

COPE Report Erasmus building and Library (Radboud University)
Adress: Erasmusplein 1 /Erasmuslaan 36 / Mercatorpad1
Nijmegen, Netherlands

Report of [REDACTED] date of visit 17/04/2024
Participants: [REDACTED] (Facility Manager Radboud University),
[REDACTED] (Aon Account manager)
[REDACTED] (Aon risk engineer)
[REDACTED] (Chubb Risk Engineer, writer of this report)

Introduction:

The Radboud University was visited April 7th, 2024 for a survey to get an impression of the exposures and controls. The buildings are in use as:

- Library: (book storage, but also office like environment where students can study in a quiet environment. is in use as office building for the board of directors and staff of the University.
- The low building around the Erasmus tower is in use as restaurant for students. There are various food sales counters all with a professional kitchen. Some of these kitchens contain deep fat fryers but these are all provided with wet chemical fire suppression systems.
- The high rise Erasmus tower has 21 floors and a basement. The building is in use for theoretical lessons.

The lower part of the Erasmus building was renovated a couple of years ago including all food courts and kitchens. The Erasmus tower is partly renovated and there are plans to upgrade the compartmentation especially around the elevator shafts. This is required by the local authorities.

Number of stories: 21

Year built: 1973

(Main) NIACs Code: 551114A property class 10

OCCUPATION:

The building is in use as office building for theoretical studies and a library. The activities can be more compared to office like environment than to a university with laboratories/workshops etc.

CONSTRUCTION:

The building three building parts have the following constructions:

- Library: Heavy concrete construction with concrete walls, floors and roof. Some ceilings are made of wood. (FR)
- Low part of Erasmus building: Single floor building with partly a mezzanine floor (concrete). The roof has a steel load bearing construction and a steel deck roof insulated with mineral wool and covered with a roof felt. The exterior walls are made of glass façade walls and/or concrete. (LFR)
- The high rise Erasmus tower has a heavy concrete construction with concrete floors and roof as well as concrete exterior walls. The building is classified as FR.

Chubb Fire Construction Class: FR (as the food court is less than 10 % of the total floor area).

Internal combustibile panels: None

External combustibile panels: None

Superior Protected Risk: No

LOSS ESTIMATES:

	PD	BI over 36 months
TIV (Three buildings together)	€ 266.804.000	€ 50.000.000,- (extra expenses)
Amount Subject	70 %	20 %
PML	100%	15 %
NLE	30 %	10 %

The library and Erasmus tower are located at 16 meters from each other, but the two buildings are interconnected via a single floor bridge with a total length of 52 meters that has two 60 minutes and two 30 minutes fire retardant partitions. The bridge has glass at the facades that is expected to break under fire conditions. Therefore the heat will be released and the fire retardant partitions at the other side will be able to withstand the fire. The exterior walls of the library and Erasmus tower are made of concrete. As the library represents about 30 % of the value the amount subject and PML represent the loss of the high rise tower and the lower part of the Erasmus building.

Under NLE conditions it is expected that a fire will start in the high rise tower. Due to the moderate fire load but the heavy concrete construction it is expected that the fire brigade will be able to save the majority of the building but there will be severe smoke, soot and water damage to all building parts. The NLE is set at 30 %.

Water supplies for firefighting:	AAA	Fire brigade	AAA
Management Controls	AA	Risk Alert	No
% of location sprinkled	10%	% of location requiring sprinkler	0%
Chubb grade Serious Deficiency	No		
Smoke detectors	AA		
Burglary alarm	AA		
RPF other factors	0 %		

PROTECTION:

The water supply is by means of above ground hydrants good. The public professional fire brigade arrives in 5 minutes. The fire alarm is directly forwarded to the central station of the fire brigade. The buildings are provided with fire detection in combination with compartmentalization. At the moment a lot of wired glass in the high rise Erasmus tower but that will be replaced by 60 minutes fire retardant partitions during the upcoming renovation.

The library is for app. 25 % provided with automatic sprinklers, but that is more for life safety reasons than property protection. The system is certified but is only protecting the large rooms that are in use by the students (desks, in general not many books). The book storage rooms are not provided with sprinkler protection.

Evaluation of Exposures:

Deep fat fryers. The lower part of the Erasmus tower is being provided with four cooking island to server different kind of foods. Deep fat fryers are provided with automatic wet chemical fire suppression systems.

