KSEF CONSORTIUM

# METHOD STATEMENT
# HSE and Scaffolding

# Safety Study,
# Safety Plan & Risk Assessment

## Zultrem S.A.

| | | | |
|---|---|---|---|
| **Project:** | TAURUS Project | | |
| **Client:** | Blanvira S.A., VAT n:o (RUT) 21 811019 0012<br>ZULTREM SA (KSEV) RUT 2186868870013<br>BPS Nro.: 7387620 | | |
| **Site:** | Mill site:<br>Zultrem S.A.<br>Ruta 5 Km 245.9 – Camino el Tala Centenario,<br>Durazno - Uruguay | **Start date:**<br>**Finish date:** | 07/01/2021<br>----- |
| | | **Contact:** | Petri Vauhkonen / KSEF |
| | | **Client site contact:** | Gerardo Galimberti / UPM |
| **OHS Officer** | Juan Garrido – CI: 2020327-8 – MATR. MTSS: 2252 | | |
| **Architect/Engineer** | María Paula Belén – CI: 4739882-2 - CJPPU 167914 | | |
| **Work activity:** | Scaffolding works including assembly, modification, use and dismantling | | |
| **Other ref: (if applicable)** | | | |
| **Review period** | This document will be subject to review when observations arise according to the dynamics of the works or at least quarterly if the aforementioned are not registered. | | |

| | **COMPANY/ROLE** | **NAME** | **National Registration** | **DATE** |
|---|---|---|---|---|
| Drafted by | Safety Director | Petri Vauhkonen | | 12/14/2020 |
| Amended at site level | Site Manager | Szymon Rambiert | | |
| Reviewed by | CEO | Jukka Pyykönen | | 02/23/2021 |
| Validated by professional | Architect | María Paula Belén | CJPPU 167914 | 02/23/2021 |
| Validated by OHS Officer | OHS Officer | Ing. Tecnológico Prevencionista Juan Garrido | MAT. MTSS 2252 | 02/23/2021 |

**CONTENTS**

## 1. SCOPE OF METHOD STATEMENT AND WORK

The **scope of this Method Statement** is to provide safe scaffolds and platforms for subscribers use in mill site.

This Method Statement is coherently integrated with the Technical Project, preventive measures and technical protections necessary for the control of risks and correct execution of the works in site, in the proper safety and health conditions. Likewise, the Safety Plan integrated in this document describes the general safety instructions of the work processes, providing rules and basic procedures necessary to eliminate or minimize potential dangers, causes of injuries, damages and losses.

It includes main procedures to ensure safety and quality of works.

The **Scope of work** is to execute scaffolding works for TAURUS project in UPM Mill site in Uruguay. It includes the following main items:

Scaffolding:

- Scaffolding material
- Installation work
- Scaffolds, which fulfil all the quality and safety requirements
- Dismantling
- All needed transportations
- All needed liftings
- Work planning
- Planning and calculation
- Supervising
- Acceptance inspection for built scaffolds before the use
- Quantity survey and documentation
- Invoicing the users
- Weekly inspections for scaffolds

Compliance with the measures established in this document is mandatory for all persons who enter the work area, including owners, operators of the main contractor, operators of any eventual sub-contract and special guests.

## 2. MANAGEMENT GUIDANCE

**In Zultrem S.A.** (later KSEF Consortium S.A.) we focus, and we work for the following Safety principles when we continuously improve in HSE matters:

• All incidents can be prevented.
• We want to guarantee a safe working place to everybody.
• Zero incidents is possible

KSEF shall coordinate the scaffolding services in such a high level together with UPM that no delay will appear for subscribers. KSEF shall be proactive and carry out active cooperation on the site.

**Management**

- Establish high standards
    - focus on sustainable improvements to safety processes and monitor progress
    - support ideas to improve safety performance and actively promote them
    - make sure that appropriate training and safety resources are available
- Promote open communication
    - visit workplaces and personally speak to employees and contractors about their concerns and performance regarding Safety.
- Tackle risks
    - ensure that incidents are properly investigated, the conclusions are communicated, and the relevant measures are taken

- Be an active participant
    - keep safety messages simple and direct, and explain its advantages
    - constantly recognise good safety behaviour and challenge unacceptable behaviours.

**Supervisors**

- Guarantee compliance
    - visit the work areas to guarantee compliance with working standards
    - help the team to solve the problems that production poses to Safety, guaranteeing that Safety is never compromised
- Motivate your team
    - know your team members' limitations and strengths
    - recognise good performance in terms of Safety and will act diligently when faced to any non- compliance in this matter
- Promote risk awareness
    - re-evaluate the risks and dangers when changes to working conditions occur
    - stop work when you see unnecessary risks taken
- Involve the team
    - support, train and involve the team in implementing improvements to safety aspects

## 3. REGULATIONS AND STANDARDS

**Uruguay national standard:**

- Law 5032/1914
- Law 15896/1987
- Law 16074/1989
- Law 16736/1996
- Law 18099/2007
- Law 18191/2007
- Law 18251/2008
- Law 18256/2008
- Decree 20/191.40
- Decree 125/014
- Decree 127/014
- Decree 158/1985
- Decree 406/1988
- Decree 651/191.40
- Decree 103/1996
- Decree 283/1996
- Decreto 333/200
- Decree 186/2004
- Decree 268/2005
- Decree 40/2006
- Decree 571/2006
- Decree 108/2007
- Decree 291/2007
- Decree 307/2009

- Decree 474/2009
- Decree 481/2009
- Decree 586/2009
- Decree 222/2010
- Decree 194/2011
- Ordinance 337/2004. MSP
- Resolutions MTSS Numbers 137/2020, 52/2020 and 54/2020
- Standard UNIT 464/1977
- Standard UNIT 465/1977
- Standard UNIT 527/1978

**Others:**

- Alfix Instructions for assembly and use
- EN 12811-1 Temporary works equipment – Part 1: Scaffolding Measuring (TAU910 dated 9.7.2019)
- S13.1 General safety Requirements (UPM)
- Site Safety Plan Final (UPM)
- N110 CM Scaffolding practices (UPM)

## 4. COMPETENCE AND INDUCTION

### 4.1 COMPETENCE

All employees should be **competent for the type of scaffolding work they are undertaking** and should have received appropriate training relevant to the type and complexity of scaffolding they are working on.

Appropriate levels of supervision is provided taking into account the complexity of the work and the levels of training and competence of the scaffolders involved.

Competence of scaffolders is classified into four categories

- Foreman
- Advanced Scaffolder
- Competent Scaffolder
- Trainee Scaffolder / Helper

KSEF maintains “Scaffolding competence list” where every scaffolders competence and authorizations are evaluated and updated

As a minimum requirement, every scaffold group should contain a competent scaffolder who has received training for the type and complexity of the scaffold to be assembled, modified or dismantled.

**Trainee scaffolders** should always work under the direct supervision of a trained and competent scaffolder. Scaffolders are classed as ‘trainees’ until their competence have been evaluated and approved by Supervisor.

Assembling, modification and dismantling of all scaffolding structures (basic or complex) should be done under the direct supervision of a competent person. For complex structures this would be an **Advanced**

**Scaffolder or Foreman** who has received training in a specific type of system scaffold for the complexity of the configuration involved.

Scaffolders should be up to date with the latest changes to safety guidance and working practices within the scaffolding industry.

### 4.2 INDUCTION

All personnel working for KSEF at TAURUS project will be inducted. Induction is executed both face to face induction and on-line induction. Induction material is available on-line at KSEF homepage.

UPM has as a requirement of entry to work on the project of the new Pulp Mill Plant and its associated works, the participation of all staff in an induction course in the most relevant aspects in terms of safety.

In order to complete the course staff must be previously registered in the OVAL system to reserve time for induction

#### 4.2.1 General Site Safety Induction

General site safety inductions and info sessions organized by the UPM are mandatory for all the Contractor's and sub-contractor's personnel accessing the site. General induction for visitors and orientation program for workers include, among others:

- site security practices
- smoking, alcohol and drugs rules
- information on workplace hazards and safe procedures for control OHS hazards
- requirements for PPE
- working at height and liftings
- electric works
- hot work and fire prevention
- hazardous chemicals
- emergency and evacuation procedures
- location of first aid facilities
- housekeeping
- environmental practices
- reporting practices

#### 4.2.2 Health and safety training on site

In addition to the general safety trainings according to the specific needs of the work additional mandatory trainings will be organized for Contractors. Trainings for each specific topic are agreed and coordinated between UPM and the Contractor.

