



**The 22nd Meeting of the Department of Computer Science and Technology
Buildings and Environment Committee**

**Wednesday, 18 January 2023, 11.30 a.m.
Room GC22, William Gates Building**

AGENDA

Committee Membership:

Prof Richard Mortier, Chair (RMM)
Dr Pietie Brooks (PB)
Celia Burns, Secretary (CB)
Thomas Bytheway (TB)
Dr Andrew Caines (APC)
Ali Digby (AJD)

Martin McDonnell (MJM)
Daniel Porter (DRP)
Luis A. Saavedra del Toro (LAS)
Malcolm Scott (MAS)
Caroline Stewart (CS)

1. Apologies for Absence

2. Committee Membership

(a) *PhD Representation.* Welcome to Luis A. Saavedra del Toro, who has joined the committee as the PhD representative.

(b) *Postdoc Representation.* Welcome to Dr Andrew Caines, who has joined the committee as the Postdoc representative.

3. Minutes

The minutes of the meeting held on 13 October 2022 are attached for approval.

4. Matters Arising

5. William Gates Cycle Parking and Landscaping of JJ Thomson Avenue

AJD to report.

6. Reducing Energy Consumption

(a) *Monitoring energy consumption:* AJD was going to contact Estates about gaining direct access to the Trend data. AJD to report.

7. Building Occupancy

The Head of Department has asked the Committee to do some work to better understand building occupancy usage post-pandemic. This is in light of the fact that our records show offices are full to capacity, yet on walking around the building at various points in time, it appears that a good deal of offices are not being used to capacity. Do Committee members have suggestions as to how we could proceed with assessing actual building use?

8. Building Matters

a) Lighting

i) *Lighting in the Lecture Theatres and The Street*

AJD was going to contact Estates for information about the timescale of Phase 8 of Estates' programme of LED whole-building upgrades and to ask whether the Lecture Theatres and The Street could be a priority. AJD to report.

b) Fire strategy for the William Gates building

At the time of the last meeting, two issues were with Estates.

- i) *Courtyard doors*. Some of the courtyard doors were not opening. The lock mechanisms were to be changed to Maglocks. AJD to report.
- ii) *Roof vents*. None of the 16 vents were working. This issue has been added to the Department's risk assessment and it was hoped that it would be red-flagged for Estates to prioritise. AJD to report.

c) Verex security system

Although the current system is working, it is running on old software and is at significant risk. DRP, MAS and AJD were going to plan a way forward and report back to the Committee. DRP to report.

d) Building management system (cooling and heating)

- i) **Heating problems:** At the time of the last meeting, Estates had not rectified the ongoing building heating problems. MJM was going to contact Andrew Freeman in Estates to follow up on this issue. MJM to report.
- ii) **Ventilation:** The ventilation is currently set to run 24/7. AJD was going to check the BMS system to investigate what she and/or Estates could do to reduce the running time. AJD to report.

e) Refit of the WGB Library

AJD had conveyed to Estates the goal of having the works done in the 2023 vacation. AJD to report on the current status.

f) Cleaning service

The process for a new contract would need to begin in January 2023. AJD was going to investigate the options around using the University contract or doing our own tender. AJD to report.

g) Clearing of FN11 Machine Room

At the time of the last meeting, there were still some items and servers left in the room. MAS was going to contact David Greaves for advice on whether anything needed to be recycled and RMM was going to contact Anil Madhavapeddy and/or Ian Pratt for advice on the question of whether items need to be destroyed. MAS and RMM to report.

h) Office Floor Boxes

Electrical works carried out towards the end of 2021 had reduced the reliability of the power supply in offices. The switch to RCBOs had led to the circuit breakers tripping occasionally when a very large number of devices were connected at once. Two suggestions had been made as a fix for this issue: (i) introducing more feeds into the circuits by powering the corridors from both ends; and (ii) replacing the sockets in the floor boxes with sockets with built-in RCD devices. AJD was going to coordinate with PB and TB and meet with Chris Cornell, the electrician, about this issue. AJD to report.

i) Downpipe Leaks

At the time of the last meeting, several contractors had been to investigate the leakages alongside the downpipe entrances through the roof surface. A leak detection test had been requested. AJD was going to follow up with Estates about this issue. AJD to report.

j) Portable Appliance Testing (PAT)

PAT Testing is now the Department's responsibility. AJD and CS were going to explore employing someone to do the testing on a short-term contract. AJD to report.

k) Generator Provision for GN09

At the last meeting, the committee had discussed the risks around the planned electrical maintenance and testing carried out by Estates, which was expected to take place around December 2022. MAS had suggested the installation of a permanent connection point for a generator with switch gear to allow the GN09 load to be transferred to the generator without outage.

