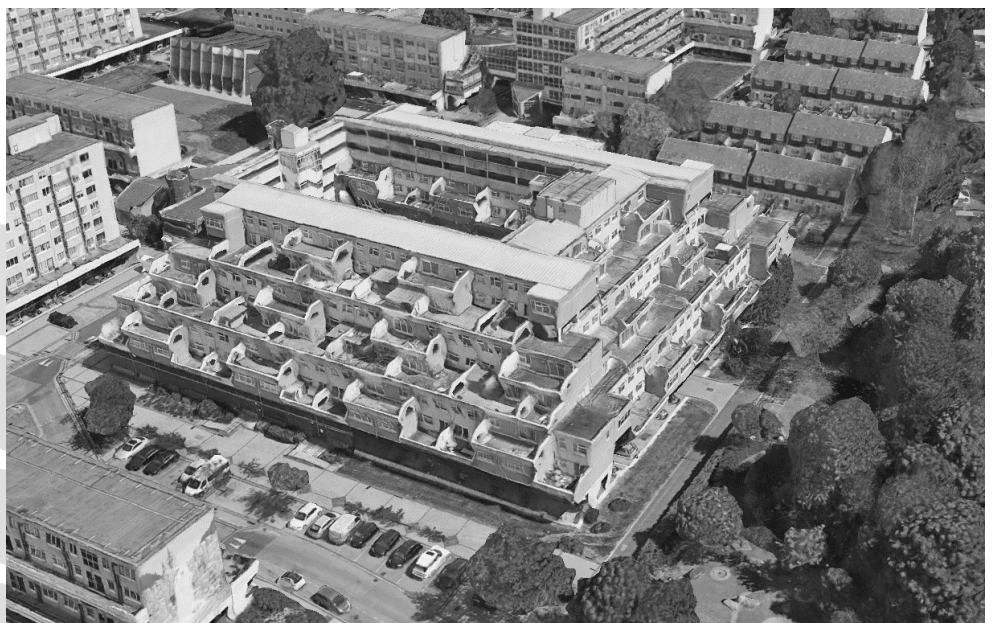
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ISSUE HISTORY			
ISSUE NUMBER:	ISSUE DATE	AUTHOR	AMENDMENTS
1	07.09.2022	Dan Byng	N/A
2	Dec 2022	Dan Byng	Demolition of South of building
3	Sept 2023	Dan Byng	Demo Remaining Building

All revisions to the method statement and risk assessment will be recorded on this page.

The author of the amendment(s), or other authorised person, must explain the details of the amendment (s) to the Site Manager/Site Supervisor. The author must ensure that the Site Manager/Site Supervisor signs off the amendment to confirm that he has received and understood it, and that the Site Manager/Site Supervisor returns the signed off front page so that the author can file it in the project office file.

The Site Manager/Site Supervisor must sign off and return the copy of this Amendment page, as explained above, and carefully insert this page and the amendments into the project site file. He must also clearly line through the existing pages to indicate they have been superseded.

This document is to be read in conjunction with the Ridge Horatia and Leamington House Demolition Methodology Report issued December 2019 (Appendix A).

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SECTION 1 – PROJECT INFORMATION

1.1 - PROJECT LOCATION

Hughes & Salvidge have been appointed the role of Principal Contractor for demolition works at Broadwater Farm Estate, Tottenham, London, N17 6NG



1.2 – OUTLINE SCOPE OF WORKS

- Site establishment
- Installation of designed crane mats
- Erection of scaffold
- Asbestos removal works
- Soft strip operations
- Structural demolition
- Ground reinstatement

1.3 – DURATION OF WORKS

- 24 Weeks

1.4 – SITE RESTRICTIONS AND CONTROL MEASURES

- Asbestos containing materials have been identified within the asbestos surveys completed. All asbestos works will be completed prior to any structural demolition of buildings.
- The site is located within the busy city centre so works and transportation of goods to and from need to be arranged as per the approved Traffic Management Plan (TMP161-21)
- Due to the height & construction of Tangmere House HSL will be using top-down demolition methods until the height is reduced to 2nd floor insitu concrete storeys, this methodology incorporates a full height scaffold and the controlled lifting of materials to ensure that the project is carried out using the safest techniques.
- Oversailing of crane – Once the crane is installed the oversailing capacity will be restricted to ensure that no lifted loads are capable of being raised outside of the exclusion zone.
- Traffic Management – The Site Manager and Permit Coordinator will be responsible for ensuring that all works involving deliveries, transport, etc. are carried out in accordance with the approved Traffic Management Plan for the project. This will be periodically audited by our SHEQ Advisor during his visits.
- Communications and Stakeholder Management – As detailed in supporting documentation communication is key to any works project. We will engage with local residents/businesses along with all stakeholders by means such as letter drops, information boards, regular newsletters, site meetings and a dedicated Resident Liaison.
- Surveys, Designs and Approval – Prior to all works on site documentation will be produced and approved. This will include structural assessments by a Structural Engineer, pre-condition surveys of the structure and other structures within close proximity to the works and dilapidation surveys of surrounding areas/properties.
- Subcontractors – Any works to be carried out by subcontractors will be done so only from our approved subcontractor list which is reviewed and monitored periodically by our SHEQ team. Their RAMS would also be checked and approved prior to works commencing on site. These works will include cranes, scaffold, licenced asbestos removal and utility disconnection works.
- Temporary Works – All temporary works will be recorded and supervised by HSL staff who hold the relevant qualifications for the roles. HSL will have a TW Coordinator and TW Supervisor on site for the project.

1.5 – LIVE SERVICES

- Whilst the client has made fair and reasonable effort to ensure all buildings are isolated of all services, the risk remains that the site could contain uncharted live services.
- There is a live substation to the North East of the building on ground floor level which is due to be replaced with a new substation outside of the works area around November 2022
- Gas and Water will be capped at the site boundary

1.6 – SECURITY

- Tangmere House has been secured by solid timber hoarding to boundary with vehicle and pedestrian access/egress gates. These gates will be padlocked shut at all times and will be manned at all times during working hours by a dedicated gateman.
- The site hoarding will be checked for security and integrity at the beginning and end of each working day. At the end of each shift the Site Manager will ensure the site is left secure and all access gates are padlocked shut.
- Out of hours security will be managed by on site security guards.

SECTION 2 – ACTIVITY SPECIFIC ASPECTS

2.1 – RESOURCES REQUIRED

Management/Labour	Plant/Equipment
1 x Project Manager	Hand Tools
1 x Site Manager	Heras Fence Panels
1 x Quantity Surveyor	Bowser
1 x SHEQ Adviser	Welfare Cabins
1 x Resident Liaison	Generator
5 x Plant Operators	Scaffold Tower/Podiums
1 x Crane Operators	MEWPs
12 x Demolition Operatives (completed)	110V or Cordless Reciprocating Saw
10 x Asbestos Removal Operatives (completed)	1 x Mobile Crane
1 x Structural Engineer	3-4 x Small Excavators
1 x Supervisor	1-2 x Skidsteer Loaders
12 x Scaffolders	1 x ZX490 Excavator
	1 x ZX490 High Reach Excavators

- All operatives will hold the relevant competence cards/certification require. (CCDO, CSCS, CPCs, SMSTS).
- All plant and equipment will have relevant certification to work on site.

2.2 – SITE PERMITS

There is a requirement for a Site Permit System on this project. The following Site Permits are required to be issued by the Site Manager / Supervisor:

- Permit to Dig
- Hot Works Permit
- Permit to Alter, Load, Unload, or Strike Temporary Works

2.3 – PERSONAL PROTECTIVE EQUIPMENT

MANDATORY PPE				
				
HARD HAT	EYE PROTECTION	HI-VISIBILITY	SAFETY GLOVES	SAFETY BOOTS
BS EN 397	EN 166 1F	EN 471	BS-EN 140	BS-EN 345

TASK SPECIFIC PPE / RPE						
						
P3 HALF FACE MASK	P3 DISPOSABLE MASK	TYPE 5/6 DISPOSABLE COVERALLS	EAR PROTECTION	BURNING / FULL FACE VISOR	LEATHER BURNING JACKET	HARNES / LANYARD
EN140:1998 & EN143:2000	EN 149: 2001	EN ISO 13982 EN 13034	BS EN 352-3	EN 166 39B	BS EN ISO 11611:2007	EN361, EN354, EN362

The above PPE may be required for certain activities, or specifically prescribed by the Site Manager.

2.4 – CONTROL MEASURES

- Danger areas to be fenced off to stop unauthorised access, lay down areas to be free from obstructions.
- Adequate spill response equipment to be in place before works begin.
- Care will be taken to ensure that a secure site boundary fence and appropriate warning signage is in place throughout the demolition works.
- Good communication is essential – Daily morning meetings of no more than 5/10 minutes will be required between the Hughes & Salvidge Site Manager and personnel on site, (including any subcontractors) to discuss the days proposed activities. This liaison will aid in the smooth running of the project and help to highlight any potential problems that could otherwise occur.
- Two-way radios (provided by Hughes & Salvidge) will be utilised for communication and emergency. Machine drivers and HSL management will be in radio communication to stop works in the event of an emergency.
- Check service drawings and historical data to check for underground voids within the vicinity of the demolition area.

2.5 – MITIGATING NUISANCE NOISE, DUST, AND VIBRATION

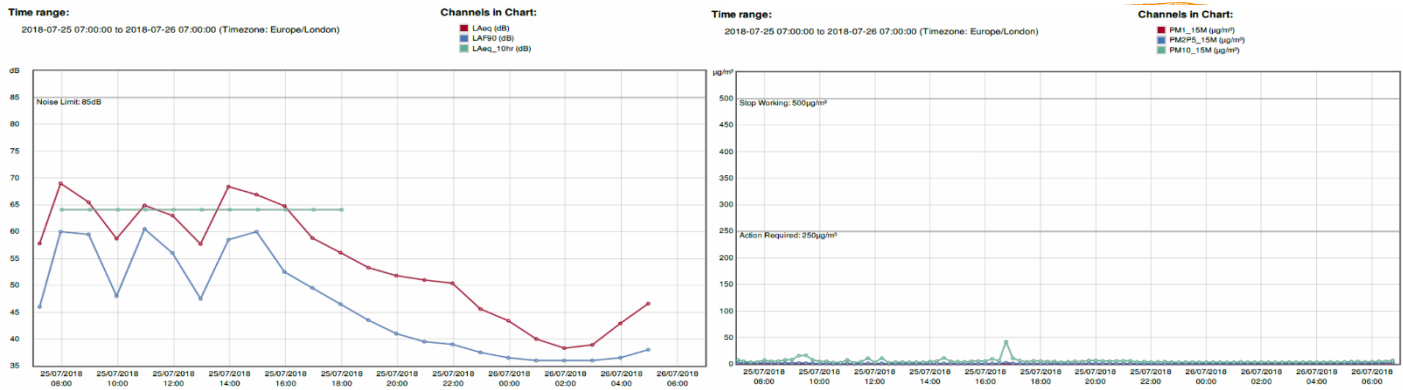
Throughout the demolition process noise, dust, and vibration will be kept to a minimum; this will be achieved in various ways as detailed below:

1. Use of correct plant for specific tasks ensuring plant is fully maintained. Hughes and Salvidge's plant fleet is constantly being updated, with all machines now fitted with Euro6 engines. We also have an extensive fleet of attachments for every demolition application.
2. Specific working hours for known noisy activities.
3. Leaving part of external elevation of particular buildings intact to act as a visual and acoustic screen.
4. Using 'quietest' method when both demolishing structures i.e. using grab or pulveriser rather than impact breakers.
5. When removing ground floor slabs and foundations, structures will be lifted by bucket attachment whenever possible, in-lieu of using impact breakers.
6. Use of live monitoring system that has predetermined limit levels that send alerts to mobile devices if the limits are neared.
7. Monoflexed scaffold to act as a secondary control to dust and also dampen the noise level.
8. Fire hoses will be used to spray water onto the work face and suppress dust.
9. Using proprietary dust suppression equipment, such as DustBoss DB60 or Dehaco DE75 Dust Fighter.
10. Water hoses will also be rigged into the high-reach machine, the water is then pumped up the arm of the machine and sprayed directly onto the attachment as demolition is undertaken.

Example of Dust Control Measures from a Previous Project:



Example of data results from the live monitoring system to be used on site



2.6 – ENVIRONMENTAL CONTROLS

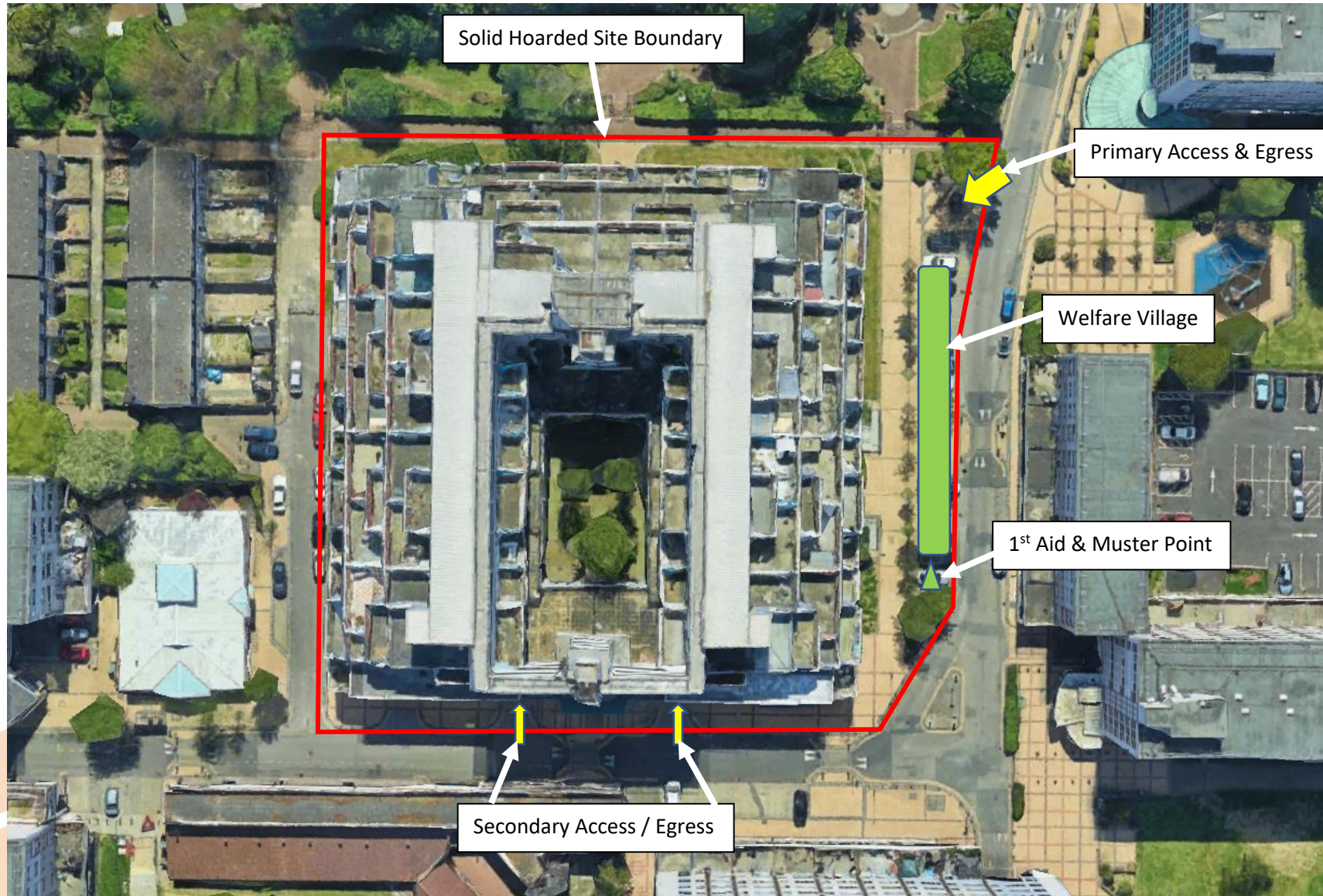
Environmental Sweep

- During the site establishment phase a team of operatives will undertake an environmental sweep of the structure to remove any hazardous that remains. Operatives will carry out a COSHH sweep and undertake cleaning of areas deemed necessary prior to other works commencing.
- All COSHH will be stored within a dedicated COSHH store ready for removal from site from a licensed removal contractor.

Protecting Services

A proportion of our project contain live services and utilities which require protecting or terminating during the beginning stages of demolition, this is namely the live substation in the North East corner of the building which the client is isolating through the course of the project and before demolition works near the area Hughes and Salvidge are experienced in dealing with service isolations and liaising with utility companies to ensure services and utilities are dealt with safely and effectively. Before works begins we would need to be provided with isolation certificates or diversion certificates from the client or we would liaise directly with the utility companies to obtain these if necessary. We are also experienced in the protection sometimes required for services or substations due to remain, such as scaffold decks, steel plates and other barriers. It is essential prior to commencing work, that the client provide us with services and utilities plans alongside any isolation certificates that have also been obtained. Details of areas containing live services that required protection are also necessary. Should there be a delay in utility providers being able to carry out full disconnections, Hughes and Salvidge will directly employ an approved electrical contractor from our approved sub-contract list who will carry out localised isolations on each individual building that will allow us to commence with works as to not incur delays with the project. These isolations will be certified and any protection methods required would be designed and approved prior to works commencing. In addition to all of the above, precautionary checks will be carried out prior to all works. Operatives will check for cut ends from the incoming fuse boxes, test light switches and use portable volt sticks to determine if any signs of electricity is present. Details of service isolations will also be included in the daily activity briefings and as a stipulation on each permit to work. When structural demolition is complete and works begin on slab and foundation removal in addition to all of the above a permit to dig (need for any ground penetrating works) will be required, these cannot be issued without CAT scanning being carried out.

2.7 – SITE LAYOUT PLAN



SECTION 3 – METHOD STATEMENT

3.1 – ASBESTOS REMOVAL

A full approved set of Asbestos removal RAMS will be provided as separate document. Below is our outline of removal methodology.

