



# Centre Buildings Redevelopment

## Explaining the impact on LSE staff and students



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

## Less than 2 months until Houghton Street closes!

From 15 June, 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 the visual building wraps to complete these before the graduation ceremonies.

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





# Centre Buildings Redevelopment

## Contents:

- Background & Programme
- Construction Traffic and Pedestrian Safety
- Demolition & Utilities Work
- Noise
- Views of the new building



# Centre Buildings Redevelopment

## 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



# Centre Buildings Redevelopment

## Site area



Buildings being demolished are coloured purple

Buildings being demolished:

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



# Centre Buildings Redevelopment

## 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.



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## How will construction traffic get to the site?

SITE LOGISTIC CONSTRAINTS ANALYSIS	C M	HS
Pedestrian safety (Staff/ public / student)	Yellow	Yellow
Physical adjacency of buildings for access	Green	Red
Commercial considerations (Wrights, etc.)	Yellow	Red
Student experience	Yellow	Yellow
Impact on access to adjacent properties	Green	Yellow
Impact on strategic road network TfL	Green	Red
Impact on Barclays bikes	Green	Red
Structural impact on adjacent properties	Green	Red
Attractiveness of logistic strategy to prospective contractors	Green	Yellow
Impact on design / components and factory site fabrication—(affects project price)	Green	Red

To demolish the existing buildings and build the new building there will be disruption at the heart of the campus.

A detailed study was undertaken considering the options for access to and from the site. These included a review of using Houghton Street (HS), or St Clements Lane, or Clare Market. (CM).

All have pro's and con's but the route that is considered to cause the least disruption is via Clare Market.

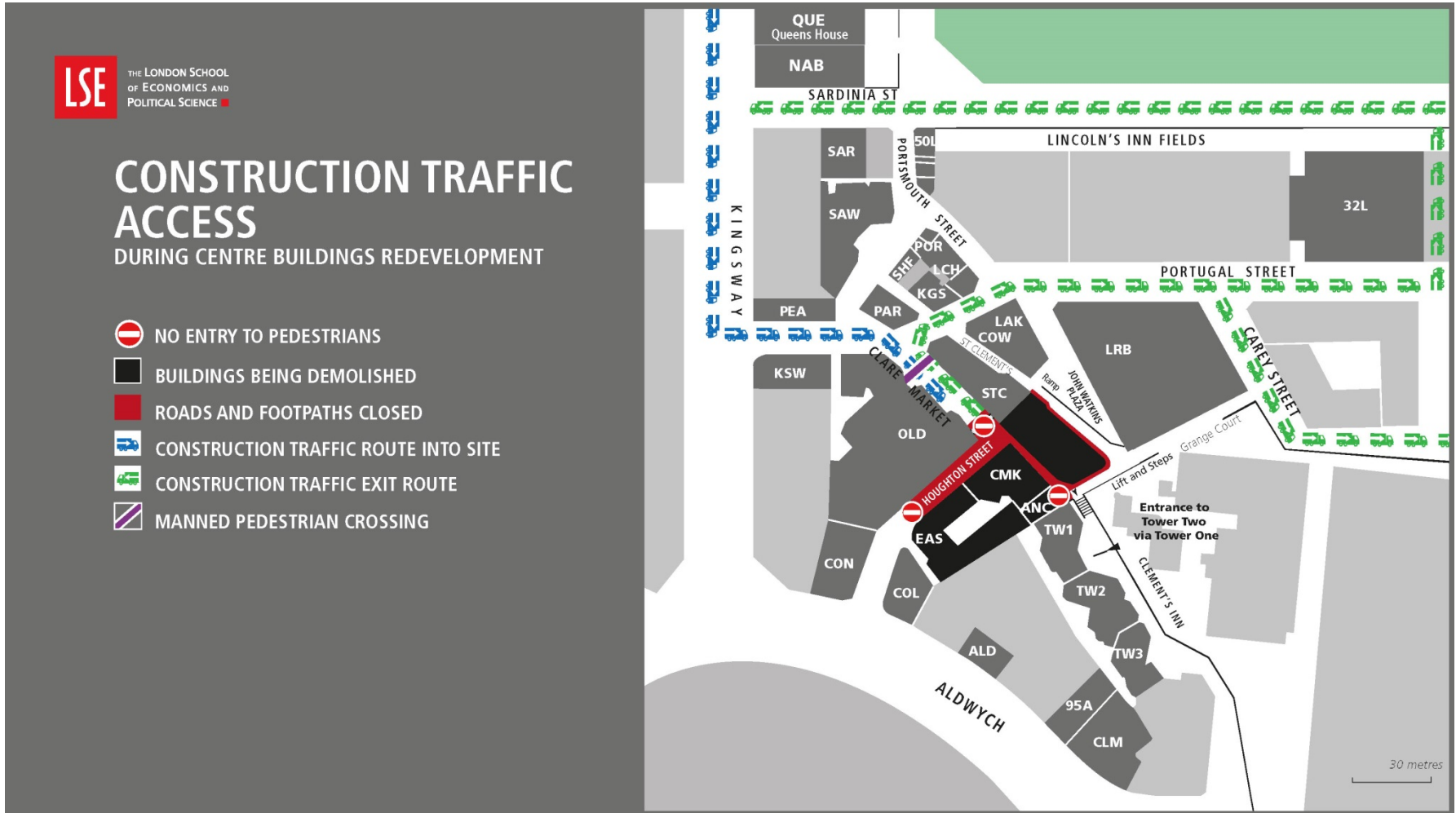
The analysis was presented to LSE's Estates Strategy Committee in November 2014 who ratified the Clare Market route as the "Best Worst Option"

