

Specific Considerations

SC16

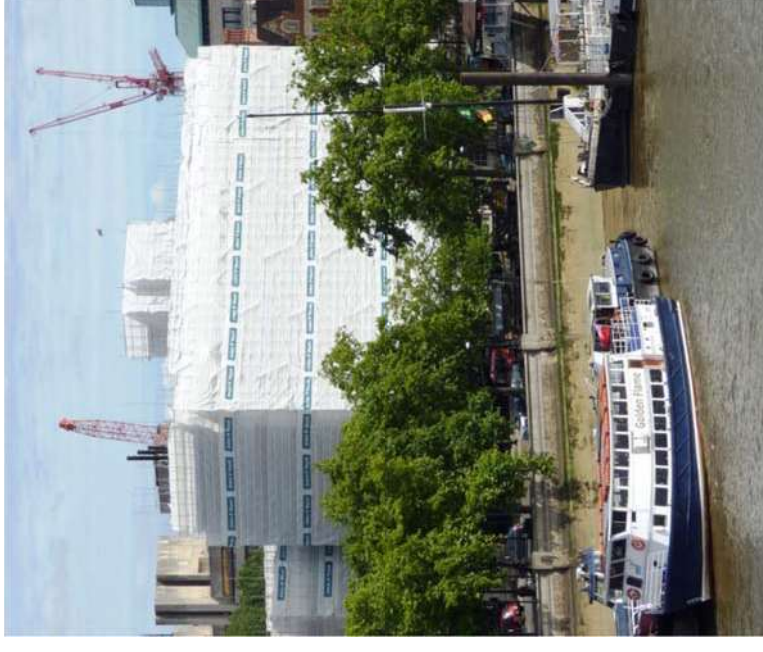
Trees on main high-street within

There are a number of mature trees outside our site boundary on the main high-street outside Friars Walk shopping centre. Although outside our hoarding line, we will protect these from the works. Dust and emission controls (as detailed within the Environmental Management section), together with continuous air monitoring, will be implemented to mitigate any potential impact on trees near the demolition site. In addition:

- No fires will be lit on site
- No access will be permitted within areas demarcated by protective barriers, unless and only where otherwise approved herein. Ground levels will not be changed within them
- No materials, equipment or debris will be stored within any of the protected areas and no chemicals, petrol or diesel will be allowed to spill where they may contaminate the root protection areas of retained trees
- All heavy plant, machinery, cranes and delivery vehicles shall be excluded from the areas demarcated for protection on the Tree Protection Plan
- Roots often exist in the substrate below hard surfaces and extreme care must be taken to avoid damage to them. Therefore existing hard surfaces should be retained to ensure the underlying rooting environment is protected, or if required, removed by less intrusive methods than conventional large machine demolition and civil works
- No excavations are proposed within the root protection area of retained trees



The trees that we will protect from the adjacent works



Example monarflex sheeting on another inner-city site, used to contain dust, noise and emissions protecting arboriculture.

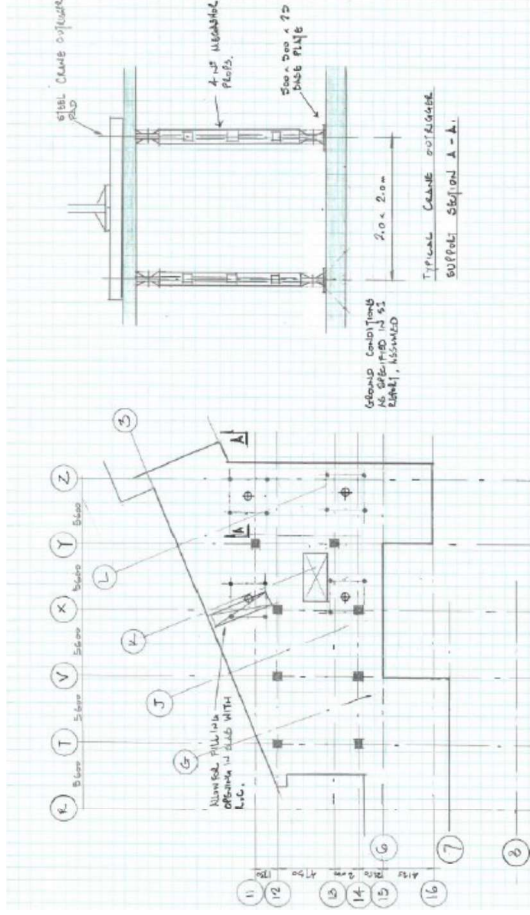
6. Demolition Sequence



Enabling Works

The site will utilise multiple lift cores or similar voids to establish demolition chutes and demolition drop zones to service multiple work fronts.

Subject to engineering review, suspended slabs may require structural support i.e. propping, to allow top down demolition with 5-15T excavators.



General Sequence

Initial 'opening up' works will involve 'open face' demolition, to create as much space within the confines of the site as early as possible, to maximise site logistics and facilitate top down demolition for high level structures, bringing structures to a safe height for large excavator demolition in the final stages.

