

# Fire Damper Testing Report

CERTIFICATE OF DAMPER INSPECTION AND TESTING IN ACCORDANCE WITH BS 9999

This safety certificate is an important and valuable document which should be retained for future reference

Certificate:	<b>SO-369168</b>	Inspection Date:	<b>05/12/2024</b>
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Facility Manager:	<b>Calibre Building Services Ltd</b>
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Building:	<b>60 Great Tower Street BD00196</b>
Address:	<b>London, EC3R 5AZ, United Kingdom</b>

Purchase Reference:	<b>111900</b>	Representative:	<b>Mark Vine</b>
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I recommend that this installation is further inspected and tested after an interval of not more than	<b>12 months</b>	<b>05/12/2025</b>
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Summary:

**Fire and smoke damper test and inspection carried out but limited to 20 assets. Level 10 plant room serviced and portion of level 9. Each level has 8 damper entering the tenanted areas via landlord areas [2x North mechanical riser, 2x South mechanical riser, 2x East entrance and 2x West entrance]. Estimated additional 60 assets onsite.**

All fire and smoke damper inspectors are trained to follow BS 9999 and best of practice guidance, exercising reasonable skill, knowledge, experience and behaviour during the inspection and testing. QS Inspector:	<b>Sam Northcott</b>	<b>OP0002</b>
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<u>Report Content</u>		
Section 1:	<b>Guidance</b>	- Regulation and Standards
Section 2:	<b>Service</b>	- Inspection and testing procedure
Section 3:	<b>Summary</b>	- Number of assets found and tested, number of defects identified
Section 4:	<b>Asset Register</b>	- List of assets located and serviced during visit within scope of work
Section 5:	<b>Defects Log</b>	- List of defects logged against assets
Section 6:	<b>Asset Pages</b>	- Service sheet for each damper asset
Section 7:	<b>Compartment</b>	- Supplementary observations of compartment barrier(s) condition
Section 8:	<b>Hygiene</b>	- Supplementary observations of ducting hygiene
Section 9:	<b>Inventory</b>	- List of damper assets and specifications
Section 10:	<b>Competencies</b>	- List of company and operative Competencies
Section 11:	<b>Notes</b>	- Notes



## Report Section 1 Guidance

The UK Government legislation “The Regulatory Reform (fire safety) Order (RRO) 2005” came into effect in October 2006 and had a major impact on responsibility for fire safety. The RRO changed the responsibility for a facility’s fire safety system to the organisation’s “responsible person”. Typically, that responsible person is the employer, or the owner of the facility.

The fire safety systems that must be kept in order include all active and passive fire protection systems. Such as fire dampers which form part of a building ventilation system and are installed where air handling ducts pass through fire-separating elements such as compartment walls or enclosures protecting escape routes.

Typically, a fire damper is a metal curtain within a duct held up by a thermal element (referred to as a fusible link) and released in the event of a rise in temperature. The thermal element will melt at a set temperature releasing a spring-operated metal curtain, which is pulled down to fill the opening the duct passes through, preventing the passage of fire. Fire and smoke dampers are linked to the fire alarm system and automatically operated once triggered by smoke detectors.

### British Standards

British Standard 9999:2017 Code of Practice for Fire Safety in the Design, Management & Use of Buildings states that “Arrangements should be made for all fire dampers to be tested by a competent person on completion of the installation and at least annually, and to be repaired or replaced immediately if found to be faulty. Spring-operated fire dampers should be tested annually, and fire dampers situated in dust-laden and similar atmospheres should be tested much more frequently, at periods suited to the degree of pollution”.

### Best of Practice

The National Association of Air Duct Specialists UK [NAADUK] has developed the most comprehensive guidance documents available for indoor air quality and fire damper servicing, installation, and design. Working with various other associations bodies they strive to continually improve industry standards by enhancing training, development and awareness across the country for this critical fire safety system. Key Documents:

**NAAD-21** – AIR (Indoor Air Quality) - Regulation Guidance standards for Indoor Air Quality in occupied zones

**NAAD-22** – Fire Damper guidance document for ‘Routine Maintenance, Testing & Inspection’.

### The Golden Thread

As part of the golden thread initiative, it is important that a test and inspection report is issued upon completion of a fire damper service and stored for future reference at any time. This document contains important information regarding the safety of the building and its occupiers/residents and must be made easily accessible in digital format.

## Report Section 2 Service

All our damper inspection and testing is carried out by trained and competent person(s). Our damper technicians will follow good practice and guidance contained within NAAD-22 [Fire Dampers] standards, and other relevant sources such as BESA DW/145 and VH001 guidance documents.

Our damper technicians will carry out an intrusive survey of the building within the agreed parameters and endeavor to locate and service all dampers. Should a ventilation drawing be provided, our technicians will update and annotate details of any extra findings. An asset register will be generated for all dampers located, along with a summary of test results and photographic evidence of inspection details and operational test.

Firstly, when a damper is located the technician will assess the safest means of access for inspection and clear any obstructions (within reason). Should there be an accessibility issue or obstruction preventing access these will be recorded as required remedial actions.

To reach fire damper compliance each damper must be inspected, and a drop test carried out. The first step in the fire damper test procedure is a visual inspection. It is the responsibility of the technician to carry out a 'detailed' inspection of the damper installation, assessing if it has followed the manufacturer installation details and/or NAAD-22 [Fire Dampers] guidance [to the best of their knowledge]. The visual inspection is carried out on the damper to ensure the following:

- Correct damper frame used to secure the damper position and integrated with the fire barrier compound.
- Installation is at the correct orientation.
- Transit tape over the fuse link has been removed and fusible link or bar is in good condition, with no visible signs of damage or solder decay.
- All galleys are clear from obstructions and springs are mounted securely and not twisted.
- No serious signs of corrosion on damper frame casing or adjacent ductwork.

