

- Construction, Design and Management Regulations 2015**
- The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.
- Legend**
- You Must Not Do
 - Hazard or Danger
 - You Must Do
 - Caution
- Abnormal Risks Identified:**
- No Abnormal Identified Risks
- Notes**
- If in doubt, ask the Project Lead.
 - Do not scale this drawing.
 - All dimensions are in millimetres unless stated otherwise.
 - This drawing is to be read in conjunction with all other relevant drawings and specifications.
 - All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Containment Notes

- This drawing has been produced to show the intent for primary electrical services containment.
- The sizes and quantities shown are indicative only and shall be developed by the Electrical Contractor.
- Primary & Secondary Containment shall be designed, supplied and installed by the Electrical Contractor, to all items of equipment as required.
- Refer to Waldeck Small Power and Data Layouts for indicative dado trunking positions.
- Final drops to individual flush accessories, shall be via recessed steel conduit from the ceiling, within the wall to the accessory.
- All containment connection from flush wall accessories or room dado trunking within the ceiling void, back to primary/ secondary ceiling void containment shall be connected via proprietary conduit / basket fixings, to allow a continuous cable containment throughout, ie no allow round bank, or hilti fasteners for cabling.
- All containment shall be zinc plated cable basket, or galvanised cable tray, connected via proprietary couplers and fixings, and joining piece throughout.
- All containment shall have 20% spare cable capacity throughout.
- All containment shall be separated and spaces as detailed in BS EN 50174-2.

Containment Legend

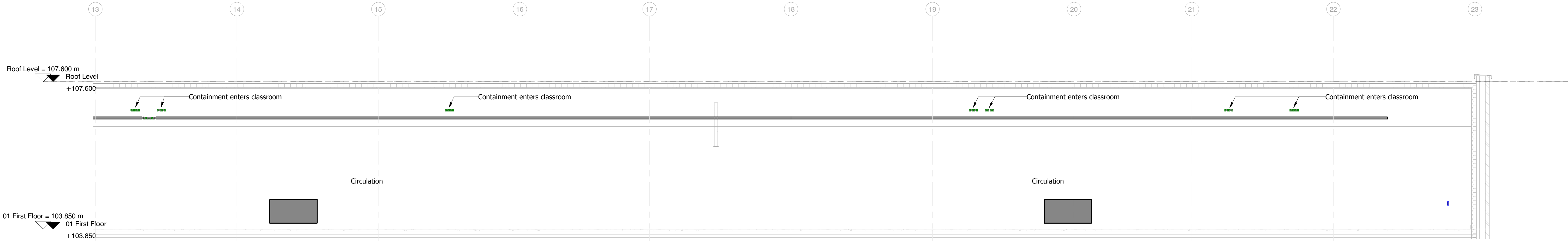
- LV Submain Tray
- Fire Alarm / ELV Basket
- LV / Data Basket
- Dado Trunking

BS EN 50742-2 - Table 8 - Minimum Separation S

| Segregation Classification (Table 3) | Separation without electromagnetic barrier | Containment Applied to information technology or power supply cabling (Containment Applied to information technology or power supply cabling) | | |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------|
| | | Open metallic containment ^a | Perforated metallic containment ^{b, c} | Solid metallic containment ^d |
| d | 10mm | 8mm | 5mm | 0mm |
| c | 50mm | 38mm | 25mm | 0mm |
| b | 100mm | 75mm | 50mm | 0mm |
| a | 300mm | 225mm | 150mm | 0mm |
| a | Screening performance (0 MHz to 100 MHz) equivalent to welded mesh steel basket of mesh size 50 mm x 100 mm. This screening performance is also achieved with steel tray (trunking without cover) of less than 1,0 mm wall thickness and/or more than 20 % equally distributed perforated area. | | | |
| b | Screening performance (0 MHz to 100 MHz) equivalent to steel tray (trunking without cover) of at least 1,0 mm wall thickness and no more than 20 % equally distributed perforated area. This screening performance is also achieved with screened power cables that do not meet the performance defined in footnote d. | | | |
| c | The upper surface of installed cables shall be at least 10 mm below the top of the containment. | | | |
| d | Screening performance (0 MHz to 100 MHz) equivalent to a steel conduit of 1,5 mm wall thickness. The assumption underlying the material performance of the conduit is that the product of the permeability and conductivity is greater than 38 Hs/m ² . This performance is not provided by stainless steel, aluminium and non-magnetic materials. A 1,0 mm wall thickness of the same material does not support S = 0mm. | | | |

01 - Containment - Sheet 2 of 2

1 : 50



First Floor - RHS Corridor

1 : 50

| | | | |
|---------|----------------------|-------|------------|
| P01 | Issued for Full CP's | MB | 03.07.2020 |
| Rev | Amendments | Rev'd | By |
| Client: | | | |



Project
Buckton Fields Primary School

Title
First Floor
Proposed Containment Layout
Sheet 2 of 2

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - E - 70 - 0006

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

Scale Created Revision

As indicated @ A0 June 20 P01

Project Lead Drawn M.B. Checked M.C.

