HARJAVALLAN
SUURTEOLLISUUSPUISTO

HOT WORK PLAN

Version	Date	Reason for update	Author
Rev.1	28.2.2019	General update	J.Paulamäki
Rev.2	26.1.2022	Added permanent hot work sites in the area	T. Lilja
Rev.3	10.3.2022	Updated regulations and instructions, corrected terminology (definitions and rescue equipment), added building numbers in relation to permanent hot work sites, improved the document layout to make it more readable	J. Vuorela
Rev.4	30.6.2022	Clarified regulations regarding roof fire work and the length of the after-watch.	J. Vuorela
Rev.5	24.4.2024	Updated requirement for the minimum number of fire extinguishing equipment at fire workplaces.	J. Vuorela

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1 INTRODUCTION

This hot work plan is adhered to when performing hot work in the Suurteollisuuspuisto Industrial Park area in Harjavalta, and this plan is based on the following guidelines and standards:

- Rescue Act (379/2011)
- Insurance Contracts Act (543/1994)
- Työturvallisuuslaki (738/2002) (hot work act)
- Rikoslaki (392/2005) (criminal code)
- Valtioneuvoston asetus työpaikkojen turvallisuus- ja terveysvaatimuksista (577/2003) (Government decree on safety and health requirements in workplaces)
- Tulityöt suojeluohje 2016 (Hot works safety guidelines)
- Tulitöiden paloturvallisuus (SFS 5900) (Fire precaution of hot works)
- Katto- ja vedeneristystöiden tulitöiden paloturvallisuus (SFS 5991) (Fire precautions for hot works located on roofs and waterproofing sites)

In addition to the above: company-specific instructions of the companies operating in the Suurteollisuuspuisto area that may impose additional requirements in addition to these guidelines.

The supervisors of the companies operating in the Suurteollisuuspuisto area must make sure that everybody participating in hot work is familiar with the content and requirements of this hot work plan. In addition, the line management of the companies must monitor that the requirements of these guidelines are adhered to. The hot work plan is maintained and updated by the Suurteollisuuspuisto regional security manager or a person designated by him/her.

The monitoring of contractual obligations is the responsibility of the designated contractor contact persons, supervisors, and other specified individuals in the Harjavalta Suurteollisuuspuisto Industrial Park area.

These safety guidelines are binding for all companies and contractors working in the Suurteollisuuspuisto Industrial Park area in Harjavalta.

1.1 Binding force

This hot work plan includes the safety regulations to be followed when performing hot work and roofing and waterproofing hot work.

These regulations apply to all parties operating in Suurteollisuuspuisto, including external suppliers.

In addition to these hot work regulations, all other relevant plans and instructions must be taken into account, such as the developer's safety document or the work site safety plan. In case of conflict, the requirements and regulations set forth in this hot work plan must be followed, at a minimum.

1.2 Definitions regarding hot work

Roofing and waterproofing hot work
Roofing and waterproofing hot work refers to waterproofing work in which a flame or other source of heat is used and which poses a fire risk. Examples of these are drying the base prior to waterproofing with a flame or hot air, heating bitumen in a bitumen boiler, attaching waterproofing by heating, and necessary related tasks that cause sparking.

Temporary hot work site
All hot work sites except permanent ones are considered to be temporary hot work sites.
A roofing and waterproofing hot work site is always a temporary hot work site.

Hot work card
A hot work card is a certificate for passing the hot work safety examination, and it is valid for a fixed period of time.

Hot work permit
A hot work permit is a written permit which gives the holder of the permit authorisation to perform hot work at a temporary hot work site. Before a hot work permit is issued, hazards caused by hot work must be identified and assessed, and the necessary safety measures must be specified.

Hot work plan
A hot work plan is a written plan for the safe execution of hot work and roofing and waterproofing hot work.

Hot work
Hot work refers to work in which sparks are produced or in which a flame or other source of heat is used and which poses a fire risk. Such work involves electrical and gas welding, gas soldering, hot-air blowing, flame cutting, as well as grinding and cutting work using a cut-off wheel. In addition to the above-mentioned work, any work in which a gas burner, open flame or other working method causing a risk of ignition is used is classified as hot work.

Hot work safety examination

Examination approved by the Finnish National Rescue Association (SPEK) to ensure that the person performing hot work and the person issuing the hot work permit have sufficient knowledge of hot work safety.

Identification and assessment of hazards caused by hot work
Identification and assessment of hazards caused by hot work refers to the identification of the hazards carried out at the hot work site and in its proximity caused by hot work and the assessment of their severity. Identification and assessment of hazards must be performed before the hot work permit is issued, and always when circumstances at the hot work site change. On the basis of the identification and assessment of hazards, the necessary safety measures can be specified, targeted at avoiding the potential of damage caused by hot work.