Many faults or defects can be identified during the initial inspection. Should there be an accessibility issue, obstruction, or damage to the damper, these will be noted as required remedial actions. Once all visual inspections are complete and satisfactory, a drop test can be carried out. During a fire damper test the technician will:

- Manually release the fusible link and allow the curtain to drop into the closed position.
- Ensure the damper curtain closes fully, visually checking that the bottom curtain blade locks onto the locking-ramp.
- Damper will be cleaned if required (and lubricated if advised in manufacturer maintenance manual)
- Damper shall then be opened and re-set, ensuring the bottom blade remains parallel with the top of the damper.
- Photographic evidence will be taken of the damper in the 'as found' position, close position and reset position.

### Supplementary Observations

Our damper technicians will also carry out some additional observations of the wider compartment condition and duct cleanliness as these factors will also impact the damper performance and effectiveness.

As part of a damper inspection the technician will carry out an inspection of the fire barrier. The fire barrier inspection is generally limited to the immediate proximity of the damper position; however, as a fire damper is there to protect the fire compartment as a whole [whilst facilitating the passage of ventilation services], the technician will record any concerns or observations of the wider compartment condition and suitability [to the best of their knowledge]. NAAD-21 states "If a technician spots any breach in a partition of a compartment, they are legally obliged to report it".

Ventilation systems control the air that we breathe inside buildings. The quality of the air can be influenced by maintenance or lack of and the local environment. In many cases BS9999 has recognized that heavy build-up of dust and debris with the system can be a fire risk. Our technicians will also assess the general cleanliness & hygiene of the duct at each damper location.

## Summary of Test Results

<b>Total Number of Dampers:</b>	<b>20</b>
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<b>Satisfactory dampers:</b>	<b>7</b>
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Satisfactory dampers which have been correctly installed, healthy fire barrier surrounding the damper, and proven effective with an operational test. The technician has recorded:

- Damper appears to have been installed correctly in accordance with relevant manufacturer IOMs and/or best of practice guidance [sometimes the installation inspection can be limited should the damper casing and support method be fully enclosed within the fire stopping elements, such as an installation prior to construction of a partition wall].
- The surrounding fire barrier is intact and in good condition with no unprotected breaches or concerns.
- Successful operational test or activation has been achieved and the damper is in good health and condition.

<b>Dampers with installation defects:</b>	<b>0</b>
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The purpose of the inspection and test is to ensure a fire damper installation and operational health is not compromising the fire compartment in any way. The technician has a responsibility to record any deviations from the manufacturer IOMs [relevant from the point of installation] and/or best of practice guidance. The technician has recorded:

- Incorrect damper frame or type and/or not correctly integrated into the compartment system.
- Insufficient clearances and/or unsuitable penetration mix for compartment system.
- No breakaway joints installed [tek screws].
- Minor gaps and/or unprotected breaches on the surrounding fire barrier, and/or unsuitable compound used for penetration seal.

Although a damper may be in good health and proven to operate, any significant deviations from manufacturer IOMs and/or best of practice guidance cannot be proven in test data as a 'effective' system, therefore cannot be deemed satisfactory. All asset defects need to be logged in the building risk register and the 'responsible person' must seek consultation regarding a remedial program of works.

<b>Dampers with operational defects:</b>	<b>10</b>
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The purpose of a fire damper is to facilitate the passage of ventilation services whilst protecting the fire compartment for the relevant timeframe. Any failed operational test, major installation and/or fire barrier defects will be a potential point of failure for the compartment. The technician has recorded:

- The damper has failed to operate and no longer has the capacity to contain a fire within the relevant compartment.
- Damaged components such as broken springs or fusible links.
- Major installation concerns such as incorrect orientation, or poor damper positioning in relation to the compartment line.
- Poor damper health and signs of corrosion.
- Large compartment gaps or damage around damper position.

Dampers must be repaired or replaced immediately if found to be faulty, and assets logged with major defects must be prioritised in the remedial works.

<b>Limitation/Untested dampers:</b>	<b>3</b>
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Arrangements should be made for all fire dampers to be tested by a competent person on completion of the installation and at least annually. The technician has recorded:

- Limitation to the agreed scope of work
- Obstruction preventing access to damper position [clearance required]
- Inadequate means of access has been provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism [remedial actions required to clear access]

Report Section 4

## Asset Register



Sr No	Page	Asset Reference	Location Reference	Technician	Date	Fire Barrier Inspection	Installation Inspection	Health and Test	Status
1	7	A20360	Level 10 - Inside Chiller Plant Room	Sam Northcott	05/12/2024	✓	✗	✗	Defect
2	9	A20361	Level 10 - Inside Chiller Plant Room	Sam Northcott	05/12/2024	✓	✓	✓	Satisfactory
3	10	A20362	Level 10 - Inside Chiller Plant Room	Sam Northcott	05/12/2024	✓	✓	✓	Satisfactory
4	11	A20363	Level 10 - Inside Chiller Plant Room	Sam Northcott	05/12/2024	✓	Lim	✓	Satisfactory
5	12	A20364	Level 10 - Inside Chiller Plant Room	Sam Northcott	05/12/2024	✓	Lim	✓	Satisfactory
6	13	A20368	Level 10 - Lift motor room	Sam Northcott	05/12/2024	✓	Lim	✓	Satisfactory
7	14	A20367	Level 10 - Lift motor room	Sam Northcott	05/12/2024	✓	Lim	✓	Satisfactory
8	15	A20366	Level 10 - Roof Plantroom	Sam Northcott	05/12/2024	✓	Lim	✗	Defect
9	17	A20365	Level 10 - Roof Plantroom	Sam Northcott	05/12/2024	✓	Lim	✗	Defect
10	19	A20356	Level 10 - Roof plantroom	Sam Northcott	05/12/2024	✓	✗	✗	Defect
11	21	A20359	Level 10 - Roof plantroom	Sam Northcott	05/12/2024	✓	Lim	✗	Limitation
12	23	A20358	Level 10 - Roof plantroom	Sam Northcott	05/12/2024	✓	Lim	✗	Limitation
13	25	A20357	Level 10 - Roof plantroom	Sam Northcott	05/12/2024	✓	Lim	✗	Limitation
14	27	A20355	Level 10 - Roof plantroom	Sam Northcott	05/12/2024	✗	✗	✗	Defect
15	30	A20369	Level 9 - Male WC Service Riser	Sam Northcott	05/12/2024	✓	Lim	✓	Satisfactory
16	31	A20370	Level 9 - Male WC Service Riser	Sam Northcott	05/12/2024	✗	✗	✗	Defect
17	34	A20371	Level 9 - North Side Mechanical Riser	Sam Northcott	05/12/2024	Lim	Lim	Lim	Defect
18	35	A20372	Level 9 - North Side Mechanical Riser	Sam Northcott	05/12/2024	Lim	Lim	Lim	Defect
19	36	A20373	Level 9 - South Side Mechanical Riser	Sam Northcott	05/12/2024	Lim	Lim	Lim	Defect
20	37	A20374	Level 9 - South Side Mechanical Riser	Sam Northcott	05/12/2024	Lim	Lim	Lim	Defect

