



Hogeschool Inholland
Alkmaar
Alkmaar, Netherlands

Risk Control Report
Property and Business Interruption

Location: Alkmaar
Bergerweg 200
Alkmaar 1817 MN
Netherlands

Date On Site: 28th April 2016
Consultant: Sander Verboog

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PARTICIPANTS

Name	Title	Company
E. Naus	Medewerker service desk	Hogeschool Inholland

SUMMARY AND OPINION OF RISK

The purpose of this audit was to review the loss prevention systems and procedures and the physical layout and arrangement of the facility, and in so doing, identify options for improvement to minimise, at a reasonable cost, the potential physical and business interruption loss exposures.

This site has been graded using the RSA quantitative risk assessment (QRA). This is a method for the assessment of risk quality against commercial/industrial facilities in general. Two elements of risk are examined and compared in order to derive an overall risk quality rating:

- the inherent fire and business interruption hazards associated with the premises, occupancy and operations*
- the risk control features in place to mitigate the inherent hazards*

This facility is a university of applied studies. There is a normal university occupancy with class rooms spread over the entire complex. Furthermore practical courses are given in dedicated workshops. This building also houses the canteen. Overall, this is an ordinary hazard occupancy with a low up to moderate fire load throughout. There is an increased fire load in a storage room on the ground floor of building B. Building A is currently being renovated. There is an increased risk during the construction work. Furthermore, for the time being a combustible building named building D has been built in order to house some of the employees that were formally housed in building A. The project will be finished in February 2017.

Overall the construction consists of a fire resistive load bearing structure with an assumed combustible roof. Two buildings are of combustible construction.

Some smoke detectors have been installed to activate some of the fire doors. Overall the buildings are not protected by a fire detection system or by an automatic sprinkler system. The only adequate protection would be the installation of a fire detection system or an automatic sprinkler system. Such systems are not required due to the values at risk and the cost/benefit analysis undertaken on sprinkler or fire detection protection by RSA.

A number of fire separations has been installed throughout the premises. The fire doors are swinging doors and they are not air tight. Related to the low up to moderate fire load throughout, the fire doors provide some protection. Both the fire separations as well as the fire detection system have mainly been installed for life safety and evacuation purposes.

Human element features are generally adequate. Generally fire inception hazards are adequately managed.

There are no direct exposures. The nearest exposure at a distance of more than 60 m will soon house refugees from abroad.

In the event of a large catastrophe, outsourcing of the activities to external own and third party buildings may be possible. However, it is not known whether there are the same possibilities for the long term.

The RSA QRA (Quantitative Risk Assessment) rating for this facility is 'Standard' with the potential to achieve a 'Above Standard' rating upon completion of the submitted recommendations.

Based on all factors, including the scope of risk-improvements, this facility is deemed by RSA 'Acceptable only if recommendations completed'.