All asbestos will have been removed prior to structural demolition happening within phase 1 of the works

3.3 – SOFT STRIP

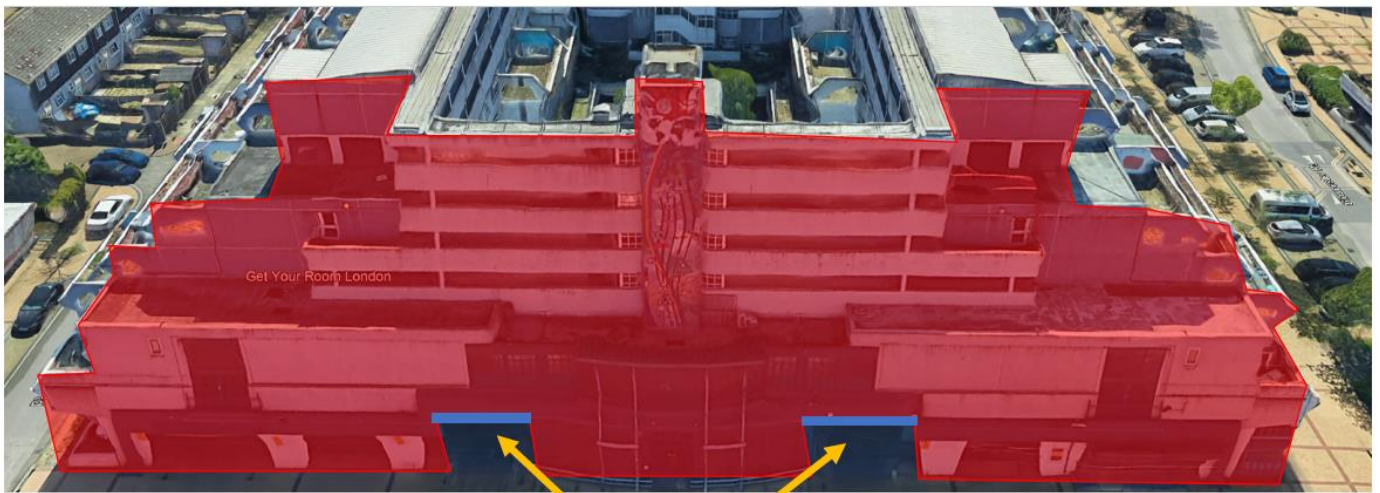
- Soft strip will have already been completed by the time structural demolition begins on site
- Please see – separate soft strip document for the works undertaken

3.4 – SUPERSTRUCTURE DEMOLITION

Phase 1 Demolition

- Upon completion of the site set up which includes isolation, hoarding install and welfare arrangements
- Building will be fully soft stripped and cleared of all asbestos identified within both the Riverside and the follow up ARCO surveys.
- Demolition will begin, starting with phase 1 of the South West corner of the site to create a larger entrance and more space on site.
- Scaffolding edge protection will be installed as per the detail in Appendix A, examples below;

Front Elevation

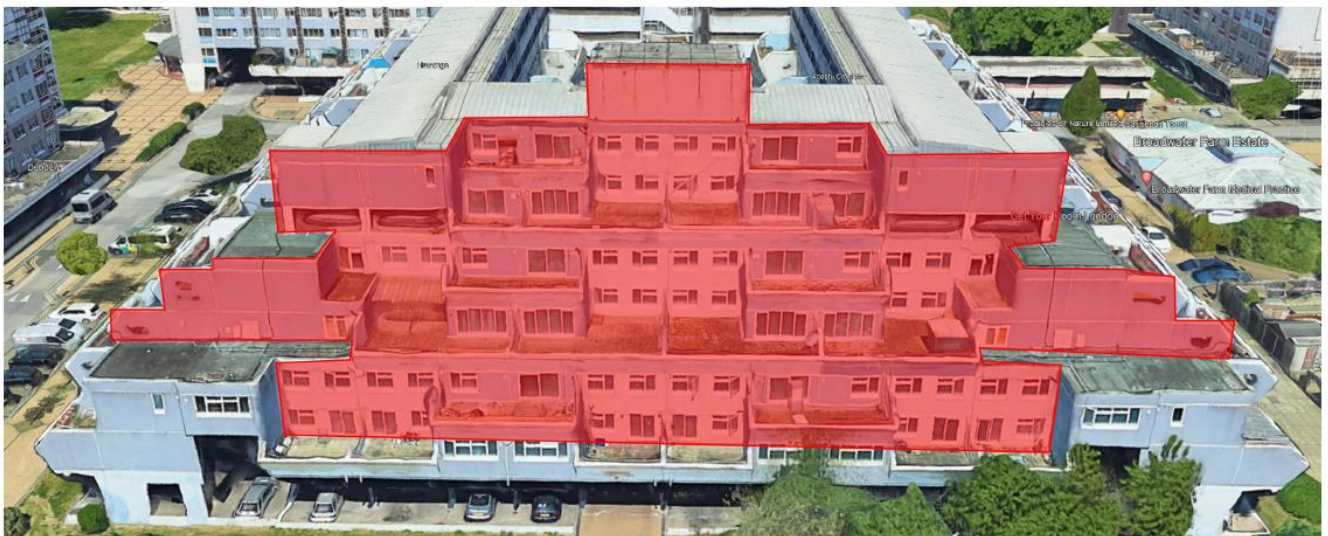


Bridging

Right Elevation



Rear Elevation



Left Elevation



Lift Logic around
balcony's

3rd Handrail

Monaflex
Sheeting

4nr Boards

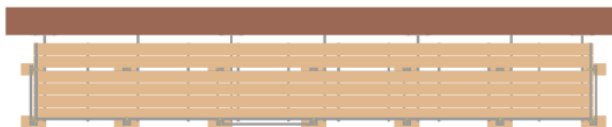
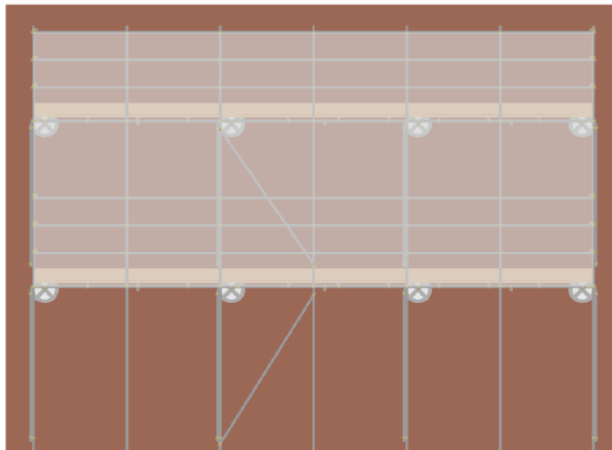
Shortened Inside
Standard



NASC

TG20:21 compliance sheet

A tied independent tube and fitting scaffold in accordance with TG20:21 chapters 06 and 07.



Wind factor 20	Maximum height	Maximum boarded lifts	Maximum lift height	Maximum bay length	Maximum boards wide	Maximum loading	Tie load Very light duty	Maximum leg load
Low	6 metres	2	3 metres	1.8 metres	4 + 2	3.0 kN/m ²	2.2 kN	7.4 kN

Sign-off

Contract no:
ICS21-0065-P
Client:
Hughes & Salvage
Site reference:
Freedom Road, London, Greater
London, N17
Scaffold reference:
Broadwater Farm
Company:
Inner City Scaffolding Ltd.
NASC membership no:
Not an NASC member
Prepared by:
Inner City Scaffolding Ltd.
Position:
Author
Signature:



Date:
31/08/2022
Notes:
3m Lift



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Page 1 of 2

NASC

TG20:21 compliance sheet

A tied independent tube and fitting scaffold in accordance with TG20:21 chapters 06 and 07.

Construction

- ✓ Constructed from type 4 galvanised steel tubes.
- ✓ Maximum 2 boarded lifts permitted.
- ✓ Maximum transom spacing: 0.9 metres.
- ✓ Facade braced every 6 bays per elevation.
- ✓ Ledger braced at alternate standards and end frames.
- ✓ Triple guard rails and toe boards at boarded lifts.
- ✓ Single guard rails at unboarded lifts.
- ✓ Internal edge protection may be provided where required.
- ✓ Fully or partially clad with sheeting.
- ! Butting structural transoms required at every standard at every lift, except where a tie tube is present.

Loading

- ✓ One lift loaded to 3.0 kN/m² (load class 4, heavy duty) plus one lift 50% loaded per facade.
- ✓ Maximum inside board loading 0.75 kN/m² at the working lift.
- ✓ Maximum leg load 7.4 kN, to be supplied to the client for foundation design.

Ties

- ✓ Tied at every lift to TG20 tie pattern A and at the top lift at ledger braced standards with 2.2 kN (very light duty) ties.
- ✓ Tie tubes connected to the inner and outer faces of the scaffold.
- ✗ The facade must not have significant openings.

Add-on features

- ✓ A gin wheel may be used to a maximum of 50 kg.
- ✗ No other add-on features are permitted without a TG20 compliance sheet or design advice.

Wind factor 20	Maximum height	Maximum boarded lifts	Maximum lift height	Maximum bay length	Maximum boards wide	Maximum loading	Tie load Very light duty	Maximum leg load
Low	6 metres	2	3 metres	1.8 metres	4 + 2	3.0 kN/m ²	2.2 kN	7.4 kN

Sign-off

Contract no:
ICS21-0065-P
Client:
Hughes & Salvage
Site reference:
Freedom Road, London, Greater
London, N17
Scaffold reference:
Broadwater Farm
Company:
Inner City Scaffolding Ltd.
NASC membership no:
Not an NASC member
Prepared by:
Inner City Scaffolding Ltd.
Position:
Author
Signature:



Date:
31/08/2022
Notes:
3m Lift



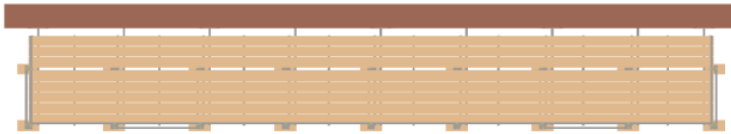
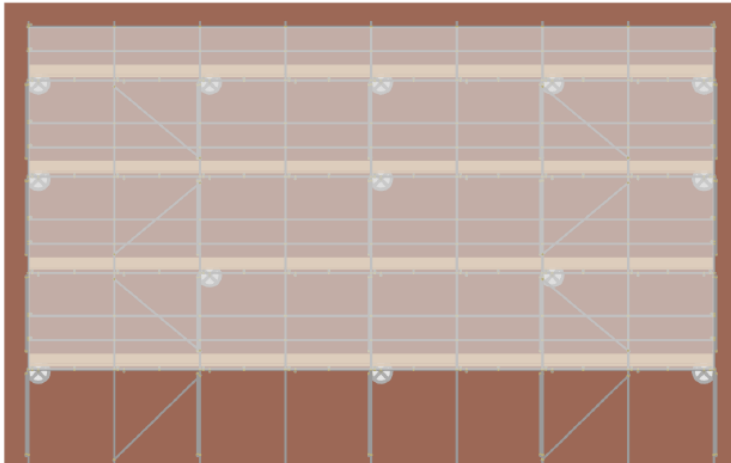
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Page 2 of 2

NASC

TG20:21 compliance sheet

A tied independent tube and fitting scaffold in accordance with TG20:21 chapters 06 and 07.



Wind factor 20	Maximum height	Maximum boarded lifts	Maximum lift height	Maximum bay length	Maximum boards wide	Maximum loading	Tie load Light duty	Maximum leg load
LOW	8 metres	4	2 metres	1.8 metres	5 + 3	3.0 kN/m ²	3.4 kN	12.2 kN

Sign-off

Contract no:
ICS21-0065-P
Client:
Hughes & Salvage
Site reference:
Unnamed Road, London, Greater
London, N17
Scaffold reference:

Company:
Inner City Scaffolding Ltd.
NASC membership no:
Not an NASC member
Prepared by:
Inner City Scaffolding Ltd.
Position:
Author
Signature:



Date:
02/09/2022



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Page 1 of 2

NASC

TG20:21 compliance sheet

A tied independent tube and fitting scaffold in accordance with TG20:21 chapters 06 and 07.

Construction

- ✓ Constructed from type 4 galvanised steel tubes.
- ✓ Maximum 4 boarded lifts permitted.
- ✓ Maximum transom spacing: 0.9 metres.
- ✓ Facade braced every 6 bays per elevation.
- ✓ Ledger braced at alternate standards and end frames.
- ✓ Double guard rails and toe boards at boarded lifts.
- ✓ Single guard rails at unboarded lifts.
- ✓ Internal edge protection may be provided where required.
- ✓ Fully or partially clad with sheeting.
- ! Butting structural transoms required at every standard at every lift, except where a tie tube is present.

Loading

- ✓ One lift loaded to 3.0 kN/m² (load class 4, heavy duty) plus one lift 50% loaded per facade.
- ✓ Maximum inside board loading 0.75 kN/m² at the working lift.
- ✓ Maximum leg load 12.2 kN, to be supplied to the client for foundation design.

Ties

- ✓ Tied at every lift to TG20 tie pattern D and at the top lift at ledger braced standards with 3.4 kN (light duty) ties.
- ✓ Tie tubes connected to the inner and outer faces of the scaffold. Additional sway resistance should be provided (TG20 section 7.9).
- ✗ The facade must not have significant openings.

Add-on features

- ✓ A gin wheel may be used to a maximum of 50 kg.
- ✗ No other add-on features are permitted without a TG20 compliance sheet or design advice.

Wind factor 20	Maximum height	Maximum boarded lifts	Maximum lift height	Maximum bay length	Maximum boards wide	Maximum loading	Tie load Light duty	Maximum leg load
LOW	8 metres	4	2 metres	1.8 metres	5 + 3	3.0 kN/m ²	3.4 kN	12.2 kN

Sign-off

Contract no:
ICS21-0065-P
Client:
Hughes & Salvage
Site reference:
Unnamed Road, London, Greater
London, N17
Scaffold reference:

Company:
Inner City Scaffolding Ltd.
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Not an NASC member
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Inner City Scaffolding Ltd.
Position:
Author
Signature:



Date:
02/09/2022



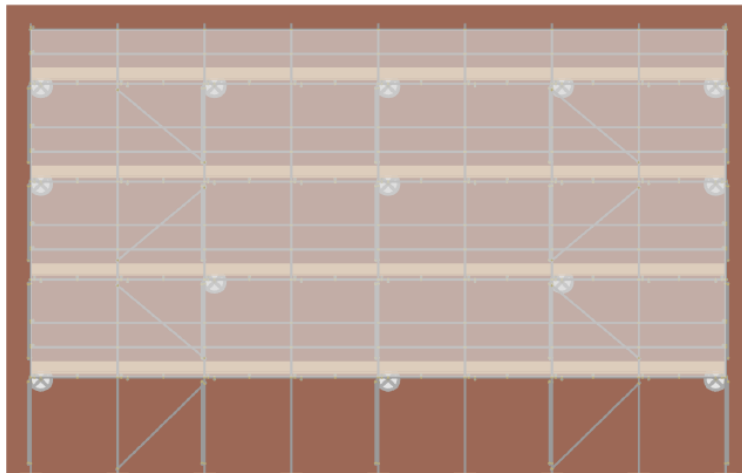
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Page 2 of 2

NASC

TG20:21 compliance sheet

A tied independent tube and fitting scaffold in accordance with TG20:21 chapters 06 and 07.



Wind factor 20 LOW	Maximum height 8 metres	Maximum boarded lifts 4	Maximum lift height 2 metres	Maximum bay length 1.8 metres	Maximum boards wide 4 + 2	Maximum loading 3.0 kN/m²	Tie load Light duty 3.4 kN	Maximum leg load 9.2 kN
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Sign-off

Contract no:
ICS21-0247-P
Client:
Hughes & Salvage
Site reference:
Broadwater Farm Community
Centre, Freedom Road, London,
Greater London, N17 6HE
Scaffold reference:

Company:
Inner City Scaffolding Ltd.
NASC membership no:
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Prepared by:
Inner City Scaffolding Ltd.
Position:
Author
Signature:



Date:
31/08/2022



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Page 1 of 2

NASC

TG20:21 compliance sheet

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Construction

- ✓ Constructed from type 4 galvanised steel tubes.
- ✓ Maximum 4 boarded lifts permitted.
- ✓ Maximum transom spacing: 0.9 metres.
- ✓ Facade braced every 6 bays per elevation.
- ✓ Ledger braced at alternate standards and end frames.
- ✓ Double guard rails and toe boards at boarded lifts.
- ✓ Single guard rails at unboarded lifts.
- ✓ Internal edge protection may be provided where required.
- ✓ Fully or partially clad with sheeting.
- ! Butting structural transoms required at every standard at every lift, except where a tie tube is present.



Loading

- ✓ One lift loaded to 3.0 kN/m² (load class 4, heavy duty) plus one lift 50% loaded per facade.
- ✓ Maximum inside board loading 0.75 kN/m² at the working lift.
- ✓ Maximum leg load 9.2 kN, to be supplied to the client for foundation design.

Ties

- ✓ Tied at every lift to TG20 tie pattern D and at the top lift at ledger braced standards with 3.4 kN (light duty) ties.
- ✓ Tie tubes connected to the inner and outer faces of the scaffold.
- ✗ The facade must not have significant openings.

Add-on features

- ✓ A gin wheel may be used to a maximum of 50 kg.
- ✗ No other add-on features are permitted without a TG20 compliance sheet or design advice.

Wind factor 20 LOW	Maximum height 8 metres	Maximum boarded lifts 4	Maximum lift height 2 metres	Maximum bay length 1.8 metres	Maximum boards wide 4 + 2	Maximum loading 3.0 kN/m²	Tie load Light duty 3.4 kN	Maximum leg load 9.2 kN
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Sign-off

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ICS21-0247-P
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Hughes & Salvage
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Broadwater Farm Community
Centre, Freedom Road, London,
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NASC membership no:
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Inner City Scaffolding Ltd.
Position:
Author
Signature:



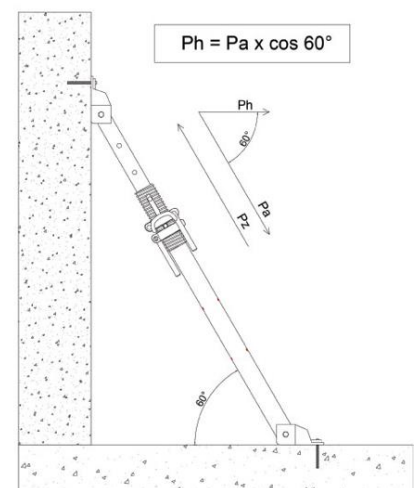
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31/08/2022