**Report Section 5**  
**Defect Log**

Asset No	Location Reference	Defects	Status
1	A20360	Level 10 - Inside Chiller Plant Room ▶ Installation- Incorrect Damper Frame/Type,Inadequate Supports,No Breakaway Joints Installed,Insufficient Clearances ▶ Test- Failed To Activate	Defect
2	A20366	Level 10 - Roof Plantroom ▶ AccessPanel- No Access Panel Installed	Defect
3	A20365	Level 10 - Roof Plantroom ▶ AccessPanel- No Access Panel Installed	Defect
4	A20356	Level 10 - Roof plantroom ▶ Installation- Inadequate Supports ▶ AccessPanel- No Access Panel Installed	Defect
5	A20359	Level 10 - Roof plantroom ▶ Test- Limitation - Smoke Extract System [BMS Controlled]	Defect
6	A20358	Level 10 - Roof plantroom ▶ Test- Limitation - Smoke Extract System [BMS Controlled]	Defect
7	A20357	Level 10 - Roof plantroom ▶ Test- Limitation - Smoke Extract System [BMS Controlled]	Defect
8	A20355	Level 10 - Roof plantroom ▶ FireBarrier- Small Compartmentation Gaps [Under 10x10cm] ▶ Installation- Inadequate Supports ▶ AccessPanel- No Access Panel Installed	Defect
9	A20370	Level 9 - Male WC Service Riser ▶ FireBarrier- Small Compartmentation Gaps [Under 10x10cm] ▶ Installation- Incorrect Damper Frame/Type,Inadequate Supports,No Breakaway Joints Installed,Insufficient Clearances ▶ AccessPanel- No Access Panel Installed	Defect
10	A20371	Level 9 - North Side Mechanical Riser ▶ Accessibility- Services Obstructing Access [No Access Arrangements],Ceiling Hatch Required [No Access Arrangements]	Defect
11	A20372	Level 9 - North Side Mechanical Riser ▶ Accessibility- Services Obstructing Access [No Access Arrangements],Ceiling Hatch Required [No Access Arrangements]	Defect
12	A20373	Level 9 - South Side Mechanical Riser ▶ Accessibility- Services Obstructing Access [No Access Arrangements],Ceiling Hatch Required [No Access Arrangements]	Defect
13	A20374	Level 9 - South Side Mechanical Riser ▶ Accessibility- Services Obstructing Access [No Access Arrangements],Ceiling Hatch Required [No Access Arrangements]	Defect

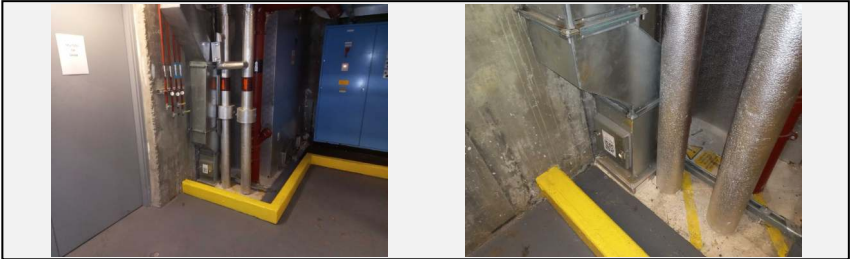


# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>		<b>QR Image</b>	
<b>Asset No:</b>	<b>A20360</b>			

<b>Location:</b>	<b>Level 10 - Inside Chiller Plant Room</b>
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<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>225x225</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



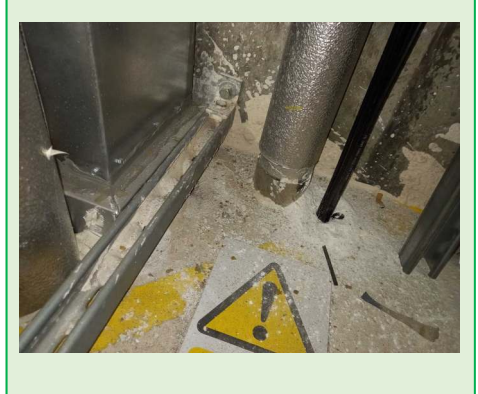
<b>Damper:</b>	<b>E Class: Mechanical fusible spring-operated fire damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	200 x 200mm
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Defect - Installation clearly deviates from manufacturer installation details and/or best of practice guidance - Inadequate supports, and/or incorrect damper frame to support and integrate with the fire barrier compound
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## Defect: Test

### Failed to Activate

Damper not responding to drop test upon the release of the fusible link or thermal release switch.

