Costing your studio build

Following on from the last issue's look at the various work stages involved in creating a studio from an architectural/acoustic perspective, ROGER D'ARCY gives some real-life cost analysis for a selection of real-life case studies. It offers an invaluable insight in to how your budget will be broken down if you build that room correctly.

WITHOUT WISHING TO LABOUR the point, the consideration of cost and time factors and the way that they impact on each other in any studio build is crucial to the success of a project. To quote from my last article (*Resolution* V2.5): 'From the smallest of private project studios to the largest commercial recording facilities, budget and cost-effectiveness are invariably among the most dominant factors when considering the creation of a new studio. The other is often timescale.'

The previous article attempted to identify the various elements of work that form the architectural/acoustic make up of a studio construction project. Here we attempt to show the distribution of costs over the various work stages for five case studies. The five projects selected cover a typical range of scenarios, in terms of size and complexity, and are based on real projects completed in the UK within the last couple of years.

This comparative cost analysis is again based on the architectural/acoustic work stage system developed at Recording Architecture. The stages A-M simply help breakdown any project, large or small, into discrete sections of work and trades to help gain a realistic idea of possible costs and timescales.

As this is central to the whole appraisal of a project, it is worth recapping the various stages again in brief and how they relate to the case studies being looked at here.

A: Works to host building

'Geographic location and land/property costs aside, the single most dominant influence on the (architectural/acoustic) success and implementation cost for any new recording studio project is the suitability, situation and condition of the host building.'

In the case studies illustrated, the host buildings were all largely suitable for the intended design solution and were all in a reasonable state of repair.

B: Sound isolation

The comparative timescales are shown for the two most widely used techniques of sound isolating shell construction – concrete blockwork versus studwork/multiple plasterboard laminate. The former is invariably more effective acoustically and less expensive – where conditions allow (principally the load bearing capacity of the host floor) this would always be the preferred technique – but rarely possible in, say, the upper floors of typical central city buildings.

C: Acoustic Treatment

'Where labour is affordable and time is not a pressure, in situ construction can be the most cost-effective approach. Where such costs are high (for example, London) and time is an issue, prefabricated methods and systems may be considered in combination. For example, the Black Box acoustic conditioning system.'

The timescales compare the in situ versus prefabricated Black Box approach for a typical 35-40 square metre control room.

D: Fitting out

'... the quality and sophistication of finishes will generally only account for up to 10% of overall costs – not the obvious target for significant savings that it is sometimes thought.'

E: Electrical power

The case studies compare costs adjusted on the assumption that adequate local supply was available. No technical earth or voltage stabilisation has been included.

Control room using in situ acoustic control techniques.

Live area using prefabricated Black Box for acoustic control.

Comparative on-site construction time analysis for in situ vs Black Box acoustic control and blockwork/concrete vs studwork/laminate sound isolating shell for a typical control room.	Isolated shell Blockwork construction Acoustic treatment Made on site	Isolated shell Blockwork construction Blackbox Acoustic Conditioning system	Isolated shell Studwork construction Acoustic treatment Made on site	Isolated shell Studwork construction Blackbox Acoustic Conditioning system
Preliminary works to existing host building	2 to 4	2 to 4	2 to 4	2 to 4
Isolated shell construction	4 to 6	4 to 6	8 to 10	8 to 10
Including plastering				
Drying out time	1 to 2	1 to 2		
Floating floors	1 1	1 1	1 to 2	1 to 2
Audio monitor front wall	1 to 2	1 to 2	1 to 2	1 to 2
Insitu wall and ceiling treatments	3 to 5		3 to 5	
Second fix on edges of acoustic treatments	1 to 2		1 to 2	
Floor finishes and second fix	3 to 5	2 to 3	3 to 5	2 to 3
Audio cable management	1 to 2	1 1	1 to 2	1 1
Decoration	1 to 2	1 to 2	1 to 2	1 to 2
Install acoustic panels and elements		1 1		1 1
Fabric installation to cover acoustic treatments	1 1		1 1	
Snagging	1 to 2	1 1	1 to 2	1 1
TOTAL	**20 TO 34**	**15 TO 23**	**23 TO 37**	**18 TO 26**

F: Lighting
Low voltage halogen lighting was used in all projects. Multiple switched circuits were used in preference to any dimming system.

G: Audio cable management
Fully accessible perimeter trunking was provided as part of the architecture of each space.

H: Mechanical services
'Airconditioning and mechanical ventilation systems – for many dedicated music studios the most appropriate and cost-effective approach can be a combination of attenuated ducted fresh air supply/extract from each space with individual wall or ceiling mounted (split) airconditioning units in control rooms.'

J: Ancillary fitting out
This work stage has been removed from the cost analyses to help give a more useful comparison of strictly acoustic spaces.

K: Audio monitor accommodation
The comparative timescales assume a flush-mounted, mass-loaded and vibration-isolated installation for a large monitor speaker system.

L: Specialist concerns
This work stage has also been removed from the cost analyses to help give a more uniform comparison of costs.

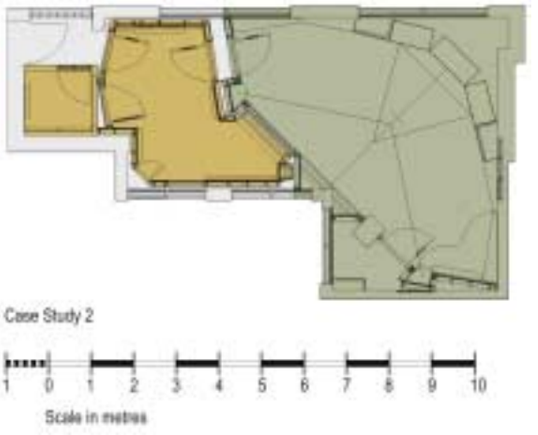
M: Technical furniture
This stage covers custom rack accommodation and worktops within the control rooms.

