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**The 12<sup>th</sup> Meeting of the Department of Computer Science and Technology  
Buildings and Environment Committee**

**Friday, 22 November 2019, Room SW00, William Gates Building**

**Agenda**

**Committee Members:**

Professor Simon Moore, Chair (SWM)

Dr Piete Brooks (PB)

Mr Ian Burton-Palmer (IBP)

Ms Celia Burns (CB)

Mr Martin McDonnell (MJM)

Dr Richard Mortier (RMM)

Mrs Caroline Stewart (CS)

Dr Graham Titmus (GT)

**1. Apologies for Absence**

Apologies were received from SWM. GT will chair the meeting in his place.

**2. Minutes**

The Minutes of the meeting held on 3 October 2019 are attached (2011-11-02)

**3. Matters Arising**

**4. Reducing Energy Consumption**

**a) *New Chiller***

IBP has reported by circulation that the new chiller is working well, following a few small issues that have been sorted out. The most significant result of the changes is a reduced flow to GN09, which must be addressed quickly. The engineers and designers of the systems are working on a secondary plan to install a set of pumps in the GN19 Plant Room that will push the chilled water into the GN09 Machine Room at a much better flow-rate than it is running at currently. Once this set of works is complete, the new systems should run well.

**5. Building Matters**

**a) *Internal/Atrium window installation in SW02***

The lighting in SW02 has now been done. The matter of internal windows is being kept under review.

**b) *Fixing mains extensions from the projection booth to power cameras***

IBP has reported by circulation that the project is now complete. Extra sockets fitted with USB ports, along with data points, have been fitted in both LTs.

**c) *Lighting***

**i) *Atrium lighting***

IBP has reported by circulation that EM are planning to update the William Gates Building lighting in 2023/24. IBP is looking at various makes and designs of lighting, some of which are on test in the Central Corridor and Atrium. The three grades of lighting on test are:

1. *Thorlux lighting unit*: although the lighting produced looks great, at £265 each unit, this option is too expensive.
2. *Medium-price LED conversion*: approx. £120 each; details on power, lumen, and colour to follow; this option allows for the same type of Retro-Look current lighting unit, but the running cost will be lower.
3. *A simple LED lamp*: approx. £13 each; runs on a 230v connection; uses 11 watts (vs. 42 watts with the existing lamps); allows for the retention of the existing lighting units (requires only removal of the ballast unit from each lamp and fitting of the LED replacement lamp, which can be done by Building Services). As the test bulbs seem to produce an uneven lighting, a few more rows of test bulbs will be fitted in order to see what the larger effect will be.

IBP to update.

**ii) Update on EM replacing the bulbs in LT1 and LT2**

IBP has reported by circulation that, since changing the lamps inside the LTs will be more complex than at first thought, the lighting control system should be replaced before the lamps are changed. It is not clear if the cost of a new lighting control system would be the responsibility of the Department or EM. As there are no windows in the LTs, it is vital that the lighting in the LTs should continue to run well. How does the Committee wish to proceed?

**iii) Emergency Lighting in the Atrium and LTs**

IBP has reported by circulation that EM are currently running an investigation into the inverter controlling the emergency lighting in the Atrium and LTs. Because we have a large number of LEDs in the Atrium, it upsets the harmonics of the current when the emergency lighting is activated and causes the lighting to strobe or flash on or off. This needs to be resolved. Should we consider the purchase of a new inverter that is able to cope with the fluctuation in current?

**d) Intel Lab ceiling (bowing panel)**

IBP has reported by circulation that monitoring of the panel can now be discontinued, since there has been no movement during the last year. However, given there will be work carried out on the roof during the next year, PB has requested (from a Health and Safety perspective) that it is measured again in 6 – 12 months' time. IBP will action.

**e) Vent leaks**

The two vent leaks (over the lifts and Reception) are being monitored. IBP to report.

**f) Fire strategy for the William Gates building**

Relocation of smoke heads: MJM/IBP to report.

