Chubb Risk Control Program
Property Underwriting Report

CHUBB®

Prepared for
Stichting NHL Stenden Hogeschool
Rengerslaan 10
8917 DD Leeuwarden
Netherlands

Inspection Date: 17 June 2024

Risk Engineering Services

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Risk Inspection Details

Location	Stichting NHL Stenden Hogeschool
	Rengerslaan 10 8917 DD Leeuwarden
Inspection Date	17 June 2024
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Purpose of Report

The purpose of this report is to:

- Provide underwriting information for underwriters.
- Identify risks and potential exposures.

The report is prepared for use by Chubb and its associated re-insurers and co-insurers who are participating on the account and location referred to in this report.

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Executive Summary

NHL Stenden University of Applied Sciences is an educational institution for higher education with campuses in the Netherlands and abroad. NHL Stenden University of Applied Sciences was created in 2018 by merging the NHL University of Applied Sciences and Stenden University of Applied Sciences. The university has 23,795 students and 2,620 employees.

- Instituut Economie en Management

- Instituut Educatie

- Instituut Techniek

- Instituut Zorg en Welzijn

- School of ICT

- School of Communication

The NHL Stenden locations Rengerslaan 8 and Rengerslaan 10 are approximately 40 meters apart. The two locations are managed by the same board. This report is about Rengerslaan 10 (RG10).

The complex (building parts A-H) has a maximum of 4 floors and a concrete supporting structure with concrete floors and roofs. Facades are made of concrete, stone and glass in the old building and curtain walls in the new building. The type of insulation used in walls and roofs is mainly rock wool with bitumen as a top layer (EPS has been applied to the roofs of the new building, 8,700 m²). Roof structures are made of steel. A concrete cellar beneath the building is where approximately 500 bicycles can be parked.

The complex has a partial-coverage automatic fire detection system and, in the other areas, a sprinkler system with approximately 50% coverage of the buildings. The automatic fire detection and sprinkler are sufficient.

The security includes an electronic intrusion detection system and CCTV.

The natural catastrophe exposures are standard for a Dutch location and include moderate windstorm exposure, especially for solar PV installation.

Overall, this rates as an average quality risk.

Security is sufficient.

Management controls are adequate.

Major Improvements Required:	No

Risk Recommendations

The following recommendations are submitted in the interest of risk reduction to property assets and business operations. Upgrades to fire protection systems should comply with the requirements of relevant local authorities and Chubb Risk Engineering Services. Plans and specifications for improvements should be submitted to Chubb Risk Engineering Services for review prior to the start of any work.

Chubb Risk Engineering Services do not confirm compliance, or otherwise, of cladding systems or insulation materials with any local Building Codes and / or Standards. Our evaluations are limited to the level of risk in regard to our insurance underwriting requirements. We strongly recommend that you work with your designers and suppliers to ensure cladding systems compliance with the applicable Building Codes and/or Standards.

Recommendations are assigned a priority and cost criteria to assist with resource allocation. Costs are estimates only and should be verified by site management.

Priority		Cost Range	
Critical	Immediate Attention Recommended	Very High	> € 100,000
High	Urgent Attention Recommended	High	€ 50,000 to € 100,000
Medium	Review within 6 months	Medium	€ 10,000 to € 50,000
Low	Long Term Risk Improvement	Low	No cost to € 10,000

Medium | Scope 12 inspectie - Zonnepaneleninstallatie

PC 24-06-17-01 Cost: Category: Solar

Branden kunnen ontstaan door storingen in elektrische installaties. PV-installaties zijn ook elektrische installaties en kunnen dus een ontstekingsbron zijn. In combinatie met brandbare isolatie kan een door het PV-systeem gestarte brand zich snel uitbreiden, wat leidt tot grote schade en bedrijfsstilstand. Om deze reden worden de volgende items aanbevolen:

Tijdens de rondgang was het duidelijk dat er ingebruikname geen Scope 12 keuring is gedaan. Visueel constateerde we tijdens het bezoek dat connectoren los liggen op het dak. Daarom raden wij aan om een inbedrijfstellingsinspectie en eens per drie jaar een inspectie van het zonnepaneelsysteem uit te voeren volgens de richtlijnen Scope 12 (TD18). Een gespecialiseerde derde partij moet de inspecties uitvoeren en de geconstateerde gebreken moeten zo nodig worden verholpen.