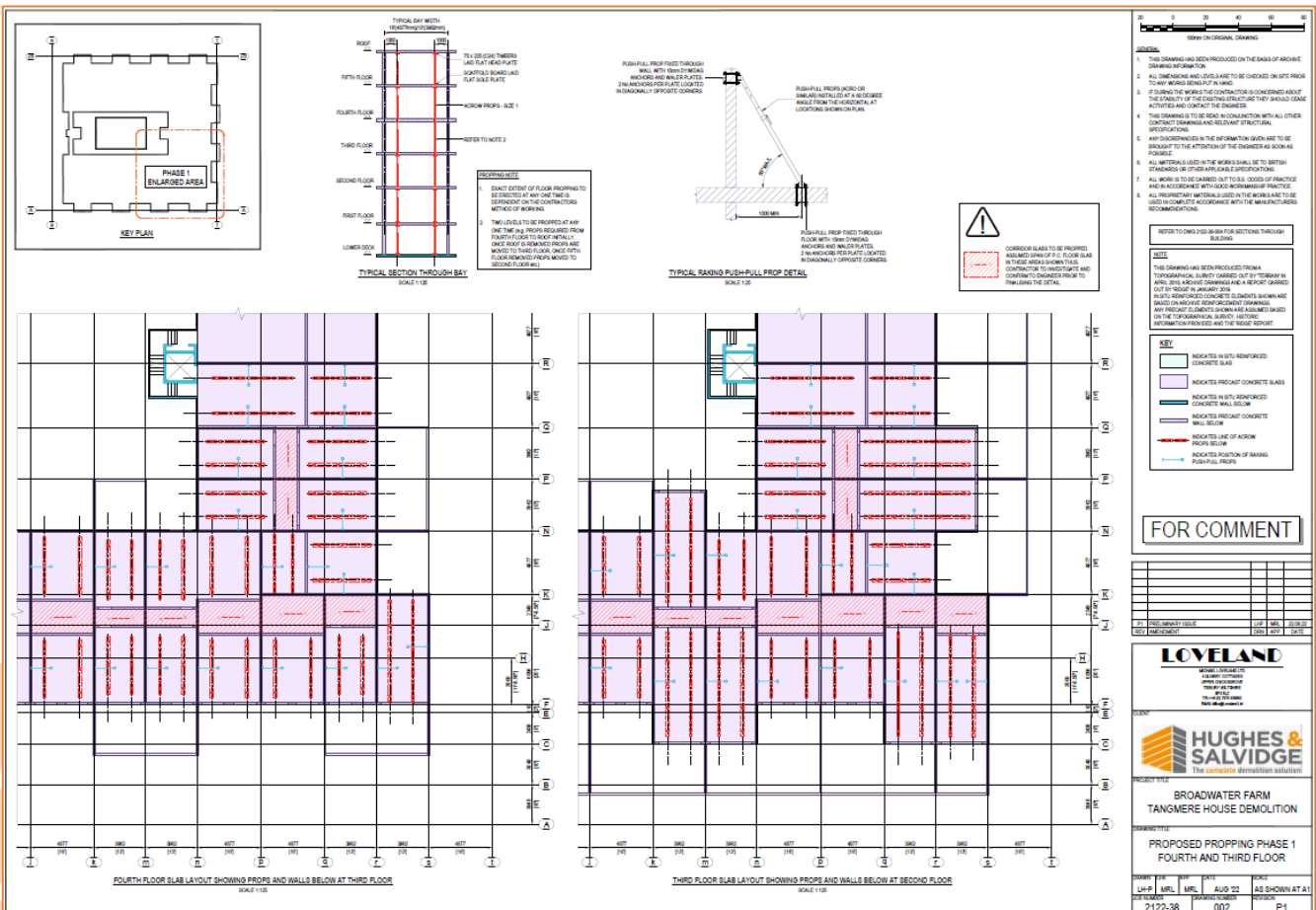
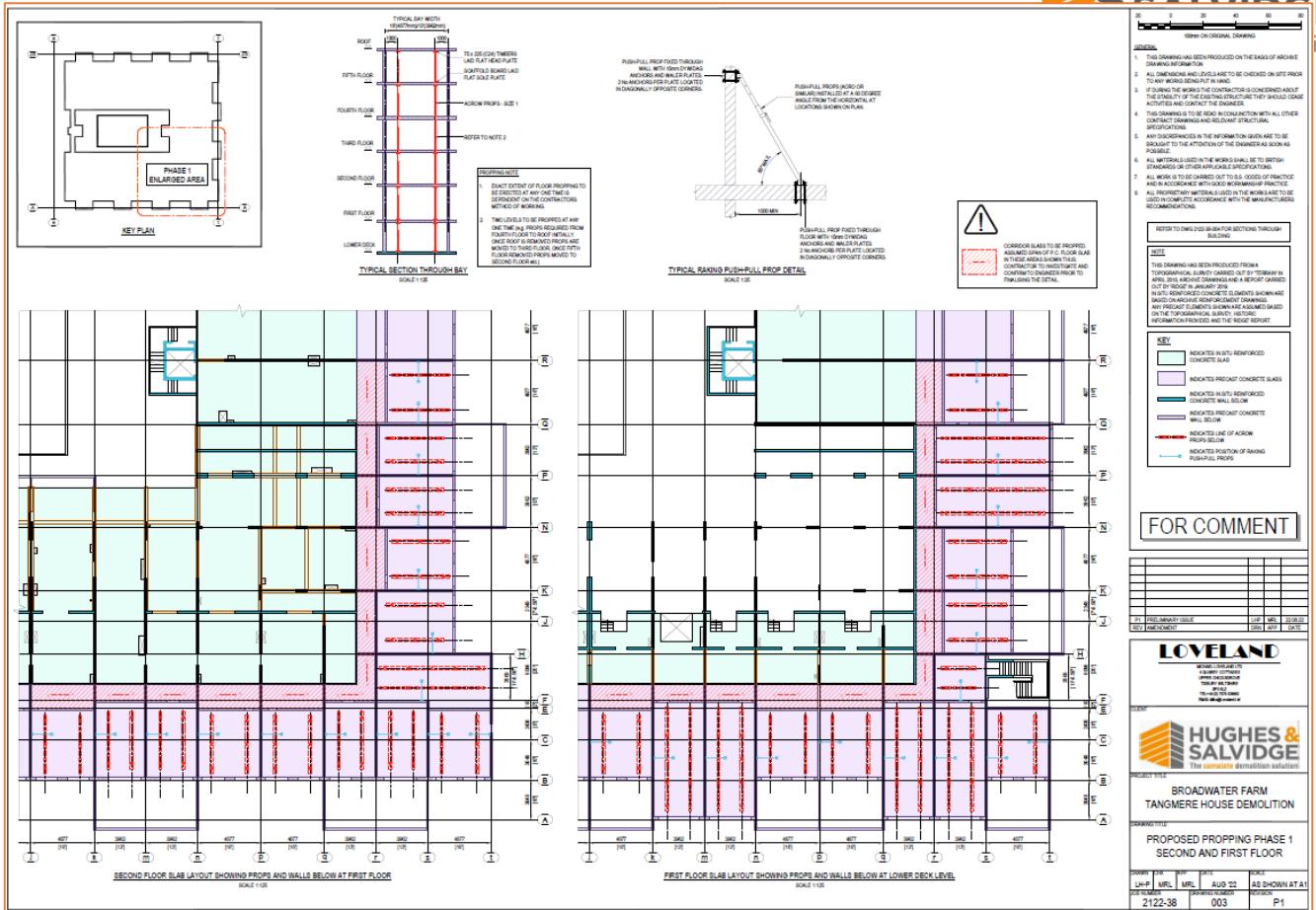


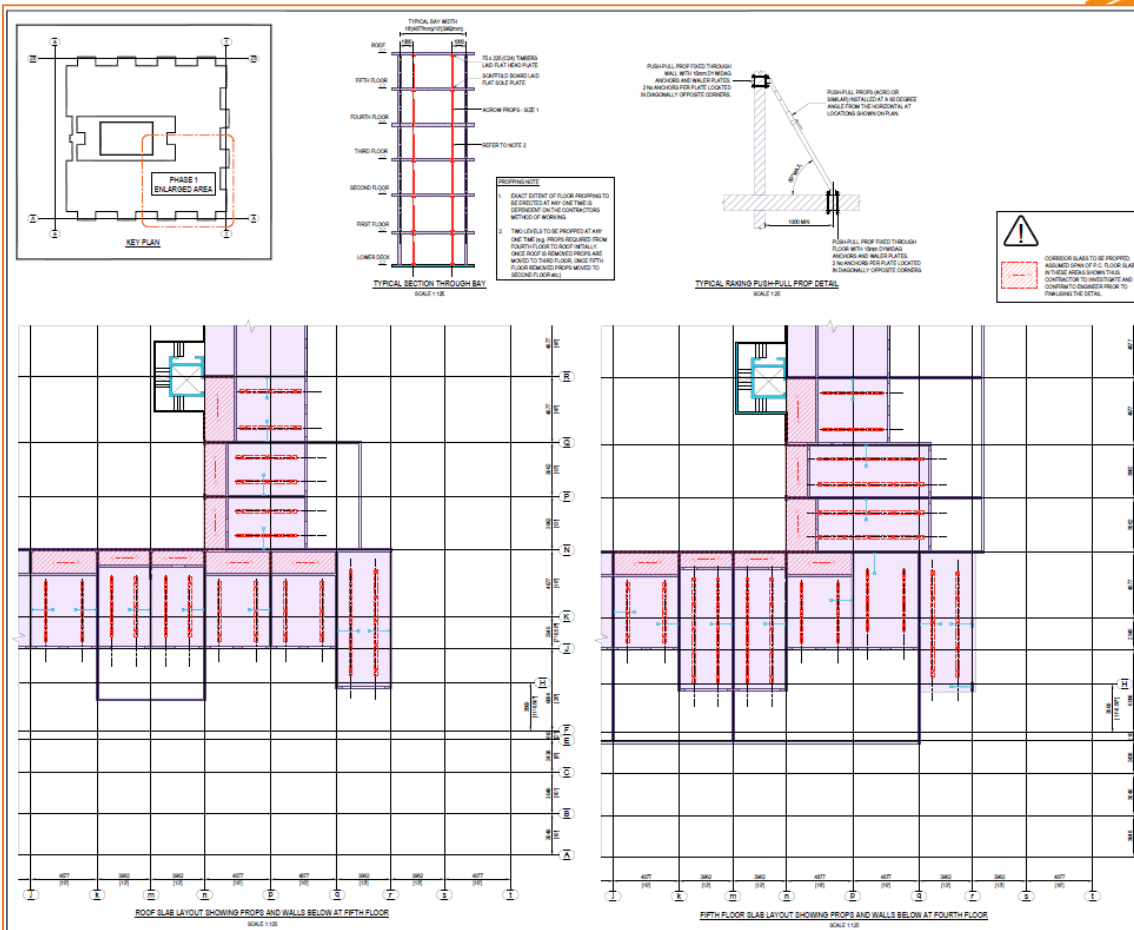
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- We have undertaken a Load bearing report by Swantest, which has formed the basis of the of the propping detail designed by HSL structural engineer – Mike Loveland (see appendix C)
- The structures are constructed of pre-cast concrete structural members with an external pre-cast concrete (LPS) large panel system. Given the type of construction and location of the structure, the demolition methodology used will be top down, using small excavators and mobile cranes.
- The lower levels are in situ re-enforced concrete construction and can be demolished traditionally using excavators
- As stated previously, all services will be isolated before a comprehensive asbestos and soft strip operation is carried out. During these works a full height fixed scaffold will be installed which will be fully sheeted (monarflex) to act as a secondary control measure for noise and dust.
- The back propping will be installed as per the agreed drawing between ridge and Hughes and Salvidge. There will be two types of propping used for the works, one will be the back propping of floors and the other will be the use of push/pull propping for the external panels and internal walls.
- All lifts will be carried out on a contract lift basis and once at ground level the materials will be further segregated and processed mechanically and removed from site in the relevant waste streams







NOTES

- THIS DRAWING HAS BEEN PRODUCED ON THE BASIS OF ARCHITECT DRAWING INFORMATION.
- ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO ANY WORKS BEING PUT IN HAND.
- IF DURING THE WORKS THE CONTRACTOR IS CONCERNED ABOUT THE STABILITY OF THE EXISTING STRUCTURE THEY SHALL CEASE ACTIVITIES AND CONTACT THE ENGINEER.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND RELEVANT STRUCTURAL SPECIFICATIONS.
- ANY DISCREPANCIES IN THE INFORMATION GIVEN ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS SOON AS POSSIBLE.
- ALL MATERIALS USED IN THE WORKS SHALL BE TO BRITISH STANDARDS OR OTHER APPROVED SPECIFICATIONS.
- ALL WORK IS TO BE CARRIED OUT TO S.A. QUALITY OF PRACTICE AND IN ACCORDANCE WITH RELEVANT WORKMANSHIP PRACTICE.
- ALL PROTECTIVE MATERIALS USED IN THE WORKS ARE TO BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

FOR COMMENT

NO.	DESCRIPTION	DATE	BY	CHKD
1	PROPOSED ISSUE	10/01/22	AS	AS
2	REVISED	10/01/22	AS	AS

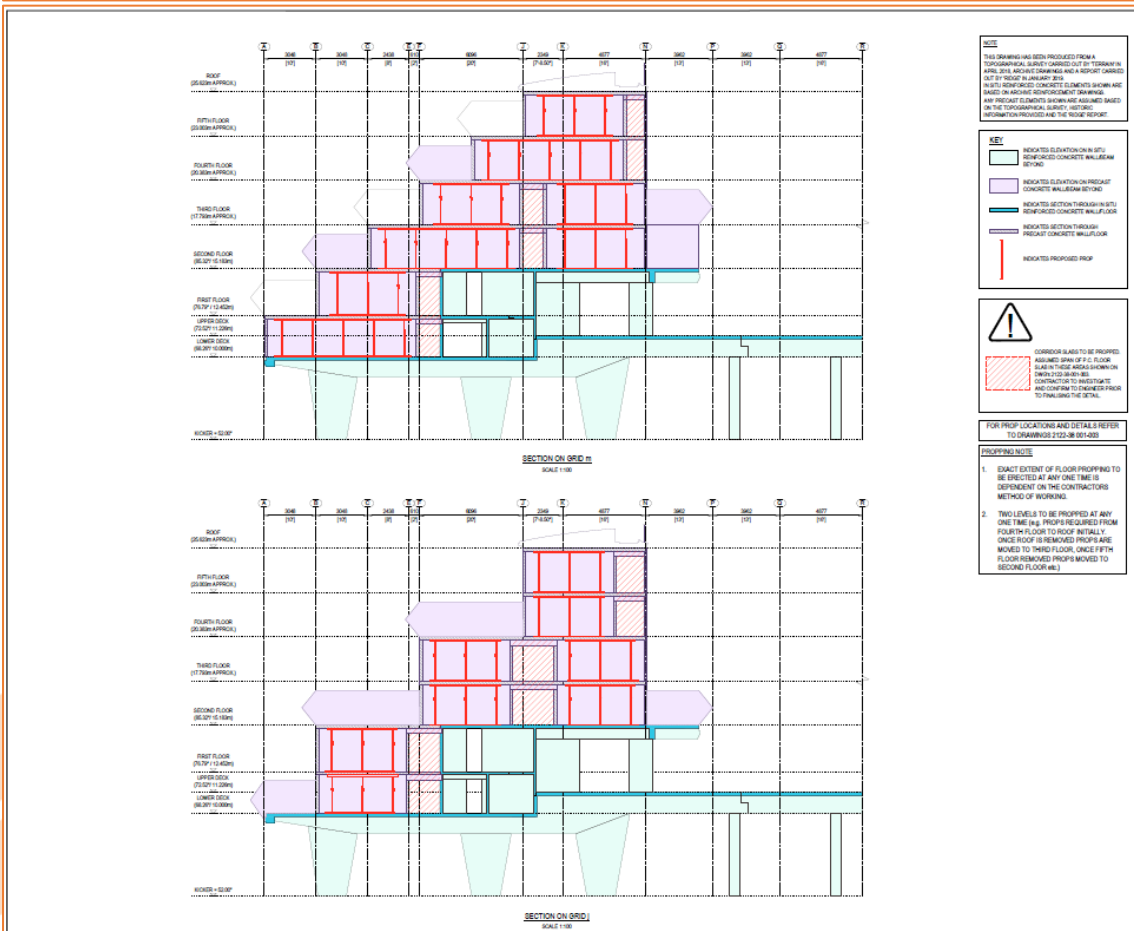
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2122-38 001

HUGHES & SALVIDGE
The complete demolition solution

**BROADWATER FARM
TANGMERE HOUSE DEMOLITION**

**PROPOSED PROPPING PHASE 1
ROOF AND FIFTH FLOOR**

DATE 10/01/22 **BY** AS **CHKD** AS **AS SHOWN AT** P1



NOTES

- THIS DRAWING HAS BEEN PRODUCED FROM A TOPOGRAPIHICAL SURVEY CARRIED OUT BY TERRYMAN IN APRIL 2011. ARCHITECT DRAWINGS AND REPORT CARRIED OUT BY ROYAL IN JANUARY 2011.
- ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO ANY WORKS BEING PUT IN HAND.
- IF DURING THE WORKS THE CONTRACTOR IS CONCERNED ABOUT THE STABILITY OF THE EXISTING STRUCTURE THEY SHALL CEASE ACTIVITIES AND CONTACT THE ENGINEER.
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TANGMERE HOUSE DEMOLITION**

**PROPOSED PROPPING PHASE 1
SECTIONS**

DATE 10/01/22 **BY** AS **CHKD** AS **AS SHOWN AT** P1

- The external panels and internal walls will be supported by push pull props. They will be secured in position by dywidag bars with wailing plates and wing nuts drilled through the panels and secured either side. The internal wall and external panels weigh in the region of 5 tonnes however checks will be carried out initially to ensure the weight is correct so the first lift will be carried out and the minimum radius of the crane to ensure greater lifting capacity.
- The propping is required to only the working areas and will be repositioned accordingly throughout the works. Push pull props will be installed prior to removal of the upper floor panel to ensure the stability of the walls are not compromised when removed. To the side elevations due to restricted fixing space to the panels these will be removed progressively and
- With the propping installed and steel roof removed, the top-down demolition can commence. Further 3t excavators and skid steer loaders will be lifted onto the roof via the crane.
- The small excavators will be fitted with a combination of impact hammers and buckets. These excavators will initially scrape the screed from the floor to expose the joints in the panels. Once the screed is removed and joints exposed, the floor panels will be broken by excavator into small sections allowing debris to fall to the floor below. The panels will be broken working back towards the excavator and the excavator will never be positioned on the panel being broken.
- The temporary propping will be removed to the panel being broken prior to breaking of the panel and the temporary accrow propping will be removed and repositioned to the floors below.
- The external and internal walls will be removed by way of forming lifting holes through the panel. The panel will be secured by chains using a choke hitch configuration via crane before operatives break out the retaining fixings by machine to release the panel. The props will be unbolted once the crane is secured to the panel before the panel is lifted and lowered to ground level where it will be processed mechanically ready for removal from site.

Each lift will be co-ordinated by the dedicated lift supervisor with exclusion zones and a dedicated laydown area installed and managed on site.

Small internal walls such as around the bathroom area will be broken in situ and cleared using the skid steer loader and transported to the lift shaft opening.

Any arising materials formed on the floor below will be also be cleared via a skid steer loader and dropped down the lift shaft to ground level.



Example of skid steer loader removing debris to lift shaft

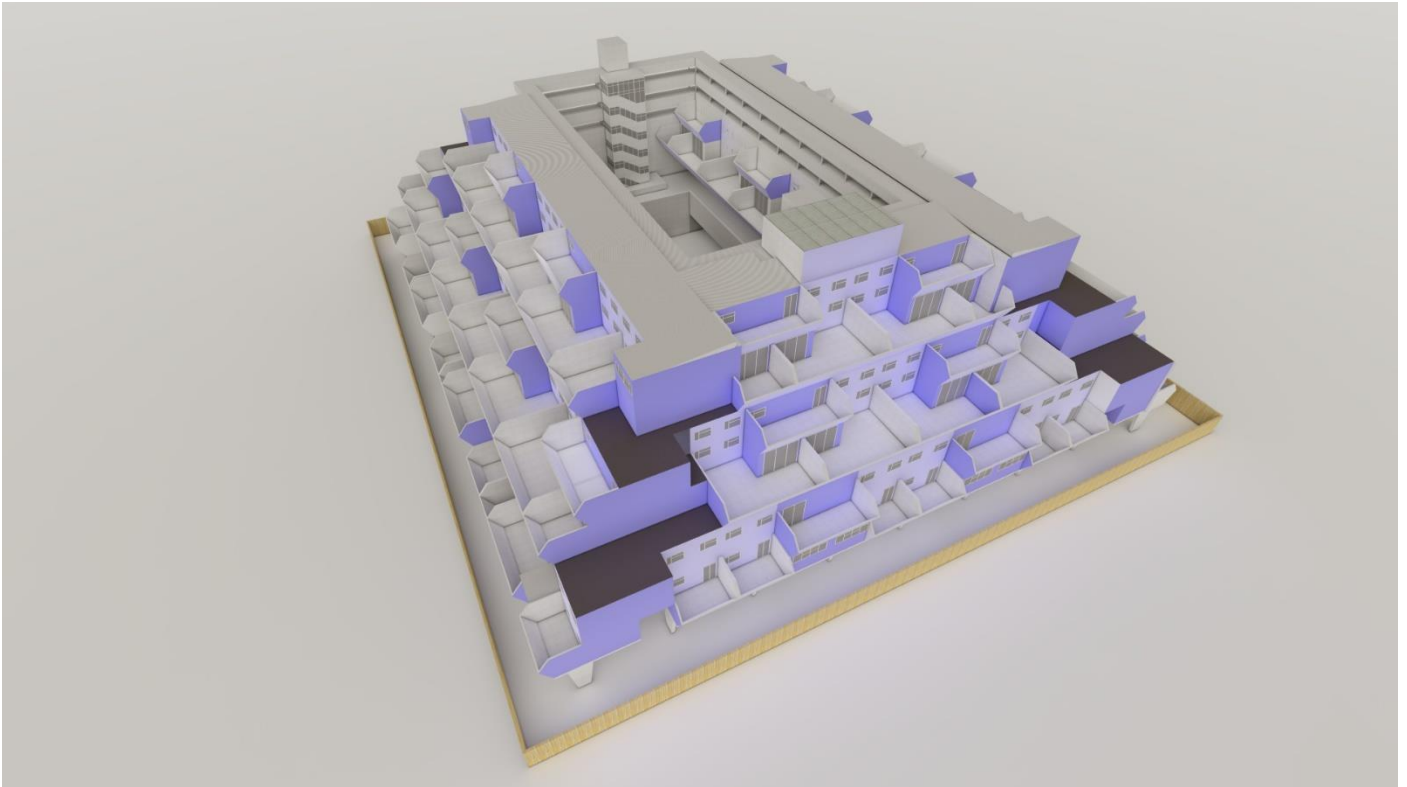
Once an area of floor has been demolished the excavator can then be lowered down a level and can work from that floor to commence removal of the next level.



