

demolition specification

Rylands Building, Manchester
CD9 Properties (Manchester)

Project Title: Rylands Building, Manchester
Client: CD9 Properties (Manchester)
Project No: 196002

version	date	description	author	reviewed by
P01	13.01.23	Draft issue	Callum Sidley	Simon Smith
P02	18.01.23	Formal issue	Callum Sidley	Simon Smith
P03	20.02.23	Formal issue	Callum Sidley	Simon Smith
P04	02.03.23	Formal issue	Callum Sidley	Simon Smith
P05	21.03.23	Formal Issue	Edward Cook	Simon Smith

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1.0 Executive Summary

1.1 Introduction

This document outlines the performance specification and National Building Specification (NBS) for the partial demolition of the primary structural frame for the Rylands Building in Manchester.

On the earliest historic maps, New High Street and Bread Street run roughly east to west across the site, with three rows of buildings occupying the site area including the Bridgwater Buildings in the north-western corner of the site and The Angel Hotel along the southern boundary. These buildings appear to be cleared over time with The Rylands Building constructed in 1932 as a textile warehouse for the Rylands family. There is historical mention of the River Tib along Tib street within a culvert.

The structure is understood to have been constructed in two phases - the main orthogonal grid parallel to Bridgewater Place and High Street as Phase 1, followed by the south and east facing sections with the grids aligned with Market Street and Tib Street respectively.

The building itself is comprised of a primary steel frame with in-situ slabs and clad in Portland stone. Stability is assumed to be provided to the existing building through a combination of frame action and the masonry cores acting as shear walls.

The sustainability consultants for the project have provided a target of 600 kgCO₂e/m² that the proposed scheme aims to comply with. The PCSA Contractor and/or Main Contractor may aim to hit this target in a multitude of ways and should clearly identify any cost or programme premiums incurred in achieving uplift in the carbon performance for the client to review and approve. Three potential options for redirecting the portions of the primary structural frame to be demounted, away from landfill, have been identified in broad terms below.

1. Careful demounting of steelwork, remediation, and reuse on the project.
2. Careful demounting of steelwork and sold to steel reuse stockist.
3. Demounting of steelwork and sold as scrap.

Each of the above scenarios will affect the procurement of the demolition package and should be considered by the PCSA Contractor and/or Main Contractor. Refer to Woolgar Hunter's File Note 33 for structural steel reuse commentary.

As noted above, it is presumed that the full height masonry cores contribute to the lateral stability of the existing building and have therefore been captured within the structural demolition drawings. Masonry walls not indicated on Woolgar Hunter's drawings are presumed to be non-loadbearing partitions only but should be confirmed on site through local opening up works and inspection of the wall head detail.

In line with the embodied carbon aspiration, the PCSA Contractor and/or Main Contractor may wish to divert existing masonry walls from landfill and retain on site for use within the proposed building. An appropriate waste management plan should be developed that is cognisant of the potential reuse of structural elements.

1.2 Outstanding Surveys

This demolition specification has been generated ahead of the completion of site soft strip and the specified intrusive works for the existing building. As such, the tendering subcontractors should place suitable contingencies on the demolition areas highlighted on Woolgar Hunter's existing drawings, located in Appendix A.



2.0 Demolition Extents

A general overview of the extent of demolition has been highlighted below, with the full extents shown on the Woolgar Hunter drawings appended to this document.

Grade II Listed Elements

Due to the listed nature of elements of the building including the façade, heritage offices, feature staircase, and stair core, the demolition contractor is to be cognisant of their protection requirements.

Refer to Architect's and Heritage Architect's information for further guidance.

Roof Outbuildings

The extent of the roof outbuildings to be removed is highlighted on Woolgar Hunter drawings, WHL-XX-07-DR-S-1007, WHL-XX-08-DR-S-1008 and WHL-XX-09-DR-S-100. The soft strip is to be completed in accordance with architectural requirements prior to the demolition of these elements.

Note, there are large pieces of equipment which are either redundant and / or require formal decommissioning prior to safe removal. Removal of these large / heavy pieces of equipment will need to be carefully coordinated with the demolition of the plant rooms and outbuildings.

As these outbuildings were to service lifts and plant rooms, there will be a number of slab openings that are to be protected with barriers and are to be considered during demolition of masonry walls regarding crash decks.

Mezzanine

The extents of the mezzanine to be removed are shown on the Woolgar Hunter existing drawings (RYLANDS-WHL-XX-MZ-DR-S-1000).

It is known that the mezzanine level to the ground floor is part original and part added at a later date. Any columns which were originally designed dependent on restraint from the mezzanine will require strengthening to accommodate the increased buckling length.

The extents of the original mezzanine are subject to further investigation. The allowance below is indicative only and will need to be reviewed following the further strip out works and intrusive investigations.

Allowances should be made for:

- Temporary propping installed to columns where the removal of the floor would result in an increase in buckling length.
- Removal of existing mezzanine slabs and steel beams and making good of columns where required. Steelwork to be disassembled in accordance with the PCSA Contractor and/or Main Contractor's overall waste management plan and reuse of site won material.

There may be the possibility of utilising the existing mezzanine floor beams in the temporary condition and avoid the need for temporary propping although this is dependent on conclusion of the intrusive investigations.



Existing Slabs

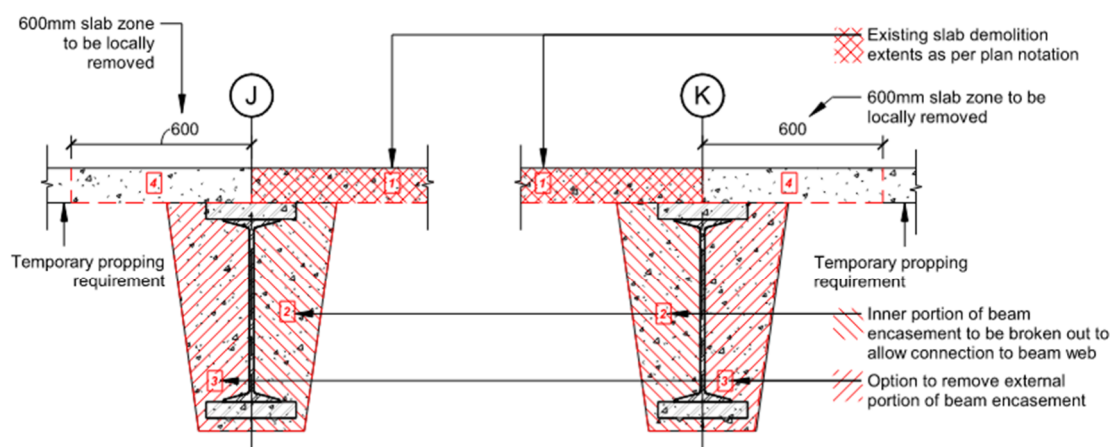
Extents of existing slabs to be removed are shown on the Woolgar Hunter existing drawings.

Crash decks are to be in place on the level below to prevent overloading or other damage to the slab. The slab below is to be back propped during demolition.

Where the slabs are to be cut back to the edge of an existing beam, a minimum bearing for the existing slab onto the existing steel beam of 100mm is to be maintained; this must not be measured from the non-structural concrete encasement, but from the edge of the steel beam. This line is to be saw cut before commencing demolition of the rest of the slab.

It is proposed slabs are to be demolished using hand tools to minimise damage and/or vibration issues associated with the existing structure and windows. Alternative methods will be considered, contractor to submit proposals for slab removal utilising powered hand tools or plant, clearly demonstrating that they will not adversely affect the existing building fabric. The proposal should also make clear what monitoring requirements are being proposed and the measures to be put in place should the work adversely affect the building fabric. Subcontractor proposals are to comply with the PCSA Contractor and/or Main contractor's waste management strategy and corresponding heritage requirements including approvals.

The perimeter basement retaining walls to the perimeter boundaries are currently propped by the sub-basement slab, basement slab, and ground floor slabs and so will require temporary propping during and after the demolition works. This design is by the demolition Contractor's Temporary works designer.



07 | DEMO REQUIREMENTS TYPICAL DETAIL

SCALE: 1 : 20

Figure 2.1: Typical slab demolition detail

Existing Beams

Where existing beams are to be removed, crash decks are to be in place on the level below to prevent overloading or other damage to the slab. The slab below is to be back propped during demolition. The extents of the backpropping is to be determined by the Temporary Works Designer.

The majority of steelwork to be removed is concrete encased. The encasement is to be removed locally to its end connections and any incoming connections prior to removal, with

temporary propping provided to any supported elements. Typical extents of removal have been shown in Figure 2.1. To help reduce the weight of the steel beam, the demolition contractor may opt to fully remove the concrete encasement to any steel beams that are being removed.

Steel noted for dountaking is to be unbolted where possible to maximise opportunity for reuse. The demolition contractor's method of demounting is to be cognisant and in line with the Main Contractor's overall waste management strategy and reuse of site won materials.

Where concrete encasement is to be removed for beam strengthening or other structural interventions, the following applies:

- Concrete encasement to be carefully removed from the underside of the existing steel section to provide a flush mating finish for the new enhancement steelwork below. The slab and beam encasement should be removed locally to the new column location over, without damaging the parent steel, to allow mating with the top of the existing beam and site welding of any necessary stiffener plates to the beam.
- It is proposed concrete encasement is to be removed using hand tools to minimise damage and/or vibration issues associated with the existing structure and windows. Alternative methods will be considered, contractor to submit proposals for slab removal utilising powered hand tools or plant, clearly demonstrating that they will not adversely affect the existing building fabric. The proposal should also make clear what monitoring requirements are being proposed and the measures to be put in place should the work adversely affect the building fabric. Subcontractor proposals are to comply with the PCSA Contractor and/or Main contractor's waste management strategy and corresponding heritage requirements including approvals.
- Steel surface to be checked to BS EN ISO 8501-1 and prepared for strengthening by mechanical cleaning to grade ST2 to BS EN ISO 8504-3 to clean finish to remove any remaining concrete or loose mill scale or rust where appropriate.
- Steel section inspected for condition and comparison with expected size based on archive information and previous investigation works.

Careful management of stockpiled material is to be in place during the works to ensure that the existing structure is not locally overloaded.

Existing Columns

Where existing columns are to be removed, crash decks are to be in place on the level below to prevent overloading or other damage to the slab. The slab below is to be back propped during demolition.

Where columns are to be fully removed, the concrete encasement is to be removed local to the end connections. Steel noted for dountaking is to be unbolted where possible to maximise opportunity for reuse. The demolition contractor's method of demounting is to be cognisant and in line with the Main Contractor's overall waste management strategy and reuse of site won materials.

To help reduce the weight of the steel beam, the demolition contractor may opt to fully remove the concrete encasement to any steel beams that are being removed.

Where column encasement is to be removed to allow for column strengthening on internal columns, the following apply:

- Concrete encasement to be carefully removed from the existing steel section through mechanical cleaning. The encasement should be removed over the full height of the column stack, without damaging the parent steel, from the lower floor top of steel level to top of steel of the level above.



- Steel surface to be checked to BS EN ISO 8501-1 and prepared for strengthening by mechanical cleaning to grade ST2 to BS EN ISO 8504-3 to clean finish to remove any remaining concrete or loose mill scale or rust where appropriate.
- Steel section inspected for condition and comparison with expected size based on archive information and previous investigation works.

Where masonry column encasement is to be removed to allow for column strengthening on perimeter columns, the following apply:

- Masonry encasement to be carefully removed from the steel section from the inside. Care must be taken not to disturb the Portland stone which forms the outer leaf. The encasement should be removed over the full height of the column stack from the lower floor top of steel level (including local removal of slab) to underside of steel of the level above. In some locations an RC upstand may be encountered at low level below the window level. This should be locally broken out over the width of the column and the ends of the RC upstand finished with a Sika Monotop or similar concrete repair mortar to protect the exposed reinforcement.
- It is proposed masonry encasement is to be removed using hand tools to minimise damage and/or vibration issues associated with the existing structure and windows. Alternative methods will be considered, contractor to submit proposals for slab removal utilising powered hand tools or plant, clearly demonstrating that they will not adversely affect the existing building fabric. The proposal should also make clear what monitoring requirements are being proposed and the measures to be put in place should the work adversely affect the building fabric. Subcontractor proposals are to comply with the PCSA Contractor and/or Main contractor's waste management strategy and corresponding heritage requirements including approvals.
- Steel surface prepared for strengthening to be mechanically cleaned and checked to grade ST2 to BS EN ISO 8501-1 and BS EN ISO 8504-3 to clean finish to remove any remaining concrete and loose mill scale or rust where appropriate.
- Steel section inspected for condition and comparison with expected size based on archive information and previous investigation works.

Where basement column encasement is to be removed to allow for column strengthening on basement pier columns, the following apply:

- Concrete encasement to be carefully removed from the steel section. The encasement should be removed over the full height of the column stack from the lower floor top of steel level to top of steel of the level above.
- It is proposed concrete encasement is to be removed using hand tools to minimise damage and/or vibration issues associated with the existing structure and windows. Alternative methods will be considered, contractor to submit proposals for slab removal utilising powered hand tools or plant, clearly demonstrating that they will not adversely affect the existing building fabric. The proposal should also make clear what monitoring requirements are being proposed and the measures to be put in place should the work adversely affect the building fabric. Subcontractor proposals are to comply with the PCSA Contractor and/or Main contractor's waste management strategy and corresponding heritage requirements including approvals.
- Steel surface prepared for strengthening by wire brushing to clean finish to remove any remaining concrete or loose rust or grit blasting where appropriate.
- Steel section inspected for condition and comparison with expected size based on archive information and previous investigation works.

Careful management of stockpiled material is to be in place during the works to ensure that the existing structure is not locally overloaded.



Existing Walls

Extents of existing structural walls to be removed are shown on the Woolgar Hunter existing drawings. Non-loadbearing and partition walls for removal have been shown on the architectural demolition drawings.

Crash decks are to be in place on the levels below and adjacent to demolition to prevent overloading or other damage to the slabs below and adjacent. The slab below is to be back propped during demolition.

The demolition contractor's method of demounting is to be cognisant and in line with the Main Contractor's overall waste management strategy and reuse of site won materials.

The demolition contractor is to provide method statements on how existing walls be removed around openings such as lift shafts, staircases, and escalators.

Existing masonry walls are to be demolished using hand tools in such a way that they comply with the PCSA Contractor and/or Main contractor's waste management strategy, potentially saving the bricks for reuse on the project subject to the waste management strategy.

It is proposed masonry is to be removed using hand tools to minimise damage and/or vibration issues associated with the existing structure and windows. Alternative methods will be considered, contractor to submit proposals for slab removal utilising powered hand tools or plant, clearly demonstrating that they will not adversely affect the existing building fabric. The proposal should also make clear what monitoring requirements are being proposed and the measures to be put in place should the work adversely affect the building fabric. Subcontractor proposals are to comply with the PCSA Contractor and/or Main contractor's waste management strategy and corresponding heritage requirements including approvals.

Careful management of stockpiled material is to be in place during the works to ensure that the existing structure is not locally overloaded.

Existing Foundations

Extents of existing foundations to be removed are shown on the Woolgar Hunter existing drawings.

Where existing foundations are to be removed, the following apply:

- Allowance is to be made for mass concrete underpinning to any adjacent structures / slabs to avoid undermining.
- Break out and remove existing ground floor slab around existing foundation. Where suitable, crush for reuse as Type 1 fill below slab around existing foundation when reinstating. Allow for wider breaking out to allow excavation below slab to form pile cap without risk of undermining immediately adjacent to excavation.
- Allowance should be made for creating access for a restricted headroom micro-piling rig – this may require additional soft strip works, creation of access / ventilation hatches, localised removal of MEP services etc.

Soft Strip

Soft strip extents can be found on the architectural demolition information, highlighting the extents of any non-structural elements that are to be removed as part of the demolition works, and the associated specifications for their demolition.



Removal of existing stairs, lifts, and escalator installations where required, including any secondary steelwork noted by Woolgar Hunter not to be required in the proposed works should be allowed for.



3.0 Additional Requirements

Any additional requirements have been highlighted below.

Approvals

The PCSA / Main Contractor is to obtain all relevant permits and approvals associated with the works and method statements for their preferred method of working.

The waste management plan showing the chain of custody and paperwork associated with the disposal of materials should also be provided.

Demolition Generally

Downtakings generally are to be considerate of the overall stability of the building in the temporary state and consider the sequence within the overall construction which will influence the temporary works requirements. Any adverse movement of structural elements is to see works stop to allow assessment.

Completing Core 1 and tying it to the surrounding floor slab on each level would provide stability to the building before cutting out the atrium. If Core 1 is not in place before cutting out the atrium, more significant temporary bracing is likely to be required given the current building's lateral stability derives at least in part from frame action, through fixed connections of the steel frame, as well as full height masonry cores. Similarly, some of the existing stair and lift shafts are likely to contribute to stability and so are recommended to be left in-situ until after formation of Core 1. The overall sequence will be developed with PCSA Contractor input through Stage 4.

Vibration and target monitoring should be in place on all elevations. Vibration monitoring adjacent to historically significant and sensitive areas (such as the original lift on the Market St – Tib St corner) should be in place during any adjacent works which could cause adverse vibrations.

Downtaking works are required to facilitate the works and/or create disposal routes for the removal of materials are to the PCSA Contractor's design, with stockpiling of material to be strictly controlled to not overload the existing slabs in accordance with the loading drawings.

Phases of demolition works are likely to coincide with elements of the proposed works. The demolition contractor is to consider the sequence of works with the Main Contractor.

Existing / Adjacent Structures

The demolition contractor will provide necessary adequate protection to adjacent structure prior to commencement of works.

Temporary Works

Any temporary works, including propping or protection, to the existing structure required as part of the demolition works are to be provided by the Demolition Contractor and are to be designed by his Temporary Works Engineer. The temporary works are to be handed over to the Main Contractor or Client at the end of the demolition works.



Retaining Walls

The basement level retaining wall of the Rylands building retains the street level to the full perimeter of the building, supporting the pavement. Reference should be made to the drawings showing the extent of the retaining walls.

Phased works

Consideration of overlapping works with other elements of demolition across the site and enabling works will be required. The Contractor should provide a phasing plan showing when access is required in each works location for demolition at the interface between enabling and demolition.

Substation

There is an existing substation located on Bridgewater Place. This is housed within the building in a masonry enclosure tight to the underside of the existing first floor slab and is to be retained until the new substation is operational. The substation will remain live throughout the demolition works and therefore a detailed method statement requires to be provided for its protection throughout the demolition works. Excessive vibration and or ground impact from falling debris must be avoided at all times in close proximity to the substation.

