# Building Advisor



Asset Health Report

## University of Leicester

Created On: 11/10/2023

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**Executive Summary**

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* Annualized Realized Energy Savings Automated Analysis Checks Equipment Health
* Anomaly Types grouped by priority score Anomaly Summary

**Details View**

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**Buildings in this report**

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* Astley Clarke Building
* Brookfield Campus
* CVRC Building
* David Wilson Library
* Fraser Noble Building
* George Davies Building
* George Porter Building
* Henry Wellcome Building
* Hodgkin Building
* Michael Attiyah
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# Executive Summary



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### Savings Performance

#### Realized and remaining potential energy savings for the last 12 months.

Identified Cost Savings — £147,592

Realized Savings - £69,573

Remaining Potential - £78,019

### Annualized Realized Energy Savings

#### Annualized realized savings over the last 13 months.

|  |  |  |
| --- | --- | --- |
| **Month** | **Cumulative Savings** | **Savings per Month** |
| Sept -22 | £0 | £0 |
| Oct - 22 | £0 | £0 |
| Nov -22 | £0 | £0 |
| Dec - 22 | £0 | £0 |
| Jan -23 | £0 | £0 |
| Feb - 23 | £12,000 | £12,000 |
| Mar -23 | £19,500 | £10,000 |
| Apr – 23 | £19,500 | £0 |
| May – 23 | £39,000 | £19,500 |
| Jun - 23 | £41,000 | £9,000 |
| Jul - 23 | £42,000 | £1,000 |
| Aug - 23 | £61,000 | £18,000 |
| Sept - 23 | £70,000 | £11,000 |

### Automated Analysis Checks

#### Automated checks findings for the selected report period showing percentage of healthy vs unhealthy equipment in the system. The actual number of equipment analysed, in addition to healthy and unhealthy equipment shows on the side.

#### 2248 pieces of equipment were analysed and the results showed that 94% (2108) were healthy and the remaining 6% (140) were unhealthy.

### Equipment Health

#### Monthly trend of percentage healthy vs unhealthy equipment for the last 13 months.

|  |  |  |
| --- | --- | --- |
| **Month and year** | **Healthy equipment** | **Unhealthy Equipment** |
| September 2022 | 95% | 5% |
| October 2022 | 96% | 4% |
| November 2022 | 95% | 5% |
| December 2022 | 94% | 6% |
| January 2023 | 96% | 4% |
| February 2023 | 95% | 5% |
| March 2023 | 95% | 5% |
| April 2023 | 95% | 5% |
| May 2023 | 94% | 6% |
| June 2023 | 95% | 5% |
| July 2023 | 96% | 4% |
| August 2023 | 95% | 5% |
| September 2023 | 95% | 5% |

### Anomaly Types grouped by priority score

#### For the selected report period. Number of anomalies for the categories: Energy, Comfort and Maintenance, grouped by priority score:

High (priority 10-8), Medium (7-5) and Low (<5). Total number of anomalies shows within each type.

|  |  |  |  |
| --- | --- | --- | --- |
| Category | High | Medium | Low |
| Energy | 12 | 118 | 6 |
| Comfort | 7 | 57 | 35 |
| Maintenance | 450 | 271 | 798 |
| **Total** | **469** | **446** | **839** |

### Anomaly Summary

#### For 13 month period, anomalies by category of impact. Note: A single issue may impact one or more categories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Month/year** | **Energy Anomalies** | **Comfort Anomalies** | **Maintenance Anomalies** |
| Sep 2022 | 220 | 300 | 700 |
| Oct 2022 | 230 | 300 | 750 |
| Nov 2022 | 230 | 290 | 760 |
| Dec 2022 | 300 | 380 | 900 |
| Jan 2023 | 350 | 490 | 960 |
| Feb 2023 | 300 | 570 | 990 |
| Mar 2023 | 280 | 520 | 900 |
| Apr 2023 | 230 | 500 | 920 |
| May 2023 | 410 | 430 | 950 |
| Jun 2023 | 410 | 440 | 850 |
| Jul 2023 | 400 | 490 | 850 |
| Aug 2023 | 380 | 490 | 850 |
| Sep 2023 | 500 | 460 | 830 |

# Details



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### Savings Performance

#### Monthly trend of realized and unrealized avoidable energy costs over the last 13 months.

|  |  |  |
| --- | --- | --- |
| **Month/Year** | **Energy avoided**  **costs** | **Energy avoidable costs** |
| Sep 2022 | £0 | £0 |
| Oct 2022 | £0 | £0 |
| Nov 2022 | £0 | £0 |
| Dec 2022 | £0 | £2500 |
| Jan 2023 | £0 | £3000 |
| Feb 2023 | £11,000 | £0 |
| Mar 2023 | £7500 | £9000 |
| Apr 2023 | £0 | £0 |
| May 2023 | £18,000 | £9500 |
| Jun 2023 | £7000 | £2500 |
| Jul 2023 | £1000 | £27,000 |
| Aug 2023 | £17,000 | £22,00 |
| Sep 2023 | £8000 | £2000 |

### Task Summary

#### Monthly trend of task activity over 13 month period.

|  |  |  |  |
| --- | --- | --- | --- |
| **Month/year** | **Tasks created** | **Tasks completed** | **Tasks remaining** |
| Sep 2022 | 6 | 37 | 39 |
| Oct 2022 | 2 | 1 | 39 |
| Nov 2022 | 6 | 5 | 43 |
| Dec 2022 | 12 | 1 | 55 |
| Jan 2023 | 15 | 3 | 62 |
| Feb 2023 | 42 | 22 | 82 |
| Mar 2023 | 39 | 39 | 82 |
| Apr 2023 | 25 | 20 | 84 |
| May 2023 | 70 | 43 | 115 |
| Jun 2023 | 35 | 19 | 123 |
| Jul 2023 | 35 | 20 | 139 |
| Aug 2023 | 39 | 39 | 138 |
| Sep 2023 | 18 | 8 | 141 |

### Top Equipment Opportunities

#### Top 10 equipment with the most avoidable energy cost opportunities identified in the reporting period.

Avoidable Energy Cost

|  |  |
| --- | --- |
| **Equipment** | **Avoidable energy costs** |
| Cooling plant (Henry Wellcome Buiding) | £1350 |
| Chilled Water Primary Loop (Henry Wellcome Building) | £110 |
| AHU 9 Lecture Theatre (David Wilson Library) | £700 |
| AHU no.1 (Space Park Ph 2) | £400 |
| CHW Sec FCUs Loop Space Park Ph 2) | £330 |
| AHU no.2 (Space Park Ph 2) | £250 |
| Rad and Trench CT Circuit HW Secondary Loop (David Wilson Library) | £200 |
| Primary CHW Loop (PRF Building) | £180 |
| AHU 02 Ventilation (Space Park Ph 1) | £150 |
| AHU 33 CP1 6th Floor (Hodgkin Building) | £130 |

### Equipment Health

#### Number of anomalies in each the monitored buildings along with the avoidable costs of those anomalies.

|  |  |  |  |
| --- | --- | --- | --- |
| **Building Name** | **Equipment Count** | **Avoidable Monthly Costs** | **Number of Anomalies** |
| George Davies Building | 261 | £0 | 271 |
| David Wilson Library | 100 | £1,171 | 120 |
| Hodgkin Building | 65 | £1,381 | 93 |
| Henry Wellcome Building | 72 | £2,477 | 75 |
| Percy Gee Building | 50 | £0 | 63 |
| Teaching & Learning Centre | 41 | £70 | 56 |
| Space Park Ph 2 | 21 | £1,150 | 27 |

|  |  |  |  |
| --- | --- | --- | --- |
| CVRC Building | 25 | £0 | 27 |
| PRF Building | 22 | £231 | 26 |
| Brookfield Campus | 18 | £233 | 26 |
| Physics Building | 18 | £17 | 25 |
| Space Park Ph 1 | 19 | £275 | 23 |
| Michael Attiyah | 18 | £119 | 23 |
| George Porter Building | 15 | £30 | 16 |
| Nixon Court | 9 | £14 | 9 |
| Astley Clarke Building | 6 | £0 | 7 |
| Fraser Noble Building | 3 | £33 | 3 |
| School of Education | 2 | £0 | 2 |

|  |  |  |  |
| --- | --- | --- | --- |
| Building: | Henry Wellcome Building | Energy Priority: | 10 |
| Equipment Name: | **Cooling Plant** | Avoidable Cost | £1,338 |
| Description: | **Cooling source off, CHW pumps on. Data quality flag.** | Associated Task ID(s): | 912 |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Energy Priority: | 10 |
| Equipment Name: | **Chilled Water Primary Loop** | Avoidable Cost | £1,085 |
| Description: | **Data quality flag. Low loop temp difference. Minimal load across loop.** | Associated Task ID(s): | 399, 946 |
|  |  |  |  |
| Building: | **David Wilson Library** | Energy Priority: | 10 |
| Equipment Name: | **AHU 9 Lecture Theatre** | Avoidable Cost | £353 |
| Description: | **Data quality flag. Fan on while unoccupied. Fan status data mismatch.** | Associated Task ID(s): |  |
|  |  |  |  |
| Building: | **Space Park Ph 2** | Energy Priority: | 10 |
| Equipment Name: | **CHW Sec FCUs Loop** | Avoidable Cost | £334 |
| Description: | **Minimal load across loop.** | Associated Task ID(s): | 741 |
|  |  |  |  |
| Building: | **Space Park Ph 2** | Energy Priority: | 10 |
| Equipment Name: | **AHU No.2** | Avoidable Cost | £234 |
| Description: | **Excess heating and/or cooling. Leaking pre- heating coil valve. Negative temp diffe...** | Associated Task ID(s): | 878 |
|  |  |  |  |
| Building: | **David Wilson Library** | Energy Priority: | 10 |
| Equipment Name: | **Rad and Trench CT Circuit HW Secondary Loop** | Avoidable Cost | £229 |
| Description: | **Data quality flag. Diff pressure higher than setpoint. Flat sensor error. Minimal...** | Associated Task ID(s): |  |
|  |  |  |  |
| Building: | **PRF Building** | Energy Priority: | 10 |
| Equipment Name: | **Primary CHW Loop** | Avoidable Cost | £213 |
| Description: | **Low loop temp difference. Minimal load across loop. Out of range sensor error. Su...** | Associated Task ID(s): | 719 |
|  |  |  |  |
| Building: | **Space Park Ph 2** | Energy Priority: | 10 |
| Equipment Name: | **AHU No.1** | Avoidable Cost | £205 |
| Description: | **Excess heating and/or cooling. No response to heating demand. Simultaneous demand ...** | Associated Task ID(s): | 880 |
|  |  |  |  |
| Building: | **David Wilson Library** | Energy Priority: | 10 |
| Equipment Name: | **AHU 9 Lecture Theatre** | Avoidable Cost | £162 |
| Description: | **Data quality flag. Fan on while all dampers closed. Fan on while unoccupied. Fan ...** | Associated Task ID(s): |  |
|  |  |  |  |
| Building: | **Space Park Ph 2** | Energy Priority: | 10 |
| Equipment Name: | **AHU No.1** | Avoidable Cost | £135 |
| Description: | Economizer should be off. Heating on, economizer should be off. | Associated Task ID(s): | 879 |

