



Fire Damper Assessment Report

On behalf of

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at

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Hydro-X Air

Section 1: Preface

Customer:	
Customer Main Address:	
Customer Contact:	
Telephone Number:	
Site Address:	
Hydro-X Account Manager:	
Account Manager Telephone Number:	
Hydro-X Address:	Unit 1, Manor Drive, Dinnington, Sheffield. S25 3QU
Hydro-X Telephone Number:	01909 565133
Hydro-X Email Address:	info@hydro-x.co.uk
Lead Hydro-X Operative:	
Date of Assessment:	

Any further information concerning this assessment should be requested by contacting the above-named Hydro-X Account Manager.

Section 2: Introduction

Hydro-X-Air were instructed to undertake the assessment of the installed mechanical fire/smoke dampers located in the ducted ventilation systems on site and to carry out a drop test.

Hydro-X Air

Section 3: Executive Summary

Hydro-X-Air were instructed to undertake the assessment of the installed mechanical fire/smoke dampers located in the ducted ventilation systems on site and to carry out a drop test. We completed the test on and can report the following:

EXECUTIVE SUMMARY	
Total fire dampers located and attempted to test	15
Manually controlled fire dampers	15
BMS controlled fire dampers	0
Total number of fire dampers PASSED	11
Total number of fire damper FAILED	3
Percentage of fire dampers which PASSED	73%
ADDITIONAL ISSUES	
Number of fire dampers which are not sealed in a compartment	0
Number of fire dampers which require fusible link replacements	0
Total fire dampers which were inaccessible	2
Number of fire dampers without access doors on both sides	3

Section 4: Fire Damper Summary

Location	Fire Damper Number	Fire Damper Secure and Sealed in Compartment?	Accessible?	Fusible Link Intact?	Blades Open on Inspection?	Is an additional access door installed on the other side*?	Damper cleaned?	Drop Test Successfully Completed and Reset?
Third Floor - plantroom 1	1	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	2	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	3	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	4	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	5	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	6	Y	Y	Y	Y	Y	Y	Y
Third Floor - plantroom 1	7	Y	Y	Y	Y	Y	N	N
First Floor - office	8	Y	Y	Y	Y	N	Y	Y
First Floor - office	9	Y	Y	Y	Y	N	Y	Y
First Floor - office	10	Y	Y	Y	Y	N/A	N	N
First Floor - office	11	Y	Y	Y	Y	N	Y	Y
First Floor - office	12	Y	Y	Y	Y	Y	Y	Y

Location	Fire Damper Number	Fire Damper Secure and Sealed in Compartment?	Accessible?	Fusible Link Intact?	Blades Open on Inspection?	Is an additional access door installed on the other side*?	Damper cleaned?	Drop Test Successfully Completed and Reset?
First Floor - office	13	Y	Y	Y	Y	Y	Y	Y
Ground Floor - office	14	Y	N	U	U	N/A	N	N
Ground Floor - office	15	Y	N	U	U	N/A	N	N

Total:	15	13	13	13	9	11	11
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*Fire dampers can be inspected, tested and reset through a single access door. These shall be quick release insulated neoprene sealed panels, all manufactured and installed to BESA specification DW/144. To achieve a full clean of the fire damper an additional access door is required. The table below has been extracted from DW144 & TR19 and indicates the location of access panels and party responsible for installing.

Table 1 – Location of access panels for inspection/servicing and/or internal cleanliness

		Party responsible for provision of suitable access panel	
In-line equipment	Location	Ductwork contractor	Specialist cleaning contractor
Fire Damper	Both Sides	To suit damper maintenance	Opposite site

Section 5: Regulations:

Our works were undertaken in accordance with the following legislation.

Regulatory Reform (Fire Safety) Order 2005 Section 17 that stipulates that all fire protection systems and elements of fire compartmentation should be subject to routine maintenance to ensure that they are in good working order

British Standard 9999:2017 Code of Practice for fire safety in the design and use of buildings states *"...any grille or opening through the <service duct> enclosure for ventilation purposes should be protected by a fire damper"*. It defines a Fire Damper as a *"mechanical device that is operated automatically or manually and is designed to prevent the passage of fire and which, together with its frame, is capable of meeting for a stated period of time the fire resistance criterion for integrity"*.

Fire dampers or 'doors' are located where ductwork passes through fire compartment walls and floors. They are typically held open by a 'fusible link' which BS 9999:2017 defines as a *"device that releases a component such as a fire damper or fire shutter at a set temperature"*.

Basically, when the fusible link is met by high heat, the link will melt, closing the damper and stopping the spread of fire.

Fire Damper Testing & Inspection

Fire dampers play a crucial role in a building's fire safety system. The difference between a well maintained, working fire damper and an ill maintained partially working fire damper can be the difference between life and death in the case of a fire.

With the enactment of the Regulatory Reform (Fire Safety) Order 2005, it is now the employer's responsibility to maintain their fire safety systems.

BS 9999:2017 also states that: *Arrangement's 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*

Fire Safety Legislation Compliance

Fire dampers are installed within the duct system to prevent the spread of fire. If a fire breaks out and gets into your ventilation system are you sure that the condition of your fire dampers will not prevent them from fulfilling this essential role?

All fire safety systems must be regularly & professionally maintained to ensure the safety of building occupants - a faulty fire damper will not prevent the spread of fire.

Provision of an essential fire safety service should be considered whereby all your fire dampers will be cleaned, lubricated, drop tested and reset to ensure they are in good working order. Faults such as damaged linkages can also be replaced.