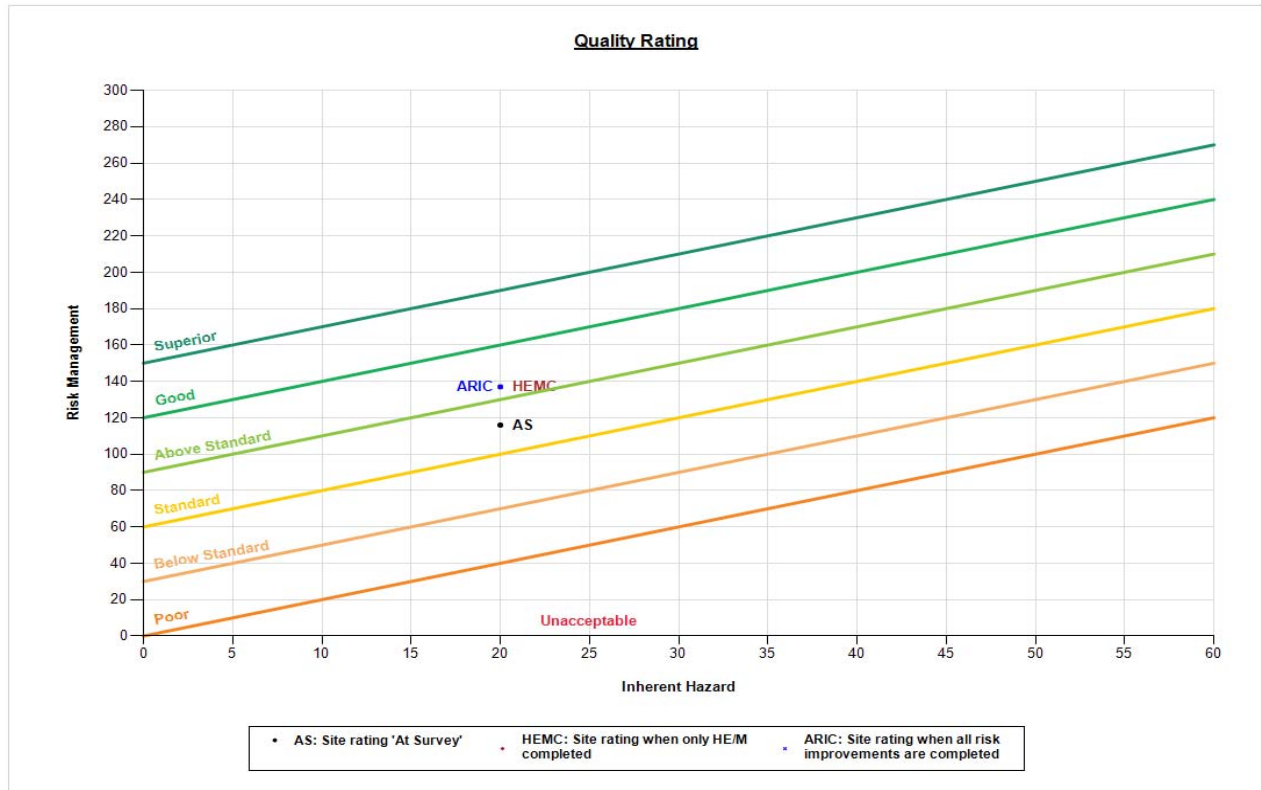
CHANGES SINCE PREVIOUS SURVEY

This is the initial full survey conducted by RSA. There have been no recent changes on site. Currently building A is thoroughly internally renovated and the entire building is not used by Inholland at this moment. The building had been provided with a fire detection system. We assume that this system will be re-installed. However, this has not been confirmed during our survey. No further technical details are known. The project will be completed in February 2017. Furthermore there are non-confirmed plans to renovate or rebuild building B.

LOSS HISTORY

In 2012, there has been a rather large theft of copper. The total damage is not known. Furthermore no losses were claimed during the past 5 years.

QUALITY RATING



Rating: 'Overall Rating' is derived from the 'inherent hazards', e.g. the type of process or storage, the type of construction and exposure hazards, evaluated against the loss control measures and risk management practices that will reduce the likelihood and/or severity of loss.

Superior:	Meets all and exceeds many best-practice risk management standards. All inherent hazards are well controlled.
Good:	Meets most best-practice risk management standards. All key inherent hazards are well controlled.
Above Standard:	Meets all or most normal risk management standards. Most key inherent hazards are well controlled.
Standard:	Meets minimum risk management standards. There may be some deficiencies in the control of inherent hazards.
Below Standard:	Gaps in application of minimum risk management standards. Inherent hazards are not thoroughly controlled.
Poor:	Numerous minimum risk management standards are missing. Inherent hazards are not controlled.
Unacceptable:	The risk has major deficiencies in more than one area (e.g. physical, procedural, process or attitude) that leads to a significant likelihood of a major loss.

RISK IMPROVEMENTS

Category:

Category 1: These are capital expenditure recommendations with a loss expectancy greater than 25% of the combined property damage and business interruption loss potential. Whilst funding for these items will normally require corporate approval, completion will significantly improve the risk profile of the site.

Category 2: These are recommendations either with a loss expectancy of less than 25% of the combined property damage and business interruption loss potential or that address important reliability issues. In some cases funding may require corporate approval.

Human Element / Maintenance (HE/M): These recommendations refer to management practice and procedures. Typically they carry no capital cost but address a wide range of local issues including the control of inception risks and training.

Priority:

- Priority A These Risk Improvements address deficiencies that feature one or both of the following:*
- high-frequency or imminent loss exposures that can typically be resolved by the implementation or improvement of procedures or practices, or by localised physical improvements*
 - loss exposures that are disproportionately large relative to the physical extent of the deficiency, or to the cost to complete the Risk Improvement*
- Priority B These Risk Improvements include procedural items that address loss exposures of moderate frequency, that may be more complex, and/or that are enhancements to existing arrangements.*
Also included are physical improvements which will reduce the likelihood and/or severity of losses, but that do not meet the criteria for Priorities A or C
- Priority C These Risk Improvements include items that represent a fundamental change or upgrade in loss control arrangements, probably as part of a longer term risk management strategy. Also included are enhancements to existing systems and practices or longer term projects aimed at achieving "best practice"*