**Energy Anomalies**

**Comfort Anomalies**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 1/1/02** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoin...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 1/03** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp lower than setpoint. Room temp setpoint above max...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 1/04** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoin...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 1/2/01** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoin...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 2/02** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoin...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 2/03** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp lower than setpoint. Room temp setpoint above max...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 3/01** | Associated Task ID(s): |  |
| Description: | **Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoin...** |  |  |
|  |  |  |  |
| Building: | **Henry Wellcome Building** | Comfort Priority: | 10 |
| Equipment Name: | **FCU 1/3/02** | Associated Task ID(s): |  |
| Description: | Data quality flag. Room air temp lower than setpoint. Room temp setpoint above max... |  |  |

**Maintenance Anomalies**

|  |  |  |  |
| --- | --- | --- | --- |
| Building: Equipment Name: Description: | David Wilson Library Heating Plant  Data quality flag. HW source(s) on, pumps off. Loop pumps off, flow status on. Pu... | Maintenance Priority: Associated Task ID(s): | 9 |
|  |  |  |  |
| Building: | **Astley Clarke Building** | Maintenance Priority: | 9 |
| Equipment Name: | **Heating Plant** | Associated Task ID(s): |  |
| Description: | **HW source(s) on, pumps off. Loop pumps off, flow status on.** |  |  |
|  |  |  |  |
| Building: | **CVRC Building** | Maintenance Priority: | 9 |
| Equipment Name: | **Heating Plant** | Associated Task ID(s): |  |
| Description: | **HW source(s) on, pumps off.** |  |  |
|  |  |  |  |
| Building: | **Teaching & Learning Centre** | Maintenance Priority: | 6 |
| Equipment Name: | **AHU 3 - Circ & Toilet Extract** | Associated Task ID(s): |  |
| Description: | **Leaking cooling coil valve. Leaking pre-heating coil valve. Negative temp differen...** |  |  |
|  |  |  |  |
| Building: | **CVRC Building** | Maintenance Priority: | 6 |
| Equipment Name: | **Boiler 2** | Associated Task ID(s): |  |
| Description: | **Boiler HW outlet temp lower than setpoint. Boiler status data mismatch.** |  |  |
|  |  |  |  |
| Building: | **Teaching & Learning Centre** | Maintenance Priority: | 6 |
| Equipment Name: | **AHU 3 - Circ & Toilet Extract** | Associated Task ID(s): |  |
| Description: | **Filter alarm (IAQ). Supply air static pressure lower than setpoint.** |  |  |
|  |  |  |  |
| Building: | **Teaching & Learning Centre** | Maintenance Priority: | 6 |
| Equipment Name: | **AHU 1 - Teaching** | Associated Task ID(s): |  |
| Description: | **Leaking pre-heating coil valve. Negative temp difference across heating coil. Nega...** |  |  |
|  |  |  |  |
| Building: | **Percy Gee Building** | Maintenance Priority: | 6 |
| Equipment Name: | **Academy 1 AHU 1** | Associated Task ID(s): |  |
| Description: | Leaking pre-heating coil valve. No supply temp reset. Room air temp higher than se... |  |  |

Total Realized Annual Savings: £8,029

Total Closed Tasks: 9

Date Created: **18/05/2023**

Building: **Henry Wellcome Building**

Equipment Name: **AHU-3**

Closed by: [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#796**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **27/09/2023**

Description: Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling.

Recommendations:

Actions: PB 18/5/23 Frost, heating & cooling coil valve operation has been checked and each operate correctly. Karl please assign the following new minimum outside temp value to prevent any "Negative Temp Difference" warnings. /Server 1/Plant Monitoring/Outside Air Temps/MinOat 27/09/23 KW / MT Replaced to Gglobal MinOat today and will be doing similar to a few other buildings, to basically point all equipment to monitor this sensor instead for better accuracy of temps being read across coils etc.

Date Created: **16/06/2023**

Building: **Hodgkin Building**

Equipment Name: **CT Circuit**

Closed by: [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#854**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **27/09/2023**

Description: Install VFDs on pumps.

Recommendations: Investigate.

Actions: KW/MT 27/0/23 - Mike confirmed today that this is not possible to do at this time. However, at a later date we may look to revisit this due to pump sets. KW has applied the appropriate EVAR to mask for now - NoFanVFDsPossible - Set to 1 if the client has indicated that it would not be possible to install VFDs on the fans (this will effectively turn off checks that suggest installing VFDs). Finally, I removed any projected savings as a result.

Date Created: **03/07/2023**

Building: **Space Park Ph 2**

Equipment Name: **GF FCU 0.17 5b**

Closed by: [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#882**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **22/09/2023**

Description: Room air temp higher than setpoint. Room temp setpoint below min. Stuck heating coil valve.

No cost calcs, missing: supply fan rated flow.

Recommendations: CB 03/07/23 Cb to check locally for actuator operation and local isolation.

Actions: CB 03/07/23 Room setpoint heating setpoint 21'C cooling setpoint 26'C The space setpoint that BA is currently following is the manual adjustment for building occupants. can this setpoint be removed from BA KW 22/09/23 - Setpoint removed as you requested Connor. NFA necessary.

Date Created: **04/07/2023**

Building: **David Wilson Library**

Equipment Name: **GF Z2 (PH2)CHB14(18)IT2**

Closed by: [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#883**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **22/09/2023**

Description: Room air temp higher than setpoint.

Recommendations: CB 04/07/23 As discussed this is controlled in bubble, Check with PB as the what the cooling setpoint is at. Discuss with Karl on call about changes that need to be made in BA to stop these errors coming through, 21'C heating SP 26'C cooling

Actions: KW 22/09/23 - Setpoint removed as you requested Connor. NFA necessary.

Date Created: **05/09/2023**

Building: **Henry Wellcome Building**

Equipment Name: **AHU-8**

Closed by: [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#950**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **05/09/2023**

Description: Data quality flag. Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling. Simultaneous coil operation.

Recommendations:

Actions: Cb 050923 Removed fix from cooling coil point, Now controlling as expected

Date Created: **13/09/2023**

Building: **David Wilson Library**

Equipment Name: **AHU 9 Lecture Theatre**

Closed by: [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#952**

Status: **Closed**

Annualized Savings: **£957**

Date Closed: **14/09/2023**

Description: Fan on while unoccupied. Fan status data mismatch. Occupancy data mismatch.

Recommendations: KW / MT 13/09/23 - Discussed today and suspect the AHU is in hand on the main control panel.

Further investigation required by MT. However, it is a difficult unit to get to.

Actions: Found Inverter in manual. It has now been put back into automatic control and running on demand from the local PIR.

Date Created: **13/09/2023**

Building: **David Wilson Library**

Equipment Name: **AHU 9 Lecture Theatre**

Closed by: [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#953**

Status: **Closed**

Annualized Savings: **£5,768**

Date Closed: **14/09/2023**

Description: Data quality flag. Fan on while all dampers closed. Fan on while unoccupied. Fan status data mismatch. Occupancy data mismatch.

Recommendations: KW / MT 13/09/23 - Slightly different analysis but all part of the same unit 09. Discussed today and suspect the AHU is in hand on the main control panel. Further investigation required by MT. However, it is a difficult unit to get to.

Actions: Found Inverter in manual. It has now been put back into automatic control and running on demand from the local PIR.

Date Created: **13/09/2023**

Building: **David Wilson Library**

Equipment Name: **AHU 7 South Side**

Closed by: [**gs404@leicester.ac.uk**](mailto:gs404@leicester.ac.uk)

Task ID: **#954**

Status: **Closed**

Annualized Savings: **£1,304**

Date Closed: **13/09/2023**

Description: Fan on while unoccupied. Fan status data mismatch.

Recommendations: KW / MT 13/09/23 - Discussed today and found that the unit was in hand. Gavin Street was able to return back to auto 12/09/23. NFA necessary.

Actions:

Date Created: **13/09/2023**

Building: **Nixon Court**

Equipment Name: **K Block Primary HWS Loop**

Closed by: [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#956**

Status: **Closed**

Annualized Savings: **£0**

Date Closed: **13/09/2023**

Description: Install VFDs on pumps. No variable speed pumps were detected on the hot water loop.

Installing variable frequency drives (VFDs) on the hot water pumps could have saved £10 in

electricity costs over the analysis period.

Recommendations: KW / MT 13/09/23 - Discussed today and due to existing pumps in place they have built in VSD's anyway. This BA project is just not necessary. As a result of simply not being possible to do anything I have applied the equipment variable to mask, NoPumpVFDsPossible - Set to 1 if the client has indicated that it would not be possible to install VFDs on the Pumps (this will effectively turn off checks that suggest installing VFDs). As a final action I have removed any projected avoidable cost from the task for reporting purposes.

Actions:

Total Annual Savings Opportunity: £78,019

Total Open Tasks: 138

Date Created:

Building: Equipment Name:

**26/08/2020**

**Henry Wellcome Building AHU-2**

Task ID: Status: Annualized Cost:

**#5**

**In Process**

**£0**

Task Assigned To:

Description: Leaking pre-heating coil valve. Possible simultaneous or excess heating and cooling.

Recommendations: Requires new analogue card IF the re circulation damper is put back into service.

Actions: Fully close heater battery valve, cooling coil valve and frost coil valve Leave for a period and check temperatures of pipework to batteries to highlight any obvious issues with the integrity of the valves. No issue found. Check operation of recirculation and supply damper, recirculation damper non responsive to requested positional signal and remains in an open position. Check AC supply voltage, all okay, check requested positional signal, not present. Check output from card 81/89, no voltage. No alternative outputs spare on card to assign output to. AHU 2 recirculation damper has been closed by temporary adjustment of the direction of rotation switch, this is in accordance with the Healthier atmospheres initiative. Requires new card if when the recirculation damper is put back into operation. Task is on hold. 22/09/2022 - KW / MT

/ CP - Latest review together. This one is still on hold for now. 08/02/2023 - KW / MT - We know there is an issue with intermittent data. However, we need to box off some older tasks. Let's agree to get someone to check out all valves again and the recirc damper for this AHU - start a fresh. If nothing is found then Karl will help to alleviate with variables to ignore somewhat as nuisance.

Date Created:

Building: Equipment Name: Task Assigned To:

**24/08/2022**

**PRF Building VAV Room G53**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#597**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag.

Recommendations: Joint call review 24/08/2022 KW / MK. After our call last month with Mike and Paul we worked on trying to fix lot's of the data quality issues. Paul was tasked to retime the outstation / cold start the controller for another equipment / points for David Wilson and it appears to have worked. We are now only seeing data quality for PRF some VAVs.

Actions: Can you possibly do the same Paul here? PB 21/11/22 Mike can we try to arrange a time/date to do this? 20/04/2023 - KW / MT - Likely still needs attention when possible. We talk regularly about the data quality issue, some buildings experience good then bad and we struggle to pinpoint. As we update this task today on the whole it's better. That said PRF is the one that always remains. KW / MT - 02/08/2023 - Still an issue this data quality. We have tried so much already. Not a lot we can do if lot's of equipment/points are being monitored by Sigma Interface Controllers (busy network)

Date Created:

Building: Equipment Name: Task Assigned To:

**22/09/2022**

**David Wilson Library 1F Zone 2 CHB 88 IC 10**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#601**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag.

Recommendations: Unfortunately the data quality flags have raised their ugly heads again. We are going to try testing restarting the outstation for this one equipment. It may help some others on the same network.

Actions: Mike to do when possible. MT & KW to then check together the results a day or too later...