*An analysis of the Pro's and Con's for Clare Market and Houghton Street for construction traffic (St Clements Lane having been already discounted as too narrow)*



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## Construction traffic routes



Construction traffic route is via Clare Market. The **blue** is traffic into the site; **green** shows traffic exiting the site. No vehicles will reverse.



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What about pedestrians?



Access via Grange Court and the Towers steps may be restricted for short periods while STC is demolished but will be reopened as soon as practicable and safe.

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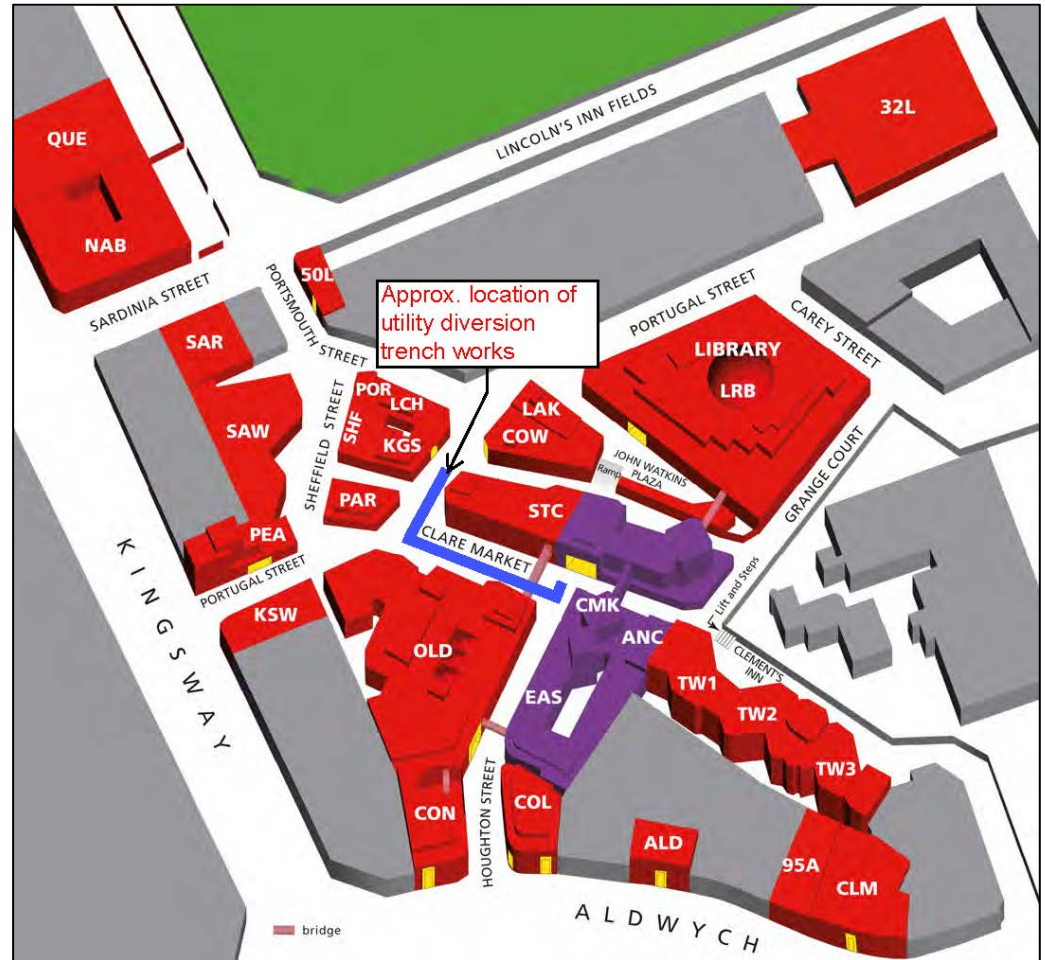
## Utility Diversions

Before demolition starts we have to divert utilities in the surrounding roads.

