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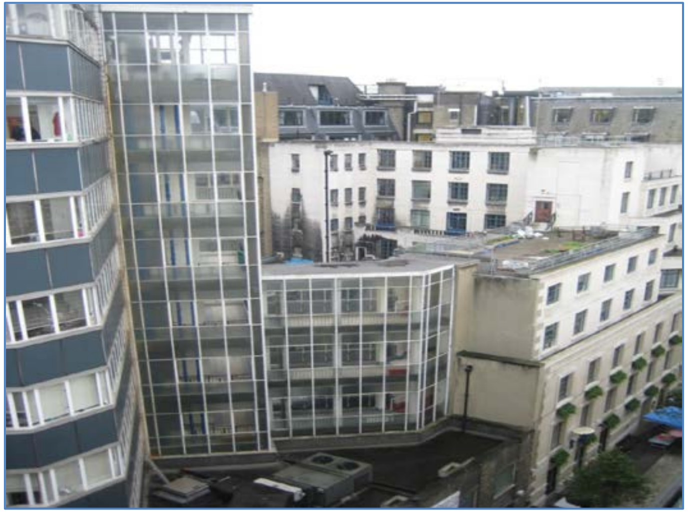
LSE CENTRE BUILDINGS

Soft Strip
Asbestos Removal
Structural Demolition

Explaining the impact on LSE staff, students and the neighbours



Creating a new LSE landmark building & public square
Improving facilities for staff and students

www.lse.ac.uk/centrebuildings

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CONTENT

- Who's Who
- Project Team
- Background and programme overview
- Why Cantillon
- Demolition Phasing
- Key demolition programme dates
- Existing buildings and controlled demolition
- Construction traffic and pedestrian safety
- Noise, dust and vibration control measures
- Communication

WHO'S WHO

- **Employer**: LSE
- **Demolition Contractor**: Cantillon Limited
- **Cost Consultants & Employers Agent**: Deloitte
- **Architects**: Rogers Stirk Harbour + Partners
- **Services Engineers**: Chapman BDSP
- **Structural Engineers**: AKT II

Background and Programme

PROJECT OUTPUTS

CBR will be a 13 storey tower with an adjoining 6 storey block facing Houghton Street and a new public square leading to the Library

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SITE AREA

Buildings being demolished:

- East Building
- The Anchorage
- Clare Market
- St Clements: core & eastern wing

Buildings being demolished are coloured purple

PROJECT TIMELINE

Activity *Year*	2015	2016	2017	2018
Architects design				
Decants from Centre Buildings				
Works to adjacent buildings				
Planning Application period				
Demolition Contract				
Main Contractor Procurement				
Construction Contract				

Key dates:

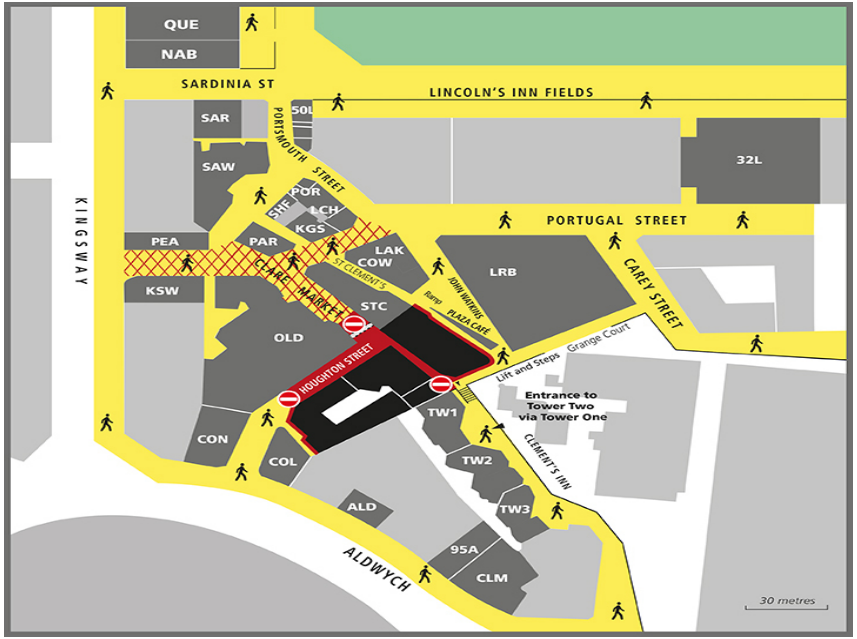
- Planning approval was received March 2015
- Existing buildings will be vacant by mid Summer term 2015
- Campus road closures start mid June 2015
- Demolition starts end of Summer term 2015
- New building finished late 2018

Demolition is expected to take approximately 35 weeks/nine months starting 6 July 2015. There will be pre-demolition works to the buildings once they are empty to strip out any fixtures and fittings that can be reused or recycled.

ONLY WEEKS UNTIL HOUGHTON STREET CLOSES!

From 15 June 2015, the pedestrian route through Houghton Street and Clare Market will be closed as the demolition contractor starts taking possession of the site by erecting hoardings and visual building wraps which will be completed before the graduation ceremonies.

Noisy works will be strictly controlled and, as this is still exam time, actual demolition will not start until after the end of term.



CANTILLON SELECTED AS DEMOLITION CONTRACTOR

The School has recently awarded Cantillon the contract demolition following a rigorous evaluation of price and quality of all tender submissions.

Cantillon is one of the UK's leading demolition contractors with an enviable reputation for efficiently and safely delivering projects with considerate behaviour to all stakeholders and an awareness of environmental impacts.

Cantillon are due to start setting up their site on 15 June 2014 (including closing Houghton Street) and then progressing with the demolition of the old Three Tuns and severing St Clements East from West immediately after term ends.

The main demolition process will commence in September 2015 once scaffolding and hoardings are completed to all the buildings.

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Project Teams

LSE Team

Julian Robinson
Director of Estates
LSE

Ken Kinsella
Director of Capital Development
LSE

Emma Lovegrove
Principal Project Manager
LSE

Phil Newsham
Senior Project Manager
LSE

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Cantillon Team

Paul Moody
Cantillon
Operational
Management

Jason Crawley
Cantillon
Commercial
Management

John Rimmer
Cantillon
Safety &
Sustainability

Damien Flatley
Cantillon
Project Manager

Henry Brooks
Cantillon
Site Manager

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COMPANY PROFILE: Cantillon Limited

- **Experience**: Second generation family run business built up over 47 years
- **Safety**: A priority - over 1.8m work-hours (over seven year period) without reportable incident
- **Investment in Training**: Highly skilled, qualified, trained and committed workforce
- **Repeat Business**: Over 74% of contracts is repeat from a high profile client base
- **Industry Recognition**: Awarded RoSPA Gold Medal (sixth consecutive award)
- **Market Recognition**: World Demolition Contractor of the Year for two Years: 2011/12

