## Colaiste Mhuire

## Boiler System Upgrade Emergency Works – BMS Points List

| Point No. | Ref. | System / Zone | Plant / Device | Point Description | BMS Function | I/O Type | Signal / Interface | Alarm / Action |
|---|---|---|---|---|---|---|---|---|
| 1 | B.01 | Boiler Cascade | Boiler 1 | Boiler Enable | Enable / disable Boiler 1 from cascade controls. | **DO** | Volt-free contact / interposing relay | Control output |
| 2 | B.02 | Boiler Cascade | Boiler 2 | Boiler Enable | Enable / disable Boiler 2 from cascade controls. | **DO** | Volt-free contact / interposing relay | Control output |
| 3 | B.03 | Boiler Cascade | Boiler 3 | Boiler Enable | Enable / disable Boiler 3 from cascade controls. | **DO** | Volt-free contact / interposing relay | Control output |
| 4 | P-1 | Library Heating Circuit | Heating Circuit Pump | Pump Enable | Start / stop Library heating circuit pump. | **DO** | MCC contactor / pump enable | Control output |
| 5 | P-1 | Library Heating Circuit | Heating Circuit Pump | Pump Run Status | Confirm heating circuit pump operation. | **DI** | Volt-free contact | Status |
| 6 | P-1 | Library Heating Circuit | Heating Circuit Pump | Pump Fault | Generate pump fault alarm. | **DI** | Volt-free contact | Alarm |
| 7 | P-2 | South West Heating Circuit | Heating Circuit Pump | Pump Enable | Start / stop South West heating circuit pump. | **DO** | MCC contactor / pump enable | Control output |
| 8 | P-2 | South West Heating Circuit | Heating Circuit Pump | Pump Run Status | Confirm heating circuit pump operation. | **DI** | Volt-free contact | Status |

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|---|---|---|---|---|---|---|---|---|
| 9 | P-2 | South West Heating Circuit | Heating Circuit Pump | Pump Fault | Generate pump fault alarm. | **DI** | Volt-free contact | Alarm |
| 10 | P-3 | General Purpose Area Heating Circuit | Heating Circuit Pump | Pump Enable | Start / stop General Purpose Area heating circuit pump. | **DO** | MCC contactor / pump enable | Control output |
| 11 | P-3 | General Purpose Area Heating Circuit | Heating Circuit Pump | Pump Run Status | Confirm heating circuit pump operation. | **DI** | Volt-free contact | Status |
| 12 | P-3 | General Purpose Area Heating Circuit | Heating Circuit Pump | Pump Fault | Generate pump fault alarm. | **DI** | Volt-free contact | Alarm |
| 13 | P-4 | North East Heating Circuit | Heating Circuit Pump | Pump Enable | Start / stop North East heating circuit pump. | **DO** | MCC contactor / pump enable | Control output |
| 14 | P-4 | North East Heating Circuit | Heating Circuit Pump | Pump Run Status | Confirm heating circuit pump operation. | **DI** | Volt-free contact | Status |
| 15 | P-4 | North East Heating Circuit | Heating Circuit Pump | Pump Fault | Generate pump fault alarm. | **DI** | Volt-free contact | Alarm |
| 16 | PU.01 | LPHW Pressurisation | Pressurisation Unit 1 | High Pressure Alarm | Monitor high pressure limit and generate BMS alarm. | **DI** | 24 V / volt-free contact | Alarm |
| 17 | PU.01 | LPHW Pressurisation | Pressurisation Unit 1 | Low Pressure Alarm | Monitor low pressure limit and generate BMS alarm. | **DI** | 24 V / volt-free contact | Alarm |

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| 18 | PU.02 | LPHW Pressurisation | Pressurisation Unit 2 / Existing | High Pressure Alarm | Monitor high pressure limit and generate BMS alarm. | **DI** | 24 V / volt-free contact | Alarm |
| 19 | PU.02 | LPHW Pressurisation | Pressurisation Unit 2 / Existing | Low Pressure Alarm | Monitor low pressure limit and generate BMS alarm. | **DI** | 24 V / volt-free contact | Alarm |
| 20 | TS-01 | Boiler Plant | External Frost Stat | Frost Condition | Initiate frost protection strategy and generate frost condition indication. | **DI** | 24 V / volt-free contact | Control / alarm condition |
| 21 | TS-02 | Boiler Plant | External Temperature Sensor | Outside Air Temperature | Outside air temperature monitoring and weather compensation input. | **AI** | Temperature sensor | Monitor |
| 22 | TS-04 | Boiler Primary | Boiler Header Flow | Boiler Header Flow Temperature | Monitor boiler header flow temperature for cascade control and alarms. | **AI** | Temperature sensor | Monitor / alarm limits |
| 23 | TS-05 | Boiler Primary | Boiler Header Return | Boiler Header Return Temperature | Monitor boiler header return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 24 | TS-06 | Secondary Heating | Post HEX.01 Flow | Post Heat Exchanger Flow Temperature | Monitor secondary heating flow temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 25 | TS-07 | Secondary Heating | Post HEX.01 Return | Post Heat Exchanger Return Temperature | Monitor secondary heating return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 26 | TS-08 | General Purpose Area Heating Circuit | Circuit Return | Heating Circuit Return Temperature | Monitor General Purpose Area heating circuit return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |

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|---|---|---|---|---|---|---|---|---|
| 27 | TS-09 | Library Heating Circuit | Circuit Return | Heating Circuit Return Temperature | Monitor Library heating circuit return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 28 | TS-10 | South West Heating Circuit | Circuit Return | Heating Circuit Return Temperature | Monitor South West heating circuit return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 29 | TS-11 | North East Heating Circuit | Circuit Return | Heating Circuit Return Temperature | Monitor North East heating circuit return temperature. | **AI** | Temperature sensor | Monitor / alarm limits |
| 30 | FA | Boiler Plant | Fire Alarm Interface | Fire Alarm Signal | Receive fire alarm signal and shut down heating plant in accordance with agreed cause-and-effect. | **DI** | Fire-rated cable / volt-free contact | Safety interlock |
| 31 | B.01 | Boiler Cascade | Boiler 1 | Boiler Run Status | Confirm Boiler 1 firing / run status at BMS. | **DI** | Volt-free contact or boiler controller interface | Status |
| 32 | B.01 | Boiler Cascade | Boiler 1 | Boiler Common Fault | Generate Boiler 1 common fault alarm at BMS. | **DI** | Volt-free contact or boiler controller interface | Alarm |
| 33 | B.02 | Boiler Cascade | Boiler 2 | Boiler Run Status | Confirm Boiler 2 firing / run status at BMS. | **DI** | Volt-free contact or boiler controller interface | Status |
| 34 | B.02 | Boiler Cascade | Boiler 2 | Boiler Common Fault | Generate Boiler 2 common fault alarm at BMS. | **DI** | Volt-free contact or boiler controller interface | Alarm |
| 35 | B.03 | Boiler Cascade | Boiler 3 | Boiler Run Status | Confirm Boiler 3 firing / run status at BMS. | **DI** | Volt-free contact or boiler controller interface | Status |

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|---|---|---|---|---|---|---|---|---|
| 36 | B.03 | Boiler Cascade | Boiler 3 | Boiler Common Fault | Generate Boiler 3 common fault alarm at BMS. | **DI** | Volt-free contact or boiler controller interface | Alarm |
| 37 | BC.01 | Boiler Cascade | Cascade Controller | Boiler Cascade Common Fault | Generate common cascade/controller fault alarm at BMS. | **DI** | Volt-free contact or controller interface | Alarm |