City Centre Location

The site is located within the city centre, with a tram network to the south and west, and vehicular access only from the north on Bridgewater Place. Access arrangements for plant and arisings being removed from site needs to be considered with a detailed plan showing the proposed traffic management system.

The welfare location will need to be considerate of the limited space on Bridgewater Place.

Tram Network

There is a live Metrolink tram network to the south and west of the overall site and is in close proximity to the Market Street tram platform. While there should be no direct impact on the Metrolink assets, the Contractor will enter dialogue with Metrolink regarding the proposed works. The demolition contractors proposed methodology will be discussed with Metrolink prior to commencement.

There are existing cables tying the overhead tram lines to the existing building's façade. The demolition contractor is to enter dialogue with Metrolink regarding any works in close proximity to these cables (e.g. scaffolding).

Services

All incoming services will be isolated outwith the site, or at the point of connection to the remaining substation, prior to the commencement of the works. Formal written confirmation will be required.

Drainage

Pre and Post demolition CCTV surveys of drainage infrastructure will be carried out to drainage within the vicinity of the works.



Noise

All neighbours will be notified of the works and provided with contact details should there be any issues with dust, noise, or vibration.

All reasonable precautions are to be taken to avoid unnecessary noise and vibration. The demolition contractor shall at all times comply with BS5228:2009 'noise Control on Construction and Demolition Sites' and Section 60 of the control of Pollution Act 1974.

As modern demolition equipment will be used, it is expected that this will minimize noise. Noise levels will be monitored throughout the works. Should agreed noise levels be exceeded then works will cease pending review.

There will be no noisy working outside of normal working hours.

Crushing and Recycling

All resultant site won concrete materials will be processed on site in preparation for crushing.

Processed materials will be put through a site crusher and turned into re-usable backfill material. Backfill material will be used for backfilling in basement locations of the site such that they can be brought up to an agreed level.

Dust Suppression

Water sprays will be utilized to dampen down materials during demolition, site crushing and loading operations. Works will cease if excess dust is produced.

Asbestos

It is understood that the site has had all asbestos removed. However, should asbestos be encountered, notice should be given to the site manager of suspected asbestos, and such materials should avoid being disturbed.

Façade Conservation

Where any façade elements are to be removed, each stone will be carefully lowered to ground level with any existing mortar removed from the beds and joints, the individual components then being placed on pallets and shrink wrapped with the identification mark clearly visible. Each pallet will be given an ID number and then transported by telehandler to a designated area of storage with the pallets arranged in a sequence to facilitate ease of identification when due to be returned.

This zone shall be secured within the site such that the façade can be stored safely and protected from damage during the refurbishment process.

The team shall work on the basis of maximising the re-use of existing stone and only resorting to replacement where absolutely necessary. A survey of the existing façade has not yet been undertaken. The survey should consult the British Geological Society to determine suitable quarries from which similar British stone can be sourced.

During the analysis of the stone condition the Employer will be kept informed of condition and proposed remedial actions such that statutory bodies can be appraised of proposed actions.

During the dismantling process samples of the original bedding and pointing mortar will be taken to be analysed and tested to best advise on mortar mixes for the rebuilding process.



4.0 Control Measures

The risks associated with the proposed demolition works will be fully assessed by the demolition contractor and reviewed prior to the commencement on site.

The key risks are:

- Stability of the overall structure during demolition of the existing cores
- Temporary works requirements for Core 1, 2, foundations and crane bases
- Removal and repositioning of ground floor steelwork affecting length of columns and restraint of retaining walls to Bridgewater Place
- Temporary works/strengthening requirements of mezzanine supporting columns prior to removal of mezzanine slab
- Undermining of existing foundations adjacent to excavations
- Adverse building movement due to demolition around core 1, 2, and the atrium

A more detailed list is provided in the Woolgar Hunter Designer's Risk Assessment (196002-WHL-XX-XX-SH-S-0001).

The on-site works will be undertaken by a competent Demolition Contractor, whom will be a member of the National Federation of Demolition Contractors. The works will be under the full time control of a supervisor who has successfully completed the Demolition Supervisor Course devised by the National Federation of Demolition Contractors, National Demolition Training Group (NDTG Scotland) and Construction Skills.

Any sensitive façade removal, refurbishment and rebuilding activities shall be undertaken by experienced stone masons, who have substantial experience in working on and with listed buildings.

Welfare facilities will be established within the main body of the site and are to be located a safe distance from the demolition works. Welfare location to be reviewed.

All demolition working site operatives will hold relevant training certificates confirming that they are suitably trained for the tasks that they are allocated on site and are undertaking. The training records/certificates for each of the operatives will be available for inspection prior to the commencement of any works on site.

All non-site personnel will be prevented from access to the localised demolition sites during the course of the works. The safety exclusion zone around the working area is to be determined by PCSA Contractor or Main Contractor. A designated pedestrian access to the site will be provided outwith the vehicular gated access, for the operatives and the design team.

Prior to entry to the demolition site, all persons must be site inducted and will be required to sign in and out on a daily basis.

Traffic routes will be determined by the PCSA Contractor or Main Contractor to the site. All movements on site will be under the direct supervision of a trained/competent banksman, in accordance with the traffic management plan. Transportation will be able to access the secured site. Turning will likely not be possible within the body of the hoarded site, and so exiting on to the public highway will likely be via a thru-route. Perimeter roads and footpaths will be kept clean by utilising road cleaning machines. Access and egress operations from the site will be provided to drivers, operatives and banksman via the pre-start site induction.

A dilapidation survey has been carried out on the building façade, but has not been performed on the building interior, and is subject to further strip out works. The reports will be made available to the Demolition Contractor prior to commencement of the works.



5.0 Site Handover Conditions

The Contractor will have fully demolished all elements highlighted on Woolgar Hunter's existing drawings where indicated, further described in section 2.0.

General

On completion of the demolition works there may be remaining temporary works that must be retained until elements of the proposed structure are completed.

Design, installation, maintenance, and removal strategy documents are to be provided for remaining temporary works, eg. Scaffolding. Along with monitoring points being maintained and clearly identified in the handover document.

The contractor will retain any hoarding around the site – any changes are to be agreed with the client and be reinstated to original position on completion of the demolition works. The Client is to be given opportunity to review any proposed hoarding changes due to other works occurring on neighbouring developments on Bridgewater Place.

Monitoring and dilapidation surveys of adjacent roads/ buildings/ services are to be undertaken and any remedial works undertaken and ensure no potential issues for the client. During and after demolition any movements of the boundary retaining walls will require to be carefully controlled to avoid impact on the adjacent services due to any ground movements. The design of the temporary works to the retained walls should take cognisance of these constraints.

Any demolition waste and site won material not removed from site is to have the necessary documentation for potential removal / reuse in line with the PCSA / Main Contractor's waste management plan and carbon strategy.

On completion of the works a survey identifying all levels, obstructions and features is required. This will include the locations of existing foundations, uncovered drainage, and all temporary works elements which would require to be surveyed onto a plan during the works.

A 'before and after' photographic demolition report of the building is to be provided.

Slab Edges

Edge protection is to be provided around any slab openings, with flanged rebar safety cap protection to any exposed / cut rebar.

Beams

Any beam ends left after cutting are to have concrete encasement removed to allow for any proposed works and are to be cleaned as described in section 2.0. Any beam ends cut away from the supporting column are to be adequately propped.

Columns

Any column heads left exposed are to have concrete encasement locally removed to 500mm of the section to allow for any proposed works and are to be cleaned as described in section 2.0.

Masonry Walls

Remaining exposed masonry wall heads are to be cleared of debris, protected from the elements, and stability of the wall ensured.



Retaining Walls

On handover, the retaining walls will be propped via a suitable arrangement agreed with the PCSA Contractor and/or Main Contractor and design team. Location of all propping must be surveyed and recorded on site handover. The propping will be handed over to the PCSA Contractor and/or Main Contractor on completion of the demolition works.

Existing Foundations Backfill

Design of any platform levels and stability of any slopes is the Demolition Contractor's responsibility. The upfill material shall be in line with the PCSA Contractor's and/or Main Contractor's waste management plan comprising reused site won material or clean 6F2 graded material free from contaminants or deleterious materials and shall be well compacted in layers. The thickness shall be to suit backfilling to the top of the slab level.

Mezzanine

Columns that have an increased buckling length due to the mezzanine slab level being removed are to have their temporary propping remain in place until the proposed works have been completed.

Mezzanine demo sequencing is to be coordinated with the column strengthening contractor(s) to ensure stability of the overall frame during the works.

There may be the possibility of utilising the existing mezzanine floor beams in the temporary condition and avoid the need for temporary propping although this is dependent on conclusion of the intrusive investigations.

Water Ingress

Areas of completed demolition are to be protected from the environment where feasible, such as at roof level to the back of the tearoom, the loading bay, and water arising from the sub-basement.

Any permanent and interim waterproofing is subject to architectural requirements.



6.0 Legislation

The demolition works will be carried out in accordance with the following:

- British Standard Code of Practice 6187:2011
- HSE Guidance Note GS29 Parts 1 to 4 which, although withdrawn, remain relevant at least in part
- The Noise at Work Regulations 2005
- The Working at Height Regulations 2005
- Health and Safety Act 1974
- The Management of Health and Safety at Work Regulations 1999
- The Health and Safety (young persons) Regulations 1997
- The Working Time (Amendment) Regulations 2003
- The lifting Operations and Lifting Equipment Regulations 1998
- The Provision and Use of Work Equipment Regulations 1998
- The Personal Protective Equipment at Work (Amendment) Regulations 2022
- The CDM Regulations 2015
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
- The Control of Asbestos regulations 2012
- The Asbestos (Licensing) Regulations (Amended) 1998
- The Manual Handling Operations Regulation 1992
- The Health and Safety (First Aid) Regulations 1981
- The Control of Substances Hazardous to Health Regulations 2002
- The control of Vibration at Work Regulations 2005

7.0 Tender Deliverables

The tendering subcontractor will identify any significant risks or additional survey works required to ensure that the tender return contains as few caveats as possible.

The tendering subcontractor will include any traffic management plans required, including principle agreement with the council for any road closures required.

The tendering subcontractor will provide details for protection of any retained structure, including details of demolition at the interface between proposed demolition and retained existing structure.

The tendering subcontractor will provide details for protecting the existing substation and show engagement with Electricity North West Limited to ensure agreement of the works.

Requested information from the contractor
Dilapidation survey of surrounding buildings, footpaths, roads and features
Pre and post works CCTV survey of the drainage network
Any unforeseen features recorded and if retained, highlighted on a drawing.
Method statements as set out in Section 8.0.
Construction sequences for each item of works compatible with the PCSA / Main Contractor's overall sequence and programme.

8.0 List of Method Statements Required

Woolgar Hunter would request that the following pieces of information are provided to the engineering consultant six weeks in advance of the works starting on site.

Requested Method Statement	Package
Detailed method statement and demolition sequencing including any temporary backpropping	Demolition
Method statement for protecting the live substation in the loading bay area	Demolition
Detailed method statement establishing how the existing structure would be protected during removal of the demolition elements.	Demolition
The PCSA Contractor is responsible for vibration monitoring and to ensure there is no damage to the adjacent infrastructure, below ground services and buildings.	Demolition
Method statement for the excavation around Core 1 and 2 to allow the removal of the substructure without impacting surrounding foundations.	Demolition
Method statement and drawing showing hoarding layout and design	Demolition
Method statement on the re-use of the existing building foundation materials for backfill use (steel reuse as well?).	Demolition
Method statement for the safe retention of the Bridgewater Place retaining wall and removal of the adjoining slabs.	Demolition



9.0 NBS Demolition Extract

Below is an extract from the Woolgar Hunter NBS document '196002-WHL-XX-XX-SP-S-0001 – NBS' that makes reference back to the document.

NBS extract contents

B50	General Structural Requirements
C20	Demolition
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B

Complete Buildings / Structures / Units

B50 General Structural Requirements

GENERAL

To be read with Preliminaries/General conditions.

110 EUROCODES

- National Annexes: Reference to a Eurocode, or to an execution or a material standard referenced therein, is deemed to include the appropriate United Kingdom National Annex, to the Eurocode or referenced standard. Nationally determined parameters shall apply.
- Non-contradictory complementary information: Applies when referenced in the National Annex.
- Substitution of alternative design rules for Eurocode Application Rules: Submit proposals.

120 STRUCTURAL WORK

- Designated codes of practice: To the Eurocodes appropriate to the nature of the structure.
- Design working life: Category 4 to BS EN 1990.
- Approvals: The contractor is to seek all necessary approvals from the relevant authorities to undertake the works, including but not limited to, listed building consent, TfGM approvals, Metrolink approvals etc.
- Completed structure generally: To comply with the requirements of the designated codes of practice and the standards referenced therein. Deflections and other structural movements at serviceability limit state to be compatible with requirements of the building fabric, movement joints and weather tightness.
- Special requirements: None.

130 CONTRACTOR'S DESIGN

- Engineer responsible for overall stability of structure: The person named as Consultant
- Structural Engineer shall be responsible for the stability of the structure in the permanent condition. Throughout execution the Contractor shall be responsible for the stability of the structure.
- Design supervision/ checking levels: To BS EN 1990, table B4, level DSL2 (checking by different persons than those originally responsible and in accordance with the procedure of the organisation).
- Design requirements: None additional.
- Design quality control: To BS EN ISO 9001.
- Maintenance: Make provision for and submit details of requirements to ensure the safety and serviceability of the structure, including:
 - Critical parts that should be regularly inspected, with recommendations for the frequency of inspection.
 - Elements susceptible to corrosion, mechanical wear or fatigue that may need to be reconstructed or replaced during the design working life of the structure.
 - Means of safe access for maintenance and repair.

140 CONTRACTOR'S DESIGN - ADDITIONAL REQUIREMENTS FOR GEOTECHNICAL WORK

- General requirements for design and supervision: Category 2 to BS EN 1997-1.
- Existing subsoil conditions:
- Soil strength and density: As ground investigation.
- Ground water conditions: As ground investigation.



PERFORMANCE

210 CONSEQUENCE FOR LOCALIZED FAILURE FROM AN UNSPECIFIED CAUSE

- Standard: To BS EN 1991-1-7, Annex A.
- Consequence class: CC2b.
- Building Class: 2b.
- Design requirements: a systematic risk assessment of the building should be undertaken, taking into account all the normal hazards that can reasonably be foreseen, together with any abnormal hazards. Critical situations for design should be selected that reflect the conditions that can reasonably be foreseen as possible during the life of the building.

220 EXPOSURE TO FIRE

- Building purpose group: 2b
- Height of top floor above ground: refer to drawings.
- Depth of lowest basement: refer to drawings.
- Loadbearing capacity, integrity and insulation: Demonstrate adequacy of the structure by the equivalent time of fire exposure to PD 6688-1-2, Annex B to BS EN 1991-1-2.
 - Criteria: Submit proposals.
 - Reaction to fire: To Building Regulations.
 - Requirements (minimum): To suit purpose and location within the building.

250 LIMITS ON MOVEMENT GENERATED BY CONSTRUCTION

- Definition of critical values:
 - Threshold value: The value beyond which further movement will be of significant concern.
 - Action value: The value at which execution must cease.
- Precautions: Take as follows if movements reach critical values:
 - Threshold: Review situation, assess possible causes and submit proposals to ensure that action values are not exceeded.
 - Action: Stop work, report and revise working procedures to prevent further movements.

320 LOADS/ ACTIONS

- Generally: Specified loads/ actions are characteristic values unless otherwise described.

330 DESIGN LOADS

- Source: As per drawings
 - RYLANDS-WHL-XX-B2-DR-S-1997
 - RYLANDS-WHL-XX-B1-DR-S-1998
 - RYLANDS-WHL-XX-00-DR-S-1999
 - RYLANDS-WHL-XX-01-DR-S-2001
 - RYLANDS-WHL-XX-02-DR-S-2002
 - RYLANDS-WHL-XX-03-DR-S-2003
 - RYLANDS-WHL-XX-04-DR-S-2004
 - RYLANDS-WHL-XX-05-DR-S-2005
 - RYLANDS-WHL-XX-06-DR-S-2006
 - RYLANDS-WHL-XX-07-DR-S-2007
 - RYLANDS-WHL-XX-08-DR-S-3108
 - RYLANDS-WHL-XX-09-DR-S-3109
 - RYLANDS-WHL-XX-10-DR-S-3110
 - RYLANDS-WHL-XX-11-DR-S-3111
 - RYLANDS-WHL-XX-12-DR-S-3112

340 PERMANENT AND IMPOSED LOADS FOR ROOF.



- Standard: To BS EN 1991-1-1.
 - Permanent loads not discernible from drawings: None.
 - Imposed loads:
 - Generally: For roof with no access except for normal maintenance and repair.
 - Exceptions: Snow drift behind parapets, wind uplift.
 - Local imposed loads: None.
 - Allowance for future changes: None.
- 360 LOADING FOR MECHANICAL AND ELECTRICAL SERVICES
- Generally: Include for known services in dead loads.
 - Locally: M+E consultant to advise of any large duct weights.
 - Heavy equipment: Location and loads of major items of plant to be confirmed by M+E consultant.
 - Allowance for future changes: None.
- 410 DATA FOR CLIMATIC LOADS/ ACTIONS
- Site Ordnance Survey grid reference: to be confirmed.
 - Site altitude to Ordnance Datum: As drawings.
- 430 SNOW LOADS - CONTRACTOR DETERMINED
- Standard: To BS EN 1991-1-3.
 - Features affecting loads: Parapets, plant screens.
- 440 ICE LOADS/ ACTIONS
- Standard: To BS EN 1993-3-1.
- 470 WIND LOADS/ ACTIONS - CONTRACTOR DETERMINED
- Standard: To BS EN 1991-1-4.
 - Factors and coefficients: Appropriate to location, exposure, altitude, building shape and size, and taking account of existing and known future adjacent and/ or attached buildings.
 - Shelter from upwind obstacles: Provide justification for assumptions.
 - Normal design condition of doors and windows: Submit proposals.
 - Features affecting loads: None other than those shown on drawings.
 - Special requirements: None.
- 490 THERMAL ACTIONS
- Standard: To BS EN 1991-1-5.
 - Design parameters:
 - Internal operating temperatures: As Standard.
 - Initial temperature: As BS EN 1991-1-5, Clause NA.2.21.
 - Movement joints: Submit proposals for location and details.
 - Continuity: Make provision for movement in all elements bridging a joint and ensure continuity of joint through structure and finishes.