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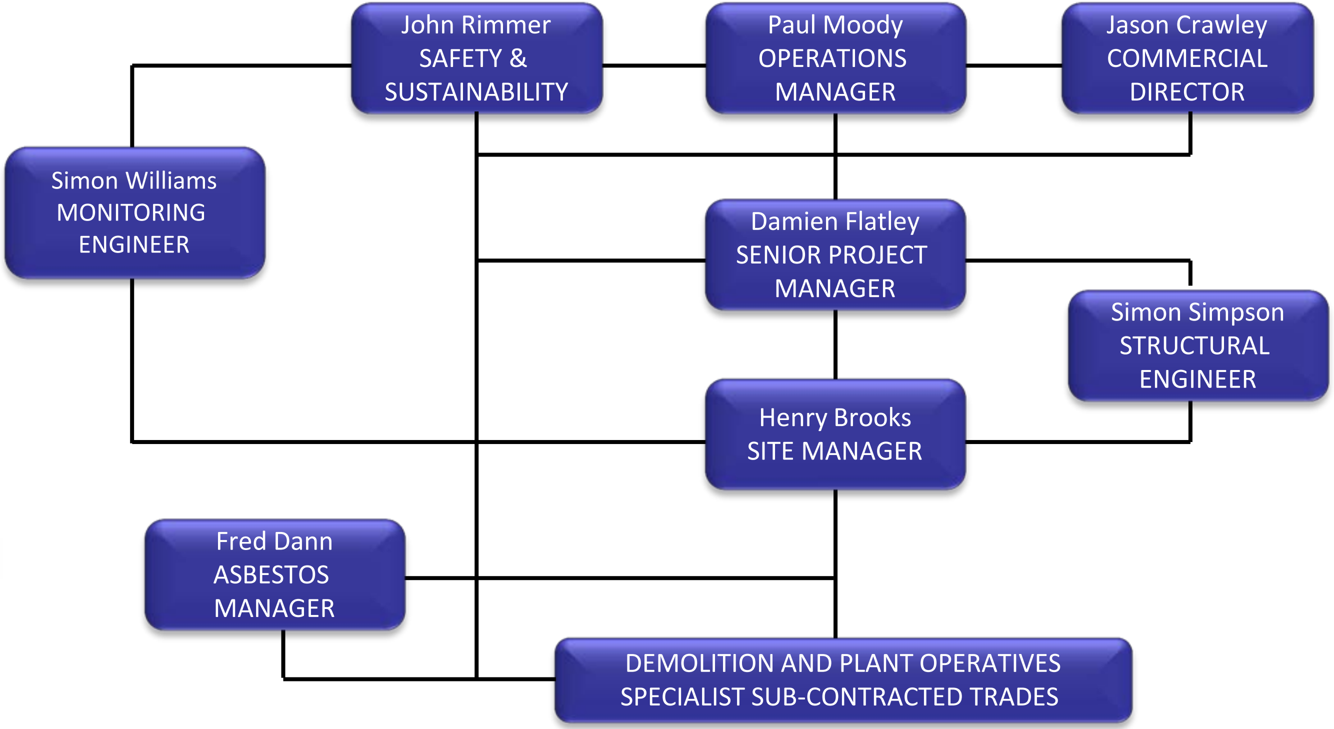
PROJECT MANAGEMENT



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THE PROJECT – LSE CENTRE BUILDINGS ENABLING WORKS

OUTLINE DEMOLITION PHASE SCOPE OF WORKS

- Isolation of existing services to the existing buildings.
- Soft strip and asbestos removal of the existing building in preparation for demolition.
- Temporarily relocate existing UKPN network substation.
- Structural demolition and clearance of the building down to the existing ground floor slab level.

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CENTRE BUILDINGS PROJECTS – THE EXISTING BUILDINGS

- 3 buildings to be demolished and cleared in full: Clare Market, East Building and Anchorage building.
- Two 8 storey towers rising from 3 storey Clare Market and St Clements Reinforced concrete framed building
- 5 storey 19c Anchorage Building, traditional masonry building
- Part dismantling and clearance of St Clements building. 1967 RC framed construction, elements of the late 19c Vestry Hall remain.

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LSE CENTRE BUILDINGS– KEY PROGRAMME OF WORKS AND MILESTONES

Overall outline programme 33 working weeks

- **Vacant Possession**
    - Clare Market / East Building / Anchorage - 15 June 15
    - St Clements Building (East) and Tower - 6 July 15
    - St Clements building (Core) - Dec 2015
- **Commence site activities** Monday 15 June 2015
    - Close Houghton Street / Clare Market - 15 June 15
    - Erect acoustic screen to Old Building - June 15
    - Isolate and make safe the building. Approx. 2wk
    - Commence site hoardings. Approx. 3 wks
    - Erect demolition scaffolding. Approx. 10 wks
    - Soft strip existing building and clear materials. Approx. 9 wks.
    - Erect tower crane. Late July / Early August 2015
- **Commence cutline 1 – St Clements Building**
    - Target 6 July 15
- **Form vehicle turning bay Clare Market** – July 15
- **Lionel Robbins Bridge Link –** Aug 2015
- **Old Building Bridge Link –** Aug 2015
- **Commence structural demolition Clare Market and St Clements Tower.**
    - Target September 2015.
    - Continue floor by floor demolition down to lowest level. Approx. 19 wks
- **Commence Cutline 2 works – St Clements Core**
- Target December 15 – Dependant upon Re-stack works
- **Demolition Phase completion** – Feb / March 2016

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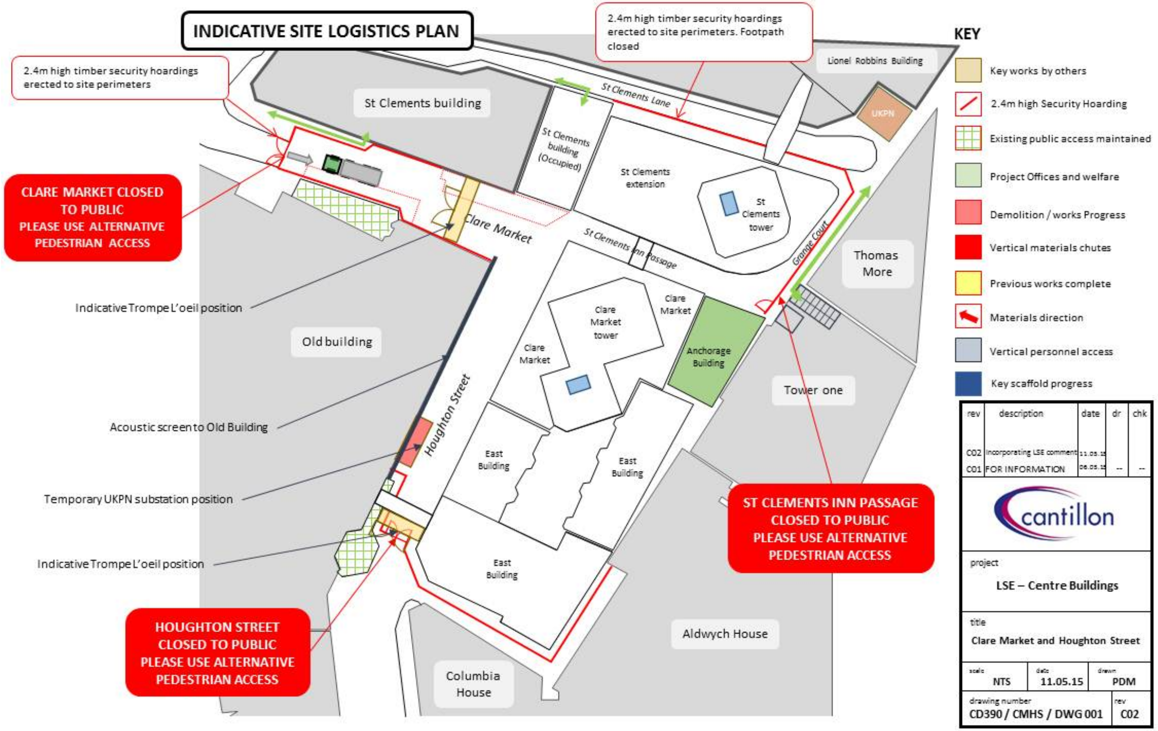
SITE LOGISTICS – PERIMETER SECURITY & ACCESS ROUTES