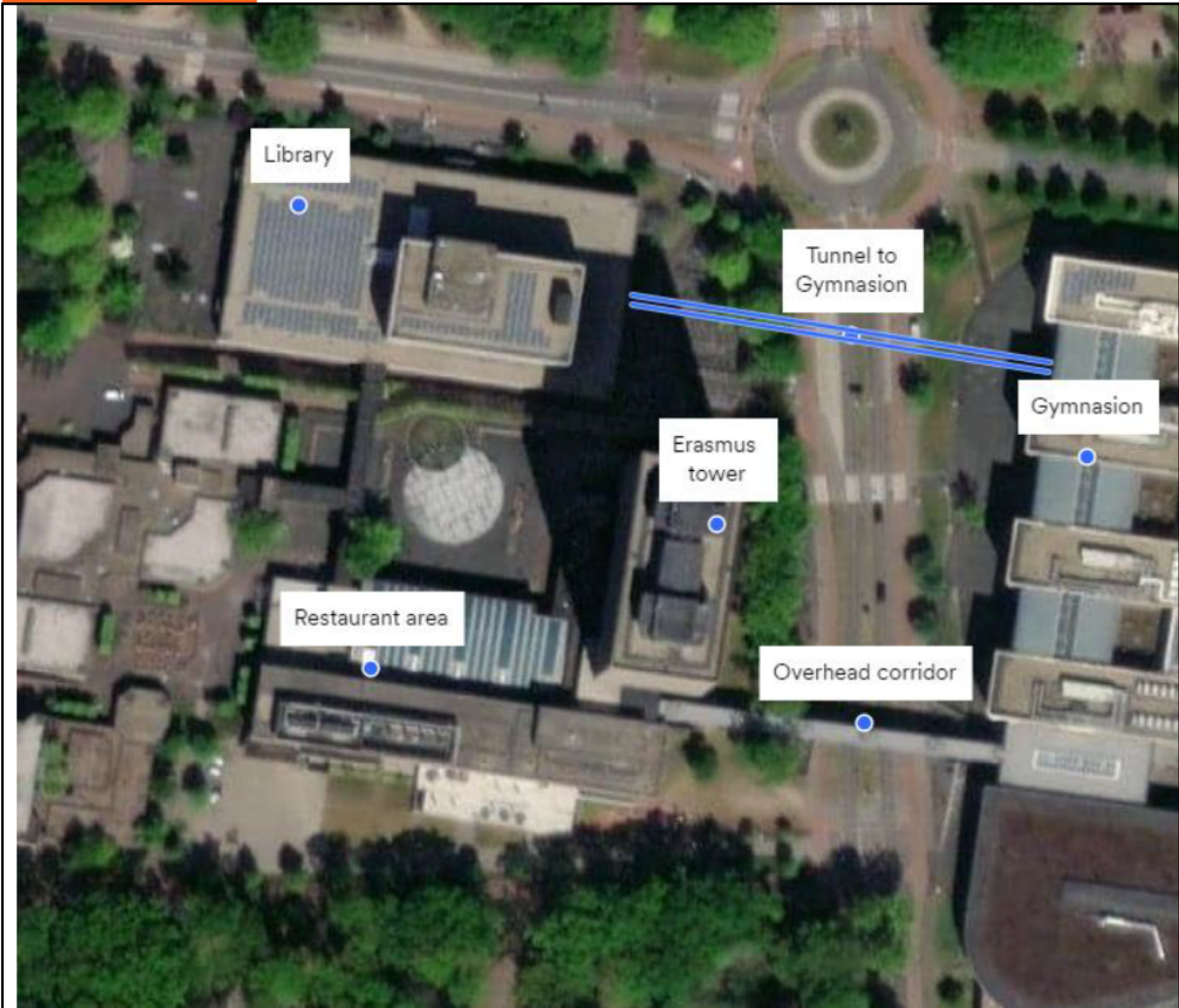
Exterior exposures: The library is interconnected to the Gymnasion building across the street by means of an underground concrete tunnel with a length of about 100 meters. The tunnel contains hardly any fire load and has four automatic closing partitions every 25 meters with a fire rating of 30 minutes. In respect of the low fire load and the many fire retardant partitions behind each other in a concrete tunnel the tunnel can be classified as a fire area separation.

The Erasmustower is interconnected to the Gymnasion building (across the street) by means of an overhead single floor corridor that four 30 minutes fire retardant partitions. The walls of the corridor are made of glass façade walls and the roof contains combustible foam plastic but is interrupted at 6 locations by 2 meter wide smoke and heat ventilating hatches including make up air louvres in the walls. This in combination with the length of the corridor of 80 meters results into a fire area separation.

Fire hazards: The fire hazards can be sub divided into:

- The electrical installation. The electrical installation is checked in accordance with the local standards NEN 3140 including infrared scanning. The cable penetrations are properly sealed off by a specialized contractor.
- Housekeeping is in general good.
- PV-panels are installed on top of the library roof. A SCIOS Scope 12 check is done and all recommendations are complied with.

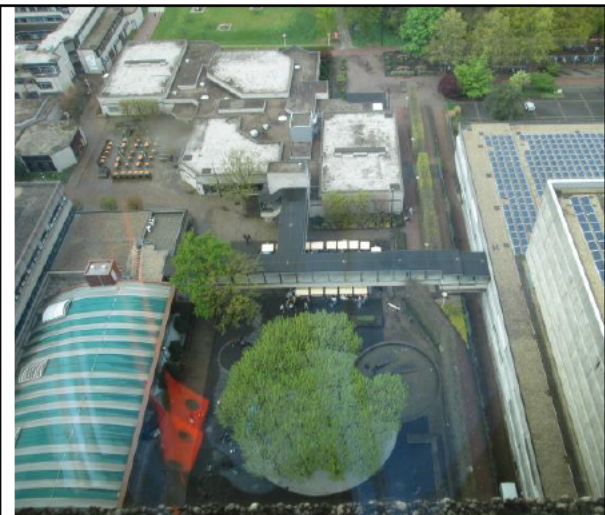
Water damage: No special hazards are identified.



Overview of the Erasmus building and library building.



The tunnel between Gymnasium and library



The overhead corridor between the restaurant (left) and the library (right)

Overall rating: Below average.



At the other side of the road the Gymnasion. Photo taken from the Erasmus tower. In between the overhead corridor.



The smoke hatches in the corridor to the Gymnasion.



Louvre panels for make up air (in combination with the smoke hatches)

AANBEVELINGEN:**2024-01 Brandwerende scheidingsen**

De brandwerende scheidingsen rond de lift kern van de erasmustoren bestaan uit draadglas. Draadglas werd vroeger gezien als 30 minuten brandwerend, echter al enkele decennia is bekend dat draadglas een zeer beperkte brandwerendheid heeft en meer als rookwerend gezien moet worden. Aanbevolen wordt het draadglas te vervangen door ruiten met een brandwerendheid van minimaal 30 minuten maar bij voorkeur 60 minuten.