EXECUTION

- 700 EXECUTION GENERALLY
- Standard: Report conflict between specification and the designated codes of practice and the standards referenced therein before ordering affected materials or executing affected work.
 - Inspection levels: To BS EN 1990, table B5, level IL2.
 - Special requirements: None.
 - Quality control: To BS EN ISO 9001.



- Tolerances: Notwithstanding tolerances specified elsewhere, do not exceed requirements for compliance with the designated code.

705 CONNECTIONS AND ANCHORAGES

- End and edge distances and spacing (minimum): Unless otherwise specified or detailed, as required by the designated code of practice for fixings/ anchorages carrying maximum load.
- Report locations where:
 - Type and number of fixings cannot be accommodated.
 - Size or position of members prevents correct positioning.

710 GEOTECHNICAL WORK

- Geotechnical design report: Keep a copy on site during the execution of the geotechnical work.
- Requirements for testing and monitoring: As geotechnical design report.
- Assumed ground conditions: As geotechnical design report.

720 STABILITY DURING EXECUTION

- Permanent bracing system: as per drawings.
 - Vertical: Concrete core wall and Vertical braced bays.
 - Horizontal: Diaphragm action of slab.
- Temporary bracing/ restraints: Provide as necessary until permanent stability system is complete and sufficiently mature to carry loads and all connections have been made to the permanent system.
 - Special requirements: Submit proposals and calculations for temporary support to Woolgar Hunter for comment.
- Design loads: Structure has been designed for the completed state.
 - Magnitude: Submit proposals.
 - Before loading structure: Take into account:
 - Reduction in strength due to immaturity of elements.
 - Reduction in loadbearing capacity due to partial completion of continuous elements.

730 RESTRICTIONS ON USE OF GROUND SURFACE BEHIND EARTH RETAINING STRUCTURES

- Surcharge loading (maximum): Restrict loading equipment and plant to be reviewed by temporary works designer on a case by case basis on upper ground surface behind structure following an intrusive investigation to understand the structural capacity.
- Extent of restriction: For a distance of 3 metres from the back of the wall stem.

750 MONITORING OF GROUND CONDITIONS DURING CONSTRUCTION

- Purpose: To identify differences between actual ground conditions and those assumed in the design.
- Requirements: As detailed in the geotechnical design report.
 - Sampling and testing: Required if conditions appear different to those described in geotechnical report.
- Inspect and record: Sequence, nature and soil types revealed in excavations and formations.
- Immediately notify: Variations from the assumed ground conditions or shortfall in test requirements.
- Special requirements: None.

COMPLETION



900 GEOTECHNICAL RECORDS

- Submit:
 - Details and results of monitoring.
 - Details and purpose of any changes to the geotechnical work.
 - Timing: Within 5 days of the completion of each stage of the geotechnical work.
 - Special requirements: None.

C

Demolition

C20 Demolition

To be read with Preliminaries/General conditions

GENERAL REQUIREMENTS

110 DESK STUDY/ SURVEY

- Scope: Before starting deconstruction/ demolition work, the PCSA Main Contractor is to examine available information, and carry out a survey of:
 - the structure or structures to be deconstructed/demolished,
 - the site on which the structure or structures stand, and the surrounding area.
 - interfaces with the tram network.
- Report and method statements: Submit, describing:
 - Form, condition and details of the structure or structures, the site, and the surrounding area.
 - Extent: As structural engineer's drawings.
 - Type, location and condition of features of historical, archaeological, geological or ecological importance.
 - Type, location and condition of adjoining or surrounding premises that might be adversely affected by the removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.
 - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
 - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
 - Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
 - Proposed programme of work, including sequence and methods of deconstruction/demolition.
 - Details of specific pre-weakening required.
 - Arrangements for protection of personnel and the general public, including the exclusion of unauthorized persons.
 - Arrangements for control of site transport and traffic.
 - Special requirements:
 - Details of services supplied by the Statutory Authority;
 - Results of tests to determine the precise nature of hazardous materials;
 - Site waste management plan development and proposals; and
 - Structural calculations in support of method statements.
- The format of the report: PDF.

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified on structural engineer's drawings.
- Deconstruct/ demolish structures down to agreed level shown on drawings: Break up and dig out foundations, part foundation, columns, beams, walls, and slabs as indicated on the structural engineer's drawings.

130 GROUNDWORKS

- Old foundations, slabs and the like: Break out in locations and to the extents stated. Note existing neighbouring foundations are to be retained and protected.
- Contaminated material: Remove and carry out remediation required by the Enforcing Authority.

140 BENCHMARKS



- Unrecorded benchmarks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

150 FEATURES TO BE RETAINED

- General: Keep in place and protect the following:
 - Extent: As structural engineer's and architect's drawings.

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

210 SERVICES REGULATIONS

- Work carried out to or affecting new and/ or existing services: Carry out in accordance with the bylaws and/ or regulations of the relevant Statutory Authority.

220 LOCATION OF SERVICES

- Services affected by deconstruction/ demolition work: Locate and mark positions.
- Mains services marking: Arrange with the appropriate authorities for services to be located and marked.
 - Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

230 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

- General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting deconstruction/demolition.

240 DISCONNECTION OF DRAINS

- General: Locate, disconnect and seal disused foul and surface water drains.
- Source: As per drawings:
 - RYLANDS-WHL-XX-B2-DR-C-52-9000
 - RYLANDS-WHL-XX-B2-DR-C-52-9400
 - RYLANDS-WHL-XX-B1-DR-C-52-9000
 - RYLANDS-WHL-XX-B1-DR-C-52-9400
 - RYLANDS-WHL-XX-XX-DR-C-52-9430
 - RYLANDS-WHL-XX-XX-DR-C-52-9450
- Sealing: Permanent, and within the site.

250 LIVE FOUL AND SURFACE WATER DRAINS

- Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:
 - Pre-demolition survey of the drainage network is required
 - Protect; maintain normal flow during deconstruction/ demolition.
 - Make good any damage arising from deconstruction/ demolition work.
 - Leave clean and in working order at the completion of deconstruction/ demolition work.
- Other requirements: Post-completion camera survey; extent 25m beyond the site perimeter, or 2 manholes.

260 SERVICE BYPASS CONNECTIONS

- General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/properties.
- Minimum notice to adjoining owners and all affected occupiers: 72 hours, if the shutdown is necessary during the changeover.

270 SERVICES TO BE RETAINED



- General: Refer to M&E consultant drawings for scope of services to be retained. The existing substation is to be retained until the proposed substation is live.
- Damage to services: Give notice and notify relevant service authorities and/or owner/occupier regarding damage arising from deconstruction/ demolition.
- Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP

- Standard: Demolish structures in accordance with BS 6187.
- Operatives:
 - Appropriately skilled and experienced for the type of work.
 - Holding, or in training to obtain, relevant CITB Certificates of Competence.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

320 GAS OR VAPOUR RISKS

- Precautions: Ensure adequate ventilation for works in the basement levels and prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.

330 DUST CONTROL

- General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
- Lead dust: Submit method statement for control, containment and clean-up regimes.

340 HEALTH HAZARDS

- Precautions: Protect site operatives and the general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

350 ADJOINING PROPERTY

- Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
- Defects: Report immediately on discovery.
- Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
- Support to foundations: Do not disturb.

360 STRUCTURES TO BE RETAINED

- Extent: As structural engineer's drawings:
 - RYLANDS-WHL-XX-B2-DR-S-0997
 - RYLANDS-WHL-XX-B1-DR-S-0998
 - RYLANDS-WHL-XX-00-DR-S-0999
 - RYLANDS-WHL-XX-MZ-DR-S-1000
 - RYLANDS-WHL-XX-01-DR-S-1001
 - RYLANDS-WHL-XX-02-DR-S-1002
 - RYLANDS-WHL-XX-03-DR-S-1003
 - RYLANDS-WHL-XX-04-DR-S-1004
 - RYLANDS-WHL-XX-05-DR-S-1005
 - RYLANDS-WHL-XX-06-DR-S-1006
 - RYLANDS-WHL-XX-07-DR-S-1007
 - RYLANDS-WHL-XX-08-DR-S-1008



- RYLANDS-WHL-XX-09-DR-S-1009
- Parts which are to be kept in place: Protect.
- The interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimise making good.

361 SITE WON MATERIALS TO BE RETAINED

- General: The PCSA Contractor and/or Main Contractor may aim to hit the carbon targets in a number of ways including redirecting portions of the demolition material away from landfill. This may be achieved in three ways:
 - Method 1: The demolition contractor is to carefully demount steelwork, allowing for remediation, and reuse on the project.
 - Method 2: The demolition contractor is to carefully demount steelwork, allowing for sale to steel reuse stockists.
 - Method 3: The demolition contractor is to demount the steelwork for sale as scrap.

The demolition contractor is to provide cost and programme implications of these three methods so they main inform the Client's selection process.

370 PARTLY DEMOLISHED STRUCTURES

- General: Leave in a stable condition, with adequate temporary support at each stage to prevent the risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.

380 DANGEROUS OPENINGS

- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
- Access: Prevent access by unauthorized persons.

390 ASBESTOS-CONTAINING MATERIALS – KNOWN OCCURRENCES

- General: Materials containing asbestos are known to be confirmed by pre demolition asbestos survey.
- Removal: By contractor licensed by the Health and Safety Executive, and prior to other works starting in these locations.

391 ASBESTOS-CONTAINING MATERIALS – UNKNOWN OCCURRENCES

- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 UNFORESEEN HAZARDS

- Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
- Removal: Submit details of proposed methods for filling, removal, etc.

420 OPEN BASEMENTS, ETC

- Temporary support: Leave adequate buttress walls or provide temporary support to basement retaining walls up to ground level.
- Safety: Make remaining sections of retaining and buttress walls safe and secure.
- Water movement: Make holes in basement walls to allow water drainage or penetration (depending on water table).

430 FILLING OF BASEMENTS, ETC

- Temporary support: Leave adequate buttress walls or provide temporary support to basement retaining walls up to ground level.



- Water movement: Make holes in basement wall to allow water drainage or penetration (depending on water table).
- Filling: Remove organic material and soil from basements and other voids. Fill and consolidate with to suit future subcontractors requirements.

442 SITE SURFACE AT COMPLETION

- Levels: Grade the site to follow the levels of adjacent areas. Refer to structural engineer's drawings. Note that the Contractor is responsible for confirming levels to ensure stability of the slopes and retention of the adjacent footpaths.

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from the site as work proceeds where not to be reused or recycled for site use.

520 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Action: The demolition contractor is to provide the cost and programme implications for reusing, recycling, or selling scrap materials from demolition. (For example crushing of concrete for 6F2 material. There may be a cost / programme implication that should be highlighted separately such that premiums are transparent).
- Evidence of compliance: Submit full details and supporting documentation.
- Verification: Allow adequate time in programme for verification of compliance.



D

Groundwork

D20 Excavating and Filling

To be read with Preliminaries/General conditions

GENERALLY / THE SITE**110 SITE INVESTIGATION**

Report: Refer to the Geo-environmental Ground Investigation Report prepared by IGE Consulting. Additional boreholes are programmed to be undertaken for geotechnical consideration by WH. This additional information will be made available once received.

145 VARIATIONS IN GROUND WATER LEVEL

Give notice: If levels encountered are significantly different from levels in the site investigation report or previously measured

150 EXISTING SERVICES/ FEATURES/ STRUCTURES

- Services: Refer to site investigation reports, Design Team Drawings and in particular M&E drawings.
- Site features to be retained: refer to Architects drawings
- It is the contractor's responsibility to review and the available information and ensure that all appropriate measures have been taken to identify the existing services on site.

CLEARANCE/EXCAVATING

(TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS AND SPECIFICATION)

168 SITE CLEARANCE

- Timing: Before demolition works, if any.
- General: Clear site of rubbish, debris and soft strip material as set out in architectural information.

240 ADJACENT EXCAVATIONS

- Proximity: Where an excavation encroaches below a line drawn at an angle from the nearest formation level of another higher excavation, the lower excavation, all works within it and backfilling thereto must be completed before the higher excavation is made.
- Angle of line from horizontal: 45°.

244 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS:

- Prior to commencing excavation:
 - Excavate trial pits adjacent to existing foundations to determine extent and formation levels.
 - Allow for inspection of trial pits.
 - Allow time for amendment of details if required. Backfill material to new excavation: Compacted Hardcore.



250 PERMISSIBLE DEVIATIONS FROM FORMATION LEVELS

- Beneath mass concrete foundations: ± 25 mm.
- Beneath ground bearing slabs and r.c. foundations: ± 15 mm.
- Embankments and cuttings: ± 50 mm.
- Ground abutting external walls: ± 50 mm, but such as to ensure that finished level is not less than 150 mm below dpc.

255 ACCURACY - LINEAR DIMENSIONS

- Permissible deviations from linear dimensions generally: ± 2 mm.

260 INSPECTING FORMATIONS

- Give notice: Make advance arrangements for inspection of formations for foundations and filling formations.
- Preparation: Just before inspection remove the last 150 mm of excavation. Trim to required profiles and levels and remove loose material.
- Seal: Within 4 hours of inspection, seal formations with blinding concrete.

270 FOUNDATIONS GENERALLY

- Give notice if:
 - A natural bearing formation of undisturbed subsoil is not obtained at the depth shown on the drawings.
 - The formation contains soft or hard spots of highly variable material.

280 TRENCH FILL FOUNDATIONS:

- Excavation: Form trench down to formation in one operation.
- Safety: Prepare formation from ground level.
- Inspection of formations: Give notice before commencing excavation.
- - Period of notice: [5 working days].
- Shoring: Where inspection of formation is required, provide localised shoring to suit ground conditions.
- Concrete fill: Place concrete immediately after inspection and no more than four hours after exposing the formation

290 FOUNDATIONS IN MADE UP GROUND:

- Depth: Excavate down to a natural formation of undisturbed subsoil.
- Discrepancy: Give notice if this is greater or less than depth given.

310 UNSTABLE GROUND

- Generally: Ensure that the excavation remains stable at all times.
- Give notice: Without delay if any newly excavated faces are too unstable to allow earthwork support to be inserted.
- Take action: If instability is likely to affect adjacent structures or roadways, take appropriate emergency action.

320 RECORDED FEATURES

- Recorded foundations, beds, drains, manholes, etc: Break out and seal drain ends.
- Contaminated earth: Remove and disinfect as required by local authority.

330 UNRECORDED FEATURES

- Give notice: If unrecorded foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered.



360 EXCESS EXCAVATION

- Excavation taken wider than required:
 - Backfill: With hardcore as clause 710.
- Excavation taken deeper than required:
 - Backfill: With well graded granular material or lean mix concrete.

DISPOSAL OF MATERIALS

410 EXCAVATED TOPSOIL STORAGE

- Storage: Stockpile in temporary storage heaps.

421 TOPSOIL STORAGE HEAP TREATMENT:

- Treatment: Apply a suitable herbicide at appropriate times to prevent seeding of weeds.

441 SURPLUS SUBSOIL

- Excavated material: Stockpile in temporary storage heaps.
- Retained material: Spread and level surplus subsoil on site.
- Locations: Contractor's choice.
- Protected areas: Do not raise soil level within root spread of trees that are to be retained.
- Remaining material: Remove from site.

450 WATER

- Generally: Keep all excavations free from water until:
 - Formations are covered and protected.
 - Below ground construction are completed.
 - Basement structures and retaining walls are able to resist leakage, water pressure and flotation.
- Drainage: Form surfaces of excavations and fill to provide adequate falls.
- Removal of water: Provide temporary drains, sumps and pumping as necessary. Do not pollute watercourses with silt laden water.

FILLING

500 PROPOSED FILL MATERIALS

- Details: Submit full details of proposed fill materials to demonstrate compliance with specification, including:
 - Type and source of imported fill.
 - Proposals for processing and reuse of material excavated on site. [Please note that test results on the wider development site indicate that the re-use of soils is achievable through modification techniques.]
 - Proposals for the reuse of graded and tested demolition spoil from site.
 - Test reports as required elsewhere.
- Timing: At least 21 days before starting filling.

510 HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS

- General: Do not use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:
 - Frozen or containing ice.
 - Organic.
 - Contaminated or noxious.



- Susceptible to spontaneous combustion.
- Likely to erode or decay and cause voids.
- With excessive moisture content, slurry, mud or from marshes or bogs.
- Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
- Unacceptable, class U2 as defined in the Highways Agency 'Specification for highway works', clause 601.

520 FROST SUSCEPTIBILITY

- General: Except as allowed below, fill must be non-frost-susceptible as defined in Highways Agency 'Specification for Highway Works', clause 801.17.
- Test reports: If the following fill materials are proposed, submit a laboratory report confirming they are non-frost-susceptible:
 - Fine grained soil with a plasticity index less than 20%.
 - Coarse grained soil or crushed granite with more than 10% retained on a 0.063 mm sieve.
 - Crushed chalk.
 - Crushed limestone fill with average saturation moisture content in excess of 3%.
 - Burnt colliery shale.
- Frost-susceptible fill: May only be used within the external walls of buildings below spaces that will be heated. Protect from frost during construction.

530 PLACING FILL

- Excavations and areas to be filled: Free from loose soil, rubbish and standing water.
- Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and re-compact if not damaged after thawing.
- Adjacent structures, membranes and buried services:
 - Do not overload, destabilise or damage.
 - Submit proposals for temporary support necessary to ensure stability during filling.
 - Allow 14 days (minimum) before backfilling against in situ concrete structures.
- Layers: Place so that only one type of material occurs in each layer.
- Earthmoving equipment: Vary route to avoid rutting.

535 COMPACTION

- General: Compact fill as soon as possible after placing.
- After compaction: Surface of each layer must be well closed, showing no movement under compaction plant, and without cracks, holes, ridges, loose material and the like.
- Defective areas: Remove and re-compact to full thickness of layer using new material.

540 BENCHING IN FILL

- Adjacent areas: If, during filling the difference in level between adjacent areas of filling exceeds 600 mm, cut into edge of higher filling to form benches 600 mm minimum width and height equivalent to depth of a layer of compacted filling.
- New filling: Spread and compact to ensure maximum continuity with previous filling.



617 HIGHWAYS AGENCY TYPE 1 GRANULAR FILLING

- Fill: To Highways Agency 'Specification for highway works', clause 803:
 - Crushed rock (other than argillaceous rock).
 - Crushed concrete.
 - Recycled aggregates.
 - Crushed non-expansive slag to clause 801.2.
 - Well-burned non-plastic colliery shale.
- Filling: To Highways Agency 'Specification for highway works', clauses 801.3 and 802.