Open Face Demolition

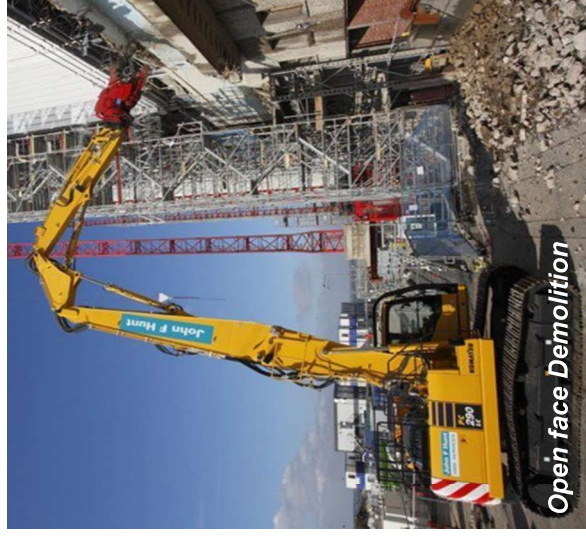
Large excavators fitted with "midi" or "long reach" arms and hydraulic cracker & shear attachments will undertake demolition in a 'walk through' open face demolition.

This method is only employed where the structure is within suitable height, and there is sufficient exclusion zones around the building.

The skilled plant operators will progressively work their way into the structure by demolishing in a "bay-by-bay" sequence, working from the roof level down through the structure.

Care will be taken to continually clear the arisings from the slabs below those being demolish by the operator so as avoid overloading the structure and prevent the risk of an uncontrolled collapse.

A suitable "pad" foundation of demolition arisings will be progressively created upon which the excavator will stand.



Top Down Demolition

Demolition can only commence once all controls & safety measures are in place:

- full scaffold encapsulation including monar-flex
- carpet/ply to the scaffold decks
- temporary water points for dust suppression
- fire blankets and extinguishers in place
- external emergency access points per building
- Ground floor void catch decks (to internal stairs and existing risers)



A 160-250T crane will be used to lift 5-20T excavators, bobcats and tools/equipment to the roof to commence top down demolition.

The demolition of the plant rooms may require a combination of manual removal methods (metal roofing) and machinery (membrane & structure)

Excavators will demolish level by level in a reverse construction sequence using hammer and cracker/rotating pulveriser attachments:

- Step 1 - Non structural walls
- Step 2 - Slabs
- Step 3 - Beams (by mobile crane)
- Step 4 - Columns

As each level is complete, all plant and equipment will be mobilised to the next level using by mobile crane, restarting the cycle.

There will be a small overlap between finishing one floor and beginning the rest to help drive the programme

Once the plant room demolition is complete, a well hole is created in the slab to allow plant and equipment to be lifted down to the next level.

Well holes sequence:

- Step 1 - Install edge protection barriers to 3 sides
- Step 2 - Exclusion zone on floor except operator and 5-8T excavator

- Step 3 - Excavator to create slab penetration in local bay by hammer attachment
- Step 4- Excavator to track back and drag in final barrier to enclose the penetration

Demolition then cycles through the floors using the same reverse construction demolition sequence

Top down demolition will cease at Level 3 slab, allowing larger machinery (30-45T excavators) to walk through the remaining structure ('open face' technique)

Boundary Wall Demolition & Potential Damage

Demolition conducted adjacent to any boundary needs to be carefully planned to mitigate noise, dust and vibration, or potential damage to adjacent properties.

Where ever possible, hoarding and scaffold will be used to segregate demolition from adjacent properties.

Any brick or blockwork walls may require the initial top courses to be removed by workers from elevated platforms, prior to small machines carefully removing the remaining

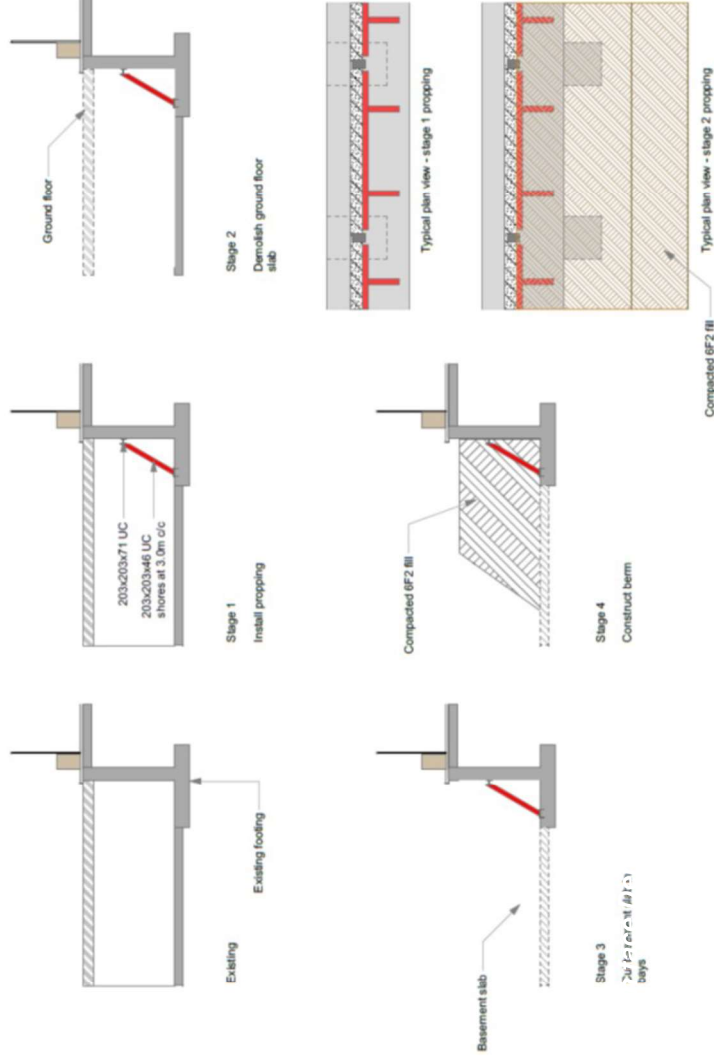
Ongoing controls

- Hot works adjacent to the perimeter scaffold requires a spotter at all times (including fire watch), wetting down scaffold protection (ply and carpet), fire extinguishers, and fire blankets
- No excessive stockpiling on suspended structures
- Noise, dust and vibration monitoring