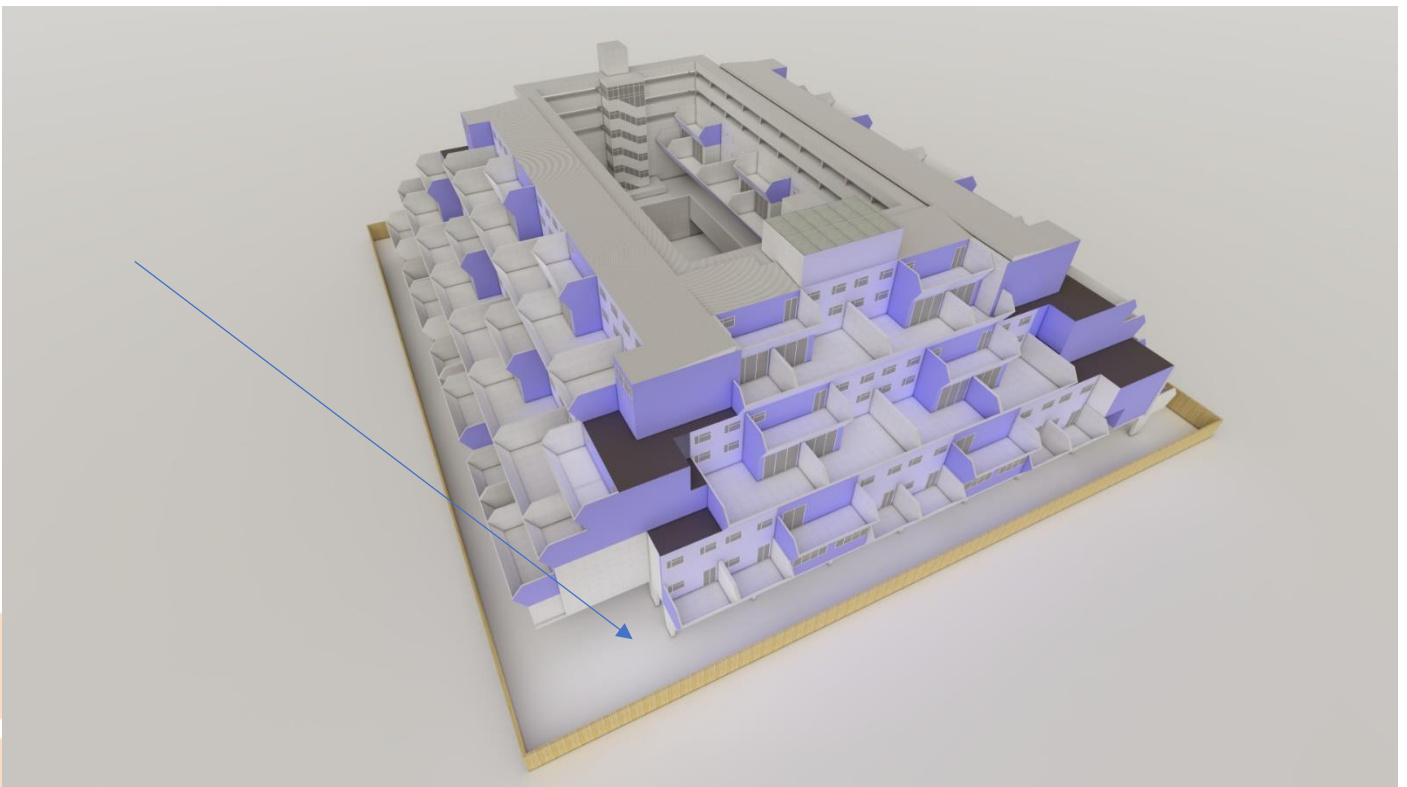
Example of excavators working top down on tower block demolition

Sequence of works

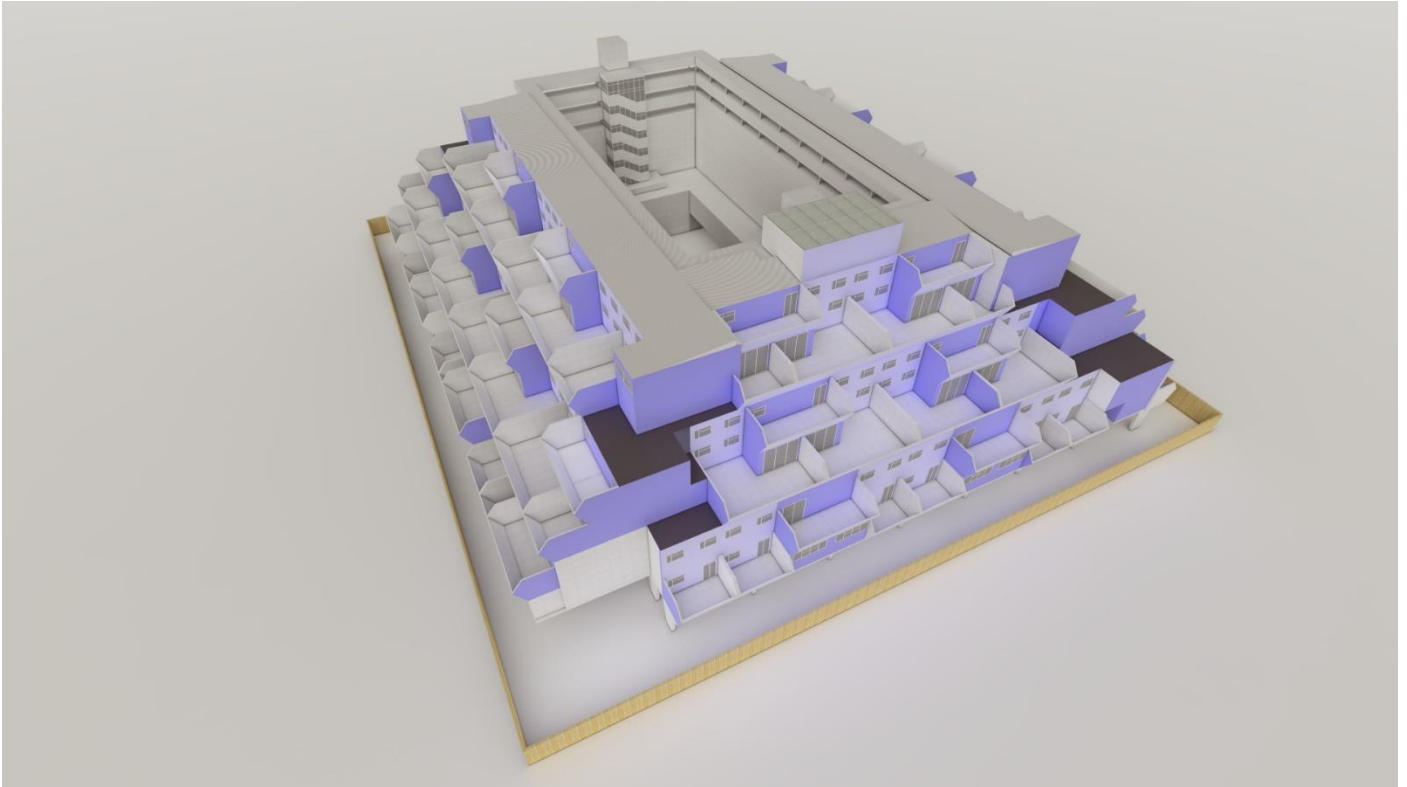
Stage 1, the area is prepped ready for demolition with internal propping installed



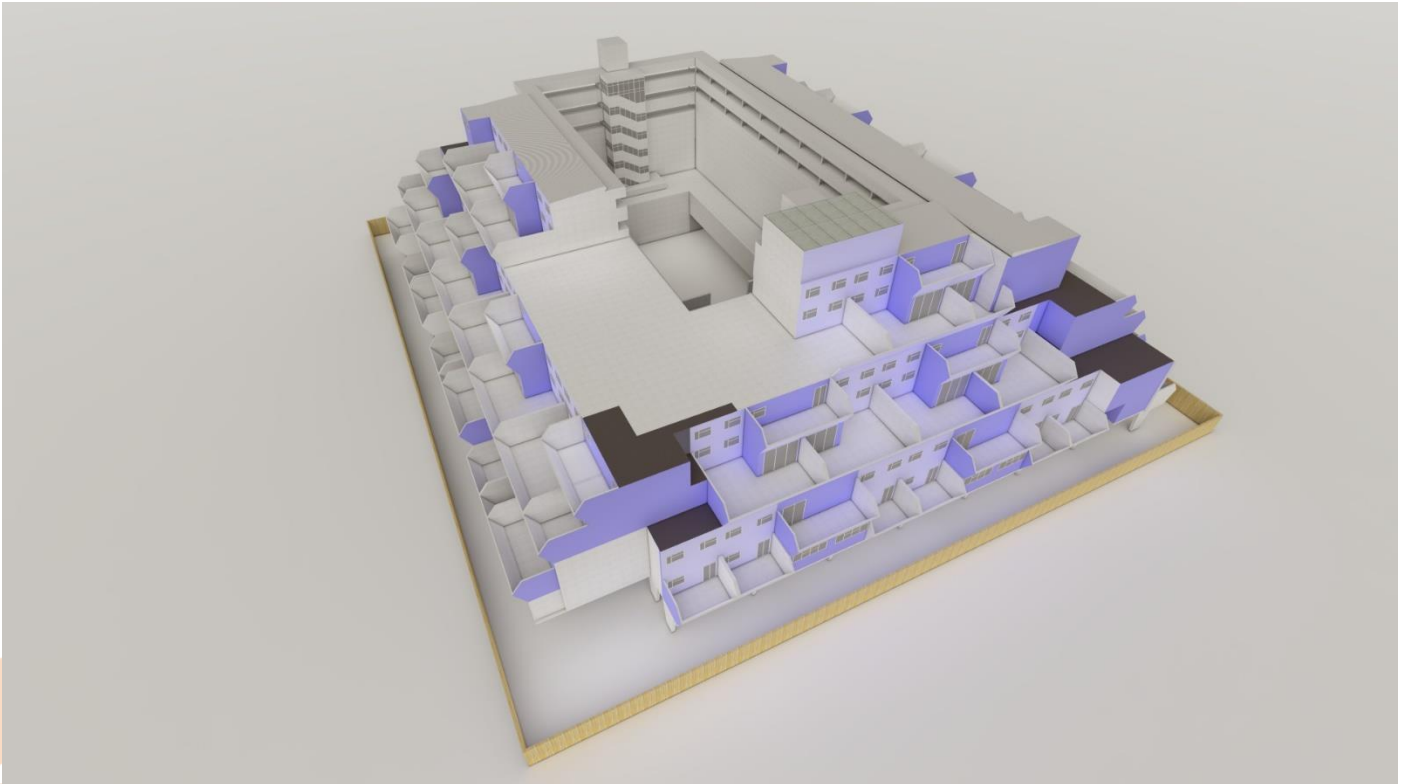
Stage 2, the very South West corner of the building is removed to allow for greater space at the entrance for deliveries and cranaage



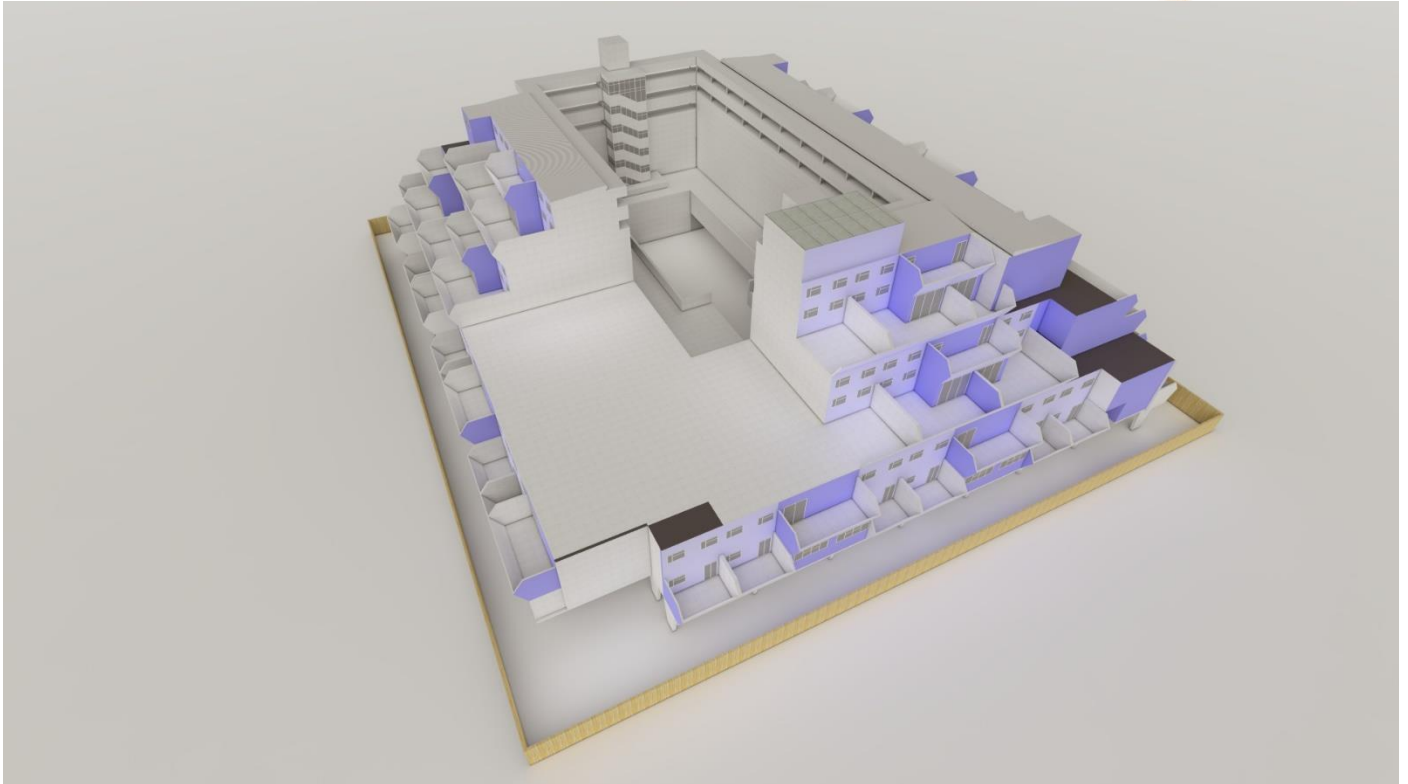
Stage 3, Internal Balconies and a drop zone is created



Stage 4, the first element of top down demolition begins to the South West corner

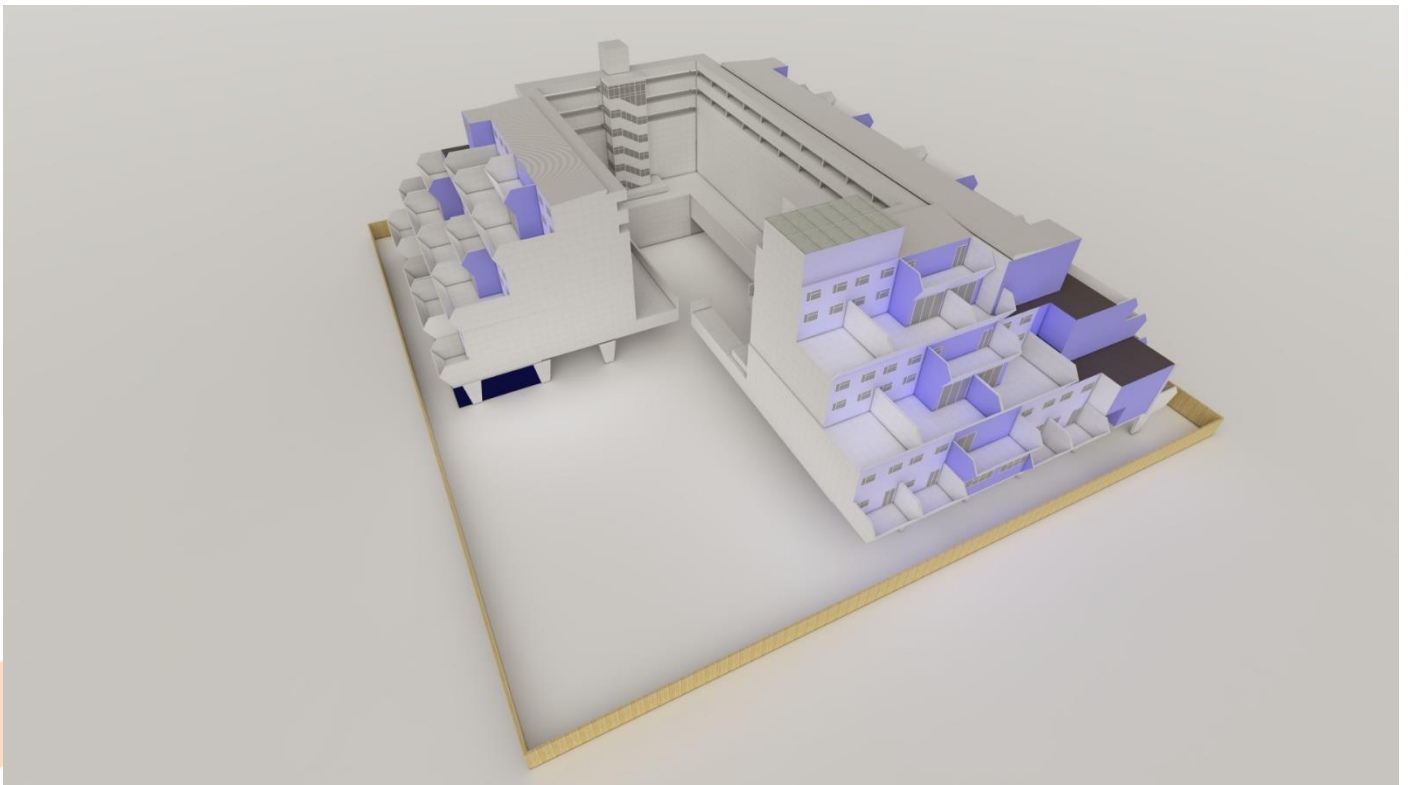


Stage 5, top down continues in the area between grid lines down to in situ deck

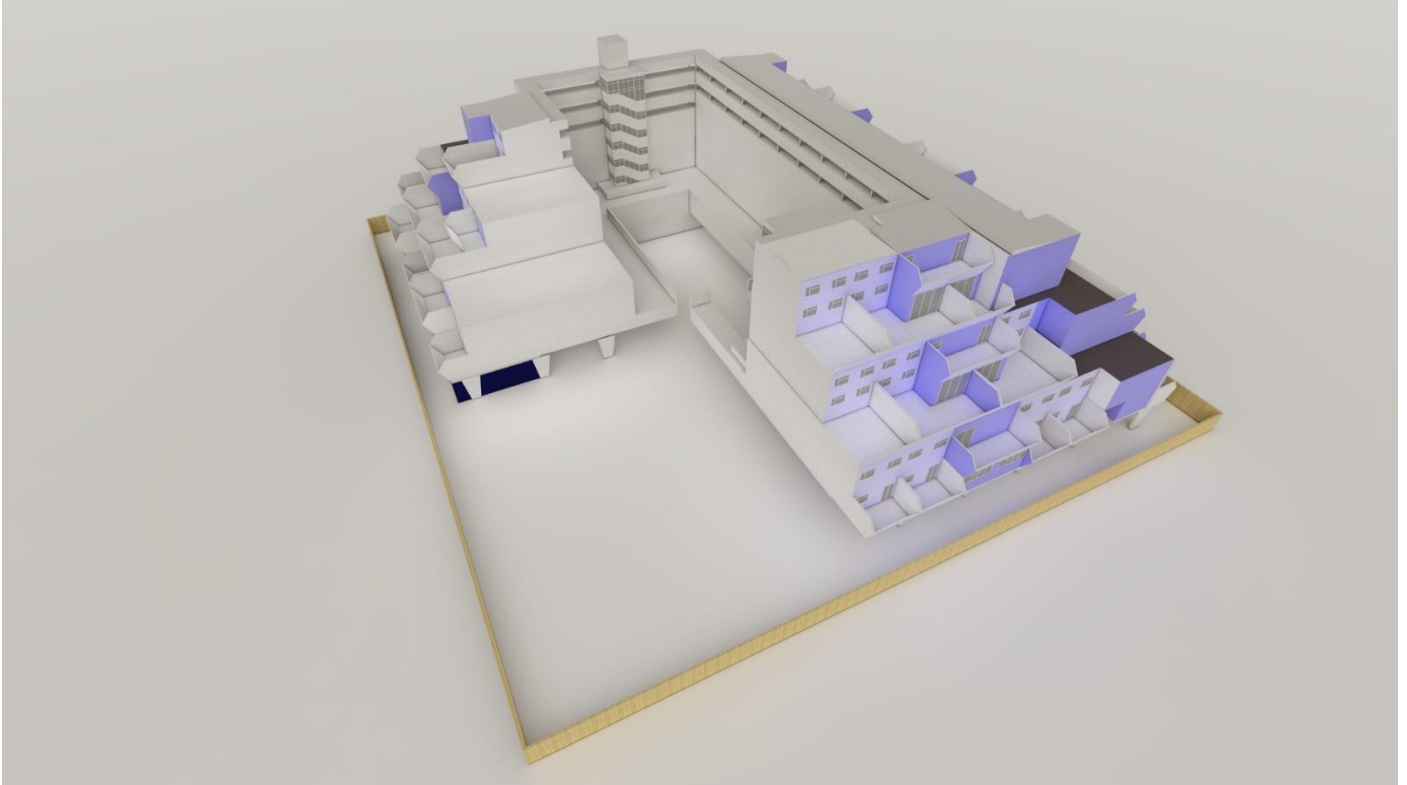


Stage 6, in situ deck is demolished traditionally using floor based excavators.