Risk Improvement Summary

RI No	Summary	Category	Priority	Class	Status	Loss Estimate
2016-04:01	Implementeer procedure brandgev. werkzaamheden (Permits to Work including Hot Work Controls)	HE/M	A	Property	AR	
2016-04:02	Implementeer een introductie procedure. (Contractor Controls)	HE/M	A	Property	AR	
2016-04:03	Verbeter het rookbeleid. (Smoking Controls)	HE/M	A	Property	AR	

Status Definitions

AR: Awaiting Response. This is the default status for all risk improvements pending site feedback
 UR: Under Review, including projects awaiting sign-off and funding
 IP: In Process, including projects for which funds have been approved and released and work is starting or due to start
 NP: Disagree / No Plans. There are no plans to complete the risk improvement
 DA: Deferred by RSA Account Manager

2016-04:01 : Implementeer procedure brandgev. werkzaamheden (Permits to Work including Hot Work Controls)

Risk Improvement:

Ontwikkel beleid dat tot doel heeft dat brandgevaarlijk werk veilig uitgevoerd wordt. Dit dient te resulteren in het gebruik van een formulier brandgevaarlijk werk en een checklist die gevolgd moet worden voorafgaand aan uitvoering van dergelijk werk. De procedure dient gecommuniceerd te worden met eigen personeel en aannemers. Alleen geautoriseerde mensen mogen werkvergunningen uitschrijven.

In het bedrijf dienen plaatsen aangewezen te worden waar nooit brandgevaarlijk werk uitgevoerd mag worden en plaatsen waar dit is toegestaan. Beoordeel het beleid periodiek en pas het aan waar nodig. Het is noodzakelijk dat het management het beleid ondersteunt. Een strikte controle van brandgevaarlijk werk zal het risico op brand verminderen. Brandgevaarlijk werk kan gedefinieerd worden als elk werk dat open vuur met zich meebrengt, werk dat warmte veroorzaakt, werk dat vonken veroorzaakt zoals slijpen, solderen, lassen.

De volgende maatregelen dienen genomen te worden:

- Maak ruim voor aanvang van de werkzaamheden de uitvoerder bekend met de huisregels.
- Maak voor aanvang van de werkzaamheden de huisregels bekend en laat mensen een vuurvergunning brandgevaarlijke werkzaamheden ondertekenen. De vuurvergunning dient een geldigheid van niet langer dan een dag te hebben. Het bewust omgaan met brandgevaarlijk werk binnen uw bedrijf zal hierdoor vergroot worden.
- Dek voor aanvang van de werkzaamheden brandbare goederen af of verwijder deze. Een medewerker van uw bedrijf dient erop toe te zien dat dit gebeurt.
- Zorg voor voldoende kleine blusmiddelen in de directe omgeving van de werkzaamheden. Een medewerker van uw bedrijf dient erop toe te zien dat dit gebeurt. Zorg voor een brandwacht.
- Zorg ervoor dat de mensen een mobiele telefoon bij zich hebben om in geval van calamiteit zo snel mogelijk alarm te kunnen slaan.
- Controleer samen met de mensen 1 uur na afloop van de werkzaamheden de werkplek op de aanwezigheid van smeulende goederen.
- Voer geen brandgevaarlijke werkzaamheden uit aan het eind van een werkdag.

Door deze procedure zullen mensen zich meer bewust worden van de verantwoordelijkheid die zij op zich nemen. Deze procedure dient voor zowel eigen personeel als voor derden geïmplementeerd te worden.

Deficiency:

Ongecontroleerd brandgevaarlijk werk kan resulteren in brand.

Status: Awaiting Response **Est. Cost:** Revenue Only **Risk Rating Impact:** Moderate

Category: HE/M **Priority:** Priority A **Loss Estimate:**

Class: Property

Status Comments:

Uitvoering van de aanbeveling is niet tijdens ons bezoek bevestigd.

2016-04:02 : Implementeer een introductie procedure. (Contractor Controls)

Risk Improvement:

Ontwikkel een formele introductie procedure voor elke aannemer die werk uitvoert.

Zorg ervoor dat elke aannemer zich volledig bewust is van:

- de omvang en de lay-out van het complex.
- de geldende veiligheids- en huisregels.
- de specifieke gevaren in het bedrijf.
- de specifieke werkinstructies inclusief het gebruik van een formulier brandgevaarlijke werkzaamheden.

Het proces dient door de desbetreffende uitvoerend aannemer ondertekend te worden voor acceptatie van de procedure.

Voor aannemers die op regelmatige basis in uw bedrijf werken, dient de procedure minimaal jaarlijks opgefrist te worden.