Removal of Ground Bearing Slabs, Drainage and Foundations

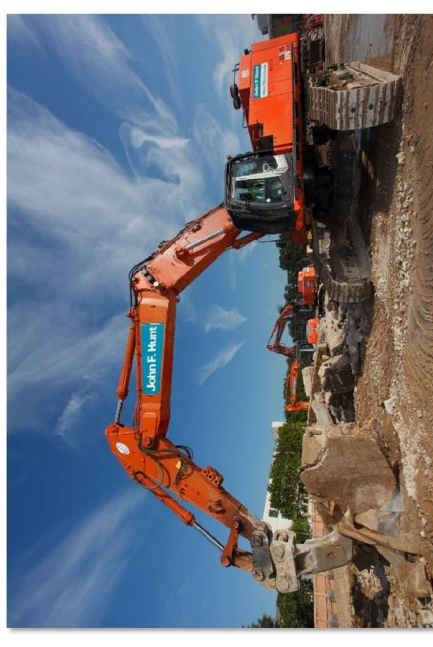
After demolition and clearance we will begin to break-out the existing ground bearing slabs, foundations, drainage and hard standings to the specified levels.

Temporary works and earthwork support will be installed subject to engineering review during breaking out and earthworks.



Breaking out and earthworks will commence in the following sequence:

- Area to be broken out will be marked out by Demolition Manager
- Safety fencing with appropriate warning signage will be placed around the work area creating an exclusion zone
- A 21/45T excavator equipped with buckets, hydraulic breaker and ripped tooth attachments will commence with the breaking out of the concrete slabs and tarmac
- The excavator will break out the concrete / tarmac working in a controlled methodical sequence through each slab, base or hardstanding
- Arisings will be grubbed up with bucket attachments and sorted into the relevant stockpile for offsite recycling or on-site crushing