Bovendien moet het PV-systeem na hevige wind- en sneeuwstormen worden geïnspecteerd om gebreken vast te stellen, zoals losse of verroeste bouten waarmee de modules zijn bevestigd, fysieke schade aan de PV-structuur, blootliggende bedrading, enz..

Medium | Thermografische inspectie elektrische installatie

PC 24-06-17-02 Cost: Category: Electrical

Tijdens de rondgang werd duidelijk dat de elektrische installatie conform de norm NEN 3140 en 1010 is uitgevoerd. Een brand in de elektrische installatie kan een aanzienlijke materiele schade alsook rook- en roetschade veroorzaken.

Thermografische inspectie elektrische installatie
Een thermografische inspectie van de elektrische installatie is niet uitgevoerd. Wij bevelen aan om de thermografische inspectie ook uit te laten voeren (tenminste 1 x per 3 jaar). En ook in geval van belangrijke wijzigingen moet de elektrische installatie onderzocht worden met behulp van een thermografische camera. Op deze wijze kunnen eventuele hot spots in een vroegtijdig stadium worden opgespoord en verholpen. Hiermee wordt de kans op brand en onverwachte bedrijfsstilstand gereduceerd.

Low | Procedure Brandgevaarlijke werkzaamheden

PC 24-06-17-03 Cost: Category: Human Element Programs

Brandgevaarlijke werkzaamheden (snijden, lassen, slijpen, dakbedekking, enz.) wordt beschouwd als een hoog risico in termen van brandrisico. Daarom moeten alle heet werk-activiteiten worden gecontroleerd, inclusief voorbereiding, uitvoering, afronding, inclusief een eindcontrole. Ten minste het eerste uur nadat de werkzaamheden zijn geëindigd. Leg deze nacontrole formeel vast. Statistisch gezien ontstonden de meeste branden nadat het hete werk was voltooid zonder controle achteraf. De geldigheid van de vergunning mag niet langer zijn dan de tijd die nodig is om de klus te klaren, maar mag nooit langer zijn dan één dienst. Voor werkzaamheden die een aantal dagen in beslag nemen, dient aan het begin van elke dienst een nieuwe vergunning te worden afgegeven, nadat het werkgebied is geïnspecteerd door de vergunningverlenende persoon.

Stichting NHL Stenden Hogeschool

Owner:	Insured
NAICS:	611310
Industry Sector:	Educational
Occupancy:	University of Applied Sciences (HBO/Bachelor)
Latitude / Longitude:	53.2103 / 5.7966

Multiple Buildings:	No
Construction:	Reinforced Concrete
Fire Construction Description:	80% of the main complex is concrete construction. 20% is steel
Combustible Internal Composite Insulated Panels:	None
Combustible EIFS / External Panels:	Combustible > 2.54cm Thick
Panel Type:	Probably polystyrene insulation.
Percent of surface area:	75 %
Comments / Unusual Features:	10% RPF due to the solar installation.

NHL Stenden Hogeschool R8

Construction

Year Built:	1987	Building Height:	9.0 m
Building Footprint:	18,200 m²	Storeys:	4
Total Floor Area:	40,000 m²	Basement Levels:	0
Structural Frame:	Reinforced concrete, Unprotected steel	Walls & Structure:	Combustible Insulated Panel, Glass Curtain, Masonry
Roof & Structure:	Reinforced Concrete	Floors & Structure:	Reinforced concrete

Unusual features:

Building part	Occupancy	Area (m²)	Storey	Construction	Wall	Roof
A	Food court, offices, theatre, staff	4,500	2	Concrete	Concrete, masonry and glass, rock wool	Concrete, Rockwool insulation
B	Facilities, IT, Service square, labs, meeting center	2,000	1	Concrete	Concrete, masonry and glass, rock wool	Concrete, Rockwool insulation
C	Art & education, theory rooms,	3,000	2	Concrete	Concrete, masonry and glass, rock wool	Concrete, Rockwool insulation
D	Administration, central hall, art & education, media library Offices	2,600	4	Concrete, partieel steel	Curtain walls, rock wool	Concrete, EPS insulation
E	Executive board, service center, various. staff departments Theory classrooms	1,300	4	Concrete, partieel steel	Curtain walls, rock wool	Concrete, EPS insulation
F	Media library	1,800	4	Concrete, partieel steel	Curtain walls, rock wool	Concrete, EPS insulation
G	Engineering, planning office, staff departments, HRM	1,400	4	Concrete, partieel steel	Curtain walls, rock wool	Concrete, EPS insulation