rev	description	date	dr	chk
C02	Incorporating LSE comment	11.05.15		
C01	FOR INFORMATION	06.05.15	--	--

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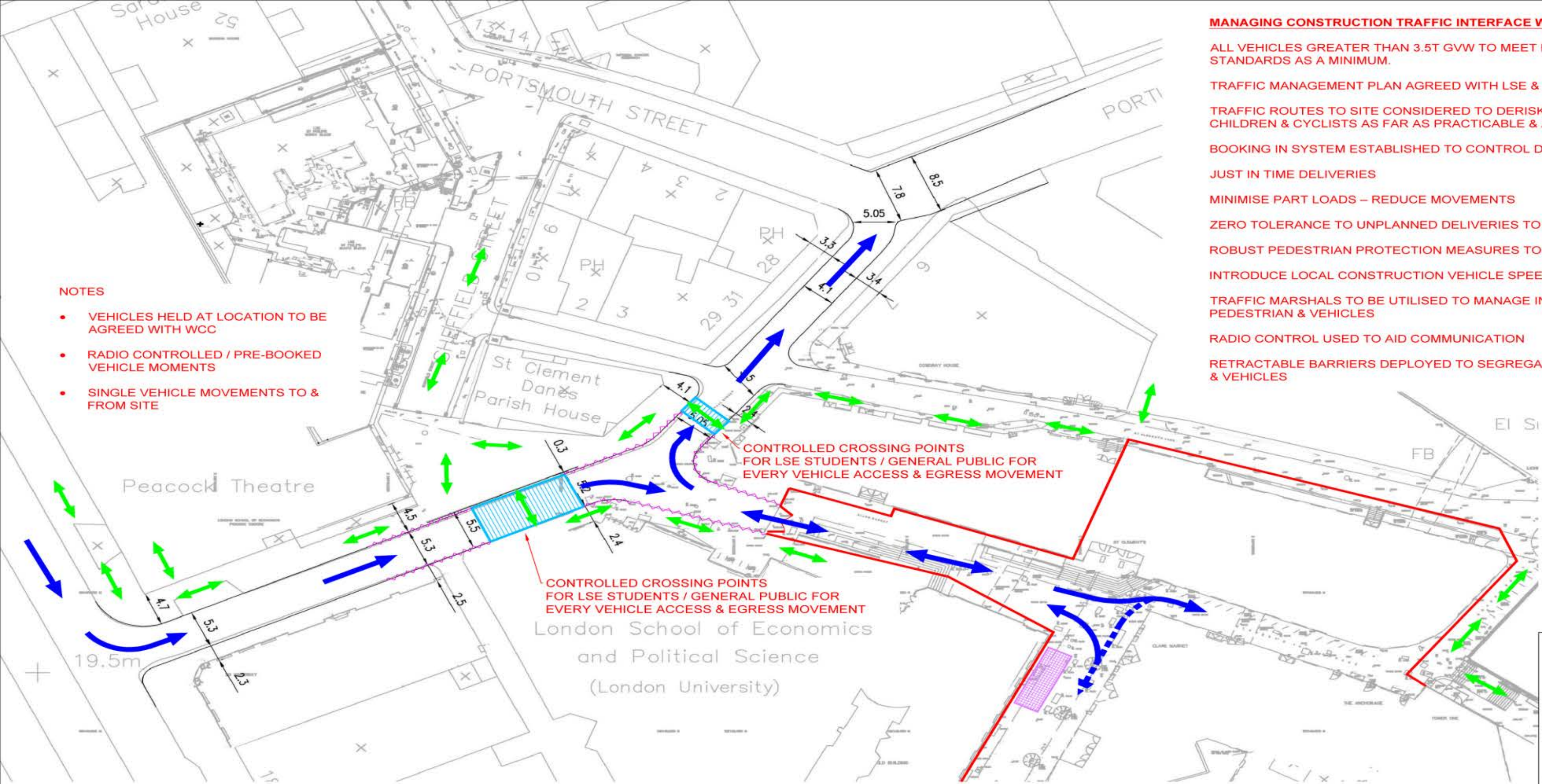
project
LSE – Centre Buildings

title
Clare Market and Houghton Street

scale	date	drawn
NTS	11.05.15	PDM

drawing number	rev
CD390 / CMHS / DWG 001	C02

PORTUGAL STREET PEDESTRIAN & VEHICLE MANAGEMENT



NOTES

- VEHICLES HELD AT LOCATION TO BE AGREED WITH WCC
- RADIO CONTROLLED / PRE-BOOKED VEHICLE MOMENTS
- SINGLE VEHICLE MOVEMENTS TO & FROM SITE

MANAGING CONSTRUCTION TRAFFIC INTERFACE WITH PEDESTRIANS

ALL VEHICLES GREATER THAN 3.5T GVW TO MEET FORS SILVER SAFETY STANDARDS AS A MINIMUM.