Permanent hot work site
A permanent hot work site refers to a separate compartment reserved for hot work, or to another clearly isolated area where hot work can be performed in a safe way.

Work with a minor risk of fire
Work with a minor risk of fire refers to work with a negligible risk of an outbreak or spreading of fire.

1.3 Definitions regarding rescue equipment

Automatic fire alarm system
A fire alarm system is a system that automatically and immediately provides an alert both locally and to the Emergency Response Centre of a starting fire and of any fault that compromises the functionality of the system.

Disconnection
Fire alarm system disconnection means disabling a fire detector, fire detector group or the alarm line going to the Emergency Response Centre. Disconnection may only be performed by a designated fire alarm system operator.

Gas extinguishing installation
Gas extinguishing systems consist of a control panel and fire detectors, manual call points, alarm devices connected to the panel, as well as extinguishing agent cylinders and discharge tubes with nozzles. The extinguishing agent is selected on the basis of the characteristics of the protected site. Moreover, the amount of extinguishing agent depends on the size of the protected space and flammable material present in the space.

The operation of the extinguishing system is controlled by the control panel that monitors the protected site and controls the system via connected fire detectors. Fire detectors are selected on the basis of the type of fire most likely to occur at the site. Detection can be based on smoke, heat or radiation. In addition to a signal from a fire detector, extinguishing systems can also be activated from separate manual call points or directly from the extinguishing agent cylinder bank. Gas extinguishing is mainly based on cooling and removal of oxygen, the effect depends on the extinguishing agent used.

Fire detector

A fire detector is a device that responds to a fire. The device is installed in the space to be monitored and its operation can be based on the detection of smoke, heat, flames, fire gases or combinations thereof. The placement and type of the detector have a significant impact on the occurrence of false alarms.

Fire alarm control panel

A fire alarm control panel is a device to which the rest of the system is connected and that contains an alarm transmission system. Detectors and switches send a signal to the fire alarm control panel which activates local alarm devices and automatically alerts the Emergency Response Centre.

Fire alarm system operator

A fire alarm system operator is designated and trained for a specific system/equipment. The fire alarm system operator also acts as a fire alarm system contact person.
In Suurteollisuuspuisto, the industrial fire chief, fire fighting equipment technician and security personnel employed by Turvapalvelut act as fire alarm system operators.

Sprinkler systems

A sprinkler system detects a starting fire as early as possible and extinguishes and slows the spread of fire, giving people more time to escape or to be rescued. At the same time, the sprinkler system provides an alert to the Emergency Response Centre or other specified location. The extinguishing function of water sprinkler systems is mainly based on cooling the object with water.

Smoke control system

The purpose of a smoke control system is to keep escape routes free of smoke, to make finding escape routes easier and to make fire fighting and rescue work easier for the fire brigade. Activation of a smoke control system can be automatic or manual.

2 HOT WORK SAFETY EXAMINATION AND HOT WORK CARD

Performing hot work at a temporary hot work site requires a passed hot work safety examination and a valid hot work card issued by the Finnish National Rescue Association (SPEK). A hot work card is a certificate for passing the hot work safety examination, and it is valid for a fixed period of time.

Moreover, in the Suurteollisuuspuisto area the hot work permit issuers, hot work supervisors and guards must have a valid hot work card. The companies operating in the area must keep an up-to-date list of persons who are authorised to perform hot work.

In addition to the hot work cards issued by the Finnish National Rescue Association (SPEK), all hot work cards issued in other Nordic countries are valid in the Suurteollisuuspuisto area.

2.1 Hot work cards issued by the Finnish National Rescue Association (SPEK)

Hot work training and hot work training for roofing and waterproofing industry were combined on 1.1.2016. Hot work training completed / a hot work card issued prior to 2016 is no longer valid.

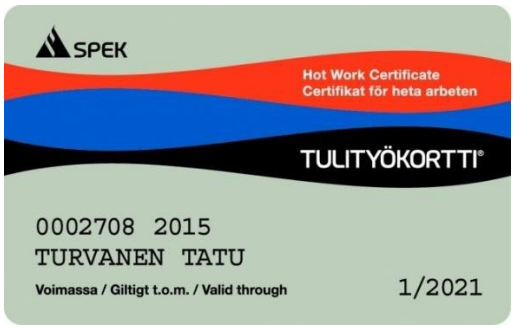


Figure 1: Hot work card issued by SPEK

3 HOT WORK PERMIT PROCEDURE

Hot work carried out at a temporary hot work site in the Suurteollisuuspuisto area in Harjavalta always requires a written hot work permit.

Before issuing a hot work permit, a written hazard survey and risk assessment must be carried out at the hot work site. A prerequisite for issuing a hot work permit is a risk assessment on the work phase and the performance of the safety measures based on the assessment. The risk assessment must be recorded in the work permit that complies with

the work permit system, in the risk assessment form or in the application used for the risk assessment.