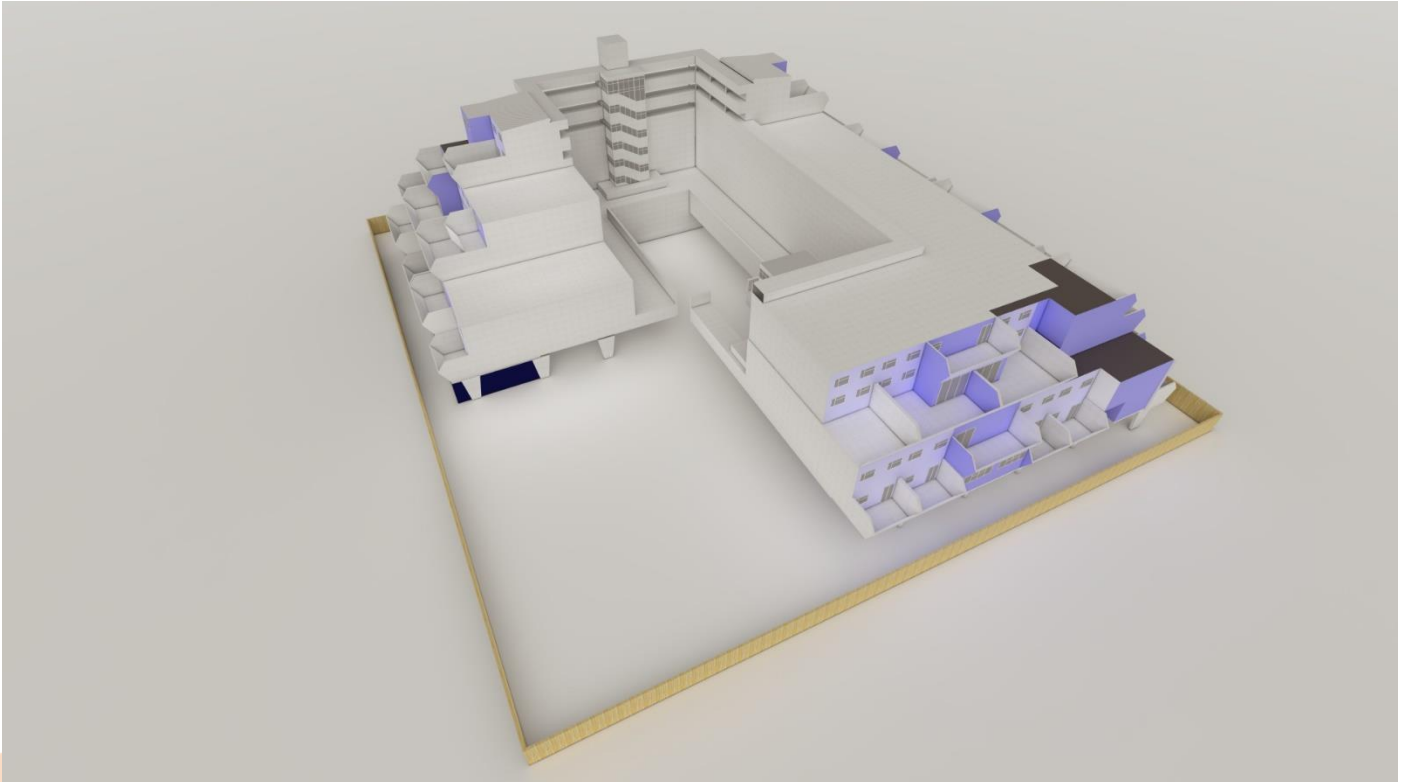
The surrounding precast side may be tiered at the section to prevent leading edge and minimise scaffold



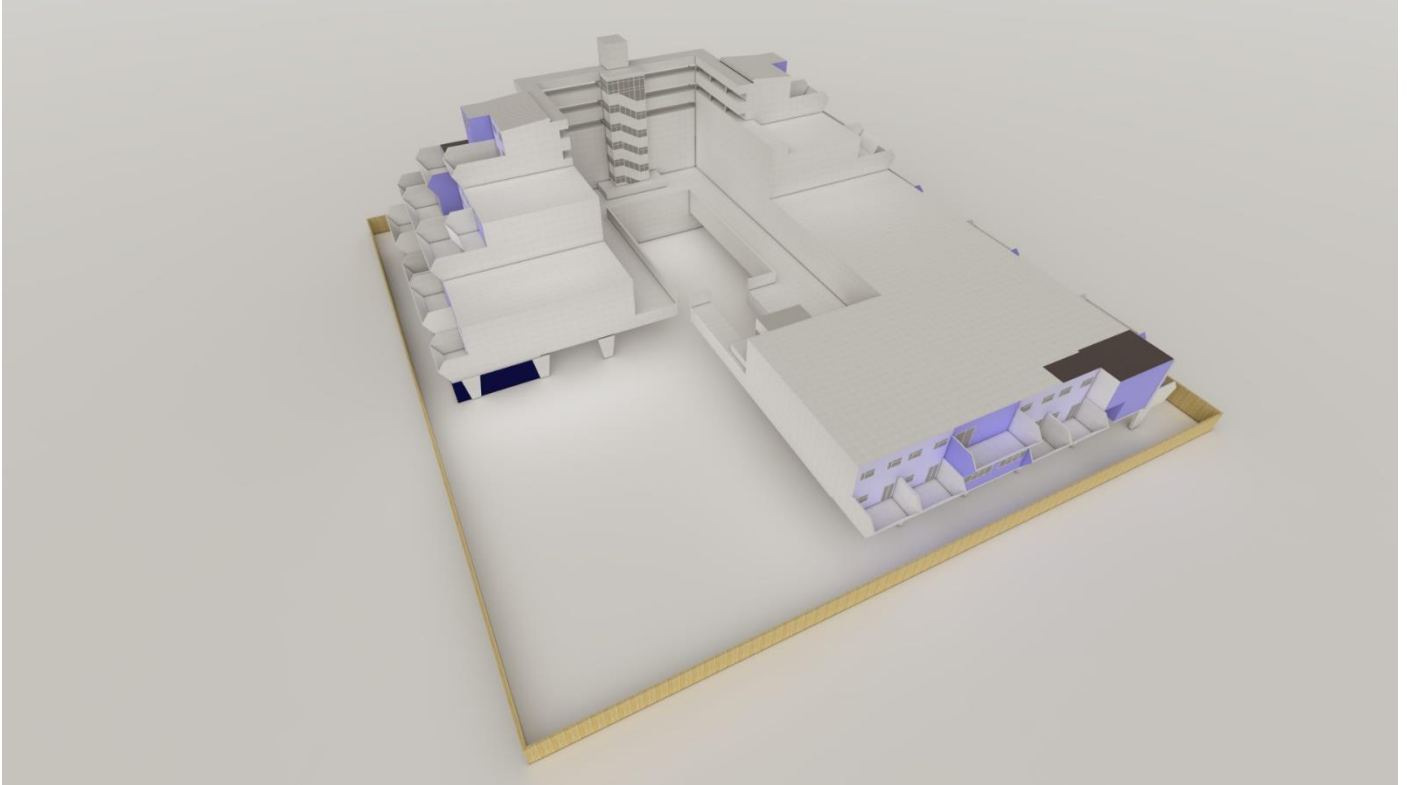
Stage 7 working round the remain rear section of the building



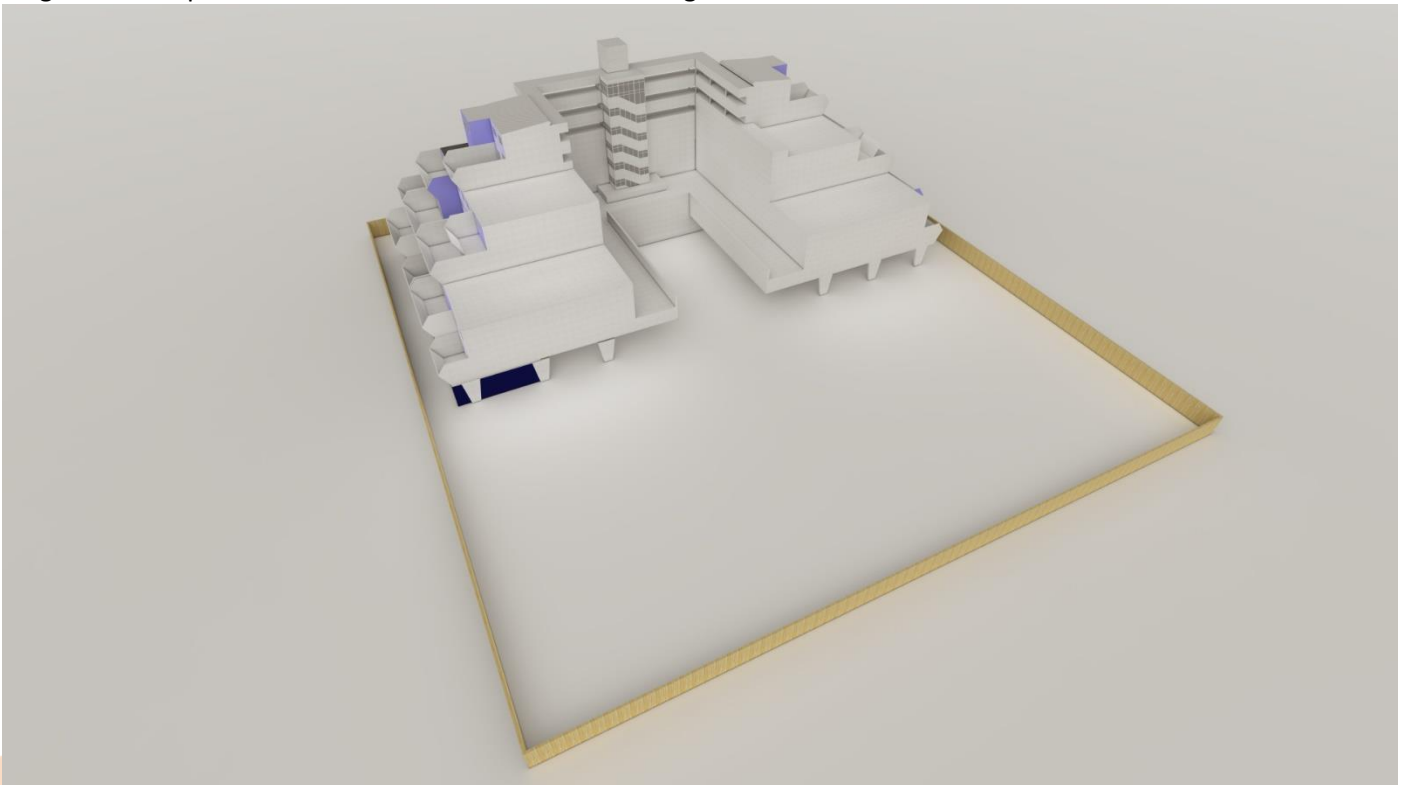
Stage 8 – Works continue top down



Stage 9 works progress down to lower levels



Stage 10 – Complete demolition of the rear of the building



The arising materials will be segregated and processed by the second excavator ready for removal from site. This excavator will then be used for mechanical demolition once the high reach excavator has reduced the structure in height where the 490 can safely operate. On completion of structural demolition all materials will be removed and the area cleared ready for removal of the slab and foundations of the structure.

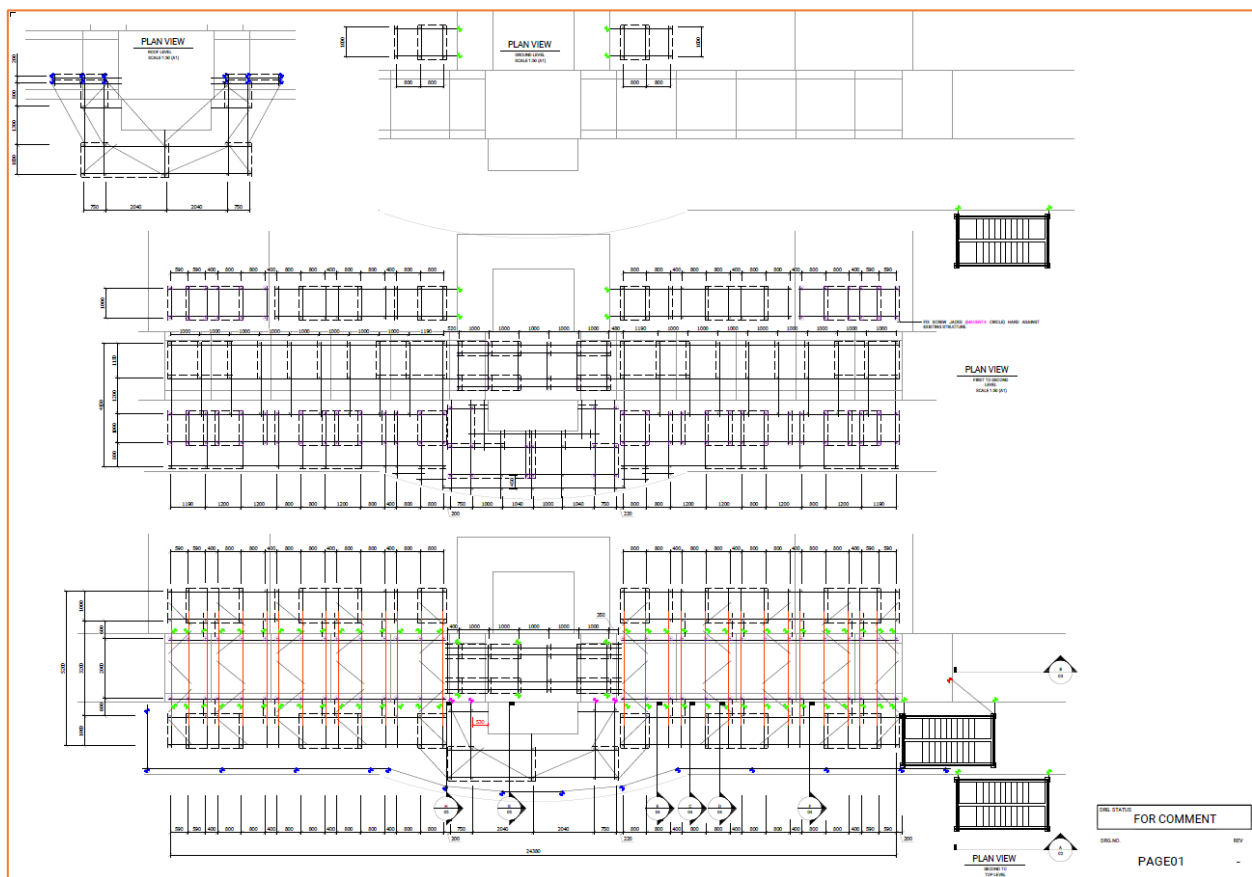
Phase 2 Works

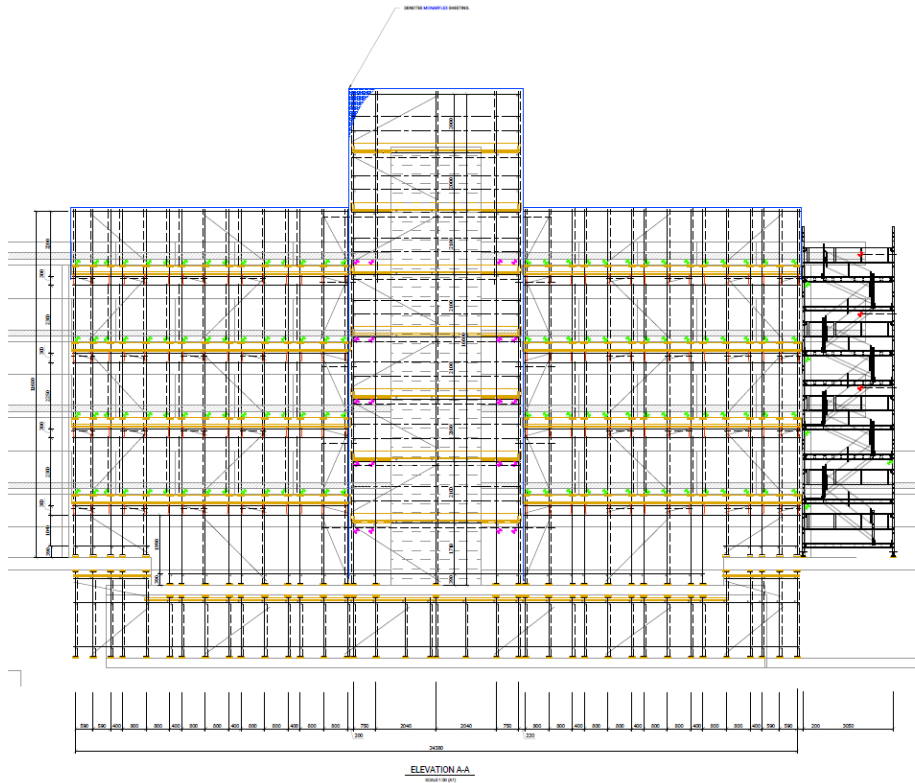
Upon approval from Historic England on the plans for works on phase 2.

HSL will re-commence with the demolition using the same techniques as before with small machines working up on the building aided by a crane to move around and will systematically top down demolish the structure.