Fusible link damaged by tek screw unable to release



## Defect: Installation

### Insufficient Clearances

Minimum clearance between fire damper cases installed in separate ducts is 200mm [unless tested otherwise], and 75mm between the damper and an adjacent wall or floor [refer to BS EN 1366-2:2015 sections 7.3 and 13.6]

### Inadequate supports

Inadequate support(s) and/or not correctly integrated with the compartment system [refer to BS 9999:2017 - 32.5.2.5]

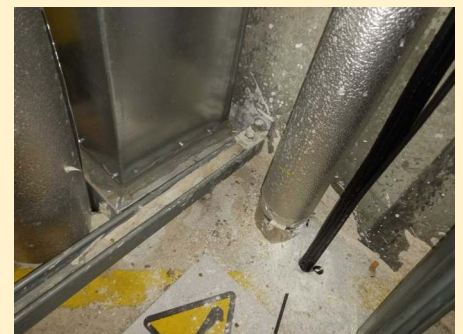
### Incorrect damper frame/type

Incorrect damper frame/type has been used for the compartment system. Installation has deviated from manufacturer IOMs or best of practice guidance [refer to BS 9999:2017 - 32.5.2.5]

### No breakaway joints installed


Screw [tek] fixings have been used to connect the ducting to the damper. Fixings need to be changed to a fire-resistant material with a low melting point such as aluminum or plastic to act as a breakaway joint [refer to BS 9999:2017 - 32.5.2.5]

Damper in poor position too close to wall and adjacent service pipe and no HEVAC frame to integrate into mortar fire break... tek screws used for damper duct connection





# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>	<b>QR Image</b> 
<b>Asset No:</b>	<b>A20361</b>	

<b>Location:</b>	<b>Level 10 - Inside Chiller Plant Room</b>
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<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>1800x600</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



<b>Damper:</b>	<b>ES Class: Motorised Fire &amp; Smoke Damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	460x250
<b>Accessibility [Both Sides]:</b>	No		




<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Satisfactory - Installation appears to follow manufacturer details and/or best of practice guidance - Correct damper frame, supported and suitable for integration with the fire barrier compound
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# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196	<b>QR Image</b>	
<b>Asset No:</b>	A20362		

<b>Location:</b>	Level 10 - Inside Chiller Plant Room
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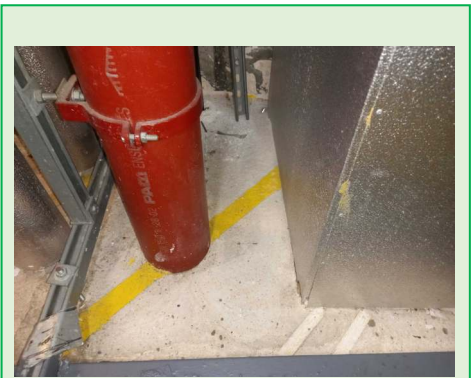
<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	1800x600
<b>Duct Shape:</b>	Square/Rectangle



<b>Damper:</b>	ES Class: Motorised Fire & Smoke Damper	<b>Orientation:</b>	Horizontal
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	460x250
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Satisfactory - Installation appears to follow manufacturer details and/or best of practice guidance - Correct damper frame, supported and suitable for integration with the fire barrier compound
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# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>	<b>QR Image</b>	
<b>Asset No:</b>	<b>A20363</b>		

<b>Location:</b>	<b>Level 10 - Inside Chiller Plant Room</b>
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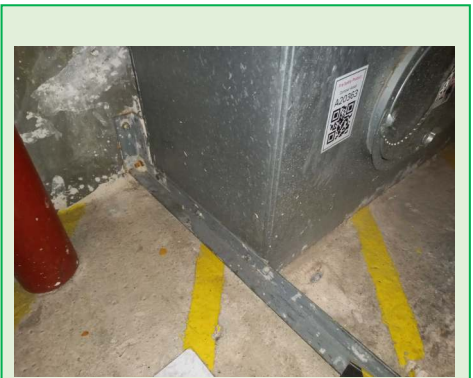
<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>950x400</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



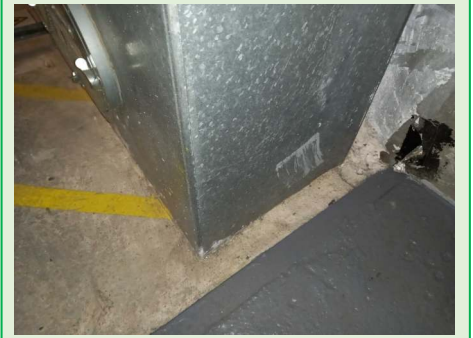
<b>Damper:</b>	<b>E Class: Mechanical fusible spring-operated fire damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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**Accessibility:** Safe Low Level

**Access Panel:** Access panel installed and accessible or not required  
**Shape:** Square/Rectangle      **Size:** 460x250  
**Accessibility [Both Sides]:** No




**Fire Barrier:** Masonry [and Fire Rated Mortar]



**Installation:** Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]

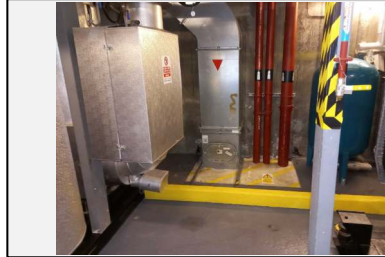


# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>	<b>QR Image</b>	
<b>Asset No:</b>	<b>A20364</b>		

<b>Location:</b>	<b>Level 10 - Inside Chiller Plant Room</b>
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<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>550x400</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



<b>Damper:</b>	<b>E Class: Mechanical fusible spring-operated fire damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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**Accessibility:** Safe Low Level

**Access Panel:** Access panel installed and accessible or not required  
**Shape:** Square/Rectangle      **Size:** 460x250  
**Accessibility [Both Sides]:** No




**Fire Barrier:** Masonry [and Fire Rated Mortar]



**Installation:** Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]

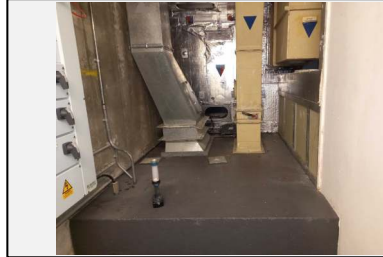


# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>	<b>QR Image</b> 
<b>Asset No:</b>	<b>A20368</b>	