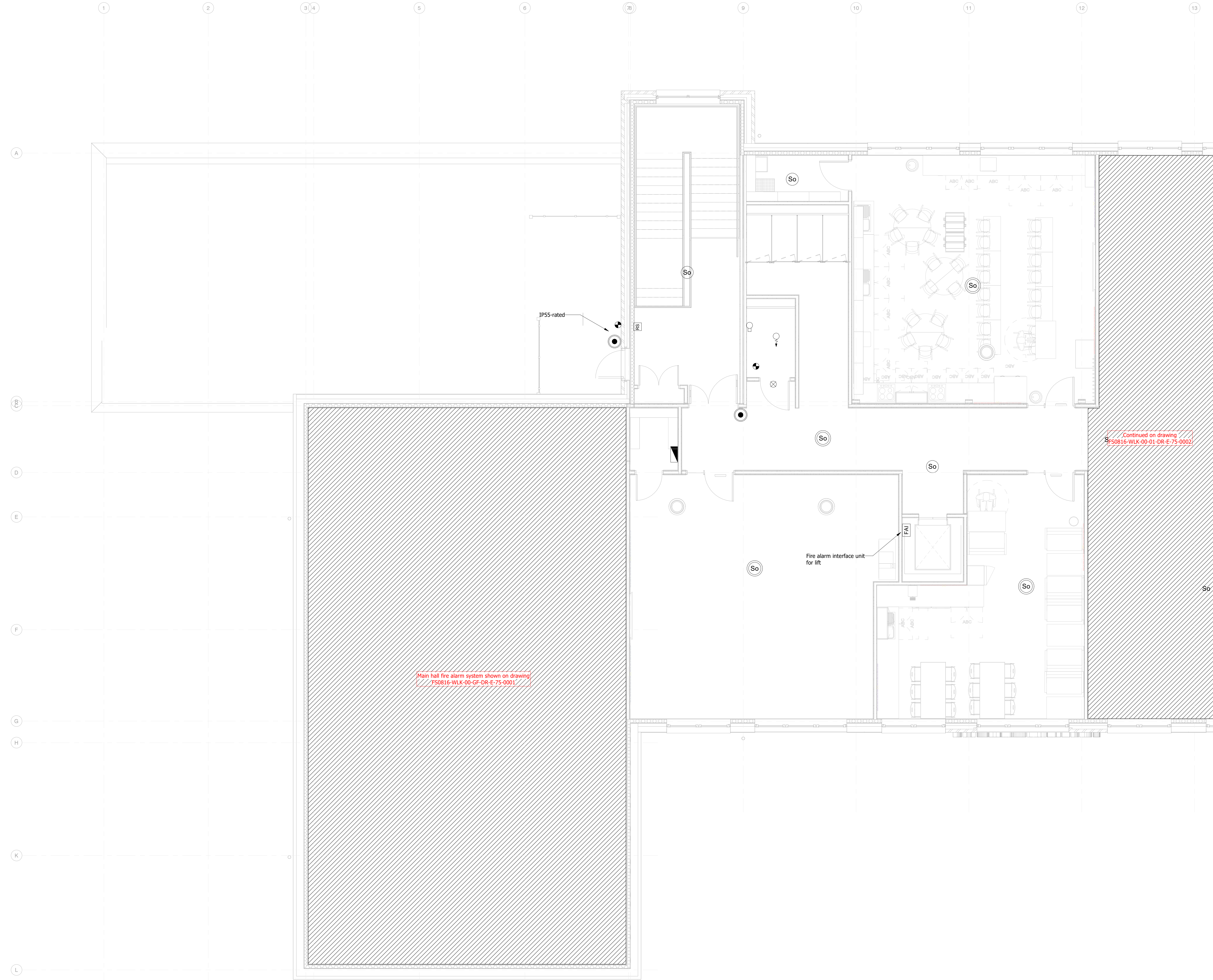
M.C. Reviewed M.C. Approved for Issue



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1 01 - Fire Alarm - Sheet 1 of 2
1 : 50

Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

You Must Not Do

Hazard or Danger

You Must Do

Caution

Abnormal Risks Identified:
1. No abnormal risks identified.

Notes

1. If in doubt, ask the Project Lead.

2. Do not scale this drawing.

3. All dimensions are in millimetres unless stated otherwise.

4. This drawing is to be read in conjunction with all other relevant drawings and specifications.

5. All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Fire Alarm Notes

1. The fire alarm system shall be designed and installed in accordance with requirements of BS 5839 and to an L2 standard as advised by Cundall Fire Safety Strategy Document referenced F50816-CNS-XX-XX-RP-FE-00-0001 Revision A

2. Positions and quantities shown on the drawing are indicative and the electrical contractor shall ensure that their design is based on the specific manufactureers equipment to achieve all the requirements i.e. sound levels detector coverage and all interfaces required.

3. Where separate devices are shown, combined units may be acceptable as long as the performance requirements are met and that compliance with the EFA Part B - Component Primary Design Brief (CPDB) is still met.

4. The fire alarm system shall be provided with a red care facility.

5. The Contractor shall appropriately zone the proposed fire alarm system. An idicative zoning strategy has been shown at final CP's.

6. The drawings have been co-ordinated with Cundall's and Stride Fire Strategy documents. The Contractor shall develop these drawings at Contractor Delevoped Design stage.

7. Fire alarm interface shall be provided to the following:

- Mechanical Plant Shut Off
- Gas Solenoid Valve
- Automatic Door Controls
- Hall AV System
- Servenvy Fire Shutter
- Access Control System
- Lift

This list is not exhaustive and shall be developed during the Contractor's detailed design.

8. All manual call points shall have tamper proof polycarbonate covers fitted.

Fire Alarm Legend

So

Smoke Detector

So

Smoke Detector with Sounder Base

So

Smoke Detector with Sounder & Beacon Base

H

Heat Detector

H

Heat Detector with Sounder Base

Sounder & Beacon Only

Manual Call Point - Break Glass

PSU

Power Supply Unit

FAI

Fire Alarm Interface

DH

Door Hold Unit

Disabled WC Alarm Over-Door Indicator

Disabled WC Alarm Reset Unit

Disabled WC Alarm Pulcford

RS

Disabled Refuge Call Station

EVC

Emergency Voice Communication Panel

FAP

Fire Alarm Panel

CV

Equipment mount in Ceiling Void

| | | | |
|---------|-----------------------------------------------------------------|----------|------------|
| p22 | Issued for Full CP's - Updated in line with Caledonian Comments | MB | 11.08.2020 |
| P01 | Issued for Full CP's | MB | 03.07.2020 |
| Rev | Amendments | Rev'd By | Date |
| Client: | | | |

Project
Buckton Fields Primary School

Title
First Floor
Proposed Fire Alarm Layout
Sheet 1 of 2

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - E - 75 - 0001

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

Scale Created Revision
As indicated @ A0 June 20 P02

Project Lead Drawn M.B. Checked M.C.
M.C. Reviewed M.C. Approved A.L. for Issue

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- Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

You Must Not Do

Hazard or Danger

You Must Do

Caution

Abnormal Risks Identified:
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- Notes
1. If in doubt, ask the Project Lead.

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4. This drawing is to be read in conjunction with all other relevant drawings and specifications.

5. All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

- Fire Alarm Notes
1. The fire alarm system shall be designed and installed in accordance with requirements of BS 5839 and to an L2 standard as advised by Cundall Fire Safety Strategy Document referenced F50816-CNS-XX-XX-RP-FE-00-0001 Revision A

2. Positions and quantities shown on the drawing are indicative and the electrical contractor shall ensure that their design is based on the performance manufactreers equipment to achieve all the requirements i.e. sound levels detector coverage and all interfaces required.

3. Where seperate devices are shown, combined units may be acceptable as long as the performance requirements are met and that compliance with the EFA Part B - Component Primary Design Brief (CPDB) is still met.

4. The fire alarm system shall be provided with a red care facility.

5. The Contractor shall appropriately zone the proposed fire alarm system. An indicative zoning strategy has been shown at final CP's.

6. The drawings have been co-ordinated with Cundall's and Stride Fire Strategy documents. The Contractor shall develop these drawings at Contractor Delevoped Design stage.

7. Fire alarm interface shall be provided to the following;

Mechanical Plant Shut Off

Gas Solenoid Valve

Automatic Door Controls

Hall AV System

Servery Fire Shutter

Access Control System

Lift

This list is not exhaustive and shall be developed during the Contractor's detailed design.

8. All manual call points shall have tamper proof polycarbonate covers fitted.

Fire Alarm Legend

- So

Smoke Detector
- So

Smoke Detector with Sounder Base
- So

Smoke Detector with Sounder & Beacon Base
- H

Heat Detector
- H

Heat Detector with Sounder Base
- Sounder & Beacon Only
- Manual Call Point - Break Glass
- PSU

Power Supply Unit
- FAI

Fire Alarm Interface
- DH

Door Hold Unit
- Disabled WC Alarm Over-Door Indicator
- Disabled WC Alarm Reset Unit
- Disabled WC Alarm Pullcord
- RS

Disabled Refuge Call Station
- EVC

Emergency Voice Communication Panel
- FAP

Fire Alarm Panel
- CV

Equipment mount in Ceiling Void

01 - Fire Alarm - Sheet 2 of 2
1 : 50

| | | | |
|---------|-----------------------------------------------------------------|----------|------------|
| p02 | Issued for Full CP's - Updated in line with Caledonian Comments | MB | 11.08.2020 |
| P01 | Issued for Full CP's | MB | 03.07.2020 |
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| Client: | | | |