TRAFFIC MANAGEMENT PLAN AGREED WITH LSE & WESTMINSTER

TRAFFIC ROUTES TO SITE CONSIDERED TO DERISK INTERFACES WITH CHILDREN & CYCLISTS AS FAR AS PRACTICABLE & AGREED WITH WCC

BOOKING IN SYSTEM ESTABLISHED TO CONTROL DELIVERIES TO SITE

JUST IN TIME DELIVERIES

MINIMISE PART LOADS – REDUCE MOVEMENTS

ZERO TOLERANCE TO UNPLANNED DELIVERIES TO MAINTAIN CONTROL

ROBUST PEDESTRIAN PROTECTION MEASURES TO BE IMPLEMENTED

INTRODUCE LOCAL CONSTRUCTION VEHICLE SPEED LIMITS

TRAFFIC MARSHALS TO BE UTILISED TO MANAGE INTERFACE BETWEEN PEDESTRIAN & VEHICLES

RADIO CONTROL USED TO AID COMMUNICATION

RETRACTABLE BARRIERS DEPLOYED TO SEGREGATE PEDESTRIANS & VEHICLES

KEY

VEHICLE ROUTES

PEDESTRIAN FLOWS

RETRACTABLE PEDESTRIAN BARRIER

rev	description	date	dr	chk
P1	FOR COMMENT / DISCUSSION	03.03.15	SD	PC

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project

CENTRE BUILDING

title

DEMOLITION LOGISTICS

scale	date	drawn
NTS	03.03.15	SD

status — project ref

drawing number: LOG-CEB-SP-003 — revision: P1

graphic scale


STOP
CHILTERN

LSE CENTRE BUILDINGS – EARLY ENABLING WORKS

- Investigative surveys

- Erect site hoardings and install security

- Erect demolition protection scaffolding

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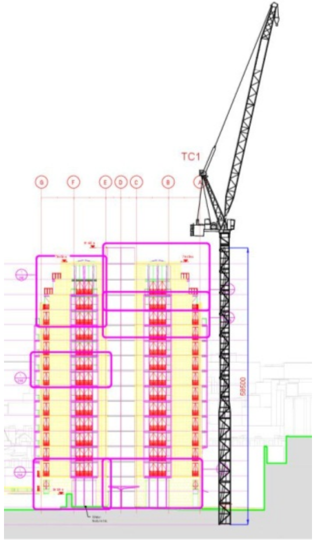
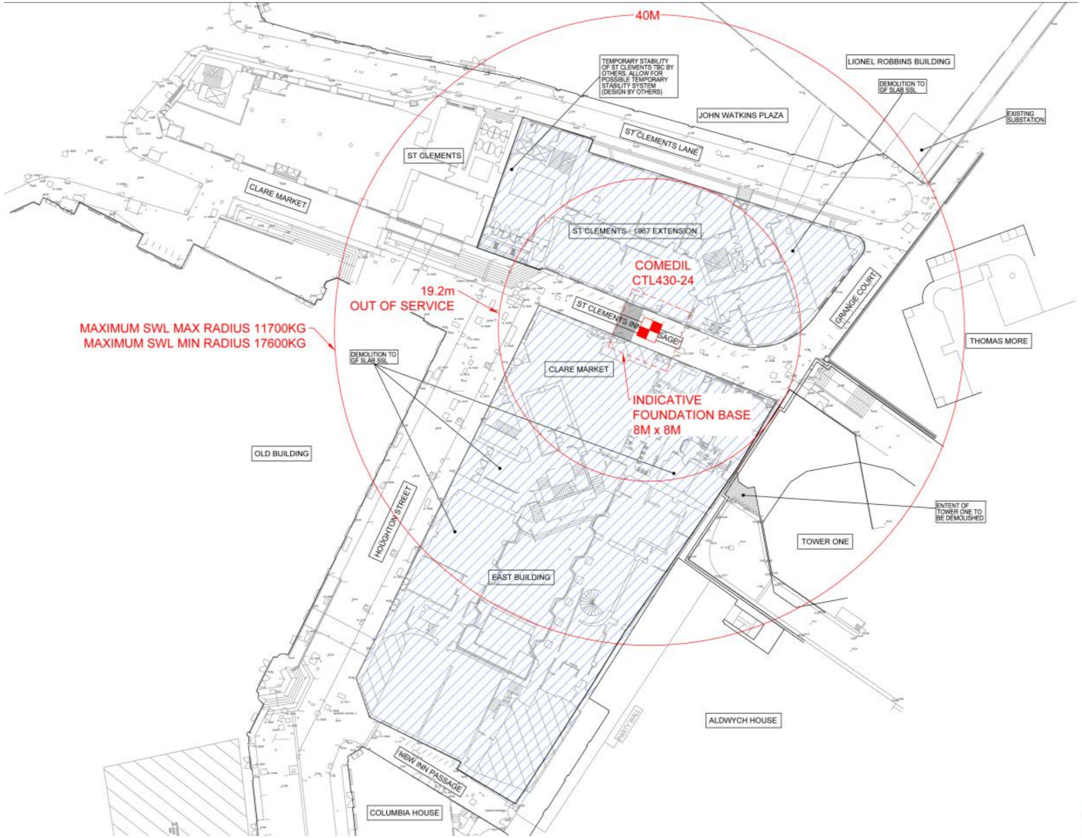
EARLY ENABLING WORKS – TOWER CRANE





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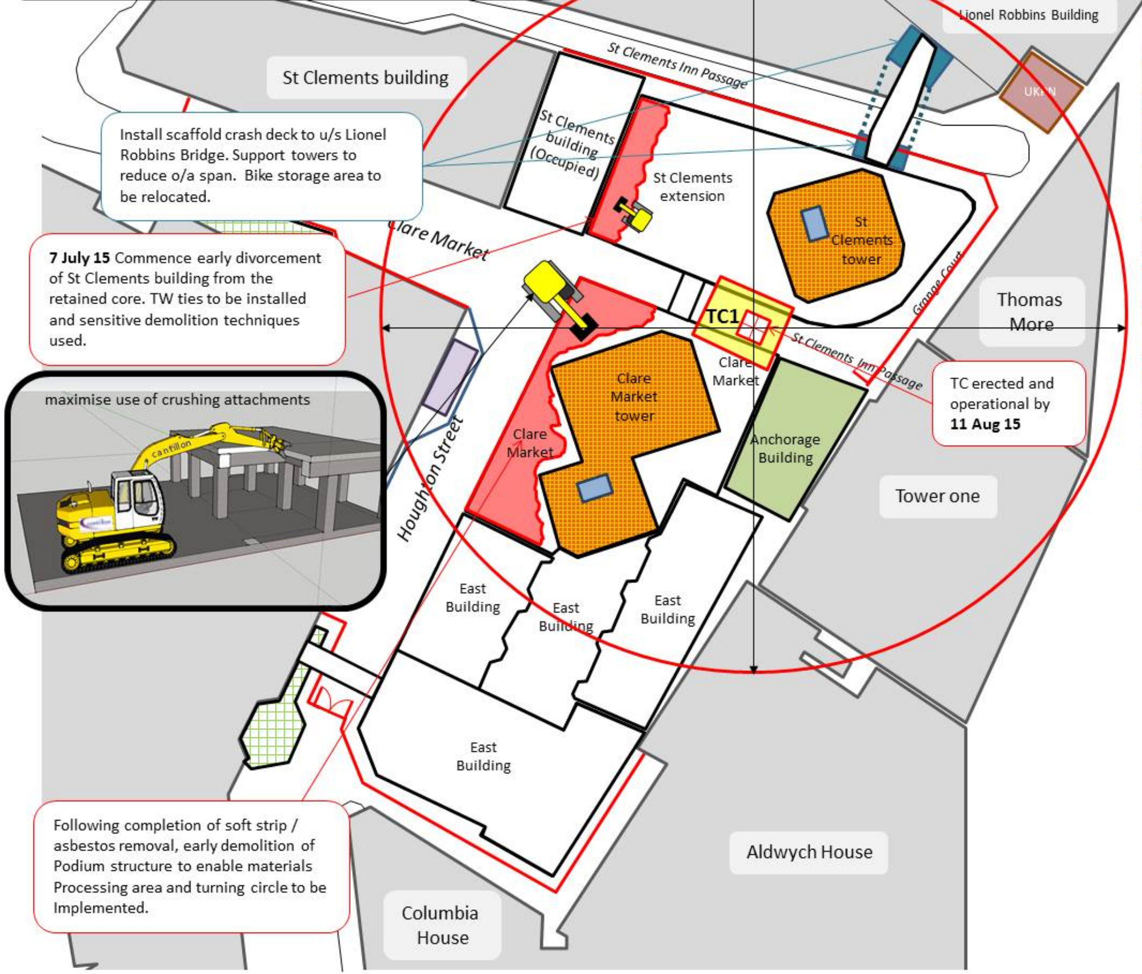
KEY LOGISTICS SEQUENCE