From 5<sup>th</sup> May until mid-June 2015 contractors will be diverting utilities by firstly digging a trench along Clare Market and a section of Portugal Street up to the junction with St Clements Lane. They will then move onto other roads around St Clements

Trenches will be fenced and an acoustic protection provided to limit local impact and ensure safety while maintaining access.

The hours of work for the noisiest operations are 17.00 – 22.00 with only hand digging during the day.



*Location of first utility trench*



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## Works to Clare Market & Old Building

Following the diversion of utilities, Clare Market will be widened so that construction traffic can enter the CBR site while still retaining safe access for pedestrians into the Old Building.

The steps outside the Old Building will be removed together with the Baby Tembo sculpture in early June 2015. The Penguin outside Waterstones Bookshop will also have to be moved.

We are planning to improve the entrance into Student Services to improve the flow of pedestrians so this isn't a pinch point during busy times and also to improve the signage on the ground floor of Old Building to route staff and students away from Student Services if they are travelling between Clare Market and the Aldwych end of Houghton Street.





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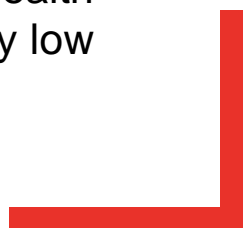
### Cantillon selected as demolition contractor

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

**Works are due to start for site set up on 15th June (closing Houghton Street) with the initial demolition of the old Three Tuns and severing St Clements East from West from 6th July onwards.** The main demolition process is due to commence in September 2015 once scaffolding and hoardings are completed.

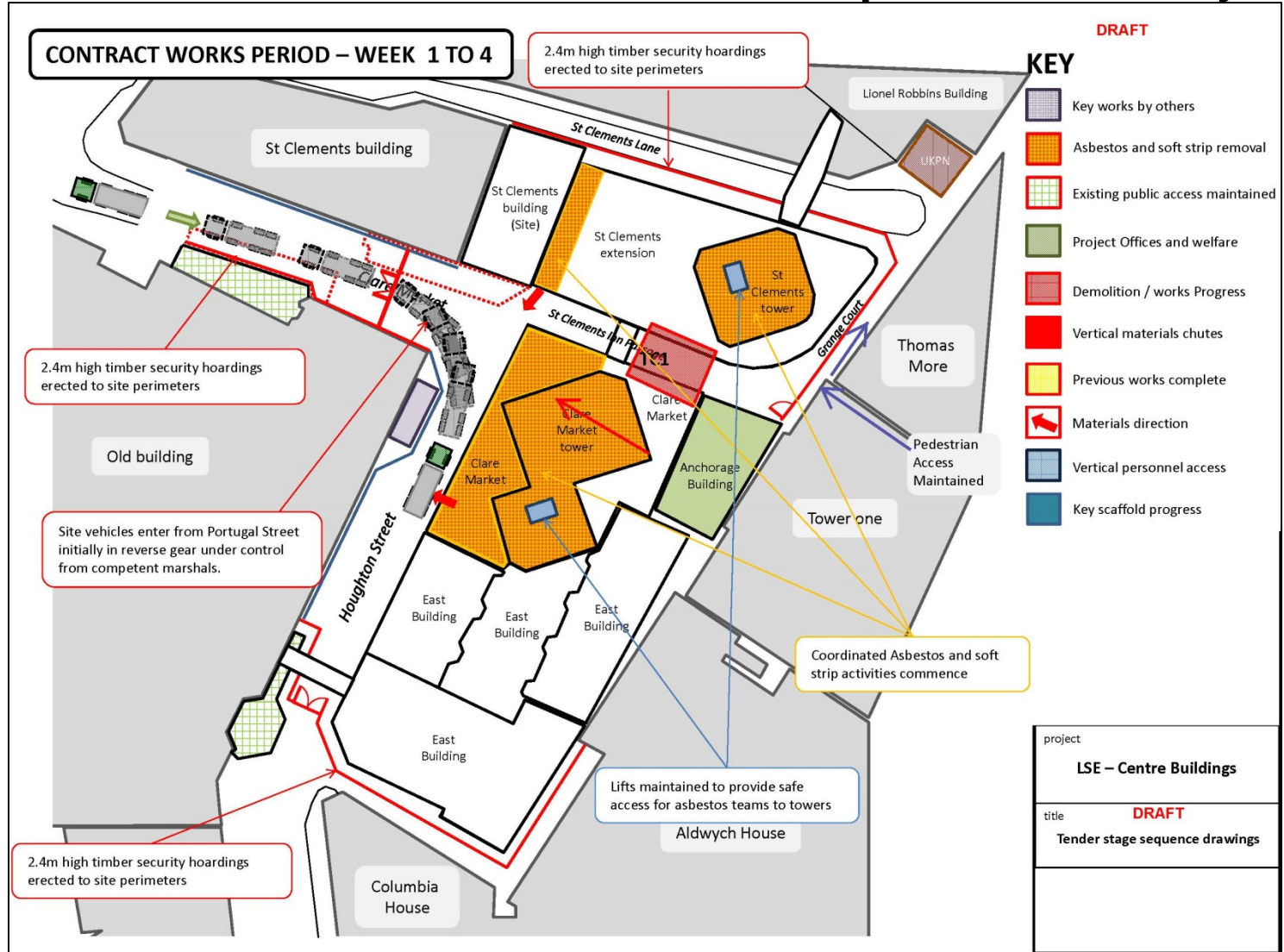
We appreciate that staff and students will understandably be concerned about the demolition process, especially in light of the recent incident at New Court in Carey Street. Cantillon have recently been awarded a Gold Medal by RoSPA (The Royal Society for the Prevention of Accidents). RoSPA Gold Award winners have achieved a very high level of performance, demonstrating well developed occupational health and safety management systems and culture, outstanding control of risk and very low levels of error, harm and loss.