Deficiency:

De introductie van nieuw personeel vormt een significant risico. Relatief veel schades worden veroorzaakt door derden en het gebrek aan controle op hun werkzaamheden.

Status: Awaiting Response **Est. Cost:** Revenue Only **Risk Rating Impact:** Moderate

Category: HE/M **Priority:** Priority A **Loss Estimate:**

Class: Property

Status Comments:

Deze aanbeveling is niet besproken tijdens ons bezoek. Het is het resultaat van onze risico-analyse na ons bezoek.

2016-04:03 : Verbeter het rookbeleid. (Smoking Controls)

Risk Improvement:

Handhaaf het algeheel geldende rookverbod. Er wordt binnen gerookt in de gang naast de studentenvereniging in gebouw B en tijdens de renovatiewerkzaamheden in gebouw A. Op enig moment kan de vuurbelasting in de gebouw B verhoogd zijn als de brandbare goederen voor studentenactiviteiten uit de opslag gehaald worden. Tevens zal de vuurbelasting in gebouw A verhoogd worden naarmate het eindstadium van de werkzaamheden in zicht komt.

Deficiency:

Brandbare goederen kunnen tot ontsteking gebracht worden door ondoordacht weggewerkte peuken.

Status: Awaiting Response **Est. Cost:** Revenue Only **Risk Rating Impact:** Moderate

Category: HE/M **Priority:** Priority A **Loss Estimate:**

Class: Property

Status Comments:

De heer Naus geeft aan dat de verantwoordelijkheid van de renovatie niet in handen ligt bij Inholland. Tevens is geen confirmatie ontvangen over het aanscherpen van het rookbeleid naast de studentenvereniging.

LOSS ESTIMATES SUMMARY

The sums insured below are based on information provided to RSA.

We define Loss Estimate (LE) as the anticipated monetary loss for any particular scenario including both physical damage and business interruption costs.

Value and Loss Estimate Summary Table

PROPERTY DAMAGE	Total Sum Insured	EML Block		EML		CNLE		TNLE	
	EUR	% of TSI	EUR	% within the EML Block	EUR	% within the EML Block	EUR	% within the EML Block	EUR
Buildings	40,873,000	100	40,873,000	50	20,436,500	50	20,436,500	50	20,436,500
Plant & Equipment	13,560,000	100	13,560,000	70	9,492,000	70	9,492,000	70	9,492,000
Stock		100		70		70		70	
Other	25,000,000	100	25,000,000	70	17,500,000	70	17,500,000	70	17,500,000
Total PD Value	79,433,000								
Total PD Loss Estimate			79,433,000		47,428,500		47,428,500		47,428,500
BUSINESS INTERRUPTION	EUR	% of TSI	EUR	Days within the EML Block	EUR	Days within the EML Block	EUR	Days within the EML Block	EUR
Indemnity Period	24 months								
Total BI Value									
Total BI Loss Estimate		100		720		720		720	
Total PD + BI Value	79,433,000								
Total PD + BI Loss Estimate									

LOSS ESTIMATE SCENARIOS

EML Block

The largest block of value without adequate fire separation covers the entire building. The EML Block represents 100% of the total sum insured. There are no exposures.

Estimated Maximum Loss (EML)

An estimation of the maximum LE that could be sustained from a single incident, which is considered within the realms of probability but excluding losses that may be possible but remain unlikely. The primary fire protection, detection, or manual response system is ignored (e.g. sprinklers are ignored but credit is given for detection; if no sprinklers exist, detection is ignored), but a normal level of emergency response can be assumed (if applicable).

Excluded loss examples include fire following aircraft impact; fire following earthquake; or other natural catastrophe; and multiple seat arson.

This building is of assumed combustible roof construction. The risk is considered an ordinary hazard occupancy with low up to moderate fire load throughout.

With the fire detection system impaired, a fire originating in the basement of building B would eventually be noticed by a passer-by. The late arriving fire brigade would encounter a smoke filled facility. Due to the heavy concrete load bearing structure, it is likely that an internal attack could be performed. However, since the extent of compartmentation is rather limited and vertical fire spread is possible due to the presence of unprotected glass windows, it cannot be excluded that severe damage could occur to a part of building B, the entire building A and the entire building L. It is expected that the fire would stop eventually due to a lack of fire load in class rooms and adequate fire brigade operations. Partial damage would occur to the fire resistive construction.

For the long term there are limited possibilities for outsourcing the activities. It is likely that temporary housing could be found for the short to middle term period.