Additional safety trainings are among others:

- mobile and elevating equipment
- confined spaces
- crane operation
- lock out / tag out
- accident prevention and safety promotion
- accident and emergency response
- safety practices
- equipment and machinery.

The Client organizes a safety induction as prerequisite safety training. for all working at site. Participation in the induction is a requirement for working in the project. The site management is responsible for own and subcontractors' staff to follow agreed arrangements.

#### 4.2.3 KSEF Induction

Induction includes

- Clients inductions (check above *General site safety induction* and *Health & safety training*)
    - For all personnel
- Scaffolders induction
    - Uruguay Etiquette
    - KSEF Code of Conduct
    - Scaffolding practices at TAURUS project
    - ALFIX training (supportive induction during project)
- Supervisors induction
    - All above
    - Scaffolding measurement
    - Purchase order practices

## 5. RESPONSIBILITIES

**The responsibilities of the site management and supervisors**

Someone responsible for the HSE matters has to be appointed for the work site and usually the person is the installations or site's supervisor. His/her tasks include:

- Responsibility of the safety, health, well-being and environmental matters in the site operations of the work in question.
- Ensuring that all staff is familiar with the site's HSE instructions and regulations and follow them.
- Ensuring that all employees has been inducted and trained for the tasks expected from them.
- Ensuring that sufficient amounts of the right kind of safety PPE and equipment have been reserved for the staff and that the staff can use them.
- Ensuring that the staff knows how to act in cases of fire and emergencies.

**The every-day responsibilities of the supervisor**

Some of acts which supervisor is responsible in daily basis:

- Work supervision
- Responsible for safe working conditions in the fields under his/her authority.
- Responsible for the purchase and maintenance of safe tools.
- Ensures that the tools and materials are used in accordance with the instructions.
- Gives instructions and is present at special work.
- Reports immediately after an accident or a near-miss event.
- Discusses with the staff about safety, health, well-being and environmental matters.

**Responsibilities of employee**

It is the responsibility of every employee to think, behave and operate safely and take care of the safety of the colleagues.

Every employee must follow the safety instructions and use the required personal protective equipment. Some of employee's responsibilities:

- Using the correct tools, materials, and methods for the work concerned.
- Taking care of the condition and safety of the tools and equipment.
- Reporting to the supervisor the shortcomings observed on the site and in the condition of the tools.
- Avoiding risky operations.
- Taking care of the tidiness and order of the work environment.
- Taking care that he/she has the required training and has sufficient skills to undertake the work given.
- Participation in HSE training and events.
- Participation in risk assessment as required.
- Reporting all the HSE accidents and near-miss events to his/her supervisor.

## 6. SCAFFOLDING DESIGN

Scaffoldings are assembled, modified and dismantled according to the Alfix manual. If work is not done according to manual, separate plans are drawn up. For main equipment drawings and calculations are done even though scaffolding is done according to the manual.

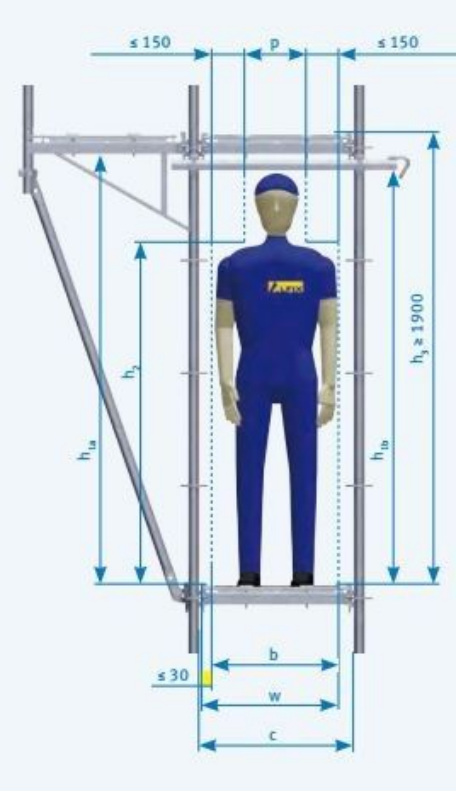
### 6.1 WIDTH OF SCAFFOLDING

One of the critical features of scaffolding safety is the width of the scaffolding. When purchasing the scaffolding subscriber evaluates works to be done on scaffolding.

**Width of scaffolding is determined by the most demanding work to be done on the scaffolding**

**A clear passageway at least 500mm wide**, should be between
persons to pass each other. 500mm passageway should be also possible between equipment or temporary stored materials on the platform.

Platforms should be kept free from construction materials and waste to avoid causing an obstruction or a trip hazard. (EN 12811-1)




**Width classes and head room of working areas**
**b width** of passage clearance, 500 mm is the minimum requirement,
and (c – 250 mm)

**c width** of clearance between standards

**h1a, h1b width** of clearance between working areas and transoms or tie members

**h2** clear shoulder height

**h3** clear height between working areas

**p clear width** in the head area; 300 mm is the minimum requirement, and (c – 450 mm)

**w width** of working areas

### 6.2 WIDTH CLASSES

| Width Class | Minimum Full Width (m) |
|---|---|
| W06 | 0.6m ≤width < 0.9m |
| W09 | 0.9m ≤width < 1.2m |
| W12 | 1.2m ≤width < 1.5m |
| W15 | 1.5m ≤width < 1.8m |
| W18 | 1.8m ≤width < 2.1m |
| W21 | 2.1m ≤width < 2.4m |
| W24 | 2.4m ≤width |
| Note: When equipment or materials are placed on the working area, consideration should be given to maintaining space for work and access. | |

Table 1 from EN 12811 Part 1, reproduced with permission from NSAI

**Width class W06**
**Width of scaffolding 0,73m**
Only persons on scaffolding. Not much traffic on scaffolding. No need for storage, machines or equipment.
**Typical work:** visual inspections, hand work with hand tools for example painting, light grinding with sandpaper etc

**Width class W09**
**Width of scaffolding 1,09m**
Personnel working with equipment.
**Typical work:** grinding (angle grinder), welding equipment, works including cables and hoists

**Width class W12**
**Width of scaffolding 1,40m**
working with larger equipment, temporary storage possibly needed
**Typical work**: welding, insulation works, piping works, heat exchanger works and similar

Typical work to be done at TAURUS project:

- Welding
- Grinding
- Painting
- Lifting
- Electrical works
- Piping
- Insulation works
- Inspection works
- etc

## 7. SCAFFOLD MATERIAL

In TAURUS project KSEF is using Alfix Modul Multi scaffolding system.

Scaffolding parts are visually inspected before assembling. All parts should be free from visual damage. Similar parts should be identical: even minor bending could be hazardous.

Do not throw scaffolding parts! Maximum dropping height to stack is 0,5m.

Damaged scaffold components shall not be used. They must be immediately replaced by flawless material and damaged part is returned to storage for inspection.

If needed, report of damaged part is done to Alfix using Alfix Customer -form.
Repairs may only be performed by the manufacturer.

## 8. STORAGES

### 8.1 ON SITE STORAGE ARRANGEMENTS

- Main storage is in an agreed area on site. Order and good housekeeping are important. Main storage area is also the area where loading and unloading of scaffolding material and containers is done.
- At site there will be several site storages to serve project. Shorter distances guarantee better response and delivery times.
- Following guides concern works at storages and containers

### 8.2 RISKS OF STORAGE WORK

#### 8.2.1 Pedestrians and vehicles

Most vehicle incidents result from collisions between pedestrians and vehicles reversing, loading, and unloading.

To avoid injuries resulting from being hit by mobile plant like forklifts, side-loaders or cranes you should, so far as is reasonably practicable:

- have clearly defined areas to keep pedestrians separate from mobile plant during the Packing/unpacking, and
- implement a driver and pedestrian exclusion zone.

#### 8.2.2 Environment

Heat, cold, rain and poor lighting and ventilation can create an unsafe working environment leading to injuries.

If packing/unpacking needs to be done in these environments, you should reduce the physical and mental stress and risk of injuries by implementing appropriate controls like:

- fans or heaters for cooling or heating
- additional lighting
- supplies of water to prevent dehydration
- wet weather protection, rain clothes

#### 8.2.3 Slips, trips and falls

To reduce the risks associated with slips, trips, and falls when packing/unpacking you should, so far as is reasonably practicable:

- keep the area around stacks, pallets and containers clear of obstructions
- ensure floor surfaces are even and undamaged
- clean up spills when they occur and use barricades and signage to prevent access to unsafe areas
- ensure workers have non-slip and sturdy footwear.