<b>Location:</b>	<b>Level 10 - Lift motor room</b>
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<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>1400x800</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



<b>Damper:</b>	<b>ES Class: Motorised Fire &amp; Smoke Damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	460x250
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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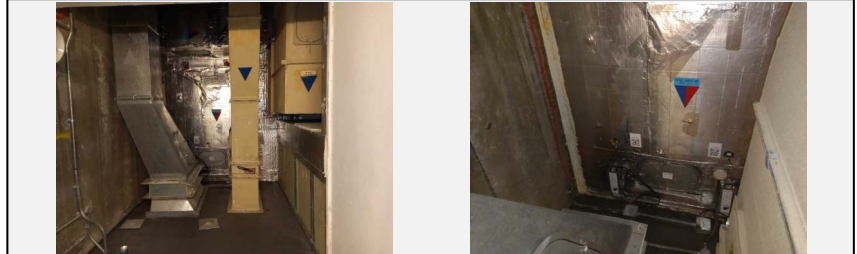


# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196	<b>QR Image</b> 
<b>Asset No:</b>	A20367	

<b>Location:</b>	Level 10 - Lift motor room
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	1400x800
<b>Duct Shape:</b>	Square/Rectangle



<b>Damper:</b>	ES Class: Motorised Fire & Smoke Damper	<b>Orientation:</b>	Horizontal
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	460x250
<b>Accessibility [Both Sides]:</b>	No		





<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20366			

<b>Location:</b>	Level 10 - Roof Plantroom
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	200
<b>Duct Shape:</b>	Circle



<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Horizontal
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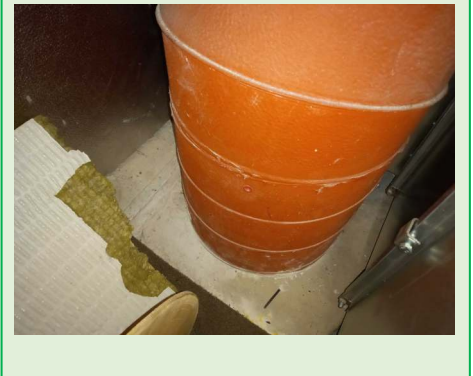
<b>Accessibility:</b>	Low level [caution]
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<b>Access Panel:</b>	Defect: no access panel installed		
<b>Shape:</b>	N/A	<b>Size:</b>	N/A
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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## Defect: AccessPanel



### No access panel installed

To enable the damper to be tested, inspected, and reset access panels need to be installed. Access panels shall be quick release insulated sealed panels, manufactured, and installed to BESA specification DW144 [BESA DW 144 - Section 20 Access/Inspection openings].

No access panel installed... New 400x200 access panel required



# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20365			

<b>Location:</b>	Level 10 - Roof Plantroom
------------------	---------------------------

<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	200
<b>Duct Shape:</b>	Circle



<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Horizontal
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**Accessibility:** Low level [caution]

**Access Panel:** Defect: no access panel installed  
**Shape:** N/A      **Size:** N/A  
**Accessibility [Both Sides]:** No

**Fire Barrier:** Masonry [and Fire Rated Mortar]

**Installation:** Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]







## Defect: AccessPanel

### No access panel installed



To enable the damper to be tested, inspected, and reset access panels need to be installed. Access panels shall be quick release insulated sealed panels, manufactured, and installed to BESA specification DW144 [BESA DW 144 - Section 20 Access/Inspection openings].

No access panel installed... New 400x200 access panel required





# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20356			

<b>Location:</b>	Level 10 - Roof plantroom
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	250
<b>Duct Shape:</b>	Circle



<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Horizontal
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<b>Accessibility:</b>	Safe Low Level
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<b>Access Panel:</b>	Defect: no access panel installed		
<b>Shape:</b>	N/A	<b>Size:</b>	N/A
<b>Accessibility [Both Sides]:</b>	No		

<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Defect - Installation clearly deviates from manufacturer installation details and/or best of practice guidance - Inadequate supports, and/or incorrect damper frame to support and integrate with the fire barrier compound
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## Defect: AccessPanel

### No access panel installed

To enable the damper to be tested, inspected, and reset access panels need to be installed. Access panels shall be quick release insulated sealed panels, manufactured, and installed to BESA specification DW144 [BESA DW 144 - Section 20 Access/Inspection openings].

No access panel installed on plantroom side with damper blade handle... very limited duct space for new access panel... New 150x150 access panel required with 250 saddle



## Defect: Installation



### Inadequate supports

Inadequate support(s) and/or not correctly integrated with the compartment system [refer to BS 9999:2017 - 32.5.2.5]

Mounting plate needs to be fixed to mortar fire break

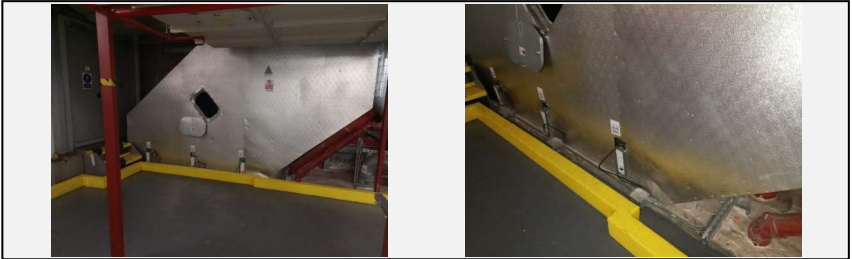


# Asset Checksheet

<b>Building:</b>	<b>60 Great Tower Street BD00196</b>		<b>QR Image</b>	
<b>Asset No:</b>	<b>A20359</b>			