23/03/2023 - KW / PB / MT Checked today and the data quality issue isn't a problem. But we know it will go intermittent again. One point giving us the trouble is as follows. 01/Server 1/Sigma Interface/Controllers/171 - DWL Grd Flr Riser/0517 - Beam Enable Paul will try some local testing when possible. PB 24/04/23 Some test global objects and some additional logging has been set up in DWL controllers 163 and 171 for review later in the week. KW / MT - 02/08/2023 - Still an issue this data quality. We have tried so much already. Not a lot we can do if lot's of equipment/points are being monitored by Sigma Interface Controllers (busy network)

Date Created:

Building: Equipment Name: Task Assigned To:

**16/12/2022**

**Space Park Ph 1 CHW Primary Loop**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#634**

Status: **In Process**

Annualized Cost: **£2,354**

Description: Flat sensor error. Low loop temp difference. Return temp lower than setpoint. Setpoint was zero. CB 16/12/22 Checked through software. Demand is driven by either the External FCU Clg Dmd or AHU2and3 schedule being on. The reason the return is below the setpoint of 13'C is because the AHU schedules are on. Software routines will need to be changed to incorporate a different kid of demand. Eg a valve output or OAT

Recommendations: Software routines will need to be changed to incorporate a different kid of demand. Eg a valve output or OAT.

Actions: KW / MT 09/05/23 - Mike to speak to connor when possible. KW / MT - 02/08/2023 - Low Loop and flat sensor are no more. Just the return temp lower than setpoint. Return around 7-9 C but the setpoint 13 C.

Date Created:

Building: Equipment Name: Task Assigned To:

**09/01/2023**

**Hodgkin Building AHU 19 CP3 4th Floor**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#638**

Status: **In Process**

Annualized Cost: **£2,527**

Description: Flat sensor error. Leaking pre-heating coil valve.

Recommendations: CB 09/01/23 Go to AHU locally and check calibration and location of the supply temperature sensor, replace or recalibrate as needed. If sensor is ok then check to see if valve is passing.

Actions: CB 09/01/23 Forced valve open 100 percent to see if temperature rose any more on the supply Temp sensor, Temp rising considerably. KW / MT 09/05/23 - The Supply temp does still seem high at around 25 C. Mike to check with Connor on next steps to take with this one. KW / PB / MT - 09/08/2023 - Hard wired confirmation of passing valve for the pre heat. Mike to raise internal ticket.

Date Created:

Building: Equipment Name: Task Assigned To:

**09/01/2023**

**Hodgkin Building AHU 33 CP1 6th Floor**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#643**

Status: **In Process**

Annualized Cost: **£779**

Description: Heat recovery cooling both sides. Unused free cooling available.

Recommendations: CB 09/01/23 Check operation of Frost valve ( this is controlled by 230V Stat not of BMS) This seems to have failed open. Investigate this as the actuator or valve has failed

Actions: Checked operation of the Heat reclaim program. The program itself seems to be working fine, however with the suspected fault of the Frost Valve this cannot be confirmed until this has been fixed. 09/05/23 MT / KW - Checked remotely on joint call and again seems a problem with the Frost valve. Appears still to be passing. 31 C reporting which is way higher than what it should be given the current 15 C outside air temp. As we say it's either passing or sensor is on it's way out. KW / PB / MT - 09/08/2023 - Hard wired confirmation of passing valve for the pre heat.

Mike to raise internal ticket.

Date Created:

Building: Equipment Name: Task Assigned To:

**02/02/2023**

**George Davies Building AHU No.7 VAV 3-04**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#653**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp higher than setpoint. Room temp setpoint below min. Setpoint was zero. Slow room air temp response to conditioning. Zone occupied, AHU off. Zone on while unoccupied.

Recommendations: CB 02/02/23 Please pass to Omar Issue with KNX calculated Setpoint Setpoint is currently coming through as 0 for all rooms. KW / PB / MT 17/05/23 Omar due in next week so Mike will catch up with him if possible. KW / PB / MT - 09/08/2023 - Mike to check again with Omar.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**02/02/2023**

**George Davies Building Room 4.16 CHB**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#654**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp higher than setpoint. Room temp setpoint below min.

Recommendations: CB 02/02/23 Please pass to Omar KNX not transferring calculated setpoint to the the actual setpoint of the room.

Actions: 17/05/23 Omar due in next week so Mike will catch up with him if possible. KW / PB / MT - 09/08/2023 - Mike to check again with Omar.

Date Created:

Building: Equipment Name: Task Assigned To:

**20/02/2023**

**CVRC Building**

**Server Room 2.15 FCU 2** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#683**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min. No cost calcs, missing: supply fan kW and flow.

Recommendations: The FCU cooling valves appear to be fully open as the room temperature is 10 degrees as measured by the FCU intake temp. Valves are inaccesable due to obstructive condensate trays. Have mailed Mike Triggs for support

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**20/02/2023**

**CVRC Building AHU No.3 Office**

[**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#691**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Pressure sensor drift.

Recommendations: Reduce extract fan speed, corresponding change in measured pressure. EcoStruxure trend chart examined, there is zero pressure when the AHU is off. Unclear as to why BA is identifying flat sensor error.

Actions: Forwarded to Karl for further investigation KW - All i can say is that we are seeing flat lined values throughout for this unit, for example - the ExtStaticPress reports a constant -327. Could it even be network related.

Date Created:

Building: Equipment Name: Task Assigned To:

**16/03/2023**

**Space Park Ph 2 Heating Plant** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#705**

Status: **In Process**

Annualized Cost: **£1,049**

Description: Dedicated pump(s) on, boiler(s) off. Excessive boiler staging changes. HW source(s) on, pumps off.

Recommendations: CB 160323 This may need re mapping. Boiler 301 is the ASHP which has 2 pumps for duty and standby P101a and P101b (ASHP is currently in fault) Boiler 101 has pump P102 Boiler 102 has pump P103 P108a and P108b are the primary pumps for the whole circuit

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**16/03/2023**

**Space Park Ph 2**

**CHW Sec AHU Process** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#706**

Status: **In Process**

Annualized Cost: **£0**

Description: Diff pressure sensor error. Minimal load across loop. No cost calcs, missing: pump kW and flow.

Recommendations: CB 160323 AHU Process CHW does not have Differential pressure sensor so this can be removed. Minimal load across loops is being investigated using HM to confirm EBO readings.

Actions: 22/03/2023 KW - Un-assigned the diff pressure point BA side if not active or not available. Left in process until the minimal load has been investigated.

Date Created:

Building: Equipment Name: Task Assigned To:

**17/03/2023**

**Space Park Ph 2**

**GF FCU 0.29 11 Storage** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#708**

Status: **In Process**

Annualized Cost: **£0**

Description: Setpoint was zero.

Recommendations: CB 170323 Setpoint is a null value when the room is unoccupied. When occupied the setpoint reverts to 21'C heating 26'C cooling There isnt an 'Active Setpoint' as such

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**17/03/2023**

**Space Park Ph 2**

**GF FCU 0.28 10 OP Rad & Haz**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#709**

Status: **In Process**

Annualized Cost: **£0**

Description: Setpoint was zero.

Recommendations: CB 170323 Setpoint is a null value when the room is unoccupied. When occupied the setpoint reverts to 21'C heating 26'C cooling There isnt an 'Active Setpoint' as such

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**17/03/2023**

**Space Park Ph 2**

**GF FCU 0.26 16a Space Res Lab 3** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#711**

Status: **In Process**

Annualized Cost: **£0**

Description: Setpoint was zero.

Recommendations: CB 170323 Setpoint is a null value when the room is unoccupied. When occupied the setpoint reverts to 21'C heating 26'C cooling There isnt an 'Active Setpoint' as such

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**21/03/2023**

**PRF Building VAV Room F30**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#713**

Status: **In Process**

Annualized Cost: **£0**

Description: PB 21/03/23 Plant review revealed a room pressure alarm and subsequent review of the graphic also revealed pressure anomalies in rooms F26, F27 and F30.

Recommendations: PB 21/03/23 Review logging and discuss with MT to decide if VAV box setpoints should be adjusted.

Actions: PB 24/04/23 Further review of historical data has been carried out as follows:- F26 Should be

+15Pa F26 was - +18Pa in 2014 - +7Pa in 2019 - -10Pa in 2020 - -10Pa in 2023 F27 Should be neutral F27 was - -4Pa in 2014 - -16Pa in 2019 - -16Pa in 2020 - -20Pa in 2023 F30 Should be neutral F30 was - -3Pa in 2014 - -10Pa in 2019 - -15Pa in 2020 - -20Pa in 2023 I will discuss these results further with MT.

Date Created:

Building: Equipment Name: Task Assigned To:

**31/03/2023**

**Space Park Ph 2 Boiler B301** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#739**

Status: **In Process**

Annualized Cost: **£0**

Description: Boiler HW inlet temp lower than setpoint. Boiler status data mismatch.

Recommendations: CB 310323 ASHP is set locally to 48'C so will never reach SP of 50'C, can this be changed to 48'c Status Mismatch looks like a comms problem as only dropped out momentarily.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**31/03/2023**

**Space Park Ph 2 CHW Sec FCUs Loop**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#741**

Status: **In Process**

Annualized Cost: **£3,211**

Description: Diff pressure setpt constant.

Recommendations: CB310323 Setpoint is a constant value with no program associated with its calculation. Discuss with MT about the possibilty of adding a compensated setpoint based on Delta T of the Flow and return on this leg. Similar to what we have done on phase one VT

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**21/04/2023**

**Space Park Ph 1**

**NR - GF VAV 0.01 Pop Up Lab**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#743**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Room air CO2 above max (IAQ).

CB 210423 Checked room control, found controller to be offline. Will update task on 250423 CC and Dh returned controller to online condition but found that the CO2 reading was still high. CC provided quote to replace sensor. 09/06/23 CB replaced sensor and found the values to be higher than expected but dropping. MT aware and will revist monday if the problem persists.

Date Created:

Building: Equipment Name: Task Assigned To:

**21/04/2023**

**Space Park Ph 1 Heating Plant** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#744**

Status: **In Process**

Annualized Cost: **£0**

Description: Pump status data mismatch.

Recommendations: CB 210423 Add the enable points to graph /Space Park Ph 1 North Plantroom/IO Bus/Mod17 - DO-FA-12-1/VT Heating Pump No1 Enable /Space Park Ph 1 North Plantroom/IO Bus/Mod17 - DO-FA-12-1/VT Heating Pump No2 Enable

Actions: CB21/04/23 Discussed with KW about the how the graphs read and how they should read. KW has now share the speed command across both pumps and removed the speed feedback as this does not exist. KW to add enables to algorithm

Date Created:

Building: Equipment Name: Task Assigned To:

**21/04/2023**

**Space Park Ph 1**

**SR - SF VAV 2.05 NCEO\_EOS**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#745**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air CO2 above max (IAQ). Room air temp lower than setpoint. Room temp setpoint above max.

Recommendations: CB 210423 Change the MAX t the CO2 Setpoint which is 900ppm The avg CO2 should be compared to SetPoint

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**24/04/2023**

**Teaching & Learning Centre AHU 09 - 01 Social Sp** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#748**

Status: **In Process**

Annualized Cost: **£0**

Description: No supply temp reset. Possible simultaneous or excess heating and cooling. Supply temp higher and lower than setpoint. Configuration flag. No cost calcs, missing: supply fan kW and flow.

Recommendations: CB 24/04/23 KW to confirm what supply setpoint value is. CB to visit locally and check valves, and confirm Kw values of fans and check flow rate.

Actions: KW 14/07/23 AhuSaTmpSpa reports a constant 21 C

Date Created:

Building: Equipment Name: Task Assigned To:

**24/04/2023**

**Teaching & Learning Centre DX FF - 1.Z08A Proj Rm**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#751**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min.