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Demolition contractor's initial site set up 15 June - 6 July





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Demolition Sequence - click image below to watch video





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## Limiting disruption during demolition and construction

There are various measures which make a big difference to the impact of construction and we will be ensuring these are used by our contractors. These include:

- Contractors will be required to use the School's quieter periods (vacations) for their most disruptive activities, this will be contractual condition
- Specifying the type of saws and drills used; e.g. diamond drills and saws are quieter than impact tools
- Using machines which hydraulically 'nibble' away at the building fabric instead of impact tools
- Installing secondary glazing to those adjacent buildings impacted by the works
- Using acoustic 'quilts' on party walls to provide insulation from noise and the weather
- Quiet Periods as per Westminster City Council (WCC) guidelines (usually 10am -12pm; and 2-4pm)
- Negotiate with WCC on permissible core hours (earlier start/later finish)
- Attractive and acoustic screening of the site, see next slide



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**Trompe L'Oeils:** Building wraps providing visual, sound and dust protection

Houghton Street from Aldwych – Options for hoarding graphic



(a) Image of existing / future building behind



(b) Way-finding signage + construction progress



(c) Advertising for LSE, Garrick, Waterstone's



## Centre Buildings Redevelopment

### Limiting disruption during demolition and construction

Contractors will be required to limit their works during certain key dates and periods. In 2015 these include the following dates:

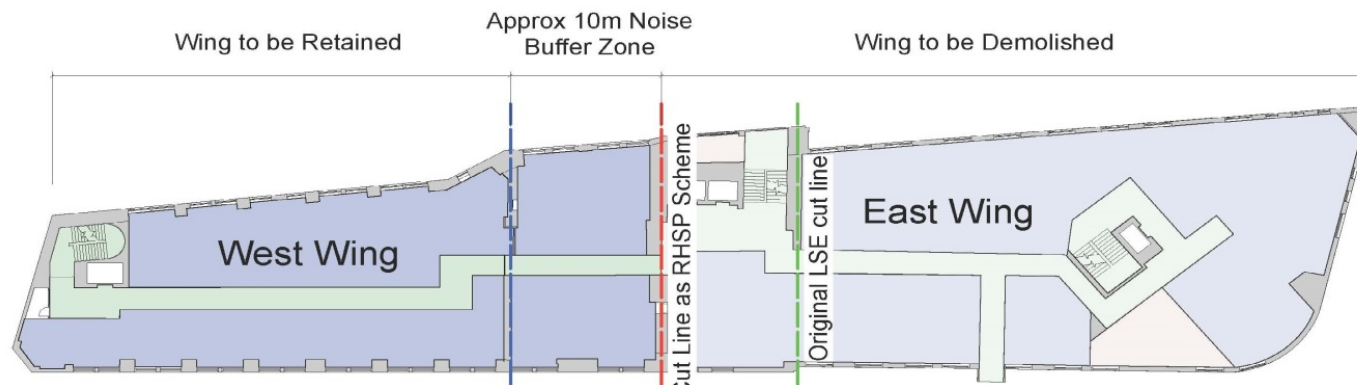
<b>July</b>	1	Campus Open Day
	2-4	Major conference
	1-3	Executive Summer School
	3	Party on the Plaza
	5-23	Summer School
	15-17	Graduation
	26	Summer School registration
<b>August</b>	4-6 & 14	Summer School exams
	21 & 28	Methods exams
<b>Sept.</b>	4-18	Trium
	21-25	Welcome Week
<b>Dec.</b>	15-17	Graduation



