

Hydro-X Fire

**Fire Damper Inspection Report
No: [Job Ref Number]**

On behalf of

[Customer]

at

[First Line of Site Address]



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Section 1: Preface

Customer:	[Client]
Customer Contact:	[Customer Contact]
Site Address:	[Site Address]
Hydro-X Account Manager:	[Account Manager]
Account Manager Telephone Number:	[Account Manager Phone 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:	[Operative]
Date of Assessment:	[Date]

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

Section 2: 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 19/04/2021 and can report the following:

EXECUTIVE SUMMARY	
Total fire dampers located and attempted to test	79
Manually controlled fire dampers	78
BMS controlled fire dampers	1
Total number of fire dampers mechanically PASSED	59
Total number of fire dampers mechanically FAILED	20
Percentage of fire dampers which mechanically PASSED	74%
ADDITIONAL ISSUES	
Number of fire dampers which are not sealed in a compartment	34
Number of fire dampers which require fusible link replacements	0
Total fire dampers which were inaccessible	19
Number of fire dampers without access doors on both sides	26

Section 3: 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*?	Is it practically possible to install access door on the other side?	Damper cleaned?	Drop Test Successfully Completed and Reset?
Third Floor - plantroom north	1	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	2	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	3	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	4	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	5	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	6	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	7	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	8	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom north	9	N	Y	Y	Y	N	Y	Y	Y
Third Floor - plantroom north	10	Y	Y	Y	Y	N	N	Y	Y
Third Floor - plantroom north	11	Y	Y	Y	Y	N	Y	Y	Y
Third Floor - plantroom north	12	Y	Y	Y	Y	N	Y	Y	Y
Third Floor - plantroom north	13	Y	Y	Y	Y	N	Y	Y	Y
Third Floor - plantroom south	14	Y	Y	Y	Y	U	U	Y	Y

Hydro-X Fire

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*?	Is it practically possible to install access door on the other side?	Damper cleaned?	Drop Test Successfully Completed and Reset?
Third Floor - plantroom south	15	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	16	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	17	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	18	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	19	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	20	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	21	Y	Y	Y	Y	U	U	Y	Y
Third Floor - plantroom south	22	N	Y	Y	Y	N	N	Y	Y
Third Floor - plantroom south	23	Y	Y	Y	Y	N	Y	Y	Y
Total:		45	60	60	60	17		59	59

*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 4: 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: *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*

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 5: Fire Damper Inspections

Fire Damper ID:	1	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom north	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?	Unknown
Size (L x W or diameter mm)	900x600	Damper Cleaned?	Yes
Time & Date?	08:42 19-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:

Fire Damper ID:	2	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom north	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?	Unknown
Size (L x W or diameter mm)	900x600	Damper Cleaned?	Yes
Time & Date?	08:45 19-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	





Additional Comments:

Fire Damper ID:	3	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Third Floor - plantroom north	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?	Unknown
Size (L x W or diameter mm)	900x600	Damper Cleaned?	Yes
Time & Date?	08:48 19-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:

Fire Damper ID:	4	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Second Floor - hub room	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)	1000x275	Damper Cleaned?	Yes
Time & Date?	11:44 19-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:



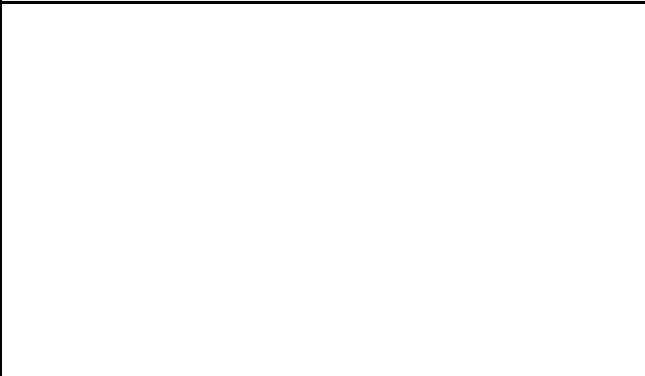

Fire Damper ID:	36	Fire Damper Secure and Sealed in Compartment?	Yes
Location: (Building, Floor, Room)	Second Floor - hub room	Accessible?	No
		Fusible Link Intact?	Unknown
Supply / Extract?	Extract	Blades Open on Inspection?	Unknown
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	No
Size (L x W or diameter mm)	1000x275	Damper Cleaned?	No
Time & Date?	11:46 19-04-2021	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:

Unable to test damper no access doors installed





Fire Damper ID:	37	Fire Damper Secure and Sealed in Compartment?	No
Location: (Building, Floor, Room)	Second Floor - comms room	Accessible?	No
		Fusible Link Intact?	Unknown
Supply / Extract?	Extract	Blades Open on Inspection?	Unknown
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	Unknown
Size (L x W or diameter mm)	300x200	Damper Cleaned?	No
Time & Date?	12:33 19-04-2021	Drop Test Successfully Completed and Reset?	No

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:





Unable to test damper as there is pipe work in way. Access door required on opposite side of the fire damper above the solid ceiling.