Recommendations: CB 24/04/23 Can MT confirm with KW about a suitable minimum temperature for this room Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**24/04/2023**

**Teaching & Learning Centre PHEX 2 - MCC01 Grd Flr**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#752**

Status: **In Process**

Annualized Cost: **£0**

Description: Unexpected temperature difference.

Recommendations: CB 24/04/24 need to run through with KW about BA terminology in regards to inlet and outlet temperatures to ascertain whether or not there is a control issue. These are packaged plant and not controlled by SE so would need contractor to investigated if any issues are found.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**24/04/2023**

**Teaching & Learning Centre PHEX 1 - MCC01 Grd Flr**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#753**

Status: **In Process**

Annualized Cost: **£0**

Description: Unexpected temperature difference.

Recommendations: CB 24/04/24 need to run through with KW about BA terminology in regards to inlet and outlet temperatures to ascertain whether or not there is a control issue. These are packaged plant and not controlled by SE so would need contractor to investigated if any issues are found.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**24/04/2023**

**PRF Building Boiler Gas-Fired 2**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#754**

Status: **In Process**

Annualized Cost: **£0**

Description: Boiler status data mismatch.

Recommendations: PB 24/03/23 Investigate operation of boiler enable and associated pump.

Actions: PB 24/03/23 The pump and boiler enable has been checked remotely and operates correctly. However when the boiler is disabled the pump overruns for 10 minutes. This may be the cause of the mismatch or alternatively it may be, because the flow switch object is inversed due to be Sigma. Karl can you have a look at this please and check for an inversed signal or add a timer to cover the 10 minute overrun.

Date Created:

Building: Equipment Name: Task Assigned To:

**15/05/2023**

**Teaching & Learning Centre Social TV Room FCU** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#778**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min.

Recommendations: CB 15/05/23 Upon investigation found local fan coil controller set at 17 degrees which is cooling the space below 18. have changed heating set point to 21 and cooling to 26. This display isnt locked so suggested to get this locked by IRS

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**16/05/2023**

**Teaching & Learning Centre AHU 09 - 02 Social Sp** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#784**

Status: **In Process**

Annualized Cost: **£0**

Description: Filter alarm (IAQ).

Recommendations: CB 160523 Checked locally and filters are dirty MT to get IRS to attend.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**16/05/2023**

**Henry Wellcome Building AHU-4**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#785**

Status: **In Process**

Annualized Cost: **£8,827**

Description: Supply temp lower than setpoint.

Recommendations: PB 16/5/23 Remote testing of the AHU has revealed that the heating coil valve is not operating and the frost setpoint has been raised to 18'C (by others) presumably to compensate for the faulty valve actuator. The valve actuator has been located and tested and operates correctly. However the LTHW flow is isolated. Possibly due to a leak from the valve union or the bottom pipe of the heating coil. I have left the frost coil setpoint at manual 17'C to prevent the cooling valve from modulating open due to heat gain across the fan. Mike can you raise a ticket if required please for this to be checked to see if the isolator valve can be opened. KW / MT / PB 17/05/23 - Just an FYI this is in hand as confirmed by Mike. With RM to investigate further.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**18/05/2023**

**Henry Wellcome Building AHU-7**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#797**

Status: **In Process**

Annualized Cost: **£0**

Description: Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling.

Recommendations:

Actions: PB 18/5/23 Frost, heating & cooling coil valve operation has been checked and each operate correctly. Karl please assign the following new minimum outside temp value to prevent any "Negative Temp Difference" warnings. /Server 1/Plant Monitoring/Outside Air Temps/MinOat

Date Created:

Building: Equipment Name: Task Assigned To:

**18/05/2023**

**Henry Wellcome Building AHU-9**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#798**

Status: **In Process**

Annualized Cost: **£0**

Description: Heating and cooling cycling. No supply temp reset. Possible simultaneous or excess heating and cooling.

Recommendations:

Actions: PB 18/5/23 Frost, heating & cooling coil valve operation has been checked and each operate correctly. Karl please assign the following new minimum outside temp value to prevent any "Negative Temp Difference" warnings. /Server 1/Plant Monitoring/Outside Air Temps/MinOat

Date Created:

Building: Equipment Name: Task Assigned To:

**19/05/2023**

**Space Park Ph 1**

**Boiler HW Common Loop** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#802**

Status: **In Process**

Annualized Cost: **£0**

Description: Negative temperature difference across loop. No supply temp reset. Return temp below min.

Supply temp lower than setpoint.

Recommendations: CB 19/05/23 Boiler flow Setpoint is set to 50'C so return setpoint will never be above 50'C Setpoint change to 43-45'C Negative temperature difference should not be an issue, suggest using the flow temp as the highest out of these 2 points. /Space Park Ph 1 North Plantroom/IO Bus/Mod3 - UI-16-1/ASHP Common Flow Temperature /Space Park Ph 1 North Plantroom/IO Bus/Mod3 - UI-16-1/Boiler Common Flow Temperature No need for supply temp reset as the output from the ASHP is constant which is the main source of heat

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**19/05/2023**

**Space Park Ph 1**

**NR - GF VAV 0.33 Atrium**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#804**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp lower than setpoint. Room temp setpoint above max.

Recommendations: CB 19/05/23 This needs the new changes going in place Re the 21'C heating SP and 26'C cooling

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**19/05/2023**

**Space Park Ph 2 Chiller C101** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#806**

Status: **In Process**

Annualized Cost: **£0**

Description: Chiller status data mismatch.

Recommendations: CB 19/05/23 Chiller1Cmd (ChillerRun) Chiller1Flow (ChillerStatus) Chiller Run is the cmd signal which stays on when required. this is not a status. Chiller compressors do not run all the time whilst chiller is cmd on. this can be ignored as this is the internal chiller controls

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/05/2023**

**George Davies Building Atrium Underfloor Loop** [**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#813**

Status: **In Process**

Annualized Cost: **£0**

Description: Supply temp higher than setpoint.

Recommendations: PB 23/5/23 Investigate pumps not running in auto due to ongoing BACnet issues.

Actions: PB 23/5/23 Investigated with MT. It appears that a fault has occurred that has put a voltage onto the RS485 comms network that has damaged all 13 pump BACnet comms modules, and the AS RS485 port. The pump BACnet modules are presenting varying different characteristics such as a short circuit, constant 5vdc or 0vdc. There are also visible signs of IC damage due to overheating on some of the pump comms modules. MT is to order a new module for test purposes to ascertain if it is possible to repair them.

Date Created:

Building: Equipment Name: Task Assigned To:

**25/05/2023**

**Physics Building Frenger System Circuit** [**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#824**

Status: **In Process**

Annualized Cost: **£0**

Description: Supply temp lower than setpoint.

Recommendations: PB 25/5/23 Investigate operation of heating controls. PB 25/5/23 It is being held off by the high limit - local investigation required.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building AHU 3**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#829**

Status: **In Process**

Annualized Cost: **£0**

Description: Negative temp difference across pre-heating coil. Pre-heat coil discharge temp lower than setpoint. Room air temp lower than setpoint. Room temp below min. Stuck pre-heating coil valve. Supply temp lower than setpoint.

Recommendations: CB 26/05/23 When checks were completed on the front end there was no issue with setpoint. Will check locally to see if valve actuators are moving and heat is going through the battery. CB to check locally

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building AHU 1**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#830**

Status: **In Process**

Annualized Cost: **£0**

Description: Negative temp difference across pre-heating coil. Stuck pre-heating coil valve. Supply temp lower than setpoint.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building Lab 2C** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#831**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp lower than setpoint. Room temp below min.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Davies Building AHU No. 2**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#826**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan speed constant. Fan status data mismatch.

Recommendations: PB 26/5/23 The fans is running at fixed speed due to a faulty VAV signal. I will ask MT what the current state of play is.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building Lab 2A** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#835**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp lower than setpoint. Room temp below min.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building Lab S23 DNA Lab** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#836**

Status: **In Process**

Annualized Cost: **£0**

Description: Room air temp lower than setpoint. Room temp below min.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. When chewcked room temp was higher due to OAT being high today /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer

\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building AHU 2**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#837**

Status: **In Process**

Annualized Cost: **£0**

Description: Supply temp lower than setpoint.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. When chewcked room temp was higher due to OAT being high today /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer

\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Porter Building VT Circuit** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#839**

Status: **In Process**

Annualized Cost: **£919**

Description: Supply temp lower than setpoint.

Recommendations: CB 26 05 23 There is a summer winter mode that switches the LTHW PHX off so there is no hot water to the building. Can this alarm/diagnostic be inhibited when the summer winter mode is set to summer. When chewcked room temp was higher due to OAT being high today /Server 1/Sigma Interface/Controllers/53 - Chem Teaching Basement Boilerhouse-2/0101 - Summer

\Winter

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**06/06/2023**

**David Wilson Library Gen Toilet Fan** [**gdw11@leicester.ac.uk**](mailto:gdw11@leicester.ac.uk)

Task ID: **#840**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan status data mismatch.

Recommendations: investigate fan flow status against fan start status. Investigate logs for period flagged. Possible faulty fan

Actions: Toilet Ext Airflow fail when Gen Toilet Extract stopped. Logs do not appear to be available. New logs created. Will review once data is available.

Date Created:

Building: Equipment Name: Task Assigned To:

**09/06/2023**

**Space Park Ph 1 CHW Primary Loop**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#841**

Status: **In Process**

Annualized Cost: **£2,422**

Description: Flat sensor error. Low loop temp difference. Return temp lower than setpoint. Setpoint was zero.

Recommendations: CB 09/06/23 Visit site with PB to ascertain configuration of pipework before any changes are made to software routines.

Actions: Visited site with PB, pipework is now understood and idea for solution has been thought up. speak with MT to decide what he wants to do.

Date Created:

Building: Equipment Name: Task Assigned To:

**09/06/2023**

**Space Park Ph 1 AHU No.1**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#842**

Status: **In Process**

Annualized Cost: **£0**

Description: Pressure sensor drift.

Recommendations: CB 09/06/23 Can there be a 3 Pa tolerance on the zero value when the fans are turned off?

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**09/06/2023**

**Space Park Ph 1**

**AHU No.2 - Gen Off & Mtg Rms** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#843**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Leaking pre-heating coil valve. Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling.

Recommendations: CB 09/06/23 This is being caused by the OAT and Frost sensor not being the same value. OAT seems to be higher (probably due to positioning) Not sure how this can rectified. Discuss with MT and KW for resolution

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**09/06/2023**

**Space Park Ph 1 AHU No.1**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#844**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling. Supply temp lower than setpoint.

Recommendations: CB 09/06/23 This is being caused by the OAT and Frost sensor not being the same value. OAT seems to be higher (probably due to positioning) Not sure how this can rectified. Discuss with MT and KW for resolution

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**09/06/2023**

**Space Park Ph 1**

**NR - FF VAV 1.41 Collab WS**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#845**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp setpoint above max.

Recommendations: CB 09/06/23 Can we have a look at the setpoint mapping again please Karl there seems to be a few that are bringing up this error. May just need to max SP increasing

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre AHU 5 - SF Small Lec The** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#846**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error.

Recommendations: CB 12/06/23 Karl could you check the data being receive from these 2 points please. Checked both trends and they are both changing value very frequently. Extract RH is more constant but still change by a few percent daily.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre ODH/GF/03**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#847**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Out of range sensor error.

Recommendations: CB 12/06/23 Sensor fault, Raise FQ for replacement sensor, use site spare if available Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre Chiller ACC/01** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#849**

Status: **In Process**

Annualized Cost: **£0**

Description: Chiller status data mismatch. Out of range sensor error.