Current Normal Loss Expectancy (CNLE)

The largest LE determined at the time of survey when considering all aggravating and mitigating factors. This can only be equal to or less than the EML.

A fire originating in the basement of building B would eventually be noticed by a passer-by. The late arriving fire brigade would encounter a smoke filled facility. Due to the heavy concrete load bearing structure, it is likely that an internal attack could be performed. However, since the extent of compartmentation is rather limited and vertical fire spread is possible due to the presence of unprotected glass windows, it cannot be excluded that severe damage could occur to a part of building B, the entire building A and the entire building L. It is expected that the fire would stop eventually due to a lack of fire load in class rooms and adequate fire brigade operations. Partial damage would occur to the fire resistive construction. A large loss of building A and fire spread to building L is accounted with due to the fact that it is uncertainty whether fire resistive walls will be erected during the renovation.

For the long term there are limited possibilities for outsourcing the activities. It is likely that temporary housing could be found for the short to middle term period.

Target Normal Loss Expectancy (TNLE)

The largest LE after all loss prevention risk improvements have been completed. Depending on the risk improvements made at the time of survey this will typically be less than the EML, but could potentially still equal the CNLE and/or EML

A fire originating in the basement of building B would eventually be noticed by a passer-by. The late arriving fire brigade would encounter a smoke filled facility. Due to the heavy concrete load bearing structure, it is likely that an internal attack could be performed. However, since the extent of compartmentation is rather limited and vertical fire spread is possible due to the presence of unprotected glass windows, it cannot be excluded that severe damage could occur to a part of building B, the entire building A and the entire building L. It is expected that the fire would stop eventually due to a lack of fire load in class rooms and adequate fire brigade operations. Partial damage would occur to the fire resistive construction. A large loss of building A and fire spread to building L is accounted with due to the fact that it is uncertainty whether fire resistive walls will be erected during the renovation.

For the long term there are limited possibilities for outsourcing the activities. It is likely that temporary housing could be found for the short to middle term period.

RISK INFORMATION

Site Occupancy

This facility is a university of applied studies. Besides this normal university occupancy with a large number of class rooms spread over the buildings, there are several associated services.

Building A: this building is currently being renovated. The building will be used to house class rooms and offices.

Building B: this building houses class rooms, offices and a student society on the ground floor. Furthermore there are some storage areas located on the ground floor. The student society is only open during normal working hours. The society mainly consists of a bar and an associated beverage storage room. Activities outside normal working hours should be approved by the general management.

Building C: this building houses class rooms and offices.

Building L: this building houses the workshops for the technical studies as well as the canteen. In the workshops small scale work is conducted and mechanical metal working machines such as lathes and milling machines have been installed. Two automated small sized CNC machines have been installed as well. Furthermore there are welding operations using flammable gases in cylinders. In one of the class rooms manually produced plastic sheets are manufactured. Flammable liquids are used. A deep fat fry system has been installed in the kitchen of the canteen. There is a limited sized storage area in the basement.

Building D: this is a temporary building that probably will be demolished after building A is operational. The building houses class rooms as well as offices.

Rabobankzaal: this building houses the auditorium. There is a limited sized storage area in the basement.

This university provides high education to an unknown number of students. Studies that can be followed comprise economics, teaching study, pedagogy and technical studies such as electro-technical engineering, mechanical engineering, civil engineering, robotics and ICT. It is estimated that students are normally in the age ranging from 17 to 25 years.

This facility is open during normal working hours, 5 days a week. Some 200 people are employed.

Occupancy Fire Load

Generally the fire load is low up to moderate. There are no large warehouse areas. Storage rooms can be found on the ground floor of building B (storage of small technical sundries and storage belonging to the student society), the basement of building L (storage furniture) and basement of the Rabobankzaal (storage of catering). The storage belonging to the student society represents an increased fire load.

Compartmentation

Fire resistive compartments have been erected throughout the building. Currently building A has no fire resistive partition walls. However, it is expected that these walls will be erected during the current renovation.

Fire resistive partition walls consist of swinging doors that are closed at all times or that are kept open by a magnet. The doors consist of a timber frame and embedded wire mesh glass panels. The doors are not air tight and provide a limited fire rating. The separations have mainly been installed for life safety and evacuation purposes.

In building B there are three compartments per storey floor. Other buildings have only been cut off from the remainder of the complex. They have not been provided with additional fire partition walls on the several floors. Exterior vertical fire spread is possible in all buildings.

Some of the fire doors that are kept open by a magnet are automatically closed by fire detectors that have been installed at either side of the doors. Other fire doors are only closed upon activation of a manual break glass point. All doors are connected to a time switch. After working hours they are automatically closed.