Project
Buckton Fields Primary School

Title
First Floor
Proposed Fire Alarm Layout
Sheet 2 of 2

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - E - 75 - 0002

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

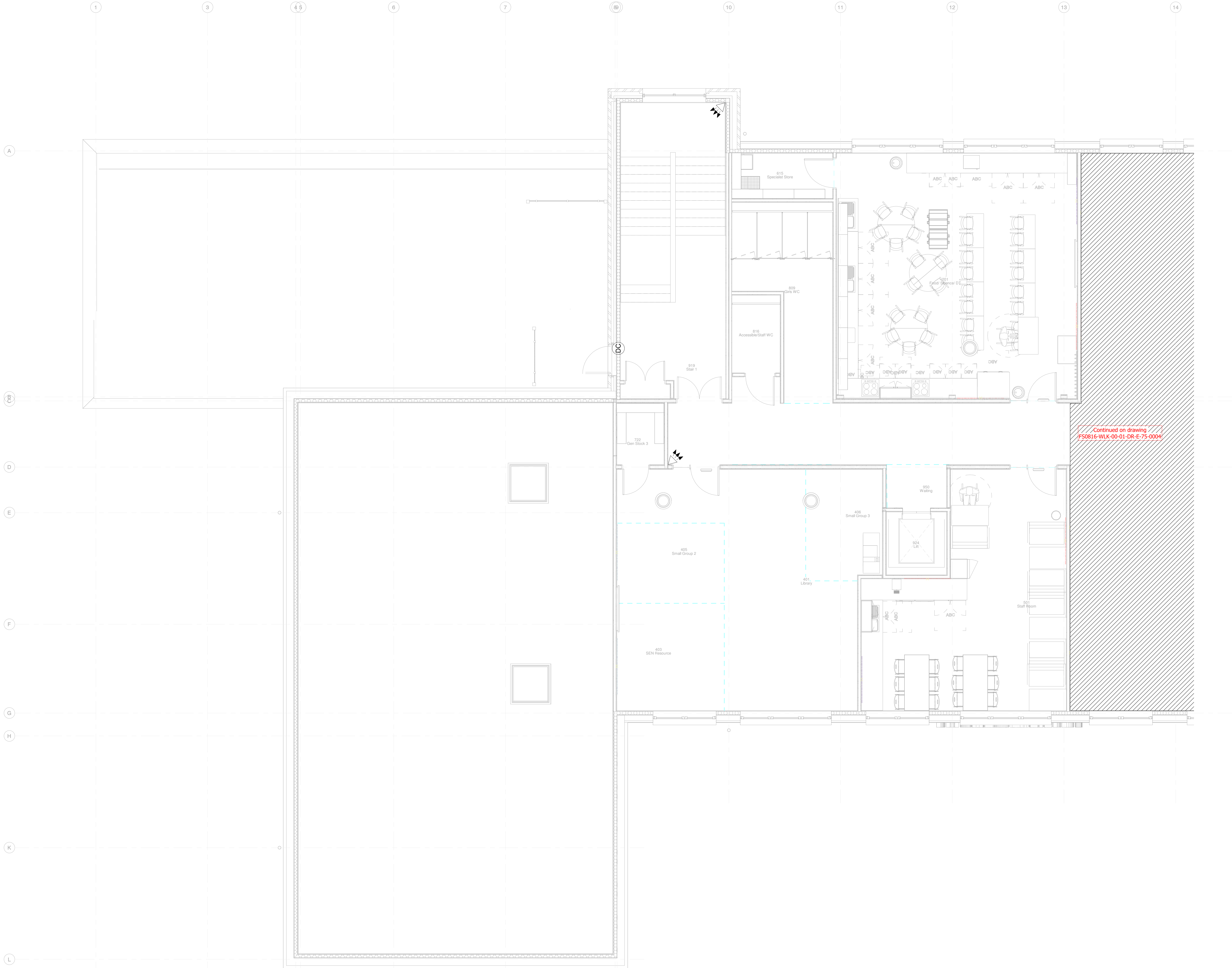
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Project Lead Drawn M.B. Checked M.C.

M.C. Reviewed M.C. Approved A.L. for Issue



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01 - Security Alarm - Sheet 1 of 2
1 : 50

- Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

You Must Not Do

Hazard or Danger

You Must Do

Caution

Abnormal Risks Identified:
1. No abnormal risks identified.
- Notes

1. If in doubt, ask the Project Lead.

2. Do not scale this drawing.

3. All dimensions are in millimetres unless stated otherwise.

4. This drawing is to be read in conjunction with all other relevant drawings and specifications.

5. All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Security Notes

1. The intruder alarm system shall be designed and installed by the Electrical Contractor.

2. The quantities and positions shown on the drawing are indicative only to show the design intent and shall be developed by the Electrical Contractor to suit the proposed system.

3. The design shall comply with the requirements of the EFA Part B - Component Primary Design Brief (CPDB).

4. The proposed intruder alarm system shall be capable of remote monitoring.

5. Audio intercom points and an external CCTV camera for the external gates shall be included for Tender in addition to the equipment shown on the drawings.

Security Legend

- SCP

Intruder Alarm - Panel
- Intruder Alarm - PIR Sensor
- K

Intruder Alarm - Keypad
- R/S

Intruder Alarm - Sounder
- DC

Intruder Alarm - Door Contact
- Intruder Alarm - Bell Box
- Intruder Alarm - Dummy Bell Box
- IOU

Intruder Alarm - Input Output Unit
- CR

Access Control - Card Reader
- R

Access Control - Push to Exit
- R/B

Access Control - Emergency Break Glass
- INT

Access Control - Intercom Unit
- ML

Access Control - Magnetic Lock
- DCU

Access Control - Door Control Unit
- CCTV Camera

| P01 | Issued for Full CP's | MB | 03.07.2020 |
|---------|----------------------|----------|------------|
| Rev | Amendments | Rev'd By | Date |
| Client: | | | |



Project
Buckton Fields Primary School

Title
First Floor
Proposed Security Layout
Sheet 1 of 2

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

FS0816 - WLK - 00 - 01 - DR - E - 75 - 0003

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

Scale
As indicated @ A0

Created
June 20

Revision
P01

Project Lead
M.C.

Reviewed
M.C.

Approved
A.L.

For Issue



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Brunel Way
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1 01 - Security Alarm - Sheet 2 of 2
1 : 50

Construction, Design and Management Regulations 2015

The Contractor's attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

You Must Not Do

Hazard or Danger

You Must Do

Caution

Abnormal Risks Identified:
1. No abnormal risks identified.

- Notes
1.

If in doubt, ask the Project Lead.
2.

Do not scale this drawing.
3.

All dimensions are in millimetres unless stated otherwise.
4.

This drawing is to be read in conjunction with all other relevant drawings and specifications.
5.

All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

- Security Notes
1.

The intruder alarm system shall be designed and installed by the Electrical Contractor.
2.

The quantities and positions shown on the drawing are indicative only to show the design intent and shall be developed by the Electrical Contractor to suit the proposed system.
3.

The design shall comply with the requirements of the EFA Part 8 - Component Primary Design Brief (CPDB).
4.

The proposed intruder alarm system shall be capable of remote monitoring.
5.

Audio intercom points and an external CCTV camera for the external gates shall be included for Tender in addition to the equipment shown on the drawings.