620 SUBGRADE IMPROVEMENT LAYER (CAPPING):

- Fill: To Highways Agency 'Specification for highway works', Table 6/1, Class 6F1 or 6F2.
- Filling: Place and compact to Highways Agency Specification for highway works, Table 6/1, clause 612 and clause 613.3, 613.9 and 613.10.

626 COMPACTED GENERAL FILLING

- Fill: material.
- Excavated material: Select suitable material and keep separate.
- Filling: Spread and level material in layers. As soon as possible thoroughly compact each layer.
- Proposals: Well in advance of starting work submit details of proposed:
 - Materials to be used, including quantities of each type.
 - Type of plant.
 - Maximum depth of each compacted layer.
 - Minimum number of passes per layer.

640 START LAYER OF COMPACTED FILLING

- Fill: Suitable hard granular material. Compact thoroughly.
- Thickness: 450 mm.

650 PROTECTION OF COMPACTED FILLING:

- Temporary protective filling: Before allowing construction traffic, raise level of compacted cohesive soil filling at least 150 mm above formation level using properly compacted temporary filling.
- Removal: Remove temporary protective filling from site before permanent construction.

700 BACKFILLING AROUND FOUNDATIONS

- Under oversite concrete and pavings: Hardcore as clause 710.
- Under grassed or soil areas: Material excavated from the trench, laid and compacted in 300 mm maximum layers.

710 HARDCORE FILLING

- Fill: Granular material, free from excessive dust, well graded, all pieces less than 75mm in any direction, minimum 10% fines value of 50 kN when tested in a soaked condition to BS 812-111, and in any one layer only one of the following:
 - Crushed rock (other than argillaceous rock) or quarry waste with not more binding material than is required to help hold the stone together.
 - Crushed concrete, crushed brick or tile, free from plaster, timber and metal.
 - Crushed non-expansive slag.
 - Gravel or hoggin with not more clay content than is required to bind the material together, and with no large lumps of clay.
 - Well-burned non-plastic colliery shale.



- Natural gravel.
- Natural sand.
- Filling: Spread and level in 150 mm maximum layers. Thoroughly compact each layer.

730 BLINDING

- Surfaces to receive sheet overlays or concrete:
Blind with:
 - Concrete where shown on drawings; or
 - Sand, fine gravel, or other approved fine material applied to fill interstices. Moisten as necessary before final rolling to provide a flat, closed, smooth surface.
- Sand for blinding: To BS EN 12620, grade 0/4 or 0/2 (MP).
- Permissible deviations on surface level: +0 -25 mm.

EARTHWORKS SPECIFICATION APPENDICES

850 COMPACTED GENERAL FILLING/ EARTHWORKS

- Specification: 'Specification for highway works', Series 600 Earthworks.
 - Amendments to requirements in 'Specification for highway works': None.
- Definition: References to the 'Overseeing Organisation' are deemed to be to the issuer of this specification.
- Fill material:
 - Assessment of acceptability: Tests as table 6/1 carried out by contractor.
 - Preliminary tests: required
- Compaction: As table 6/4.



E

In Situ Concrete

E05 In Situ Construction Generally

To be read with Preliminaries/General conditions

220 STRUCTURAL DESIGN PROVIDED

- Description: Columns, Walls, Foundations, Floor slabs.
- Requirements:
 - Generally: As section B50.
 - Additional requirements: None.
- Production/ execution records: In accordance with the designated code of practice.

223 STRUCTURAL DRAWINGS AND SCHEDULES

- Standards:
 - Drawings: To 'Standard method of detailing structural concrete' published by the Institution of Structural Engineers.
 - Reinforcement schedules: To BS 8666.

225 TEMPERATURE RECORDS

- Requirement: Throughout period of concrete construction record:
- Daily: Maximum and minimum atmospheric shade temperatures.
- Under adverse temperature conditions: Temperature at commencement and end of placing.
- Equipment: Contractor's choice.
- Location: In the shade, close to the structure.

235 OPENINGS, INSERTS AND FIXINGS

- Requirement: Collate all information.
- Submit: Details where openings, inserts and fixings can only be accommodated by adjustments to reinforcement.
- Locate reinforcement: To ensure specified minimum cover at openings and inserts and to be clear of fixing positions.

250 STRUCTURAL TESTING

- Requirement: Contractor responsible for submitting results of cube tests for all concrete.
 - Method/ standard: Submit proposals.
 - Timing: Refer to section E10 Clause 508.
 - Report: Refer to section E10 Clause 530.
 - Submission: Within 5 working days.

290 ACCURACY OF CONSTRUCTION

- Setting out: To BS 5964-1.
- Setting out: Additional lift shaft setting out requirements to suit BS5655-6:2011 Lifts and Service Lifts – Part 6: Code of Practice for the Selection, Installation, and Location of New Lifts. BS5655 gives additional recommendations and guidance that builds upon the requirements in BS E 81 (all parts) which covers the full requirements for building construction for electric and hydraulic lifts. Contractor to provide proposals.
- Geometrical tolerances: To Section 7 of the 'National Structural Concrete Specification for Building Construction'.
 - Conflicts: Notwithstanding tolerances specified elsewhere, do not exceed requirements for compliance with the designated code of practice.



- Substitution of alternative requirements: None.
- 300 LEVELS OF STRUCTURAL CONCRETE FLOORS
- Tolerances (maximum):
 - Level of floor: As Preliminaries section A33.
 - Steps in floor level: ± 5 mm.
- 310 SURFACE REGULARITY OF CONCRETE FLOORS TO BS 8204 - GENERAL
- Standard: To BS 8204-1 or -2.
 - Measurement: From underside of a 2m straightedge (between points of contact) placed anywhere on surface and using a slip gauge.
- 315 SURFACE REGULARITY OF CONCRETE FLOORS TO BS 8204
- TOLERANCE CLASS S R2
 - Location: When class is not otherwise specified.
 - Abrupt changes: Not permitted.
- 318 SURFACE REGULARITY OF CONCRETE FLOORS TO TR 34 - GENERAL AND TOLERANCE
- Measurement of surface regularity: To Concrete Society Technical Report 34 (TR 34), section 4.
 - Surface deviations: Comply with permissible limits for floor classifications/ locations: FM3 generally.
- 320 CONSTRUCTION ACCURACY
- Comply with the latest edition of National Structural Concrete specification for Building Construction (NSCS)
 - Document Availability: make available during course of the works on site.
- 410 IN SITU CONCRETE CONSTRUCTION - SUPERVISION/ CHECKING
- Standard: To BS EN 13670, Execution Class 2.
- 430 SURFACE CRACKING
- Method of measurement: Submit proposals.
 - Critical crack width: 0.3 mm.
 - Action: Should cracks occur that are wider than the critical crack width:
 - Survey: Frequency and extent of such cracks and investigate cause.
 - Report: Findings together with recommendations for rectification.



E10 Mixing / Casting / Curing In Situ Concrete

TO BE READ WITH PRELIMINARIES/GENERAL CONDITIONS.

CONCRETE

101 SPECIFICATION

- Concrete generally: To BS 8500-2.
- Exchange of information: Provide concrete producer with information required by BS 8500-1, clauses 4 and 5.

105 DESIGNATED CONCRETE FLOOR SLABS, AND WALLS (ALL CONCRETE NOT IN CONTACT WITH THE GROUND EXCLUDING COLUMNS)

- Designation: Refer to drawings.
- Fibres: Not required.
- Aggregates:
 - Size (maximum): 20 mm.
 - Coarse recycled aggregates: No special requirements.
 - Additional aggregate requirements: None.
- Special requirements for cement/ combinations: Contractor to submit proposals to suit the PCSA Main Contractor's carbon targets, highlighting associated costs and programme implications.
- Consistence class: Contractor's choice.
- Chloride class: Normal.
- Admixtures: Concrete producer's choice.
- Additional mix requirements: Contractor to submit proposals for slipform concrete requirements in wall construction.

106 DESIGNATED CONCRETE COLUMNS

- Designation: Refer to drawings.
- Fibres: Not required.
- Aggregates:
 - Size (maximum): 10 mm.
 - Coarse recycled aggregates: No special requirements.
 - Additional aggregate requirements: None.
- Special requirements for cement/ combinations: Low shrinkage and self compacting.
- Consistence class: Contractor's choice.
- Chloride class: Normal.
- Admixtures: Concrete producer's choice.
- Additional mix requirements: None

107 DESIGNATED CONCRETE COLUMN ENCASEMENT

- Designation: Refer to drawings.
- Fibres: Not required.
- Aggregates:
 - Size (maximum): 10 mm.
 - Coarse recycled aggregates: No special requirements.
 - Additional aggregate requirements: None.
- Special requirements for cement/ combinations: Low shrinkage and self compacting.
- Consistence class: Contractor's choice.
- Chloride class: Normal.



- Admixtures: Concrete producer's choice.
 - Additional mix requirements: None
- 108 DESIGNATED CONCRETE C20 MIX FOR BELOW GROUND DRAINAGE USE
- Designation: C20.
 - Fibres: Not required.
 - Aggregates:
 - Size (maximum): 20 mm.
 - Coarse recycled aggregates: No special requirements.
 - Additional aggregate requirements: None.
 - Special requirements for cement/ combinations: None
 - Consistence class: Contractor's choice.
 - Chloride class: Normal.
 - Admixtures: Concrete producer's choice.
 - Additional mix requirements: None
- 125 SUBSTITUTION OF STANDARDIZED PRESCRIBED CONCRETE FOR DESIGNATED CONCRETE
- General: Conform to BS 8500-2, clause 9.
 - Substitution: In accordance with BS 8500-1, table A. 13.
 - Proposals: Submit for each substitution, stating reasons.
 - Site mixing: Permitted as E10 clause 218.
- 132 DESIGNED CONCRETE FOR ALL RETAINING WALLS, GROUND SLABS, FOUNDATIONS & PILECAPS
- Reinforcement / embedded metal: Yes
 - Compressive Strength class (cylinder/cube): refer to drawings
 - Target density (oven dry): Normal
 - Aggregates
 - Size (maximum): 20mm
 - Type/ Density: Normal weight
 - Recycled coarse aggregates: Do Not Use
 - Other requirements: absorption not greater than 3%
 - Design chemical class: DC-2
 - Limiting values for composition:
 - W/c ratio (maximum): 0.45
 - Cement (CEM1) content (minimum) 340 kg/m³ ≤ 0.60% replacement
 - Air content (minimum): No Requirement.
 - Consistence class: Contractors choice
 - Cement/Combinations: As DC class
 - Chloride class: CL 0.40
 - Admixtures: Everdure Caltite System from Cementaid Limited or equal approved.
 - Mix design to include (as per producers specifications, see also clause 141):
 - a. Superplastet SR (or Superplastet F): approximately 1% by weight of cement, litres per cubic metre.
 - b. Everdure Caltite: 30 litres per cubic metre of concrete.
All other producers' specifications and recommendations to be followed.
The BBA Certificate No 93/2888 to be provided.
 - Colour: Not Required
 - ACEC class: AC-2
 - DC class: DC-2
 - Exposure Class: XC2
 - Concrete Cover to be 50mm
 - Other requirements: As clause 141 and 508.



141 EVERDURE CALTITE SYSTEM – SPECIFICATION DETAILS DETAILED SPECIFICATION

Concrete:

All concrete must conform to current British Standard Specifications and be designed, WITHOUT ADDITIVES, for a compressive strength complying with the requirements of at least C32/40 (EN206), or greater if required as specified on the relevant clauses. The concrete must contain a minimum of 335kg Portland cement per m³ (the cement content being stated on the delivery dockets) and have a W/C ratio not in excess of 0.45. Mixes incorporating blended content may be used subject to agreement of Cementaid.

Admixtures:

All concrete shall contain Cementaid Everdure Caltite heavy-duty impermeable ingredient at the rate of 30 litres per m³. In addition, Cementaid Superplastet shall be included AS 1% VOLUME BY WEIGHT OF Portland Cement (eg if PC content 350kg, 3.5 litres of Superplastet is used). For special conditions, this rate may be varied between 0.5% and 1.5 % as agreed by Cementaid. No other admixtures or ingredients are to be included or allowed for in the concrete unless specifically authorised by Cementaid in writing. The water requirement is to be reduced accordingly to allow for the effect of the ingredients on the concrete slump. The concrete is to be thoroughly mixed.

Trial Mixes:

Where requested by the Engineer, or as required by QSRMC (The Quality Scheme for Ready Mixed Concrete), the concrete supplier, with Cementaid present, shall mix and test a trial mix of concrete with the Everdure Caltite System ingredients to confirm that the enhanced concrete conforms to strength, consistence class and any other requirements.

Consistence (Slump):

Consistence class is to be in accordance with the requirements of S2 (EN206) unless agreed in writing. Flowing concrete, or consistence in excess of S2, is only allowed when mix design is altered to accommodate such a requirement with the approval of the Engineer and Cementaid.

Concrete Suppliers:

Not all concrete suppliers are approved for supplying Everdure Caltite System quality concrete. The Contractor should check with Cementaid for approved suppliers before ordering concrete. Cementaid approval does not remove the responsibility for basis concrete quality, in respect of its compressive strength or minimum cement content, from the concrete producer or the Contractor.

Reinforcement:

All reinforcement shall be high tensile rib deformed bar to Engineers detail drawings.

Placing:

Concrete shall not be placed at concrete temperatures below 5°C, nor above 30°C, and must be placed according to current Codes of Practice and Cementaid recommendations. Concrete received from batch plant, which cannot be placed free from honeycombs, shall be rejected by the Contractor. Care shall be taken to fill every part of the forms, to force concrete under and around reinforcing without displacing it, to work back coarse aggregate from the face and to remove all air bubbles and voids. Compaction shall be assisted by a sufficient number of appropriate immersion type vibrators. These shall not be held in one place so long as to result in segregation of concrete materials or formation of laitance on the surface.

NB: Unless agreed in writing, pour sizes must be within the limits of current Codes of Practice. If in doubt, please contact Cementaid to discuss.



Finishing:

All concrete to be properly finished according to the Engineers and Architects.

Cooling and Curing:

Proper curing shall be carried out in accordance with BS 8110 or equivalent. For slabs, curing should start immediately after finishing and as soon as the concrete can withstand a man's weight without marking. For larger slabs, curing should be done in sections and this is especially the case with power float finishes where commencement of curing must not be delayed. For walls, the top surface must be appropriately covered during the curing period. The curing time should be at least 72 hours after placement or longer as specified. Spray-on curing membranes are not recommended.

Loading:

Loading of the structure is not permitted until either the concrete has reached the strength specified by the Engineer or approval has been given.

Site Attendance:

A representative of Cementaid is to be in attendance at the batch plant and on site during all Everdure Caltite pours. Cementaid is to be notified by the Contractor at least 3 working days before the first intended placement of Everdure Caltite System concrete and thereafter 24 hours before each placement. Such site attendances do not constitute supervision, which remains the responsibility of the Contractor.

Construction and Movement Joints:

Construction or day joints shall conform to the details supplied by Cementaid. Movement joints are permitted but Cementaid does not guarantee their performance unless the proposed movement joint construction is agreed with Cementaid in writing and is acceptable to the Engineer. In particular, the design of suspended structures must allow for the expansion and contraction of the concrete due to temperature changes, both during construction and in its final form, to relieve stresses likely to cause cracking.

Section Thickness:

Wall thicknesses are to be as specified and, unless agreed by Cementaid in writing, the minimum section thickness permitted for walls is 200mm.



MATERIALS, BATCHING AND MIXING

- 215 READY-MIXED CONCRETE
- Production plant: Currently certified by a body accredited by UKAS to BS EN ISO/IEC 17065 for product conformity certification of ready-mixed concrete.
 - Source of ready-mixed concrete: Obtain from one source if possible. Otherwise, submit proposals.
 - Name and address of depot: Submit before any concrete is delivered.
 - Delivery notes: Retain for inspection.
 - Declarations of nonconformity from concrete producer: Notify immediately.
- 218 SITE MIXED CONCRETE
- Batching by mass:
 - Restrictions: To be agreed.
 - Accuracy of measuring devices: To BS EN 206-1, clause 9.6.2.2.
 - Tolerances for quantity of constituent material: To BS EN 206-1, table 21.
 - Batching by volume:
 - Restrictions: To be agreed.
 - Mixing: To BS 8000-2.1, subsections 2, 3 and 4.
- 221 INFORMATION ABOUT PROPOSED CONCRETES
- Submit when requested:
 - Details listed in BS 8500-1, clause 5.2.
 - Additional information: Data concerning the anticipated rate of strength gain.
- 225 CHANGES TO SPECIFICATION
- Changes to specification of fresh concrete (outside concrete producer's responsibility): Submit proposals.
- 230 INTERRUPTION OF SUPPLY DURING CONCRETING
- Elements without joints: Where elements are detailed to be cast in a single pour without joints, make prior arrangements for a back-up supply of concrete.
 - Elsewhere:
 - Preparation: Manage pour to have a full face and have materials available to form an emergency construction joint while concrete can still be worked.
 - Before pour is completed: Submit location and details of joint, make proposals for joint preparation
- 315 AGGREGATES FOR EXPOSED VISUAL CONCRETE
- Limitations on contaminants: Free from absorbent particles which may cause 'popouts', and other particles such as coal and iron sulfide which may be unsightly or cause unacceptable staining.
 - Colour: Consistent.
 - Supply: From a single source and maintained throughout the contract.
 - Samples: Submit on request.
- 325 MATERIALS FOR EXPOSED VISUAL CONCRETE
- Alterations to sources, types and proportions: Submit proposals.
- 415 ADMIXTURES
- Calcium chloride and admixtures containing calcium chloride: Do not use.



490 PROPERTIES OF FRESH CONCRETE

- Adjustments to suit construction process: Determine with concrete producer. Maintain conformity to the specification.

PROJECT TESTING/ CERTIFICATION

505 PROJECT TESTING OF CONCRETE - GENERAL

- Testing: BS EN 206-1, Annex B.
 - Nonconformity: Obtain instructions immediately.
 - Recording: Maintain complete correlated records including:
 - Concrete designation.
 - Sampling, site tests, and identification numbers of specimens tested in the laboratory.
 - Location of the parts of the structure represented by each sample.
 - Location in the structure of the batch from which each sample is taken.

508 REGULAR PROJECT TESTING OF CONCRETE

- Tests: Early age compressive strength testing at 7, 28, & 56 days.
- Sampling:
 - Point: At point of discharge from delivery truck.
 - Rate: Greater of 4 samples from each days concreting and One sample per 60 m³.
 - Other requirements: Cubes for early age strength testing to be stored under same conditions as concrete in members.

520 TESTING LABORATORY

- Laboratory: Accredited by UKAS or other national equivalent.
 - Name and UKAS reference number: Submit well in advance of making trial mixes or concrete for use in the works.