Soft strip / Structural demolition

JUNE 2015 to SEPT 2015

CONTRACT WORKS PERIOD – WEEK 5 TO 8



KEY

- Key works by others
- Asbestos and soft strip removal
- Existing public access maintained
- Project Offices and welfare
- Demolition Progress
- Vertical materials chutes
- Previous works complete
- Materials direction
- Vertical personnel access
- Key scaffold progress

rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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LSE – Centre Buildings

title

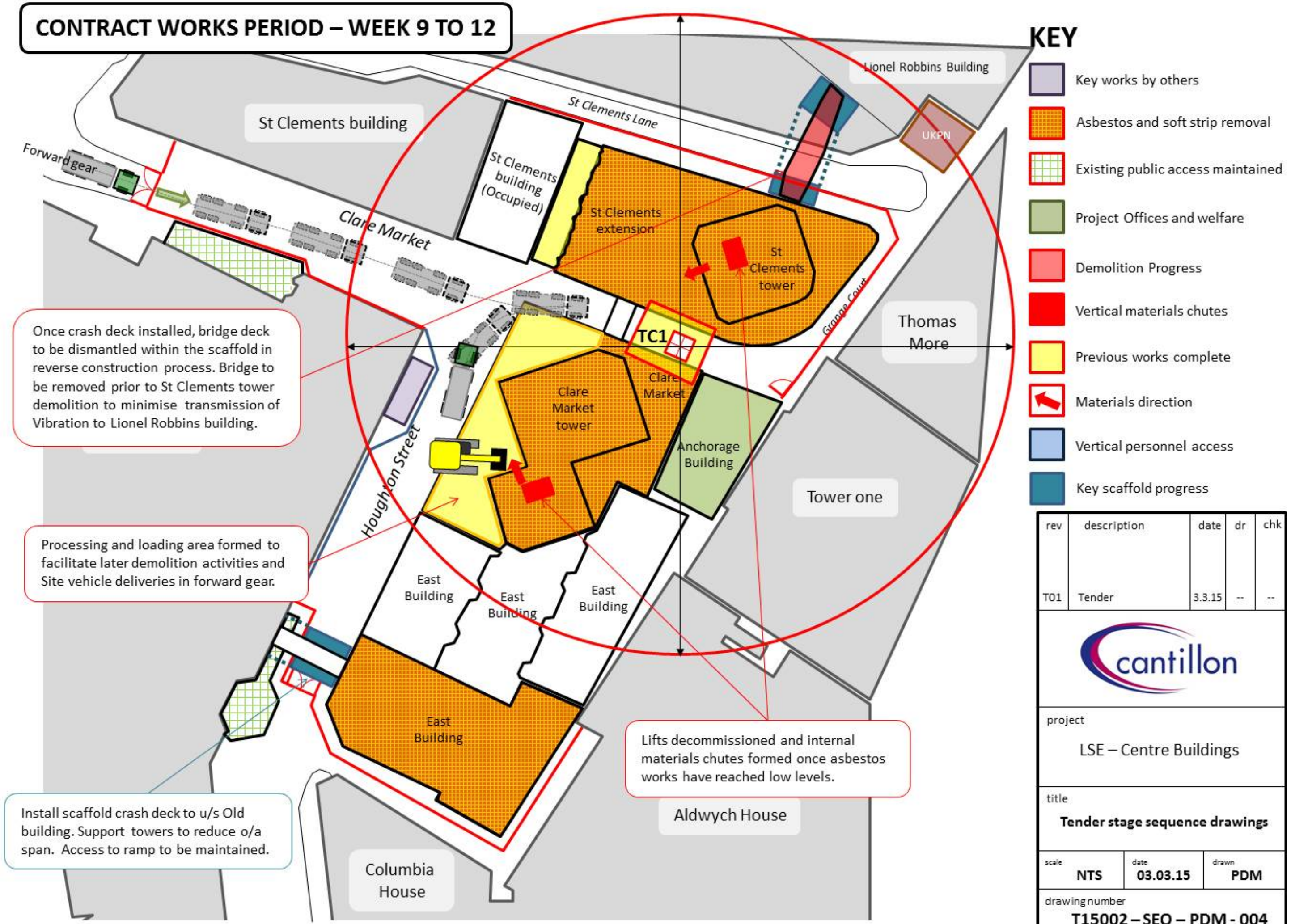
Tender stage sequence drawings

scale	date	drawn
NTS	03.03.15	PDM

drawing number

T15002 – SEQ – PDM - 003

CONTRACT WORKS PERIOD – WEEK 9 TO 12



rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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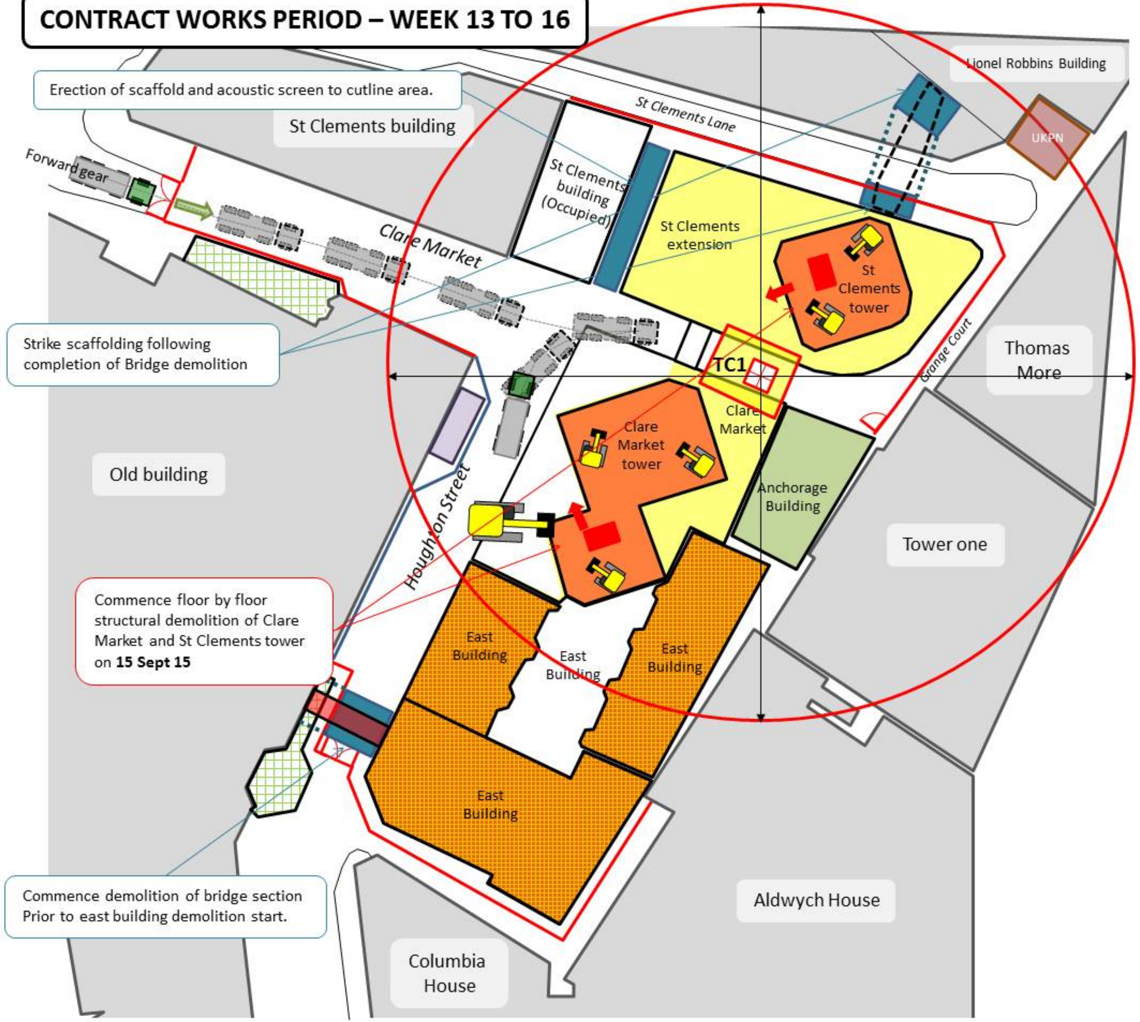
project
LSE – Centre Buildings

title
Tender stage sequence drawings

scale	date	drawn
NTS	**03.03.15**	**PDM**

drawing number
T15002 – SEQ – PDM - 004

CONTRACT WORKS PERIOD – WEEK 13 TO 16



KEY