Recommendations: CB 12/06/23 Karl can we chat about this one too, Struggling to find the point that its following Actions: KW 31/07/23 - Sure. Best when you are on site giving me a call to discuss this and one or two

others that are in process.

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre Chiller ACC/02** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#850**

Status: **In Process**

Annualized Cost: **£0**

Description: Out of range sensor error.

Recommendations: CB 12/06/23 Karl can we chat about this one too, Struggling to find the point that its following Actions: KW 31/07/23 - Sure. Best when you are on site giving me a call to discuss this and one or two

others that are in process. Point paths FYI are, 01/Server 1/Servers/Freemen's Common - T&LC - MCC02 (2nd Floor)/BACnet Interface/MSTP Network/Chiller No.2/Application/ENTERING CHILLED LIQ TEMP 01/Server 1/Servers/Freemen's Common - T&LC - MCC02 (2nd Floor)/BACnet Interface/MSTP Network/Chiller No.2/Application/LEAVING CHILLED LIQ TEMP

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre CHW Pri Loop** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#851**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Out of range sensor error.

Recommendations: CB 12/06/23 Cb to check online status of both heat meters on site. Karl can we tie up on this one too

Actions: KW 31/07/23 - Sure. Best when you are on site giving me a call to discuss this and one or two others that are in process.

Date Created:

Building: Equipment Name: Task Assigned To:

**12/06/2023**

**Teaching & Learning Centre DX Comms Rm AC** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#852**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error. Out of range sensor error.

Recommendations: CB 12/06/23 This diagnostic seems incorrect can we look into this Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**22/06/2023**

**Hodgkin Building Buffer Tank Loop** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#856**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag. Install VFDs on pumps. Setpoint was zero. Supply temp higher and lower than setpoint. No cost calcs, missing: pump kW and flow.

Recommendations: The Sigma points highlighted by the issue raised by BA are suspected of being obslete legs in the chilled water system. Investigation to confirm and then request to delete the Sigma points. Confirmed, mail sent, please action mail.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/06/2023**

**PRF Building VAV Room F39**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#875**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag. Flat sensor error.

Recommendations: PB 23/6/23 Investigate pressure sensor readings

Actions: PB 23/6/23 The sensor was reading a default value of 20 for at least 20 days but has been reading correctly for the last 25 days. I will leave this in process with a view to discussing with MT and reviewing again next month.

Date Created:

Building: Equipment Name: Task Assigned To:

**27/06/2023**

**David Wilson Library AHU 4 North Side** [**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#876**

Status: **In Process**

Annualized Cost: **£196**

Description: Fan on while all dampers closed. Fan on while unoccupied. Fan status data mismatch.

Recommendations: PB 27/6/23 Local investigation has revealed that the pressure switch pitot connection is broken and the switch does not always change state when it should. A new DPS and pitot is required to be fitted. I will advise MT via the monthly report.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**03/07/2023**

**Space Park Ph 2 AHU No.2**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#878**

Status: **In Process**

Annualized Cost: **£2,409**

Description: Excess heating and/or cooling. Leaking pre-heating coil valve. Negative temp difference across pre-heating coil. Positive temp difference across cooling coil. Stuck heating coil valve.

Recommendations:

Actions: CB 03/07/23 Pre heating coil Tested frost coil, When frost coil is closed there was a 0.0'C - 0.2'C difference from inlet to off frost temp. When frost coil was opened there was a 6-7'C rise over the coil. When valve was closed the temperature return to 0'C Unable to replicate the issue BA has flagged, possible fault could the location of the sensors and solar gain factor. Cooling coil The pickup between the off recovery and off coiling was 1'C which is expected across that type of Fan. When the recovery was closed there was a 2.5'C across the fan/cooling coil. The coiling coil was provide a 6'C drop in temperature across coil. Heat recovery When Heat recovery was in 100% recovery there was a 4 degree pick up that was acceptable. Need to review this with MT and KW to check the tolerances of this diagnostic

Date Created:

Building: Equipment Name: Task Assigned To:

**03/07/2023**

**Space Park Ph 2 AHU No.1**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#879**

Status: **In Process**

Annualized Cost: **£58**

Description: Recommendations:

Actions:

Economizer should be off. Heating on, economizer should be off.

Cb 03/7/23 Checked control strategy and IO bus related to the damper positions and commands. All 3 dampers have to be open before the supply fan is allowed to start and this is presumed to be a hardwired interlock. It is difficult to test this live as the AHU is supply a lab environment so reluctant to turn fans off. Judging by the software it seems that this diagnostic will need adjusting as there is an analog out to changed damper position they are either open or closed.

Date Created:

Building: Equipment Name: Task Assigned To:

**03/07/2023**

**Space Park Ph 2 AHU No.1**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#880**

Status: **In Process**

Annualized Cost: **£803**

Description: Excess heating and/or cooling. No response to heating demand. Simultaneous demand for heating and cooling. Supply temp lower than setpoint.

Recommendations:

Actions: CB 03/07/23 Checked Strategy on the AHU. Simultaneous heating and cooling will occur on this AHU as it is humidity controlled so this can be ignored. Heating tested heating coil and this found to be adding 7-8'C over the test period. (off coiling temp sensor looks to be located close to heating coil and changes considerably when the heating coil is opened.) Supply Air Low temp. The cooling setpoint is the temp that the mechanical will control to, however due to the nature of the space that is being controlled, the cooling will be enabled when the humidity needs to be lowered. The low limit is set to 13'C so it shouldn't go below this supply temp This needs to be reviewed by MT and KW to decide whether to have these ignored.

Date Created:

Building: Equipment Name: Task Assigned To:

**03/07/2023**

**Space Park Ph 2 AHU No.3**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#881**

Status: **In Process**

Annualized Cost: **£1,514**

Description: Recommendations:

Actions:

Fan on while unoccupied. Filter alarm (IAQ).

CB 03/07/23 Filter alarm not present at time of testing and cannot replicate issue. Fans on whilst unoccupied; The fan is being brought on by the night cooling program. Night cooling schedule is 12am-4am and some internal external conditions. Can BA track this schedule as well as the main occupancy schedule. path is /Space Park Ph 2 MCP02-1 1st Floor Plantroom/Space Park Phase 2/Misc/Schedules/NightCooling

Date Created:

Building: Equipment Name: Task Assigned To:

**04/07/2023**

**David Wilson Library AHU 3 South Side** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#884**

Status: **In Process**

Annualized Cost: **£0**

Description: Leaking pre-heating coil valve. Negative temp difference across pre-heating coil. Supply temp lower than setpoint.

Recommendations:

Actions: CB 04/07/23 Supply air below setpoint Setpoint is 19 on sigma, BA needs to change the setpoint from 21 to 19. Leaking pre heating coil Looking at the graphs it seems that this fault is intermittent. Cannot replicate fault. From Start of May to end of September the heating is held off in summer mode and there is no heat going to the heating battery of this AHU. This fault is likely being caused by sensor accuracy difference between the sensors and location of the sensors. Can this diagnostic be ignored when the plant is is summer mode Negative temp difference accross heating coil. This is due to sensor difference and differing locations, solar gain etc.

Date Created:

Building: Equipment Name: Task Assigned To:

**04/07/2023**

**David Wilson Library AHU 3 South Side** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#885**

Status: **In Process**

Annualized Cost: **£0**

Description: Possible simultaneous or excess heating and cooling.

Recommendations: CB 04/07/23 Simultaneous heating a cooling may be taking place as this is a humidity controlling AHU Remove this diagnostic error please

Actions: 31/07/2023 - Have we got a point that indicates when in such a status - like a Dehumidification status? If that came on then the check for possible simultaneous is ignored.

Date Created:

Building: Equipment Name: Task Assigned To:

**04/07/2023**

**David Wilson Library AHU 8 North Side** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#886**

Status: **In Process**

Annualized Cost: **£16,933**

Description: Negative temp difference across pre-heating coil. -. Possible simultaneous or excess heating and cooling. Supply temp lower than setpoint.

Recommendations: CB 04/07/23 Supply temp lower than setpoint. Can this diagnostic be ignored when the building is in summer mode. This is between the start of May to the end of September. There is no heat avaiable form the LTHW plant. Negative temp difference accross coil This is likely to be due to sensor positioning and inaccuracy from the readings Simultaneous cooling and heating Thhis is due to the AHU being humidity controlled

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**04/07/2023**

**David Wilson Library AHU 3 South Side** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#887**

Status: **In Process**

Annualized Cost: **£0**

Description: Flat sensor error.

Recommendations: CB 040723 Quote issue for new sensor Actions:

Date Created:

Building:

Equipment Name: Task Assigned To:

**07/07/2023**

**Percy Gee Building AHU 1**

[**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#890**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Supply temp higher than setpoint.

CB 07/07/23 Checked operation of AHU, When checked the Setpoint was 26 and the supply temp was 14. This is due the there being now heat available as the Heat pump is in Cooling mode. Suspect valve is also passing will check locally.

Date Created:

Building: Equipment Name: Task Assigned To:

**07/07/2023**

**Astley Clarke Building DHWS Loop** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#891**

Status: **In Process**

Annualized Cost: **£0**

Description: Low supply temp. Low tank temp (risk of bacteria). Pump status data mismatch. Supply temp higher and lower than setpoint.

Recommendations: Investigate low supply temperature and confirm pump status.

Actions: 07/07/23 - return temperature for circuit is being used as per information on graphic due to flow temperature sensor being a strap-on sensor - setpoint is set to 57C and flow temperature is at 57C, return is currently 60C and graphic mentions ensure return is around 60C. Primary, destrat and secondary Pumps are currently running and flow switch matches to pump status.

Investigation Complete. Can this be closed down along with any other diagnostic referencing this issue?

Date Created:

Building: Equipment Name: Task Assigned To:

**07/07/2023**

**Astley Clarke Building Lecture Theatre Supply AHU** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#892**

Status: **In Process**

Annualized Cost: **£0**

Description: No supply temp reset. Room air temp lower than setpoint. Supply temp lower than setpoint. No cost calcs, missing: rated flow.

Recommendations: investigate the issues on description and report results

Actions: 07/07/23 - CC - supply temp reset exists on relationship between space temp and space setpoint this ranges from 16 to 26C current room setpoint is 21C and current supply setpoint is 16C due to hot weather. No cooling available therefore not reached setpoint In regards to room air temp below setpoint, unable to replicate this fault due to weather conditions and due to diagnostic. Will liase with MT to get flow rate from commissioning documentation for update.

Date Created:

Building: Equipment Name: Task Assigned To:

**10/07/2023**

**Percy Gee Building Academy 2 AHU** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#895**

Status: **In Process**

Annualized Cost: **£0**

Description: HR exhaust inlet temp higher than setpoint.

Recommendations: CB 10/07/23 Need to check operation of DX unit, currently in fault. IRS?

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**10/07/2023**

**Percy Gee Building AHU 5**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#896**

Status: **In Process**

Annualized Cost: **£0**

Description: Leaking pre-heating coil valve. Negative temp difference across pre-heating coil. Stuck pre- heating coil valve. Supply temp lower than setpoint.

Recommendations: CB100723 Heating coil opens and closes when when commandded and heat is seen to be gained over the coil. LTHW says it is held off however there still seems to be heating enbabled in this building. KW could you add some higher tolerance for negative heat differential across coil as this isn't the case, its just differing temperature sensors in the AHU and the OAT which is positioned in a different area

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**11/07/2023**

**Percy Gee Building Union Diner AHU** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#897**

Status: **In Process**

Annualized Cost: **£0**

Description: Out of range sensor error.