<b>Location:</b>	<b>Level 10 - Roof plantroom</b>
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<b>Duct Type:</b>	<b>Standard duct</b>
<b>Duct Size:</b>	<b>2800×900</b>
<b>Duct Shape:</b>	<b>Square/Rectangle</b>



<b>Damper:</b>	<b>ES Class: Motorised Fire &amp; Smoke Damper</b>	<b>Orientation:</b>	<b>Horizontal</b>
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<b>Accessibility:</b>	Low level [caution]
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<b>Access Panel:</b>	Access panel installed and accessible or not required
<b>Shape:</b>	Square/Rectangle
<b>Size:</b>	530×360
<b>Accessibility [Both Sides]:</b>	No



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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## Defect: Test

### Limitation - Smoke extract system [BMS Controlled]



Smoke extract damper BMS controlled

BMS operated



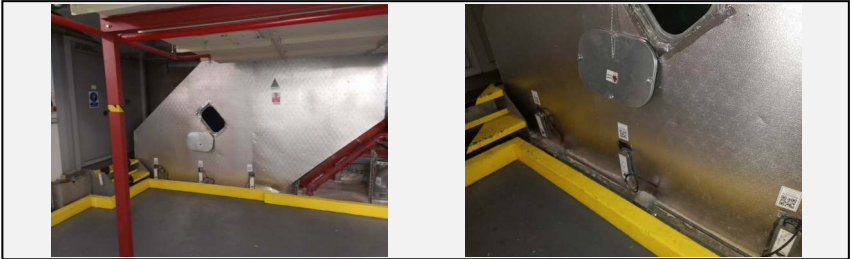


# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		QR Image 
<b>Asset No:</b>	A20358		

<b>Location:</b>	Level 10 - Roof plantroom
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	2800x900
<b>Duct Shape:</b>	Square/Rectangle



<b>Damper:</b>	ES Class: Motorised Fire & Smoke Damper	<b>Orientation:</b>	Horizontal
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<b>Accessibility:</b>	Low level [caution]
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<b>Access Panel:</b>	Access panel installed and accessible or not required
<b>Shape:</b>	Square/Rectangle
<b>Size:</b>	530x360
<b>Accessibility [Both Sides]:</b>	No



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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Defect: **Test**



**Limitation - Smoke extract system [BMS Controlled]**

Smoke extract damper BMS controlled

BMS operated

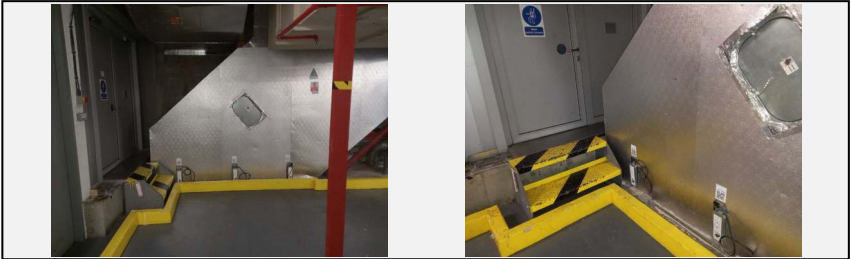


# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20357			

<b>Location:</b>	Level 10 - Roof plantroom
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	2800×900
<b>Duct Shape:</b>	Square/Rectangle



<b>Damper:</b>	ES Class: Motorised Fire & Smoke Damper	<b>Orientation:</b>	Horizontal
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<b>Accessibility:</b>	Low level [caution]
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<b>Access Panel:</b>	Access panel installed and accessible or not required		
<b>Shape:</b>	Square/Rectangle	<b>Size:</b>	530×360
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Masonry [and Fire Rated Mortar]
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<b>Installation:</b>	Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]
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## Defect: **Test**



### Limitation - Smoke extract system [BMS Controlled]

Smoke extract damper BMS controlled

BMS operated

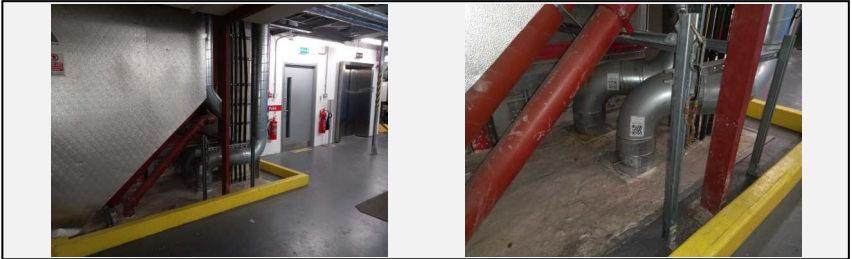


# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20355			

<b>Location:</b>	Level 10 - Roof plantroom
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<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	250
<b>Duct Shape:</b>	Circle



<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Horizontal
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**Accessibility:** Safe Low Level

**Access Panel:** Defect: no access panel installed  
**Shape:** N/A      **Size:** N/A  
**Accessibility [Both Sides]:** No

**Fire Barrier:** Masonry [and Fire Rated Mortar]

**Installation:** Defect - Installation clearly deviates from manufacturer installation details and/or best of practice guidance - Inadequate supports, and/or incorrect damper frame to support and integrate with the fire barrier compound







## Defect: Installation

### Inadequate supports

Inadequate support(s) and/or not correctly integrated with the compartment system [refer to BS 9999:2017 - 32.5.2.5]

Mounting plate needs to be fixed once additional fire stopping installed



## Defect: AccessPanel

### No access panel installed

To enable the damper to be tested, inspected, and reset access panels need to be installed. Access panels shall be quick release insulated sealed panels, manufactured, and installed to BESA specification DW144 [BESA DW 144 - Section 20 Access/Inspection openings].

