



NL Utrecht Landbouwhuisdieren - Bruingebouw Risk Summary Report 2021 Aon

Onderwijsinstellingen

Location:	Yalelaan 5-7-9 UTRECHT Netherlands
Location code:	UU 724
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Table of contents

1. Introduction	2
1.1 Introduction	2
1.2 Participants	2
1.3 Genaral	3
1.4 Future plans	3
2. Construction	4
2.1 Construction	4
3. Utilities	5
3.1 EUilities	5
4. Protection	6
4.1 Fire Protection	6
4.2 Security	6
5. Loss Estimates	7
5.1 Values	7
5.2 Breakdown of values	7
5.3 Loss estimates summary table	7
5.4 Loss Scenarios	7
6. Scorecard results	8
6.1 Category scores (histogram)	8
6.2 Category scores (spider web)	8
6.3 Overall scores	8
6.4 Scorecard results	8
6.5 Review comments	11
7. Recommendations	12
7.1 Remove extension cord	12
7.2 Remove combustible storage from technical room	12
8. Plattegronden - Tekeningen - Foto's	13
8.1 Layout and drawings	13
8.2 Aerial view	16
8.3 Pictures	17
9. About Aon	18

1. Introduction

1.1 Introduction

The information in this report is based on a site visit and information provided by University Utrecht (hereafter: UU). A good impression could be gained from the housekeeping, risk awareness, fire protection installations, and fire compartmentation based on the visit. During the visit, the emphasis was on a random review of technical areas, fire-resistant separations, catering and areas for practicums. The survey has been supplemented with information insofar as it is provided by UU. The EML and MPL scenarios at the end of this report are based on these gathered impressions. The survey was held during the COVID epidemic. As a result, the occupancy of the buildings was less than normal.

1.2 Participants

Participants surveys

The survey (09-06-2021) has been accompanied by the following person from the UU organization: Jeffrey van Leeuwen - Facility

1.3 General

The UU has a broad variety of Education Programs, in all kinds of fields from practical studies to theoretical studies. There are 50 bachelor's programs and 154 master's programs that represent a cross-section of the entire scientific spectrum. The programs are part of organized units. There are several partnerships with international training institutions and collaborations with national and international companies. Research is done by students within several units. These activities are done under the strict supervision of the teaching staff. Every location has its own facility managers.

Utrecht University boasts seven faculties.

Faculties

Each faculty consists of a number of departments. Each department coordinates the research and teaching programmes of a specific field of science. Scientific staff are appointed at department level.

Faculty of Geosciences

Faculty of Humanities

Faculty of Law, Economics and Governance

Faculty of Medicine Faculty of Science

Faculty of Social and Behavioural Sciences

Faculty of Veterinary Medicine

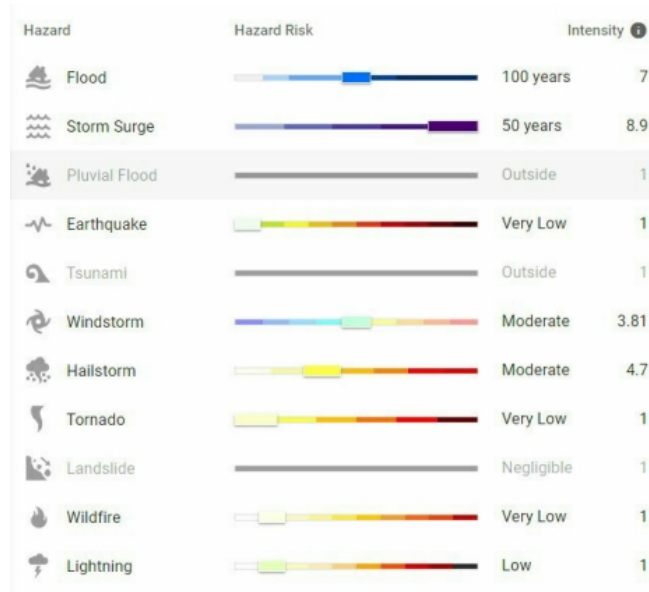
There are 30,000+ students. In total the staff is 8035 persons of whom 4,316 persons are teaching staff.