530 TESTS RESULTS

- Submission of reports: Within one day of completion of each test.
 - Number of copies: Three.
- Reports on site: A complete set, available for inspection.

550 BROKEN CUBES FROM FAILED STRENGTH TESTS

- Nonconformity: Keep separately the pieces of each cube which fail to meet the conformity requirements for individual results.
- Period for keeping cubes: Obtain instructions.

PLACING/ COMPACTING/ CURING AND PROTECTING

620 TEMPERATURE OF CONCRETE

- Application: ALL CONCRETING WORKS.
- Objective: Limit maximum temperature of concrete to minimize cracking during placing, compaction and curing. Take account of:
 - High temperatures and steep temperature gradients: Prevent build-up during first 24 hours after casting. Prevent coincidence of maximum heat gain from cement hydration with high air temperature and/ or solar gain.
 - Rapid changes in temperature: Prevent during the first seven days after casting.
 - Proposals for meeting objective: Submit.

630 PREMATURE WATER LOSS

- Requirement: Prevent water loss from concrete laid on absorbent substrates.
 - Underlay: Select from:
 - Polyethylene sheet: 250 micrometres thick.
 - Building paper: To BS 1521, grade B1F.
 - Installation: Lap edges 150 mm.

640 CONSTRUCTION JOINTS

- Location of joints: Submit proposals.
- Preparation of joint surfaces: Remove surface laitance and expose aggregate by lightly brushing and spraying. Joint surface to be clean and damp immediately before placing fresh concrete.

645 SPACING OF CONSTRUCTION JOINTS

- Type of construction: Ground supported slabs.
 - Distance between joints (maximum): Submit proposals.



- Area of pour (maximum): Submit proposals.
 - Other requirements: None.
- 648 ADVERSE TEMPERATURE CONDITIONS
- Requirement: Submit proposals for protecting concrete when predicted ambient temperatures indicate risk of concrete freezing or overheating.
- 650 SURFACES TO RECEIVE CONCRETE
- Cleanliness of surfaces immediately before placing concrete: Clean with no debris, tying wire clippings, fastenings or free water.
- 660 INSPECTION OF SURFACES
- Notice: Give notice to allow inspections of reinforcement and surfaces before each pour of concrete.
 - Period of notice: Obtain instructions.
 - Timing of inspections: To be agreed.
- 670 TRANSPORTING
- General: Avoid contamination, segregation, loss of ingredients, excessive evaporation and loss of workability. Protect from heavy rain.
 - Entrained air: Anticipate effects of transport and placing methods in order to achieve specified air content.
- 680 PLACING
- Records: Maintain for time, date and location of all pours.
 - Timing: Place as soon as practicable after mixing and while sufficiently plastic for full compaction.
 - Temperature limitations for concrete: 30°C (maximum) and 5°C (minimum), unless otherwise specified. Do not place against frozen or frost covered surfaces.
 - Continuity of pours: Place in final position in one continuous operation up to construction joints. Avoid formation of cold joints.
 - Discharging concrete: Prevent uneven dispersal, segregation or loss of ingredients or any adverse effect on the formwork or formed finishes.
 - Thickness of layers: To suit methods of compaction and achieve efficient amalgamation during compaction.
 - Poker vibrators: Do not use to make concrete flow horizontally into position, except where necessary to achieve full compaction under void formers and cast-in accessories and at vertical joints.
- 690 COMPACTING
- General: Fully compact concrete to full depth to remove entrapped air. Continue until air bubbles cease to appear on the top surface.
 - Areas for particular attention: Around reinforcement, under void formers, cast-in accessories, into corners of formwork and at joints.
 - Consecutive batches of concrete: Amalgamate without damaging adjacent partly hardened concrete.
 - Methods of compaction: To suit consistence class and use of concrete.
- 720 VIBRATORS
- General: Maintain sufficient numbers and types of vibrator to suit pouring rate, consistency and location of concrete.
 - External vibrators: Obtain approval for use.



730 PLASTIC SETTLEMENT

- Settlement cracking: Inspect fresh concrete closely and continuously wherever cracking is likely to occur, including the top of deep sections and at significant changes in the depth of concrete sections.
- Timing: During the first few hours after placing and whilst concrete is still capable of being fluidized by the vibrator.
- Removal of cracks: Revibrate concrete.

810 CURING GENERALLY

- Requirement: Keep surface layers of concrete moist throughout curing period, including perimeters and abutments, by either restricting evaporation or continuously wetting surfaces of concrete.
- Surfaces covered by formwork: Retain formwork in position and, where necessary to satisfy curing period, cover surfaces immediately after striking.
- Top surfaces: Cover immediately after placing and compacting. If covering is removed for finishing operations, replace it immediately afterwards.
- Surface temperature: Maintain above 5°C throughout the specified curing period or four days, whichever is longer.
- Records: Maintain details of location and timing of casting of individual batches, removal of formwork and removal of coverings. Keep records on site, available for inspection.

811 COVERINGS FOR CURING

- Sheet coverings: Suitable impervious material.
- Curing compounds: Selection criteria:
 - Curing efficiency: Not less than 75% or for surfaces exposed to abrasion 90%.
 - Colouring: Fugitive dye.
 - Application to concrete exposed in the finished work: Readily removable without disfiguring the surface.
 - Application to concrete to receive bonded construction/ finish: No impediment to subsequent bonding.
- Interim covering to top surfaces of concrete: Until surfaces are in a suitable state to receive coverings in direct contact, cover with impervious sheeting held clear of the surface and sealed against draughts at perimeters and junctions.

812 PREVENTING EARLY AGE THERMAL CRACKING

- Deep lifts or large volume pours: Submit proposals for curing to prevent early age thermal cracking, taking account of:
 - Temperature differentials across sections.
 - Coefficient of thermal expansion of the concrete.
 - Strain capacity of the concrete mix (aggregate dependent).
 - Restraint.

818 CURING PERIODS GENERALLY

- Minimum periods: When not otherwise indicated, to BS EN 13670, Annex F.8.5.



820 CURING PERIODS GENERALLY

- General: Curing periods are in days (minimum).
 - Definition of 't': The average surface temperature of concrete in degrees Celsius during the curing period.
- Curing periods for concrete made using CEM1 strength class 42.5 or 52.5, or SRPC class 42.5:
 - Drying winds or dry, sunny weather (relative humidity < 50%): $140/(t+10)$.
 - Intermediate conditions (relative humidity between 50 and 80%): $100/(t+10)$.
 - Damp weather, protected from sun and wind (relative humidity > 80%): $100/(t+10)$.
- Curing periods for concrete made using cements listed in BS8500-1, table A.6 except for those listed above and for supersulfated cement:
 - Drying winds or dry, sunny weather (relative humidity < 50%): $180/(t+10)$.
 - Intermediate conditions (relative humidity between 50 and 80%): $140/(t+10)$.
 - Damp weather, protected from sun and wind (relative humidity > 80%): $100/(t+10)$.
- Curing periods: For concretes using admixtures or other types of cements/ combinations:
- Submit proposals.
- Other requirements: Increase curing period by any time during which surface temperature of concrete is less than 5°C.

840 PROTECTION

- Prevent damage to concrete, including:
 - Surfaces generally: From rain, indentation and other physical damage.
 - Surfaces to exposed visual concrete: From dirt, staining, rust marks and other disfiguration.
 - Immature concrete: From thermal shock, physical shock, overloading, movement and vibration.
- In cold weather: From entrapment and freezing expansion of water in pockets, etc.



E20 Formwork for In Situ Concrete

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS.

GENERALLY/ PREPARATION**110 LOADINGS**

- Requirement: Design and construct formwork to withstand the worst combination of the following:
 - Total weight of formwork, reinforcement and concrete.
 - Construction loads including dynamic effects of placing, compacting and construction traffic.
- Wind and snow loads.

120 FORMWORK DETAILS

- Provide the following: Construction joints – positions and types. Arrangement of any slipform / jumpform rigs for wall construction, along with sequence of construction ensuring stability of the structure in the temporary condition. The contractor will submit proposals for testing and specific mix requirements for slipform / jumpform construction.

132 PROPPING

- General: Prevent deflection and damage to the structure. Carry down props to bearings strong enough to provide adequate support throughout concreting operations.
- Method statement: Submit proposals for prop bearings and sequence of propping/ repropping and backpropping. Propping and temporary works design is the responsibility of the Temporary Works Designer.
- Timing of submission: To be agreed between the permanent works designer and the temporary works coordinator.

145 PERMANENT FORMWORK

- Location and materials: Submit proposals.
- Standard: Design profiled steel shuttering as permanent formwork in accordance with BS EN 1993-1-3.

170 WORK BELOW GROUND

- FOUNDATIONS;
- RETAINING WALLS; and
- SLAB EDGES
- Casting vertical faces against faces of excavation: Obtain consent.
- Requirements: Submit proposals for maintaining stability of excavated faces and preventing contamination of concrete by loose soil.

CONSTRUCTION**310 ACCURACY**

- General requirement for formwork: Accurately and robustly constructed to produce finished concrete in the required positions and to the required dimensions.
- Formed surfaces: Free from twist and bow (other than any required cambers).
- Intersections, lines and angles: Square, plumb and true.



- 315 SUBSTRUCTURE FORMWORK AND UNDERSLAB INSULATION
- Cutting: Neat and accurate to edges, and around penetrations and downstands.
 - Laying: Tightly butted and fully supported on firm, even substrate.
 - Vertical faces: Stiffen as necessary to act as shutter.
 - Formwork/ insulation surfaces: Protect from indentation by spacers and other items.
 - Joints in formwork/ insulation and with edge structure and penetrations: Seal to prevent penetration of concrete.
 - Concrete placement: Restrain formwork/ insulation against movement.
- 320 JOINTS IN FORMS
- Requirements including joints in form linings and between forms and completed work:
 - Prevent loss of grout, using seals where necessary.
 - Prevent formation of steps. Secure formwork tight against adjacent concrete.
- 330 INSERTS, HOLES, AND CHASES
- Positions and details:
 - Dimensioned on drawings provided on behalf of the Employer: Do not change without consent.
 - Undimensioned or from other sources: Submit proposals.
 - Positioning relative to reinforcement: Give notice of any conflicts well in advance of placing concrete.
 - Method of forming: Fix inserts or box out as required. Do not cut hardened concrete without approval.
- 340 KICKERS
- Method statement: Submit proposals including means of achieving quality of concrete consistent with that specified for the column or wall.
 - Kicker height: 150 mm.
- 350 FORM TIES
- Metal associated with form ties/ devices: Prohibited within cover to reinforcement.
 - Compatible with reinforcement metal.
- 470 RELEASE AGENTS
- Use: All formwork.
 - General: Achieve a clean release of forms without disfiguring the concrete surface.
 - Product types: Compatible with formwork materials, specified formed finishes and subsequent applied finishes. Use the same product throughout the entire area of any one finish.
 - Protection: Prevent contact with reinforcement, hardened concrete, other materials not part of the form face, and permanent forms.
- 480 SURFACE RETARDERS
- Use: Obtain approval.
 - Reinforcement: Prevent contact with retarder.

STRIKING

- 510 STRIKING FORMWORK
- Timing: Prevent any disturbance, damage or overloading of the permanent structure.



521 MINIMUM PERIOD FOR RETAINING FORMWORK/ TEMPORARY SUPPORTS IN POSITION

- Concrete strength at time of formwork removal (minimum): 75% of 28-day strength.
- Assumptions: Maturity of permanent supports and adjacent elements of structure is at least equal to element under consideration.
 - Before removing formwork: Submit proposals if assumptions will not be realised.
- Method to be used in assessing early age strength of concrete: Submit proposals.

FORMED FINISHES

620 PLAIN FINISH

- Location: Floor slabs generally, refer to architect's drawings for specific locations.
- Finish: Even and dense. Arrange formwork panels in a regular pattern as a feature of the surface. (ramp to have brushed finish TBC by Architect.)
- Permissible deviation of surfaces:
 - Sudden irregularities (maximum): 3 mm.
 - Gradual irregularities (maximum): 3 mm, when measured from the underside of a 1 m straightedge, placed anywhere on surface.
- Variations in colour:
 - Permitted: Those caused by impermeable formwork linings.
 - Not permitted: Those caused by contamination or grout leakage.
- Surface blemishes:
 - Permitted: Blowholes less than 10 mm in diameter and at an agreed frequency.
 - Not permitted: Voids, honeycombing, segregation and other large defects.
- Formwork tie holes: In a regular pattern and filled with matching mortar.

635 STANDARD FINISH:

- Location: To all exposed concrete, refer to architect's drawings for specific locations.
- Standard: BS 8110-1, clause 6.2.7.3.
- Quality: Type B.
- Face as formed: As the regional Reference Panel
- Other requirements: Contractor to provide examples of previous completed exposed concrete works for design team review. A sample panel is to be constructed on site as reference panel for all exposed concrete. Refer to architectural information for details of the sample panel.
- Other requirements: Contractor to provide examples of previous completed slip form / jump form concrete works for design team review. A sample panel is to be constructed on site as reference panel for all slip form / jump form concrete works. Refer to architectural information for details of the sample panel.

750 ARRISES, MARGINS AND JUNCTIONS

- Requirements: As drawings.



E30 Reinforcement for In Situ Concrete

To be read with Preliminaries/ General conditions.

REINFORCEMENT

110 QUALITY ASSURANCE OF REINFORCEMENT

- Standards:
 - Reinforcement: To BS 4449, BS 4482, BS 4483 or BS 6744.
 - Cutting and bending: To BS 8666.
- Source of reinforcement: Companies holding valid certificates of approval for product conformity issued by the UK Certification Authority for Reinforcing Steels (CARES). All reinforcement to have minimum 97% recycled content.

150 RIBBED BAR REINFORCEMENT

- Standard: To BS 4449.
- Strength grade: B500B.

210 STANDARD FABRIC REINFORCEMENT

- Standard: To BS 4483.
- Strength grade: B500B.

WORKMANSHIP

310 CUTTING AND BENDING REINFORCEMENT

- General: To schedules and to BS 8666.
- Bending on site, including minor adjustments: Not permitted.

320 PROTECTION OF REINFORCEMENT

- Dropping from height, mechanical damage and shock loading: Prevent.
- Cleanliness of reinforcement at time of pouring concrete: Free from corrosive pitting, loose mill scale, loose rust and contaminants which may adversely affect the reinforcement, concrete, or bond between the two.

410 LAPS OR SPLICES

- Details not shown on drawings: Obtain instructions.

425 LAPS NOT DETAILED ON DRAWINGS

- Laps in bar reinforcement (minimum): 40 x bar diameter.
- Laps in fabric reinforcement (minimum): 40 x bar diameter.
- Laps at corners: Avoid four-layer build-up.

451 FIXING REINFORCEMENT

- Standard: To BS 7973-1 and -2.
- Installation: In addition to any spacers and chairs shown on drawings or schedules, provide adequate support, tie securely and maintain the specified cover.
- Tying:
 - Wire type: 16 gauge black annealed. Use stainless steel wire for stainless steel reinforcement.
 - Ends of tying wire: Prevent intrusion into the concrete cover. Remove loose ends.
- Compatibility of metals: Prevent contact between ordinary carbon steel and stainless or galvanized reinforcement.



- 470 TOLERANCES ON COVER
- Tolerance (maximum): 5mm.
 - Checking specified cover dimensions: Before concreting check that cover dimensions will be achieved.
- 510 RUST STAINING
- Staining of surfaces of concrete which will be exposed to view in the finished work: Prevent.
- 520 COVER METER SURVEY
- Purpose of survey: To check positions of reinforcement and that the specified cover has been achieved.
 - Type of cover meter: A magnetic induction digital display type selected to suit arrangement and type of reinforcement.
 - Use: In accordance with recommendations of BS 1881-204 and manufacturer as appropriate to yield accurate results.
 - Surveyor: Experienced with cover meter surveys.
 - Calibration: At the outset and thereafter regularly at 45-minute (maximum) intervals.
 - Locations for checking: Include columns, beams, cantilevers, slab soffits and all faces exposed to the weather in the finished structure.
 - Timing: As soon as practicable after casting.
 - Notification: Give adequate notice.
 - Results: Submit. Notify immediately where specified cover has not been achieved.



E40 Designed Joints in In Situ Concrete

TO BE READ WITH PRELIMINARIES/GENERAL CONDITIONS.

120 CONSTRUCTION/ MOVEMENT JOINTS GENERALLY

- Accuracy: Position and form joints accurately, straight, well-aligned and truly vertical or horizontal or parallel with setting out lines of the building.
- Modifications to joint design or location: Submit proposals.
- Placing concrete to form movement joints:
 - Maintain effectiveness of joints. Prevent concrete entering joints or penetrating or impregnating compressible joint fillers.
- Do not place concrete simultaneously on both sides of movement joints.

210 FORMED JOINTS

- Forms/ stop ends generally: Rigid and grout-tight.
- Forms/ stop ends for projecting continuity reinforcement: To accommodate bars or fabric without temporary bending or displacement.

211 FORMED JOINTS IN CONCRETE WEARING SURFACES

- Temporary forms: Square edged with a steel top surface.
- Placing concrete: Compact thoroughly at edges to give level, closely abutted joints with no lipping.

230 PREPARATION OF CONSTRUCTION JOINTS

- Roughening of joint surfaces: Select from:
 - Brushing and spraying: Remove surface laitance and expose aggregate finish while concrete is still green.
 - Other methods: Submit proposals.
- Condition of joint surfaces immediately before placing fresh concrete: Clean and damp.

260 SAWN CRACK INDUCING GROOVES

- Groove dimensions:
 - Depth: 50 mm.
 - Width: As narrow as practicable.
- Sawing: Sufficiently early to prevent random cracking (within 24 hours of casting slab) and to produce strong, well defined arrises.
- Groove filling: Sealant.

410 CARBON STEEL TIE BARS

- Standard: To BS 4449.
 - Product form: Ribbed.
 - Strength grade: B500B.
- Cleanliness: Free from corrosive pitting, loose mill scale, loose rust and contaminants which may adversely affect the tie bars, reinforcement, concrete, or bond between the two.
- Position: Centred on joint.
- Other requirements: None.



420 FABRIC TIE STRIPS

- Standard: To BS 4483.
- Cleanliness: Free from corrosive pitting, loose mill scale, loose rust and contaminants which may adversely affect the fabric, concrete, or bond between the two.
- Position: Width of the mesh strip centred on the joint.