#### 8.2.4 Hazardous manual tasks

Packing/unpacking goods by hand can lead to physical injuries caused by repetitive actions. Also working with goods above shoulder height or below knee level increases the risk of physical injury.

To eliminate the risk of these injuries forklifts or other mechanical aids should be used.

To reduce the risk of hazardous manual task injuries you should, so far as is reasonably practicable:

- consider the weight, size and layout of goods and configuration of the storage container
- consult with personnel to develop and implement a safe method of packing/unpacking
- use lifting equipment (for example forklift) to pack/unpack especially large, bulky or awkward goods
- use pallet jacks, trolleys or adjustable conveyors to ensure lightweight goods are handled between knee and shoulder height
- consider where the packed/unpacked goods are to be taken to minimize carrying distance

- use platform ladders to access lightweight goods at height
- rotate jobs to reduce the risks of repetitive work
- ensure workers:
  - are trained to manually pack/unpack goods
  - safely handle goods between knee and shoulder height
  - secure load fastening before moving the load.

### 8.2.5 Falling goods

Workers packing/unpacking scaffold loads or containers may be struck by falling goods - particularly if goods have moved during transport or goods fall from the stack or when container is first opened. For opening a container: To reduce this risk you should develop a safe method for opening the container and unpacking goods. Procedures could include securing container doors with a short safety rope so you can see if the goods have shifted when the doors are partially opened.

### 8.2.6 Falls from height

To reduce the risk of falls from ladders, cargo, containers, stairs and ramps you should, so far as is reasonably practicable, unpack the container:

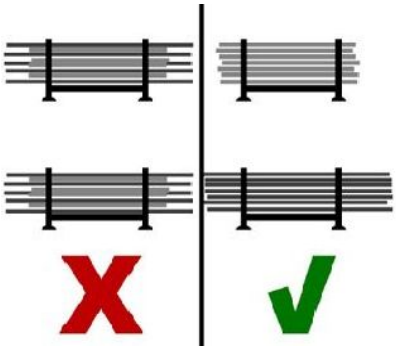
- at ground level, or
- using a specifically designed mobile platform
- Use falling protection like safety harnesses

## 8.3 PACKING SCAFFOLD STACKS

Packing scaffolding parts correctly is important.

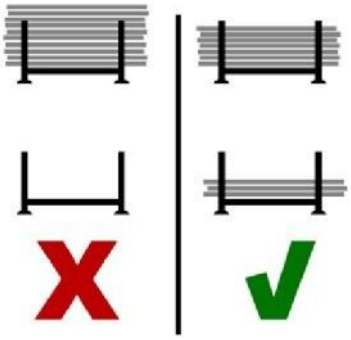
- Safety – if site and storage is in order, less incidents appear
- Effective use of space is critical when there is a lot of scaffolding material
- Bookkeeping is easier, faster, and more accurate

**NO MIXED PARTS**



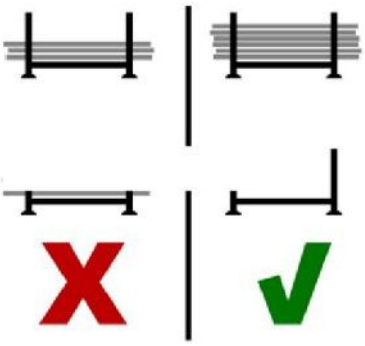
Easier handling
Easier Bookkeeping
Easier to find correct parts

**DO NOT OVERFILL**



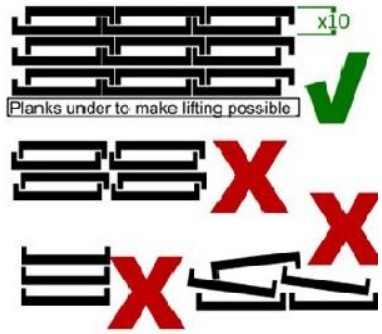
Stacks are more stable
Stacks can be put on each other
Easier to handle

**FILL STACKS IN ORDER**



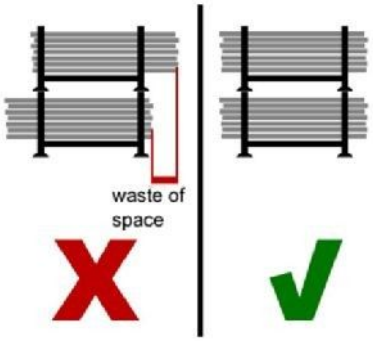
More effective storage
Easier bookkeeping

**STACK PLATFORMS CORRECTLY**



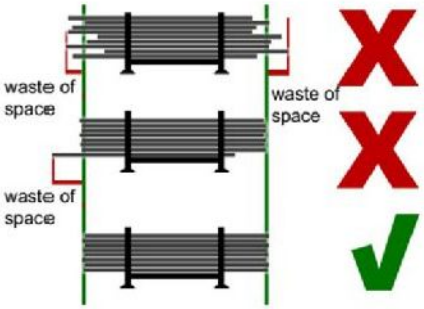

More safe and stable stack
Bookkeeping easier

**CENTER THE PARTS**



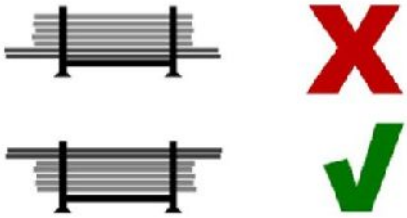

No wasted space
Easier to storage and handle
More safe and stable stacks

**EVEN STACK ENDS**




No wasted space
Easier to storage and handle
More safe and stable stacks

**MIXED STACKS CORRECTLY**



Sometimes mixed stacks are necessary
Rule: less parts up
Easier to unload at storage

## 8.4 CONTAINERS

Check also guide **"Before opening a container"**

### 8.4.1 Siting, stability and placement of containers

Containers should be located and placed to avoid injuries. You should, so far as is reasonably practicable:

- place containers on even ground to ensure the container does not roll over or that the goods do not move during unpacking
- place the container into safe area reserved for containers away from vehicle traffic and use barriers and use signs to restrict access
- ensure there is enough space around the container for unpacking
- ensure the container is not placed under electric lines.

### 8.4.2 Hazardous chemicals

In containers delivered to KSEF's site there should not be any hazardous chemicals in containers. However, if such containers appear, hazardous chemicals can cause a risk to health and safety.

Containers may have residual chemicals like:

- fumigants e.g. methyl bromide and phosphine—these are used to control pests, for example insects and rodents.
- solvents e.g. formaldehyde—these can be released from transported goods (off-gassing).

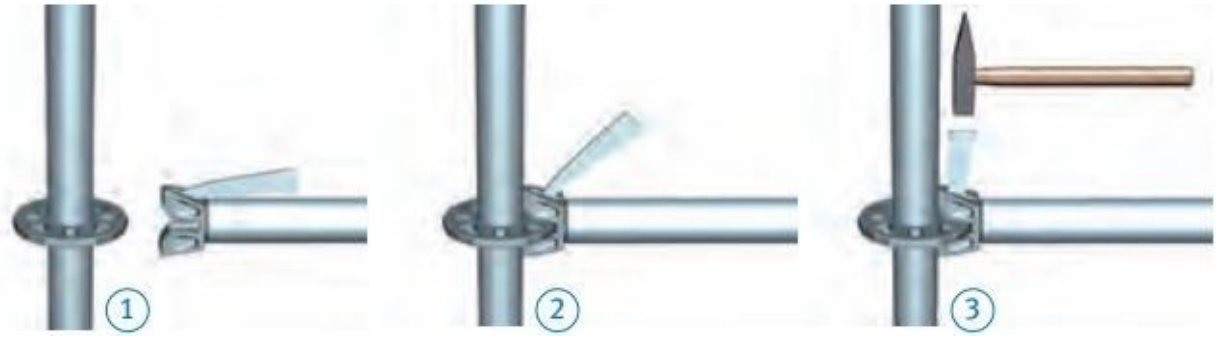
Check for warning notices and clearance certificates. Ask overseas suppliers or importers whether the container has been fumigated. If in doubt, assume it has been fumigated and apply appropriate risk control measures.

Check possible safety data sheets for information on chemicals or seek advice from a competent person for safe work procedures.

## 9. SCAFFOLDING EQUIPMENT

### HAMMER

Use 500 g hammer to get tight wedges




### LEVEL

Scaffolding is constructed on a level surface to ensure safety, high quality, and best performance. Use a quality level to check whether scaffold has been placed on a level surface. Spirit levels are traditionally used, but electronic levels are now becoming also more common.