**g) Office recycling**

IBP has reported by circulation that the new signage from EM has not arrived. It has been agreed that, until the EM signage arrives, bins with commercial signage will be purchased

by the Department and the experiment will be run as previously outlined. CS has reported that we are starting the trial in GC and FC. Bins for the SC kitchen will be purchased once we have seen the samples that have been ordered.

**h) Solar panels (PVs) for the roof**

IBP has reported by circulation that the works to the roof are complete (to replace some timbers around the edge of the roof and to fit the roof with a membrane that can accommodate solar panels). The scaffolding has been removed and the roof made ready for the panels to be fitted. This is an EM project, and lead-time for the solar panel fitting is not currently available.

**i) Verex security system**

IBP has reported by circulation that Chubb Security are working on a price for the Maintenance Contract and Software Updates to keep the building's systems up-to-date for the next few years. IBP to update.

**j) Microwaves**

PB has reported by circulation that he has acquired two 5–50-minute timers, which appear to be suitable but may be easily reprogrammable (simply by re-pressing the 'on' button). The suggestion is to implement these timers and, if on IBP's daily inspections they are found to have been reprogrammed, a warning notice will be issued (asking users to check on each use that the timer is set to 5 minutes, and noting that if the problems persist, the microwaves will be removed). IBP to update.

**k) Building management system (cooling and heating)**

IBP has reported by circulation that the heating and cooling systems are running well and the new chiller means there is now capacity to cool the building and the GN09 Machine Room without any failures when the outside temperature reaches 30 degrees or more. Some remedial works are required to ensure that a better flow of chilled water is supplied to the Rittal Machines in GN09. IBP to update.

**l) Treatment of Sound in the Atrium**

CS has reported that the proposed actions have been approved by the Head of Department and the sound management panels have been ordered.

**6. AV Matters**

*a) Projection booth in LT2*

The Head of Department has suggested that we remove the projection booth in LT2 to make room for an increase in seat capacity required for the increase in student numbers. IBP to report.

*b) Projector in FW26*

The FW26 projected image is small, so the projector is to be moved further away and the screen is to be moved up. MJM has reported that he is waiting for a support bracket that has been ordered.

**7. Any Other Business**

**8. Date of Next Meeting**



**The 11<sup>th</sup> Meeting of the Department of Computer Science and Technology  
Buildings and Environment Committee**

**Thursday, 3<sup>rd</sup> October 2019, Room SW00, William Gates Building**

**Minutes**

**Present:**

Professor Simon Moore, Chair (SWM)

Dr Piete Brooks (PB)

Ms Celia Burns (CB)

Mr Martin McDonnell (MJM)

Dr Richard Mortier (RMM)

Mrs Caroline Stewart (CS)

Dr Graham Titmus (GT)

**1. Apologies for Absence**

Apologies were received from Mr Ian Burton-Palmer.

**2. Minutes**

The Minutes of the meeting held on 30 April 2019 were approved.

**3. Matters Arising**

There were no matters arising.

**4. Reducing Energy Consumption**

a) Type and design of a new chiller

*Update on the chiller project (IBP/GT)*

GT reported that the chiller project is now complete. A month-on-month comparison for August/September shows that it is using the same amount of energy as the previous chiller, however, we now have spare capacity. The Committee thought that we may have seen a reduction but this is not the case. The flow rates have been checked by Estates Management (EM).

**5. Building Matters**

**a) Internal/Atrium window installation in SW02**

It was agreed at an earlier meeting to keep this item on hold until the replacement lighting in SW02 had been fixed (see below). Now the lighting has been fixed, it does not seem that internal windows will be needed, however, we will keep this under review.

**b) Fixing current lighting in SW02**

The lighting project in SW02 is now complete, with the general feeling being that it is a great improvement. CS reported that Thorlux would be coming on Friday 4 October to correct the dimmer settings. IBP had proposed to ask Thorlux to separate the room into quarters for

dimming purposes. The Committee felt that if only one quarter of the room was occupied, it would make the room very dark if 3/4s of the room were dimmed. CS reported that IBP had planned to discuss requirements with Lise Gough but she would do this in his absence.

**Afternote:** Lise Gough asked that the room be set to all on or off. Thorlux attempted to do the work but they needed to refer some electrical issues back to EM before proceeding.