Recommendations: CB 11/07/23 Tested extract Duct CO2 sensor Sensor faulty order new sensor FQ 667837-37-A Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**11/07/2023**

**Percy Gee Building Members Service Office AHU** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#898**

Status: **In Process**

Annualized Cost: **£0**

Description: Out of range sensor error.

Recommendations: CB 11/07/23 Tested sensor Found Co2 to be faulty Issued quote FQ 667837-37-A Actions:

Date Created:

Building:

Equipment Name: Task Assigned To:

**11/07/2023**

**George Porter Building AHU 3**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#899**

Status: **In Process**

Annualized Cost: **£3,572**

Description: Jumping sensor error. Pre-heat coil discharge temp lower than setpoint. Room air temp lower than setpoint. Supply temp higher than setpoint.

Recommendations:

Actions: CB 11/07/23 When checked locally the AHU was controlling to setpoint. Checked operation of both valve actuators and both operate correctly and heat passes through both batteries.

However there is only around a 4 degree heat uplift across each battery.

Date Created:

Building: Equipment Name: Task Assigned To:

**14/07/2023**

**Fraser Noble Building Primary HW Loop** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#904**

Status: **In Process**

Annualized Cost: **£1,362**

Description: Return temp lower than setpoint.

Recommendations: Boiler 1 in fault could you get someone to look at the boiler Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**14/07/2023**

**Fraser Noble Building AHU Hall** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#905**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Fan speed constant at high speed.

CB14/07/23 Checked fan spd bindings requested fan spd is drive from the graphic, so will always be constant unless someone manually changes it. If MT could advise whether this diagnostic can be removed or fan spd can be lowered or add in a program to control fan speed (may require pressure sensor)

Date Created:

Building: Equipment Name: Task Assigned To:

**28/07/2023**

**Astley Clarke Building Basement AHU Supply** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#908**

Status: **In Process**

Annualized Cost: **£0**

Description: Supply temp lower than setpoint.

Recommendations: CB 28/07/23 Building is in summer mode and therefore the heating valve will not open in this mode

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**04/08/2023**

**Henry Wellcome Building**

**General Extract 6 (AHU-8 Exhaust)** [**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#915**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag. Fan on while all dampers closed. Fan speed constant at high speed.

Recommendations: PB 04/08/23 Investigate operation of fan motors/dampers.

Actions: PB 04/08/23 The system was shutdown remotely to check the damper closed and when restarted the inverter went into a fault condition. It was visited locally and reset and the operation of the damper and fan motor was observed and operated correctly. I will ask KWs team to check if the Sigma damper signal is inverted. Additionally the motor runs at 100% but does not achieve the 3.7m/s setpoint - actual is 3.5m/s. I will discuss with MT to suggest that the fan belts may require checking in case they are slipping. If they are ok then the velocity sensor may need a calibration check.

Date Created:

Building: Equipment Name: Task Assigned To:

**04/08/2023**

**Henry Wellcome Building**

**General Extract 7 (AHU-9 Exhaust)** [**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#917**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan speed constant at high speed.

Recommendations: PB 04/08/23 Investigate operation of the fan motors.

Actions: PB 04/08/23 The system has been checked and it has been discovered that the velocity sensor is set to manual 3.5m/s and the setpoint is 4.5m/s consequently the fan motor runs at 100%. It appears that the velocity sensor is faulty because when it is set back to auto it reads 0.4m/s. I will ask MT if this is a known problem in case it has been investigated previously. If not it requires local investigation.

Date Created:

Building: Equipment Name: Task Assigned To:

**18/08/2023**

**Percy Gee Building Zone 2-5 Room 4** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#937**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Room temp below min. Config: Missing OccupancyMode var.

CB 18/08/23 Checked operation and trend values for all similar diagnostics in relation to this type of plant. They all follow similar values. The temperature is low in the morning around 6- 7am. The schedule starts at 7am when the plant starts it warms up to a 'normal temperature of 20-22'C. This is locally by the trox units and fed from AHU 3. I don't believe there is really an issue with this as it is only cold when out of schedule. A program could be implemented if this is deemed an issue where the rooms would control to a minimum temp outside of schedule. Could MT and KW review the requirements to either ignore further diagnostic or add the program which I could implement.

Date Created:

Building: Equipment Name: Task Assigned To:

**18/08/2023**

**Percy Gee Building Zone 2-5 Room 2** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#938**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Room temp below min. Config: Missing OccupancyMode var.

CB 18/08/23 Checked operation and trend values for all similar diagnostics in relation to this type of plant. They all follow similar values. The temperature is low in the morning around 6- 7am. The schedule starts at 7am when the plant starts it warms up to a 'normal temperature of 20-22'C. This is locally by the trox units and fed from AHU 3. I don't believe there is really an issue with this as it is only cold when out of schedule. A program could be implemented if this is deemed an issue where the rooms would control to a minimum temp outside of schedule. Could MT and KW review the requirements to either ignore further diagnostic or add the program which I could implement.

Date Created:

Building: Equipment Name: Task Assigned To:

**18/08/2023**

**Percy Gee Building Zone 2-4 Room 4** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#939**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Room temp below min. Config: Missing OccupancyMode var.

CB 18/08/23 Checked operation and trend values for all similar diagnostics in relation to this type of plant. They all follow similar values. The temperature is low in the morning around 6- 7am. The schedule starts at 7am when the plant starts it warms up to a 'normal temperature of 20-22'C. This is locally by the trox units and fed from AHU 3. I don't believe there is really an issue with this as it is only cold when out of schedule. A program could be implemented if this is deemed an issue where the rooms would control to a minimum temp outside of schedule. Could MT and KW review the requirements to either ignore further diagnostic or add the program which I could implement.

Date Created:

Building: Equipment Name: Task Assigned To:

**18/08/2023**

**Percy Gee Building Zone 2-4 Room 2** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#940**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Room temp below min. Config: Missing OccupancyMode var.

CB 18/08/23 Checked operation and trend values for all similar diagnostics in relation to this type of plant. They all follow similar values. The temperature is low in the morning around 6- 7am. The schedule starts at 7am when the plant starts it warms up to a 'normal temperature of 20-22'C. This is locally by the trox units and fed from AHU 3. I don't believe there is really an issue with this as it is only cold when out of schedule. A program could be implemented if this is deemed an issue where the rooms would control to a minimum temp outside of schedule. Could MT and KW review the requirements to either ignore further diagnostic or add the program which I could implement.

Date Created:

Building: Equipment Name: Task Assigned To:

**18/08/2023**

**Percy Gee Building Kitchen AHU** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#943**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan speed constant at high speed. No cost calcs, missing: supply fan kW.

Recommendations: Review with MT for all AHUs in Percy Gee Building. Most AHUS have a user selectable SP but no program to calculate speed required

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/08/2023**

**Physics Building**

**South Zone Gen S\Ex Extract AHU** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#944**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan on while unoccupied. Fan speed constant at high speed.

Recommendations: Cb 23/08/23 Fan runs for 3 hours from 1am on a free cooling program. Fans are also fixed speed selectable from the graphic. there are no pressure sensors to control fan speed.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/08/2023**

**Physics Building**

**South Zone Gen S\Ex Supply AHU** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#945**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan on while unoccupied. Fan speed constant at high speed.

Recommendations: Cb 23/08/23 Fan runs for 3 hours from 1am on a free cooling program. Fans are also fixed speed selectable from the graphic. there are no pressure sensors to control fan speed.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**29/08/2023**

**Henry Wellcome Building Chilled Water Primary Loop** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#946**

Status: **In Process**

Annualized Cost: **£12,241**

Description: Data quality flag. Low loop temp difference. Minimal load across loop.

Recommendations: Can we revisit this with KW, PB and I to discuss making some changes to the way of control. If it deemed this is the way it is to run going forward have it removed from the calculation and the load calculations lowered to mask this diagnostic.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**29/08/2023**

**Henry Wellcome Building AHU-5**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#947**

Status: **In Process**

Annualized Cost: **£0**

Description: Recommendations:

Actions:

Data quality flag. Negative temp difference across pre-heating coil. Supply air RH above max.

CB 29/08/23 Have checked operation on the supply RH sensor anc compared values with my newly calibrated and it is reading the correct humidity. humidity has been high today so hasn't dropped below 60 percent.Cooling coil is operation correctly and is dehumming. Heating coil working correctly, the heating coil will heat up to 18'C and then back off. MT and KW Decide whether 60 percent is suitable for max humidity

Date Created:

Building: Equipment Name: Task Assigned To:

**29/08/2023**

**Henry Wellcome Building FCU 3/65**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#948**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag. Room air temp higher and lower than setpoint. Room temp setpoint above max. Room temp setpoint below min.

Recommendations: CB 290823 Review all setpoints with MT as there is no consistency across the floor and building. Are the set points user adjustable locally?

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**29/08/2023**

**Henry Wellcome Building Chiller 2** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#949**

Status: **In Process**

Annualized Cost: **£0**

Description: Chiller status data mismatch.

Recommendations: Cb 290823 Chiller has own internal controls/setpoint sometimes we will send a command for the chiller to come on but internally the chiller is satisfied and will not come on

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**05/09/2023**

**Henry Wellcome Building Autoclave AHU** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#951**

Status: **In Process**

Annualized Cost: **£0**

Description: Data quality flag. Freeze protection on, OAT high. Negative temp difference across pre-heating coil. Room air temp higher than setpoint.

Recommendations: CB 050923 Can we visit this Karl as cant find any instances of the frost stat being in alarm Possibly need to set up some logging in case of nuisance alarms

Actions: 22/09/2023 Yes, just give me a shout when you are free and we can take a look. Or i can pick up Mike on weekly review.

Date Created:

Building: Equipment Name: Task Assigned To:

**21/09/2023**

**Percy Gee Building Zone 1-3 Room 106** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#963**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min. Config: Missing OccupancyMode var.

Recommendations: CB 21/09/23 Occupancy mode is there so unsure what is being asked for for?

Actions: KW 22/09/23 - Think we have the mode point in play but we also need a variable applying BA side to accompany it. Can you confirm the number values when supposed to be running please if possible Connor. i.e What value should we get if occupied, is it like 1 - 4? 0 I presume is unoccupied but any others also for when in that mode state?

Date Created:

Building: Equipment Name: Task Assigned To:

**21/09/2023**

**Percy Gee Building Zone 2-4 Room 3** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#964**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min. Config: Missing OccupancyMode var.

Recommendations: CB 21/09/23 Occupancy mode is there so unsure what is being asked for for? See Task 940 for details on Temperature

Actions: KW 22/09/23 - Think we have the mode point in play but we also need a variable applying BA side to accompany it. Can you confirm the number values when supposed to be running please if possible Connor. i.e What value should we get if occupied, is it like 1 - 4? 0 I presume is unoccupied but any others also for when in that mode state?

Date Created:

Building: Equipment Name: Task Assigned To:

**21/09/2023**

**Percy Gee Building Zone 2-5 Room 3** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#965**

Status: **In Process**

Annualized Cost: **£0**

Description: Room temp below min. Config: Missing OccupancyMode var.

Recommendations: which has been linked to heart conditions, oral disease and decreased physical performance.

See task 940 for temperature details

Actions: One for MT and KW to investigate when on a weekly joint review.

Date Created:

Building: Equipment Name: Task Assigned To:

**25/09/2023**

**Percy Gee Building Zone 3-1** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#966**

Status: **In Process**

Annualized Cost: **£0**

Description: Jumping sensor error. Out of range sensor error. Room temp above max.