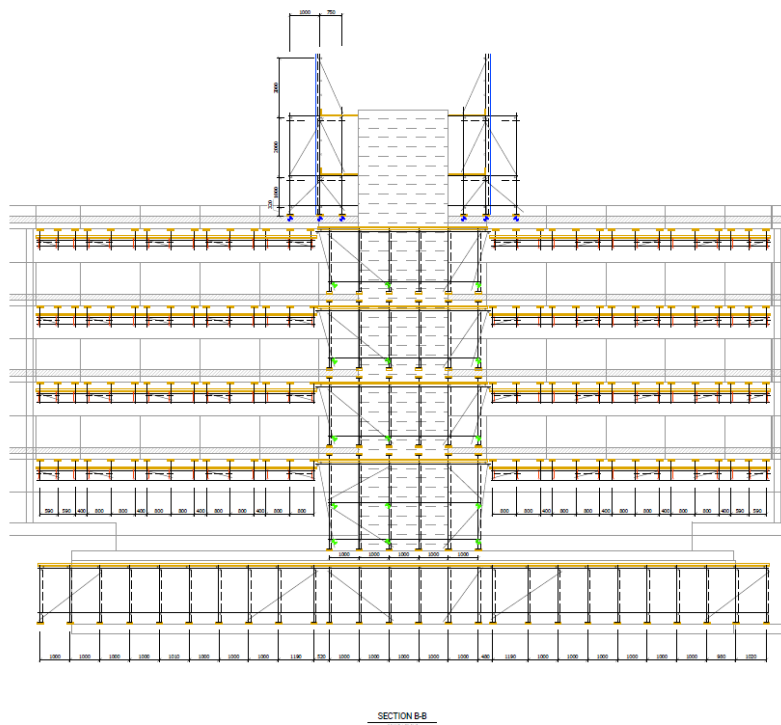
Scaffold is to be installed as per the design documents;

2122-38-R04(01) M Loveland Structural appraisal
EKS080-LADA-DE-CAL-SF-40001-C01 – Inner City Scaffold Calcs
INC-052-01-05-C – Inner City Scaffold Designs
INC-052-02-05-C
INC-052-03-05-C
INC-052-04-05-C
INC-052-05-05-C

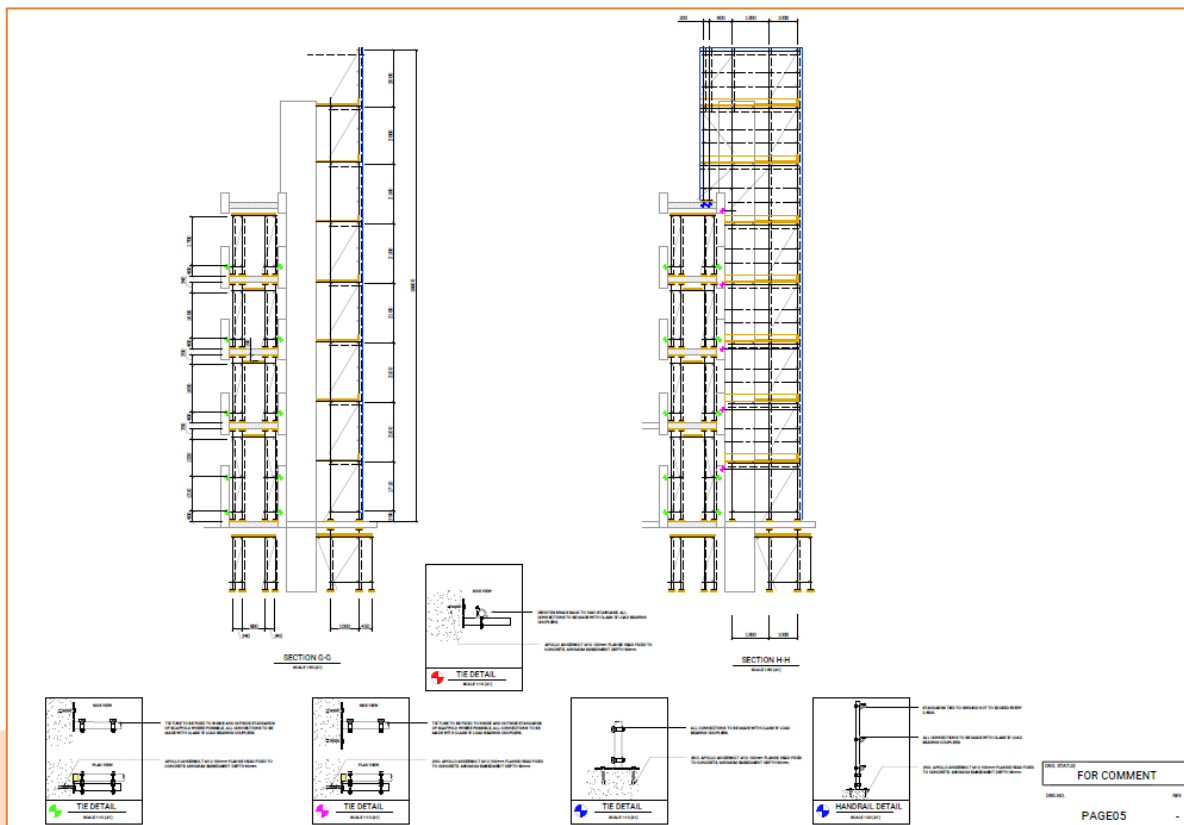
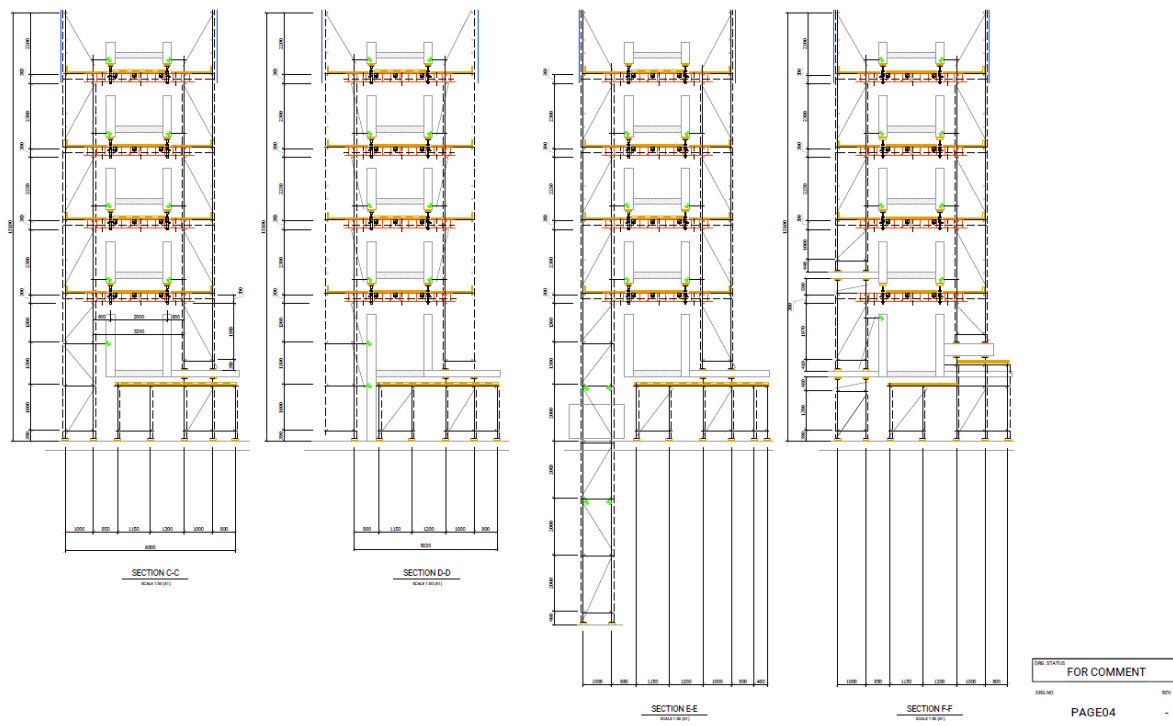




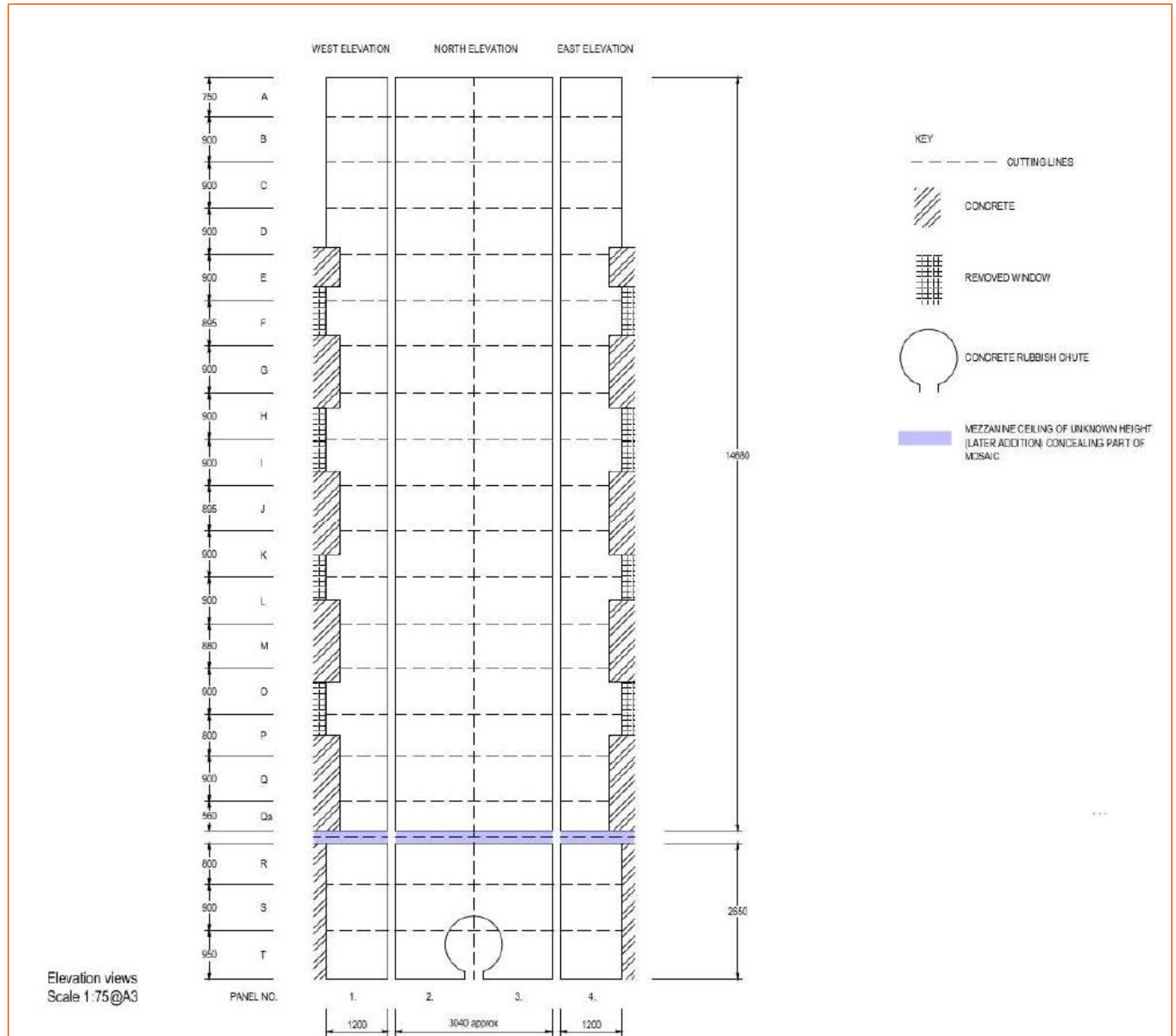
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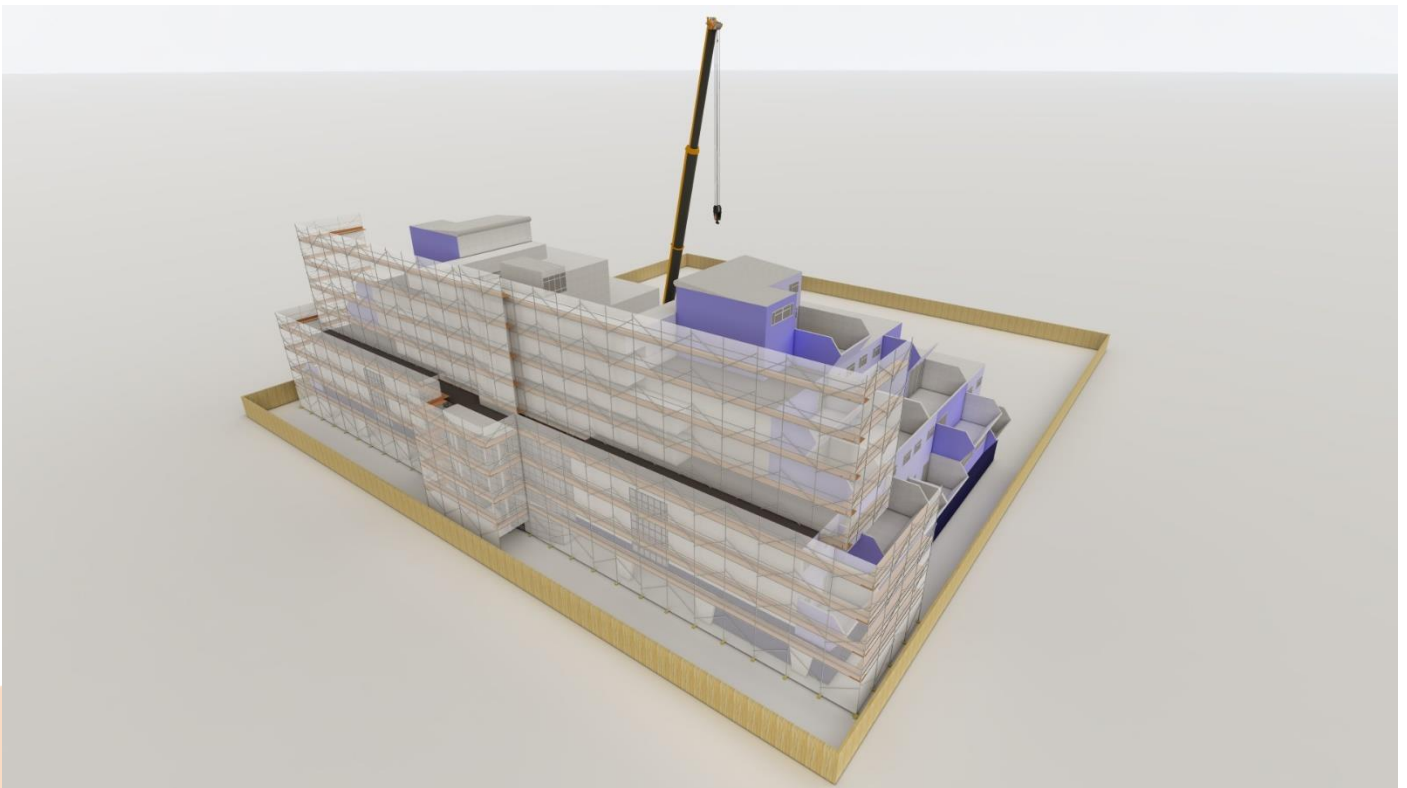
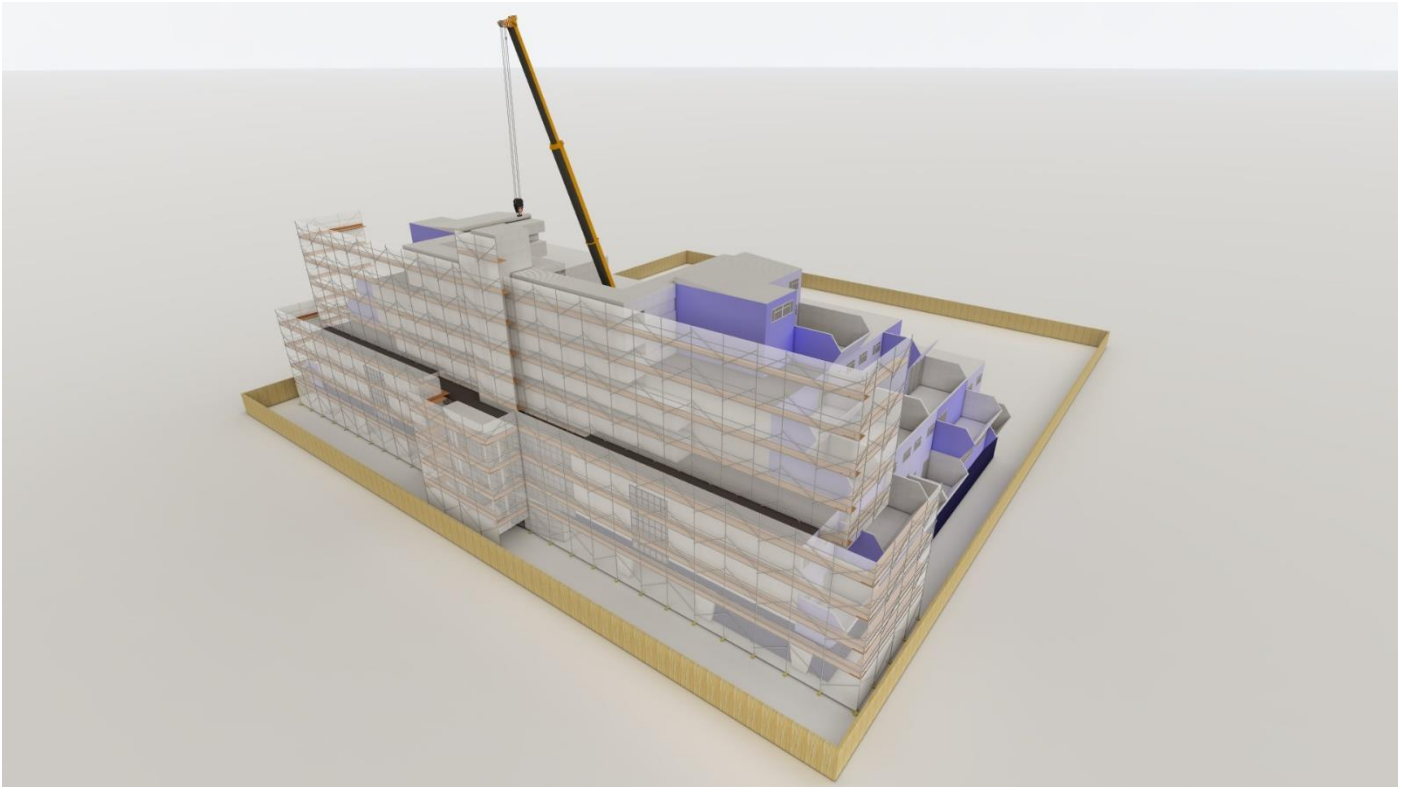
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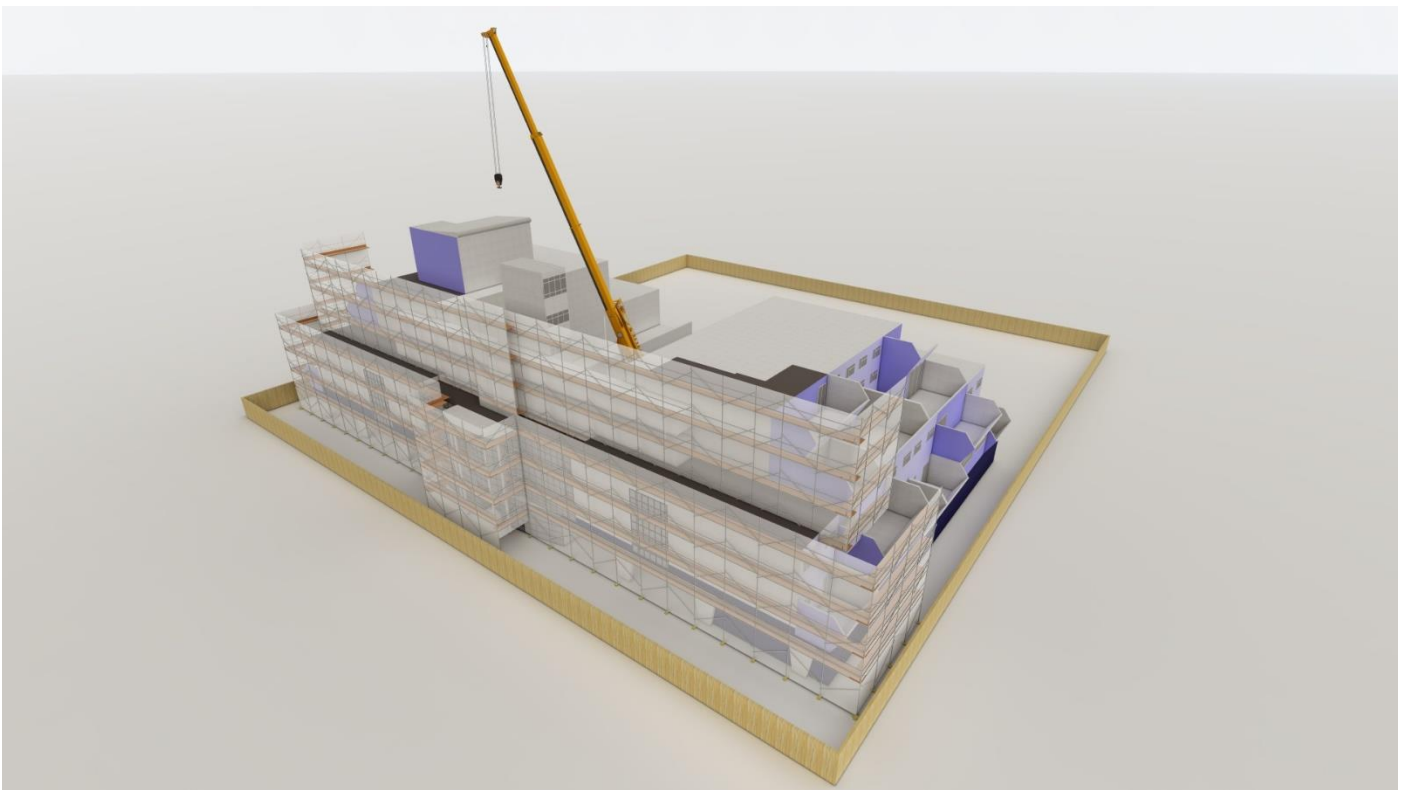
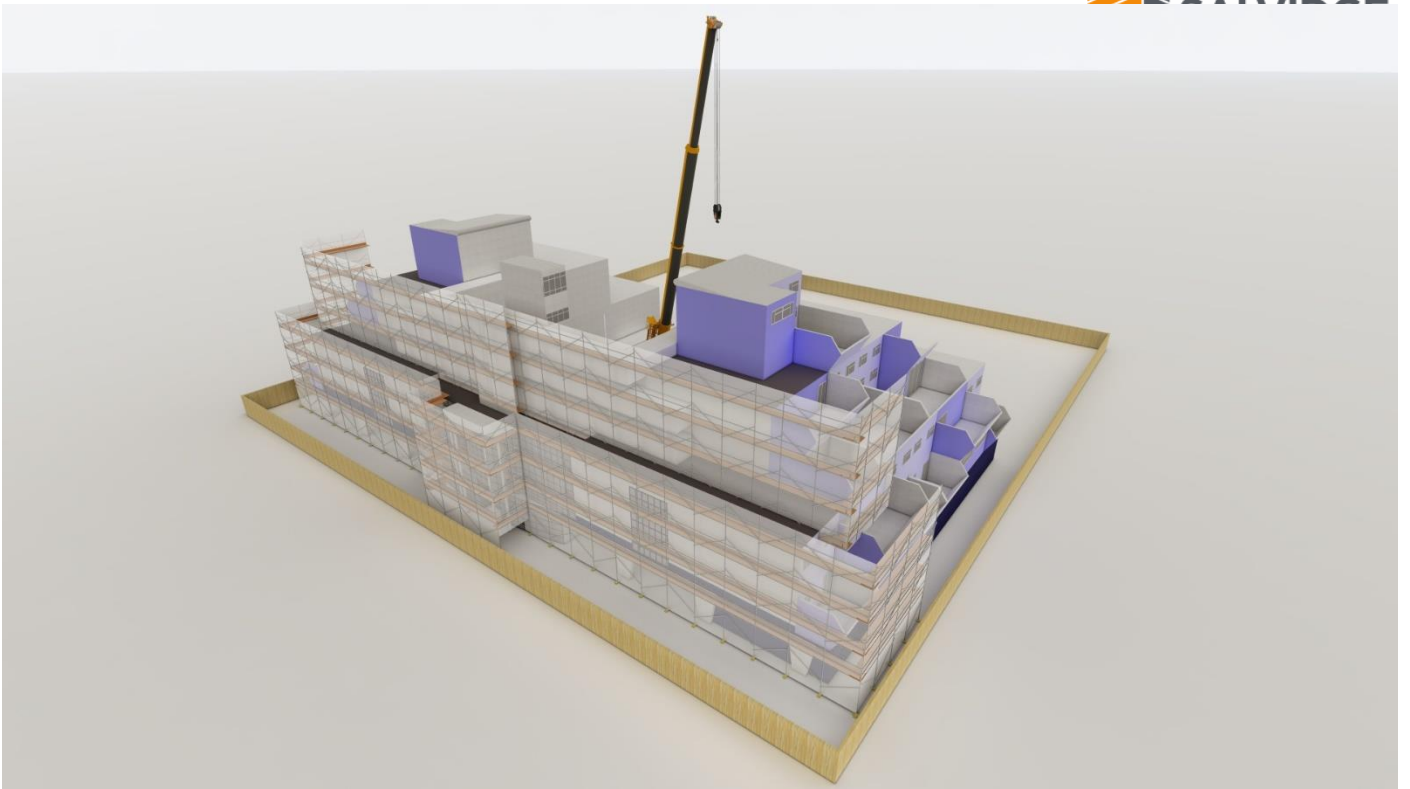