CASE STUDY 1. SIZE: 57m²

Location: North London semi-basement in 1930s brick-built 7-storey industrial building.
Project: Private facility for music. Control room/isolation booth/machine room; fully independent, floated concrete and blockwork shells; acoustics part in-situ/mainly Black Box.
Main monitors flush-mounted/vibration isolated.

CASE STUDY 2. SIZE: 56m²

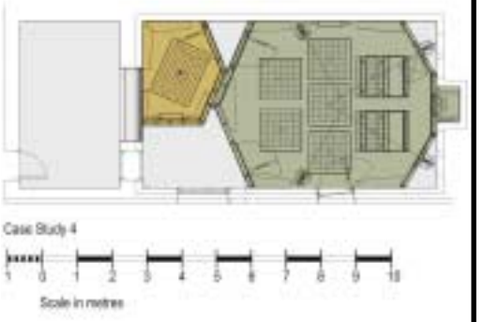
Location: London Soho second floor of 1950s 5-storey commercial building.
Project: Production company in-house facility for music. Control room/studio/isolation booth/machine room; studio areas fully independent studwork shells; control room partially isolated lid; all floors floated laminate raft; acoustics in situ. Main monitors flush-mounted/vibration isolated.



Contact

RECORDING ARCHITECTURE, UK:
Tel: +44 208 692 6992
Fax: +44 208 692 6957
E-mail: ra@aaa-design.com
Website: www.aaa-design.com

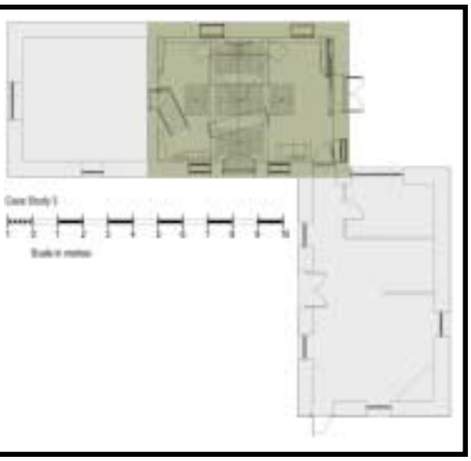
CASE STUDY 4. SIZE: 43m²



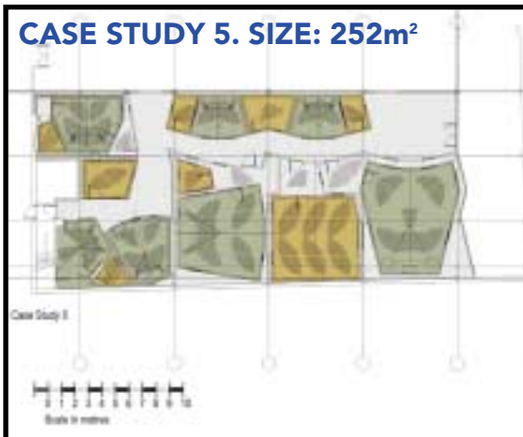
Location: Central London within purpose-built 1960s recording complex on upper floor.
Project: Commercial sound to picture facility. Remodelling of existing dubbing theatre into 5.1 control room plus isolation booth and machine room; acoustics 50/50 in situ/Black Box. Main monitors free-standing within projection screen wall.

CASE STUDY 3. SIZE: 35m²

Location: East Sussex 19th Century coachhouse within grounds of listed 18th Century manor house.
Project: Private facility for music production. Control room, writing studio; added isolation to pitched roof/secondary glazing/sound lobby; acoustics entirely Black Box. Main monitors free-standing/vibration isolated.



CASE STUDY 5. SIZE: 252m²



Location: West London ground floor of 2-storey 1950s light industrial building.
Project: Mixture of commercial, private and in-house operations for music. Multistudio/production suite complex; fully independent floated concrete and block work; acoustics 50/50 in situ/Black Box. Main monitors generally free-standing.

Percentage cost analysis based on Recording Architecture work stages for case studies 1-5.

WORK STAGE	CASE STUDY 1 Control room, isolated booth Machine room North London	CASE STUDY 2 Post production facility London Soho	CASE STUDY 3 Project studio East Sussex	CASE STUDY 4 Commercial studio refurbishment production Central London	CASE STUDY 5 Multi-studio complex West London
A Works to the host building	8.0%	7.8%	4.3%	8.5%	5.5%
B Sound isolation	32.4%	35.4%	32.9%	11.2%	37.2%
C Acoustic treatment	16.8%	18.1%	16.3%	24.1%	18.3%
D Fitting out	10.1%	12.3%	8.8%	10.2%	13.8%
E Electrical power	4.9%	2.2%	5.9%	11.2%	3.7%
F Lighting	4.5%	3.1%	3.3%	5.1%	3.1%
G Audio cable management	2.5%	1.9%	2.4%	6.8%	1.0%
H Mechanical services	10.8%	10.0%	9.0%	5.4%	12.8%
J Ancillary spaces	Not included	Not included	Not included	Not included	Not included
K Audio monitor installation	2.5%	2.9%	4.6%	4.0%	1.7%
L Specialist concerns	1.3%			4.8%	
M Technical furniture	6.0%	6.2%	12.4%	8.6%	3.0%