General information about Totaal Landbouwdieren (Martinus de Bruingebouw) location:

The so-called "Bruingebouw" is the main unit within the University of Utrecht for farm animals. The building is built in 1967 and has 2 storey floors (some areas also have a basement). The gross floor area is 21,964 m²—a large complex of several building parts. Represent together one single fire area. The front part is in use as offices. The middle part is in use for some research laboratories and lecture rooms, and the rear houses the stables. To enter most stables, it is required to change to protect the animals from diseases. The present animals in the stables are typical farm animals such as chicken, turkey, cows, sheep, goats etc. At the rear is a detached small building for the collection of manure. Most of the stables have grated floors to collect manure in the basement. The manure is automatically removed by a kind of conveyor system. The basement is well ventilated to prevent methane gas to accumulate..

In this building

- Faculty of Veterinary Medicine
- Department Farm Animal Health
- Department Population Health Sciences, unit Farm Animal Health
- Faculty board
- Administrative and Management Support



- Source: CatNed SwissRe

Based on information from the Dutch Directorate-General for Public Works and Water Management, this location is located in an area that has no flood risk.

1.4 Future plans

There are no significant plans.

2. Construction

2.1 Construction

The building has a partly steel and partly concrete load bearing construction. Most of the roofs are made of concrete and partly of steel with mineral wool or plastic foam insulation. The exterior walls are a mixture of masonry provided at the outside with PUR insulation covered with tiles and partly with wood covered. Therefore is the construction rated as combustible. The building has a stretched layout and provided with several 30 and some 60 minutes fire retardant partitions.

3. Utilities

3.1 Utilities

The electrical installation is fed by a transformer that is owned and maintained by Stedin. Detailed information about the transformers was not available. The main distribution box is located in a closed area with a fire resistance of at least 60 minutes. The other distribution boxes in the buildings are located on every floor in the building.

The installation is maintained by the installer. A (Dutch) NEN3140 inspection is done every 5 years, thermographic inspections included. Defects that emerge from the inspection will be remedied as soon as possible. Visually, the installation is in a good condition. The use of power strips is minimal. However, in the garage area there was a power strip not connected properly. A recommendation has been issued. Separate electrical appliances are inspected annually, including private equipment that is allowed by UU.

The building is heated with district heating with a heat pump. The heat is transported through the building by air ducts. This installation is also able to cool.

Other installations are an air compressor installation and refrigerating compressors. These are well set up and are periodically maintained.

The low tension room and emergency power generator room are both provided with automatic fire detection.

4. Protection

4.1 Fire Protection

There is an automatic sprinkler system (only the stables are not sprinkler protected). The automatic sprinkler is certified. There are two independent pumps with two independent clear water basins present. The system is certified and audited adequately. The automatic sprinkler minimum design is 5 litres/min/m² over 360 m² or 7.5 litres/min/m² over 260 m².

The two automatic sprinkler pumps have a rated capacity of 192 m³/h (equals 3200 litres/min) at a pressure of 4.5 bars getting the water from two clear water basins of 500 and 700 m³. The sprinkler pump is tested every two weeks by a specialized third party.

Alarms are transmitted to a 24/7 alarm centre. The valves have open position monitoring. The installation is inspected twice a year. Also, there is a certified automatic fire detection available. Alarms are transmitted to a 24/7 alarm centre.



4.2 Security

The whole building is protected by an alarm system with motion detection and door magnets. The alarms are transmitted to a 24/7 alarm centre. In case of an alarm, a private security service is notified and will respond. In addition, also cameras with recording around the building are installed. The building is closed by the private security service at 22.00 p.m. The rear of the premises is fenced in by a 2 meter high fence.

5. Loss Estimates

5.1 Values

Section/Property	Indemnity period	Value	Source	EML (%)	MPL (%)	Third party
Buildings		40,400,000 EUR	Policy	10	100	Aon