- Security Legend
- SCP

Intruder Alarm - Panel
- Intruder Alarm - PIR Sensor
- K

Intruder Alarm - Keypad
- Intruder Alarm - Sounder
- DC

Intruder Alarm - Door Contact
- Intruder Alarm - Bell Box
- Intruder Alarm - Dummy Bell Box
- IOU

Intruder Alarm - Input Output Unit
- CR

Access Control - Card Reader
- Access Control - Push to Exit
- Access Control - Emergency Break Glass
- INT

Access Control - Intercom Unit
- ML

Access Control - Magnetic Lock
- DCU

Access Control - Door Control Unit
- CCTV Camera

| | | | |
|-----|-----------------------------------------------------------------|----------|------------|
| p02 | Issued for Full CP's - Updated in line with Caledonian Comments | MB | 11.08.2020 |
| P01 | Issued for Full CP's | MB | 03.07.2020 |
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Client:



Project
Buckton Fields Primary School

Title
First Floor
Proposed Security Layout
Sheet 2 of 2

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

FS0816 - WLK - 00 - 01 - DR - E - 75 - 0004

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

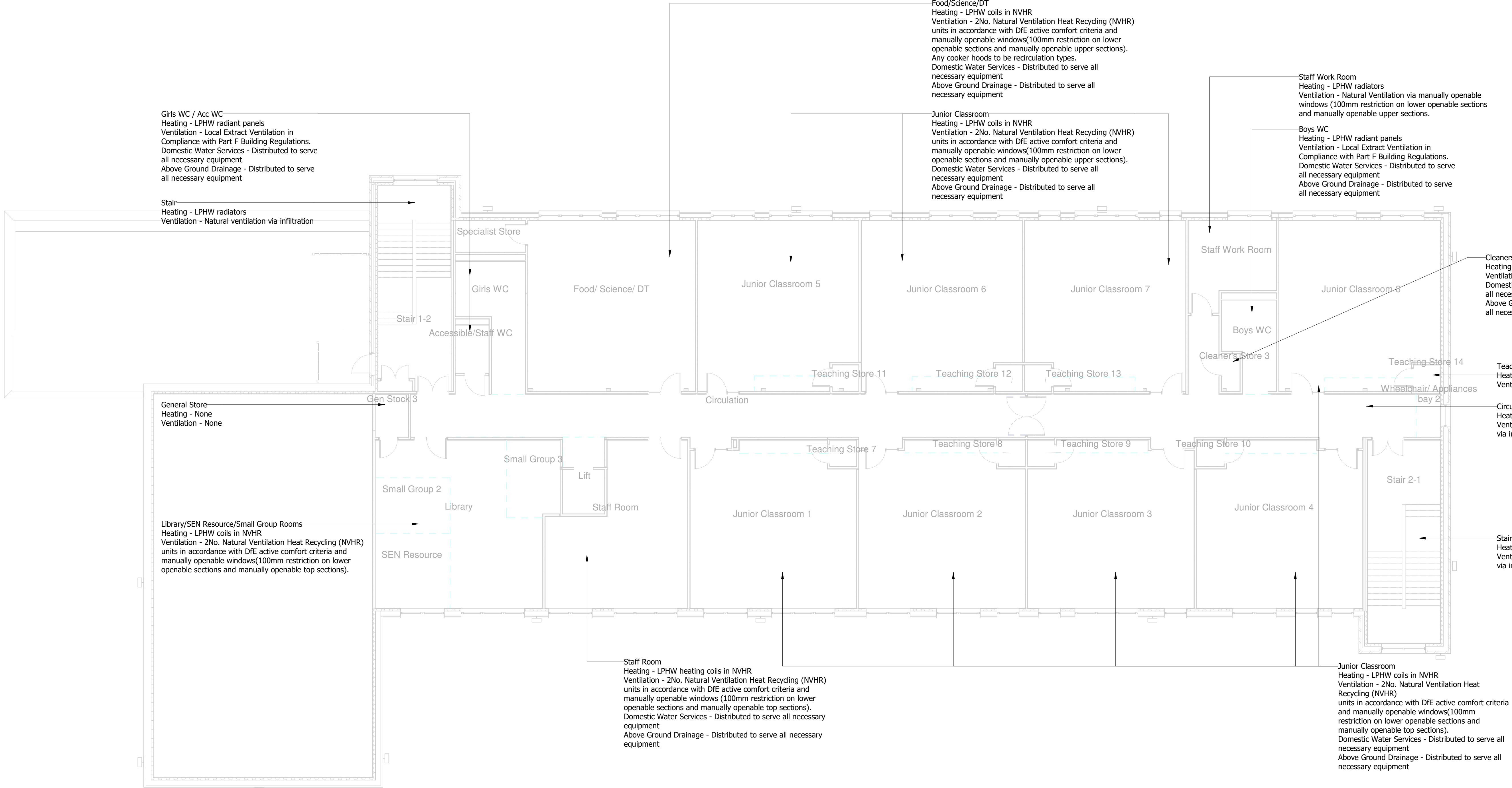
Scale Created Revision

As indicated @ A0 June 20 P02

Project Lead Drawn M.B. Checked M.C.

M.C. Reviewed M.C. Approved A.L. for Issue





1 First Floor Mechanical Services Strategy
1 : 100

- Notes
1. If in doubt, ask the Project Lead.
 2. Do not scale this drawing.
 3. All dimensions are in millimetres unless stated otherwise.
 4. This drawing is to be read in conjunction with all other relevant drawings and specifications.
 5. All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

| | | | |
|-----|----------------------------------|----------|------------|
| P04 | Issued for Full CPs | RTL | 03.07.2020 |
| P03 | Updated for Design Team Comments | MAB | 22.04.2020 |
| P02 | Issued for Draft CP's | MC | 06.04.2020 |
| P01 | Issued for CEM 5 review | MC | 12.03.2020 |
| Rev | Amendments | Rev'd By | Date |