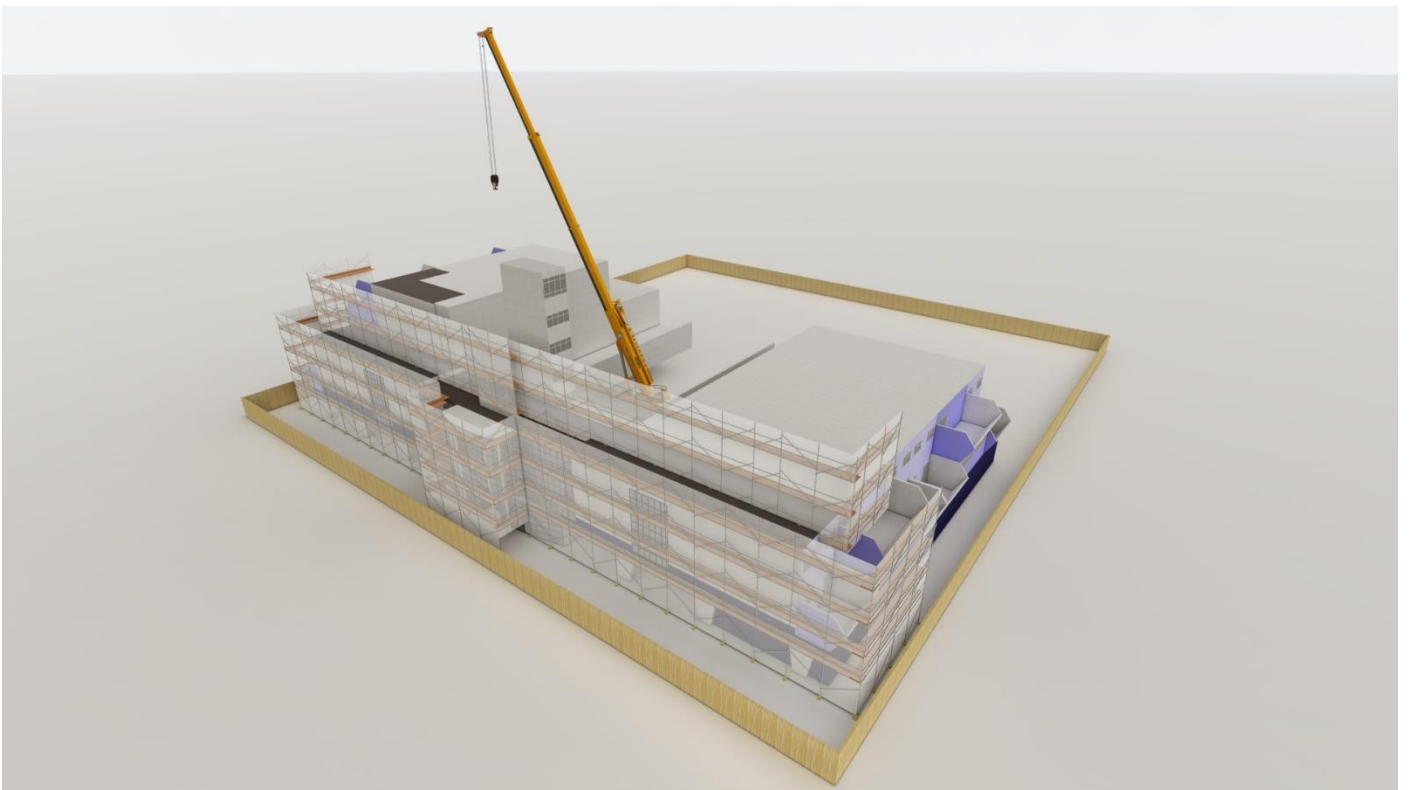
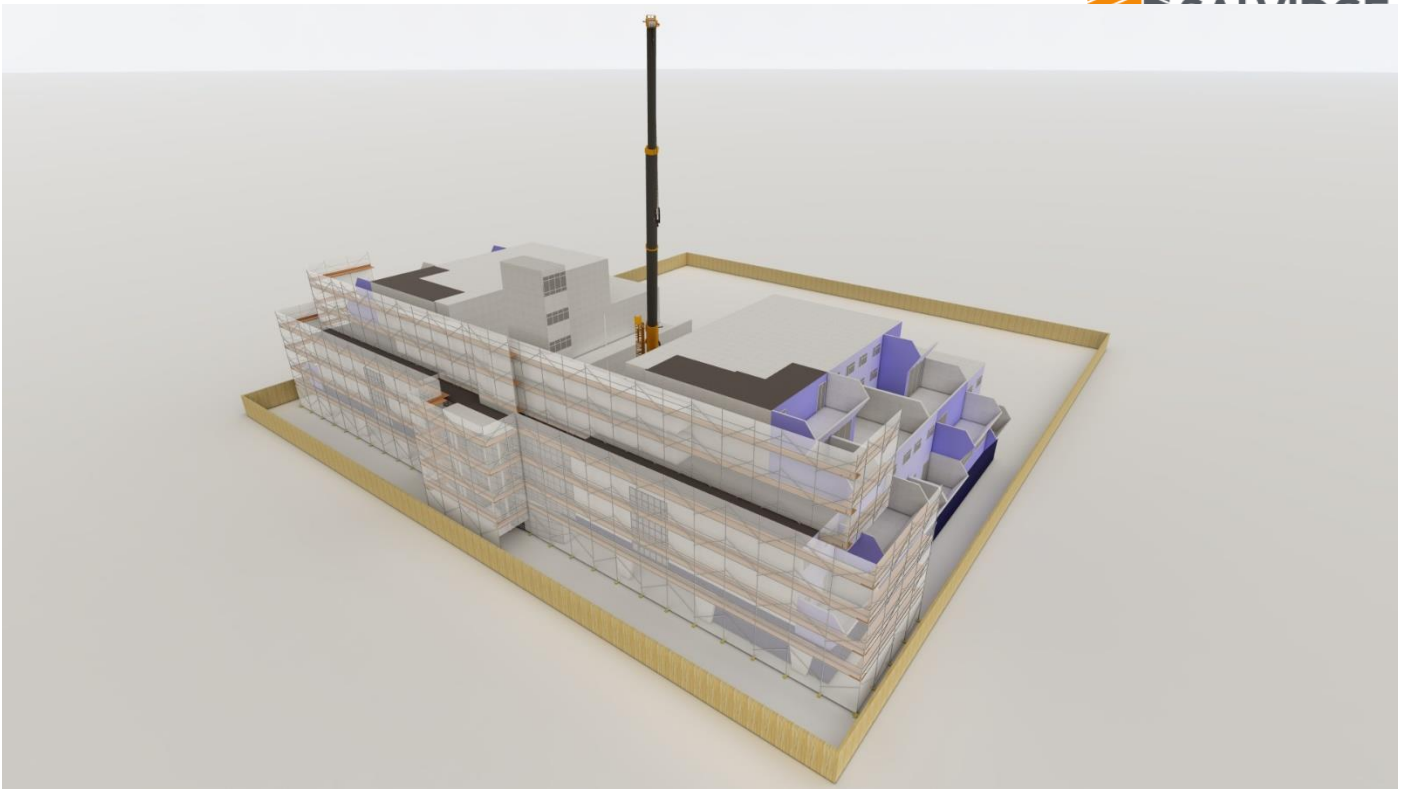
Mural Removal Elevation Drawing

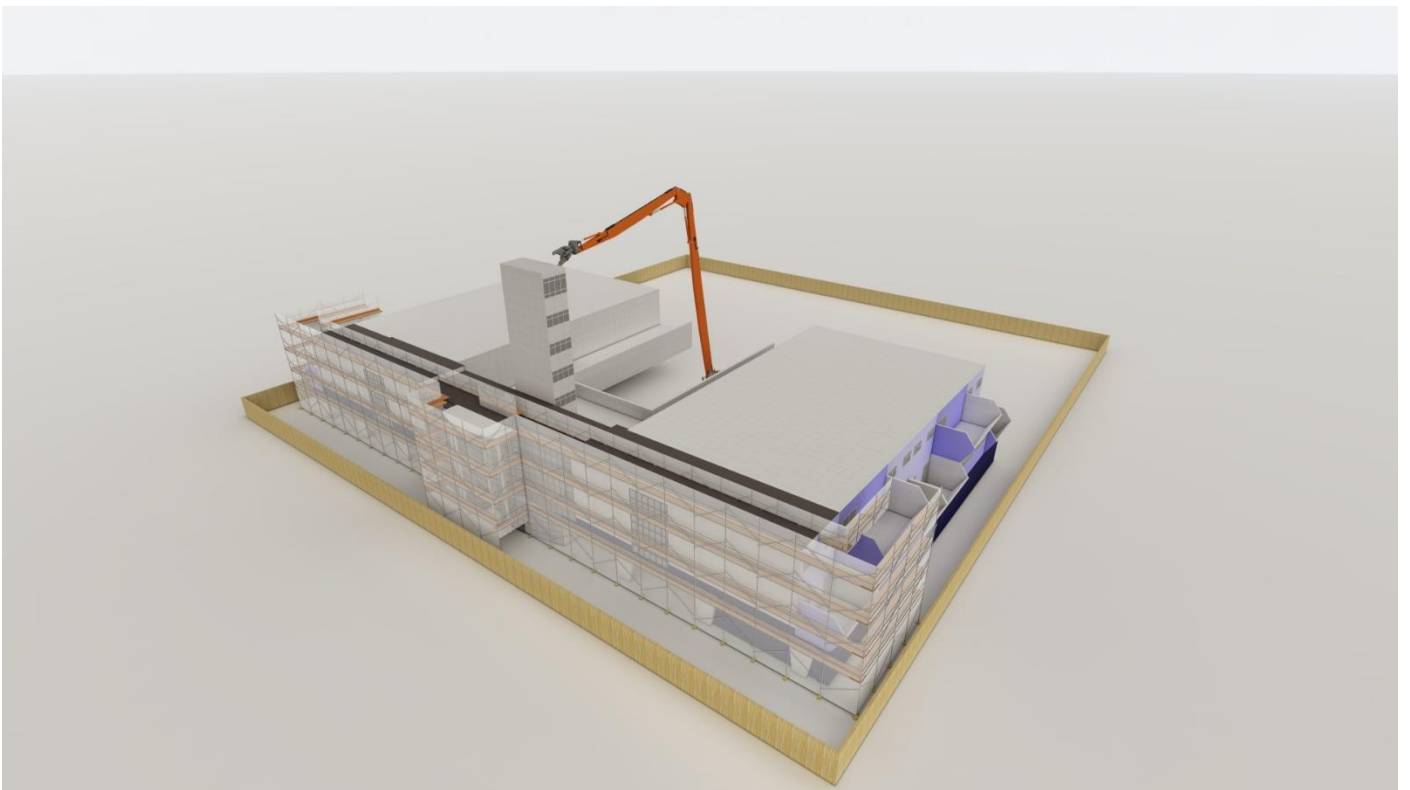
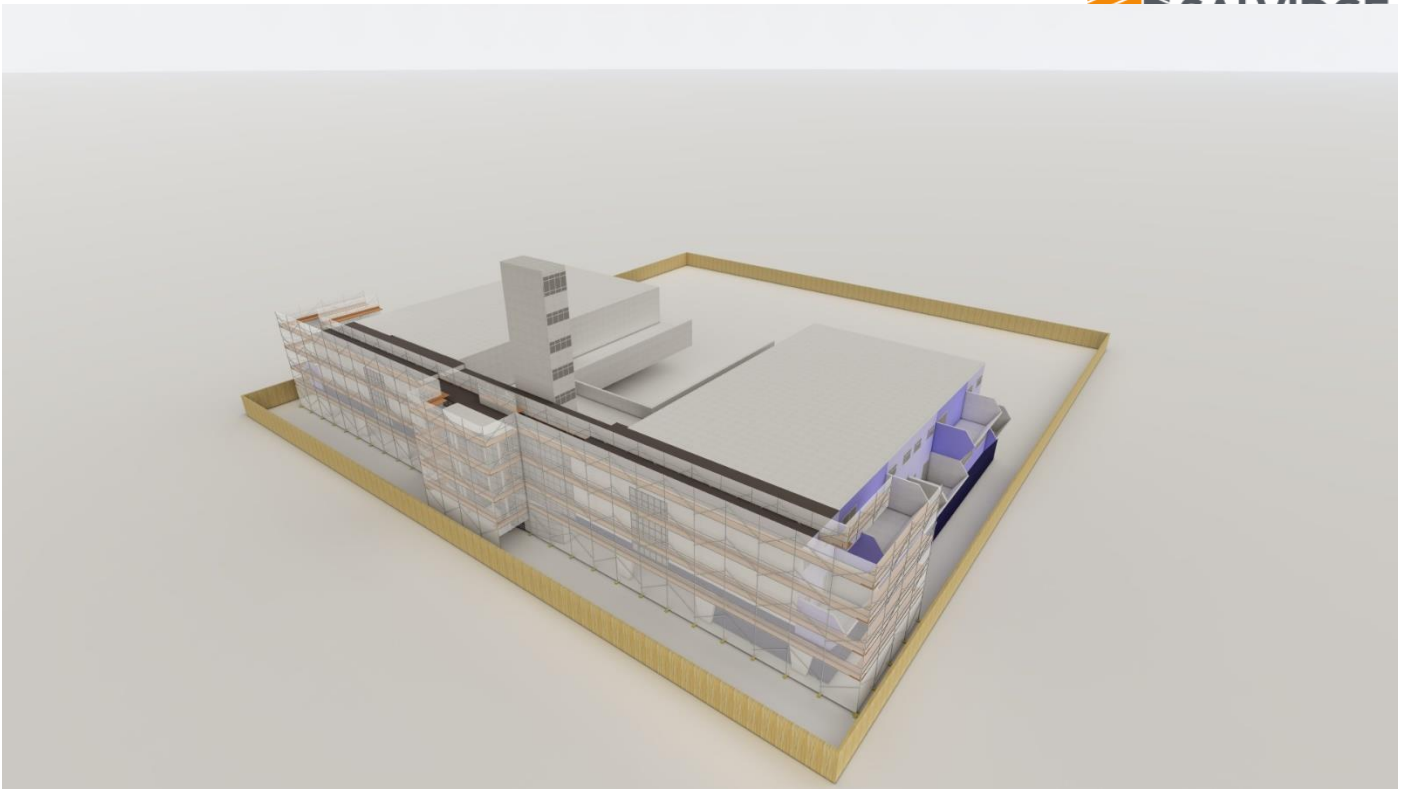