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- Asbestos and soft strip removal
- Existing public access maintained
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- Demolition Progress
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- Vertical personnel access
- Key scaffold progress

rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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project

LSE – Centre Buildings

title

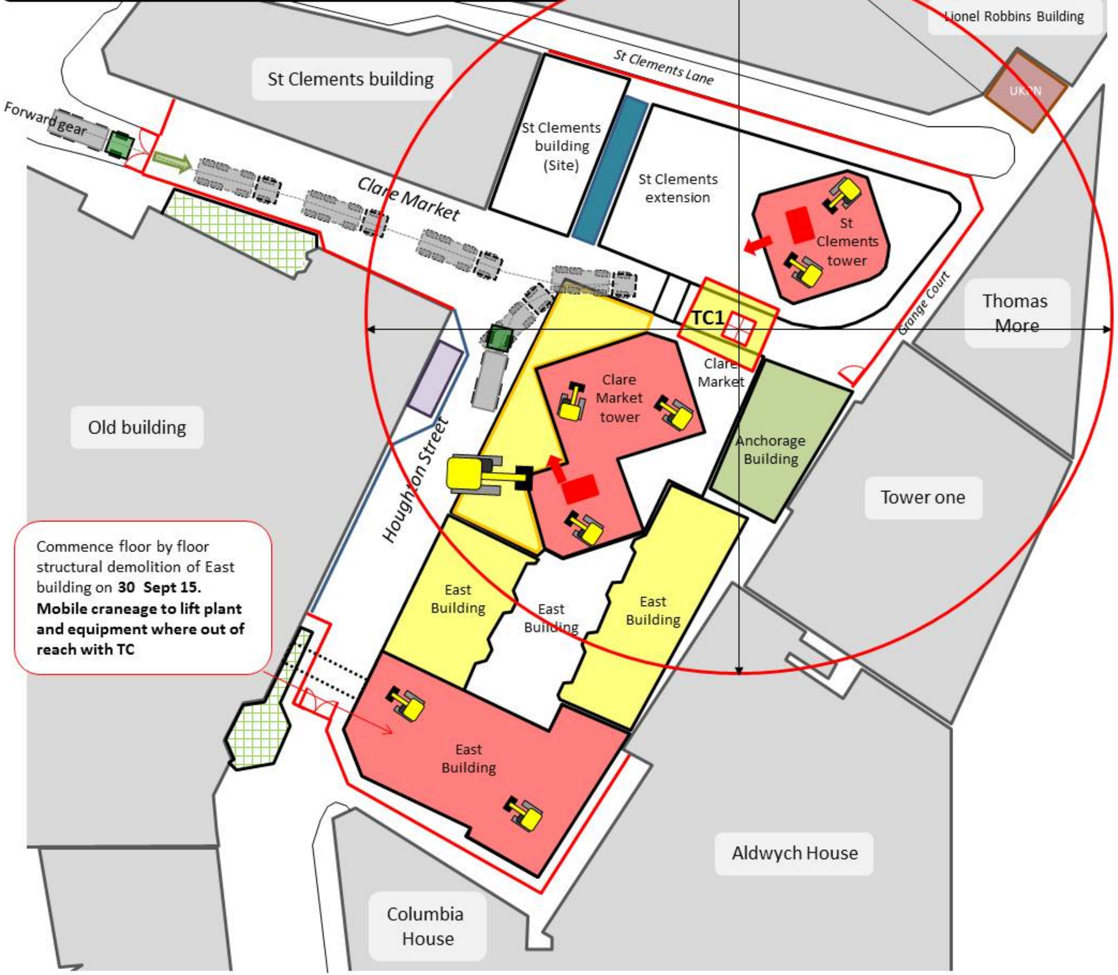
Tender stage sequence drawings

scale	date	drawn
NTS	**03.03.15**	**PDM**

drawing number

T15002 – SEQ – PDM - 005

CONTRACT WORKS PERIOD – WEEK 17 TO 20



KEY

- Key works by others
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- Existing public access maintained
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- Demolition Progress
- Vertical materials chutes
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- Materials direction
- Vertical personnel access
- Key scaffold progress

rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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title