AJD was going to contact Estates and convey the Department's concerns about the power shut-down test. AJD to report.

Do Committee members wish to readdress MAS's proposal for a permanent generator, with automatic start-up and switchover in the event of a power outage?

l) Improvements to the Ventilation and Extraction in SE17

At the last meeting, TB had proposed the installation of a better ventilation system in the hardware lab, and was going to get some quotes for the Committee to consider. TB to report.

m) Security Cameras

Currently there are security cameras that fall under the Department's responsibility in the locations shown below. (There are a few other cameras around the building for which University Security is responsible).

- The Goods In entrance
- The old cycle compound gate (showing the new automatic gate for the cycle compound)
- The cycle shed south (showing the new bike racks outside of the compound)
- The Street (outside the Building Services Manager's office, looking down The Street)
- The old library (2 cameras)
- The Intel Lab Terrace
- SW02
- The cafeteria seating area

The Head of Department is in support of having a security camera at the Goods In entrance only, so the other cameras have been turned off. The Building Services Manager is in support of keeping the second camera listed (on the old cycle compound gate). What are the Committee's thoughts? Should the other cameras be removed?

9. AV Matters

a) Projector in FW26

MJM reported that Mark Cresham had suggested using an existing projector from the Library refit. However, as the Library refit has stalled, the Committee agreed that it would be better to purchase a new projector that could be installed straightaway. Mark Cresham has subsequently requested three quotes. He has received two of them and is chasing up the third.

10. Electricity Devolution Project (EDP)

(a) Solar panels

At the time of the last meeting, works to install 365kw peak PV array panels had gone out to tender, requesting two costs: (i) for installation of the panels; and (ii) for installation of the panels and battery storage. AJD to report.

11. Any Other Business

12. Date of Next Meeting

The next meeting has been scheduled for Monday, 24 April 2023 from 14.00 – 15.30, in GC22.



**The 21st Meeting of the Department of Computer Science and Technology
Buildings and Environment Committee**

**Thursday, 13 October 2022, 11.30 a.m.
Room FW11, William Gates Building**

MINUTES

Present:

Prof Richard Mortier, Chair (RMM)
Dr Piete Brooks (PB)
Celia Burns, Secretary (CB)
Thomas Bytheway (TB)
Ali Digby (AJD)

Martin McDonnell (MJM)
Daniel Porter (DRP)
Malcolm Scott (MAS)
Caroline Stewart (CS)

1. Apologies for Absence

None.

2. Committee Membership

(a) *New Chair.* The Committee welcomed Prof Richard Mortier as the new Chair.

(b) *Building Services Manager.* The Committee welcomed Miss Ali Digby, who joined the Department in June as the Building Services Manager.

(c) *IT Support Manager.* The Committee welcomed Daniel Porter, who has joined the Committee in his role as IT Support Manager.

(d) *PhD Representation.* CB has asked the Secretary of the Postgraduate Student Forum (PSF) to include on the agenda for the next PSF meeting the opening for a PhD representative on this committee.

(e) *Postdoc Representation.* The Committee agreed that CB would include an item on the next Research Staff Forum agenda inviting a Postdoc representative to join the Committee.

Action: CB

3. Minutes

The minutes of the meeting held on 1 February 2022 were approved.

4. Matters Arising

There were no matters arising.

5. William Gates Cycle Parking and Landscaping of JJ Thomson Avenue

The Committee received an update from Estates about the cycle parking and landscaping works. AJD reported that she had met with Joe Ackers (Estates Project Manager) over the summer and that she and MJM are now receiving regular updates about this project.

6. Reducing Energy Consumption

(a) Monitoring energy consumption: The Committee discussed the issue of accessing data to monitor the Department's energy consumption and agreed that it would be more useful to have direct access to the Trend data rather than to rely on reports generated by Estates. It was agreed that AJD would look into this with Estates.