H	Built environment	1,600	4	Concrete, partieel steel	Curtain walls, rock wool	Concrete, EPS insulation
Total		18.200				

The complex (building parts A-H) has a maximum of 4 floors and a concrete supporting structure with concrete floors and roofs. Facades are made of concrete, stone and glass in the old building and curtain walls in the new building. The type of insulation used in walls and roofs is mainly rock wool with bitumen as a top layer (EPS has been applied to the roofs of the new building, 8,700 m²). Roof structures are made of steel. There is a concrete cellar beneath the building to park approximately 500 bicycles.

Occupancy

The complex includes classrooms, canteen, theatre, practice rooms art, technic and chemistry,

Storage areas:	0% of floor area	Vacant areas:	0% of floor area

Protection

Protection:

- Fire Detectors
- Fire Sprinkler System
- Portable Extinguishers

Fire Sprinkler Coverage: 55%

Fire Sprinkler Design: Approximately 55% of the complex (the new construction 2009) is estimated to have automatic sprinkler protection. The sprinkler system was installed in accordance with VAS 1987, 1996 edition, and is certified. The Veritas company performs inspections.

Building part	Hazard class	Design Density	Design Area	Explanation
New construction 2009 (Ring)	NII	5 mm/min	216 m²	All areas except storage areas
New construction 2009 (Ring)	NII	Space area	216 m²	Storage areas

The sprinkler system has a third-degree water supply with one electric pump connected to the water mains. The pump delivers 66 m³/hr. The installation is maintained annually, and Engie tests the pumps once every two weeks

Fire Detection: 100 % coverage

Fire Rated Compartments: There are several fire compartments with 30-minute and 1-hour-rated walls and doors.

Building Security:

- All external access fitted with appropriate locks or access control system
- Recorded CCTV coverage of all access / key areas

Internal Exposures

Tenants occupy 0% of building.

Comments: The complex has no other tenants.

Natural Perils

Flood Risk:	Slight
Earthquake Risk:	Slight
Windstorm Risk:	Moderate

Building Summary

Major improvements required: No

Comments: The building complex, built between 1981 and 2009,

This location and is located right next to the other NHL Stenden location RG8 (distance approx 40m). There is an old building from 1981 (buildings A, B and C) and new construction from 2009 (the outer shell of buildings E, F, G and H). The total building area (footprint) is approximately 18,200 m². There are no risk-increasing adjacencies within 30 meters. The site is freely accessible (no fencing). The complex (building parts AH) has a maximum of 4 floors and a concrete supporting structure with concrete floors and roofs. Facades are made of concrete, stone and glass in the old building and curtain walls in the new building. The type of insulation used in walls and roofs is mainly rock wool with bitumen as a top layer (EPS has been applied to the roofs of the new building, 8,700 m²). Roof structures are made of steel. There is a concrete cellar beneath the building to park of approximately 500 bicycles.

Management Controls

Documentation of Rules & Procedures

The school has a well-set-up management program and house rules for the students, staff members and contractors.

Observations:

- Compliance audits conducted as appropriate
- Formal contractor policy & controls / induction
- Formal safety program / policy covering Fire Protection promulgated and in use
- Incident & near miss reporting system in place

Housekeeping

The housekeeping is in general at a good level.

Observations:

- 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

Inspection & Testing of Fire Equipment

The equipment is checked by a maintenance contractor twice per year and also certified by a notified body once per year.

Systems installed:

- Extinguishers
- Fire Detection
- Manual Fire Alarms
- Passive fire protection
- Sprinkler

Observations:

- Documented records of maintenance undertaken / inspections sighted

Annual Maintenance Completed Yes

Maintenance of Buildings Plant & Equipment

The school conducts maintenance with support from computerised data. It includes curative and preventive tasks performed by a combination of personnel and specialised contractors.
The equipment appears well-maintained. The buildings are well maintained with no signs of previous damage.

Observations:

- Buildings appear in good state of repair and maintenance
- Machinery / equipment preventative maintenance program in place

Electrical Installations & Inspections

The building is checked in accordance with the local standard NEN 3140. Thermal imaging is not done yet. A recommendation has been issued. Visually, the equipment is in good condition.