Client



Project
Buckton Fields Primary School

Title
First Floor
Mechanical Services Strategy

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

FS0816 - WLK - 00 - 01 - DR - M - 00 - 0001

Internal Project Reference

190280

Suitability | Suitable For

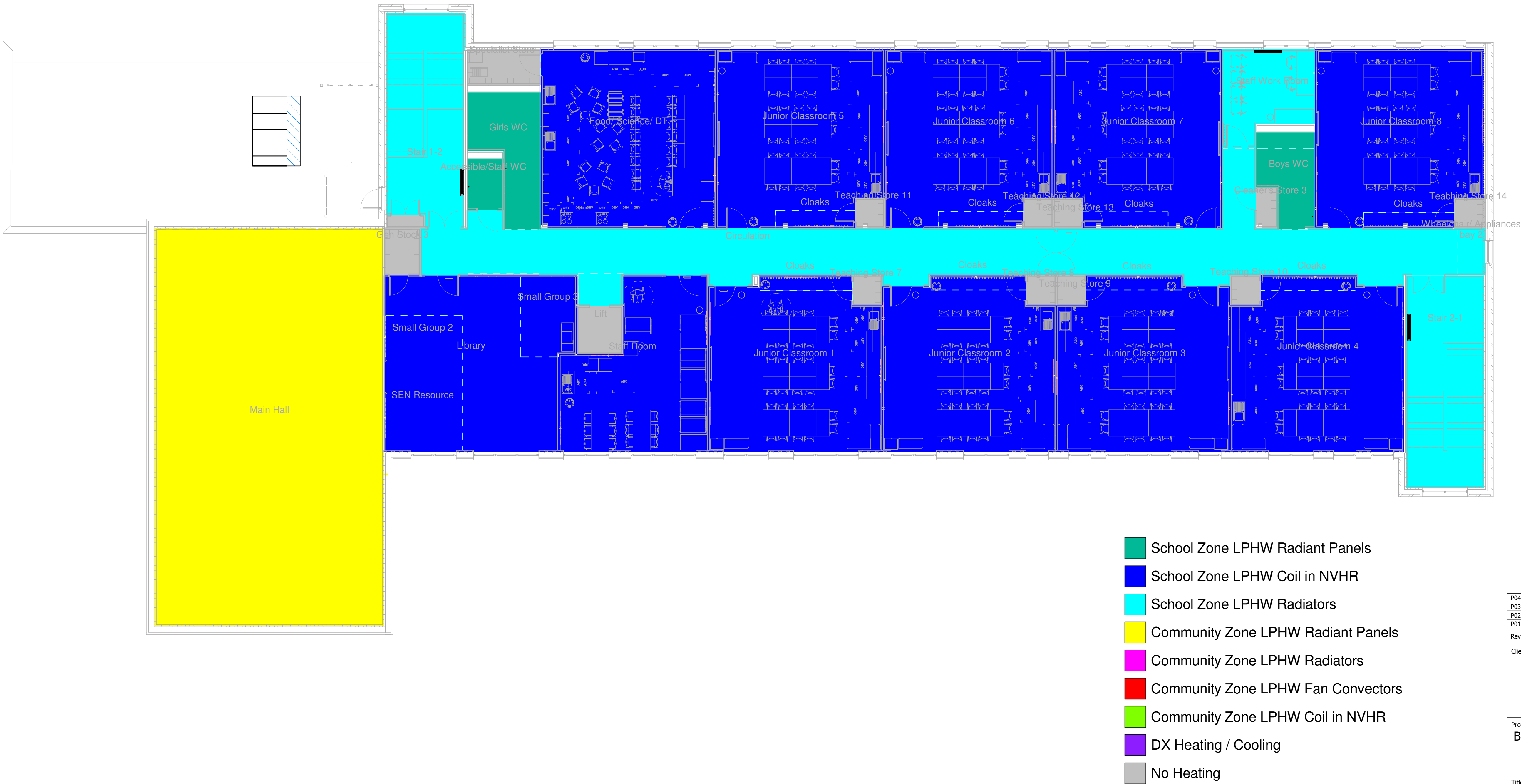
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|--------------|---------|----------|
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| 1 : 100 @ A1 | Feb 20 | P04 |

| | | | | |
|--------------|-------|----|--------------|-----------------------|
| Project Lead | Drawn | MC | Checked | MAB |
| MC | | | Reviewed CTH | Approved AI for Issue |



- Notes
- If in doubt, ask the Project Lead.
 - Do not scale this drawing.
 - All dimensions are in millimetres unless stated otherwise.
 - This drawing is to be read in conjunction with all other relevant drawings and specifications.
 - All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.



1 First Floor Heating & Cooling Strategy
1 : 100

| | | | |
|-----|----------------------------------|----------|------------|
| P04 | Issued for Full CPs | RTL | 03.07.2020 |
| P03 | Updated for Design Team Comments | MAB | 22.04.2020 |
| P02 | Issued for Draft CPs | MC | 06.04.2020 |
| P01 | Issued for CEM 5 review | MC | 12.03.2020 |
| Rev | Amendments | Rev'd By | Date |

Client



Project
Buckton Fields Primary School

Title
First Floor
Heating/Cooling Zoning Strategy

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

FS0816 - WLK - 00 - 01 - DR - M - 00 - 0002

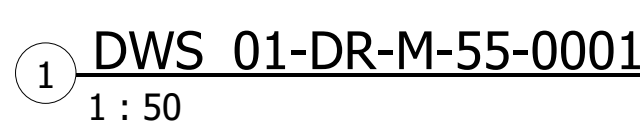
Internal Project Reference
190280

Suitability | Suitable For
S4 - Suitable for Stage Approval

| | | |
|--------------|---------|----------|
| Scale | Created | Revision |
| 1 : 100 @ A1 | Feb 20 | P04 |

| | | | | |
|--------------|----------|-----|-----------|-----|
| Project Lead | Drawn | MC | Checked | MAB |
| MC | Reviewed | CTH | Approved | AI |
| | | | for Issue | |





Notes

1. If in doubt, ask the Project Lead.
2. Do not scale this drawing.
3. All dimensions are in millimetres unless stated otherwise.
4. This drawing is to be read in conjunction with all other relevant drawings and specifications.
5. All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

1. The domestic water services installation shall comply with the Mechanical Performance Specification and all relevant legislation.
2. The design shown on this drawing is indicative only and the Contractor shall be responsible for the design/sizing of the services and co-ordination with the building fabric and other services in the building.
3. All invert levels shown from the finished floor level of the storey indicated to the centerline of the pipeline.
4. Provision shall be made for pipework flushing, chlorination and cleaning
5. Air vents shall be provided to all high points and draincocks at low points. All air vents at the top of the riser shall be the automatic type, complete with shock arrestors
6. All pipework to be identified in accordance with BS1710
7. All domestic pipework will be in copper to BS EN 1057 unless stated otherwise
8. Isolation ball valves to be provided on all final connections to appliances and sanitaryware to facilities maintenance.
9. All components of the domestic services system to be WRAS approved
10. All hot & cold water pipework within ceiling voids, boxings, risers and plant spaces to be insulated. All cold water pipework will be vapour sealed.
11. Exposed pipework in kitchens and WCs shall be chrome plated. Elsewhere exposed pipework will be painted to the architect's specification.
12. All pipework will be pressure tested prior to installation.
13. All pipework penetrating fire compartment walls and shafts will be fire stopped by the mechanical contractor.
14. Blended water pipework not to exceed 2 meters from the device to point of discharge and to be within the same overall length from the circulation return pipe connection
15. Blended hot water to be provided to all necessary outlets in the form of separate thermostat mixing valves or mixers taps with isolation, with the exception of cleaners & mop sinks



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Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

You Must Not Do

Hazard or Danger

You Must Do

Caution

Abnormal Risks Identified:
1. No Abnormal Risks Identified

- Notes
1.

If in doubt, ask the Project Lead.
2.

Do not scale this drawing.
3.

All dimensions are in millimetres unless stated otherwise.
4.

This drawing is to be read in conjunction with all other relevant drawings and specifications.
5.

All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Domestic Water Services

1.

The domestic water services installation shall comply with the Mechanical Performance Specification and all relevant legislation.
2.

The design shown on this drawing is indicative only and the mechanical Contractor shall be responsible for the design/izing of the services and co-ordination with the building fabric and other services in the building.
3.

All invert levels shown from the finished floor level of the storey indicated to the centerline of the pipeline
4.

Provision shall be made for pipework flushing, chlorination and cleaning
5.

Air vents shall be provided to all high points and draincocks to all low points.All air vents at the top of the of risers to be the automatic type, complete with shock arrestors
6.

All pipework to be identified in accordance with BS1710
7.

All domestic pipework will be in copper to BS EN 1057 unless stated otherwise
8.

Isolation ball valves to be provided on all final connections to appliances and sanitaryware to facilities maintenance.
9.

All components of the domestic services system to be WRAS approved
10.

All hot & cold water pipework within ceiling voids, boxings, risers and plant spaces to be insulated. All cold water pipework will be vapour sealed.
11.

Exposed pipework in kitchens and WC's shall be chrome plated. Elsewhereany exposed pipework will be painted to the architect's specification.
12.

All pipework will be pressure tested prior to installation.
13.

All pipework penetrating fire compartment walls and slabs will be fire stopped by the mechanical contractor.
14.

Blended water pipework not to exceed 2 meters from blended device to point of discharge and to be within the meter overall length from the circulation return pipe connection
15.