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## St Clements specific measures

- Creating a minimum 10 metre acoustic buffer zone in St Clements west during the noisiest phase of demolition works between academic areas and the construction zone
- Cutting St Clements East from the West as early and as speedily as possible in the 2015 summer vacation
- “Work from Home” period arranged for St Clements West occupants during the initial 6-8 week most intense noise period

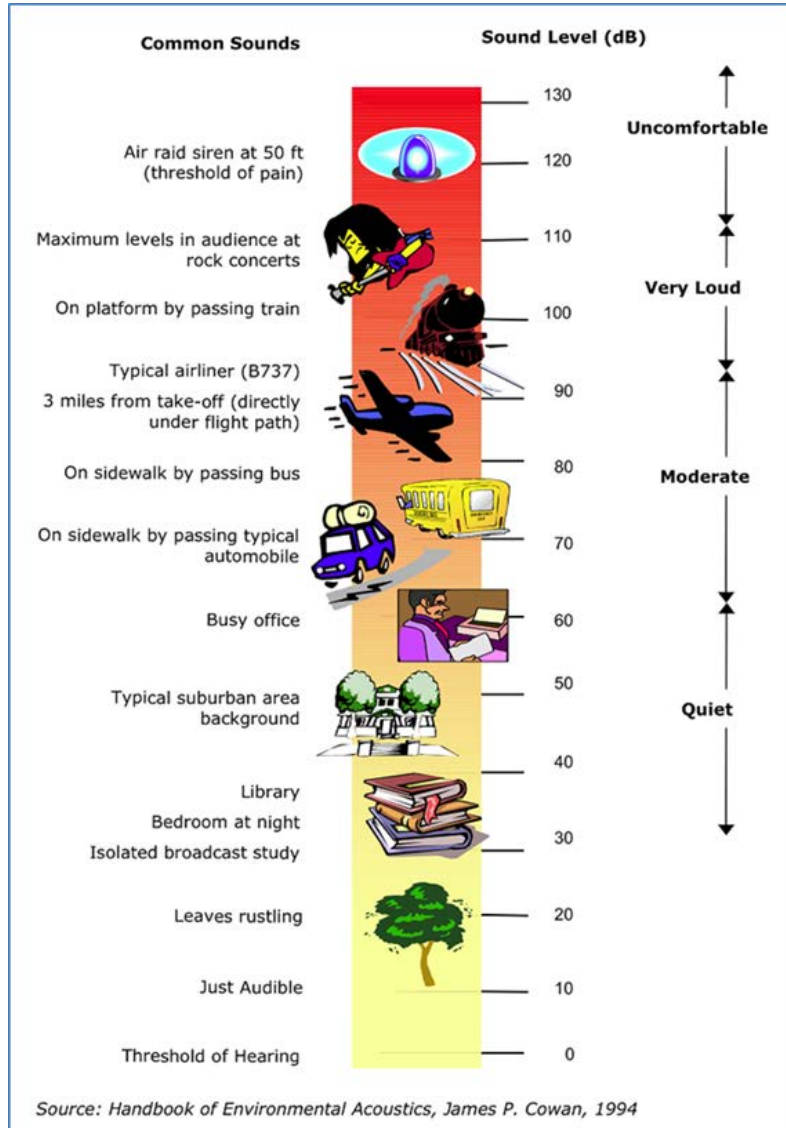


St Clements cut line



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## What is noise?



Sound is what we hear - noise is unwanted sound. The difference between sound and noise depends on the listener. The picture shows the sound scale in decibels (abbreviated "dB"), relative to common sounds.

British Standards provide guidance on technical matters such as this, BS5228 states the following:

*"Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut. [...] Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:*

*75 decibels (dB) in urban areas near main roads in heavy industrial areas."*



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### What is the Decibel range adopted for the CBR noise assessment?

The CBR development is located in an urban area near main roads, in accordance with British Standards guidance, the LSE's acoustic consultant has used a maximum target limit of **75dB** at the façade of the neighbouring buildings.

All the neighbouring buildings have been surveyed to gauge the potential noise impact of CBR. If the technical assessment identified a potential impact over the target then a possible noise problem could arise.

### Does different glazing in the windows make a difference?

The type of window will make a great deal of difference to the impact of noise (assuming it is kept shut) This is why we have surveyed all windows in all rooms which might be affected by the CBR works.