**Action: CS/IBP**

**c) Fixing mains extensions from the projection booth to power cameras**

IBP had acquired three updated quotes for the works to both LT1 and LT2 and had passed these over to Brian Jones to check. The Committee asked for IBP to report on progress by circulation.

**Action: IBP**

**d) GS15 and FC35 kitchenette refurbishments**

The refurbishments are now complete.

**e) Lighting update**

EM have reported their Lighting Replacement Plan for 2023/24, which may have an impact on the Department's plans for replacement lighting. The current work in discussion by the Committee is detailed below. The Committee asked for IBP to report on EM's plans by circulation.

A main concern for the Committee was the longevity of the controllers in the Lecture Theatres (item (e)iii, below). It was noted that our Lecture Theatre requirements would be very different to, and might fall outside, EM's lighting replacement plans.

Another concern was lighting efficiency (items (e)i, ii and iv, below). CS reported that Srinivasan Keshav had given IBP details of an LED tube (c. £30/tube) that could replace the fluorescent tubes in offices. The Committee asked that IBP investigate further and test the efficiency in one office.

**Action: IBP**

**i) Atrium lighting update**

IBP had put one new unit on display and was awaiting feedback. The Committee had asked previously for the lighting unit specifications to be checked to ensure that (1) the lumen output closely matches the existing lighting, and (2) the replacement lighting is significantly more efficient than the existing lighting. There was also a query raised regarding DALI compatibility which may need to be revisited. It was agreed that an alternative lighting option for SW00 would be investigated.

It was noted that the industry is slow to deliver efficient LEDs but that it might be worth waiting to see what EM's plans were rather than building our own systems. IBP to check on the unit efficiency and report back by circulation.

**Action: IBP**

**ii) Update on EM replacing the bulbs in LT1 and LT2**

The question of overhauling the lecture theatre lights to an LED system to save energy and to replace the aging controllers that are at risk of failure had been raised at the April 2019 meeting. The Committee had requested that a replacement programme be

started, and IBP had agreed to ask Chris Lock of EM for his view. Brian Jones had reported that Chris Lock believed the issue to be more complex than had originally been thought. It was suggested that now there is less need for dimming, we should seek an electrician's advice as to whether the Dynalite system could be manually bypassed and if this is possible, establish if EM would cover the cost of the works.

**Action: IBP**

As Brian Jones was no longer responsible for AV, he would not be continuing as a member of the Committee. The Committee agreed to invite Mark Cresham to submit a report to each Committee meeting via GT.

**Action: GT**

**iii) Update on replacing the control panel in the Lecture Theatres**

Brian Jones had reported that the lighting controllers in the Lecture Theatres which take input from the wall buttons and convert them into a set of brightness settings for the zones in each LT are currently a Dynalite system (now part of Philips). No one knows how to program the system or override it to allow the lights to all be on or all be off. If the system were to fail, it would result in no lighting in the LTs.

This item had been discussed under point ii) above.

**iv) Trialling LED lighting in the SN corridor**

Nothing has been done regarding trialling LED lighting in the SN corridor. There were concerns about the price of the lights used in the GE corridor and it was felt that alternative options should be explored. IBP to report by circulation on a project for upgrading lighting in the building.

**Action: IBP**

**f) Intel Lab ceiling (bowing panel)**

MJM reported that the panel has been monitored and no recent movement has been detected. IBP to monitor.

**Action: IBP**

**g) Vent leak on the 2nd floor**

MJM reported that the leak was improving.

**Afternote:** following heavy rain during the weekend following the meeting, it is apparent there are two leaks, one over the lifts and one over Reception. Both leaks are being monitored.

**Action: IBP**

**h) Fire strategy for the William Gates building**

The original fire strategy for the building is being worked on and updated, which should save having to introduce a new strategy. The fly-open doors to the courtyards will be refurbished with electric motors so that they fly open when the fire alarm is activated. The repairs to the smoke vents should also comply with the original fire strategy.