5.2 Breakdown of values

5.3 Loss estimates summary table

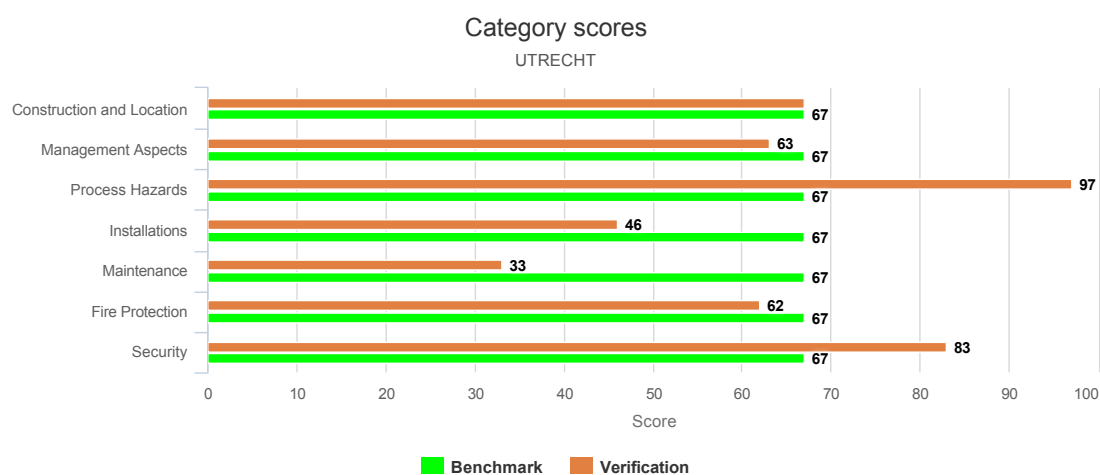
Property Damage / Business interruption	EML (%)	MPL (%)	EML (value)	MPL (value)
Material Damage	10%	100%	4,040,000 EUR	40,400,000 EUR
Business Interruption	0%	0%	0 EUR	0 EUR
Combined	10%	100%	4,040,000 EUR	40,400,000 EUR

5.4 Loss Scenarios

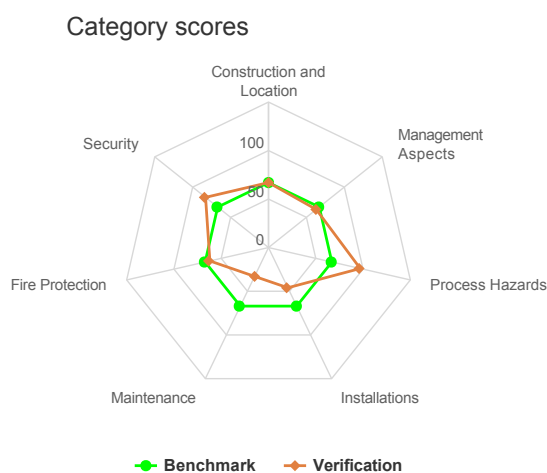
Name	Definition	Scenario
MPL	<i>Maximum Possible Loss scenario(s) according to the CEA 1999 definition. (The Maximum Possible Loss is that which may occur when, the most unfavourable circumstances being more or less exceptionally combined, the fire is only stopped by impassable obstacles or lack of substance).</i>	The MPL for this unit of the UU is estimated at 100% of the total insured value for Property Damage. This is based on: The building represents a single fire area. There are no perfect fire separations inside the buildings, the fire can spread throughout the whole complex in worst-case scenarios. The building has very large dimensions (very widely spread) but the roof is partly combustible and the exterior walls as well. Therefore the MPL is set at 100%. In this scenario, the automatic sprinkler system is impaired.
EML	<i>Estimated Maximum Loss scenario(s) according to the CEA 1999 definition. (The Estimated Maximum Loss is that which could reasonably be sustained from the contingencies under consideration, as a result of a single incident considered to be within the realms of probability taking into account all factors likely to increase or lessen the extent of the loss, but excluding such coincidences and catastrophes which may be possible but remain unlikely).</i>	The EML for this unit of the UU is estimated at approx. 10% of the total insured value for Property Damage. This is based on: • A fire is normally controlled by the automatic sprinklers • Stretched building

6. Scorecard results

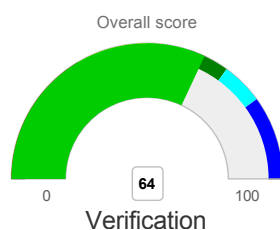
6.1 Category scores (histogram)



6.2 Category scores (spider web)



6.3 Overall scores



6.4 Scorecard results

		Category Weight	Subject Weight	Verification score	Comment
1	Construction and Location	10			
1-01	Building construction		1	2	Y
1-02	Roof insulation		1	2	Y
1-03	Wall insulation		1	-	Y
1-04	Combination solar panels vs. roof structure		1	1	N

