

**UNIVERSITY OF CAMBRIDGE
BUILDINGS AND ENVIRONMENT COMMITTEE**

The 3rd meeting of the Computer Laboratory Buildings and Environment Committee will be held at 11:00am on Tuesday 1 August 2017 in Room FW11.

Committee Members: Dr Pieter Brooks
Mr Ian Burton-Palmer
Miss Claire Chapman (Secretary)
Mr Brian Jones
Professor Ian Leslie (Chair)
Mr Martin McDonnell
Mrs Caroline Stewart
Dr Graham Titmus

AGENDA

1. Apologies for Absence

None.

2. Minutes of the Previous Meeting

The minutes of the meeting held on 30 May 2017 are attached **(2017-08-02)**

3. Matters Arising

Matters arising from the previous minutes are included in Agenda items below.

4. Reducing Energy Consumption

- i. Update on reducing energy consumption of the corridor lights (MJM, IBP & BDJ)
- ii. Reinstalling alcove light switch test (MJM)
- iii. Report of unused equipment in SE18 (GT)

5. Passive Cooling

- i. Two further quotes for crane hire (IBP)
- ii. Meeting with Jim Gorman, Fire Officer regarding replacing just 4 vents in the stairwells and balconies in the Atrium (MJM, PB and IML)
- iii. Merger of SW00 with SN01 alcove - anticipated renovation date (IBP & MJM)

6. Building Matters

- i. Monitoring of the new 200A 'new UPS DB in Server Room GN13' B02L feed to the UPS. Electrician visit from EM (IBP)
- ii. Quote from BBC Fire regarding putting all 9 stair case doors on the East side of the building on automatic door hold back **(2017-08-06ii)** (MJM)
- iii. Mains sockets in Lecture Theatres (MJM)
- iv. Report on Resource Management Committee's agreement on procedure for minor works (IML) **(2017-08-03iv)**
- v. Report on meeting with Colin High from Estate Management (IML)
- vi. Cancel 'cloud management' of LEDs (IML)
- vii. Two quotes to change opening for SW00 doors (IBP)
- viii. Increase lighting in SW02 (IML & BDJ)
- ix. Refurbishment of common room kitchen and kitchenettes (x9) (Committee Members) **(2017-08-06ix)**
- x. Security of outside bike shelter
There has been a reported bike theft. The Committee are asked to consider the various suggestions on improving security:
 - close and lock the gates on each of the exits and entrance points to the shelters with a small key code (this could be problematic for visitors).
 - close and lock gates using the building's existing building access system. An initial quote to dig a trench for the wiring has been obtained but was considered too expensive. Further quotes could be obtained.
 - sectioning off part of the bike shelter and locking half.

7. AV Matters

- i. Lecture theatre lights – Creston software update (BDJ)
- ii. Temperature control fan on back wall of LT1. Proposed installation date (IBP and MJM)
- iii. Acoustics improvement in the Atrium – wall hanging trial (GT)

8. Energy and Environmental Website

Changes required to the website (GT)

<http://www.cl.cam.ac.uk/local/wgb/ecobuilding/html>

9. Committee Budget

It has been requested that Budget be a standing item on the Agenda.

10. Any Other Business

11. Date of next meeting

The next meeting of the Committee will be arranged for October by Doodle Poll.

**UNIVERSITY OF CAMBRIDGE COMPUTER LABORATORY
BUILDINGS AND ENVIRONMENT COMMITTEE**

Minutes from the 2nd meeting of the Computer Laboratory Buildings and Environment
Committee held on Tuesday 30 May 2017 at 14:00 in Room SW00

Present: Professor Ian Leslie (Chairman) (IML)
Dr Piete Brooks (PB)
Mr Ian Burton-Palmer (IBP)
Ms Claire Chapman (Secretary) (CLC)
Mr Martin McDonnell (MJM)
Mrs Caroline Stewart (CS)
Dr Graham Titmus (GT)

1. Apologies for Absence

Mr Brian Jones (BDJ)

2. Minutes of the Previous Meeting

The minutes of the meeting held on 30 March 2017 were approved.

3. Matters Arising

None.