Blended hot water to be provided to all necessary outlets in the form of separate thermostatic mixing valves or mixer taps with integral TMV with the exception of cleaners & kitchen sinks



1DWS 01-DR-M-55-0002

1 : 50

| | | | |
|--------|---------------------|----------|------------|
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| Rev | Amendments | Rev'd By | Date |
| Client | | | |



Project

Buckton Fields Primary School

Title

First Floor
Domestic Water Services
Layout (2 of 2)

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

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Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

| | | |
|-------------------|-----------|----------|
| Scale | Created | Revision |
| As indicated @ A0 | Jun 20 | P01 |
| Project Lead | Drawn | RTL |
| MC | Checked | MAB |
| | Reviewed | CTH |
| | Approved | AI |
| | For Issue | |



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1.

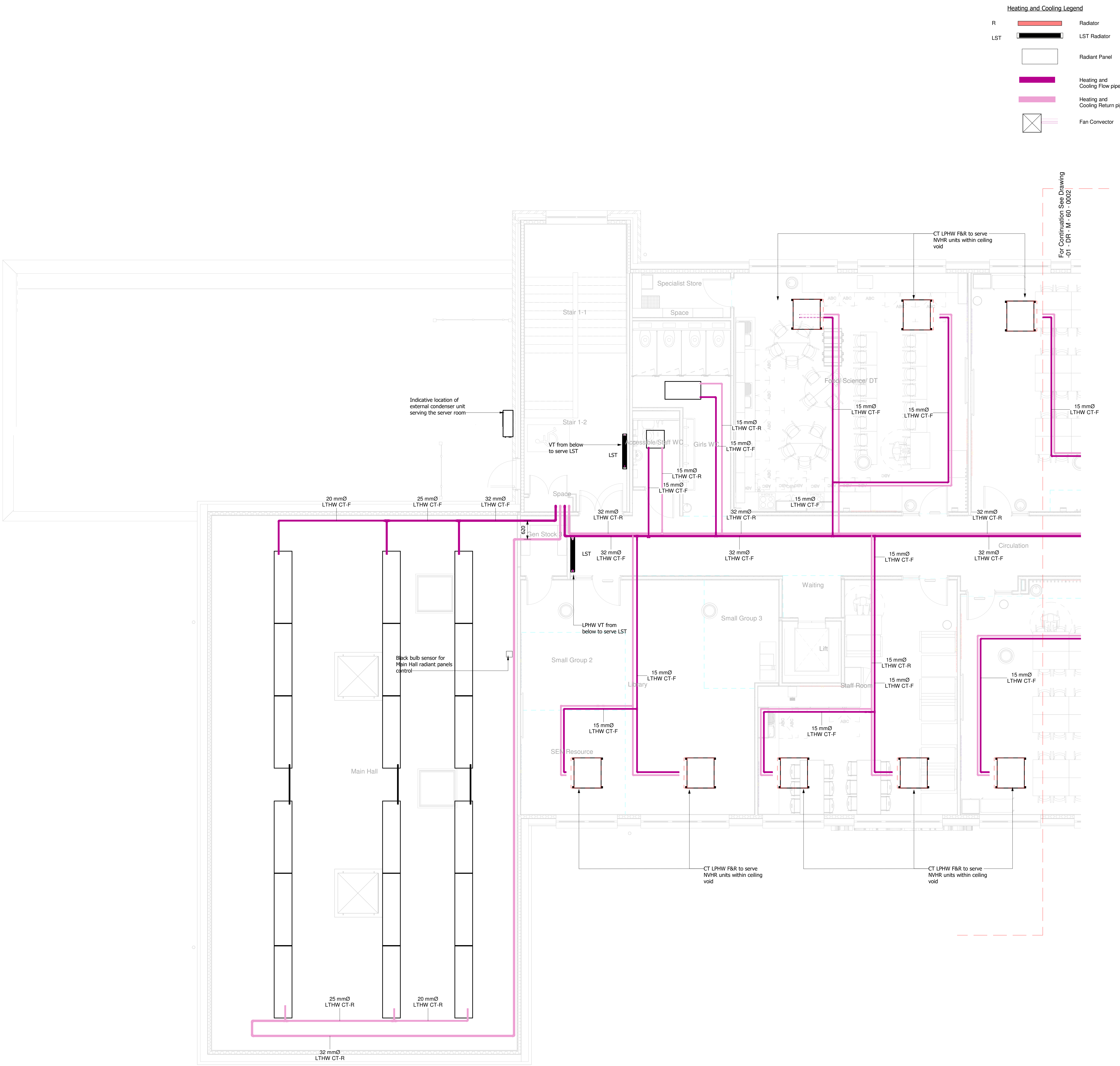
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2.

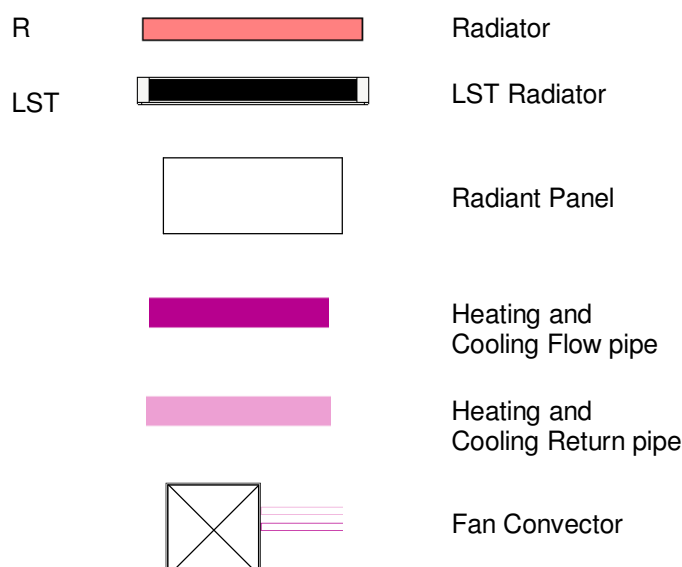
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Heating and Cooling Legend



Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

- You Must Not Do
- Hazard or Danger
- You Must Do
- Caution

Abnormal Risks Identified:
1. No Abnormal Risks Identified

- Notes**
- If in doubt, ask the Project Lead.
 - Do not scale this drawing.
 - All dimensions are in millimetres unless stated otherwise.
 - This drawing is to be read in conjunction with all other relevant drawings and specifications.
 - All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.
- LPHW Notes**
- The LPHW heating services installation shall comply with the Mechanical Performance Specification and all relevant legislation.
 - The design shown on this drawing is indicative only and the Mechanical Contractor shall be responsible for the design/sizing of the services and co-ordination with the building fabric and other services in the building.
 - All invert levels shown from the finished floor level of the storey indicated to the centerline of the pipeline unless stated otherwise.
 - Pipelines for LPHW Heating pipework to be mild steel tubes to BS EN 10255 unless stated otherwise.
 - Provision shall be made for pipework flushing and cleaning. Air vents shall be provided to all high points and draincocks to all low points. All air vents at the top of the of the risers to be the automatic type, complete with shock arrestors.
 - PICVs to AHU heater & cooling coils to be flanged & isolated connection to be provided to enable coil withdrawal in future.
 - Refer to standard details on the associated schematic for pump layout details.
 - Flushing loops to be provided to all devices.
 - All equipment, valves, sensors etc to be labelled in accordance to room reference for all working drawings.
 - All pipework to be identified in accordance with BS 1710.
 - All LPHW heating pipework to be insulated unless stated otherwise.
 - All pipework to be pressure tested prior to installation.
 - All external weather louvers will be heavy duty type.
 - Ensure that all IV's on index run are opened prior to pump starts-up.
 - Pressure independent control valve should include:
 - 2 port valve
 - Integrated valve controller (motorised)
 - Integrated flow limiter
 - Integrated pressure differential valve