		Category Weight	Subject Weight	Verification score	Comment
1-05	adjacent buildings		1	3	Y
2	Management Aspects	10			
2-01	Risk Management Policy		1	2	N
2-02	Supervision outside opening hours		1	1	Y
2-03	Self-inspection		1	2	Y
2-04	Smoking policy		1	3	N
2-05	Hot work Procedure		1	3	Y
2-06	Waste handling inside		1	2	N
2-07	Waste handling outside		1	2	N
2-08	Housekeeping		1	2	N
2-09	Housekeeping technical areas		1	0	Y
2-10	Management of Change (MOC)		1	2	N
3	Process Hazards	10			
3-01	Practice rooms: gasses		1	N/A	N
3-02	Practice rooms: flammable liquids and aerosols		1	3	N
3-03	Practice rooms: wood working		1	N/A	N
3-04	Practice rooms: metal working		1	N/A	N
3-05	Practice rooms: plastic machining		1	N/A	N
3-06	Practice rooms: paint spraying		1	N/A	N
3-07	Practice rooms: experiments and research		1	N/A	N
3-08	Practice rooms: unmanned processes		1	N/A	N
3-09	Practice rooms: textile processing		1	N/A	N
3-10	Catering / restaurant		1	N/A	N
3-11	Battery charging (tools, etc.)		1	2	N
3-12	Theaters		1	N/A	N
4	Installations	10			
4-01	Electrical installation		1	2	N
4-02	Local heating		1	2	Y
4-03	Installations for cooling		1	2	N
4-04	Lightning and overvoltage protection		1	2	N
4-05	Air compressors		1	2	N
4-06	Solar panels		1	0	Y
4-07	Electric bicycles		1	0	N
4-08	Charging of electric vehicles		1	1	N
5	Maintenance	10			
5-01	Inspectie elektrische installatie en gereedschappen		1	1	Y
5-02	Inspectie PV installatie		1	0	Y
5-03	Onderhoudsprogramma		1	2	N

		Category Weight	Subject Weight	Verification score	Comment
6	Fire Protection	10			
6-01	Fire department		1	2	N
6-02	extinguishing water		1	1	Y
6-03	hand extinguishers		1	2	N
6-04	Fire hoses		1	2	N
6-05	Automatic fire detection		1	2	N
6-06	Fire separations		1	2	N
6-07	Specific object fire protection		1	N/A	N
6-08	Automatic sprinkler system		1	2	Y
7	Security	10			
7-01	Access site and buildings		1	3	N
7-02	Burglary system		1	2	N
7-03	Security cameras		1	2	N
7-04	Specific computer equipment		1	N/A	N

6.5 Review comments

1-01	Building construction The building has a partly steel and partly concrete load bearing construction. Most of the roofs are made of concrete and partly of steel.	Peter Uri
1-02	Roof insulation Most of the roofs insulation consist of mineral wool and partly plastic foam insulation.	Peter Uri
1-03	Wall insulation The exterior walls are a mixture of masonry provided at the outside with PUR insulation covered with tiles and partly with wood covered.	Peter Uri
1-05	Adjacent buildings / exposures The other buildings of the university are located at more than 50 meters distance. Regarding the height of the building is the distance sufficient.	Peter Uri
2-02	Supervision outside opening hours The is no fence present. Therefore, the score is score 1.	Peter Uri
2-03	Self-inspection Self-inspections are being done on a regular basis. The housekeeping is perfect and the site is well managed. Documented fire safety self-inspection program in use covering hazards and essential fire safety elements	Peter Uri
2-05	Hot work Procedure There is a formal strict hot work procedure including a fire watch.	Peter Uri
2-09	Housekeeping technical areas In general, housekeeping is at a excellent level. The corridors are free of any storage. There is no yard storage. Adequate clearance to sprinkler heads (where installed). Aisles & passageways kept clear of obstructions. All work and storage areas well controlled and in good state. Combustible materials cleared from hazardous areas. Fire protection equipment easily accessible. No excess storage in process areas. However in technical areas there is some room for improvement.	Peter Uri
4-02	Local heating The building is heated with district heating with a heat pump. The heat is transported through the building by air ducts.	Peter Uri
4-06	Solar panels The building has a PV installations. Recently a Scope 12 inspection has been conducted. During the survey the report was not available.	Peter Uri
5-01	Electrical equipment of installation Inspection of electrical equipment is done every 5 years according the Dutch NEN3140. Tools are inspected yearly.	Peter Uri
5-02	Solar panel installation A scope 12 inspection is recently conducted. The report was not yet available during the survey.	Peter Uri
6-02	Extinguishing water The public water supply consist of underground hydrants fed by the public water supply (grid). The private water supply is for the automatic sprinkler with two underground clear water tanks of 700 and 500 m³ (all together 1200 m³) feeding two pumps of Wijk en Boerma (192m³/h at 4.5 bar).	Peter Uri
6-08	Automatic sprinkler The automatic sprinkler is certified. There are two independent pumps with two independent clear water basins present. The system is certified and audited adequately by an external notified body. The automatic sprinkler minimum design is 5 litres/min/m² over 360 m² or 7.5 litres/min/m³ over 260 m². The two automatic sprinkler pumps have a rated capacity of 192 m³/h (equals 3200 litres/min) at a pressure of 4.5 bars getting the water from two clear water basins of 500 and 700 m³. The pumps are tested once per two weeks.	Peter Uri