430 CARBON STEEL DOWEL BARS

- Standard: To BS EN 10025-2.
- Product form: Plain.
 - Strength grade: 250.
 - Properties: Perfectly straight, with sawn (not sheared) ends.
- Debonding: Achieve effective debonding of each bar
 - Material: Suitable proprietary debonding compound or Suitable plastics sleeve.
 - Extent: Half length of bar.
- Position: At right angles to and centred on joint.
- Other requirements: Fit debonded ends of bars in expansion joints with an approved type of cap incorporating not less than 30mm of compressible material.

520 SHEET JOINT FILLER FOR ISOLATION JOINTS

- Manufacturer: Fosroc or approved equal.
 - Product reference: Hydrocell or approved equal.
- Joints finished with sealant: Leave sufficient space for sealant by using temporary formers.

530 SEALANT SAW-CUT JOINTS IN FLOOR SLAB.

- Manufacturer: Fosroc or approved equal.
 - Product reference: Nitro Seal MS300.
 - Colour of surfaces exposed to view: not applicable.
- Preparation and application: As section Z22.
- Guarantee: Required.
 - Period: 10 years.
 - Requirements: Compatible with retained liquid and joint filler.



E41 Worked Finishes to In Situ Concrete

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS.

150 FINISHING

- Timing: Carry out at optimum times in relation to setting and hardening of concrete.
- Prohibited treatments to concrete surfaces:
 - Wetting to assist surface working.
 - Sprinkling cement.

230 BRUSHED FINISH

- Surface on completion: Light even texture.

320 TROWELLED FINISH

- Surface on completion: Uniform, smooth but not polished, free from trowel marks and blemishes, and suitable to receive specified flooring material.



Appendix A Existing Drawings



B2 | B2 - EXISTING

SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT

(refer to 196002-WHL-XX-XX-SH-S-0001 for full schedule)

-  Temporary works required on gridline 12 prior to local demolition of core two.
-  Temporary works required, prior to demolition, for core one base, core two base, crane base and foundation strengthening works.
-  Any below ground obstructions present due to phased building construction from historic buildings that could impact on piling.
-  Adverse building movement due to demolition and temporary works requirements for core two construction.
-  Unknown locations and extents of all existing services within subbasement and basement.
-  Loading of floor slabs during main works.

ALL PROPOSED DRAINAGE RUNS TO HAVE 750mm WIDE TRENCH SAW CUT INTO EXISTING SLAB

ALL PROPOSED INSPECTION CHAMBERS TO HAVE 3000mm x 3000mm SQUARE PENETRATION SAW CUT INTO EXISTING SLAB TO ALLOW EXCAVATIONS AND INSTALLATION

SLAB DEMOLITION REQUIREMENTS FOR BELOW GROUND DRAINAGE TO BE READ IN CONJUNCTION WITH WOOLGAR HUNTER 9400 SERIES

DRAINAGE DEMO EXTENTS BASED ON STAGE 3 LIGHT INFORMATION AND INDICATIVE BREAK OUT. SUBCONTRACTOR TO MAKE ANY NECESSARY ALLOWANCES FOR ADDITIONAL BREAKING OUT FOR WORKING ROOM. AN 'ALL NEW' DRAINAGE PROVISION, AS PREFERRED BY RWBHO, WILL BE DEVELOPED THROUGH STAGE 4 AND REQUIRE DEMO EXTENTS TO BE AMENDED.

Notes:

- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
- All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
- All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
- Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

Legend:

- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Red cross hatch denotes extent of existing floor slab to be demolished to facilitate new drainage runs - to be read in conjunction with relevant GA
- Slab demolition extents around columns that are to be strengthened should be broken out to 750mm from face of column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed.
- Denotes span of existing 115mm C20/25 RC slab.
- Denotes approximate location of existing drain line / manhole.
- Denotes approximate location of existing drain line / manhole.
- Denotes approximate location of existing drain line / manhole.

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. AWAITING 2D & 3D MEASURED SURVEY INFORMATION

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

 DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-B2-DR-S-0481

LOCATION OF EXISTING BUILDING DRAINAGE FROM SUB-BASEMENT TO BE SURVEYED. PILE LOCATIONS SUBJECT TO COORDINATION WITH EXISTING SERVICES

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

REFER TO WOOLGAR HUNTER DRAWING NUMBER RYLANDS-WHL-XX-B2-DR-C-52-9000 FOR EXISTING SUB-BASEMENT DRAINAGE

P08	DRAINAGE LAYOUT UPDATED	02.03.23	DRC	EC
P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P04	CDM HAZARD MASKING REGION UPDATED. NOTE ADDED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EC
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:

STAGE 4A

CONTRACT No.: 196002 SCALE: 1:200 @ A1



RYLANDS BUILDING MANCHESTER

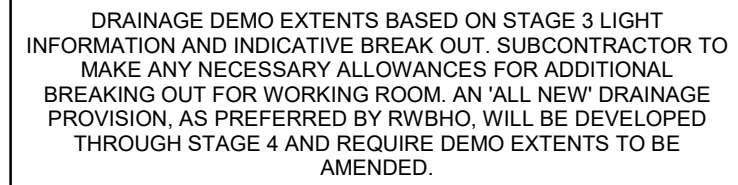
CD9 PROPERTIES (MANCHESTER)

SUB-BASEMENT EXISTING

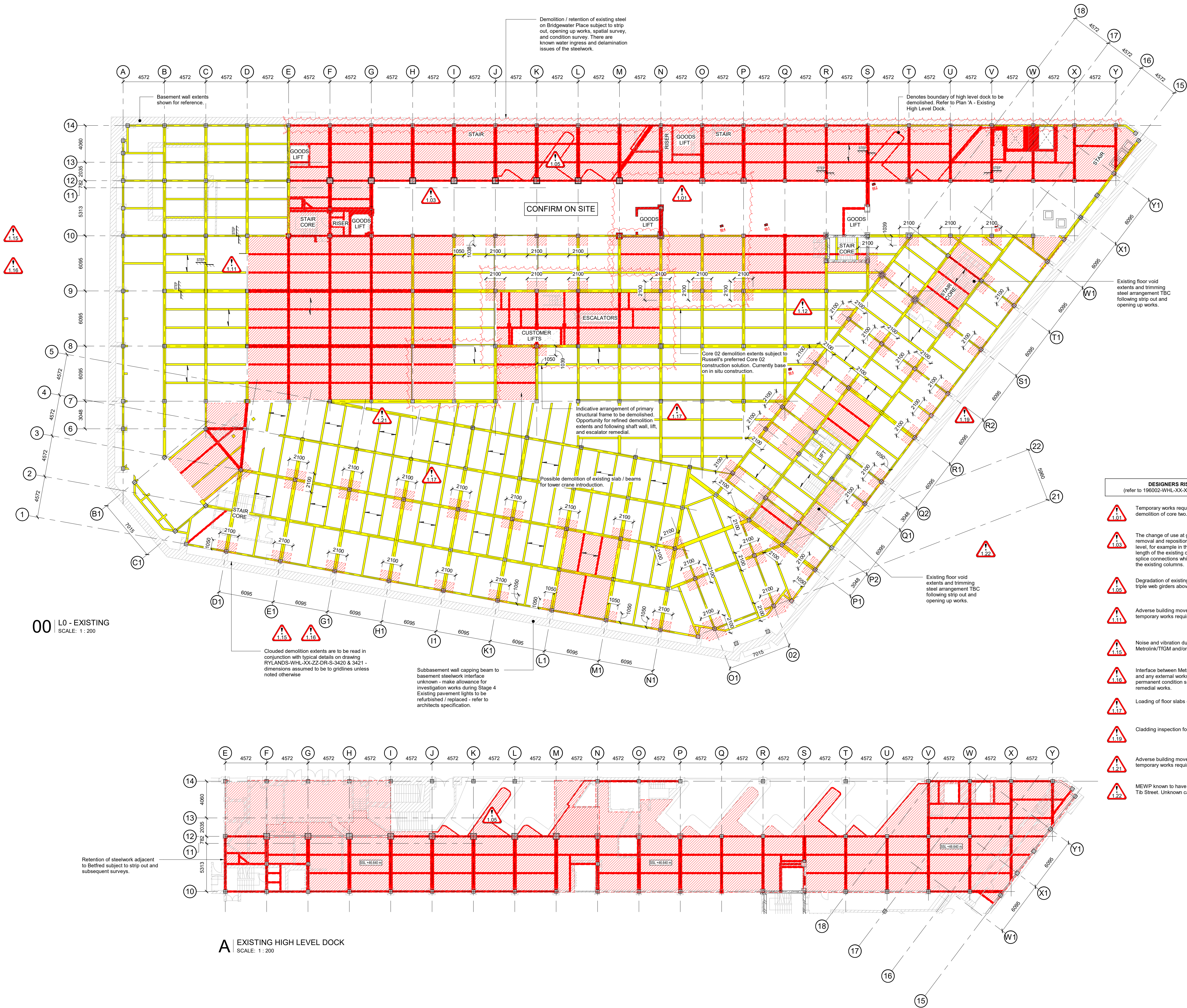
WoolgarHunter
engineers

DRAWING No.: RBM-WHL-XX-B2-DR-S-00-0997

REVISION: P08



DRAWING No.:	REVISION:
RBM-WHL-XX-B1-DR-S-00-0998	P09



- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

Legend:

- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Red cross hatch denotes extent of existing floor slab to be demolished to facilitate new drainage runs - to be read in conjunction with relevant GA
- Slab demolition extents around columns that are to be strengthened should be broken out to 750mm from face of column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed.
- Denotes span of existing 115mm C20/25 RC slab.
- Denotes approximate location of existing drain line / manhole
- Denotes approximate location of existing drain line / manhole
- Denotes approximate location of existing drain line / manhole

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. AWAITING 2D & 3D MEASURED SURVEY INFORMATION

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

GROUND FLOOR AND BASEMENT SLAB AND BEAM DOWNTAKING TO BE SEQUENCED TO AVOID LOSS OF RESTRAINT TO HEAD OF BASEMENT WALL. SEQUENCE TO BE DEVELOPED WITH MAIN CONTRACTOR

REFER TO SLHA INFORMATION FOR EXTERNAL SITE OBSERVATIONS

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF STRIP STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-00-DR-S-0501

P08	DEMO EXTENTS AMENDED	08.03.23	DRC	SJS
P07	GRID DIMENSIONS UPDATED TO	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P04	CON HAZARD MASKING REGION	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EC
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:

STAGE 4A

CONTRACT No: 196002 SCALE: 1:200 @ A1

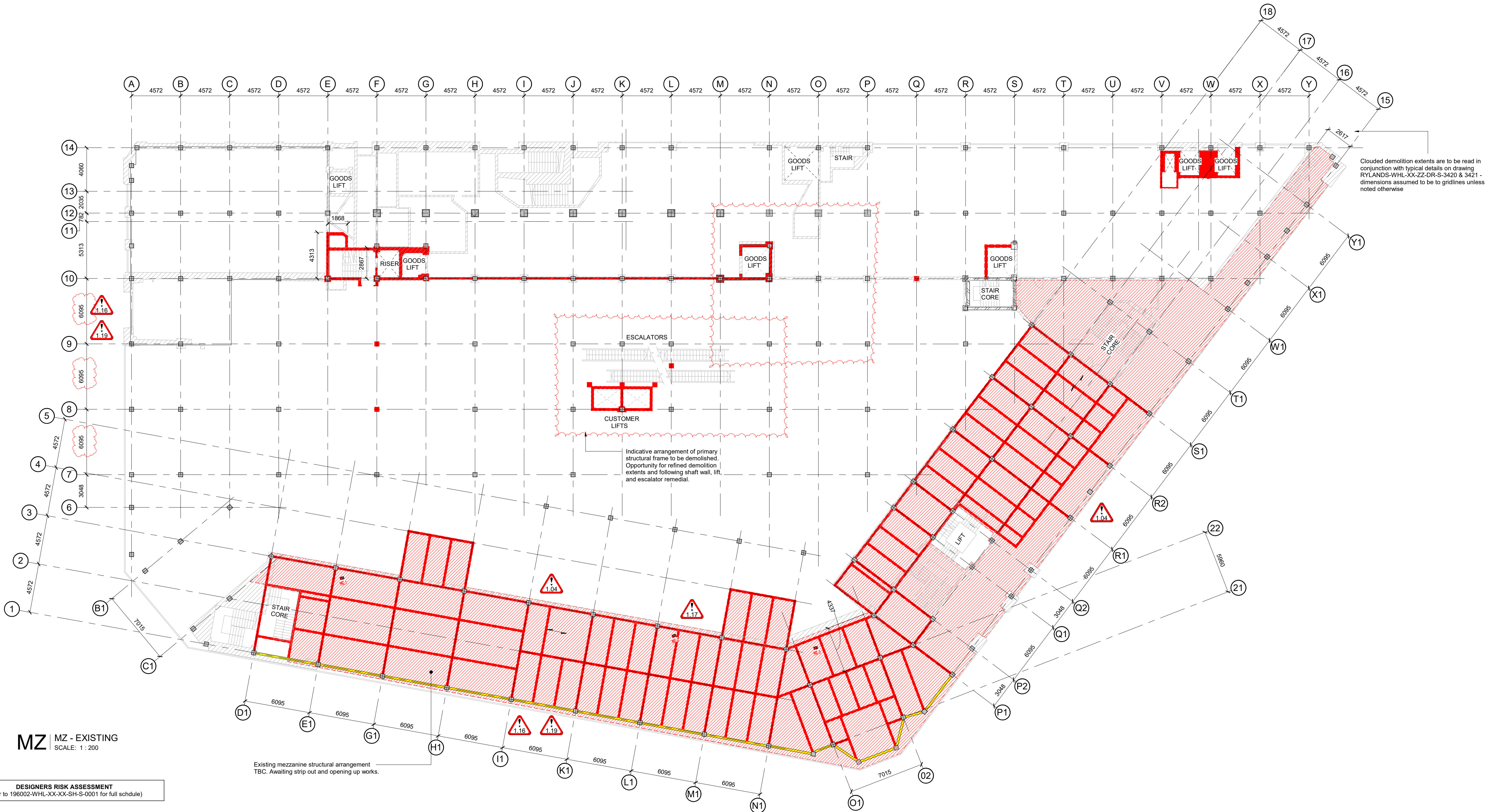
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

GROUND FLOOR EXISTING

WoolgarHunter
engineers

DRAWING No.: RBM-WHL-XX-00-DR-S-00-0999 REVISION: P08



MZ MZ - EXISTING
SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schedule)

- Temporary works and/or column/beam strengthening works to be undertaken prior to demolition of original mezzanine.
- Interface between Metrolink cables attached to cladding and any external works required in the temporary or permanent condition such as scaffolding or cladding remedial works.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
 - Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
 - Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information.
 - Red cross hatch denotes extent of existing floor slab to be demolished to facilitate new drainage runs - to be read in conjunction with relevant GA
 - Slab demolition extents around columns that are to be strengthened should be broken out to 750mm from face of column head. Note majority of columns have flared heads.
 - Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
 - Denotes span of existing 115mm C20/25 RC slab . . .
 - Denotes approximate location of existing drain line / manhole
 - Denotes approximate location of existing drain line / manhole
 - Denotes approximate location of existing drain line / manhole

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. AWAITING 2D & 3D MEASURED SURVEY INFORMATION

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

ALLOWANCE TO BE MADE FOR INFILL OF CONCRETE SLABS AND BEAMS FOLLOWING OPENING UP WORKS AND / OR ENABLING WORKS.

DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-MZ-DR-S-0581

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:

INITIAL COSTING

CONTRACT No:	SCALE:	
196002	1:200 @ A1	

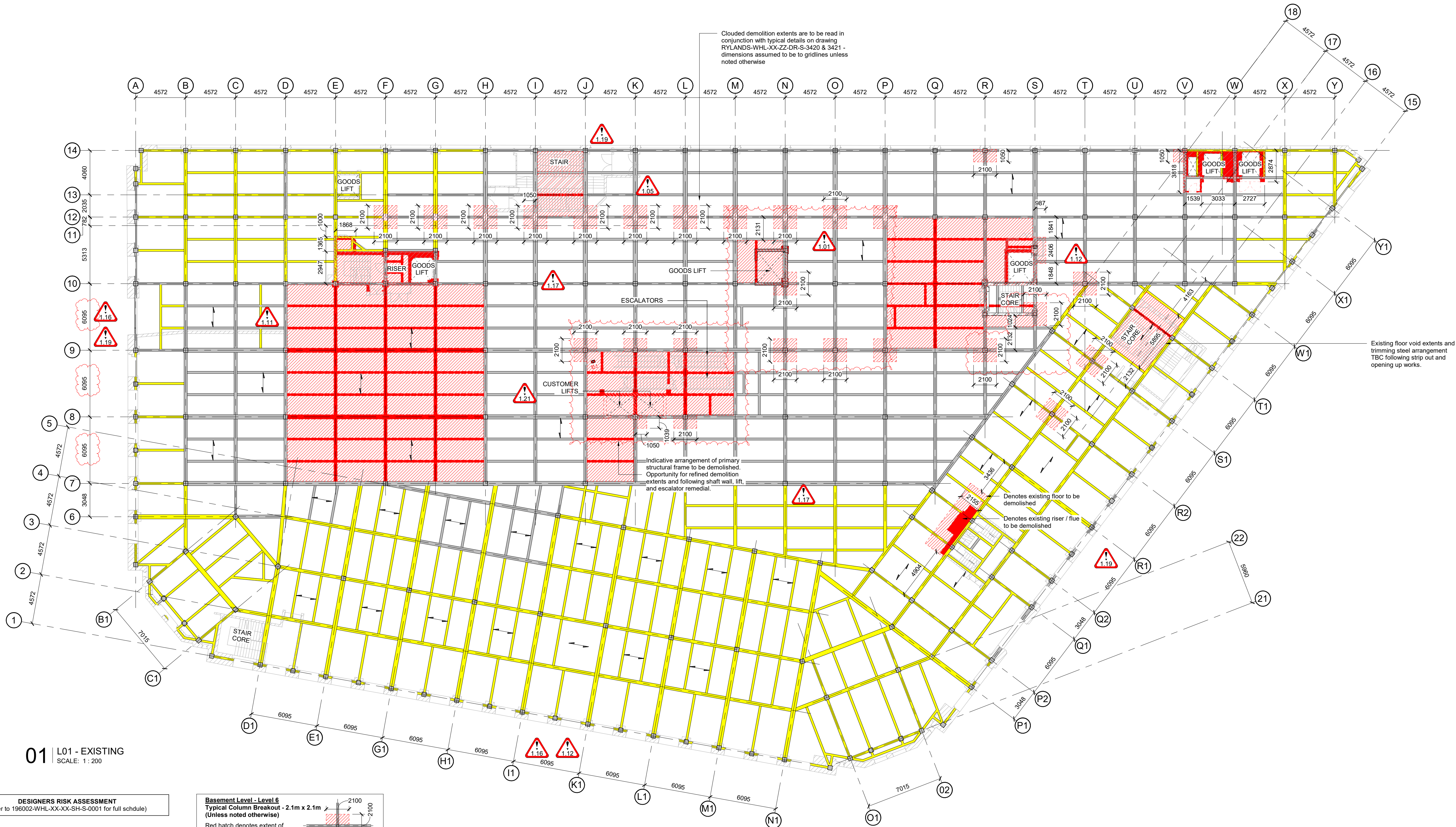
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

MEZZANINE EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-MZ-DR-S-00-1000	P07



DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-001 for full schdule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Degradation of existing hollow compound elements e.g triple web girders above loading bay or twin web columns.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Interface between Metrolink cables attached to cladding and any external works required in the temporary or permanent condition such as scaffolding or cladding remedial works.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

Basement Level - Level 6
Typical Column Breakout - 2.1m x 2.1m
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

Basement Level - Level 6
Typical Column Breakout - Perimeter
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.
- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
- Slab demolition extents around columns that are to be strengthened should be broken out to 750mm from face of column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
- Denotes span of existing 115mm C20/25 RC slab . . .