The hot work permit is valid for a fixed period of time; the duration of the permit depends on, for example, the completion level of the building so that in the foundation and frame construction stages the duration of a hot work permit can be longer, but never longer than one week.
If the hot work permit is issued for more than 24 hours, the conditions for safe continuation of hot work must be verified at least once a day.

A hot work permit is specific to one particular hot work site, and only those hot work tasks listed in the hot work permit are permissible. If the circumstances at the hot work site change during the validity period of the permit, the issuer of the hot work permit must update the permit to match the circumstances. The hot work operator is responsible for the validity of the hot work permit and monitoring the conditions.

The hot work permit must be drawn up in at least three copies:
- one for the hot work permit issuer
- one for the hot work operator at the site
- one for the hot work guard

Alternatively, the hot work permit can be recorded in the electronic work permit system. In addition, a possible copy of the issued permit is delivered to the work site's control room or to some other specified workstation in the relevant department.
The persons responsible for hot work are the hot work permit issuer, hot work operator and hot work guard. The hot work permit must specify the names of all persons responsible for the hot work.

Moreover, all such company-specific procedures that may set tighter requirements than set forth in this plan must be taken into account both at work sites where a hot work permit is required and in work permit procedures.

3.1 Emergencies and reporting a fire

In case of an emergency, every person working in the area, including those participating in hot work, are responsible for initiating first response, without putting themselves in danger. The first response measures include, among other things, warning of other people, calling the general emergency number and the Suurteollisuuspuisto main gate, as well as possible first-aid extinguishing.

Fires, beginnings of fire, self-sustained ignitions with a risk of spreading and any situations in which a fire extinguisher or some other mean of

extinguishing is used must be reported to the Suurteollisuuspuisto main gate. The main gate forwards the information to the personnel of the Suurteollisuuspuisto fire and rescue services for a possible inspection task. In addition, the situations referred to above must be reported to the work orderers and the hot work permit issuer as per company-specific guidelines.

If a beginning of fire gets suppressed, the contractor performing the work must guard the fire scene for at least two hours, unless otherwise agreed with the fire and rescue services personnel.

Contact information:

General emergency number	112
STP emergency number	(02) 5358 112
STP main gate	(02) 5358 200

3.2 Hot work permit issuers

The hot work permit shall primarily be issued by the person responsible for the work area or task. In the absence of the person in charge, the permit is issued by another person present who is authorised to issue a hot work permit and who has sufficient knowledge of the hazards present at the hot work site in question.

A hot work permit can be issued only for a pre-determined period of time. The hot work permit issuer must have a valid hot work card and an authorisation by the employer to issue hot work permits.

In the Suurteollisuuspuisto area, **the persons who are authorised to issue a hot work permit are listed in company-specific guidelines** which are available from the person in charge of safety in each company.

If a hot work permit is needed for sites associated with the use of **flammable liquids, natural gas or LPG**, the permit is issued by the **operation supervisors for the substances in question, appointed in accordance with relevant decrees, or persons designated by them**. **Roofing and waterproofing** hot work permits are issued by the **industrial fire chief or his/her deputy**.

Regarding hot work located on a roof but not classified as roofing and waterproofing hot work, the hot work permit is issued primarily by the person responsible for the work area or task. However, Suurteollisuuspuisto's industrial fire chief must be notified of hot works located on roofs before starting work so that the fire chief can review the hot work site, if necessary. If the review results in an assessment that the

work is so-called normal hot work, the hot work permit is issued by the person responsible for the work area or task.

3.2.1 *Duties of a hot work permit issuer*

The hot work permit issuer must ensure at least the following:

- The hot work operator must be sufficiently qualified for performing hot work. Everybody participating in hot work must present a valid hot work card and, if necessary, prove their identity.
- The hot work guard has sufficient knowledge of the risks associated with hot work and the assessment of fire hazard. In addition, the hot work guard must know how to make an emergency call and start first-aid extinguishing.
- Hot work is performed in accordance with the risk assessment and safe work practices.
- The first-aid extinguishing equipment and extinguishant reserved at the hot work site comply with the hot work permit.
- The fire detectors and fire extinguishing systems located at the hot work site are taken into account in the hot work risk assessment and the necessary disconnections are performed.
- The safety measures required in the hot work permit have been taken before the hot work permit is issued and the hot work is started.

3.3 Hot work guarding

Hot work guarding must continue uninterrupted during the actual hot work phase and breaks, and as fire watch afterwards for the period specified in the work permit. The length of the fire watch period for a hot work is determined on the basis of the identification and assessment of hazards when issuing the hot work permit.

The hot work operator cannot act as a hot work guard while carrying out work. The hot work guard must be aware of the hazards present in hot work, know how to make an emergency call and know how to use the first-aid extinguishing equipment at the site. If necessary, the hot work guard must interrupt the hot work.