Fire & Smoke Damper Tests in Hospitals and Health Care Properties Heating and ventilation systems Health Technical Memorandum 03-01: Specialised ventilation for healthcare premises Part B: Operational management and performance verification – gives the following guidance:

1.31 Regular tests, at intervals agreed with the local fire prevention officer, will need to be carried out in order to demonstrate the continuing efficiency of the fire detection and containment systems. These may be in addition to the inspections detailed above. Records of these tests should be kept.

4.13 All fire dampers should be tested as part of the annual verification.

Section 6: Fire Damper Inspections



Fire Damper ID:	1	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	150 circ	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 08:00	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	2	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Extract	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	400x200	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 08:47	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully



Fire Damper ID:	3	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Extract	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	400x400	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 09:38	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	4	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	400x400	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 10:34	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully



Fire Damper ID:	5	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	400x400	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 11:02	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	6	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Extract	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	400x400	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 12:09	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	7	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom 1	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	150 circ	Damper Cleaned?	No
Time & Date?	6/11/2019 – 12:30	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Due to the size of the damper it was not possible to drop test, recommend replacing to externally testing fire damper.

Fire Damper ID:	8	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	No
Size (L x W or diameter mm)	800x300	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 12:40	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully



Fire Damper ID:	9	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?		Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	No
Size (L x W or diameter mm)	800x300	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 13:10	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	10	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?		Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	N/A
Size (L x W or diameter mm)	300 circ	Damper Cleaned?	Unknown
Time & Date?	6/11/2019 – 13:50	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

unable to test as room was locked where I need to get access



Fire Damper ID:	11	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Extract	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	No
Size (L x W or diameter mm)	600x300	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 14:17	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

drop test completed



Fire Damper ID:	12	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	250 circ	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 15:04	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Drop test completed successfully

Fire Damper ID:	13	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	First Floor - office	Accessible?	Yes
		Fusible Link Intact?	Yes
Supply / Extract?	Extract	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Yes
Size (L x W or diameter mm)	250 circ	Damper Cleaned?	Yes
Time & Date?	6/11/2019 – 15:15	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:


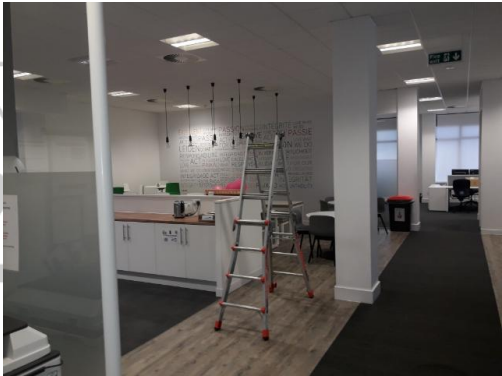
Drop test completed successfully

Fire Damper ID:	14	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Ground Floor - office	Accessible?	No
		Fusible Link Intact?	Unknown
Supply / Extract?		Blades Open on Inspection?	Unknown
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	N/A
Size (L x W or diameter mm)	600x300	Damper Cleaned?	No
Time & Date?	6/11/2019 – 15:48	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	

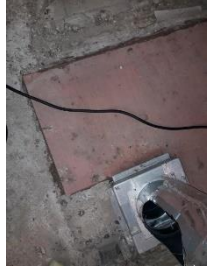



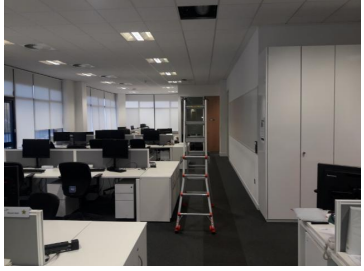
Additional Comments:






Fire Damper ID:	15	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Ash house - Ground Floor - office	Accessible?	No
		Fusible Link Intact?	Unknown
Supply / Extract?	Supply	Blades Open on Inspection?	Unknown
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	N/A
Size (L x W or diameter mm)	400x400	Damper Cleaned?	No
Time & Date?	6/11/2019 – 15:58	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	

Additional Comments:

Section 7: Additional Findings

FD ID	Finding	Photograph
1	Unable to fit additional access door due to solid floor	
10	Room locked and unable to gain access to fire damper.	
12	Unable to fit additional access door due to fire curtain	
13	Unable to fit additional access door due to fire curtain	
14	Mobile tower required to access fire damper safely as too high to access of a ladder	

2	Unable to fit additional access door due to solid floor	
3	Unable to fit additional access door due to solid floor	
4	Unable to fit additional access door due to solid floor	
5	Unable to fit additional access door due to solid floor	
6	Unable to fit additional access door due to solid floor	

Section 8: Recommendations

FD ID	Building	Floor	Room	Issue Found	Recommendation
7		Third Floor	plantroom 1		fit 250 cir access door
8		First Floor	office	Access doors are not fitted on both sides.	As per DW144 guidelines, access doors should be installed both sides of a fire damper to carry out routine maintenance.
9		First Floor	office	Access doors are not fitted on both sides.	As per DW144 guidelines, access doors should be installed both sides of a fire damper to carry out routine maintenance.
10		First Floor	office	room locked and unable to gain access to fire damper.	store room opposite kitchen to be left open to gain access to fire damper.
11		First Floor	office	Access doors are not fitted on both sides.	As per DW144 guidelines, access doors should be installed both sides of a fire damper to carry out routine maintenance.
14		Ground Floor	office	The Fire Damper is not accessible.	Access should be made available to carry out drop test.
15		Ground Floor	office	The Fire Damper is not accessible.	Access should be made available to carry out drop test.