Walls between the class rooms and offices are fire resistive from plaster board panels. The outside windows and walls towards the corridors are not fire resistive however.

Construction

Building Name	Main Occupancy	Year Built	Construction Information			Overall Classification Summary	% Sprinklers Adequate	% Sprinklers Deficient	Storeys	Ground Floor Area (m ²)	Total Building Area (m ²)	Estimated Property Value Split (%)
			Roof	Walls	Insulation							
Building A	Office	1998	Partly Combustible	Light Non-combustible	Unknown - assumed combustible	Partly Combustible	0	0	5	2,000	10,000	35
Rabobankzaal	Office	1969	Highly Combustible	Partly Combustible	Unknown - assumed combustible	Highly Combustible	0	0	1	800	800	2
Building L	Office	1969	Partly Combustible	Light Non-combustible	Unknown - assumed combustible	Highly Combustible	0	0	2	2,650	5,300	17
Building C	Office	1994	Partly Combustible	Light Non-combustible	Unknown - assumed combustible	Partly Combustible	0	0	3	1,500	4,550	15
Building B	Office	1969	Partly Combustible	Light Non-combustible	Unknown - assumed combustible	Partly Combustible	0	0	4	2,200	8,800	30
Building D	Office	2015	Highly Combustible	Highly Combustible	Unknown - assumed combustible	Highly Combustible	0	0	1	400	400	1

Construction Definition	% of Total Building Area
Highly Combustible	21.78
Partly Combustible	78.22

The complex consists of 6 buildings that have all been attached to each other.

Building A consist of a ground floor and 4 storey floors; building B consists of a ground floor and 3 storey floors; building C consists of a ground floor, partly 2 storey floors and partly 1 storey floor; building L consists of a basement and a ground floor, building Rabobankzaal consists partly of a basement and a ground floor; building D consists of a ground floor only.

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Buildings A, B, C and L consists of a concrete load bearing structure with concrete roofs, concrete storey floors and masonry and glass window walls. The Rabobankzaal consists of a timber vertical load bearing structure. The timber roof is supported by steel trusses. Temporary built building D consists of plastic panel walls and a timber floor.

During our survey the type of insulation material applied on the roof could not positively be identified. Currently it is assumed that the building has been insulated with non-approved combustible insulation materials. The actual situation could be different. However, possible combustible insulation material would have been installed on a concrete roof structure.

Process Hazards

Summary Table

Process Hazard	Arrangement, management and protection #ADEQUATE	Arrangement, management and protection #INADEQUATE
Building B		
Warehousing/Storage	1	0
Building L		
Flammable Gas Operation	1	0

Operations comprise normal office and university activities. Special hazards are the deep fat fry installation in the kitchen, the limited sized storage rooms, the production of plastic sheets and the welding activities in the workshops.

Utilities Infrastructure

Electricity and Lightning

Electrical power is supplied by the public grid. It is stepped down on site by a total of 2 transformers. These transformers have been installed in concrete vaults. Transformers are oil filled. No further details are known. The transformers are owned and maintained by the public electricity board.

Heating and Cooling

The entire building has been provided with a gas-fired boiler system feeding low pressure warm water radiators. Two boiler systems have been installed for buildings B, L and Rabobankzaal; one boiler system has been installed for building C. Temporary building D has been provided with electrical heaters.

Buildings C and L have each been provided with an air treatment system. Air inlet and air outlet ducts are situated close to each other. These systems are of limited size. Other buildings have not been provided with such systems. However, during the current renovation building A may be provided with an air treatment system as well. It is believed that the air treatment systems are shut off upon activation of the manual glass break points.

Gases and Liquids

Natural gas from the towns mains is used for space heating. In the event of an emergency, the gas supply is manually isolated. The isolation valve is easily accessible from a safe place outside the building.

Arson Exposure

No combustible materials are stored on site. A single waste compacter has been installed in the yard. The yard is easily accessible.

External Exposures

There are no direct exposures. A single office in building C has been rented to an external company named Idea that supports starting entrepreneurs.

Human Element and Maintenance Control Programs

Electrical Maintenance

Every year, the electrical installations are gradually checked according to the Dutch standard NEN3140. The electrical installations are entirely checked every three years. Any deficiencies are reported and corrected promptly. The electrical installations seem visually to be in a good state of repair. Thermographic images of the electrical installations are made on a three years basis as well.

General Maintenance

The building and technical installations seem visually to be in a good state of repair.

Permits to Work including Hot Work Controls

No specific procedure is in place. Due to the assumed combustible roof insulation, an adequate procedure should be implemented. It is not likely that a hot work permit system is used during the current renovation work in building A. It is strongly recommended to improve the current situation.