4. Reducing Energy Consumption

i. Migration of SE18 and order for racks in GN09 (GT)

The racks have been ordered and will be delivered at the end of June. They should be fully installed by July.

ii. Reducing energy consumption of the corridor lights (IML and BDJ)

The paper written by IML titled 'Corridor Lighting in the Gates Building: An Overview' had been circulated prior to the meeting. It was agreed a phased upgrade will move all corridor lighting to 24volts, starting in the GN corridor by the end of July. It was agreed we should use green cable to differentiate from other cables running in the ceiling void; this would also indicate our environment friendly aims! It was noted that there would be significant cost in doing the whole building but that we would need to make some investment in order to save energy in the longer term, and to show other departments what can be done. It was agreed we should hold off augmenting the solar panels for a while as they are becoming more efficient.

Action: MJM, IBP, BDJ

iii. How to avoid the alcove light sensors activating when people walk past (MJM)

The viable solutions are to reinstall light switches or to shield the sensors in new offices. Both these solutions can be done in-house, at no cost. MJM will test the first option and report back at the next meeting.

Action: MJM

- iv. **Report of unused equipment in SE18 (GT)**

There are 3.5 - 4 racks to move. AWM has yet to decide whether to dispose of or keep his equipment. GT will follow this up. The racks will be moved during the summer and the power will be turned off in December. GT will announce the official 'shut off' as being 15 November. Further work will need to be done in SE18 before it can be used for office space.

Action: GT

5. Passive Cooling

- i. **Turning off all but one of the air conditioning units in SE18 (IBP)**

Only one air conditioning unit is currently being used during the week, with no disruption to the service so far.

- ii. **Quotes for crane hire (IBP)**

Two quotes have been received from Cambridge Crane Hire:

1) 1 crane operator and crane @ £440.00 + VAT per day

2) 1 crane operator, lift operator and crane @ £880 + VAT per day (*preferred option from supplier for safety reasons*)

The crane will need to stand in the main entrance of the CAPE building for stability purposes and to avoid road closure.

It was decided to leave the chillers in their current place for the moment, if they are difficult to remove.

IML requested two further quotes from other crane suppliers and to request a site visit for them to assess our requirements. It was suggested that the Michaelmas Term would be the preferred time frame to carry out the work, ideally at the end of term (2nd-5th December).

Action: IBP

- iii. **Meeting with Fire Officer regarding replacing just 4 vents in the stairwells and balconies in the Atrium (MJM)**

Andrew Kerley attended the site last week and we are awaiting a visit from Colt Roof Vents for their assessment. IML said that EM has overall fire responsibility and if the vents are in bad repair, they will replace them. IML questioned who the University Fire Officer is and to request a meeting with them to look at the vents. IBP said that Jim Gorman is the Head of Fire Safety/Principal Maintenance Technician in EM, but his anticipated response will be to refer it to a consultant for assessment. It was agreed that IML, MJM, and PB should meet with Jim Gorman in July.

We shall investigate the best way to install vents in the stairwells.

Action: MJM, PB, IML

- iv. **Proposal to merge SW00 with SN01 alcove – fire risk assessment (MJM)**

MJM reported that he had completed a fire risk assessment and the merge would not breach any fire blocks. The benefits would be to gain space by increasing the room to 30-50% capacity and to have fresh air, allow passive cooling and turn off the air conditioning. The Committee agreed we should go ahead with the renovation in due course.

Action: IBP and MJM

6. Building Matters

i. Two ventilation holes in SE17 during SE18 refurbishment (IBP and BDJ)

This will be investigated when doing the SE18 refurbishment.

ii. Monitoring of the new 200A 'new UPS DB in Server Room GN13' B02L feed to the UPS (PB)

IBP reported that he had ordered 200A current transformers (CT). The maximum current will be 60A so we might want to get alternative ones. The Electrician will be asked to assess and advise the time for each phase. A time frame of under 30 minutes is required so as not to interrupt the UPS. If this is a problem, we shall investigate split core CTs instead. IBP will raise an EM ticket for the Electrician to visit.

Action: IBP

7. AV Matters (Brian Jones report)

i. Wi-Fi connected projector - Rainbow Group report (BDJ)

A trial has been made in SS03 using Wi-Fi and it works with Macs, Windows and phones after downloading software. A cable is needed for Linux users. A request to upgrade the projector in FW26 has been added (previous planned upgrades were in FW11, GS15 and SN08). Two projectors of the same type as in SS03 have been ordered.

ii. Lecture theatre lights

A comment that the lecture theatre lights setting 2 is too dim has been received. As these are programmable, the Dynalite settings have to be understood to make the change. Both Dynalite and Creston have changed software versions at least once since their installation. An alternative solution would be to contact Absolute AV to make a change to the Creston software.