Action: AJD

7. Building Matters

a) Lighting

i) *Lighting in the Lecture Theatres and The Street*

AJD reported that Estates are in the process of doing LED upgrades for whole buildings. The next phase is Phase 8 in which seven buildings (possibly including the William Gates building) will be upgraded. Adam Fjaerem and Roger Ling from Estates will be visiting the building on Tuesday, 25 October. A main concern for the Committee was the timescale—both having enough notice for the works (the Department would require at least a year's notice) and the length of time the works would take. Other considerations were the vulnerability of the lighting in the Lecture Theatres and the possibility that the kit in the Lecture Theatres is going to be updated.

It was agreed that AJD would contact Estates for more information about the timescale and to ask whether the Lecture Theatres and The Street could be a priority for Phase 8 of the project.

Action: AJD

ii) *Lighting in SW01*

MJM reported that the fault with one of the diffusers has now been fixed.

b) Fire strategy for the William Gates building

MJM reported that a fire assessment had taken place the previous week. He had reported the faults with the courtyard doors and roof vents to the assessor. These two issues are currently with Estates.

i) *Courtyard doors.* Some of the courtyard doors do not open (the bolt that drops down into the door is not releasing). The lock mechanisms will be changed to Maglocks, the same as in the fire door at the café end of the building.

ii) *Roof vents.* There are 16 vents. Four of them were not working before but, following a power cut in August, none of them are working now. Estates have said that all

the vents will need to be replaced. There is currently no timescale, but scaffolding will be required and there may be a need for a crane outside. ACD noted that this issue has been added to the Department's risk assessment and it is hoped it will be red-flagged for Estates to prioritise it.

c) Verex security system

DRP and MAS reported on the current system, noting that although it is currently working, it is running on old software and is at significant risk (including risk to door-locking functionality). It was agreed that DRP, MAS and AJD would make a plan for a way forward and report back to the Committee.

Action: DRP, MAS and AJD

d) Building management system (cooling and heating)

i) Heating problems

MJM reported that Estates have not yet rectified the building heating problems that have been ongoing since the last meeting. MJM agreed to contact Andrew Freeman in Estates to follow up on this issue.

Action: MJM

ii) Ventilation

The ventilation is currently set to run 24/7 and it is not known how to set it for a reduced amount of time. It was noted that it was not necessary to run the ventilation overnight, particularly in the colder months. AJD agreed to check the BMS system to investigate what she and/or Estates can do to reduce the amount of time the ventilation is running

Action: AJD

e) Refit of the WGB Library

AJD reported that she had met with Ian Lewis about the Library refit and had raised the issue with Andrew Kerley and Alan Greaves from Estates. ADP noted that she had conveyed the goal of having the works done in the 2023 vacation. Estates had noted that the LED upgrade project would pay for the lighting part of the Library refit if we can provide them with the required information.

ACTION: AJD

f) Cleaning service

AJD noted that a year's dispensation from having to get a new contract had been granted (from 1 September 2022) so she will start the process for a new contract in January 2023. She noted that in the past when she has worked in other departments, she has always had in-house cleaners. The Committee discussed taking up the University contract but noted that it was currently more expensive than doing our own tender. RMM commented that he would hope if most Departments take up the University contract they would get a better price. AJD agreed to investigate the options.

Action: ACD

g) Alcove Conversions

This project is now complete.

h) Clearing of FN11 Machine Room

MAS reported that there had been no further progress on the servers in the room. RMM reported that all the interesting historical items had now been removed (and were now

boxed up in his office) and he had various people in mind who would be interested in them.

Questions were raised about whether anything needed to be recycled or destroyed. MAS is going to contact David Greaves for advice on the recycling issue and RMM offered to contact Anil Madhavapeddy and/or Ian Pratt for advice on the question of whether items need to be destroyed. TB was happy to help with moving items and suggested offering any unwanted items to the Computer Museum.

Action: MAS, RMM, TB

i) Damaged Baffle Panels on the Roof

MJM reported that the damaged baffle panels have now been repaired.

j) Office Floor Boxes

A concern had been raised by a member of the Department in October 2021 that electrical works that had been carried out might significantly reduce the reliability of the power supply in offices, with circuit breakers tripping more frequently. Monitoring of the circuits had shown that the circuit breakers had tripped only occasionally, and the tripping occurred when a lot of equipment was suddenly plugged in, taking out a quarter of the floor boxes in the corridor.