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRG	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:			
INITIAL COSTING			
CONTRACT No:	SCALE:		
196002	1:200 @ A1		

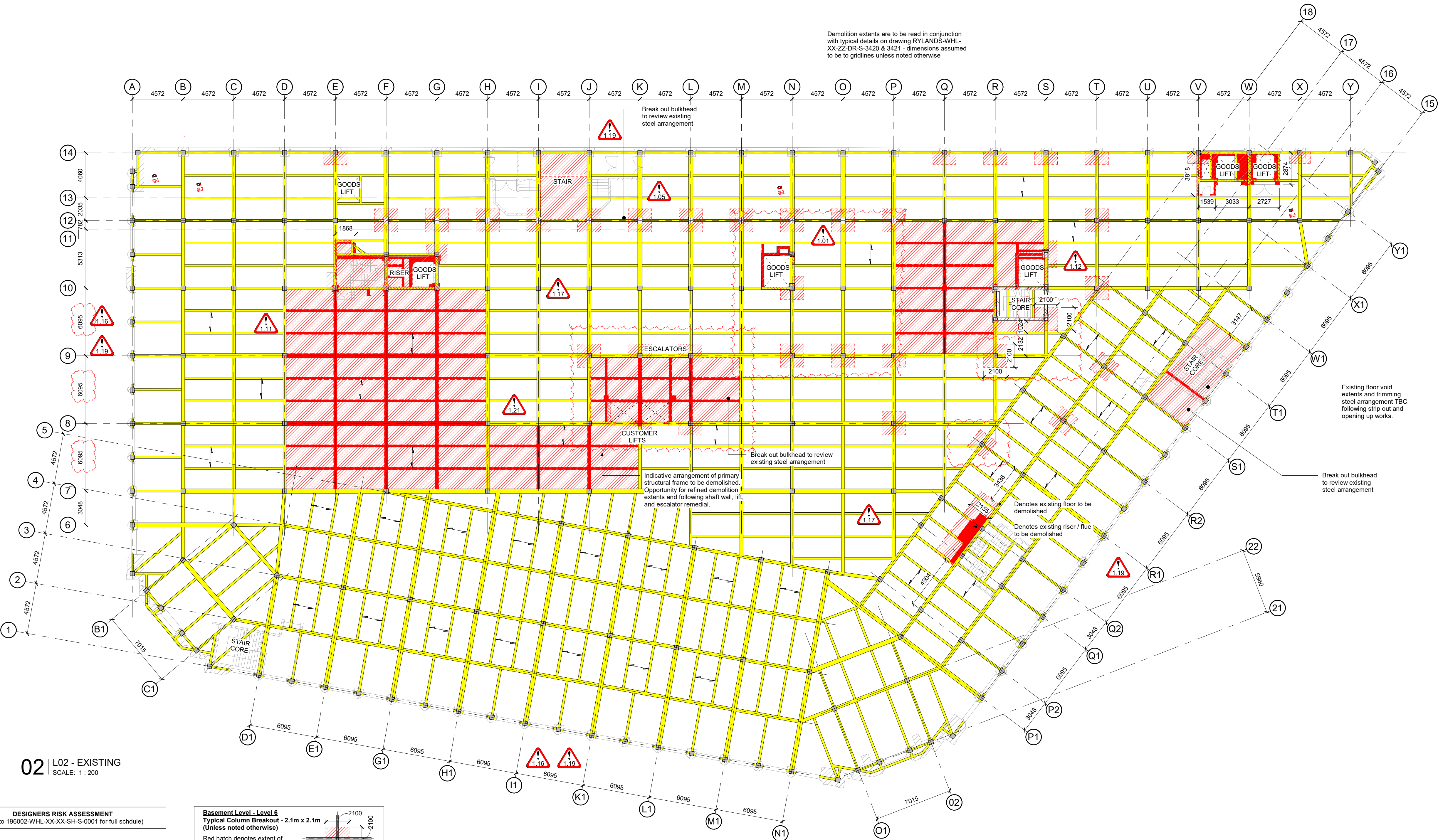
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L01 EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-01-DR-S-00-1001	P07



02 | L02 - EXISTING

SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT (refer to 196002-WHL-XX-XX-SH-S-001 for full schedule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Degradation of existing hollow compound elements e.g. triple web girders above loading bay or twin web columns.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Interface between Metrolink cables attached to cladding and any external works required in the temporary or permanent condition such as scaffolding or cladding remedial works.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects.
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

Basement Level - Level 6
Typical Column Breakout - 2.1m x 2.1m
(Unless noted otherwise)
Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

Basement Level - Level 6
Typical Column Breakout - Perimeter
(Unless noted otherwise)
Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.
- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
 - Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
 - Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
 - Slab demolition extents around columns that are to be strengthened should be broken to face of column head. Note majority of columns have flared heads.
 - Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
 - Denotes span of existing 115mm C20/25 RC slab . . .
- EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.
- EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS
- WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELIN OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR
- DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511
- WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.
- NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/STRIP OUT DRAWINGS.
- ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.
- DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DR	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:			
INITIAL COSTING			
CONTRACT No.:	SCALE:		
196002	1:200 @ A1		

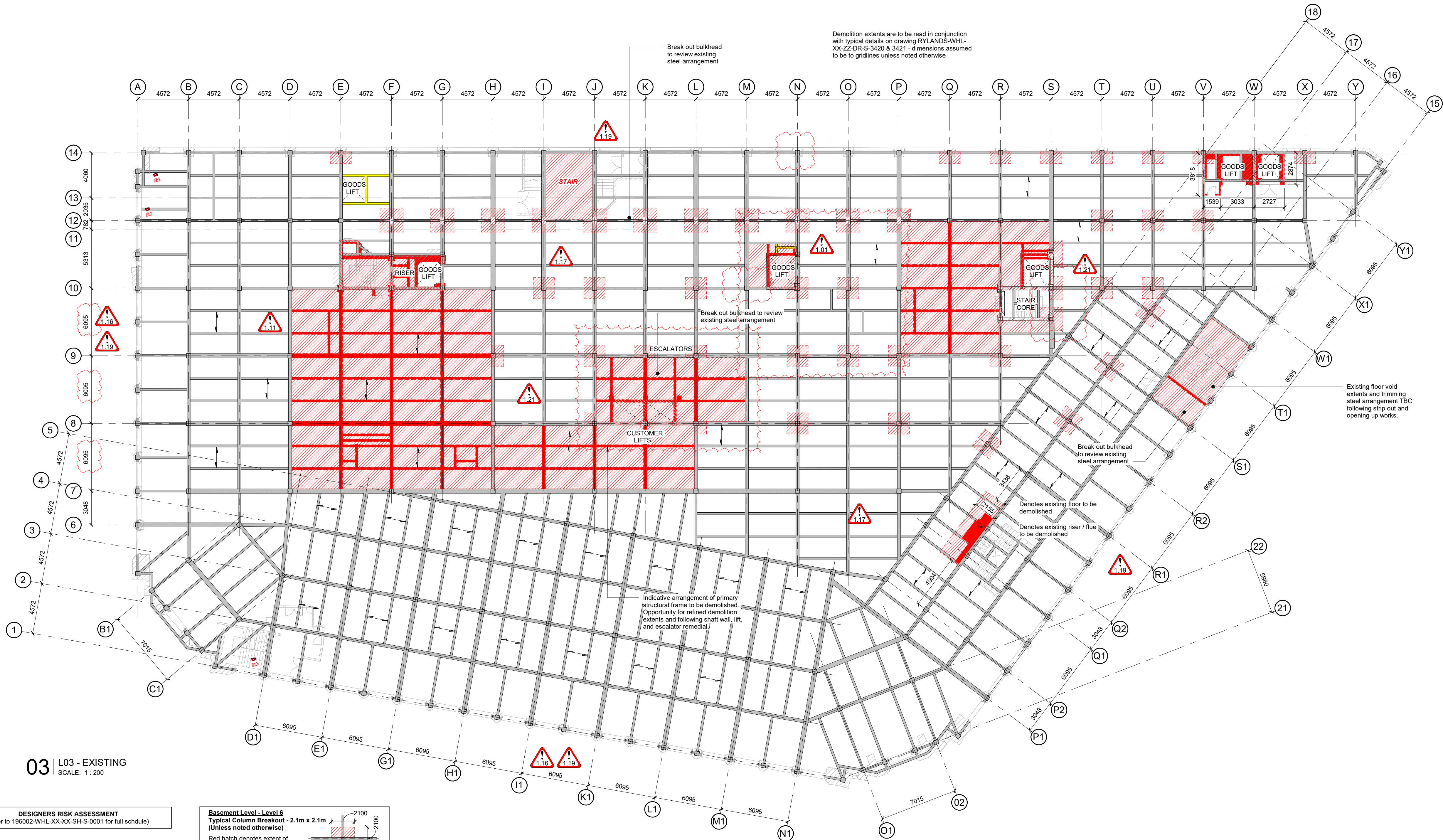
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L02 EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-02-DR-S-00-1002	P07



03 | L03 - EXISTING
SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-001 for full schedule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Degradation of existing hollow compound elements e.g. triple web girders above loading bay or twin web columns.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Interface between Metrolink cables attached to cladding and any external works required in the temporary or permanent condition such as scaffolding or cladding remedial works.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

Basement Level - Level 6
Typical Column Breakout - 2.1m x 2.1m
(Unless noted otherwise)
Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

Basement Level - Level 6
Typical Column Breakout - Perimeter
(Unless noted otherwise)
Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

Demolition extents are to be read in conjunction with typical details on drawing RYLANDS-WHL-XX-ZZ-DR-S-3420 & 3421 - dimensions assumed to be to gridlines unless noted otherwise

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.
- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
 - Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
 - Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
 - Slab demolition extents around columns that are to be strengthened should be broken from face of column head. Note majority of columns have flared heads.
 - Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
 - Denotes span of existing 115mm C20/25 RC slab . . .
- EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.**
- EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS**
- WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR**
- DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511
- WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.**
- NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.**
- ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHQ FOR FURTHER GUIDANCE.**
- DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.**

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:

INITIAL COSTING

CONTRACT No.: 196002 SCALE: 1:200 @ A1

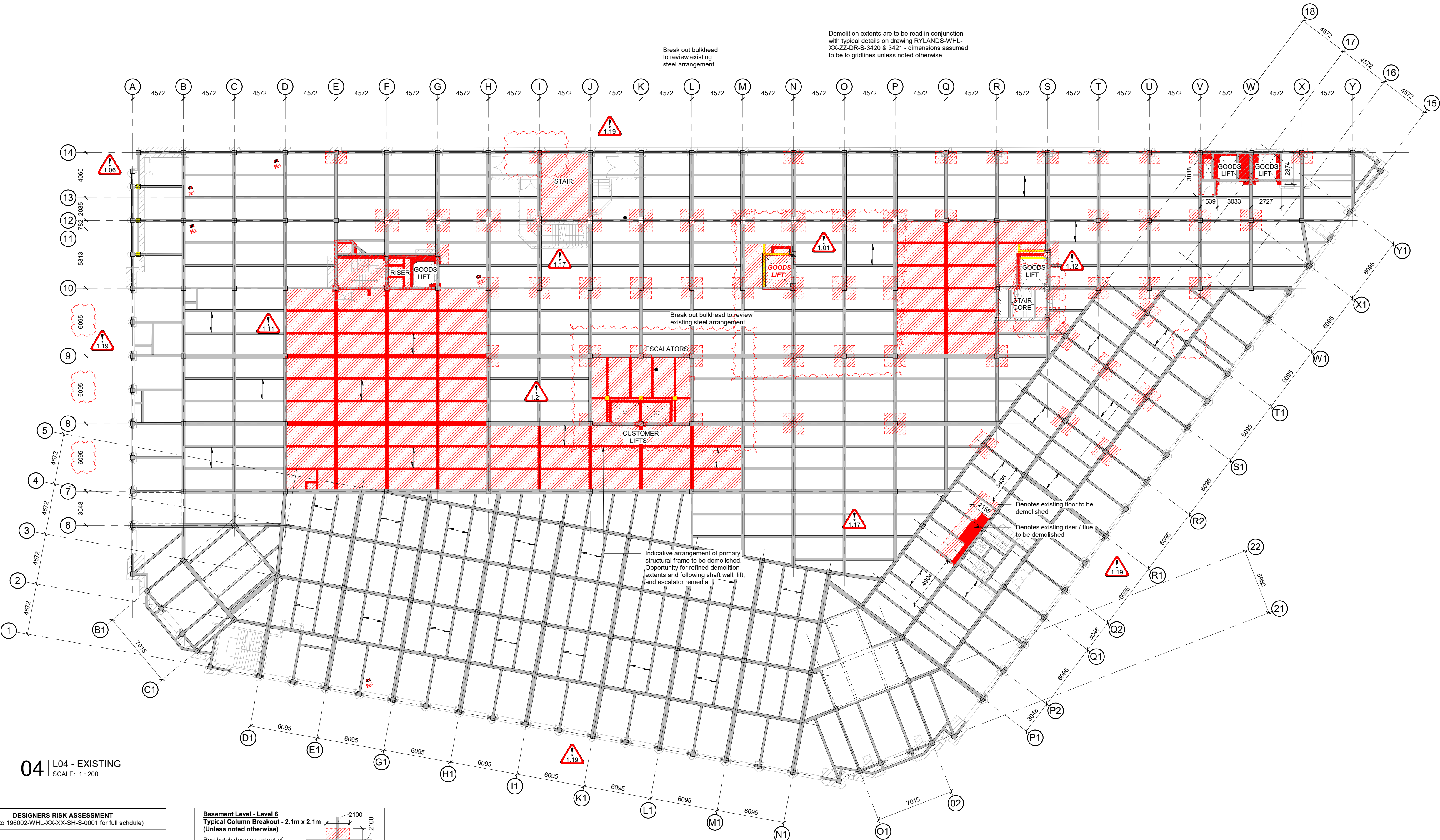
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L03 EXISTING

WoolgarHunter
engineers

DRAWING No.: RBM-WHL-XX-03-DR-S-00-1003 REVISION: **P07**



DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schdule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Movement in cladding above L04 mansard known, as previously surveyed by Quadriga.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

Basement Level - Level 6
Typical Column Breakout - 2.1m x 2.1m
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

Basement Level - Level 6
Typical Column Breakout - Perimeter
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

Legend:

- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
- Slab demolition extents around columns that are to be strengthened should be broken out 750mm from face of column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
- Denotes span of existing 115mm C20/25 RC slab . . .

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELIN OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

Denotes location of site observation image. For image and description, refer to DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

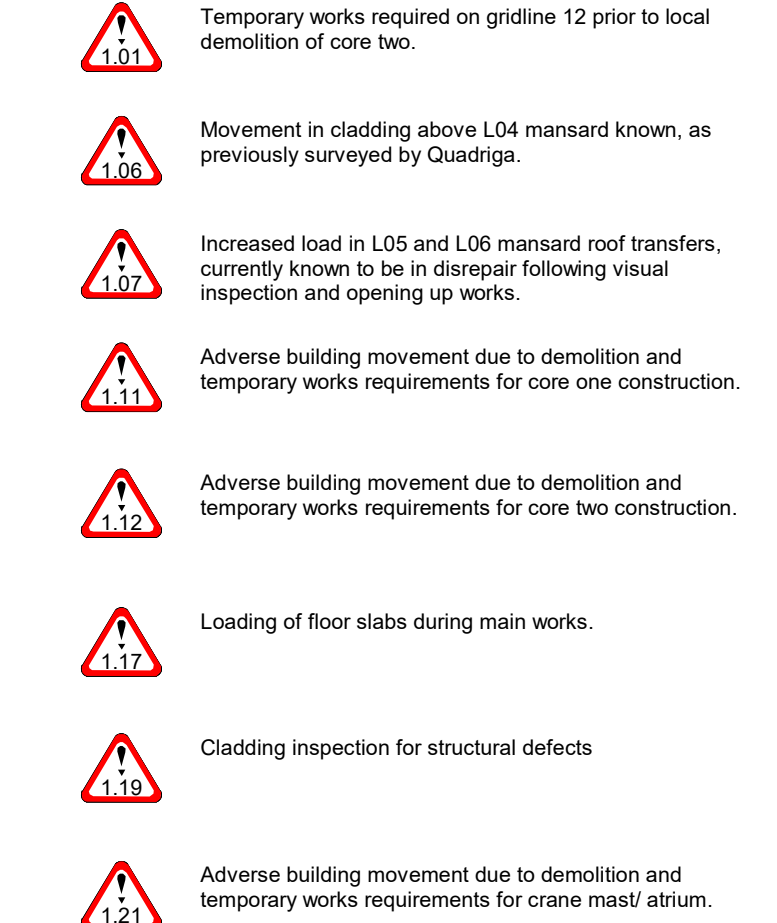
NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DR	EC
P04	CDM HAZARD MASKING REGION	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

www.woolgarhunter.com	
STATUS:	
INITIAL COSTING	
CONTRACT No.: 196002	SCALE: 1:200 @ A1
RYLANDS BUILDING MANCHESTER	
CD9 PROPERTIES (MANCHESTER)	
L04 EXISTING	
WoolgarHunter engineers	
DRAWING No.: RBM-WHL-XX-04-DR-S-00-1004	REVISION: P07



Basement Level - Level 6
Typical Column Breakout - Perimeter
 (Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

Large external clock cantilevered from facade at this location. Condition and fixings to main structure unknown. survey required

Demolition extents are to be read in conjunction with typical details on drawing RYLANDS-WHL-XX-ZZ-DR-S-3420 & 3421 - dimensions assumed to be to gridlines unless noted otherwise

- Break out bulkhead to review existing steel arrangement

- Break out bulkhead to review existing steel arrangement

Indicative arrangement of primary structural frame to be demolished
Opportunity for refined demolition extents and following shaft wall, lift and escalator remedial.