After the hot work has been completed, fire watch must be continued at least for the period specified in the work permit. Continuous hot work guarding / fire watch must always be continued for **at least one hour** after the hot work has been completed.

If necessary, fire watch can be continued with spot checks after the actual fire watch period. Additional guarding can be specified on the basis of the risk assessment when issuing the hot work permit.

3.3.1 *Duties of a hot work guard*

The duties of the hot work guard include, but are not limited to, the following:

- Know the site-specific hazards and the hazards involved in hot work
- Interrupt the hot work if he/she notices a hazard
- Keep first-aid extinguishing equipment ready for use and potentially start first-aid extinguishing
- Know the work site and make an emergency call immediately in the event of a hazard

4 FIRST-AID EXTINGUISHING EQUIPMENT

The hot work operator is responsible for ensuring that sufficient first-aid extinguishing equipment is available at the site. The fire extinguishing equipment must be present at the hot work site throughout the entire hot work process and the fire watch period afterwards.

At a temporary hot work site:
The hot work permit issuer determines what fire extinguishing equipment is required at a temporary hot work site on the basis of the identification and assessment of the hazards caused by hot work.
The fire extinguishing equipment must nevertheless always include at least two portable fire extinguishers with 43A183BC rating, but one of these extinguishers can be substituted with two 6-kg portable fire extinguishers with 27A144BC rating or a functional, pressurised hose reel that complies with standard SFS-EN671-1.

At a roofing and waterproofing hot work site:
In accordance with the above, and also a pressurised fire hose with a nozzle.
The hose of the hose reel or the fire hose must be long enough to reach the hot work site, at a minimum. For hot works located on roofs, clearing equipment suitable for breaking the roof open must be available, including at least the following: a reciprocating saw, axe and crowbar.
If the weather conditions are such that there is a risk of the pressurised hose reel or fire hose freezing, the fire hose may be left unpressurised but the site must be fully prepared to use the fire hose immediately if required.

4.1 Extinguishers

Fire extinguishers placed at hot work sites must be properly inspected and their inspection must be valid. Every employee is responsible for reporting

a faulty fire extinguisher to a person in charge of fire safety or to his/her supervisor.

A fire extinguisher is faulty if, for example:

- Seal is broken
- Pressure gauge is in red
- Handle is broken Inspection is expired
- It appears unusable in some other way

5 RESCUE EQUIPMENT

In the act on rescue equipment (10/2007), rescue equipment refers to pieces of technical equipment that is significant in terms of fire safety but that usually is not part of rescue departments' operational equipment.
Such equipment include, but are not limited to, fire alarm systems, fire extinguishing systems and smoke control systems installed in buildings, first-aid extinguishing equipment such as portable fire extinguishers and fire blankets, products used to mark and illuminate exit routes in buildings, prefabricated fireplaces, and equipment and products used for building and equipping civil defence shelters.

5.1 Fire alarm and fire extinguishing systems in hot work areas and related disconnection

The need for disconnection and the area to be disconnected are primarily determined by the work permit issuer. If necessary, the personnel of the Suurteollisuuspuisto fire and rescue services helps in determining the area that needs to be disconnected.

In addition to hot work, the disconnection of rescue equipment must be performed for any other work in which there is a risk of a fire alarm or fire extinguishing system going off falsely. Examples of this type of work include, for example, work that causes spreading of dust or steam.

If there is a fire alarm system or a fire extinguishing system at or in the immediate vicinity of the hot work site, at least the following actions must be considered with regard to their operation:

Before issuing a work permit or hot work permit

- Check the site for any fire detectors or a fire extinguishing system
- Estimate the need for disconnection to avoid false alarms.
- Mark the address of the disconnection to the work permit according to the location diagram, for example fire group 136, location 2nd floor, detectors 007.

- Verify the numbering of the detectors on the location diagram and detector
- Mark the address of the disconnection to the work permit according to the location diagram
- If a disconnection is performed, the area to be disconnected must be set as small as possible to avoid compromising fire safety unnecessarily in the areas surrounding the hot work.
- Protect/cover detectors if you suspect that they might get contaminated
- **If even a part of an automatic fire extinguishing system is disabled, it must be substituted with continuous fire watch and extinguishing capability that matches the extinguishing system.**
- **If even a part of an automatic fire alarm system is disabled, it must be substituted with hourly fire watch rounds in the area.** If there are people working in the disconnected area, separate fire watch rounds are not required, provided that the people in the area have instructions on the substitute alarm arrangements for the duration of disconnection.
- The disconnection of a fire alarm system may only be performed by a designated system operator or his/her deputy.
- The work permit must have the name, signature and telephone number of the permit issuer

During the work and disconnection

- Perform continuous monitoring in the disconnected area

After the work is completed

- Clean the area so that the reconnection can be performed
- Remove any covers and other protection from the detectors
- Inform the site personnel on the completion of the work
- **Notify the Suurteollisuuspuisto main gate of the completion of the work and request rescue equipment reconnection**

The work permit issuer and the persons participating in the work are responsible for adequate prevention and precautionary measures throughout the work phase.