No access panel installed on plantroom side with damper blade handle... very limited duct space for access panel... very small 150x150 access panel maybe required with 250 saddle







## Defect: FireBarrier


### Small Compartmentation Gaps [under 10x10cm]

Dampers are installed where air handling ducts pass through fire-separating elements. The integrity of those elements should be maintained using suitable fire-stopping to maintain the fire resistance of the elements [BS 9999:2017 - 32.5.2.6]


Damper slightly out of line with mortar fire break - Additional fire stopping required



# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196	<b>QR Image</b>	
<b>Asset No:</b>	A20369		

<b>Location:</b>	Level 9 - Male WC Service Riser
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<b>Duct Type:</b>	Standard duct		
<b>Duct Size:</b>	200		
<b>Duct Shape:</b>	Circle		

<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Vertical
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**Accessibility:** 6 tread step ladder

**Access Panel:** Access panel installed and accessible or not required  
**Shape:** Square/Rectangle      **Size:** 200 x 200mm  
**Accessibility [Both Sides]:** No



**Fire Barrier:** Partition Drywall [Plasterboard], Ablated Batt and Sealant

**Installation:** Unknown [Limitation] - Enclosed within fire barrier, support method not visible for inspection [or no IOMs relevant]



Report Section 6

# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20370			

<b>Location:</b>	Level 9 - Male WC Service Riser
------------------	---------------------------------

<b>Duct Type:</b>	Standard duct
<b>Duct Size:</b>	225x225
<b>Duct Shape:</b>	Square/Rectangle



<b>Damper:</b>	E Class: Mechanical fusible spring-operated fire damper	<b>Orientation:</b>	Vertical
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<b>Accessibility:</b>	6 tread step ladder
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<b>Access Panel:</b>	Defect: no access panel installed		
<b>Shape:</b>	N/A	<b>Size:</b>	N/A
<b>Accessibility [Both Sides]:</b>	No		



<b>Fire Barrier:</b>	Partition Drywall [Plasterboard]
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<b>Installation:</b>	Defect - Installation clearly deviates from manufacturer installation details and/or best of practice guidance - Inadequate supports, and/or incorrect damper frame to support and integrate with the fire barrier compound
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## Defect: FireBarrier

### Small Compartmentation Gaps [under 10x10cm]

Dampers are installed where air handling ducts pass through fire-separating elements. The integrity of those elements should be maintained using suitable fire-stopping to maintain the fire resistance of the elements [BS 9999:2017 - 32.5.2.6]

Gaps all around damper with no penetration seal



## Defect: Installation

### No breakaway joints installed

Screw [tek] fixings have been used to connect the ducting to the damper. Fixings need to be changed to a fire-resistant material with a low melting point such as aluminum or plastic to act as a breakaway joint [refer to BS 9999:2017 - 32.5.2.5]

### Incorrect damper frame/type

Incorrect damper frame/type has been used for the compartment system. Installation has deviated from manufacturer IOMs or best of practice guidance [refer to BS 9999:2017 - 32.5.2.5]

### Inadequate supports

Inadequate support(s) and/or not correctly integrated with the compartment system [refer to BS 9999:2017 - 32.5.2.5]

### Insufficient Clearances

Minimum clearance between fire damper cases installed in separate ducts is 200mm [unless tested otherwise], and 75mm between the damper and an adjacent wall or floor [refer to BS EN 1366-2:2015 sections 7.3 and 13.6]

Damper needs reinstall however will need to build new aperture away from substrate







## Defect: AccessPanel



### No access panel installed

To enable the damper to be tested, inspected, and reset access panels need to be installed. Access panels shall be quick release insulated sealed panels, manufactured, and installed to BESA specification DW144 [BESA DW 144 - Section 20 Access/Inspection openings].



New 200x200 access panel required after reinstall



# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	<b>A20371</b>			

<b>Location:</b>	Level 9 - North Side Mechanical Riser
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<b>Duct Type:</b>	N/A		
<b>Duct Size:</b>	N/A		
<b>Duct Shape:</b>	N/A		

<b>Damper:</b>	N/A	<b>Orientation:</b>	N/A
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<b>Accessibility:</b>	No Access Arrangements / Limitation
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	Defect: Accessibility
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**Services obstructing access [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

**Ceiling hatch required [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]



No access arrangements either side of mechanical riser... Tenant refurb decor has removed all access to damper



# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		QR Image 
<b>Asset No:</b>	A20372		

<b>Location:</b>	Level 9 - North Side Mechanical Riser
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<b>Duct Type:</b>	N/A		
<b>Duct Size:</b>	N/A		
<b>Duct Shape:</b>	N/A		

<b>Damper:</b>	N/A	<b>Orientation:</b>	N/A
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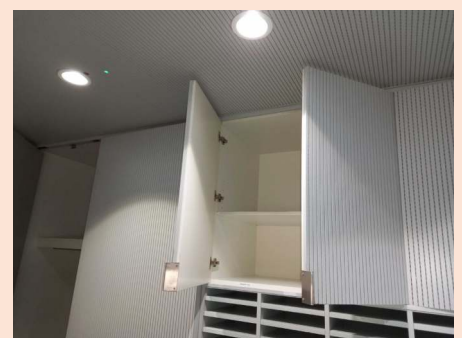
<b>Accessibility:</b>	No Access Arrangements / Limitation
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	<b>Defect: Accessibility</b>
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**Ceiling hatch required [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

**Services obstructing access [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

No access arrangements either side of mechanical riser... Tenant refurb decor has removed all access to damper



# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	<b>A20373</b>			

<b>Location:</b>	Level 9 - South Side Mechanical Riser
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<b>Duct Type:</b>	N/A		
<b>Duct Size:</b>	N/A		
<b>Duct Shape:</b>	N/A		