Estimates of noise reductions for different types of windows are as follows:

Type of window	Estimated sound reduction in Decibels against external noise
Single glazed	up to 20 dB
Double glazed	up to 30 dB.
Single glazed with additional secondary glazing	up to 35 dB

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## Results of the CBR noise assessment

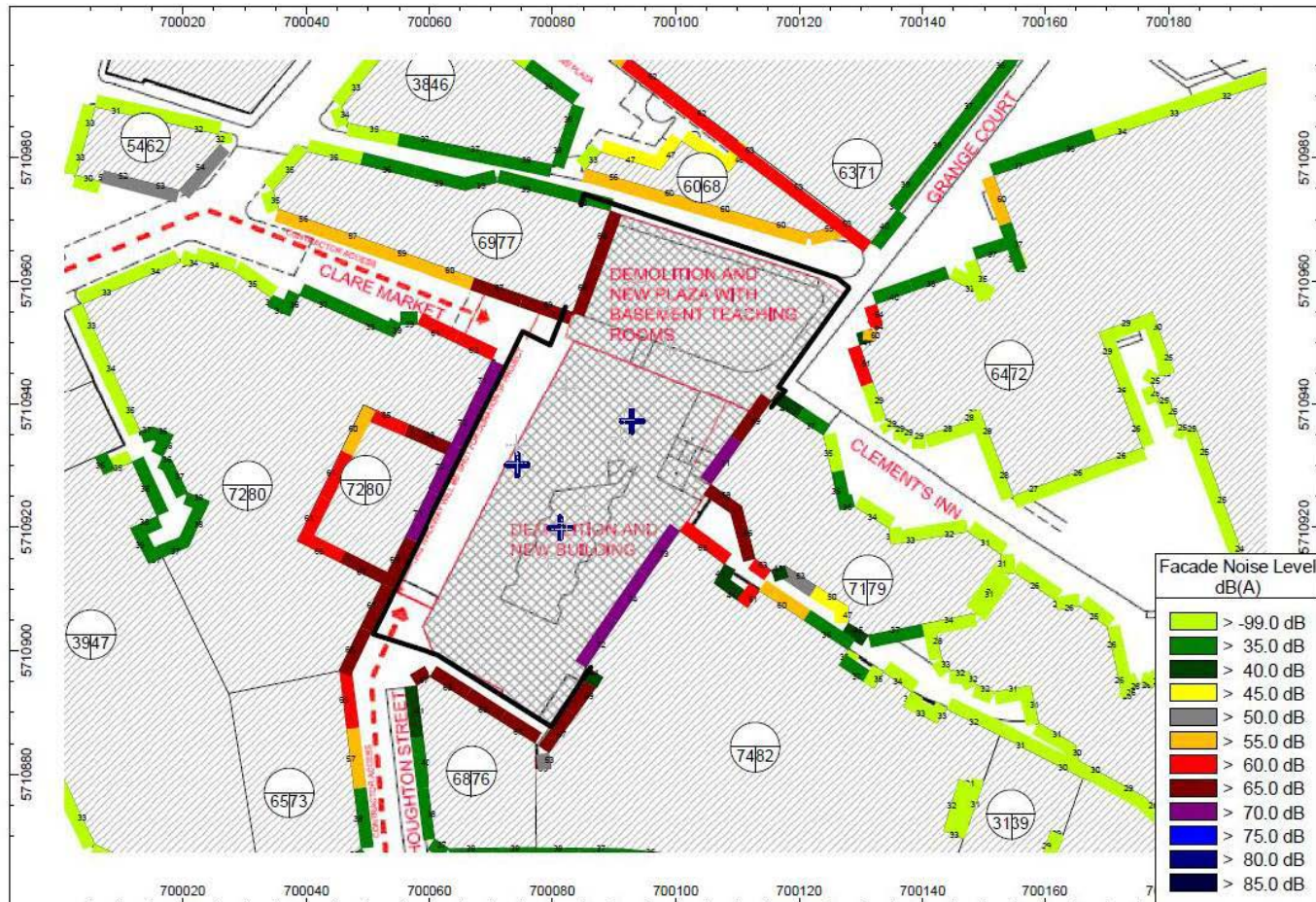
AECOM

Noise Impact Assessment

6

Environment

Figure 1: Stage 1 Demolition of lower level building, Houghton Street (Predicted Highest Facade Noise Levels)





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## Noise mitigation measures – secondary glazing

The School has now agreed the extent of secondary glazing to the buildings adjacent to the CBR site. Installation has started and the draft programme is below.

Some of these buildings already benefit from secondary glazing and if this is the case, no further noise mitigation measures will be provided as the necessary mitigation is already in place.