Tender stage sequence drawings

scale	date	drawn
NTS	**03.03.15**	**PDM**

drawing number

T15002 – SEQ – PDM - 006

CONTRACT WORKS PERIOD – WEEK 21 TO 24

KEY

- Key works by others
- Asbestos and soft strip removal
- Existing public access maintained
- Project Offices and welfare
- Demolition Progress
- Vertical materials chutes
- Previous works complete
- Materials direction
- Vertical personnel access
- Key scaffold progress

rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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LSE – Centre Buildings

title

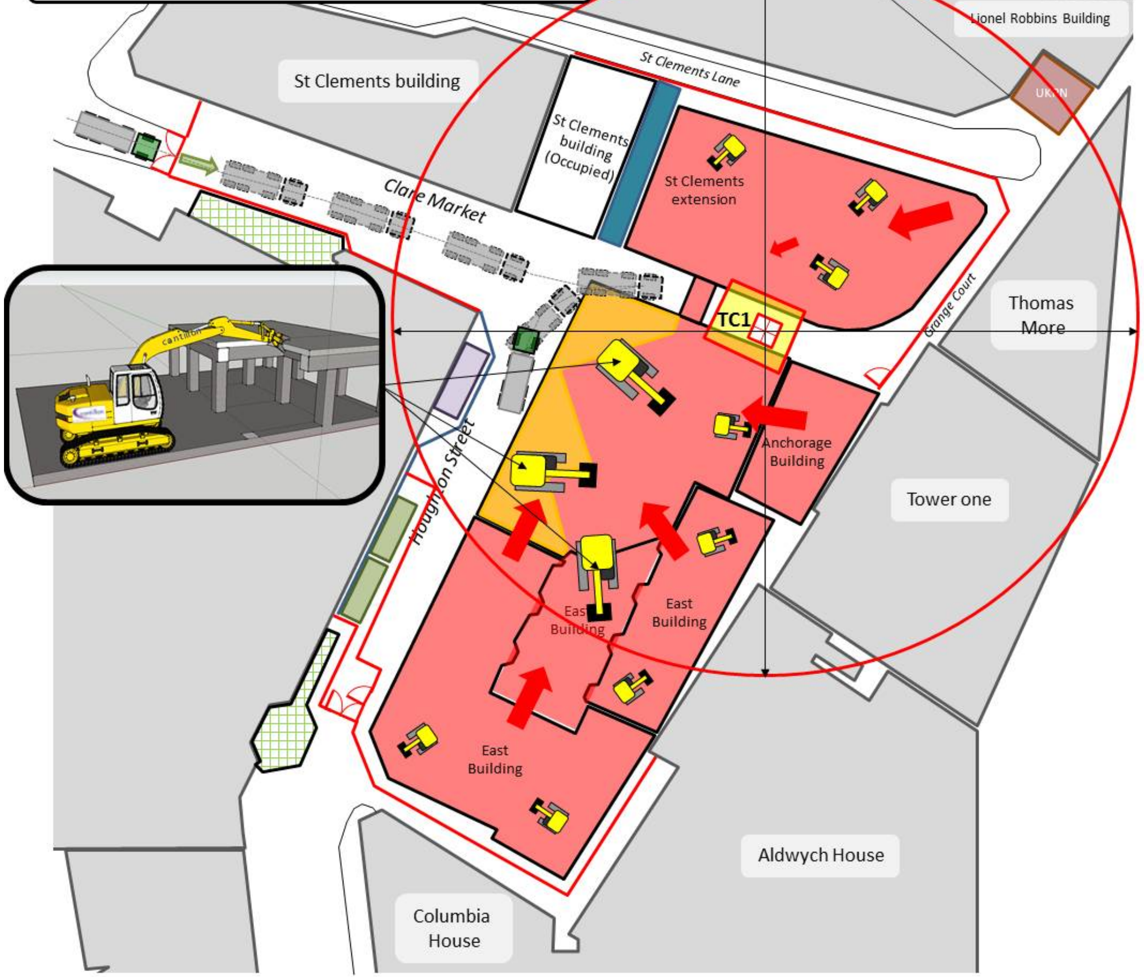
Tender stage sequence drawings

scale	date	drawn
NTS	03.03.15	PDM

drawing number

T15002 – SEQ – PDM - 007

CONTRACT WORKS PERIOD – WEEK 25 TO 33



KEY

- Key works by others
- Asbestos and soft strip removal
- Existing public access maintained
- Project Offices and welfare
- Demolition Progress
- Vertical materials chutes
- Previous works complete
- Materials direction
- Vertical personnel access
- Key scaffold progress

rev	description	date	dr	chk
T01	Tender	3.3.15	--	--

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project

LSE – Centre Buildings

title

Tender stage sequence drawings

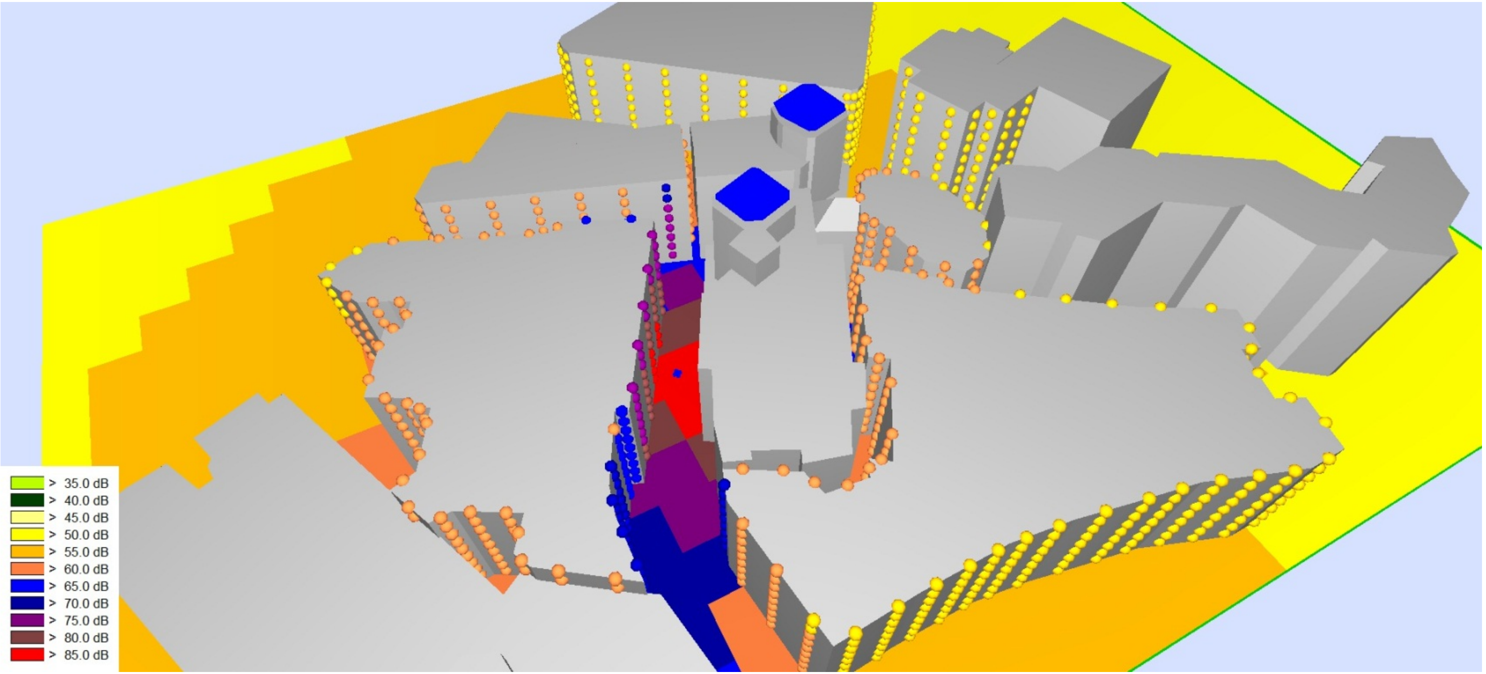
scale	date	drawn
NTS	03.03.15	PDM

drawing number

T15002 – SEQ – PDM - 008

CADNA NOISE PREDICTION MODEL

We have carried out a pre-demolition noise predication model using CADNa software



OLD BUILDING FAÇADE – ACOUSTIC SCREEN

- Identified that the Old Building identified as most likely impacted due to the location and proximity of works
- Detailed acoustic study carried out identified
- Selected use of specialist acoustic ‘absorbent’ screen to benefit site areas

Acoustic screen during construction.