MJM reported an issue regarding the location of the smoke heads in offices, which are currently just outside legal requirements, and the possibility that they might need to be relocated. MJM would update the Committee after Tim Jones had met with Michael Marsh

from University Fire Safety. **Afternote:** a further meeting with Jamie Groom of BBC Fire will be arranged to work out the best plan of action for the relocation of the smoke heads.

All but one of the cupboards had been removed from the Second Floor South corridor (to comply with legal requirements), and Nicholas Cutler had been approached to remove the tapes from the remaining cupboard with a view to digitising them. **Afternote:** both the Second Floor South and Second Floor Central corridors are now clear.

**Action: MJM**

**i) Office recycling**

IBP had agreed to run a trial as noted below, but we are still awaiting updated signage from EM before we can order the new bins. It was agreed that the signage should be chased.

GC kitchenette:	1 compostable materials bin
GC crossroads:	1 mixed recycling bin and 1 non-recycling bin
SC kitchen:	1 compostable materials bin, 1 mixed recycling bin, 1 non-recycling bin
Common Room kitchen:	1 compostable materials bin, 1 mixed recycling bin, 1 non-recycling bin

Office bins in the SC and GC corridors would be removed during the trial and the bin stations would be the only points for disposal and recycling waste. Glasdon have been identified as a suitable supplier.

**Action: IBP/CS**

**j) Solar panels (PVs) for the roof**

The Committee's understanding was that the work that had recently been carried out on the roof would allow for solar panels to be installed. IBP is asked to clarify this and report back by circulation.

**Action: IBP**

**k) Update on roof works**

MJM reported that all the roof work (replacing the membrane and fascia boards) had been completed. No further action was required.

**l) Verex security system**

Following concerns re. the longevity of the system, IBP had agreed to get an update from EM on the planned timeframe for changing the University access cards and to ask for the latest information on security system compatibility. IBP to report by circulation.

IBP to report by circulation on his meeting with Fitzwilliam Museum on 17 May to discuss the Verex system and software updates.

Martyn Johnson and Graham Titmus had been discussing technical requirements for a new system. GT reported that there was still no further information from the University about a more unified security system. IBP, MJ and GT would be meeting with Chubb (who serve Fitzwilliam) next week to explore whether Chubb could support the Department.

**Afternote:** It has since been agreed that we will move the maintenance of our alarm/intruder/access system to Chubb, which means that the longevity of the system is no longer an immediate concern, so no further action is currently required.

**m) Projector for GS15**

The projector has been purchased, to be put up by MJM (with cabling guidance from GT and Mark Cresham if necessary).

**Action: MJM**

**n) Microwaves**

We are still getting requests for additional microwaves. IBP to report on progress with identifying an appropriate timer.

**Action: IBP**

**o) Building management system (BMS; cooling and heating)**

GT reported that the current BMS is now very old, but the University are not likely to move us over to Trend in the near future. SWM suggested that there might be some need for research projects to access the data, and to achieve that, we would need to move over to Trend. The researchers should raise this issue with EM.

**6. AV Matters**

The FW26 projected image is small, so the projector is to be moved further away and the screen is to be moved up. MJM to action, with technical input from Mark Cresham if required.

**Action: MJM**

**7. Electricity Consumption Report**

The Electricity Consumption Report (1 August 2018 – 31 July 2019) had been circulated previously for the Committee's information.

**8. Any Other Business*****Treatment of Sound in the Atrium (the Street)***

GT reported that sound management panels have been in use in the Street, resulting in considerable improvement in the usability of the space for meetings in terms of ease of conversation. The sound management panels included ceiling panels, moveable absorbable vertical panels and yellow wall panels.

Panels have been installed from the southern end as far as Reception. (The north end of the Street is generally used as the reception area for conferences and for smaller groups).

GT has priced for more of the various panels and recommended acquiring three more moveable panels (£3,000 VAT incl., to be purchased immediately) and more ceiling panels (£8,500 VAT incl., to be installed over the Christmas break).

CS agreed to discuss the proposed action and pricing with Prof Copestake.

**Action: CS, GT**

**9. Date of Next Meeting**

Friday, 22 November 2019, 10.30 a.m., was proposed for the next meeting, subject to IBP's availability.