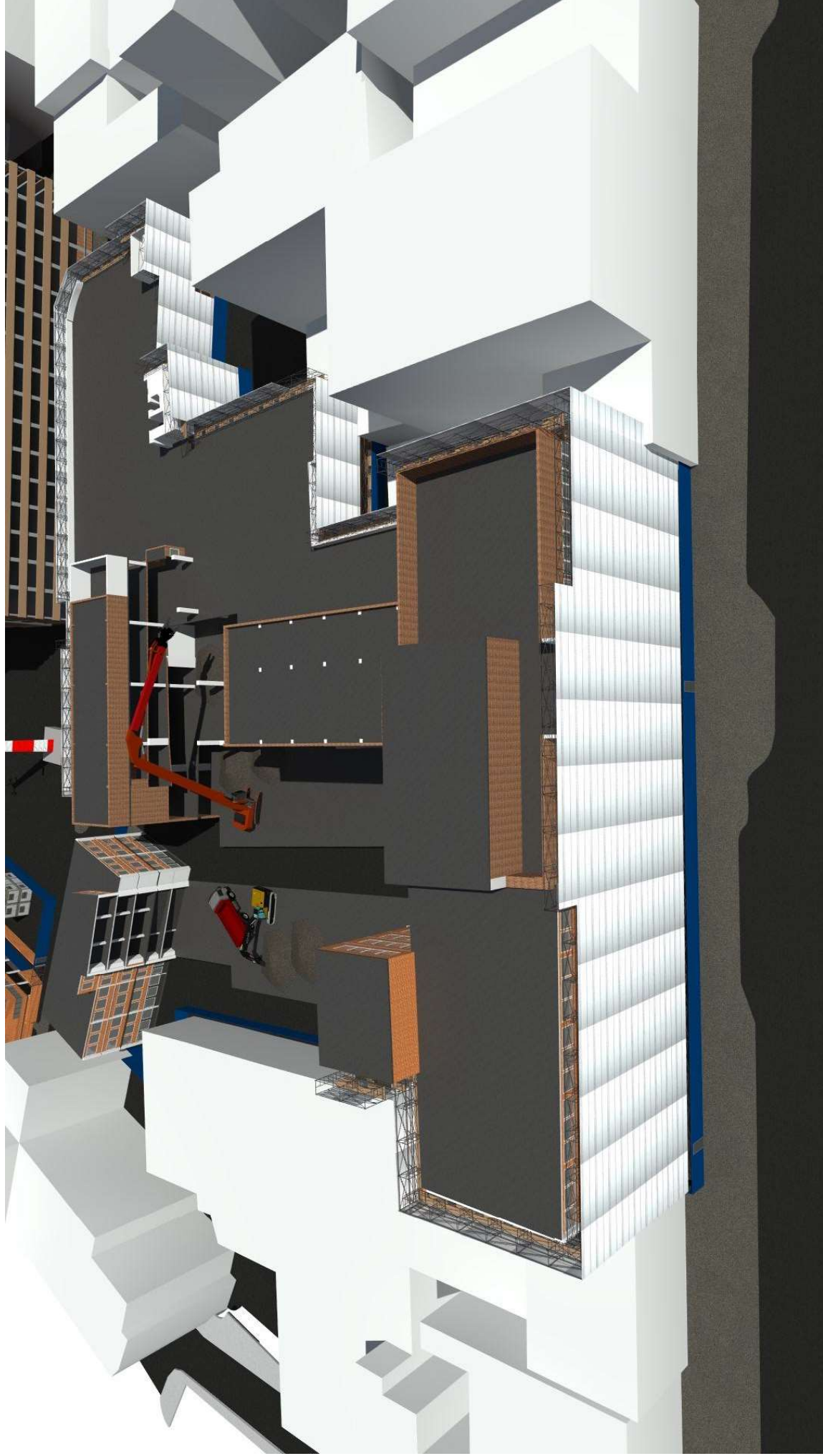












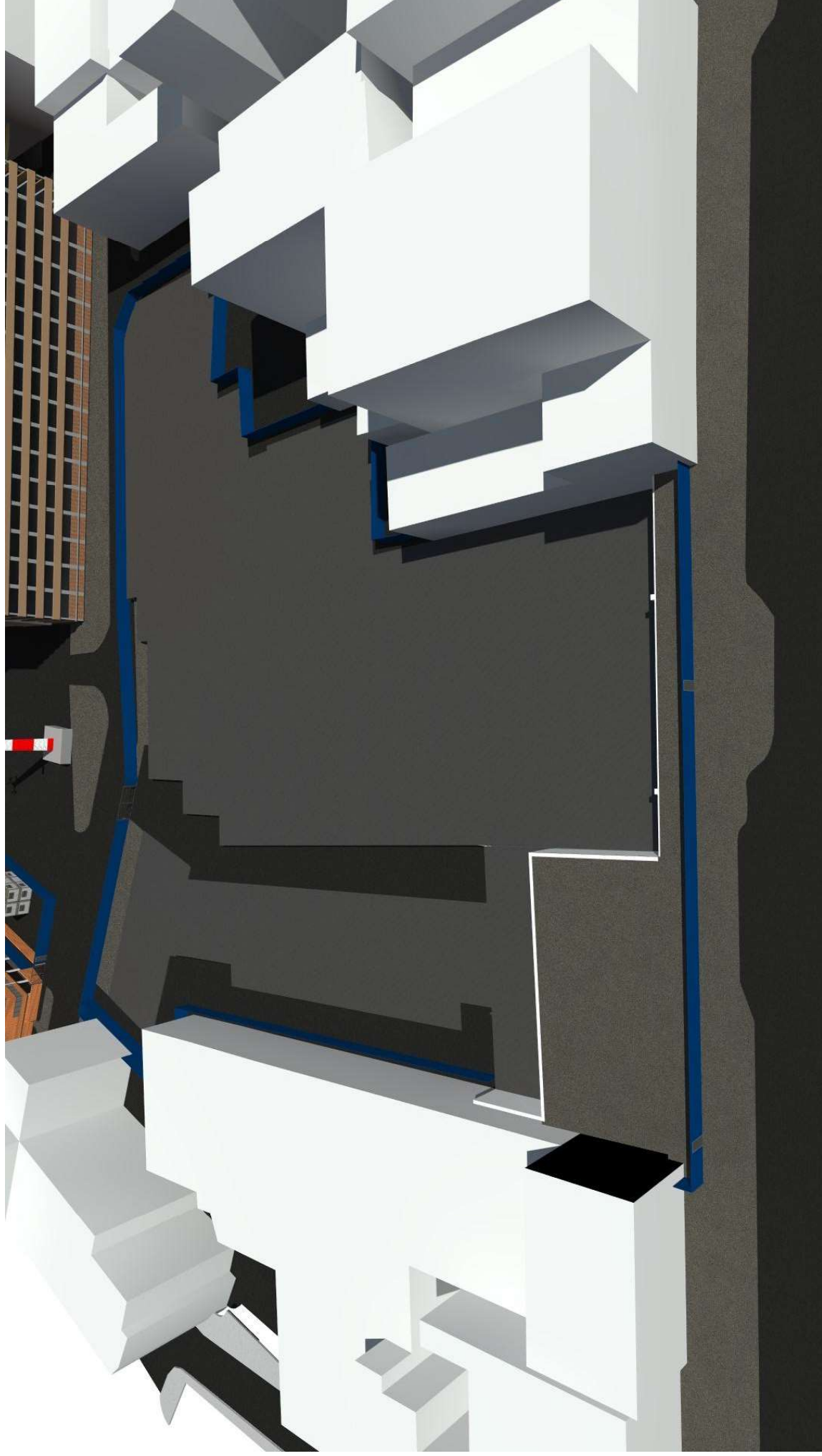






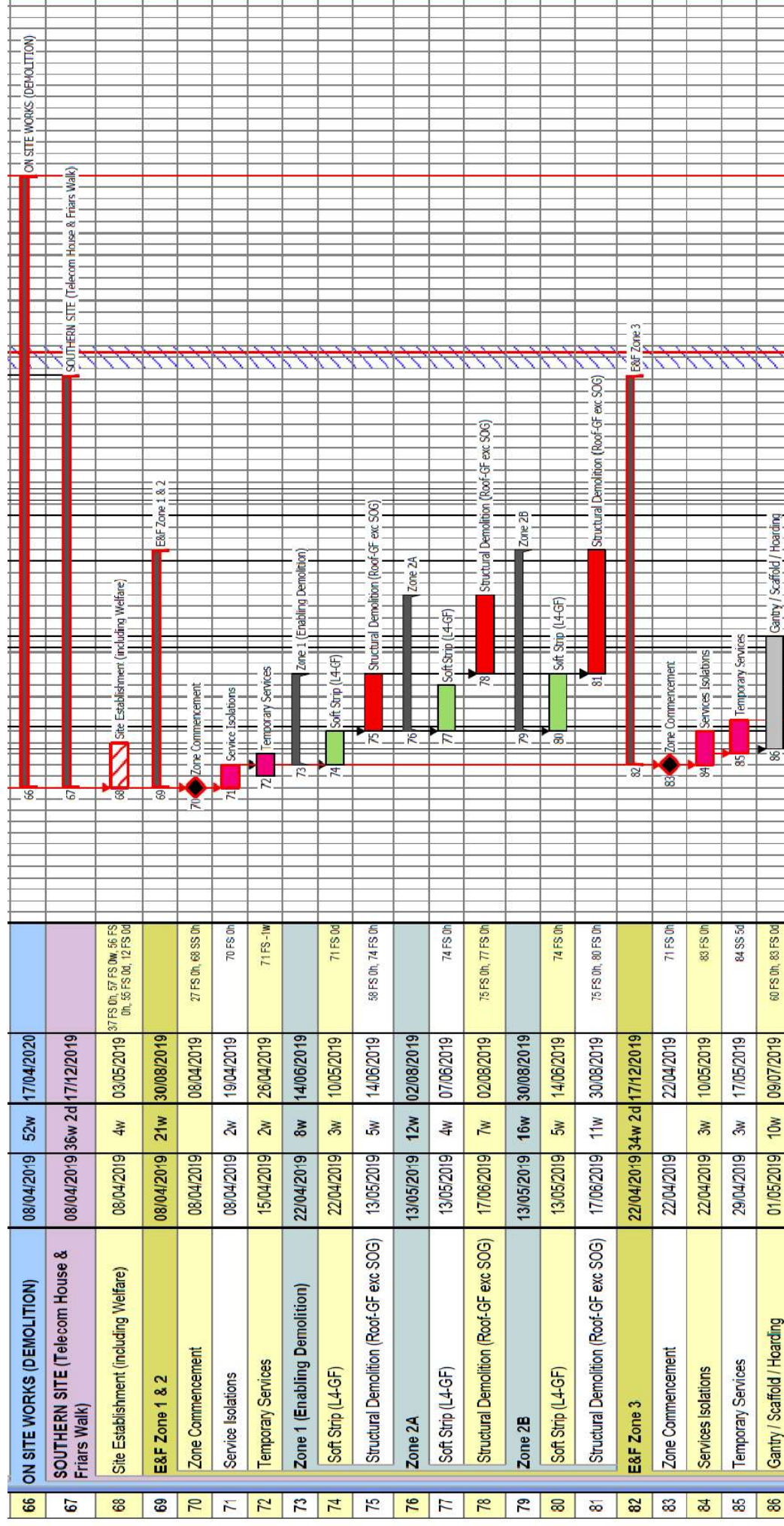


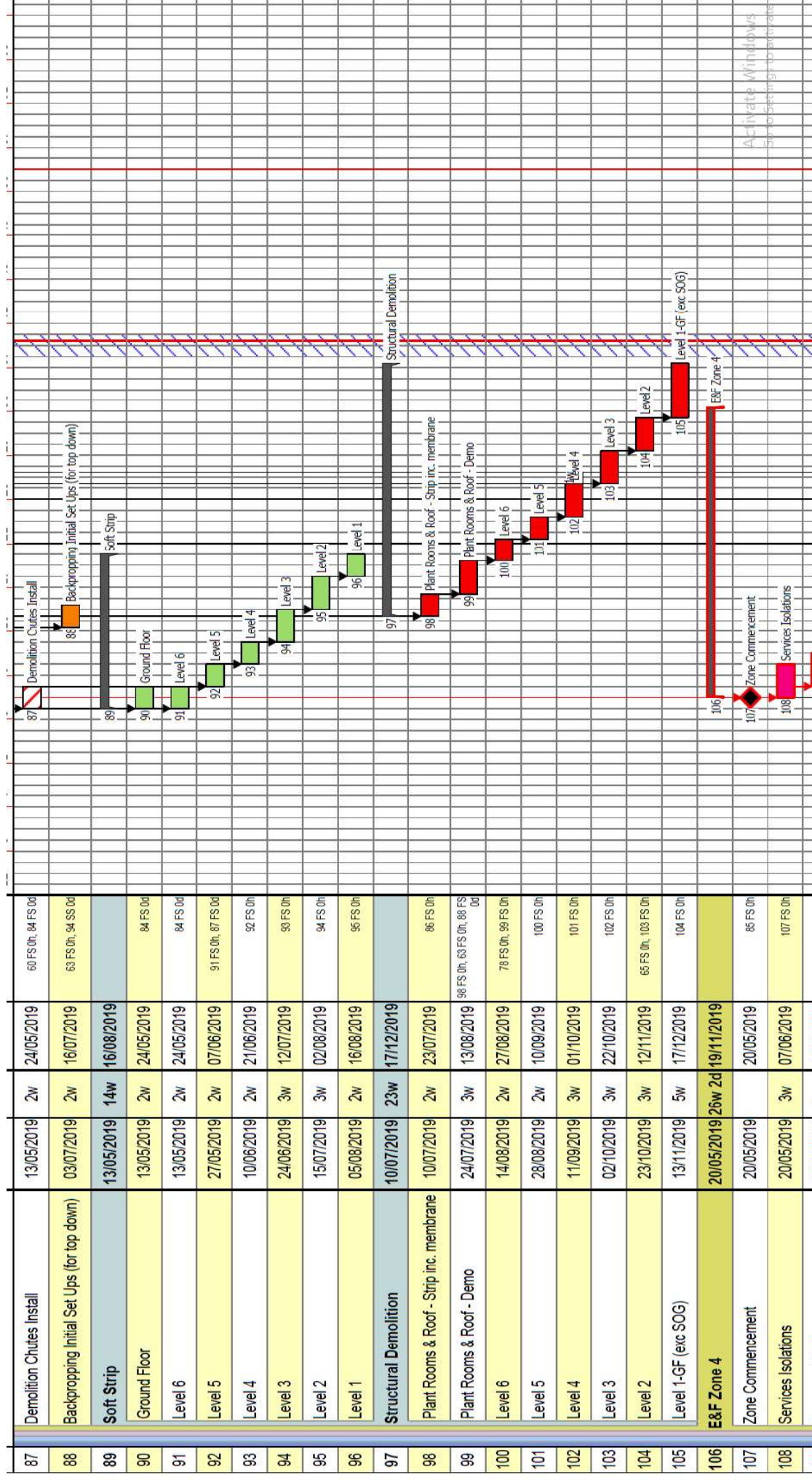


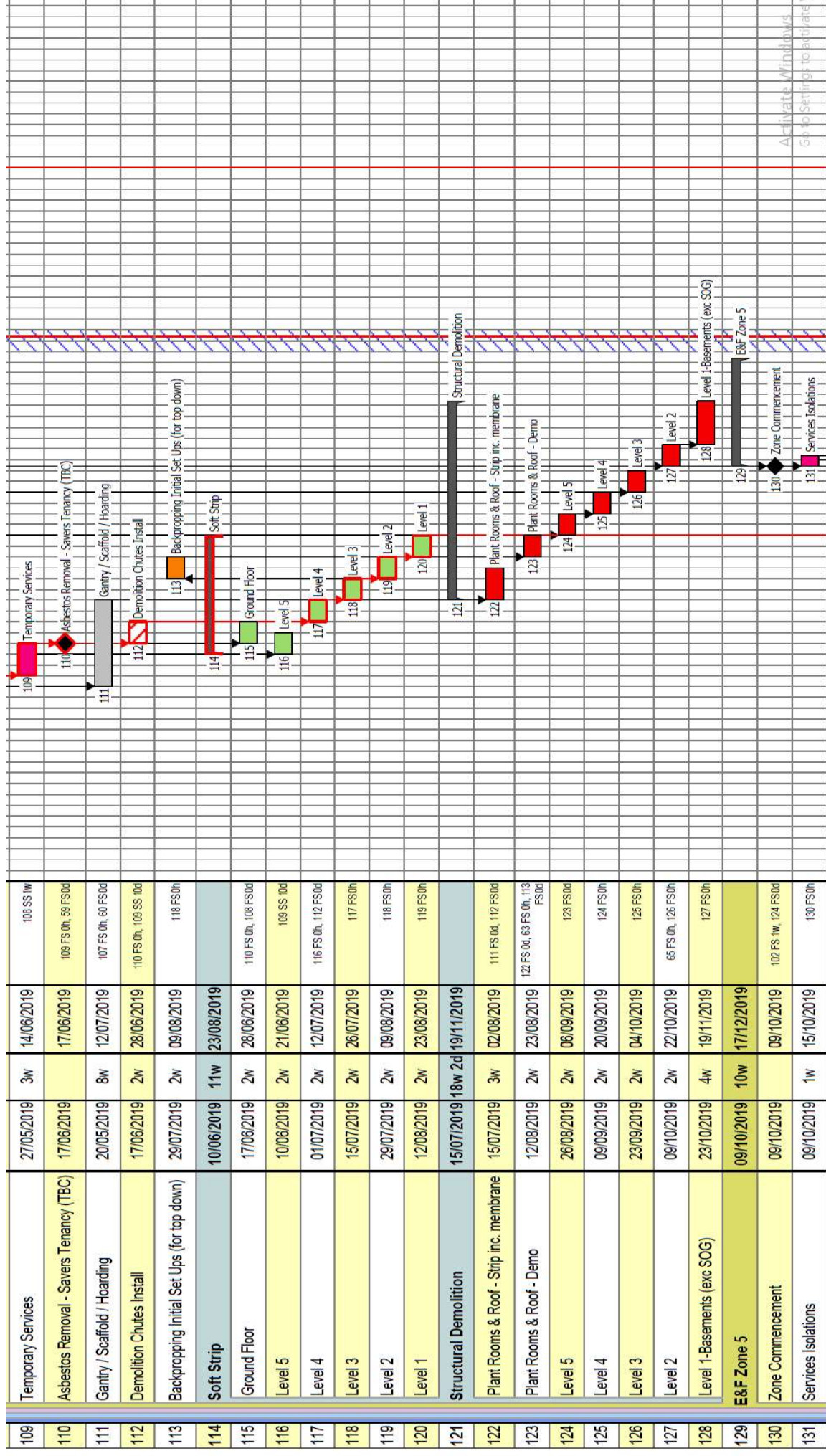


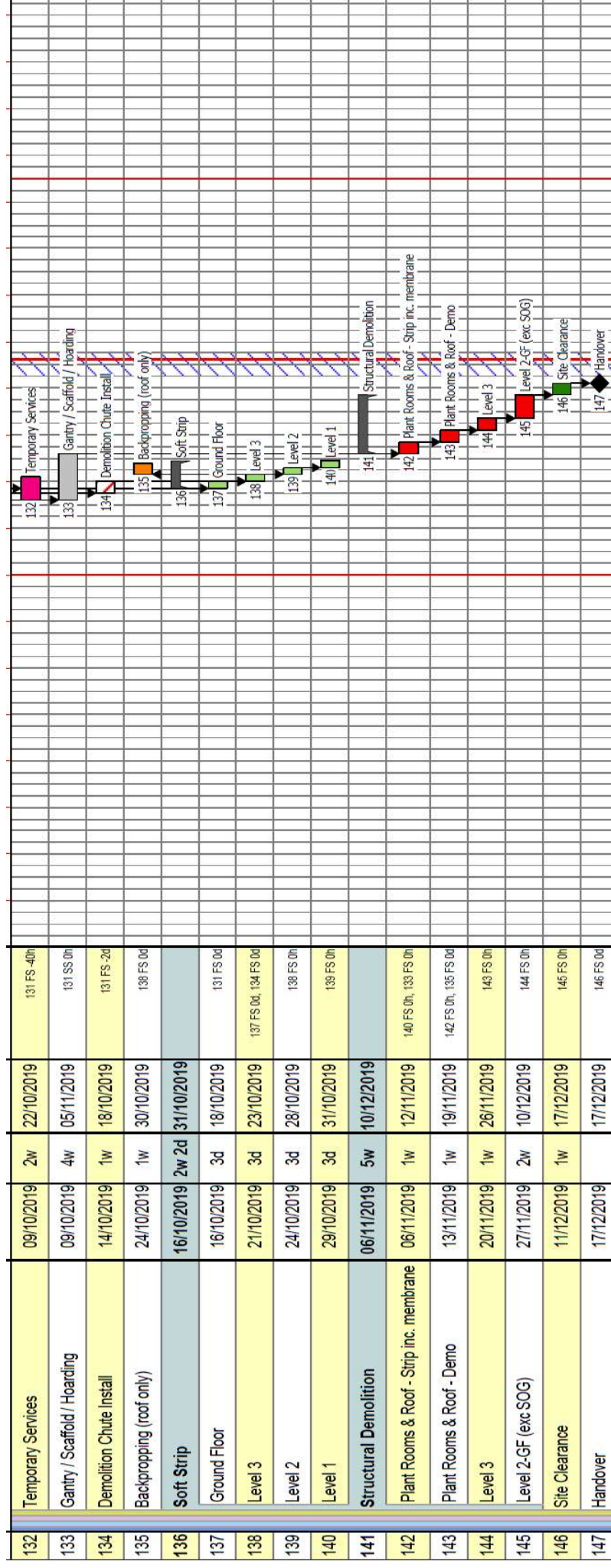
7. Programme and Timescales











8. Temporary Works



Designing and Managing Temporary Works

All design management will be in accordance with our **Temporary Works Procedure SMS-020**, ensuring compliance with BS5975:2008.



Following a **Structural Appraisal Assessment** and provision of **Design Brief** from the Temporary Works Coordinator, a full design will be completed for each temporary works element used to facilitate works and included on the **Temporary Works Register**. A **Site Control Assessment** during installation verifies it has been built to design before use.