Observations:

- Adequate transformer bunding and fire separation in place
- Combustible materials kept clear of electrical installation areas
- Fire detection systems installed

Hot Work

A formal hot work procedure is not in force yet. A recommendation has been issued.

Smoking Controls

Smoking is totally prohibited in the building. No signs of violations of the ban. The risk is adequately controlled.

Observations:

- Formal policy and rules in place controlling smoking
- Smoking only allowed in designated smoking areas

Self Inspection

Informal self-inspections are conducted at regular intervals. Housekeeping is at a good level, and the utility rooms are free of storage.

Observations:

- Issues / problems discovered are assigned for action and monitored until completion

Fire and Emergency Response Training

The emergency response team has 200 members. The fire wardens' main interest is to evacuate the people, and they might be successful in extinguishing a small fire.

Observations:

- Appropriate staff undergo initial training in use of fire protection equipment
- Site Emergency Response Team assigned and trained
- Yearly refresher training undertaken as required

Fire System Impairment Notification

Observations:

- All major impairments communicated to fire department
- Formal fire protection system impairment system in use for fire detection system
- Reinstatement of systems notified to broker / insurer

Security

The buildings are not fenced in but are provided with a full-coverage burglary alarm system. Any alarm will be transmitted to an external alarm center, which is manned 24/7. A mobile security service team will be sent directly to the alarm to investigate the reason for the alarm. The prevention is at an adequate level. During opening hours, a security guard is present on-site.

Observations:

- All external access fitted with appropriate locks or access system
- Back to base intrusion alarm system installed and monitors all access areas
- Guard response on alarm activation
- Safe alarmed and key access controlled

Estimated guard response time is 15 minutes.

Contingency / Disaster Recovery

There is no formal business contingency plan for these buildings and their contents.

Protection & Hazards

Fire Protection

Water Supplies for Fire Fighting

There are underground hydrants on the city water mains around the facilities. There are also constantly full drainage canals at 50m.

Maximum flow available for fire brigade use:	2,800 L/min
Maximum distance of at least 2 hydrants from buildings:	Up to 150 m
Water Supply:	Public
Public Water Supplies:	Fire Hydrants and Sprinklers

Fire Brigade

Leeuwarden City has multiple fire stations. The closest station is at 1.8 km.

Fire Brigade Service:	Yes	Public
Primary service available:		Public
Public Fire Department		
Response time:		6 minutes
Auto alarm notification:		Yes

Fire Sprinkler Systems

Approximately 55% of the complex (the new construction 2009) is estimated to have automatic sprinkler protection. The sprinkler system was installed in accordance with VAS 1987, 1996 edition, and is certified. The Veritas company performs inspections.

Building part	Hazard class	Design Density	Design Area	Explanation
New construction 2009 (Ring)	NII	5 mm/min	216 m²	All areas except storage areas
New construction 2009 (Ring)	NII	Space area	216 m²	Storage areas

The sprinkler system has a third-degree water supply with one electric pump connected to the water mains. The pump delivers 66 m³/hr. The installation is maintained annually, and the pumps are tested by Engie once every two weeks.

Fire sprinkler installed:	Yes
Unprotected areas:	The oldest part of the building (Fire detection available)
Percentage of site protected:	55%
Year Installed:	2009

Other Extinguishing Systems

The MER is equipped with a fire-extinguishing gas installation.

Hose Reels & Portable Extinguishers

In cabinets are hose reels installed in the building and have full coverage. There are also an adequate number of extinguishers present in the building.

Hose reels:	Yes	Extent of cover:	Full

Portable extinguishers: Yes Extent of cover: Full

Hydrant Systems

Underground hydrants are installed in the public streets around the buildings.

Site requires hydrant system: No

Fire Detection / Alarm Systems

Smoke detection is available to control fire-retardant doors, technical rooms, and evacuation routes, especially in corridors. As soon as the alarm is triggered, the fire retardant doors close automatically, elevators go to the ground floor level, and the fire brigade is directly alarmed, especially during idle hours. During working hours, the fire wardens are alarmed first to investigate the reason for the alarm.