### LIFTING EQUIPMENT

GEDA lifting equipment


The machine may only be operated by persons who can guarantee to handle it appropriately based on their training knowledge and practical experience.
These persons must

- Be authorized by the company to operate the machine
- Be correspondingly instructed and informed about the risks
- Be inducted to the assembly and operating manual

### PULLEY WHEELS

Always if possible, use assisting equipment for moving and lifting scaffolding parts.

Check safety instructions before use.

## 10. LOGISTICS AT SITE

### 10.1 MOVING MATERIALS

At site a large volume of scaffolding material is moved. Detailed planning of the delivery sequence for all scaffolding components and assemblies is very important and done accurately and precisely.

- Use designated and safest routes only
- Keep emergency routes clear

Most of deliveries at site are done with trucks without a crane. Most of loading and unloading is done manually. For moving scaffold stacks for example forklift and telescopic handlers are used.

Vehicles and machines must be:

- Inspected and in condition required by authorities
- Serviced
- Safe to use

All personnel using vehicles receive thorough and up to date training. Only fully qualified and authorized person can use vehicles. Authorization is documented.

Some vehicle types to be used for material transport at site:

- Telescopic handlers (for example Caterpillar TH414, Manitou MT625)
- Tractors (JCB Fasttrac)
- Trucks (Opel Movano, Citroen Jumper, Ford Transit)
- Cranes (mostly 40 tons)
- Forklifts
- Trailers

Check also “Risk assessment” part 1.3

### 10.2 LIFTING MATERIALS

#### 10.2.1 MANUAL LIFTING

Before beginning any handling procedure (lifting, lowering, pushing, pulling or carrying) of heavy or large objects, assess the situation:

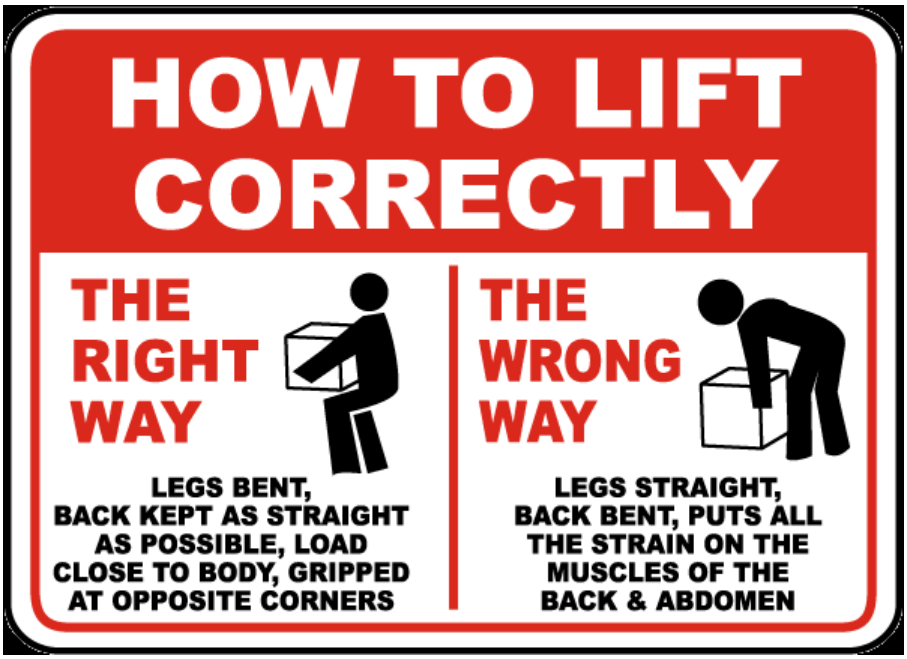
- Check the overall size and shape of the load.
- Check the weight of the load. If too heavy, use a lifting device such as a forklift.
- Lifting heavy objects incorrectly can put unnecessary strain on the back. Two common errors when lifting are:
    - using the wrong muscles, i.e. back muscles instead of leg and buttock muscles
    - holding the object too far away from the body – the closer the object, the less the pressure on the body.

When manually lifting an object, carry out the following procedure:

- Assess the load.
- Stand close to the load, centred over it and with feet set shoulder width apart for balance.
- Bend your hips and knees but keep your back straight.
- Firmly grip the object with both hands at opposite corners to keep the load balanced.
- Keep the load close to your body.
- Raise your head to look ahead.
- Straighten your legs and make sure your back also remains straight.

Do not lift:

- with a rounded back
- while bent from the waist
- with feet close together
- with a tense or arched neck
- if the load is too heavy for you
- with an unbalanced load.




### 10.2.2 MECHANICAL LIFTING

Minimise the possibility of back strain, damaged fingers, or other injuries by using mechanical lifting equipment such as a pulley wheel or an electrically powered hoist. Move heavy objects with a forklift, crane, or other mechanical lifting equipment.

Mechanical lifting equipment must only be used by **fully qualified and authorized person**. Authorization is documented with **"Lifting equipment and forklift licence"**

**Do not work underneath a load!**

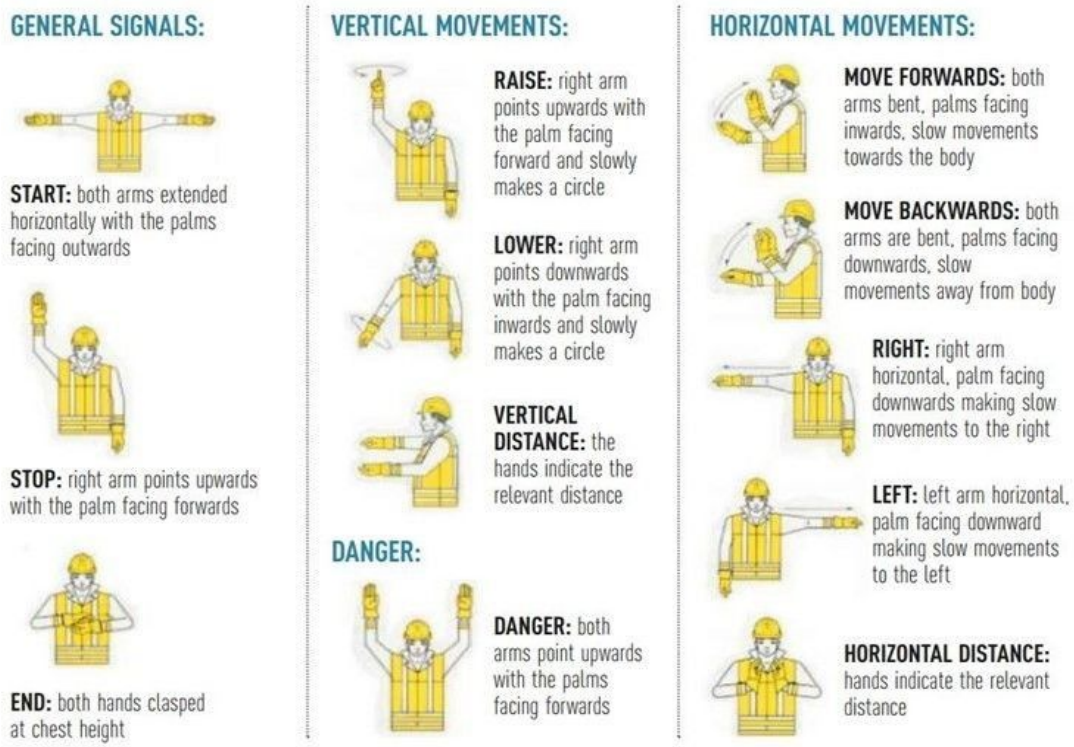
Mechanically lifting a load
Before lifting a load:

- warn anyone nearby to keep clear
- check that all slings, ropes and chains are in shape and securely attached to the load and the hook
- slowly and gently start to raise the load
- raise steadily until the load is just off the ground
- check that the load is stable and has not accidentally become loose
- ensure everyone is standing well clear before continuing the lift.

Mechanically lowering a load
Before lowering a load:

- check that the ground is clear of obstacles
- use suitable supports to load the load onto and place supports on the ground where the load is to be lowered down to
- supports makes sling removal easier
- lower the load gently onto the supports
- guide the load manually if necessary

**USE CORRECT SIGNALS:**




## 11. PURCHASE ORDER

All scaffolding work is ordered with properly filled Purchase Order document

**GENERAL INFORMATION**

- Subscriber's name
  - Name of company ordering the scaffolding. Invoice
- Ordering Date/time
  - Date/time is important for response time and rent
- Orderer, Contact info
  - Subscriber's person making the order.
  - **Only authorized persons can make orders.**
  - Subscriber delivers list of persons allowed to make orders/inspections.
- Scaffolding work to be done: Assembling/Modification/Dismantling or by hourly rates
  - Unit price work and/or hourly rates
- Estimation of using time
  - Estimation of time scaffolding is needed
- Location
  - Scaffoldings location at the site
- Scaffold n:o
  - Number for every scaffold is given by KSEF. If number already exists, it is written here

**TECHNICAL INFORMATION**

- Planned Size LxWxH (m x m x m)
  - Length, width and height of scaffolding
- Scaffold load
  - normally Light (150 kg/m2) if other load class, then what (kg/m2)
  - Possible special loads, what?