It is the responsibility of the person requesting the disconnection to inform the personnel at the Suurteollisuuspuisto main gate or the fire alarm system operator **immediately after the completion of the work** so that the reconnection can be performed.

In cases where a false fire alarm is caused by incorrect method of operation or negligence, the companies that are fire alarm system

possessors in the Suurteollisuuspuisto area may charge any false fire alarm fee or other costs incurred as the result of the event from the company or contractor that caused the false alarm.

Disconnections related to fire alarm systems and other enquiries:

- STP main gate (02) 5358 200

6 RISKS ASSOCIATED WITH HOT WORK

Hot work always causes a significant increase in the risk of fire, so the risks affecting hot work and the site's environment must be carefully assessed before work is started.

Before issuing a hot work permit, a written hazard survey and risk assessment must be carried out at the hot work site. A prerequisite for issuing a hot work permit is a risk assessment on the work phase and the performance of the safety measures based on the assessment.
The risk assessment must be recorded in the work permit that complies with the work permit system, in the risk assessment form or in the application used for the risk assessment.

Everybody participating in the work must be familiar with the risks associated with the work.

6.1 Potentially explosive atmospheres

In areas where potentially explosive atmosphere may occur (ATEX classified zones), it must be noted that a potential explosion can be caused not only by hot work, but also by a working method classified as non-hazardous, such as high-pressure water jet work (discharge of static electricity from water mist), ordinary power tools, mobile phones and other equipment that is not EX protected.
Work permits for work to be performed in ATEX classified zones are issued by the applicable chemical operation supervisors for the substances that cause a potentially explosive atmosphere, or a person designated by them.

6.2 Waste and packaging materials

The amount of waste and packaging materials at the workstations should be kept as low as possible. Excess material must be removed from the hot work site before starting the work.

6.3 Storing flammable liquids and gases in Suurteollisuuspuisto

The storage of flammable liquids, gases and explosives must be agreed in advance with the persons in charge and operation supervisors of the companies operating in Suurteollisuuspuisto. All gas cylinders must always be stored in an upright position.

Acetylene and oxygen cylinders used at a permanent hot work site are stored either in cylinder carts or so that they are secured to a wall and stand with, for example, a chain. The cylinders must also be marked with appropriate warning signs.

At a temporary hot work site, acetylene and oxygen cylinders are stored in cylinder carts also during use. After the work is completed, the cylinder carts must be returned to their storage location.

Storing gas and LPG cylinders indoors is prohibited. If gas and LPG cylinders are temporarily stored in storage containers, the containers must be marked with a “KAASUPULLOT” sign.

6.4 Smoking

Smoking is prohibited outside the marked smoking areas.

7 SAFETY MEASURES

7.1 Safety measures before the hot work is started

At a minimum, the following measures must be taken before the work is started:

- Consider using alternative working methods
- Fill and record the written hot work permit properly
- Remove combustible material unrelated to the work from the hot work site
- Cover all combustible materials that cannot be removed tightly with an incombustible tarpaulin

- Cover any openings in structures with a protective sheet and seal all gaps if flame, splatter or sparks can spread into structures through these
- Ensure that the hot work equipment is appropriate and in good condition
- Ensure that everyone working on the worksite knows the internal emergency number and knows how to make an emergency call and use the first-aid extinguishing equipment.
- If necessary, water the area surrounding the work site.

If necessary, hot work guarding must be arranged for these spaces as well.

- In order to prevent the spread of sparks, arrange incombustible tarpaulins at the work site.
- Prevent the conduction of heat generated by hot work to other premises through pipes, ventilation ducts, etc.
- The work site must have the first-aid extinguishing equipment required by the work permit, as well as the extinguishing and clearing equipment.
- Measure the concentration of gases and ventilate the work area, if necessary. Hot work must not be started until the safety measures required in the hot work permit are taken.
- **If there is a fire alarm system or an automatic fire extinguishing system at the work site and it must be disconnected for the duration of the work, the work supervisor must record the disconnection to the hot work permit and then confirm the reconnection of the systems by signing the permit after the work is completed. Disconnection may only be performed by a fire alarm system operator.**

Disconnections related to fire alarm systems and other enquiries related to hot work:

- STP main gate (02) 5358 200

7.2 Safety measures during the hot work

During the hot work, the safety measures specified in the hot work permit must be followed:

- Ensure that the hot work guard is present throughout the duration of the work, including breaks
- Ensure that the first-aid extinguishing equipment required by the work permit is present
- Observe whether the risk of fire in the surrounding areas has increased during the work and assess whether additional safety measures are necessary
- Monitor the generation of flammable gases. Ensure adequate ventilation.