Denotes existing floor to be demolished

Denotes existing riser to be demolished

Notes:

1. All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZX-DR-S-0001 and RYLANDS-WHL-XX-ZX-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
2. All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architectural and Service Engineers drawings and specifications.
3. All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
4. Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

Legend:

Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.

Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.

Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.

Slab demolition extends around columns that are to be strengthened should be broken out to 750mm from face of column head. Note majority of columns have flared heads.

Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .

Denotes span of existing 115mm C20/25 RC slab . . .

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

 DENOTES LOCATION OF SITE OBSERVATION
IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO
DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR
DEMOLITION ARE SHOWN ON JBA DRAWING
DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF
BROKEN OUT ELEMENTS OR STRENGTHENING
WORKS. REFER TO RWBHO FOR FURTHER
GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF
SOFT STRIP MEASURED SURVEY, OPENING UP
WORKS AND ASSOCIATED REINSTATEMENT
STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ
P02	STAGE 3 ISSUE	28.02.22	EP
P01	INITIAL ISSUE	16.12.21	EP
REV	AMENDMENTS	DATE	BY

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STATUS: **INITIAL COSTING**

CONTRACT No.: 196002	SCALE: 1:200 @ A1	
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RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L05 EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-05-DR-S-00-1005	P0



DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schdule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Movement in cladding above L04 mansard known, as previously surveyed by Quadriga.
- Increased load in L05 and L06 mansard roof transfers, currently known to be in disrepair following visual inspection and opening up works.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

Basement Level - Level 6
Typical Column Breakout - 2.1m x 2.1m
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

Basement Level - Level 6
Typical Column Breakout - Perimeter
(Unless noted otherwise)

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

REFER TO LEVEL 1 FOR SETTING OUT OF TYPICAL SLAB BREAKOUTS

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.
- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
 - Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
 - Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
 - Slab demolition extents around columns that are to be strengthened should be broken out 750mm from face of column head. Note majority of columns have flared heads.
 - Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed...
 - Denotes span of existing 115mm C20/25 RC slab...

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELINE OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

EXISTING BEAMS TO STAIR BETWEEN GRIDS C1-D1 ADDED TO DEMOLISHED SEQUENCE GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	CS
P07			
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRG EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ EP
P02	STAGE 3 ISSUE	28.02.22	EP JB
P01	INITIAL ISSUE	16.12.21	EP JB
REV	AMENDMENTS	DATE	BY CHK

www.woolgarhunter.com

STATUS:			INITIAL COSTING
CONTRACT No.:	SCALE:		
196002	1:200 @ A1		

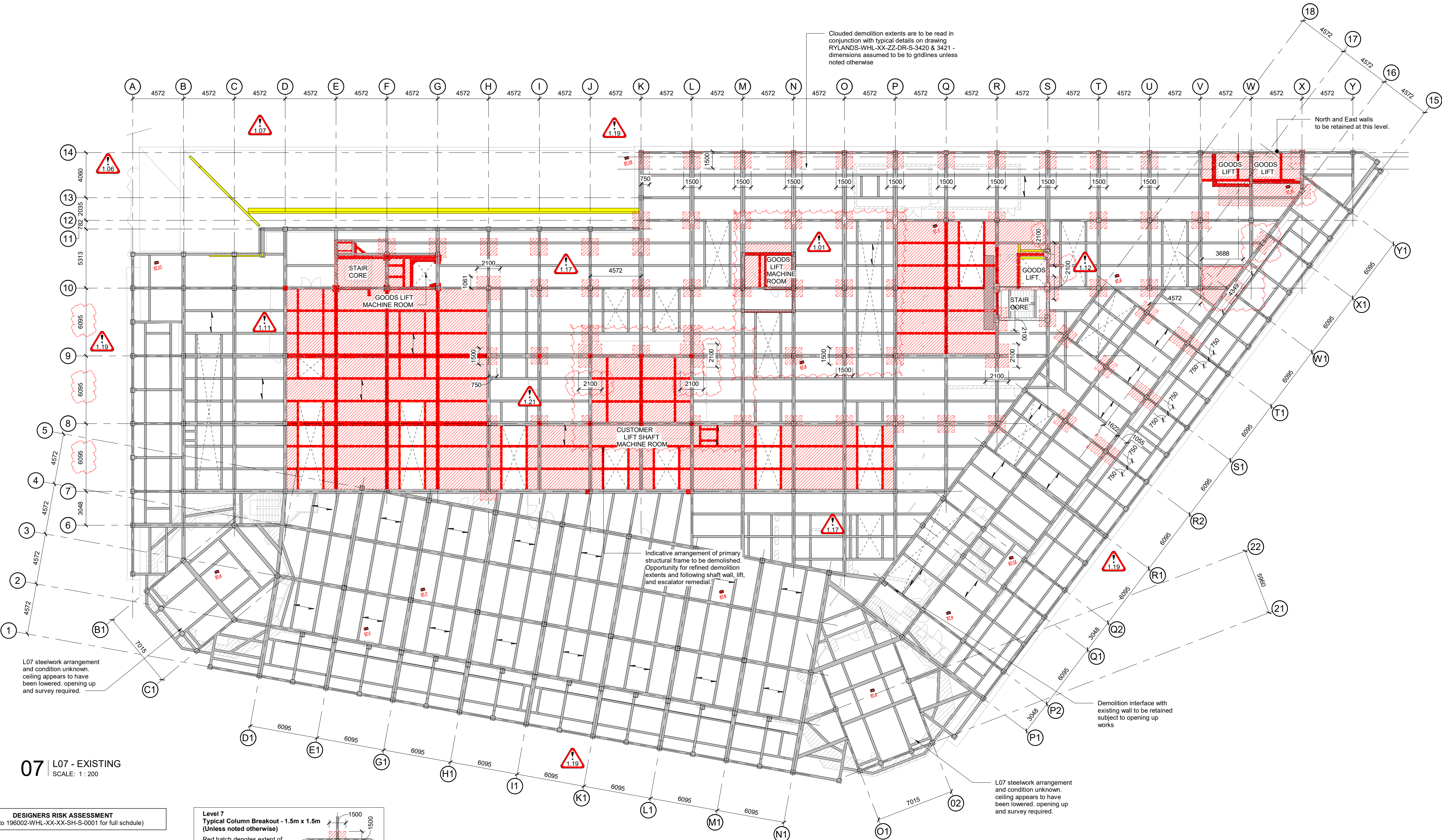
RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L06 EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-06-DR-S-00-1006	P07



DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schedule)

- Temporary works required on gridline 12 prior to local demolition of core two.
- Movement in cladding above L04 mansard known, as previously surveyed by Quadriga.
- Increased load in L05 and L06 mansard roof transfers, currently known to be in disrepair following visual inspection and opening up works.
- Adverse building movement due to demolition and temporary works requirements for core one construction.
- Adverse building movement due to demolition and temporary works requirements for core two construction.
- Loading of floor slabs during main works.
- Cladding inspection for structural defects
- Adverse building movement due to demolition and temporary works requirements for crane mast/ atrium.

**Level 7
Typical Column Breakout - 1.5m x 1.5m
(Unless noted otherwise)**

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

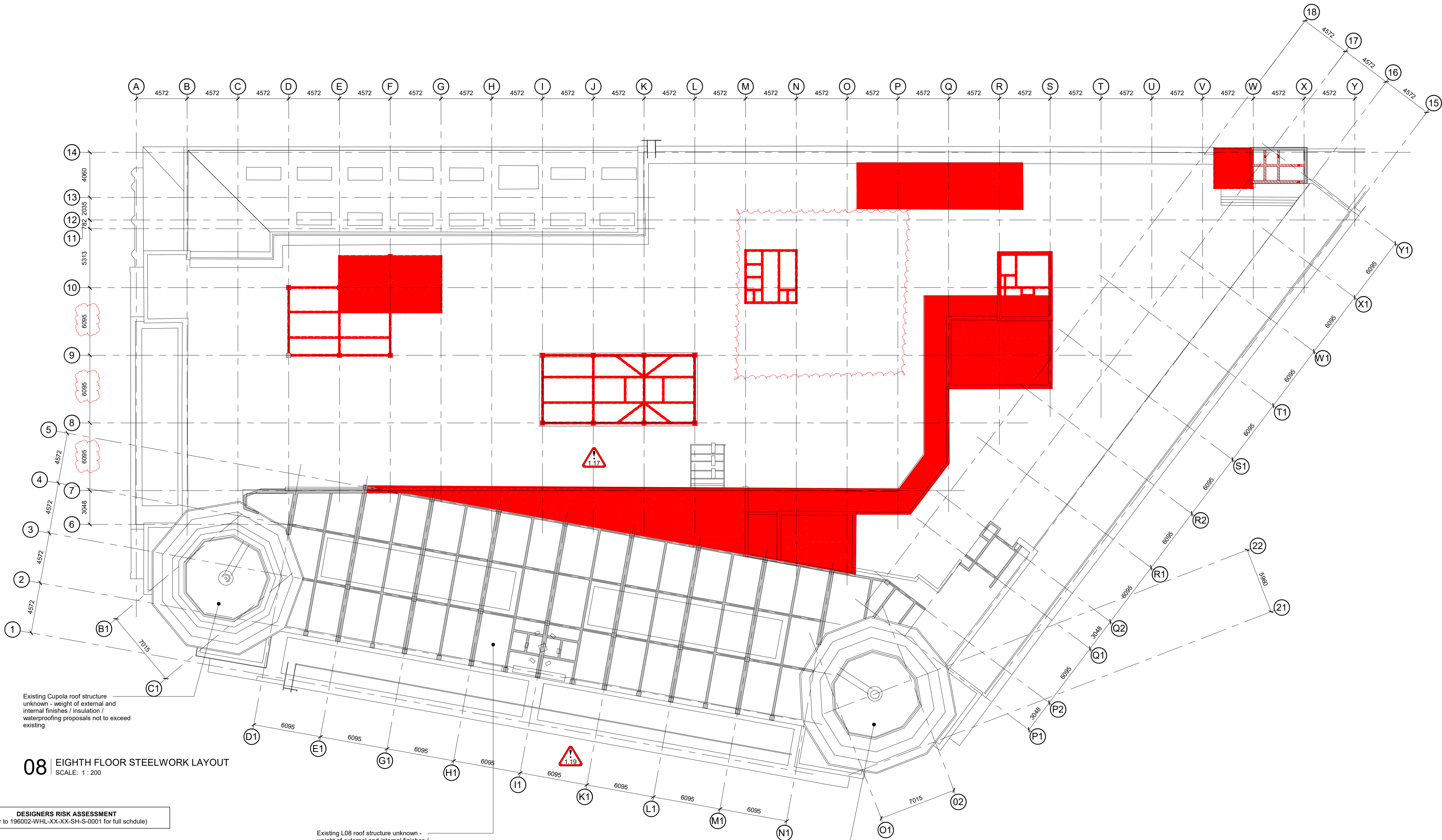
**Level 7
Typical Column Breakout - Perimeter
(Unless noted otherwise)**

Red hatch denotes extent of existing floor slab to be demolished. To be centered on column as per typical plan detail

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.
- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
- Slab demolition extents around columns that are to be strengthened should be broken out 750mm from face of column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed...
- Denotes span of existing 115mm C20/25 RC slab...
- EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.
- EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS
- WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELIN OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR
- DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511
- WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.
- NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/STRIP OUT DRAWINGS.
- ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.
- DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	ORC	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EP
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

www.woolgarhunter.com			
STATUS:			
INITIAL COSTING			
CONTRACT No.:	SCALE:		
196002	1:200 @ A1		
RYLANDS BUILDING MANCHESTER			
CD9 PROPERTIES (MANCHESTER)			
L07 EXISTING			
WoolgarHunter engineers			
DRAWING No.:			REVISION:
RBM-WHL-XX-07-DR-S-00-1007			P07



08 | EIGHTH FLOOR STEELWORK LAYOUT
SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schedule)

-  Loading of floor slabs during main works.
-  Cladding inspection for structural defects

Existing L08 roof structure unknown - weight of external and internal finishes / insulation / waterproofing proposals not to exceed existing

Existing Cupola roof structure unknown - weight of external and internal finishes / insulation / waterproofing proposals not to exceed existing

- Notes:**
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
 - All Woolgar Hunter drawings to be read in conjunction with the relevant Woolgar Hunter specifications and all relevant Architects and Service Engineers drawings and specifications.
 - All dimensions are in millimetres unless stated otherwise. All levels are in metres and relate to ordnance datum.
 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

- Legend:**
- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information. 
 - Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure. 
 - Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details. 
 - Slab demolition extents around columns that are to be strengthened should be broken out to allow for column head. Note majority of columns have flared heads. 
 - Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed. 
 - Denotes span of existing 115mm C20/25 RC slab. 

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

WHERE EXISTING BEAMS SUPPORT ATRIUM CURTAIN WALLING MAKE ALLOWANCE FOR LOCALLY BREAKING OUT CONCRETE ENCASEMENT FOR CURTAIN WALLING BRACKET FIXING TO TOP FLANGE. MAX OFFSET OF CURTAIN WALLING TO CENTRELIN OF BEAM LIMITED TO 400MM - TO BE DEVELOPED WITH ARCHITECT AND SPECIALIST SUBCONTRACTOR

EXTENT OF DEMOLITION OF EXISTING PLANTROOMS SHOWN, INCLUDING ROOFS AND WALLS DOWN TO L07

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

WOOLGAR HUNTER DEMOLITION INDICATE EXTENTS OF ASSUMED DEMOLITION OF PRIMARY STRUCTURAL FRAME ONLY. DEMOLITION EXTENTS SUBJECT TO CONFIRMATION OF COMPLETED STRIP OUT, SPATIAL SURVEY, AND COMPLETION OF OPENING UP WORKS.

NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

P07	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P06	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P05	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P04	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P03	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EC
P02	STAGE 3 ISSUE	28.02.22	EP	JB
P01	INITIAL ISSUE	16.12.21	EP	JB
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:	
INITIAL COSTING	
CONTRACT No.: 196002	SCALE: AS INDICATED @ A1

RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L08 EXISTING

WoolgarHunter
engineers

DRAWING No.: RBM-WHL-XX-08-DR-S-00-1008	REVISION: P07
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09 | NINTH FLOOR STEELWORK LAYOUT
SCALE: 1 : 200

DESIGNERS RISK ASSESSMENT
(refer to 196002-WHL-XX-XX-SH-S-0001 for full schdule)

- Loading of floor slabs during main works.
- Cladding inspection for structural defects

Existing L08 roof structure unknown - weight of external and internal finishes / insulation / waterproofing proposals not to exceed existing

Existing Cupola roof structure unknown - weight of external and internal finishes / insulation / waterproofing proposals not to exceed existing

- Notes:
- All Woolgar Hunter drawings to be read in conjunction with General Notes: RYLANDS-WHL-XX-ZZ-DR-S-0001 and RYLANDS-WHL-XX-ZZ-DR-S-0002. Any discrepancy between the General Notes and drawing-specific notes to be raised to Woolgar Hunter immediately.
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 - Any discrepancies between the general notes and drawing specific to be raised to Woolgar Hunter immediately.

Legend:

- Red denotes existing primary steel frame to be demolished. Note this is subject to change following receipt of final spatial survey information.
- Yellow denotes 'assumed' structure location. Spatial survey & intrusive survey to determine location and nature of structure.
- Red hatch denotes extent of existing floor slab to be demolished. Note this is subject to change following receipt of final spatial survey information. Refer to Woolgar Hunter drawings 3420 series for slab and beam encasement demolition details.
- Slab demolition extents around columns that are to be strengthened should be broken out to allow for column head. Note majority of columns have flared heads.
- Cyan denotes concrete beam encasement to be stripped from existing beam to allow for curtain walling brackets to be fixed . . .
- Denotes span of existing 115mm C20/25 RC slab . . .

EXISTING BEAM AND COLUMN ARRANGEMENT BASED ON HISTORICAL INFORMATION AND JBA REFLECTED CEILING PLANS. TO BE REFINED UPON RECEIPT OF 2D AND 3D MEASURED SURVEY.

EXTENTS OF PROPOSED STEELWORK AND SLAB INFILLS SUBJECT TO PRESENCE OF EXISTING SLABS AND BEAMS TO BE DETERMINED FOLLOWING STRIP OUT AND REMOVAL OF EXISTING STRUCTURE IN ACCORDANCE WITH JBA DEMOLITION DRAWINGS

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DENOTES LOCATION OF SITE OBSERVATION IMAGE. FOR IMAGE AND DESCRIPTION, REFER TO DRAWING No. RYLANDS-WHL-XX-01-DR-S-0511

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NON-STRUCTURAL MASONRY WALLS FOR DEMOLITION ARE SHOWN ON JBA DRAWING DEMOLITION/ STRIP OUT DRAWINGS.

ALLOWANCE TO BE MADE FOR REINSTATEMENT OF BROKEN OUT ELEMENTS OR STRENGTHENING WORKS. REFER TO RWBHO FOR FURTHER GUIDANCE.

DEMOLITION EXTENTS SUBJECT TO COMPLETION OF SOFT STRIP MEASURED SURVEY, OPENING UP WORKS AND ASSOCIATED REINSTATEMENT STRATEGY.

P05	GRID DIMENSIONS UPDATED TO TIE WITH JBA LAYOUTS	20.02.23	SJ	EC
P04	DRAWING GENERALLY UPDATED	20.01.23	SJ	CS
P03	DEMOLITION DIMENSIONS ADDED	13.01.23	DRC	EC
P02	CDM HAZARD MASKING REGION UPDATED	15.12.22	SJ	EC
P01	STAGE 3 LIGHT ISSUE	09.12.22	SJ	EC
REV	AMENDMENTS	DATE	BY	CHK

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STATUS:

INITIAL COSTING

CONTRACT No:	SCALE:	
196002	1:200 @ A1	

RYLANDS BUILDING MANCHESTER

CD9 PROPERTIES (MANCHESTER)

L09 EXISTING

WoolgarHunter
engineers

DRAWING No.:	REVISION:
RBM-WHL-XX-09-DR-S-00-1009	P05

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civil + structural + geo-environmental