7. Recommendations

7.1 Remove extension cord

<i>ID</i>	2021001	<i>Issued by</i>	
<i>Status</i>	New	<i>Currency</i>	
<i>Category</i>	Risks	<i>Estimated costs</i>	
<i>Subcategory</i>	Electrical Equipment	<i>Loss Estimate before</i>	
<i>Priority</i>	Medium	<i>Loss Estimate after</i>	

The use of electrical extension cords should be limited to temporary occasions (hours rather than days or months).

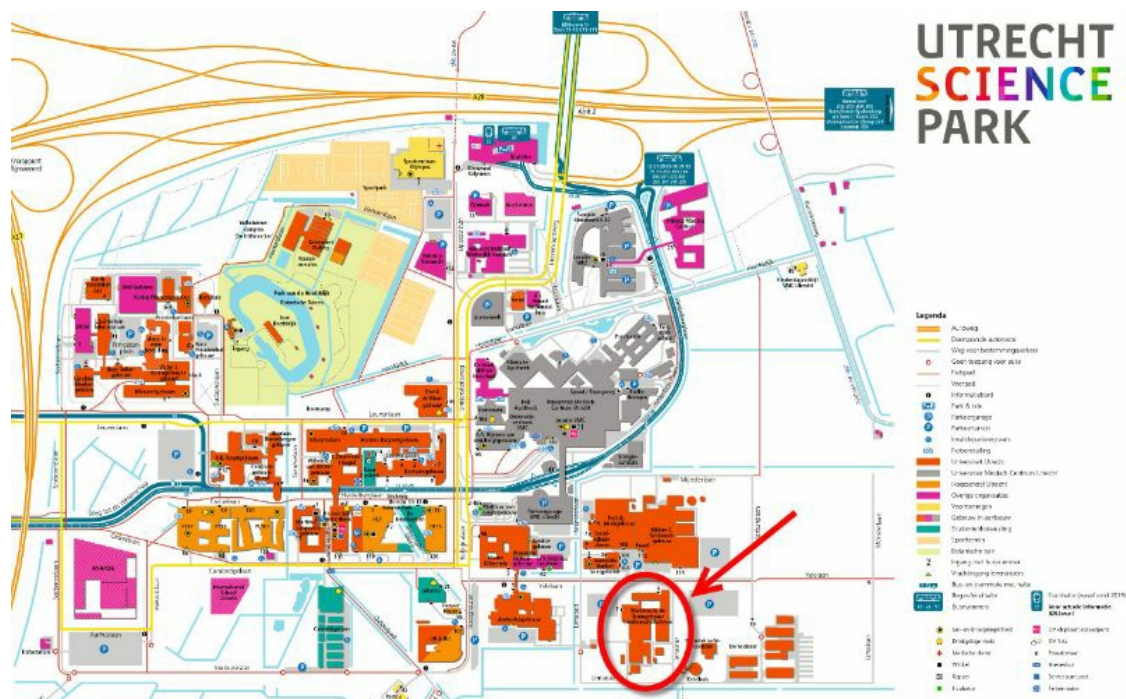
At several places in the building, there are very good examples of how to avoid the use of extension cords, however, in the garage, loaders are used to charge electronic devices with the use of 'domestic' extension cords. We recommend having these replaced by fixed electrical wall outlets or 'professional' extension cords.