Fire detection installed: Yes Ionization detection

Fire alarm monitoring: Alarm center

Percentage of site protected: 50%

Fire Rated Compartments

The building has many 30-minute and 60-minute fire retardant partitions. Some of the doors have wired glass (20-minute fire retardant). In the large compartments, sprinkler protection is installed.

Floor area of largest fire compartment:	2,000 m²
Fire rated compartments / cutoffs installed:	Yes
Minimum fire rating of fire walls and floors:	1 hours
Penetrations adequately fire stopped:	Yes
Fire walls parapeted through roof:	No

Hazards

Neighbouring Properties

The complex is adequately separated from neighbours.

Separation distance: 50.0 m

Common Hazards

The gas-fired boilers provide comfort heat via a low-pressure warm water system and are properly maintained.
Electricity is fed from the public net via a single transformer housed in a fire cell at the perimeter of the complex. The public electricity company owns and maintains this transformer.
Solar PV panels are on the roofs, and inverters are in technical rooms. A Dutch Scope 12 inspection has not been performed yet. A recommendation has been issued.

Observations:

- Boilers
- PV Solar Panels

Special Hazards

NA

Natural & Other Perils

Bushfire	No bushfire exposure.	
Earthquake	Low hazard according to SwissRe.	
Flood	According to SwissRe, there is a 50-year return period for Storm Surge.	
	Distance to river/lake:	50.0 m
	Control measures:	National flood defense works (dikes, etc)
Tsunami	No hazard acc to SwissRe	
	Distance to coast:	20,500.0 m
	Elevation above sea level:	0.0 m above sea level
Windstorm	SwissRe rates the risk as Significant. The building's construction is generally solid. Overall, the risk is moderate. The solar panels are well-ballasted but more susceptible.	
Winter Storm	Assessed a low hazard. Heavy snow is rare in this region.	
Other Perils	• Hail • Lightning	According to SwissRe, there is a Low Lightning risk and Very Low hailstorm risk. The solar panels are susceptible to hail storms and lightning.

Business Interruption

Business Operations

There are school activities during the week. The school currently serves 20,000 students and has 2000 staff members.

Hours of Operation: 5 days a week

Production Dependencies

Estimated period to return to full operation: 12 months

Comments

The school entirely depends on the availability of electric power and EDP services. There is no backup location.

Loss Estimates

Insured Values

Property Values (PD):	173,027,078	EUR
Business Interruption Values (BI):	0	EUR
Indemnity Period:	0	months

Probable Maximum Loss

PD	100%	173,027,078 EUR	With the automatic sprinkler and automatic fire detection system impaired, a fire will be notified quite late. A passerby will eventually alert the fire brigade. Conservatively, it must be assumed that the complex will be lost.
BI	100%	0 EUR	Not insured

Normal Loss Expectancy

PD	60%	103,816,247 EUR	The sprinkler or fire detection system would detect a fire in the complex. The fire load and many fire-resistant fire doors could allow the fire brigade to prevent a total loss. The fire brigade is close by. There will be some smoke and soot damage.
BI	100%	0 EUR	Not insured

Definitions

Property Damage Probable Maximum Loss (PML) – The portion of the property damage that we anticipate will be lost in a fire or other event when automatic plant protection and detection systems, including sprinklers are out of service. Adequate public and/or private fire brigade services including water supply and pressure are available. Factors that affect PML are construction, occupancy, fire walls within a building, separation between buildings, degree of combustible loading, quality of responding brigade and value distribution.

Property Damage Normal Loss Expectancy (NLE) – The portion of the property damage that we anticipate will be lost in a fire or other event when all automatic plant protection and detection systems, public and private fire brigade services, respond and function as expected. Factors that affect the NLE are construction, occupancy, fire walls within a building, separation between buildings, degree of combustible loading, quality of responding brigades, value distribution and the adequacy of automatic protections.

Business Interruption PML & NLE – The portion of business interruption that we anticipate will be true lost production, revenue, income, and profit as a result of a given fire or other event. While consideration can be given to recovery features, considerable caution should be exercised when applying these to a given scenario. The existence of an applicable contingency plan will give an enhanced level of confidence here. The Business Interruption loss estimates are calculated using the same Property Damage PML and NLE loss scenarios.

General Photos

South side

West side

Bicycle parking

Solar panels, mineral insulation roof

Storage of inert gases

View building part G

View building part A

Theatre

In general, good housekeeping in technical rooms

Sprinkler pump