SMS-020 sets out requirements such as a '**permit to load**' and provides a **Temporary Works Inspection Register** prompting inspections at the appropriate frequency.

Records are kept in the Site Office and uploaded to the project's secure SharePoint.

Our Contracts Manager will maintain control of temporary works on-site; all of our project managers are competent in this having completed Temporary Works Coordinator Training.

In line with our procedure, when designing due cognisance is given to:

- The proximity of third-party assets, public footways and roads
- Obtaining agreements for oversailing scaffold
- Management of traffic on adjacent haul roads

- The protection of adjacent third-party assets and structures

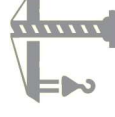
- Services and utilities that are to remain in place

All designers risks will be recorded on a risk matrix proforma using a scale of impact and severity between 1-5. Residual risks that cannot be eliminated through design will be clearly marked on drawings.

Method Statements with Risk Assessments and designs for installing temporary works will be produced prior to their installation for comment by your design team or other third-parties. To ensure only up-to-date design information is used updates will be recorded on the site drawing register and correctly versioned.

Craneage

Given the methodology adapted and ability to facilitate demolition with mobile cranes; zoning, out of service restraint and free movement is not of concern.



The mobile crane will be mobilised and demobilised to site using agreed traffic routes and conducted out of normal hours in agreement with Reading Council, to avoid impacting normal traffic. Once onsite, erection and dismantling of the crane would be done within the site footprint.

Crane type and sizing will be confirmed, after structural investigations and assessment is completed. This assessment ultimately determines which excavators are chosen, which will be lifted to the roof to

commence top down demolition. Ideally mobile cranes in the range of 110T-220T would be used, which are more than capable to also facilitate adjoining land scaffold/gantry install and dismantle.

Mobile cranes may also be used against adjacent boundaries where saw-cutting and lifting techniques are employed, for example to remove a beam or column, if conventional demolition methods are not suitable.

A programme will be issued prior to commencement and be used to ascertain key dates for crane use on site including any over sail.

Scaffolding

Company Health and Safety Standard

No.7 'Scaffold Requirements on Site'

will be followed and this will provide guidance to ensure safety and compliance as well as an inspection and testing scheme.