Recommendations: Cb 25/09/23 Need to look at the Litres per second calculation as at V max the unit runs at around 900m3/h which equates to around 250l/s.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**25/09/2023**

**Percy Gee Building Kitchen AHU** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#971**

Status: **In Process**

Annualized Cost: **£0**

Description: Fan speed constant at high speed. No cost calcs, missing: supply fan kW.

Recommendations: CB 25/09/23 Fan is on Fixed setpoint of 100 percent. Could look at lowering the setpoint or add pressure sensor to vary fan speed

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**20/02/2023**

**CVRC Building**

**Server Room 2.15 FCU 1** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#686**

Status: **Open**

Annualized Cost: **£0**

Description: Room temp below min. No cost calcs, missing: supply fan kW and flow.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**20/02/2023**

**CVRC Building Cooling Plant** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#690**

Status: **Open**

Annualized Cost: **£0**

Description: Chiller/HP on, CW pumps off. Cooling source on, CHW pumps off.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**22/02/2023**

**CVRC Building Server Room 2.15** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#693**

Status: **Open**

Annualized Cost: **£0**

Description: Room air temp lower than setpoint.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**22/02/2023**

**CVRC Building**

**CHW Secondary Freezer/Server Circuit** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#697**

Status: **Open**

Annualized Cost: **£0**

Description: Flat sensor error.

Recommendations: Chiller performance is consistent resulting in a stable chiller flow temperature. The critical alarm here is a high flow temperature due to the nature of the equipment that is being supplied by the FS chilled water

Actions:

Date Created:

Building: Equipment Name:

**06/03/2023**

**PRF Building Cooling Plant**

Task ID: Status: Annualized Cost:

**#702**

**Open**

**£180**

Task Assigned To: [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Description:

Cooling source on, CHW pumps off. Excessive chiller/HP staging changes. Loop pumps off, flow status on. Loop pumps on, flow status off. Pump status data mismatch.

Recommendations: PB 06/03/23 The operation of the system has been checked and operates correctly. The chillers are staged from outside air temp whenever there is demand from the building. OaTmp <12'C - Chillers Disabled OaTmp >13'C - 1 Chiller Enabled if Demand is present OaTmp >20'C - 2 Chillers Enabled if Demand is present The chiller enables also benefit from a 20 minute minimum enable time and a 5 minute disable time so will not be unnecessarily cycled by the BMS. However the chillers also control via there own on board controls once enabled.

Consequently the chillers will cycle independently from the BMS dependant on the prevailing load and it is the chiller actual run signals that BA is referencing which causes the excessive staging warnings. Karl since the pump and chiller enable and run/flow signals operate correctly any mis-match would appear to be due to the configuration of BA, although I thought we addressed this on this system last year. However can you have another look please. Also can you inhibit the excessive staging warnings please since the chiller actual run times are beyond our control and the BMS control strategy was amended last year in line with UoLs instructions.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**17/03/2023**

**Space Park Ph 2**

**GF FCU 0.27 8a Elec W/Shop** [**connor.byrne@se.com**](mailto:connor.byrne@se.com)

Task ID: **#710**

Status: **Open**

Annualized Cost: **£0**

Description: Setpoint was zero.

Recommendations: CB 170323 Setpoint is a null value when the room is unoccupied. When occupied the setpoint reverts to 21'C heating 26'C cooling There isnt an 'Active Setpoint' as such

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**21/03/2023**

**Brookfield Campus**

**Brookfield Stable Block AHU 1** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#712**

Status: **Open**

Annualized Cost: **£962**

Description: Fan on while all dampers closed. Fan on while unoccupied.

Recommendations: Check operation of Dampers. Check controls of fan enable. review logs for damper controls/fan enable/duct pressure.

Actions: Dampers operated closed and open. Fans automatically shut down when dampers closed. DFS states there is a pressure over 250pa during this period which doesn't coincide with a closed damper/fan running state. Damper log states dampers were open 1.24am which is parallel with measured increase in pa pressure. It appears BA is looking at the VAV box positions within the rooms which are: /Brookfield Stable Block/IO Bus/Slot10:AO-V-8/Ahu01SaVav1 /Brookfield Stable Block/IO Bus/Slot10:AO-V-8/Ahu01SaVav2 /Brookfield Stable Block/IO Bus/Slot10:AO- V-8/Ahu01EaVav1 /Brookfield Stable Block/IO Bus/Slot10:AO-V-8/Ahu01EaVav2 BA should be looking at supply and extract damper from AHU which are: /Brookfield Stable Block/IO Bus/Slot4:DI-16/Ahu01SaDmpPos /Brookfield Stable Block/IO Bus/Slot4:DI- 16/Ahu01EaDmpPos

Date Created:

Building: Equipment Name: Task Assigned To:

**21/03/2023**

**PRF Building Heating Plant** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#717**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Excessive boiler staging changes. HW source(s) on, pumps off. Loop pumps off, flow status on. Loop pumps on, flow status off. Configuration flag. No cost calcs, missing: HW pump kW and flow.

Recommendations: PB 21/03/23 Regarding the following warnings - HW source(s) on, pumps off - Loop pumps off, flow status on - Loop pumps on, flow status off. Both gas fired boiler pump sets have been tested and operate correctly including the associated DPS. It appears that BA is not referencing the flow switches correctly (DPS's). 052 - Pump Flow (BoilerFlowStatus on Boiler Gas-Fired 2) - This one is correct 0046 - Pump Flow (LoopFlowStatus on HW Primary Loop) - This should be (BoilerFlowStatus on Boiler Gas-Fired 1) - There is not a common primary flow DPS. Gas Fired Boiler 1, Gas Fired Boiler 2 & Bio Mass Boiler each have their own dual pump sets and associated DPS's. Karl can you check the configuration of these objects please to ensure that the correct DPS is associated with the appropriate pump set - Thanks.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**21/03/2023**

**PRF Building Primary CHW Loop** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#719**

Status: **Open**

Annualized Cost: **£1,391**

Description: Out of range sensor error.

Recommendations: PB 21/03/23 The operation of the system has been checked and logging reviewed. There are 6 sensors which present a similar potentially out of range reading when the primary pump is off. The location of the sensors has not been visited because as soon as the primary pump and chillers run the readings all come back in range and present similarly sensible values. It appears that when the primary pump is not running the pipework where the sensors are located is subject to local heat gain. Karl can you inhibit the monitoring of the sensors detailed below when the primary pump is not running please to prevent the out of range warning. Chiller 1 Flow Temp PRF\_CHW\_01\_C1FT - 239|20 Chiller 1 Return Temp PRF\_CHW\_01\_C1RT - 239|21 Chiller 2 Flow Temp PRF\_CHW\_02\_C1FT - 239|22 Chiller 2 Return Temp PRF\_CHW\_02\_C1RT - 239|23 Pri Com Flow Temp PRF\_CHW\_01\_CMFT - 239|24 Com Return Temp PRF\_CHW\_01\_SMFT - 239|25 Thanks.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/03/2023**

**PRF Building AHU 7-8**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#721**

Status: **Open**

Annualized Cost: **£2,825**

Description: Data quality flag. HR effectiveness out of range. Unused free heating available.

Recommendations: PB 23/03/23 The HR has been tested and operates correctly when the AHU is in heating mode. Additional logging has been set up. Karl any ideas why this warning has been raised? Is it due to some missing dat on the HR Effectiveness graph?

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**25/04/2023**

**PRF Building**

**HW Secondary Loop (Welfare)** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#760**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Negative temperature difference across loop. Supply temp lower than setpoint.

Recommendations: PB 23/3/23 The setpoint is 63'C and the average flow temp over a 6 week period was 61'C. The average return temp over the same period was 62'C. Because of this anomaly I will check the calibration of both sensors and discuss the setpoint with MT with a view to setting it to 60'C and amending the control parameters to remove the integral action. Likewise with the Lab HWS which would benefit by having the integral action removed due to erratic control of the valve actuator.

Actions: PB 24/4/23 Both control loops have been amended to remove the integral action and set to control at 60'C. The actual setpoint is set at 62'C because the PB is set to 4'C and is aligned with the setpoint to achieve 60'C. PB 25/4/23 This sensor is difficult to access so calibration has not been checked. Karl this sensor is only used for monitoring and a low limit alarm so can you mask the negative temp warning please.

Date Created:

Building: Equipment Name: Task Assigned To:

**25/04/2023**

**PRF Building Boiler Gas-Fired 2**

[**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#761**

Status: **Open**

Annualized Cost: **£0**

Description: Boiler status data mismatch. Bio Mass secondary pump failure.

Recommendations: PB 24/04/23 Whilst checking this warning it was discovered during plant review that the Bio Mass secondary pump had failed and latched off. It was reset and tested but failed again. Local investigation is required.

Actions: PB 25/04/23 Pump 2 has been found to be faulty. Power is available at the motor which does not run and a red LED on the motor illuminates as does the common fault lamp on the control panel. Powering down does not clear the fault. Mike can you raise a job ticket for this to be repaired please. MT 18/05/23 - Job raised awaiting a response on when it has been fixed.

Date Created:

Building: Equipment Name: Task Assigned To:

**26/04/2023**

**PRF Building AHU 1-3**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#762**

Status: **Open**

Annualized Cost: **£0**

Description: Possible simultaneous or excess heating and cooling. Pump status data mismatch.

Simultaneous coil operation.

Recommendations: PB 26/04/23 The temperature control has been checked and logged data reviewed. The heating and cooling coils have not operated simultaneously although there is a possibility they could occasionally during dehumidification but that's very unlikely during the winter. The excess heating could be due to the run around coil temperature gain influencing the diagnostic results. Karl can you see why the simultaneous heating/cooling warning is raised and possibly try to remove any nuisance warnings. Also the run around pump enables and run status has been checked and operates correctly. It is probably because the run status is a Sigma object that needs inverting in BA.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**27/04/2023**

**PRF Building AHU 5-6**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#763**

Status: **Open**

Annualized Cost: **£0**

Description: Negative temp difference across pre-heating coil. Stuck pre-heating coil valve.

Recommendations: PB 26/04/23 The preheat (frost) control has been checked and logged data reviewed. It operates correctly however the AHU shuts down for 10 minutes on a Tuesday night and when it starts up the frost coil setpoint is elevated to 20'C during low outside temp. Consequently this then appears that the valve has stuck as the normal setpoint of 10'C is exceeded. The negative temp difference is because of the location, probably (or possibly calibration) of the outside sensor. The sensor usually reads higher than the off frost coil temp sensor when the frost valve is closed. Karl for the first item can you introduce a time delay at start up when the setpoint is elevated to 20'C? Also the outside sensor reads about 2 to 3'C high although its a big job to start trying to find and access it. It easier to introduce an offset and/or use another sensor for BA for all the AHUs on PRF please. /Server 1/Sigma Interface/Segments/Adrian Building/Greenhouse/Monitoring/Outside Air Temp

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**27/04/2023**

**PRF Building AHU 2-4**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#765**

Status: **Open**

Annualized Cost: **£0**

Description: Flow sensor zero, fan on.

Recommendations: PB 27/04/23 The AHU has been investigated is operating correctly. The logged data has been reviewed for the 14th and 15th March and confirms an average pressure of 575Pa and the setpoint is 575Pa. It is not known how the calculated flow sensor value is achieved. Karl can you review calculated flow sensor value please and amend or remove if applicable.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**27/04/2023**

**PRF Building AHU 7-8**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#766**

Status: **Open**

Annualized Cost: **£0**

Description: Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling. Stuck pre-heating coil valve. Supply temp higher than setpoint.