Contractor Controls

The management always use the same main contractor and tends to use the same sub-contractors. They are familiar with the site and the specific safety rules. Specific safety instructions have not been discussed.

Housekeeping and Loss Control Self-inspection

An adequate program is in place with good standards maintained across the entire site.

A formal self inspection program is in place with monthly control rounds using a checklist. Deficiencies are corrected promptly.

Waste is collected in roll containers throughout the building and processed in a single compactor that has been installed in the yard.

Control of External Exposures

The surroundings of the building are regularly visited.

Management of Change

A management of change procedure is in place. All necessary parties are involved in case of major changes. Insurers have not been involved in the current renovation of building A.

Smoking Controls

Smoking is strictly prohibited and two dedicated smoking areas have been installed outside the building. However, there is illicit smoking in the corridor of the student society and in building A. It is strongly recommended to improve the current situation.

Process Hazard Controls

Plant and Equipment Installations

All equipment is installed to a good standard in line with local code and best practice at the time of installation.

Kitchen appliances are electric. Natural gas is not used in the building.

Welding is conducted in a single workshop. The activity itself is segregated by non-combustible dedicated vertical slats. Welding gases are stored properly in two cylinders inside the class room. There are two more cylinders stored in a dedicated steel vault in the yard.

For educational purposes, plastic sheets are manually manufactured in a single workshop. This activity is a limited scale and forced exhaustion of vapours has been installed. Combustible liquids will be installed in a safety cabinet that has recently been purchased.

Instrumentation and Controls

There are no specific requirements relating to this occupancy.

Safe Shutdown Systems

There are no specific requirements relating to this occupancy.

Maintenance and Management

All maintenance is outsourced to third party specialised contractors. A preventive maintenance program is in place. Maintenance is outsourced to a main contractor named Engie. An Engie employee is based at this facility during one day a week. This contractor is assisted by a number of sub-contractors. Engie provides supervision on these sub-contractors.

Hazardous Goods and Spillage Response

There are no specific requirements relating to this occupancy.

Operator Training

There are no specific requirements relating to this occupancy.

Location and Construction

Technical rooms have been installed in cut off rooms. Cable penetrations have been sealed properly.

Extraction Systems

A deep fat fry installation has been installed in the kitchen. The hoods are daily cleaned. The exhaust pipe is inspected and cleaned on an annual basis.

Electrical Installations

All electrical equipment has been installed in line with the Dutch standard NEN1010. All cable run in suitable loaded conduit or cable trays. There is no redundant cabling. Transformers are well arranged. The equipment is visually in a good condition.

Response Factors

Security and Access Control

Access is controlled from the reception desk at the ground floor of building B. However, this is an open organisation where people may enter the building uncontrolled. Access to non-public areas is controlled by key locked doors.

Automatic Fire Detection

Some fire detectors have been installed to operate the fire doors in building L. During the renovation, it is expected that building A will be provided with smoke detectors. However, this could not be confirmed by Mr. Naus.

Water Supplies for Manual Fire Fighting

Extinguishing water can be obtained from the underground public hydrants which are situated along the public roads. The hydrants are connected to the public water main. It is not known whether the public water main is maintained. The pressure and flow characteristics of the hydrants are unknown.

An unlimited supply of extinguishing water can be obtained from the nearby ditch at a distance of 20 meters from the premises.

Public Fire Brigade

The public fire brigade is situated at a distance of 2 km with a response time of less than 10 minutes. There are no obstructions on the roads towards the facility. No familiarisation visits to the facility are completed by the fire brigade.

Incident Response and Shutdown of Supplies

The site has an incipient emergency response team as part of Dutch legislative requirements. The team is trained to deal with fires using portable fire extinguishers and hose reels. The team receives trainings twice a year. The primary purpose of this team is evacuation and life safety.

The entire facility has been provided with manually operated emergency buttons. This system signals to the fire brigade and operate the fire doors.

Fire Extinguishing Appliances

Suitable portable fire extinguishers and hose reels are provided throughout the site, which are serviced annually by a specialised contractor.

Fire Systems Maintenance and Impairment Management

The facility is not protected by a fire detection system or an automatic sprinkler system.

Fire Protection Systems

Automatic Sprinkler Protection

Automatic sprinkler protection has not been provided.

Fire Water Supplies

Automatic sprinkler protection has not been provided.

Fire Suppression System(s)

Automatic fire suppression systems have not been provided.