**SCAFFOLD TYPE**

Relevant manual, drawings and documentation to clarify needed scaffolding

- ALFIX Modul Multi according instructions
  - Normal situation when scaffolding assembled according to manual
- According to drawing n:o
  - If design, drawing and /or calculations are done, then information here
- Weather protection cover needed, if yes -> mark
- Is scaffolding outside or inside

**PLANNED WORKS ON SCAFFOLD**

- To ensure safety of scaffolding KSEF must know works to be done
- When ordering a scaffolding the work to be done is reviewed and its risks and requirements for the scaffolding are assessed
- Depending on type of work, equipment in use, storage needed etc scaffolding can be planned to fulfil safety and quality demands for every work to be done
- Pay special attention to:
  - Lifting: how is material lifted to scaffolding and further to the target
  - Hoses: routes for hoses, cables
  - Hot Work: Hot work protection
  - Storage needed for material, tools, equipment

**INFORMATION**

- Additional information can be given

**SIGNATURES**

- Both orderer and KSEF representative signs document.
- Orderer can sign document also by sending approval e-mail or message to KSEF representative
- Only authorized person can sign

## 12. RESPONSE AND EXECUTION TIMES

Response time is time limit for preparing the **assembly/modification/dismantling** work after receiving the order.
Execution time is time limit for **assembly/modification/dismantling** work.

**Small modifications and modifications** work must be ordered during previous working day at 4:00PM.
Working days means days from Monday to Saturday.
Shift work must be used case by case to perform the scaffolding work in execution times described above with no price effect.

**Definitions of modifications**

Small modification = no additional scaffolding parts needed, only modification of existing scaffolding.

Modification = new scaffolding material must be added to existing scaffolding.

**Response maximum times** for different scaffolding orders are listed below:

- Acceptance inspection notifications Immediately
- Small modification: 2 hours
- Modification: 4 hours
- Less than 50 m³: 1 working day
- Less than 150 m³: 2 working days
- Less than 500 m³: 4 working days
- Less than 1000 m³: 5 working days
- Over 1000 m³: To be agreed each time

**Execution maximum times** for different scaffold services are listed below:

- Small modification: 4 hours
- Modification: 1 day+, depends on modification size
- Less than 50 m³: 2 working days
- Less than 150 m³: 3 working days
- Less than 500 m³: 5 working days
- Less than 1000 m³: 7 working days
- Over 1000 m³: To be agreed each time

## 13. RISK ASSESSMENT

This method statement is to be read in conjunction with the attached risk assessment that will be regularly reviewed. Risks will be assessed for each task, site and project according to the method specified for KSEF.

### 13.1 KSEF Risk Assessment principals

- All ACTIVITIES and works to be done are divided into appropriately sized phases.
- The HAZARDS associated with the work are identified
- PERSONNEL EXPOSED to hazards are evaluated
- RISK ASSESSMENT with NO CONTROLS is done by evaluating probability and severity
- Result is RISK CATEGORY

### 13.2 Risk Category leads to Conclusions.

After conclusions corrective measures (CONTROLS) will be decided

- CONTROLS are decided to eliminate or minimize the risks
- RISK ASSESSMENT with CONTROLS is done.
- After controlled measures Risk Category must be D or lower.

### 13.3 Probability and Severity classes

Probability (P)

- 1. Improbable Close to zero probability
- 2. Remote Unlikely but conceivable
- 3. Possible May occur, could well occur
- 4. Probable May occur several times, not surprising, to be expected, likely

Severity (S)

- 1. Negligible Minor injuries such as small cuts and bruises, first aid
- 2. Minor Injury with short term effect
- 3. Severe Major injury or disability or ill health with long term effect
- 4. Extreme Fatalities

**Risk Category** (A, B, C, D, -)is determined on the basis of probability and severity

| PROBABILITY | SEVERITY | | | |
|---|---|---|---|---|
| | 1. Negligible | 2. Minor | 3. Severe | 4. Extreme |
| 1. Improbable | - | - | D | C |
| 2. Remote | - | D | C | B |
| 3. Possible | D | C | B | A |
| 4. Probable | D | B | A | A |

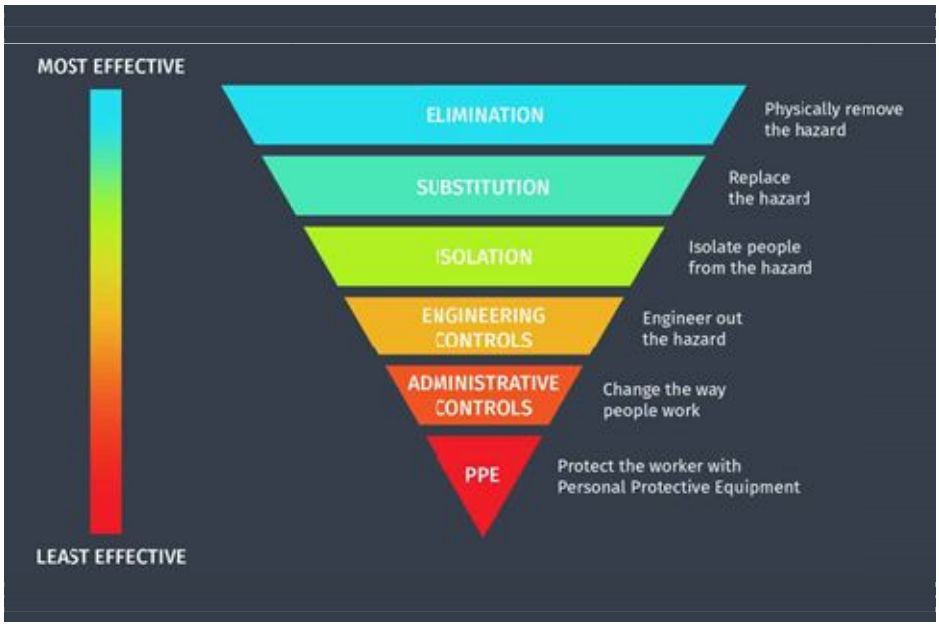
### 13.4 Risk Categories / conclusions

**A:** Critical risk. Hazard must be eliminated
**B:** High risk. Hazard should be eliminated, or the level of risk reduced significantly and reliably by controls
**C:** Medium risk. Risk to be controlled as far as reasonably practicable
**D:** Risk is controlled as far as reasonably practicable
**-:** No special control measures necessary

After controlled measures Risk category must be D or lower.

### 13.5 Risk controls hierarchy principle

The most effective method is elimination for example physically remove the hazard.
PPE is the least effective but still necessary method



## 14. PERSONAL PROTECTIVE EQUIPMENT (PPE)

The following PPE's are mandatory at the site all the time for **scaffolding works**:

- helmet (EN 397)
- eye protection (EN 166)
- foot protection (safety class S3)
- high visibility work clothing (ISO 20471 Class 2).
- work clothes must be long-sleeved
- fall protection (full harness with 2 lanyards, etc.)
- N95 respirator or similar (to prevent infection with COVID-19)


**Follow updated COVID-19 regulations regulated by the Ministry of Public Health of Uruguay**

Fall protection not mandatory for personnel working on ground level for example storages etc. According to the risk assessment or work circumstances, the other additional PPE must be provided depending on work related hazards. For example, the following PPE must be provided:

- hearing protection
- cut resistant gloves
- welding related PPE requirements
- grinding related PPE requirements (face shield protection, etc.)
- life jackets
- respiratory protection (particle, or gas, half or full-face masks, etc.)
- cut resistant clothing when working with chain saw
- chin strap in helmet when working from heights and wearing harness.

PPE should be safely stored when not in use, to prevent contamination, loss, or damage.

The aging and product lifetime of personal protective equipment should be followed.

## 15. GENERAL ASSEMBLY PROCEDURES

### 15.1 SAFE WORK PRACTICES

- Follow
  - **Alfix instructions** and/or scaffolding plan.
  - Site Safety Plan
  - Occupational Health and Safety Guide (UPM)
- The scaffolding parts should be checked, and any damaged scaffolding part should be clearly marked with paint or tags. Damaged parts will be removed from the work area to prevent use.
- Scaffold fittings and other connections should be securely tightened
- All bracing should be installed as the scaffold is erected.
- Consider using specifically designed loading platforms to prevent overloading the scaffold.
- Work from a platform whenever possible.