Action: BDJ

iii. Temperature control fan on back wall in LT1– EM approval and fire safety report (IBP and MJM)

Andrew Kerley from EM has granted permission and there is no fire risk. He suggested that we install a metal vent, but we are hoping to cut the existing wood, and not add any metalwork. It was agreed we should proceed with the installation.

Action: IBP and MJM

iv. How to improve acoustics in the Atrium – fabric trial and wall tiles (MJM and GT)

A Snowsound Acoustics brochure had been circulated by GT prior to the meeting. Approximately 200 wall tiles would be needed at a cost of £10,000. It was agreed we should try wall hangings first and see how well they work.

Action: GT

8. Energy and Environmental Website

IBP reported changes are required to the website

<http://www.cl.cam.ac.uk/local/wgb/ecobuilding.html> as it is now out of date giving incorrect information. GT will ask Lucija Dacic to update the page.

Action: GT

9. Any Other Business

i. SW00 door to open outwards rather than inwards (IBP and MJM)

Briars have been asked to quote for this work due to the Maglock mechanism. It was questioned if the room still needs to be lockable. In the past, it was lockable due to the plasma screen. GT said that the cost of a replacement screen is now negligible and therefore doesn't warrant spending much to make it lockable. IBP stated that even if we reverse the door Briars would need to disconnect the lock.

IML requested two quotes:

- 1) Keep Maglock and reverse the door
- 2) Remove Maglock to allow MJM to reverse the door.

Action: IBP

ii. Increase lighting in Room SW02

Lise Gough has asked if the lighting in SW02 can be increased. IML and BDJ will experiment over the summer and report back at the next meeting.

Action: IML/BDJ

iii. Energy devolution costs

EM have now confirmed agreement to devolve the electricity costs. The budget will be passed on in August. Costs will be charged against the budget and reimbursed quarterly. The cost is estimated to be £160,000 per year. This does not include the café but includes our racks in the WCDC.

iv. Refurbishment of common room kitchen and kitchenettes x 9

IBP asked that committee members consider which kitchens and kitchenettes are most in need of refurbishment. He was thinking of doing 6 in the first phase. Suggestions should be sent to CLC to collate for the next meeting.

Action: All committee members

10. Date of the next meeting

The next meeting of the Committee will be a date in August as selected by a Doodle Poll.



(2017-08-06ii)



UNIVERSITY OF CAMBRIDGE



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Defect Report Quotation

Recommendation Quotation

Customer's Name: **The University of Cambridge
Facilities Management**

Customer's Site No: **W046**

Address: **William Gates Building
Cambridge**

Post Code: **CB3 0FD**

BBC Contact: **Mr. Jim Gorman**

Date: **02-Jun-17**

Quote Number: **86672**

BBC Site No: **31002**

Instigating Engineer: **646**

For The Attention Of: **Mr. Jim Gorman**

Title: **Estate Management**

e.mail: **James.Gorman@admin.cam.ac.uk**

To install door holdbacks (400N) on stairwells.

Qty	BBC Stock Code	Product/Work Description		
Materials [Customer Specific SOR]:				
3	05-0679-99	M701+M200E-SMB M701 CONTROL MODULE C/W BACI	44.60	133.80
6	05-0964-00	Detector Optical NFXI-OPT	25.10	150.60
6	05-0981-00	Detector Base White B501AP	2.60	15.60
200	83-0397-97	2L1.5 FLEXIBLE FIRE RATED CABLE C/W FIXINGS	1.50	300.00
120	89-8351-QS	25mm HEAVY GAUGE CONDUIT WHITE	0.40	48.00
6	90-0042-00	Box Adaptable 50 x 50mm Black Enamel	1.50	9.00
3	99-9999-B	TRX1A-24 Transformer Rectifier Unit 1A 24vdc Regulated	54.10	162.30
9	99-9999-B	DORMA EM500A - 24V DC Electromagnetic Door Retainer	108.80	979.20
Engineer's Labour				
100	Hour(s)	Standard Rate	36.00	3,600.00
			Pre VAT Total:	£ 5,398.50

BBC Standard Terms & Conditions to apply (Copy available on www.bbcbfire.co.uk)

Planned completion from receipt of order

- Within Ten Days

Y Within Thirty Days

Technical Approval:

Typed By:

E & O E

Resource Management Committee

Briefing on a pilot scheme for electricity recharging at the Computer Laboratory

Background

1. In December 2016, RMC agreed that the Electricity Incentivisation Scheme should be stopped and that a scheme for the direct recharging of electricity costs to departments would be developed and implemented.
2. PRAO subsequently received a suggestion from Professor Ian Leslie that his department, the Computer Laboratory, could act as a pilot for the recharging of electricity costs. Following discussions between the department, PRAO (Jonathan Appleton) and Environment and Energy (Joanna Chamberlain) the recharging of electricity costs to the Computer Lab will commence from August 2017. This scheme will provide a useful pilot for the roll-out of the recharging of electricity costs to all departments.