Business Interruption Information

In the event of a large catastrophe, the activities could be outsourced to other Inholland universities in the Netherlands. These are short term solutions. It is not known whether there are long term solutions. It is expected that interruption of activities would occur during the rebuilding time.

Since business interruption has not been insured, no RSA QRA rating has been included.

Contingency Plans

There is no contingency plan.

Natural Catastrophe Exposures

Earthquake/Volcano

This site is located in a hazard zone 0 (Munich Re rating system where 0 represents a low hazard and 4 a high hazard).

Hurricane/Cyclone/Tornado

This site is located in a tornado hazard zone 3 (Munich Re rating system where 0 represents a low hazard and 4 a high hazard). According to the Munich Re rating there is no Tropical Cyclone & Hurricane hazard.

Winter Storm

This site is located in a hazard zone 3 (Munich Re rating system where 0 represents a low hazard and 4 a high hazard).

Flood (River, Coastal, Surface Water)

General

Approximately one third of the Netherlands is built below the mean sea level. These areas are subdivided into 53 main dike rings and approximately 40 small dikes rings. The latter dike rings are situated along the river Maas in the south of the Netherlands. Dike rings are exposed to the sea, to rivers or both to the sea and rivers. All dikes rings are surrounded by either dunes and dikes or levees along the rivers. Government experts have calculated the probability of a dike failure and flooding of the specific dike ring.

Dike ring #13

This site is exposed to the sea, lakes and a canal. The premises are exposed to the North sea, Wadden sea, IJsselmeer, Markermeer and Noordzeekanaal. This site is located in dike ring #13 named 'Noord-Holland'. The government data shows the probability of a flood of this site as one in 500 every year. The total surface area of this dike ring amounts to 1,531 km². The total length of the dike ring amounts to 253 km. The governmental rating of this dike ring is qualified as not sufficient, sufficient and good. This dike ring has been subdivided in smaller areas by non classified dikes. The distance to the nearest classified dike ring is 19 km.

Sea

The site elevation is 1 m above sea level. The site elevation is above the expected sea flood level. The site would probably not be flooded in case of a breakthrough of a sea dune or a sea dike.

Lake, canal

According to Dutch government data a lake or canal dike breakthrough would result in an inundation depth of 4 m. All basements would be flooded as well. The value of the stored goods in the basements is limited. This is a rough estimate. As mentioned above the probability of a flood is one in 500 every year. This is considered a high risk. A project has been started already by the Dutch authorities in order to improve the overall quality of the river dikes. It is expected that the risk of a dike failure will be reduced within a few years.

Non classified bodies of water

Besides the risk of inundation from the sea and major rivers, there is always a chance that inundation occurs from non classified ditches, rivers, canals etc. There are no inundation data for these bodies of water available. The nearest non classified body of water is located at 20 m from the premises.

Lightning/Hail

This site is located in a lightning and hail hazard zone 2 (Munich Re rating system where 0 represents a low hazard and 6 a high hazard).

Snow/Collapse

No excessive snow fall is expected in this part of the Netherlands. The roofs are inspected and cleaned on a regular basis.

Other Natural Catastrophe

N/A

OTHER CLASSES: COMMENTS

Crime

General Description

There are several computer rooms throughout the building that have been equipped with some 30 computers each. Computers are standard type machines and does not represent a large value. Furthermore some workshops have been equipped with metal working machines and small sized robots. It is believed that the machines represent a large value. However, due to their weight and size, the majority of the machines are difficult to move.

Theft EML

The theft EML is based on a number of metal working machines from the workshops and a number of computers from computer class rooms and is the result of an organised attack based on removal by articulated lorry. The value of the computers and machines could not be given by Mr. Naus.

Physical Security

The site is partly surrounded by a ditch. Furthermore the parking at the front of the building has been provided with a 1 m high fence. Windows and doors have been provided with standard type hinges and locks.

Intruder Alarms

The entire facility has been provided with an intruder detection system. The protection consists of door magnets and passive infra red detectors in the corridors and in the computer class rooms. Alarm is transmitted to a permanently manned central alarm station. The alarm station will alert a private security company. The watchman would go to the facility in order to verify the alarm and call out the police.

Other Security

CCTV camera's have been installed outside the building. Furthermore one camera has been installed in the room where the exams are kept in a safe and one camera has been installed near the reception desk. The camera footage is recorded and partly actively monitored at the reception desk. The value of the system is limited to police investigation purposes after an incident.

No control rounds are performed during idle hours.

M&E

A machinery breakdown assessment was not undertaken, as this is only a university occupancy. As such, no major machinery is present.

APPENDIX

Site Plans and Photographs