1 Heating 01-DR-M-60-0001
1 : 50

| Rev | Amendments | Rev'd By | Date |
|-----|---------------------|----------|------------|
| P01 | Issued for Full CPs | RTL | 03.07.2020 |



Project
Buckton Fields Primary School

Title
First Floor
Proposed Heating and Cooling
Layout (1 of 2)

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - M - 60 - 0001

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

Scale
As indicated @ A0 Jun 20 P01

Project Lead
MC

Reviewed CTH Approved AI
For Issue

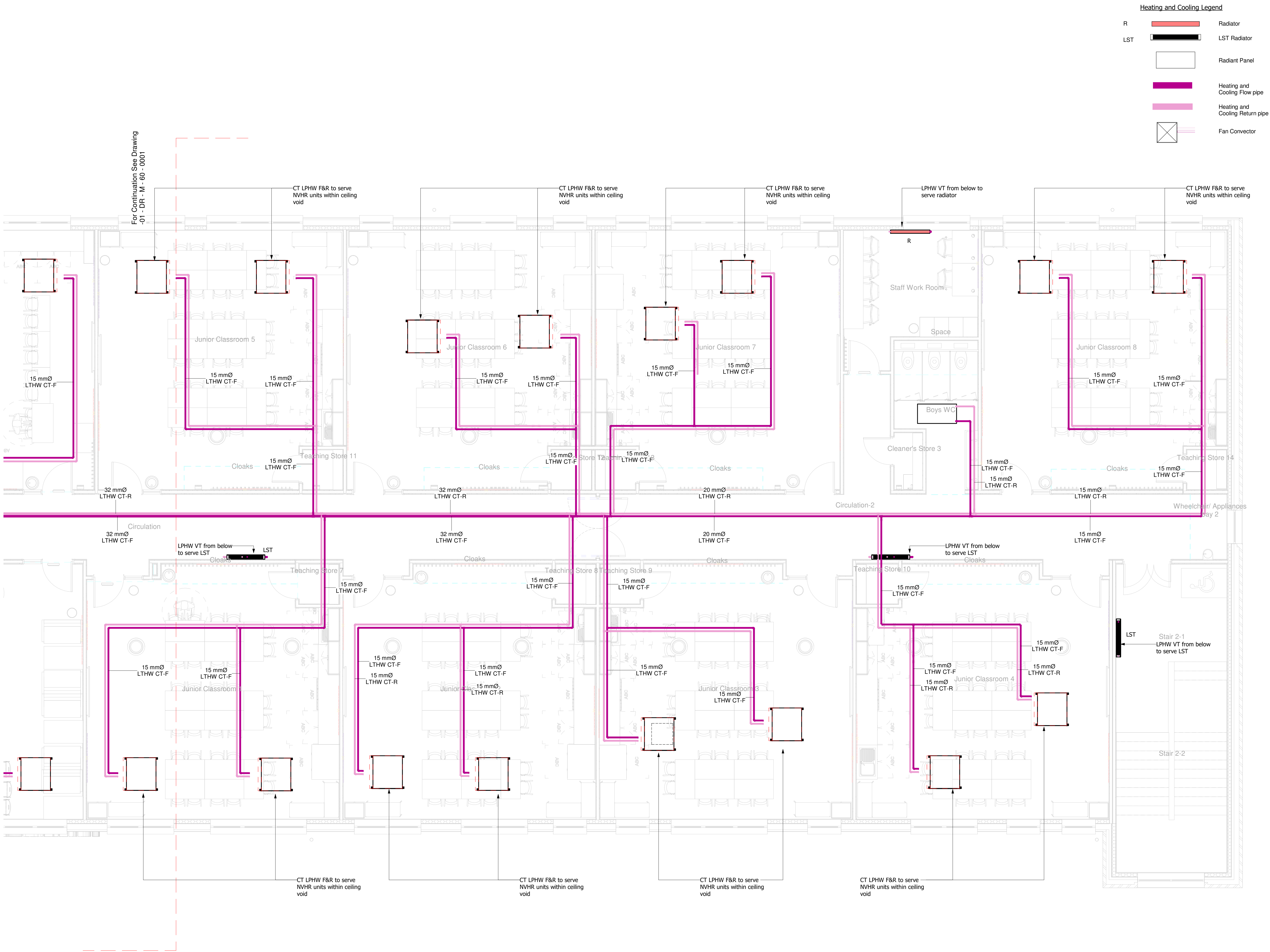


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2. The initial feasibility pre-contract designs specifications, cost plans, bill of quantities, feasibility studies and all other documents or media whether electronic or hard copy are indicative only and could be subject to changes in statute or other rules and regulations and changes in the Employer's requirements and will be subject to design development until such time as Waldeck's Services are engaged under a formal written appointment that pays for an appropriate fee at commercial rates. Use of these documents or media shall be entirely at the risk of the person using it. No reliance on these documents shall be permitted and full copyright is retained by Waldeck. Waldeck accepts no responsibility for reliance on these documents or media and it is assumed that the Contractor or Developer or Client has made sufficient provision for design development risk where a full design has not been commissioned. No waiver of the endorsement shall be permitted except in writing and signed by a Director of Waldeck as recorded at Companies House.

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Construction, Design and Management Regulations 2015

The Contractors attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

⊘ You Must Not Do
⚠ Hazard or Danger
ⓘ You Must Do
⚡ Caution

Abnormal Risks Identified:
1. No Abnormal Risks Identified

Notes

- If in doubt, ask the Project Lead.
- Do not scale this drawing.
- All dimensions are in millimetres unless stated otherwise.
- This drawing is to be read in conjunction with all other relevant drawings and specifications.
- All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

LPHW Notes

- The LPHW heating services installation shall comply with the Mechanical Performance Specification and all relevant legislation.
- The design shown on this drawing is indicative only and the Mechanical Contractor shall be responsible for the design/sizing of the services and co-ordination with the building fabric and other services in the building.
- All invert levels shown from the finished floor level of the storey indicated to the centreline of the pipeline unless stated otherwise.
- Pipelines for LPHW Heating pipework to be mild steel tubes to BS EN 10255 unless stated otherwise.
- Provision shall be made for pipework flushing and cleaning. Air vents shall be provided to all high points and draincocks to all low points. All air vents at the top of the of risers to be the automatic type, complete with shock arrestors.
- PLCVs to AHU heater & cooling coils to be flanged & isolated connection to be provided to enable coil withdrawal in future.
- Refer to standard details on the associated schematic for pump layout details.
- Flushing loops to be provided to all devices.
- All equipment, valves, sensors etc to be labelled in accordance to room reference for all working drawings.
- All pipework to be identified in accordance with BS 1710.
- All LPHW heating pipework to be insulated unless stated otherwise.
- All pipework to be pressure tested prior to installation.
- All external weather louvers will be heavy duty type.
- Ensure that all ITVs on index run are opened prior to pump start-up.
- Pressure independent control valve should include:
 - 2 port valve
 - Integrated valve controller (motorised)
 - Integrated flow limiter
 - Integrated pressure differential valve

1 Heating_01-DR-M-60-0002
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| P01 | Issued for Full CPs | RTL | 03.07.2020 |
| Rev | Amendments | Rev'd | By |
| Client | | | Date |



Project
Buckton Fields Primary School

Title
First Floor
Proposed Heating and Cooling
Layout (2 of 2)

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - M - 60 - 0002

Internal Project Reference

190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

Scale Created Revision
As indicated @ A0 Jun 20 P01

Project Lead Drawn RTL Checked MAB

MC

Reviewed CTH Approved AI
For Issue



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S60 5WS
0142 994 077

Construction, Design and Management Regulations 2015

The Contractor's attention is drawn to the abnormal risks identified below, annotated on the drawing and explained in the associated design risk registers.