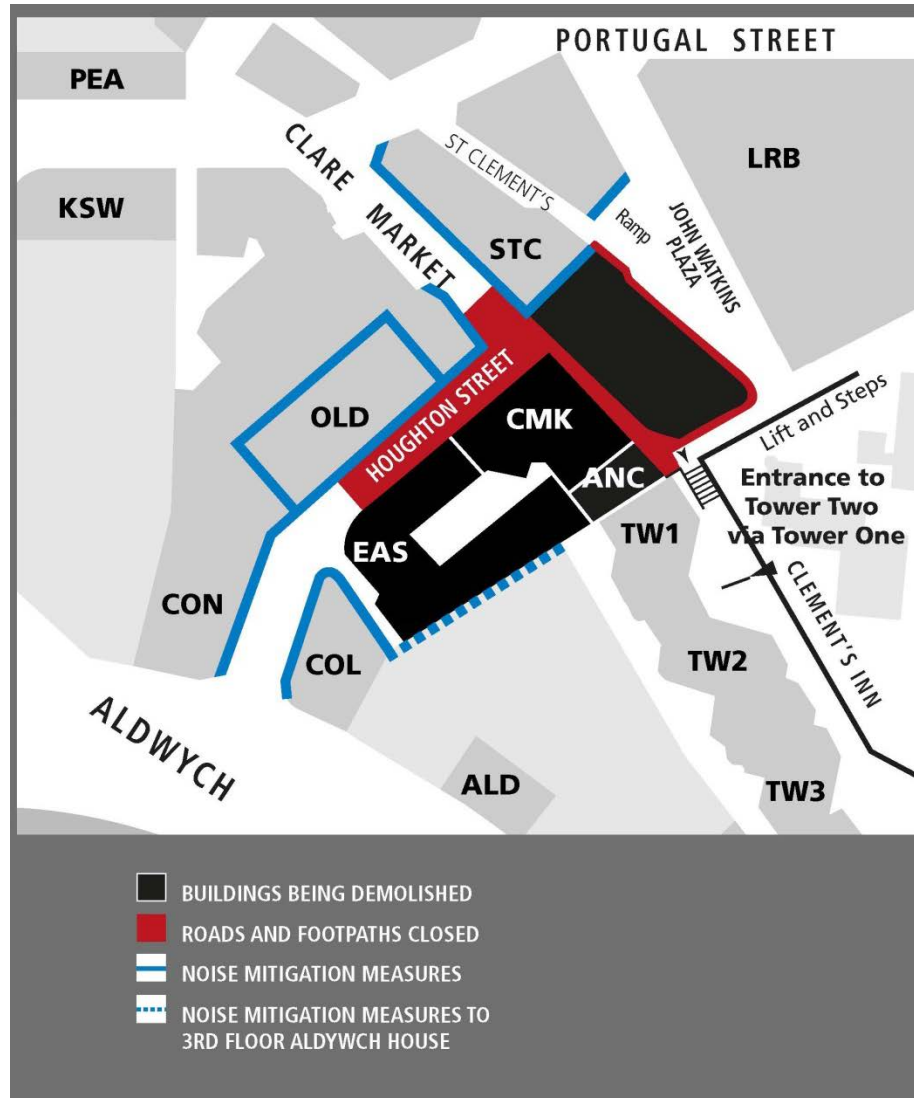
In some rooms the existing secondary glazing may require adjustment to make sure it's fully effective. The contractors appointed by the LSE to carry out installation will also attend to defective secondary glazing

Secondary glazing		
Which Building	Which Elevation	Draft Timescale
St Clements	Clare Market	27/04/15 – 15/05/15
Old Building	Houghton Street and the section at the junction of Clare Market	18/05/15 – 05/06/15
Columbia House	Houghton Street and New Inn Passage	08/06/15 – 12/06/15
Connaught House	Houghton Street	15/06/15 – 19/06/15
Cowdray House	Rear elevation facing the Plaza Café	22/06/15 – 26/06/15



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## Noise mitigation measures – agreed locations







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## Planning for summer

*Limiting noise disruption is via secondary glazing! But.....*

*Q: What happens when it gets hot in the summer and I can't open the window due to noise?*

*A: Mobile air conditioning units.*

Estates are investigating providing mobile air conditioning units to deal with those brief periods during the summer when temperatures may reach a point where it would be necessary to open windows to maintain a reasonable temperature.

The proposal is to organise a supply of units readily available as and when temperatures are predicted to rise above a certain level.

This is being explored and is yet to be costed and presented to Senior Managers for approval.