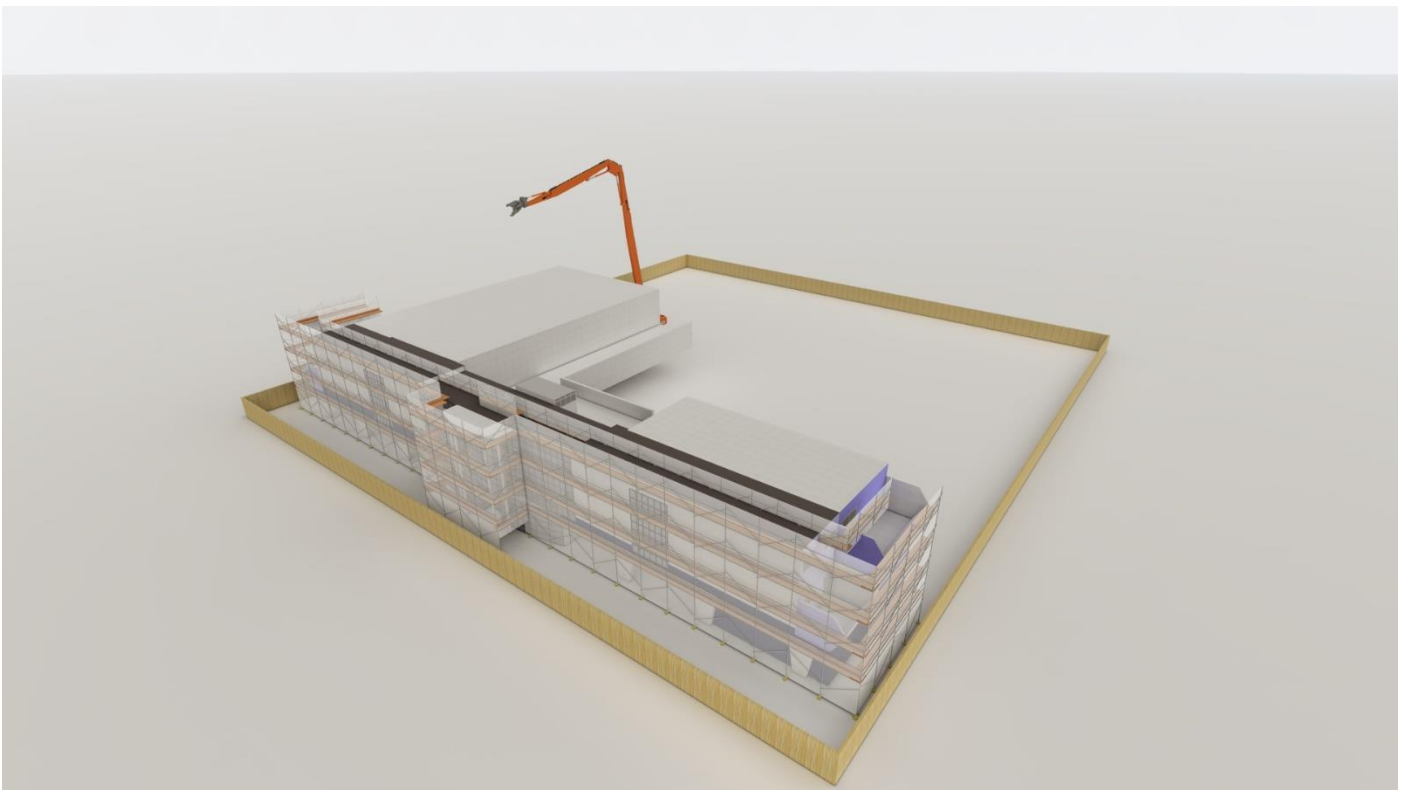
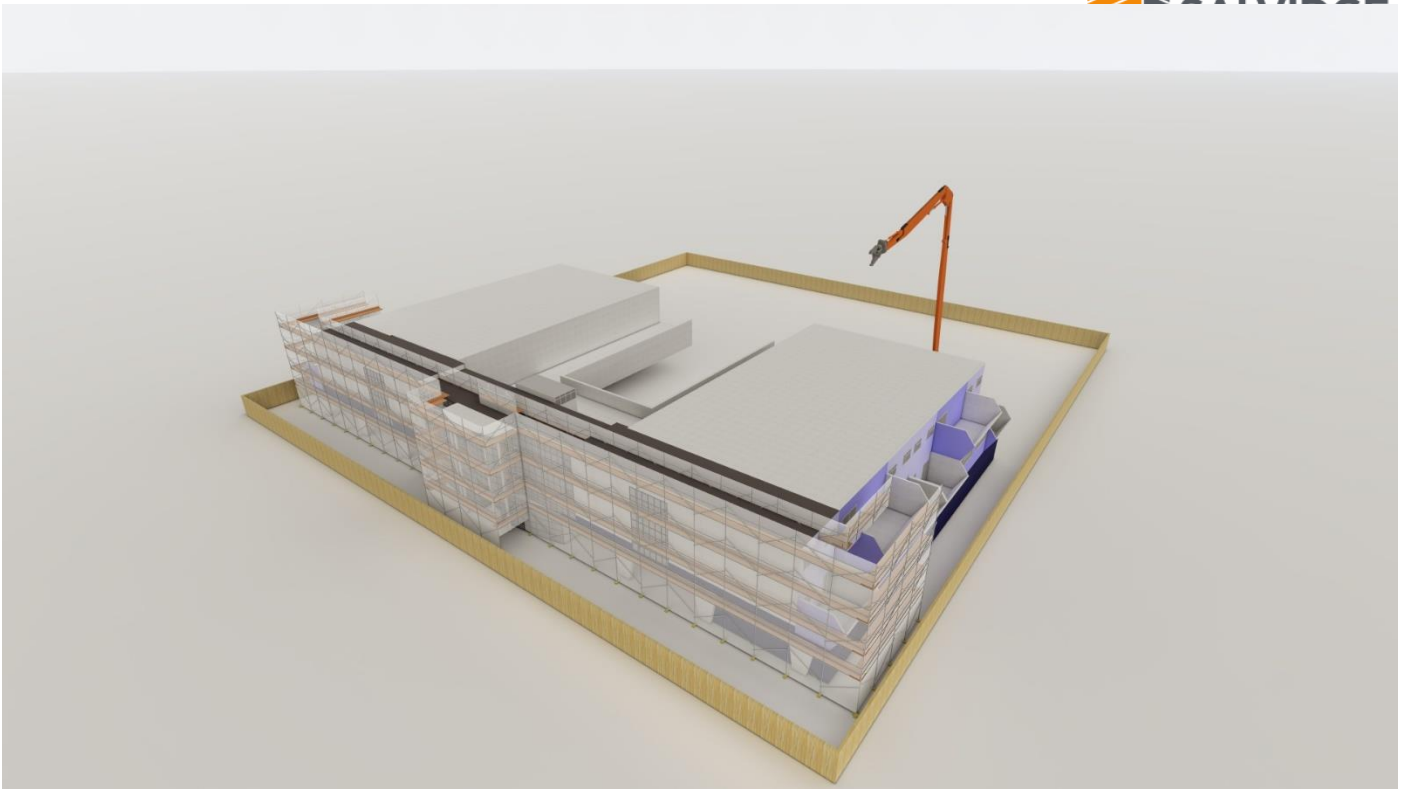
Below is the outline sequence of works for the remaining demolition's including the
The mural removal process.

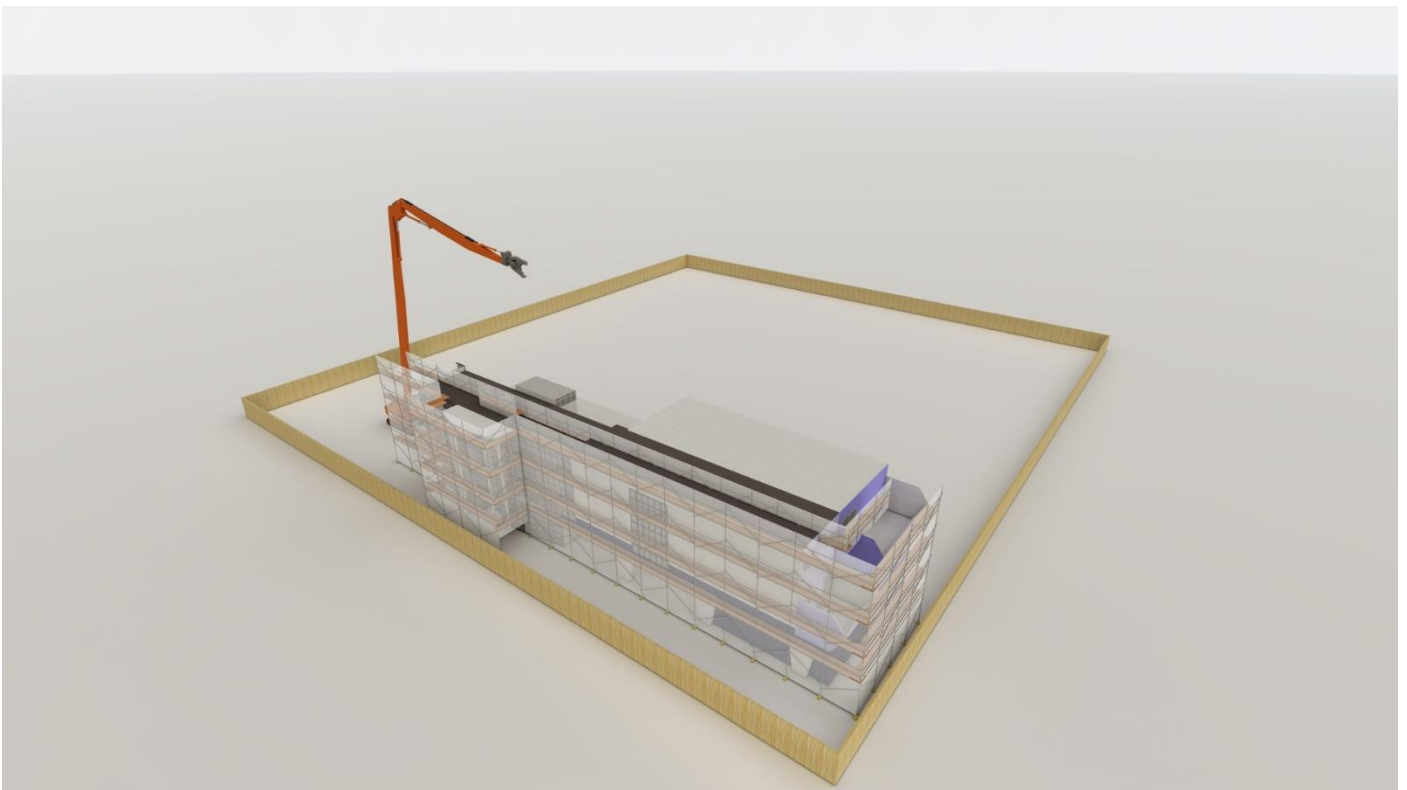
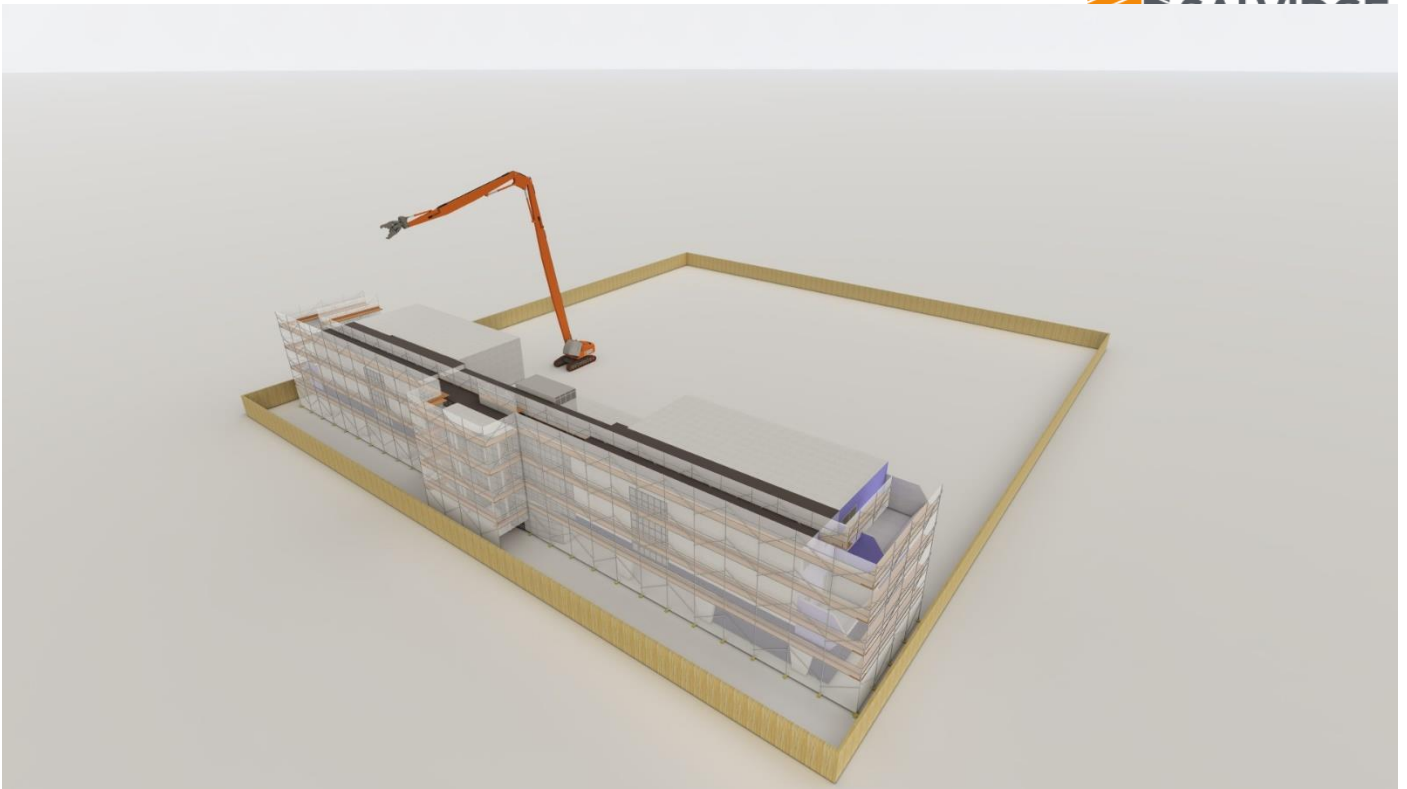


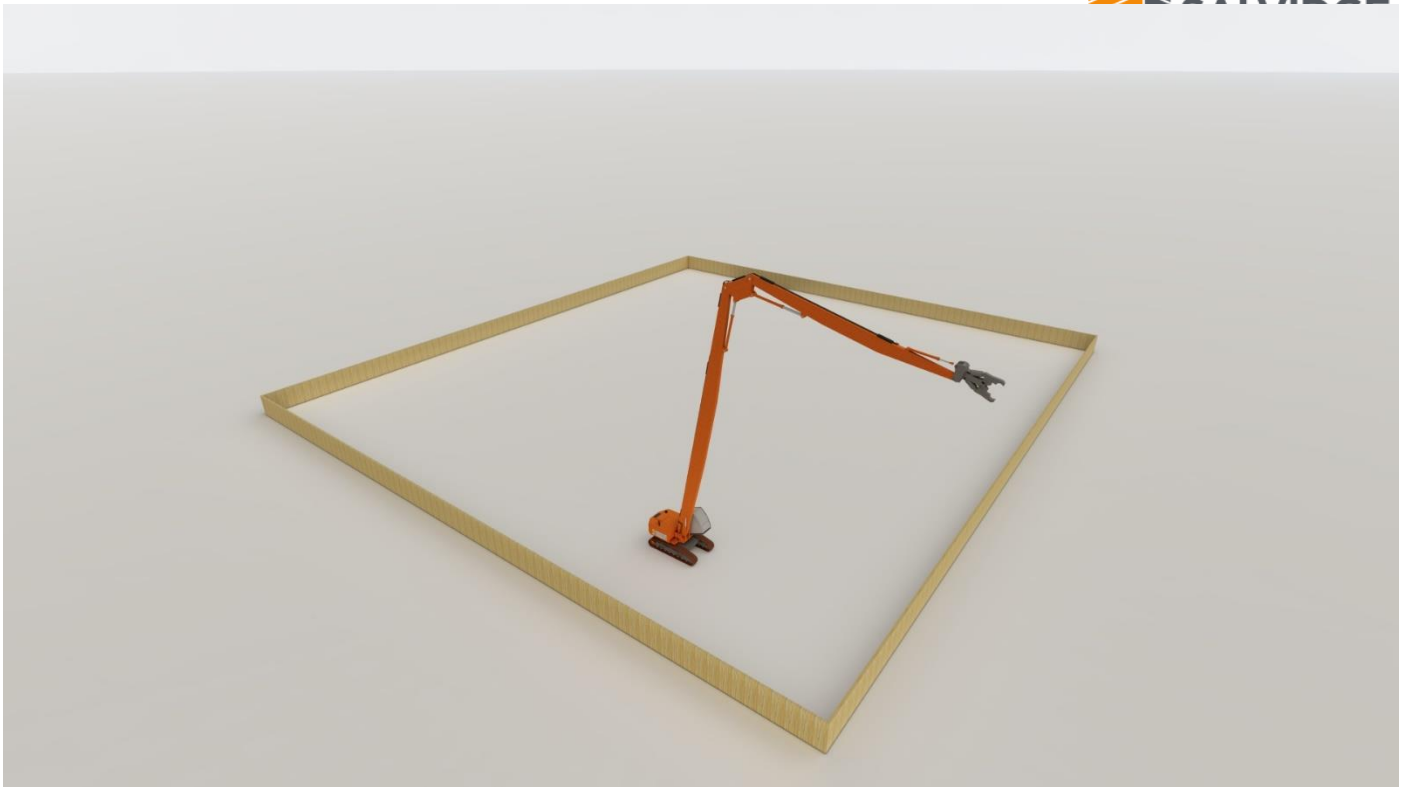












3.5 – SUBSTRUCTURE DEMOLITION

Prior to any works commencing the following procedures will have been implemented and completed:

- Services drawings inspected
- Area (and surrounding perimeter) to be CAT scanned
- Any identified services to be marked up with spray paint
- Permit to Dig issued

PLEASE NOTE AS THE PILE CAPS ARE REMOVED, THE PILES LOCATIONS ARE TO BE PLOTTED AND RECORDED

Once a significant amount of ground bearing slab has been exposed, machines fitted with impact hammers and buckets will begin to remove the slab and foundations. Machine fitted with impact hammer will begin by puncturing the slab and pile caps to break them up into moveable sections. Machine fitted with a bucket will then lift and stockpile sections ready for further processing. Machines fitted with pulverisers will process arisings further to separate concrete from reinforcing bar, and load away respective materials.

All excavations will be backfilled progressively after foundation removal; the area will be graded to surrounding site contours, and the footprint tracked in by machine, leaving a flat site.

As with all projects within the Portsmouth area we must consider the risk of UXO when penetrating or disturbing ground, prior to commencement on site HSL will endeavour to obtain any know documentation regarding potential UXO information in the area. In addition, a specific risk assessment will be created with mitigation controls such as trial pits, shallow trench inspection and bore holes to gather evidence for the safe removal of the slab and foundations.

3.6 – CRUSHING

Site-won hard inert arisings will be crushed on site to produce aggregate for re-use.

Works will commence loading the Crusher using a 360 Excavator. Concrete/hardcore will be loaded into the hopper which is hydraulically fed into the crusher. The crushed material falls onto the conveyor where any reinforcement bar or other ferrous metal is removed by a hydraulic belt magnet fitted above the main conveyor. The crusher then discharges crushed aggregate and metal into two separate stockpiles. Metal will be periodically loaded away into metal bins, and aggregate will be regularly cleared and stockpiled in the client's desired location(s). Aggregate stockpiles will be formed with a suitable angle of repose to ensure they remain stable and to mitigate any "land-sliding" of aggregate.

The Crusher is fitted with a dust suppression system, whereby water is sprayed onto the discharge conveyor to minimise dust.

The area will be left clean and tidy on completion.