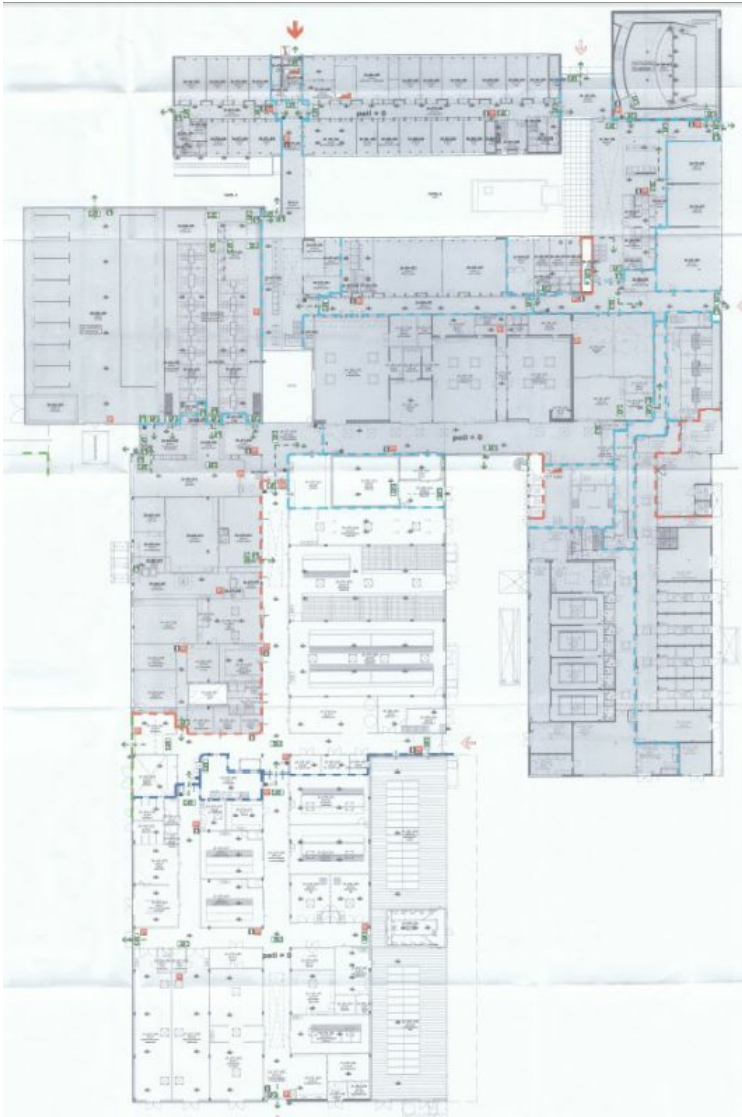
7.2 Remove combustible storage from technical room

<i>ID</i>	2021002	<i>Issued by</i>	
<i>Status</i>	New	<i>Currency</i>	
<i>Category</i>	Human Element	<i>Estimated costs</i>	
<i>Subcategory</i>	Housekeeping	<i>Loss Estimate before</i>	
<i>Priority</i>	High	<i>Loss Estimate after</i>	

The housekeeping in the buildings during the survey can be qualified as being sufficient to good. In a technical rooms however, materials not related to these areas was present. In general, technical rooms should be free from combustible storage. If storage is necessary in these areas, it is strongly advised to remove or to place this storage in a steel (fire-resistant) cabinet. It is recommended to check this as part of the self-inspection procedure.

8.1 Layout & drawings





Ground floor

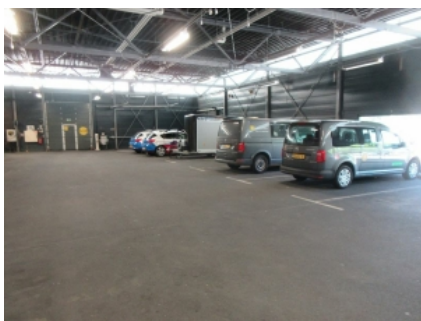


First floor

8.2 Aerial view



8.3 Pictures

		
Front of the building	Indoor parking for UU cars	UU cars
		
Side of the front building with entrance to basement	Basement bicycle parking	Office area
		
Evacuation plan	Inner court of the front part	Emergency generator
		
Inner court at the rear of the building	Some open stables at the rear	Rear of the building

9. About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

All inspections, reports and recommendations are purely advisory and for the purpose of assisting clients and insureds in risk control and safety procedures. Observations and recommendations are the result of practices and conditions observed and information made available to us at the time of our visit and do not purport to refer to or to guarantee compliance with local, state or federal regulations which may be applicable to such practice and conditions. This report should not be considered a definitive listing of all existing hazards nor an absolute solution to all indicated hazards. No responsibility for the implementation, management and operation of risk control and safety procedures is assumed by Aon Risk Solutions.