Fire Damper ID:	38	Fire Damper Secure and Sealed in Compartment?	No
Location: (Building, Floor, Room)	Second Floor - comms room	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)	350x350	Damper Cleaned?	Yes
Time & Date?	12:38 19-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	



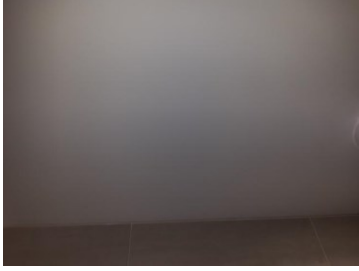


Additional Comments:



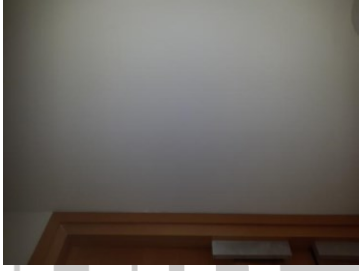
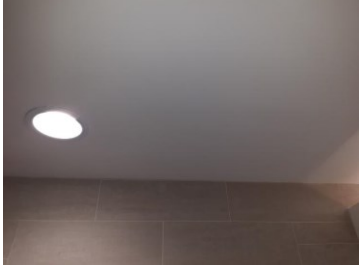

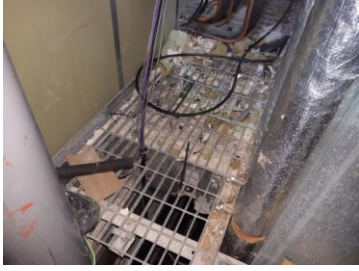
Fire Damper ID:	52	Fire Damper Secure and Sealed in Compartment?	No
Location: (Building, Floor, Room)	First Floor - hub room south	Accessible?	No
		Fusible Link Intact?	Yes
Supply / Extract?	Supply	Blades Open on Inspection?	Yes
BMS Controlled / Manual?	Manual	Is an additional access door installed on the other side?	No
Size (L x W or diameter mm)	1050x275	Damper Cleaned?	Yes
Time & Date?	07:50 20-04-2021	Drop Test Successfully Completed and Reset?	Yes

Photo of Damper as Found	Photo of Damper Drop Tested
	
Photo of Damper Reset	Photo of Fire Compartment
	

Additional Comments:

Section 6: Additional Findings

FD ID	Finding	Photograph
22	Unable to install access door on the opposite side of the fire damper	
27	Unable to install access door on the opposite side of the fire damper	
28	Ceiling hatch required for on opposite side of the fire damper	
29	Unable to install access door on the opposite side of the fire damper	
30	Unable to install access door on the opposite side of the fire damper	

FD ID	Finding	Photograph
31	Under floor ductwork	
32	Unable to test damper due to access door too far away	
35	Ceiling hatch required on opposite side of damper	
37	Ceiling hatch required on opposite side of damper	
38	Unable to install access door on the opposite side of the fire damper	
40	Unable to install access door on the opposite side of the fire damper	

Section 7: Recommendations

FD ID	Building	Floor	Room	Issue Found	Recommendation
9		Third Floor	Plantroom north	The Fire Damper is not secure and sealed in fire compartment.	Fire Damper should be secured and sealed within the fire compartment.
9		Third Floor	Plantroom north	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.
11		Third Floor	Plantroom north	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.
12		Third Floor	Plantroom north	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.
13		Third Floor	Plantroom north	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.
22		Third Floor	Plantroom south	The Fire Damper is not secure and sealed in fire compartment.	Fire Damper should be secured and sealed within the fire compartment.
23		Third Floor	Plantroom south	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.

FD ID	Building	Floor	Room	Issue Found	Recommendation
24		Third Floor	Plantroom south	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.
25		Third Floor	Plantroom south	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.
26		Third Floor	Plantroom south	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.
28		Second Floor	Hub room	The Fire Damper is not secure and sealed in fire compartment.	Fire Damper should be secured and sealed within the fire compartment.
28		Second Floor	Hub room	The Fire Damper is not accessible.	Access should be made available to carry out drop test.
28		Second Floor	Hub room	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.
31		Second Floor	Hub room	The Fire Damper is not secure and sealed in fire compartment.	Fire Damper should be secured and sealed within the fire compartment.
31		Second Floor	Hub room	Blades not open during inspection	Fire damper should be reset or replaced if damper cannot be repaired.
32		Second Floor	Hub room	The Fire Damper is not secure and sealed in fire compartment.	Fire Damper should be secured and sealed within the fire compartment.