- Remove flammable material generated during work
- When performing welding, flame cutting and disc cutting, special attention must be paid to the use of fire-retardant mats to prevent sparks and molten metal from spreading
- The hot work operator is always responsible for performing the work safely.

7.3 Safety measures after the hot work is completed

After the hot work is completed, the following is carried out in accordance with the hot work permit:

- Inspect the hot work site and its surroundings area for any smouldering fires.
- Start the post-work fire watch at the hot work site and, if required, in the surrounding area.
- Fire watching is continued uninterrupted for the period specified in the hot work permit, at least for one hour.
- Close the valves on the gas cylinders and gas outlets used for the work and disconnect the hoses and equipment connected to them.

7.4 Safety measures for roofing and waterproofing hot work

In addition to the above, certain safety measures based on the identification and assessment of hazards caused by hot work must be put in place at a roof hot work site, with the following being the minimum requirement:

- Remove combustible material unrelated to the work from the hot work site
- Cover all combustible materials that cannot be removed tightly with an incombustible tarpaulin
- Cover any openings in structures with a protective sheet and seal all gaps if flame, splatter or sparks can spread into structures through these
- Ensure that the hot work equipment is appropriate and in good condition
- Reserve the necessary fire extinguishing and clearing equipment
- When the hot work is completed, move the gas cylinders and related equipment to a safe place
- The bitumen boiler must not be placed near combustible supplies (for example, membranes, insulating materials, timber) or waste, or near combustible walls or other structures.
- Moreover, the bitumen boiler must be placed at a safe distance (at least 6
  m) away from any supply air openings of a building
- Bitumen must be stored sufficiently far from the boiler and protected from snow, water and ice in winter

- The LPG cylinder used for heating the bitumen boiler must be placed at least 2 m away from the boiler
- The maximum amount of LPG allowed on the roof in total is 200 kg (calculated by the net weight of the cylinders so that empty and half empty cylinders are considered full). Loose LPG cylinders are not allowed – they must be in cylinder carts or cages.
- When the hot work is completed, the surface membrane at the roof hot work site is checked with a thermal camera if a beginning of fire or self-sustained ignition has occurred during the hot work.
- The roof fire protection period for hot work job in the roof is at least four hours, after which fire protection rounds are carried out in the area with a thermal camera for another four hours, making the protection period a total of eight hours.

7.5 Safety distances at a hot work site

The minimisation of fire load at the work site and the positioning of the equipment must be taken into account in the risk assessment to be carried out before the hot work is started. The safety distances shown in the figure below must be followed when performing hot work in the Suurteollisuuspuisto area.