Recommendations: PB 27/04/23 Investigate operation of the AHU and review associated logged data.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**13/05/2023**

**Nixon Court**

**G Block Toilet Extract Fan** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#775**

Status: **Open**

Annualized Cost: **£0**

Description: Fan status data mismatch.

Recommendations: Investigate. Fan running signal remains running even when fan is stopped. Requires site investigation.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**13/05/2023**

**Nixon Court**

**G Block Cleaners Extract Fan** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#776**

Status: **Open**

Annualized Cost: **£0**

Description: Fan status data mismatch.

Recommendations: Investigate. Fan remains running even when enable is stopped. Requires site investigation.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**15/05/2023**

**Teaching & Learning Centre ODH/GF/01**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#779**

Status: **Open**

Annualized Cost: **£0**

Description: Room air temp higher than setpoint. Room temp setpoint below min.

Recommendations: CB 15/05/23 Can the max temperature be removed or increased to 30 degrees as this space is in direct sunlight in the middle of the day. Min temp setpoint o be lowered to 15'C as this is only an entrace way to take chill off air in the winter and prevent heat loss from building

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**16/05/2023**

**Teaching & Learning Centre**

**VT HW Sec Loop - MCC01 Grd Flr** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#781**

Status: **Open**

Annualized Cost: **£0**

Description: Diff pressure higher than setpoint. Diff pressure setpt constant.

Recommendations: CB 16/05/23 Set point is bar can this be changed on BA Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**18/05/2023**

**George Davies Building**

**Riser 7 LTHW Secondary Loop** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#800**

Status: **Open**

Annualized Cost: **£0**

Description: Diff pressure below minimum.

Recommendations: PB 18/5/23 The operation has been reviewed although the system is not currently running. It appears that the error is reported when the associated pumps are off. Karl can you check if the warning can be inhibited when the pumps are not required please. I have created a pump required variable object that can be referenced if required. /Centre for Medicine - LTHW and CHW/LTHW & CHW/LTHW/Variables/LthwPmpReq

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**22/05/2023**

**George Davies Building**

**First Floor Slab Cooling CHW Loop** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#809**

Status: **Open**

Annualized Cost: **£0**

Description: Config: Fractional point out of range.

Recommendations: PB 22/5/23 I have investigated this and cannot see what is causing this error. The valve actuator reads a normal percentage when the object:- /Centre for Medicine - LTHW and CHW/IO Bus/Slot07:AO8/ChwL1Vlv - is reviewed. Karl can you have a look at this please to see what the error means.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**25/05/2023**

**Physics Building 4 A\B VT Circuit**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#825**

Status: **Open**

Annualized Cost: **£0**

Description: Supply temp lower than setpoint.

Recommendations: PB 25/5/23 Investigate operation of heating controls.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**25/05/2023**

**Physics Building**

**G1 S\Ex Lect\Theatre B AHU** [**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#822**

Status: **Open**

Annualized Cost: **£0**

Description: Negative temp difference across heating coil.

Recommendations: PB 25/5/23 The - Negative temp difference across heating coil - reports are due to discrepancies between the building outside temperature reading and the AHU off coil temperature when the heating coil valve is closed. Karl can you assign the new minimum outside temperature program that I have created please - this should then prevent the warnings being reported. /Server 1/Plant Monitoring/Outside Air Temps/MinOat Please apply to the following AHUs:- North Zone Gen S\Ex Supply AHU North Zone Toilet Supply AHU G1 S\Ex Lect\Theatre B AHU G3 S\Ex Lect\Theatre A AHU Central Zone Gen S\Ex Supply AHU Central Zone Research Dept Supply AHU Central Zone Toilet Supply AHU South Zone Gen S\Ex Supply AHU

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**25/05/2023**

**Physics Building 2 A\B VT Circuit**

[**paul.boot@se.com**](mailto:paul.boot@se.com)

Task ID: **#823**

Status: **Open**

Annualized Cost: **£0**

Description: Supply temp higher and lower than setpoint.

Recommendations: PB 25/5/23 Investigate operation of heating controls.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Davies Building AHU No. 4**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#832**

Status: **Open**

Annualized Cost: **£0**

Description: Flat sensor error. Flow not correlated with fan speed.

Recommendations: PB 26/5/23 Investigate operation of the AHU. PB 26/5/23 The AHU has been tested and operates correctly with the fan speed modulating to maintain a maximum VAV position of 85%. The flat sensor errors corresponds with the AHU being off so don't appear to be genuine. Karl can you have a look please and mask these errors if you agree.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Davies Building AHU No. 6**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#834**

Status: **Open**

Annualized Cost: **£0**

Description: Supply temp reset error.

Recommendations: PB 26/5/23 The supply setpoint modulates (P+I) between 18'C and 22'C reset from the KNX space temp sensor and KNX room setpoint. It operates correctly and does not reset against outside temp. Karl if you agree can you mask this error warning please.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**26/05/2023**

**George Davies Building AHU No. 2**

[**Karl.Whittle@se.com**](mailto:Karl.Whittle@se.com)

Task ID: **#827**

Status: **Open**

Annualized Cost: **£0**

Description: Fan speed constant. Fan status data mismatch.

Recommendations: PB 26/5/23 Karl I have tested this AHU and the fan enable and flow switch operate correctly. Can you check that BA is referencing the correct objects - AhuSaFanDps (SupplyFanStatus), AhuSaFanEna (SupplyFanRun). I cant see any other reason why the data mismatch is reported.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**16/06/2023**

**Hodgkin Building AHU 28 CP1 6th Floor** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#853**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Possible simultaneous or excess heating and cooling. Room air temp higher and lower than setpoint. Room temp setpoint below min.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/06/2023**

**PRF Building AHU 2-4**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#871**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Possible simultaneous or excess heating and cooling. Pump status data mismatch.

Recommendations: PB 23/6/23 The pump enables and run status have been fully tested and operate correctly. The warning is probably due to the run status being inverted due to being Sigma. Please invert the run status signal in BA.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**23/06/2023**

**PRF Building AHU 1-3**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#873**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Supply air static pressure higher than setpoint.

Recommendations: PB 23/6/23 The AHU pressure controls correctly. However AHU 1 and 2 operate in parallel and control to AHU2 supply pressure sensor. Please amend the tolerance in BA to take this into account as AHU1 usually runs at about 440Pa when AHU2 is controlling at 400Pa.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**05/07/2023**

**David Wilson Library AHU 6 North Side** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#888**

Status: **Open**

Annualized Cost: **£0**

Description: Leaking pre-heating coil valve. Negative temp difference across pre-heating coil. Possible simultaneous or excess heating and cooling. Supply temp lower than setpoint.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**05/07/2023**

**David Wilson Library AHU 3 South Side** [**daniel.hulse@se.com**](mailto:daniel.hulse@se.com)

Task ID: **#889**

Status: **Open**

Annualized Cost: **£0**

Description: Fan on while unoccupied. Fan status data mismatch.

Recommendations: Investigate

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**04/08/2023**

**Henry Wellcome Building**

**General Extract 6 (AHU-8 Exhaust)** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#916**

Status: **Open**

Annualized Cost: **£0**

Description: Data quality flag. Fan on while all dampers closed. Fan speed constant at high speed.

Recommendations: PB 04/08/23 Investigate operation of fan motors and damper. PB 04/08/23 KWs Team: Can you please check to see if the Sigma damper signal is inverted as the damper does operate correctly.

Actions: PB 04/08/23 The system was shutdown remotely to check the damper closed and when restarted the inverter went into a fault condition. It was visited locally and reset and the operation of the damper and fan motor was observed and operated correctly.

Date Created:

Building: Equipment Name: Task Assigned To:

**04/08/2023**

**Henry Wellcome Building Cooling Plant** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#912**

Status: **Open**

Annualized Cost: **£9,353**

Description: Cooling source off, CHW pumps on. Data quality flag.

Recommendations: PB 04/08/23 The operation of the chillers and pumps with demand and no demand present has been tested and operates correctly. KWs Team: can you please inhibit the pump run warnings only when the following object is off: /Server 1/Sigma Interface/Segments/Henry Wellcome Bldg/Chillers/Chillers Enable This is because the chillers run on their own controls and will cycle off during demand periods but the pumps are still required. Additionally a 10 minute pump overrun is operational at the end of the demand period which needs to be masked otherwise a similar warning would be raised again each time the system shuts down.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**04/08/2023**

**Henry Wellcome Building AHU-4**

[**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#914**

Status: **Open**

Annualized Cost: **£0**

Description: Fan speed constant at high speed.

Recommendations: PB 04/08/23 KWs Team: This AHU operates at constant velocity and its operation has not changed. This is a research building and it is not recommended to reduce AHU volumes since it would affect the as commissioned room pressures and air change rates. Can you mask this warning please unless the fan speed increases to 100% and the setpoint is not achieved.

Actions: PB 04/08/23 The operation of the AHU has been tested and inspected locally and operates correctly.

Date Created:

Building: Equipment Name: Task Assigned To:

**08/08/2023**

**David Wilson Library AHU 1 South Side** [**ba.bureau@se.com**](mailto:ba.bureau@se.com)

Task ID: **#923**

Status: **Open**

Annualized Cost: **£0**

Description: Fan speed constant at high speed. Fan status data mismatch.

Recommendations: PB 08/08/23 KWs Team: The fan operates correctly at design - 100% is the normal daytime speed. Therefore can you please mask this warning. The fan status mismatch does not seem to an issue now so maybe the fan was switched off when the warning was raised - currently NFA on this element.

Actions: PB 08/08/23 The AHU has been tested and operates correctly. The fan status is correct and the fan runs at 100% during occupancy and 80% during night setback as per design.

Date Created:

Building: Equipment Name: Task Assigned To:

**13/09/2023**

**Physics Building Heating Plant** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#958**

Status: **Open**

Annualized Cost: **£120**

Description: HW source(s) off, pumps on. Secondary HW Pump 2 was running for 168 hours while all heat

exchangers were off. This may have wasted around £4 over the diagnostic period.

Recommendations: KW / MT 13/09/23 - Mike has agreed to check on this one. Will feedback when possible.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**19/09/2023**

**Astley Clarke Building DHWS Loop** [**gdw11@leicester.ac.uk**](mailto:gdw11@leicester.ac.uk)

Task ID: **#959**

Status: **Open**

Annualized Cost: **£0**

Description: Tank temp dropping below set point Recommendations: monitor tank temps. investigate drops in temp

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**19/09/2023**

**Astley Clarke Building Lecture Theatre Supply AHU** [**gdw11@leicester.ac.uk**](mailto:gdw11@leicester.ac.uk)

Task ID: **#960**

Status: **Open**

Annualized Cost: **£0**

Description: Room air temp higher than setpoint.

Recommendations: Monitor Lecture theatre supply temp. possibly HR issue or electric heater battery discharging.

Actions:

Date Created:

Building: Equipment Name: Task Assigned To:

**20/09/2023**

**David Wilson Library AHU 7 South Side** [**mawt3@leicester.ac.uk**](mailto:mawt3@leicester.ac.uk)

Task ID: **#962**

Status: **Open**

Annualized Cost: **£2,012**

Description: Recommendations:

Actions:

Data quality flag. Unused free heating available.

KW / MT 20/09/23 - Discussed today again and it would appear someone keeps putting this unit in hand on the control panel. Gavin last time was able to revert back to auto. It will need doing so again but need to understand who and why this keeps happening.