Legend

- You Must Not Do
- Hazard or Danger
- You Must Do
- Caution

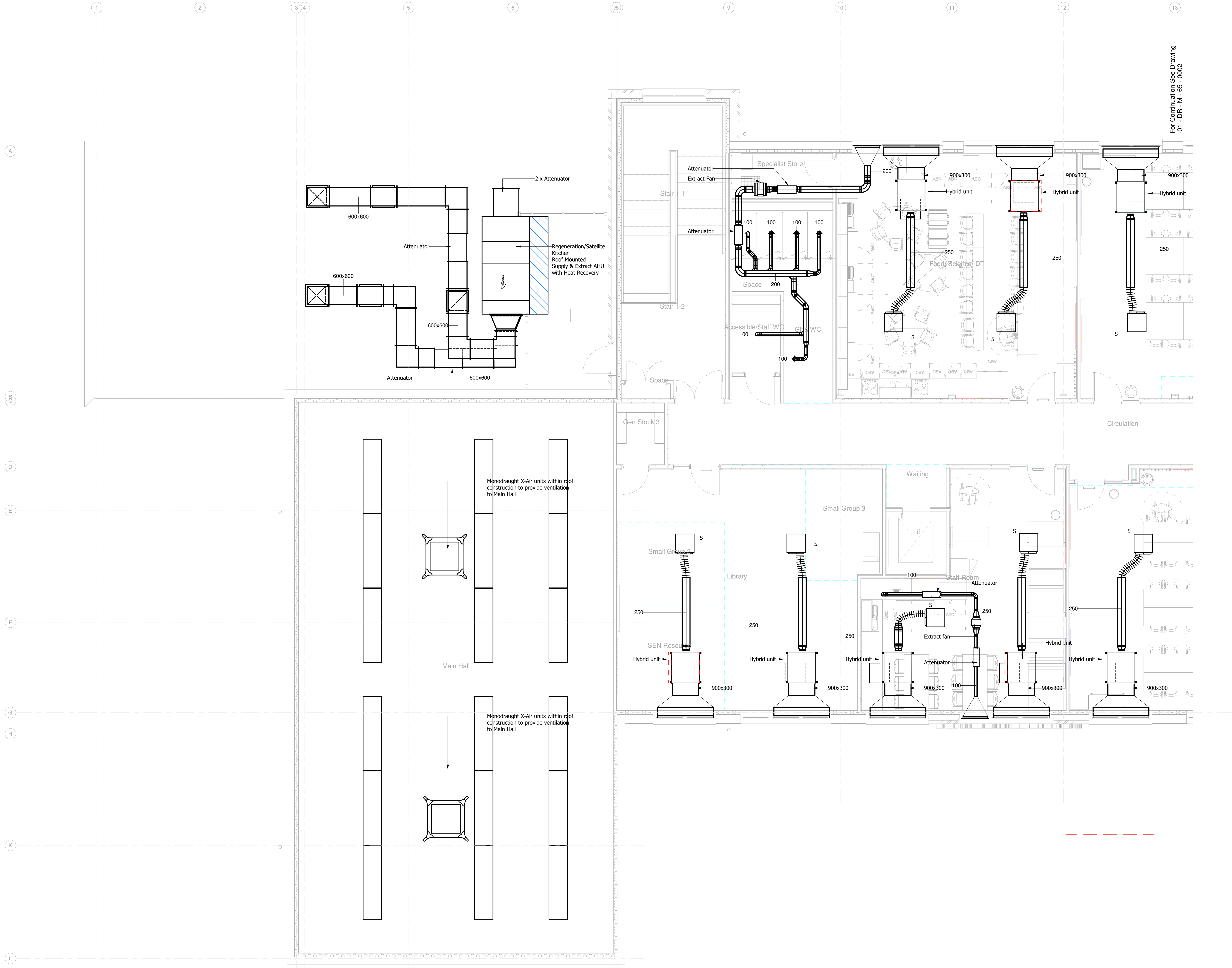
Abnormal Risks Identified:
1. No Abnormal Risks Identified

Notes

- If in doubt, ask the Project Lead.
- Do not scale this drawing.
- All dimensions are in millimetres unless stated otherwise.
- This drawing is to be read in conjunction with all other relevant drawings and specifications.
- All Proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Ventilation Notes

- The ventilation ductwork installation shall comply with the mechanical Performance Specification and all relevant legislation
- The design shown on this drawing is indicative only and the mechanical Contractor shall be responsible for the design /sizing of the services and co-ordination with the building fabric and other services in the building
- All invert levels shown from the finished floor level of the storey indicated to the centerline of the duct unless stated otherwise
- All ductwork exceeding 1:4 ratio (depth:width) will require splitters
- Location of access door in ductwork to comply with DW144 Table 20 (page 92) and TR19 Table 3 (page 13). As a minimum to be provided adjacent all fire dampers, volume control dampers and heater batteries, either side of bends and at maximum 12m intervals on ductwork runs.
- All ductwork to be identified in accordance with BS 1710
- All supply & return air ductwork running in risers, ceiling voids and plant spaces will be insulated with the exception of extract ductwork from which heat is not recovered and supply ductwork carrying tempered air in open spaces it is serving and associated return air ductwork will not be insulated.
- All louvres will be provided with bird mesh. Access panels provided to be installed in connecting ductwork to allow cleaning.
- Flexible connections to be provided on either side of each fan.
- All ductwork to be manufactured, installed, tested and commissioned in compliance with HVCA DW144, DW143, DW172 and CIBSE commissioning codes
- All Ductwork penetrating a fire compartment / structure shall be provided with a fire / smoke damper in accordance with the building fire strategy.



1 Ventilation 01-DR-M-65-0001
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|-----|----------------------------------------------------------------|----------|------------|
| pg2 | Issued for Full CPs - Updated in line with Caledonian Comments | RTL | 13.08.20 |
| P01 | Issued for Full CPs | RTL | 03.07.2020 |
| Rev | Amendments | Rev'd By | Date |

Client:



Project
Buckton Fields Primary School

Title
First Floor
Proposed Ventilation
Layout (1 of 2)

Drawing Number (Project, Originator, Volume, Level, Type, Role, Class & No.)

F50816 - WLK - 00 - 01 - DR - M - 65 - 0001

Internal Project Reference
190280

Suitability | Suitable For

S4 - Suitable for Stage Approval

| | | |
|-------------------|---------|----------|
| Scale | Created | Revision |
| As indicated @ A0 | Jun 20 | P02 |

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|--------------|-------|-----|---------|-----|
| Project Lead | Drawn | RTL | Checked | MAB |
| MC | | | | |

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|----------|-----|-----------|----|
| Reviewed | CTH | Approved | AI |
| | | For Issue | |