Acoustic Screen completed.

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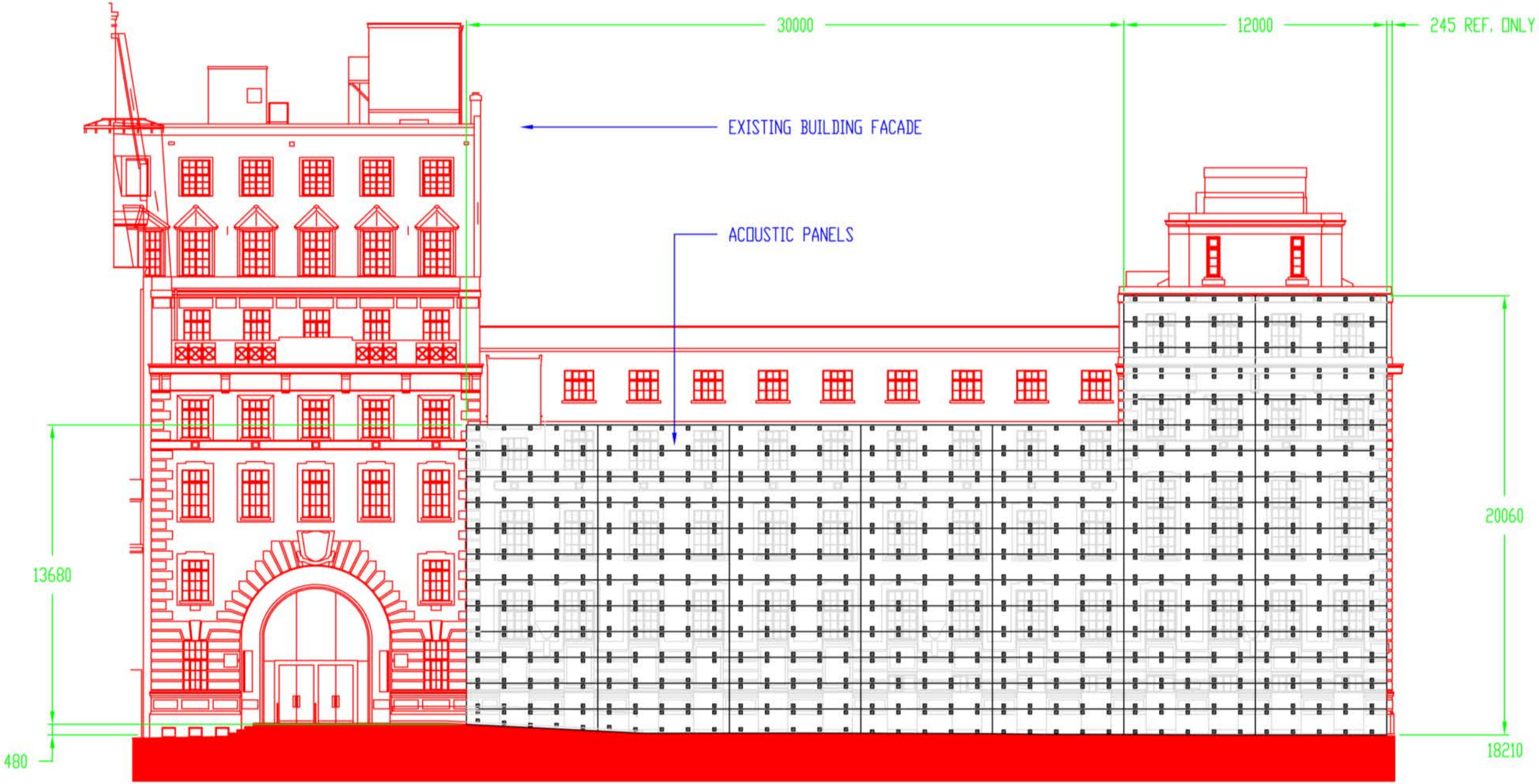

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NOISE ABATEMENT

Noise reduction methods can be introduced to minimise noise to the lowest practical levels

- best practice methods / engines off outside of use / muffled plant & pulverisers whenever possible etc
- internal material chutes
- scaffold sheeting
- acoustic scaffold sheeting
- acoustic quilts

DUST

- Proactive approach to dust control and suppression
- Smart effective use of water prior to and during demolition as work proceeds and at ground level

MONITORING

We have two types of monitoring at our disposal:

- Directional monitoring - deployed at perimeter of sites to identify dust sources and evaluate their effect on surrounding receptors
- Real-time equipment warns site managers of elevated levels - action can be taken immediately.
- This technology samples PM_{10} in line with Local Authority air quality guidance

DUST SUPPRESSION METHODS

VIBRATION

Structural Vibration (PPV)

- Structural vibration monitoring shall be considered at all stages of our operation to ensure minimal impact on key receptors
- Structural vibration monitoring data will be recorded to monitor / confirm compliance with WCC EHO requirements
- Vibration is recorded in real-time to predetermined levels. Audio and/or visual warning systems warn site staff to ensure works remain compliant
- Monitors preset at trigger alarm levels (as WCC EHO)

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NEIGHBOURHOOD LIAISON

Cantillon's Neighbourhood Liaison person shall be: Henry Brooks supported off site by Jenny Fowler

In this instance we would recommend the following:

- Start-up meeting with Westminster City Council's Environmental Health Officer
- Early open-forum meeting with local Residents and receptors
- Early liaison with other key neighbours
- Newsletter drop prior to work commencing with copy of newsletter laminated and displayed on hoarding - then on a regular basis
- Advance notice to WCC & key local receptors (5 days) for any out of hours deliveries
- Robust and visible complaints procedure with any issues included within project progress reports

OUR COMMITMENT

DURING THE COURSE OF THE WORKS, WE SHALL BE:

APPROACHABLE

RESPONSIBLE

ACCOUNTABLE

Communication

- Single points of contact
  Emma Lovegrove – LSE
  Damien Flatley - Cantillon
  Project email address - estates.centrebuildings@lse.ac.uk
- Out of hours LSE Security lodge Old Building
- Monthly News letters
- Capital Development complaints procedure – on website
- Project web site – all information issued about the project will be available on the website www.lse.ac.uk/centrebuildings
- Monthly drop in sessions to meet the Cantillon and LSE project Teams
- Web cam – live feed to the site will be available on the web site
- Notice board on the site hoarding

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