Do not:

- Overload scaffold platforms with scaffolding awaiting installation.
- Climb on guardrails to gain extra height.
- Climb on outside of scaffold.

Control the risk of a fall into the internal gap. The gap between the inner edge of the of the platform and the face of the building or structure is max 250 mm (Eurocode)

- edge protection (rails, PPE)
- extra scaffold planks/platform to minimise the size of the internal gap.

After enough components of the scaffold have been erected to support it, immediately install:

- Platforms
- Guard rails

Using more ties if:

- Increased wind loadings
- it is used as a loading platform for materials or equipment
- lifting equipment is attached.

Scaffold working platforms should:

- Have a slip-resistant surface
- Be secure so it cannot be kicked off or uplift or displaced during normal use
- Be positioned so no single gap between platforms exceeds 30 mm

Fall protection measures

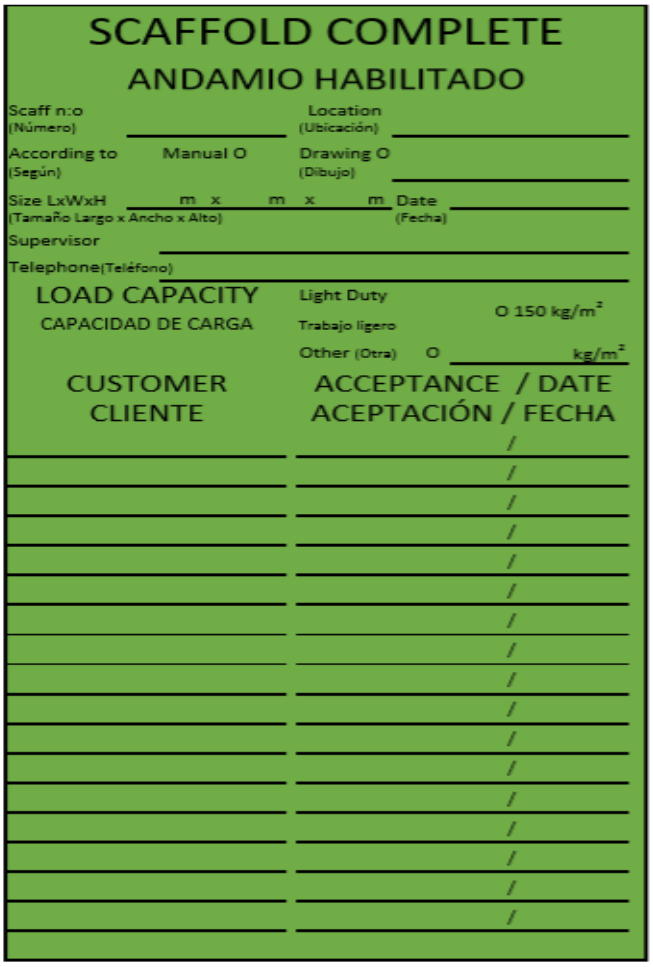
- During erection, modification and dismantling of scaffold, personal protective equipment (PPE) a guardrail, or a combination of both may be required.
- Only equipment that meets the EN standard and the requirements of the DECRETO 125/014 must be used.
- The protective equipment is subject to an annual audit carried out by an expert.

**As long as the scaffolds are not ready for use, especially during their assembly, disassembly, or their transformation, signs will be used to warn of their disabling. the sign will be a white card and on a red background it will have inscribed the legend DO NOT USE SCAFFOLD - DO NOT USE SCAFFOLD (figure 1 - Red Tag - DO NOT USE SCAFFOLD - DO NOT USE SCAFFOLD).**


**Fig. 1 - DO NOT USE SCAFFOLD - NO UTILIZAR EL ANDAMIO**

**DISABLED SCAFFOLD**

**Likewise, when the scaffolds are on conditions, it will be signaled proving their authorization, placing a green card with the data of their scaffolds authorization (figure 2- Green tag - SCAFFOLD COMPLETED - SCAFFOLD ENABLED).**


SCAFFOLD COMPLETE

ANDAMIO HABILITADO

Scaff n:o (Número) _____ Location (Ubicación) _____

According to (Según) Manual O Drawing O (Dibujo) _____

Size LxWxH (Tamaño Largo x Ancho x Alto) ____ m x ____ m x ____ m Date (Fecha) _____

Supervisor _____

Telephone(Teléfono) _____

LOAD CAPACITY
CAPACIDAD DE CARGA

Light Duty
Trabajo ligero
O 150 kg/m²

Other (Otra) O _____ kg/m²

| CUSTOMER CLIENTE | ACCEPTANCE / DATE ACEPTACIÓN / FECHA |
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**Fig. 2 – SCAFFOLD COMPLETE – ANDAMIO HABILITADO**

**Enabled scaffold**

### 15.2 ANCHORAGE POINTS FOR PPE

To use personal fall protection equipment (PPE), the following anchorage points can be used:

1) guardrail brace / longitudinal ledgers 1 m above deck level

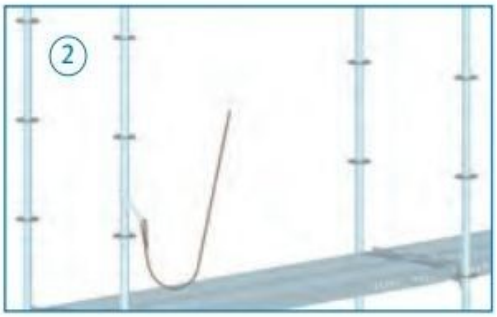
✓

**CORRECT USE**


2) modular upright
this is not allowed to hook like this to scaffolding

✗

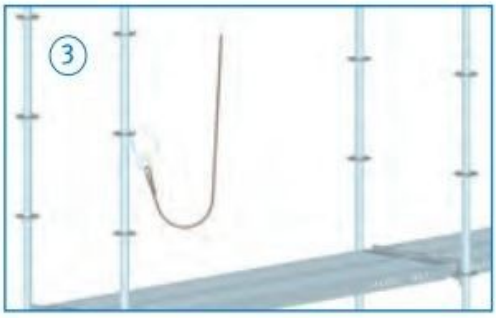
**INCORRECT USE**




3) To the connecting disc 1 m above deck level

✓

**CORRECT USE**




## 16. SURROUNDINGS - SAFETY SIGNS AND BARRIERS

When scaffolding operations are in progress the surrounding must be protected. Steps to ensure this will include:

- No simultaneous work when scaffolding work in progress
- Temporary routes for traffic (pedestrians and vehicles) possible traffic closure during operations are carried out
- Using of barriers and signs
- Handling and storing scaffold parts safely
- Not lifting or lowering materials over any people.

## 17. INSPECTION AND HANDOVER PROCEDURE

### 17.1 INSPECTION

KSEF representative shall do the acceptance inspection for scaffold immediately after installing together with the SUBSCRIBER's representative.
**Only authorized Subscriber's persons can make inspections** (List of authorized persons)
Acceptance inspection shall be documented by filling and signing the acceptance inspection certificate and Green Tag.

**KSEF representative inspection focuses on construction and safety of the scaffolding**:

- Foundation
- Vertical supports
- Horizontal supports
- Diagonal braces (end and horizontal if needed)
- Platforms: no gaps, does not move unintentionally
- Safety rails: no gaps, Rail = handrail, middle rail and toe board
- Stairs and ladders: do not move unintentionally
- Anchoring
- Signs and markings

**SUBSCRIBERs representatives shall accept the scaffold for its use** by signing the Green Tag and inspection certificate. The representative shall ensure that scaffolding is suitable for their work and work can be carried out safely.

### 17.2 DOCUMENTATION

Scaffolding inspection certificate

- Inspection and acceptance document for scaffold in file

Green Tag for scaffold

- To verify that the scaffolding fulfils safety requirements and ordered quantity and design
- Attached to the entrance of scaffold

The rent time will start when Scaffold inspection certificate is filled and signed by SUBSCRIBER and SCAFFOLDING CONTRACTOR. Green Tag is filled and signed to verify that scaffold is ready for use.