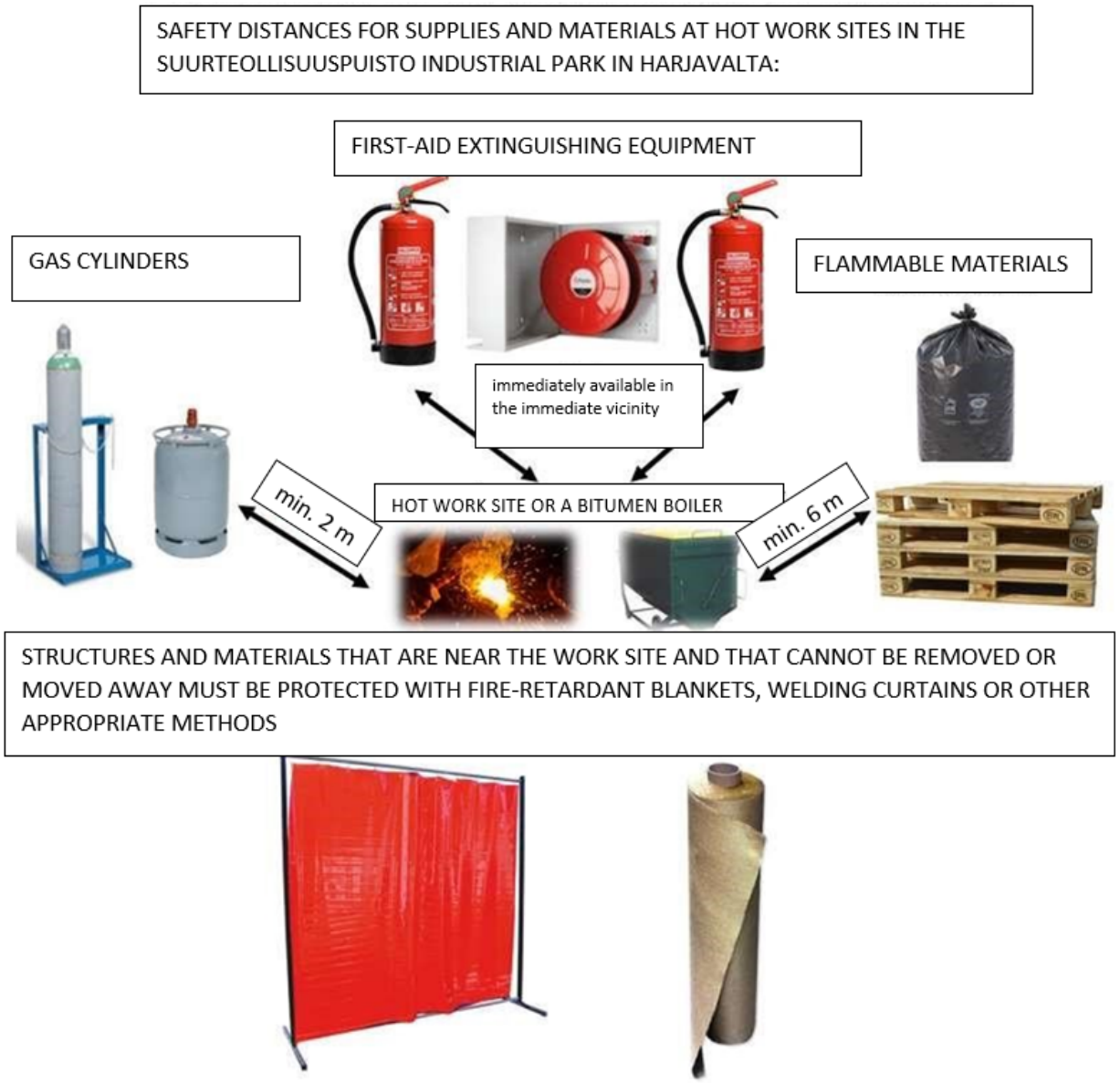


Figure 2: Safety distances for supplies and materials at a hot work site

7.6 Making an emergency call in the Suurteollisuuspuisto Industrial Park in Harjavalta

WHAT TO DO IN CASE OF A FIRE OR ACCIDENT IN THE SUURTEOLLISUUSPUISTO INDUSTRIAL PARK

1. **Warn** other people
2. **Rescue** those in danger, if possible
3. **Activate** the fire alarm system by pushing a manual call point in case of fire, if the building is equipped with a fire alarm system

4. **Call** the STP emergency number **02 5358 112** and follow their instructions

5. **Call** the general emergency number **112** and follow their instructions
6. **Restrict** the fire with first-aid extinguishing and, if possible, by closing doors and windows
7. **Close** doors and windows indoors to prevent the spread of fire and fire gases
8. **Provide first aid** and help staff
9. **Arrange** guidance for the rescue services

When making an emergency call, tell the operator:

- Your name
- What happened
- Work site address: Harjavallan Suurteollisuuspuisto - Teollisuuskatu 1, 29200 Harjavalta
- Detailed location, building and door number, if possible
- Location of guidance
- Answer calmly to the questions the operator asks you and hang up only when the operator tells you to do so.

8 PERMANENT HOT WORK SITE

A permanent hot work site must meet at least the following requirements:

- the structures of the work site must be incombustible or equipped with fireproofing
- 55 A 233BC power class hand fire extinguisher (standard SFS-EN 3), one of which can be replaced with two 43 A 233 BC power class hand fire extinguishers (standard SFS - EN 3).
- no combustible material is allowed at the work site
- no flammable liquids may be kept at the site, and the site may not have a connection with premises with flammable gases
- requirements set for a temporary hot work site must be followed at a permanent hot work site if the risk of fire is increased due to the object of the hot work or other factors

GENERAL EMERGENCY
112

SUURTEOLLISUUSPUISTO MAIN GATE EMERGENCY
02 535 8112

Permanent hot work sites are located in the plant area in the following locations:

NNH, Nornickel Harjavalta

- Chemical plant, maintenance support point (building 401)
- Electrolysis, maintenance support point (building 18)
- Reduction plant, maintenance support point (building 47)
- EF leaching plant, maintenance support point (building 72)
- Reduction plant, smaller civil defence shelter (building 46)
- Reduction plant, installation hall at the north end (building 46)

BOHA, Boliden Harjavalta

- Shift repair point in central repair shop (building 32)
- Maintenance support point at central warehouse (building 45)
- Masonry service support point (building 103)
- Slag refinery, maintenance support point (building 15)
- Slag refinery, hot work container (building 15)
- Large repair shop, welding point (building 307)
- Smelter, converter hall (does not apply oil and gas distributors and their vicinity) (building 10)
- Smelter, 2-bay (at the end of central warehouse) (building 45)

Valtasiirto

- Vehicle repair shop, area separated for hot work (building 37)

Kemira

- Aluminium sulphate plant, north end (building 320)