<b>Damper:</b>	N/A	<b>Orientation:</b>	N/A
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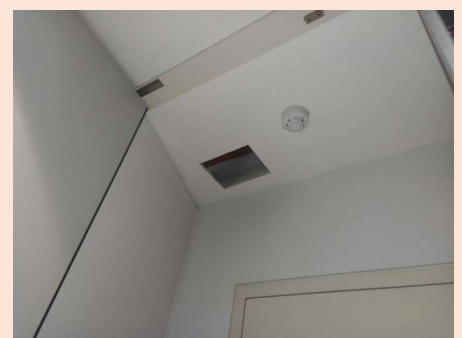
<b>Accessibility:</b>	No Access Arrangements / Limitation
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	Defect: Accessibility
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**Ceiling hatch required [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]



**Services obstructing access [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

No access arrangements either side of mechanical riser... Tenant refurb decor has removed all access to damper





# Asset Checksheet

<b>Building:</b>	60 Great Tower Street BD00196		<b>QR Image</b>	
<b>Asset No:</b>	A20374			

<b>Location:</b>	Level 9 - South Side Mechanical Riser
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<b>Duct Type:</b>	N/A	
<b>Duct Size:</b>	N/A	
<b>Duct Shape:</b>	N/A	

<b>Damper:</b>	N/A	<b>Orientation:</b>	N/A
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<b>Accessibility:</b>	No Access Arrangements / Limitation
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	<b>Defect: Accessibility</b>
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**Ceiling hatch required [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

**Services obstructing access [No access arrangements]**  
 Inadequate means of access has be provided to allow inspection, testing and maintenance of both the fire damper and its actuating mechanism. Actions required to provide suitable accessibility [BS 9999:2017 - 32.5.2.5]

No access arrangements either side of mechanical riser... Tenant refurb decor has removed all access to damper



# Supplementary Observations Compartments

# Supplementary Observations Hygiene

**BS 9999:2017 states:** "As filters, etc. become contaminated they become a progressively greater fire hazard, and hence they should be cleaned and/or replaced as recommended by the manufacturer or supplier. Similarly, deposits of combustible material (including any dust) should not be allowed to build up within the ductwork itself. Panels forming ceiling voids used for the extraction of air from non-domestic kitchens and from deep fat fryers should be cleaned frequently to avoid the build-up of grease deposits". Technicians will assess the cleanliness & hygiene of the visible duct connected to each damper.

Clean:5

Moderate:6

Dirty:0



A20360



A20361



A20362



A20363



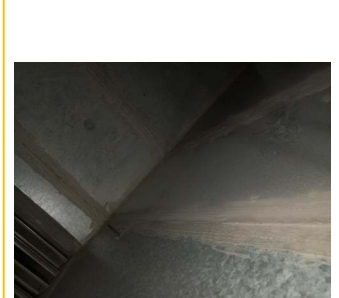
A20364



A20368



A20367



A20359



A20358



A20357



A20369

**Report Section 9**

## Inventory - Asset Schedule

Asset No		Location	Damper Classification	Accessibilities
1	A20360	Level 10 - Inside Chiller Plant Room	E Class: Mechanical fusible spring-operated fire damper	▶ Safe Low Level
2	A20361	Level 10 - Inside Chiller Plant Room	ES Class: Motorised Fire & Smoke Damper	▶ Safe Low Level
3	A20362	Level 10 - Inside Chiller Plant Room	ES Class: Motorised Fire & Smoke Damper	▶ Safe Low Level
4	A20363	Level 10 - Inside Chiller Plant Room	E Class: Mechanical fusible spring-operated fire damper	▶ Safe Low Level
5	A20364	Level 10 - Inside Chiller Plant Room	E Class: Mechanical fusible spring-operated fire damper	▶ Safe Low Level
6	A20368	Level 10 - Lift motor room	ES Class: Motorised Fire & Smoke Damper	▶ Safe Low Level
7	A20367	Level 10 - Lift motor room	ES Class: Motorised Fire & Smoke Damper	▶ Safe Low Level
8	A20366	Level 10 - Roof Plantroom	E Class: Mechanical fusible spring-operated fire damper	▶ Low level [caution]
9	A20365	Level 10 - Roof Plantroom	E Class: Mechanical fusible spring-operated fire damper	▶ Low level [caution]
10	A20356	Level 10 - Roof plantroom	E Class: Mechanical fusible spring-operated fire damper	▶ Safe Low Level
11	A20359	Level 10 - Roof plantroom	ES Class: Motorised Fire & Smoke Damper	▶ Low level [caution]
12	A20358	Level 10 - Roof plantroom	ES Class: Motorised Fire & Smoke Damper	▶ Low level [caution]
13	A20357	Level 10 - Roof plantroom	ES Class: Motorised Fire & Smoke Damper	▶ Low level [caution]
14	A20355	Level 10 - Roof plantroom	E Class: Mechanical fusible spring-operated fire damper	▶ Safe Low Level
15	A20369	Level 9 - Male WC Service Riser	E Class: Mechanical fusible spring-operated fire damper	▶ 6 tread step ladder
16	A20370	Level 9 - Male WC Service Riser	E Class: Mechanical fusible spring-operated fire damper	▶ 6 tread step ladder
17	A20371	Level 9 - North Side Mechanical Riser	N/A	▶ No Access Arrangements / Limitation
18	A20372	Level 9 - North Side Mechanical Riser	N/A	▶ No Access Arrangements / Limitation
19	A20373	Level 9 - South Side Mechanical Riser	N/A	▶ No Access Arrangements / Limitation
20	A20374	Level 9 - South Side Mechanical Riser	N/A	▶ No Access Arrangements / Limitation





Approved Constructionline Associate

**Membership Id:** - Westbury Filtermation



Safe Contractor Approved

**Membership Id:** KC0502



The National Association of Air Duct Specialists UK (NAADUK) is an association for qualified ventilation ductwork maintenance technicians.

**Membership Id:** NA 2730

## Technician Competencies



AEME [CITB] Fire & Smoke Control Damper Inspection, Testing, Replacement & Installation to BS9999 Standards

**Membership Id:** FSD 369



**Operative Name:** Sam Northcott



CITBNI 20581 Ventilation Risk Assessments

**Membership Id:** 012



**Operative Name:** Sam Northcott

n/a