All proposed scaffold structures will be designed in accordance with the TG20:13 regulations by an independent scaffold designer and the proposals will be subsequently checked by our in-house engineering dept, logged on a scaff-tag and in site files.

Flame retardant Monarflex type sheeting will be installed to the external face of the scaffolding to encapsulate the car park and assist in containing dust and debris.

The scaffold will be secured from authorised external entry using 2.4m hoarding at the base on public frontages.

Scaffold and hoarding on Garrard St elevation may be subject to obtaining a relevant licence through Reading Council, however all other external protection will be contained with the demolition boundary, with no requirement for oversailing or access required.

Logistics of installation and striking is

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addressed below under *General Access*.

An agreed level of liability and professional indemnity insurance will be maintained covering all scaffold or gantry works.

Scaffold, gantry and hoardings will be used to protect and segregate the public from the demolition works, while assisting to contain demolition dust and debris. External scaffold will be for site worker access and to conduct works from where it is unsuitable or inefficient to work from the structure.

The scaffold shall be used for emergency access no materials or debris will be stored on scaffold, only kept there while being used for any current task.

Fans will be used in line with best practice and as a secondary measure to mitigate potential injury from a falling object which has escaped the immediate scaffold face.

General access for scaffold

Scaffold will stand completely independent and separate of surrounding adjacent neighbouring structures.

To avoid unauthorised access we will secure this using monarflex, hoardings

and locked gates.

With suitable space around the perimeter for deliveries and laydown, a combination of existing lifts, forklifts using existing ramps and manual methods will be used to mobilise and install scaffold, fans and gantry.

Striking of scaffold, fans and gantry will be aided by lifting out using mobile cranes located to the west within the site boundary. Some equipment may need to be manually demobilised however we anticipate this to be minimal.

Working hours will comply with the project working hours for any install/ dismantling unless alternative arrangements are agreed prior.

Community liaison is vital to minimise the disruption associated with scaffolding. We will conduct an initial **newsletter drop** with information about the works, the programme and site team contact details. This will be followed by an evening information meeting for residents/local businesses if necessary and a continuation of subsequent newsletters in hard copy or via email. Where specific stakeholders have bespoke requirements e.g. neighbouring access, we will issue individual updates also via our Project Manager.



All required Personal Protective Equipment and tools used to install scaffold/ gantry at height will be tethered to avoid falls or drops from height in line with our **Working at Height procedure**.

9. Sustainability





Noise

- In line with Good Neighbor Policy, no shouting, stereos or radios
- All plant switched off, never idling, when not in use
- Silencers, vibration dampers, barriers, screening and static plant & waste chutes positioned away from party walls and site boundary to minimise noise levels
- Methodology to maximise use of mini-pulverisers, with percussive plant avoided
- Plant used in line with BS 5228
- Cutting operations and noisy tasks minimised through off-site fabrication where practicable
- Monaflex sheeting provides sound barrier
- Compliance with Section 61 agreements
- Unattended real-time sound level meters deployed on site boundary to monitor LAeq with trigger levels pre-agreed
- Demolition arisings loaded via internal well-holes down to the ground floor where it will be loaded into waste lorries



Dust

- Employ Best Practicable Means (as per Part III of the Environmental Protection Act 1990)
- Vehicles securely sheeted when transporting materials to/from site
- Site speed limit adhered to
- Haulage roads cleaned regularly
- Wheel washing facilities and access points to public roads
- Mobile water bowsers to dampen haul roads
- Increased spraying in dry weather
- Drop heights for loading/unloading minimised
- Water supply installed for dust suppression to Dampen down cutting, grinding and breaking out using atomisers forcing tiny particles of moisture into air without creating excess water
- Monaflex screens used as well as primary containment areas
- Dust monitoring

Waste

- Monitor waste streams using data collected from **Waste Log Forms** provided by Site Managers.
- Exceeding best-practice a detailed Site Waste Management Plan will be developed for the project prior to the commencement of any works, for your approval
- All waste and demolition/excavation arisings separated into waste streams as much as practicable on site and send to the appropriate recycling facility or reused
- Implement initiatives on-site to reduce, reuse and recycle diverting waste from landfill with a target of 98%:
 - Compost bins for food waste
 - All timber for hoardings and ply FSC/PEFC accredited
 - **Reuse crush** on site to reduce waste and traffic movements

Carbon



- On site water and energy analysis is carried out monthly using **Emissions Target Sheet** to record target and actual emissions from site and the project progresses. This form logs the number of loads delivered/removed, the mileage of each trip and total monthly mileage, litres of fuel used and electricity consumption on site. Carbon dioxide emission levels can be assessed to address areas where this can be minimised
- To reduce carbon emissions:
 - All vehicles from FORS Bronze
 - Promote the use of public transport, providing map to the nearest links on site
 - We use suppliers that are as local as possible, or ensure deliveries come from / waste is taken to the closest suitable depot

Water, Drainage & Hydrology



- Works in accordance with the Environment Agency Pollution Prevention Guidelines 1, 2, 3, 5, 6, 8, 13, 18, 21, 26
- Areas of bare soil kept to minimum
- Water run-off from dust suppression absorbed by hardcore
- No pumping to controlled waters, surface water drains or foul sewer without Discharge Consent from the Environment Agency or local water authority

Vibration



- Vibration surveys completed prior to demolition and ground works in consultation with Reading Borough Council
- Vibration will be minimised as far as practicable through the selection of plant, equipment and methodology
- Pre and post-works condition survey