Linde

- Oxygen plant, maintenance hot work site (building 24)

Step

- Power plant, maintenance support point (building 25)

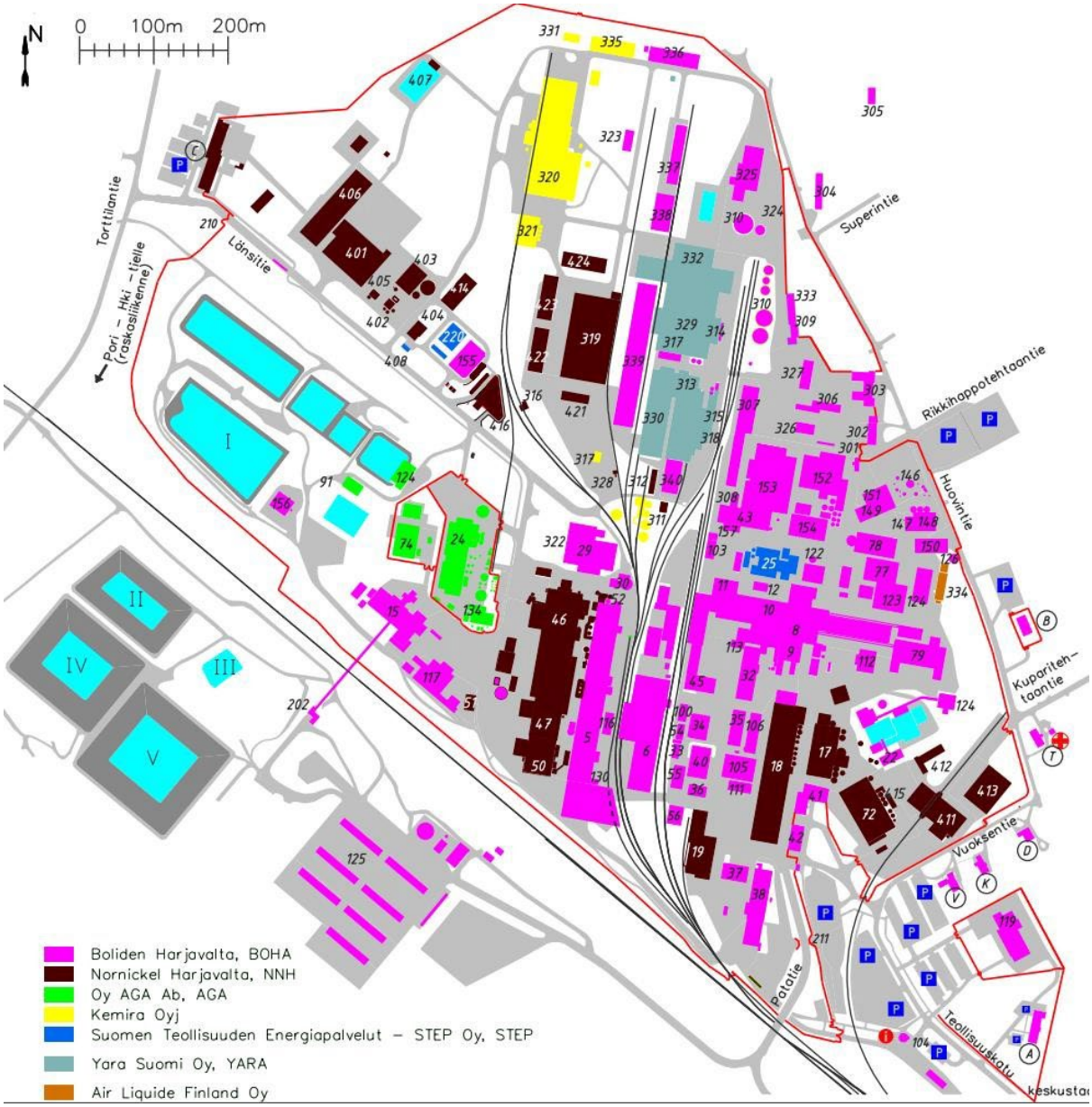
All permanent hot work sites must be marked with a “VAKITUINEN TULITYÖPAIKKA” sign. Permanent hot work sites are approved by the company's person in charge and the industrial fire chief of Suurteollisuuspuisto.

9 TEMPORARY HOT WORK SITE

All work sites other than the permanent hot work sites in the plant area, inside buildings or outdoors are temporary hot work sites where the hot work permit procedure is required and the specified safety measures must be taken and followed.

9.1 Alternative working methods

Hot work must be performed at a permanent hot work site whenever possible. Hot work must not be performed in an area where it is unsafe to do so. Due to the risk of fire associated with hot work, alternative working methods for hot work must always be considered. These include, for example, machining, joining and cutting methods that do not generate sparks or use open flame.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