The tripping issue is due to the switch to RCBOs (a type of breaker that integrates an RCD device), which have an RCD trip of 30mA—required by law/building codes. Connecting large amounts of computer equipment at once or having a very large number of devices connected at once can trip this (especially as 30mA is the maximum trip and frequently actual breakers can go as low as 18-20mA). An electrician had confirmed that the breakers are functioning within spec, so it is not a fault as much as a design oversight.

Two suggestions were made as a fix for this issue: (i) introducing more feeds into the circuits by powering the corridors from both ends, thus essentially reducing the number of floor boxes per RCBO by half; and (ii) replacing the sockets in the floor boxes with sockets with built-in RCD devices, thus negating the requirement for RCBOs in the breaker panels while maintaining the legal requirement for a 30mA RCD on all sockets.

It was agreed that AJD would coordinate with PB and TB and meet with Chris Cornell, the electrician, about this issue.

Action: AJD, PB, TB

k) Downpipe Leaks

The Health and Safety Committee had passed this item to this Committee. MJM reported that several contractors had been to investigate the leakages and had agreed that the problem is not the downpipes but leakage alongside the downpipe entrances through the roof surface. This is on a part of the roof that wasn't resurfaced. A leak detection test has been requested but no further progress has been made. It was agreed that AJD would follow up with Estates about this issue.

Action: AJD

l) Portable Appliance Testing (PAT)

The Health and Safety Committee had passed this item to this Committee. At one time, PAT tests had been carried out centrally, but this is no longer the case, and the Department is now responsible for carrying out the tests. The Committee discussed options and agreed that AJD and CS would coordinate to explore employing someone to

do the testing on a short-term contract. This would include talking to the Department of Engineering, who employ someone in their department to carry out the tests.

Action: AJD and CS

m) Generator Provision for GN09

MAS reported that every few years, planned electrical maintenance and testing requires power to be shut down to the building for longer than existing battery backup can keep servers running. Such maintenance is now over-due. Previously for these shut-downs, Estates have attached a generator using a temporary setup that was unsafe and did not work. MAS suggested that for the next time, a permanent connection point could be installed for a generator with switch gear to allow the GN09 load to be transferred to the generator without outage. Another option would be to have a generator permanently in situ, with automatic start-up and switchover in the event of a power outage. In the case of a permanent generator, the Committee would need to consider where it would be located as that would affect where the connection point would be installed.

The Committee discussed MAS's proposal, noting that Estates are looking to do the planned shut-down around December this year and given it is overdue, they are pushing to get this done. It was agreed that AJD would contact Estates and convey the Department's understanding that the shut-down needs to happen but stressing our concerns about safety.

Action: AJD/MAS

n) Improvements to the Ventilation and Extraction in SE17

TB presented his proposal to move to a better ventilation system in the hardware lab, both whole-room ventilation and fume hoods over some areas for equipment (e.g., the small oven for soldering, the 3D printer). TB noted that this project would prevent potential health and safety hazards. In addition, there was an existing hole in the wall which, hopefully, could serve as the extraction point without there being a need to drill another hole.

TB agreed to get some quotes so that the Committee could consider the proposal further.

Action: TB

8. AV Matters

a) Projector in FW26

MJM reported that Mark Cresham had suggested using an existing projector from the Library refit. However, as the Library refit has stalled, the Committee agreed that it would be better to purchase a new projector that could be installed straightaway. It was agreed that CB would ask Mark Cresham to proceed.

Action: CB

9. Electricity Devolution Project (EDP)

(a) Solar panels

AJD updated the Committee on the status of possible solar panels, reporting that the solar panels programme had been shelved while there was a possibility of there being a solar farm at Lord's Bridge. Now that the solar farm is not going ahead, the proposal is to install 365kw peak PV array panels on the roof with a view that they supply a significant amount of consumption.

A survey has already been done on the roof and the works have gone out to tender, requesting two costs: (i) for installation of the panels; and (ii) for installation of the panels

and battery storage. The battery storage option would be more expensive and would require two parking spaces for the batteries. If the project came in too expensive, it would be shelved.

The Committee discussed the reduction of parking spaces, noting that this issue had also come up in relation to the discussion about a generator for GN09 (item 7m above) and MAS suggested that the two projects might be merged.

10. Any Other Business

There was no other business.

11. Date of Next Meetings

It was agreed that the next meetings would take place on Wednesday, 18 January 2023 from 11.30 – 12.30 and on Monday, 24 April 2023 from 14.00 – 15.30. In the meantime, any updates could be sent via email.