William Gates Building (WGB)

3. The Computer Lab is based at the WGB on West Cambridge. The building is extensively metered with consumption data available in near real-time for different areas of the building and covering a period of over five years. Until recently the building was also occupied by part of the Engineering department and the University Catering Service who run the café. Engineering have moved out of the building and so the Computer Lab now occupies the majority of the building with approximately 2% of the building's electricity being consumed by the University Catering Service.

Plans for how the scheme will operate

4. The consumption baseline is being set using an average of the past two years' consumption with amendments made to account for the fact that Engineering has moved out of the building and that the Computer Lab now occupies this space. The consumption relating to the UCS space will be removed from the baseline.
5. An average price per kWh of electricity will be set in advance of 2017-18 and this price will be multiplied by the consumption baseline to calculate the budget that will be transferred to the Computer Lab for their electricity consumption.
6. In 2017/18, the Computer Lab will be charged for its electricity use on a quarterly basis. This will be based on actual consumption (excluding that used by the Catering Service) multiplied by the average unit rate agreed at the start of the year for budget setting.
7. If over the year, the department has used less electricity than its baseline, it can retain any excess budget to use as it wishes. However, if the department uses more, it will be required to pay the additional costs from its own funds and no additional budget will be transferred to cover these costs.
8. The department will still be required to pay the carbon levy separately and no additional budget will be transferred to cover these costs. This is the same as it currently operates for other departments.

West Cambridge Data Centre

9. The Computer Lab has requested that electricity consumption relating to its equipment in the data centre is included within the scheme and a corresponding budget transferred. The Data Centre Manager is supportive of this approach and further discussions are underway as to how this will operate in practice as the Data Centre pays for its full electricity costs and so transactions will need to take place between the Data Centre and the department. It is expected that costs of electricity relating to departments' use of the data centre will be included in the wider roll-out of electricity recharging as this would act as an incentive for departments to use the data centre.

Minor building works

10. The department also hopes to invest in some minor building works to support its objective of reducing energy consumption in the WGB. Works would be funded by the Computer Lab and undertaken or managed as usual by Estate Management. Rather than register a series of individual – and potentially very small – minor works projects with the PRAO, the department seeks authority from RMC to commission this work directly from Estate Management. The department would expect to report periodically on the work undertaken, either to RMC or its Space Management and Minor Works Sub-committee.
11. The Computer Lab expects its requirement to be for very small works such as drilling holes and altering windows. Such works can be undertaken directly by Estate Management and the costs recovered from the department. More substantive works requiring project management may be referred by the Head of Estate Facilities to the Space Management & Minor Works Sub-committee. No work will be undertaken by the department, which does not have the necessary authority from the Buildings Committee.

The Committee is asked to note the proposed electricity recharging pilot as summarised in paragraphs 1-9 of this paper.

The Committee is asked to authorise the Computer Laboratory to commission work from Estate Management, to support its objective of reducing energy consumption in the William Gates Building, as summarised in paragraphs 10-11 of this paper.

Room	IBP - 31/05/17	PB - 06/06/17	CC -12/07/17	
SS17	OK - No need to change. Gold Star Award	No water damage	Excellent	
SC20	OK - No need to change	No water damage, lino looking tired	Skirting board grim. Lino worn	
SN18	Needs to be refurbished	No water damage	Drawer water damage	
FN18	Needs to be refurbished	Minor water damage to doors by sink, unused coffee machine and coffee grinders. Used by people next door to FW03	Same as PB	
FW03	Needs to be refurbished	Minor water damage to doors by sink; fridge cover proud, barely used	Same as PB	
FC35 (Kitchen)	Needs to be refurbished	Water damage to doors by sink	Same as PB	
FS27	Needs to be refurbished	Some water damage	Same as PB	
GS13 (Kitchen)	Needs to be refurbished	Severe water damage to doors by sink; dishwasher does not fit; rest OK	Same as PB	
GC25	OK - No need to change	No water damage	OK	
	Comment: It may be worth refurbishing all to avoid refurbishing at a later date	Comments: Filtered water, machines and more dishwashers would be liked		