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## Views of the new building



View from St Clements



## Centre Buildings Redevelopment



View towards Houghton Street with the new St Clements lift and staircase on the right



# Centre Buildings Redevelopment



Existing



New

Views across John Watkins Plaza





# Centre Buildings Redevelopment



Existing



New

Views from the Aldwych





# Centre Buildings Redevelopment



Existing



New

Views along Portugal Street towards Clare Market



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View of the ground floor café which fronts onto Houghton Street

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View of the central atrium & main staircase leading to teaching spaces



# Centre Buildings Redevelopment



View of the atrium looking down to the ground floor café

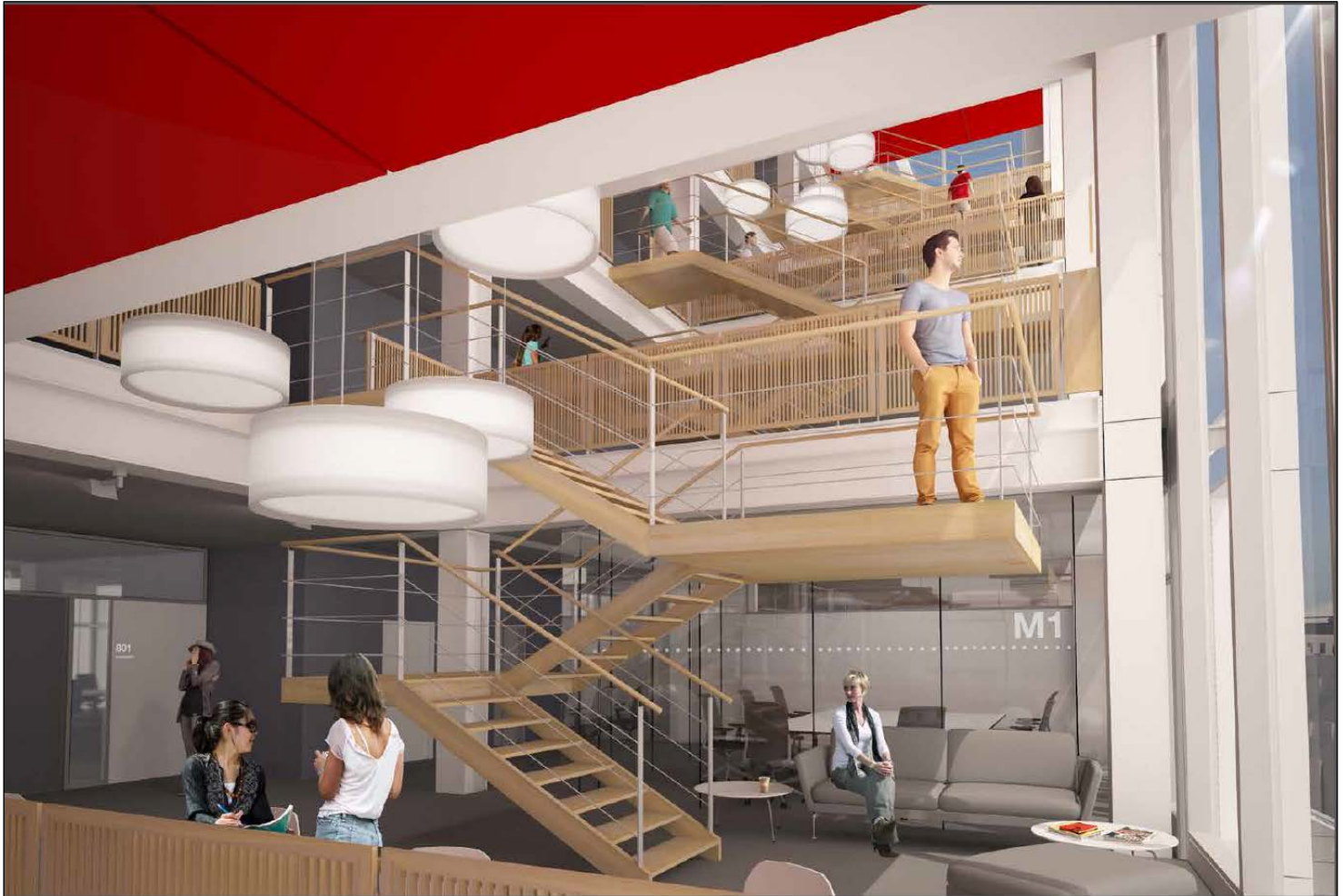


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View of tower illustrating double-height diagonal staircase connecting the academic floors

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Double-height staircase connecting academic floors in the tower

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Double-height staircase connecting academic floors in the tower



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New public square at the heart of the LSE





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View along Houghton Street from the Aldwych