## 18. USING SCAFFOLDING PROCEDURE

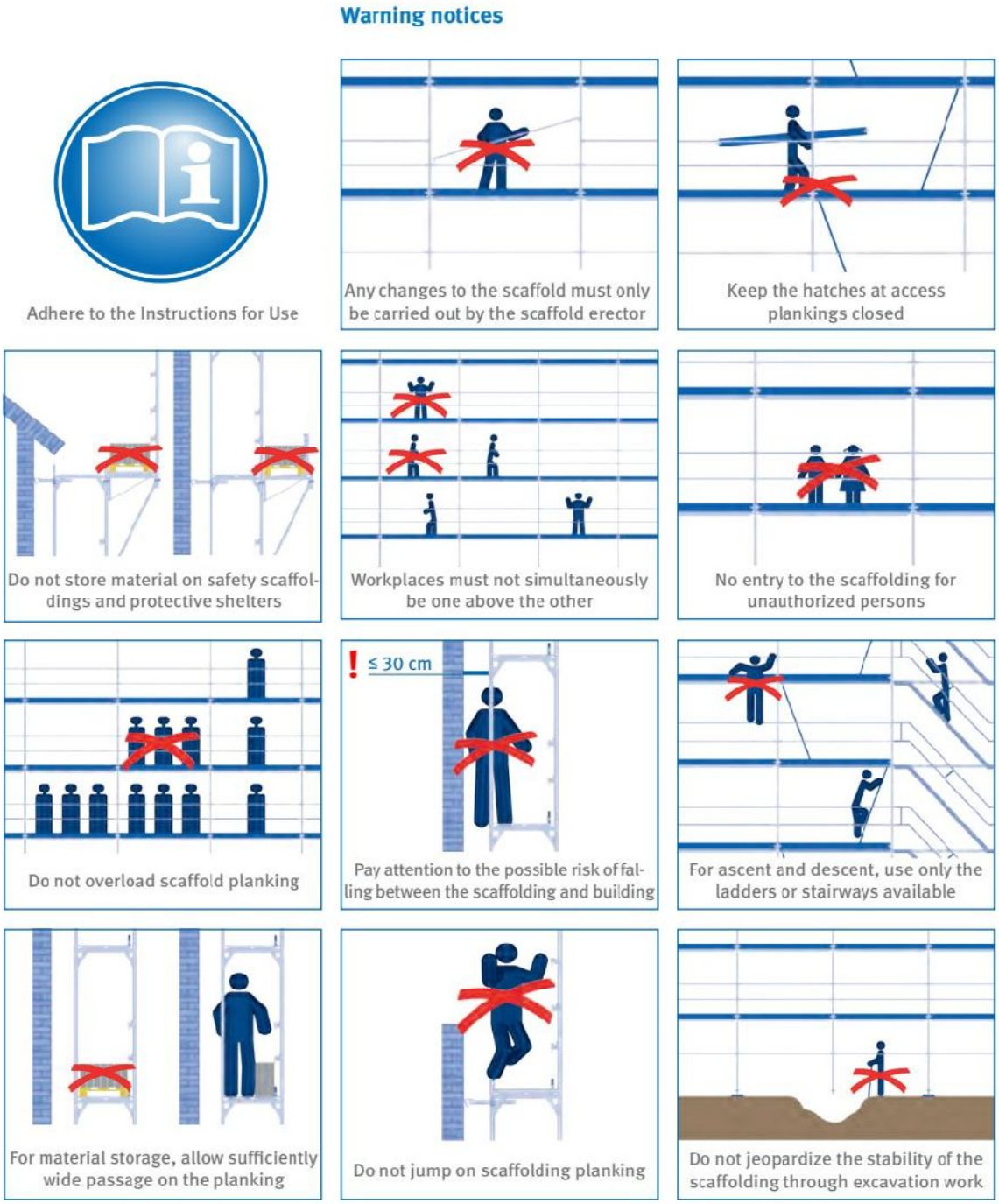
All personnel using scaffolding will attend a site induction. When ordering a scaffolding the work to be done is reviewed and its risks and requirements for the scaffolding are assessed.

Users of the scaffold.

- are directly responsible for ensuring the structure is used only for its intended purpose and within its specified loading limits.
- Users must ensure not to move or dismantle any ties, guardrails, platform boards or other scaffolding parts.
- must check the scaffolding visually before use
- must check before use that scaffolding is suitable for their work

Any modifications to the scaffold must be carried out only by trained scaffolders.

## 18.1 SAFETY WHEN USING SCAFFOLING




## 18.2 WEATHER CONDITIONS

**Weather**

Pay attention to weather forecast to be prepared for changing weather conditions. Working may continue when risks are assessed, and measures needed executed.

Scaffolding should be inspected before use and every time after heavy weather.

**Wind**

Higher wind speed causes greater stress to scaffold structure.

- Watch for any changes in scaffolding structure because it may indicate a possible damage.
- Check and ensure platforms cannot move or come off.
- Avoid lifting material in heavy wind.

**Rain**

Scaffold is by nature intended to allow rain to flow off the edges and platforms. However, care should be taken when moving. It is unlikely that rain would have altered the condition and/or capacity of a scaffold, no matter how heavy the rain has been.

- Alfix steel platforms and stairs are slip-resistance. If wooden panels are used pay special attention when moving on site or scaffolding.
- If it rains steadily for a long time, ground could get softer. This can potentially cause the feet of the scaffolding to sink
- Wear weather protection for example raincoats and trousers

**Snow and ice**

Icy surface cause slipping and falling. Keep scaffolding platforms and stairs clean of ice and snow. Snow and ice cause extra load for scaffolding and must be removed as accurately as is reasonable

## 19. DISMANTLE PROCEDURE

Dismantling is **high risk work and statistically the most dangerous phase** of scaffolding work.

Before dismantling

- Turn Green Tag to STOP. Clear the area around the scaffolding site. Use flag line or similar.
- The scaffold structure should be examined from the base to the top for any visible hazards, loose items on the working platforms, or hung items on the piping
- Clear a space where the scaffolding parts can be set down and stacked in an organised and safe manner.
- Clear path to carry parts to a vehicle to transport the parts to storage.
- Check you have all necessary PPE. Falling protection, hard hat, and safety glasses against falling trash is especially needed.

Dismantling

- Dismantling proceeds in the reverse order of erection, beginning at the top.
- Dismantle whole floor before proceeding lower. The scaffold will then be dismantled methodically
- Ties and braces will not be removed from below before upper floors
- Parts can be passed down from person-to-person or lowered to the ground using a rope system or hoist.
- **Never throw down** any material. All parts will be lifted or passed by hand to ground level.
- Immediately remove components that have been loosened.
- Parts should not be stacked or left on the structure temporarily but brought to the ground straight away.
- The scaffolding components should be inspected when they have been dismantled. Possibly damaged parts are set away from parts that are fit for use.
- Ensure that the structure remains stable and that it does not become overloaded with dismantled materials at any time.
- In general, scaffolds will be dismantled in reverse order to the erection procedure.

After dismantling

- On completion all materials will be cleared from the work area and stored in an agreed position or removed from site.
- A final visual check will be made

## 20. EMERGENCY PROCEDURES

### 20.1 UPM emergency procedures

KSEF comply with UPM site emergency procedures.

In case of evacuation, it is important to follow instructions to evacuate an area an orderly manner.

UPM practical guide to act safely and efficiently when facing an emergency.

**PROTECT**:

Make sure that both the injured person and yourself are not in danger.

For example

- in toxic environment, do not attend to intoxicated person without first protecting yourself
- in case of electrocution: do not touch them but cut the electricity supply

**WARN**:

- Call for help
- Advise the emergency personnel about the situation

**HELP:**

Once you have protected and advised, you should:

- Proceed to help the person who has had the accident according to skills you have
- Look for First Aid trained person

### 20.2 First Aid for Suspected Cardiac Arrest

The steps to take when a cardiac arrest is suspected are:

- Command someone to call help (site emergency).
- Immediately start chest compressions regardless of your training. Compress hard and fast in the centre of the chest, allowing recoil between compressions. Hand this task over to those who are trained when they arrive.
- If you are trained, use chest compressions and rescue breathing.
- If available, an AED (Automated External Defibrillator) should be used. But it is essential not to delay chest compressions, so finding one should be commended to someone else while you are doing chest compression

### 20.3 First Aid for Bleeding

Steps to take if you are faced with bleeding:

- Cover the wound with a gauze or a cloth.
- Apply direct pressure to stop the blood flow.
- Do not remove the cloth. Add more layers if needed. The cloth will help clots form to stop the flow.

### 20.4 First Aid for Blisters

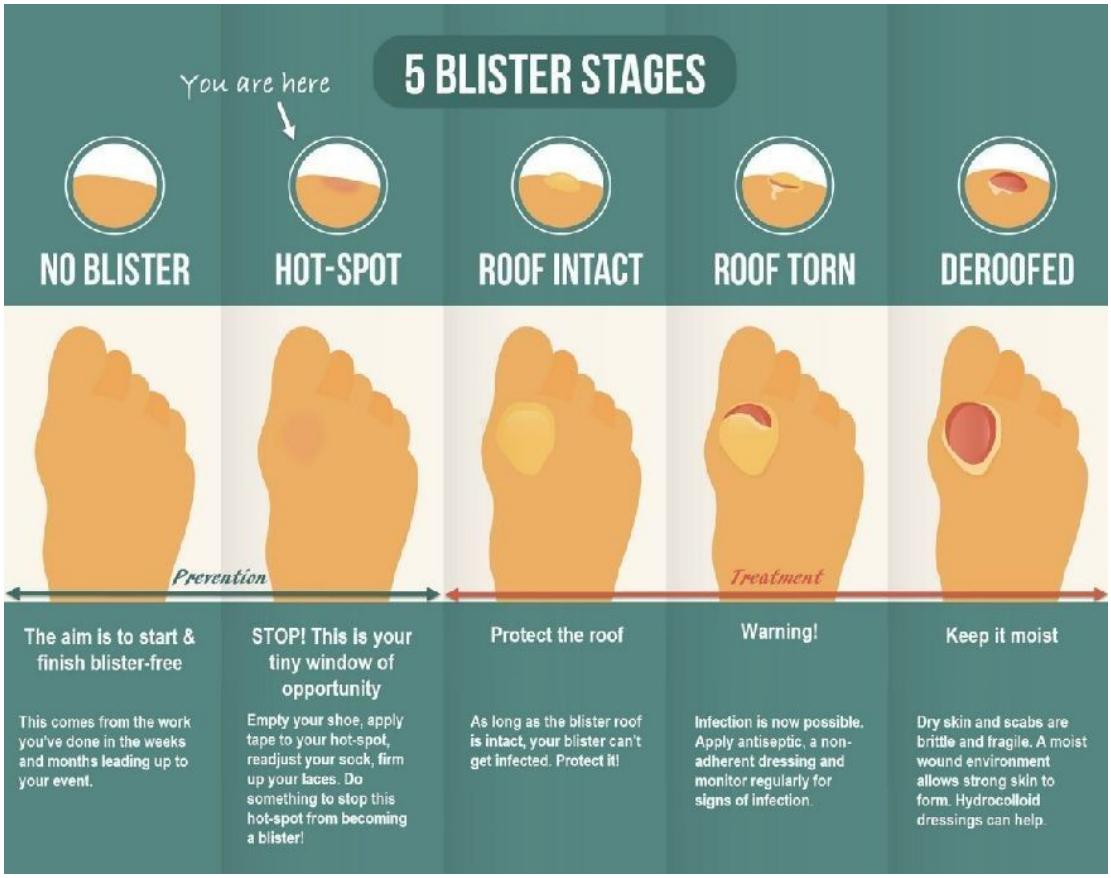
Whether or not a blister needs any treatment is debatable.

If the blister is small, unbroken and not very painful:

- It is probably best to leave it alone.
- Cover it to prevent continued rubbing
- Pressure on it that can cause it to swell more and possibly burst on its own.

If the blister is large or painful, get **professional medical help**. Steps to drain and dress a blister:

- Use a sterilized needle and make small punctures at the edge of the blister.
- Express the fluid, then apply antibiotic ointment.
- Cover it to protect it from further rubbing and pressure.



### 20.5 First Aid for Suspected Fracture

Take these steps for a suspected fracture:

- Do not try to straighten it.
- Stabilize the limb using a splint and padding to keep it immobile.
- Put a cold pack on the injury, avoiding placing ice directly on the skin.
- Elevate the possible fracture.
- Give anti-inflammatory drugs like ibuprofen.

### 20.6 First Aid for Burns

Take these first aid steps:

- Flush the burned area with cool running water for several minutes. Do not use ice.
- Apply a light gauze bandage.
- Do not apply butter or oily remedies to the burn.
- Take ibuprofen for pain relief if necessary.
- Do not break any blisters that may have formed
-

### 20.7 Compliance protocol prevention and action against COVID-19

Regarding the preventive measures to be adopted to prevent contagion by COVID-19 and the action measures in case of detecting a positive case, the company will comply with the tripartite protocol for the Construction industry approved on April 11, 2020 already the general guidelines of UPM COVID of January 29th, 2021.

Likewise, the company reinforces the provisions with the following actions aimed at guaranteeing compliance with them, as well as providing the necessary resources by taking a responsible and proactive attitude on the subject of reference.

Prevention measures and action measures will be available.

#### 20.7.1 Prevention measures:

Prevention measures are mandatory for all KSEF work centers on the construction site.

A staff designated by KSEF will carry out the consultation of workers who enter the work area due to the presence of COVID symptoms before starting work. Check point 20.7.2 for symptoms

In the event that any worker experiences symptoms of COVID 19, they must report it and their entry to the work site will not be authorized.

An individual record will be filled out that will establish which of the symptoms he/she has, and the indicated assistance will be provided, following the recommendations established by the health authorities.

**Work centers**

Each work center of the KSEF company within the site is responsible for the communication and supervising of all the measures and rules issued by the MSP and by UPM will be done and followed. Posters are used in visible places. These posters will be placed in dining rooms, changing rooms, offices and meeting rooms in all KSEF work centers.

**After holidays**

On the day of reinstatement to work (after holidays), the HSE Officer will carry out a meeting to all personnel, where all the measures to be taken by KSEF will be mentioned, complying with the protocol established by the tripartite and for the Construction Industry. In the following days and for the people where I did not carry out the induction, the person in charge of HSE will review it.

**Daily working**

Daily reminders of the measures promoted by the organization will be held at the AST with posters placed at various work points, emphasizing the issue of any symptoms of the kind referred to give prior notice to starting work. We must promote a responsible and respectful attitude to all staff.

Stable work crews will be formed (according the situations) for tasks, **avoiding the rotation of personnel** within them.

**Masks and hygiene**

All staff must wear a mask throughout the working day. KSEF will deliver them to all staff, respecting the guidelines of the protocol signed in a tripartite manner on April 11, 2020.

Hygiene, disinfection and care should be taken in the welfare services:

- dining rooms, changing rooms, bathrooms etc.
- offices, storerooms, working rooms etc.

Maintaining order and cleanliness and informing those responsible for this service.

In the accommodations and lodgings of the company's staff, cleaning will be carried out once a day, keeping strict control of this.

**Mass transit**

Care and hygiene measures should be taken into account in the mass transit transports like buses, minivan, etc. which are hired by the company. Informing and supervising responsible for service to take measures to control performance. Mass transit always to be carried by trained personnel.

- **Buses.** Occupying half of the maximum marked capacity of each vehicle of this type. In order to maintain the distance stipulated in the protocol, half of the seats (1 passenger per every 2 seats) are in use in buses.
- **Company cars and double-cabin vans** may transport up to the maximum allowed by the vehicle. In these cases all people must wear a mask and maintain an external ventilation in the vehicle allowing air circulation.

### 20.7.2 Active Control measures

**WHAT ARE THE MAIN SYNTOMS OF COVID-19:**


**What do we do if we detect symptoms or we ourselves present some of the symptoms?**

a. Separate the person from the work team

b. Provide to him/her a new mask and disposable gloves.

c. The person picks up their personal equipment and leave the work site in the same way that they came to work, in the event that the company handles the transfer, this must be respected.

d. Contact a reference person, provided by the worker, to give notice.

e. The worker must sign the declaration in which it includes what type of symptoms are present

f. The person must go home and

- call their health provider
- follow the medical instructions
- inform the HR of the KSEF company within 24 hours of the event.

g. When a positive case is detected, it is the responsibility of each worker to

- inform their health provider (mutual or medical insurance)
- carry out the follow-up that health provider consider appropriate.

h. In these cases, the affected worker is not allowed to make any type of public statement without the approval of UPM.

i. To return to work, the worker must always bring a medical certification (discharge or proof of medical visit clarifying their status).

## 22. INCIDENT REPORT

We want everyone to report incidents, positive safety observations and near-misses to serve as learning material for the future.

KSEF has a process of collecting safety data from our organization to recognize the root causes of incidents and learn how to prevent them in the future.

We systematically analyse and identify lessons learned and best practices from incidents, near misses and audit findings. Investigation of safety incidents and near misses identify any potential underlying causes and define corrective actions and effective control measures to prevent a similar incident from recurring.

Type of Incidents

- Near miss
- Accident
- Safety Observation
- Environment incident
- Quality incident

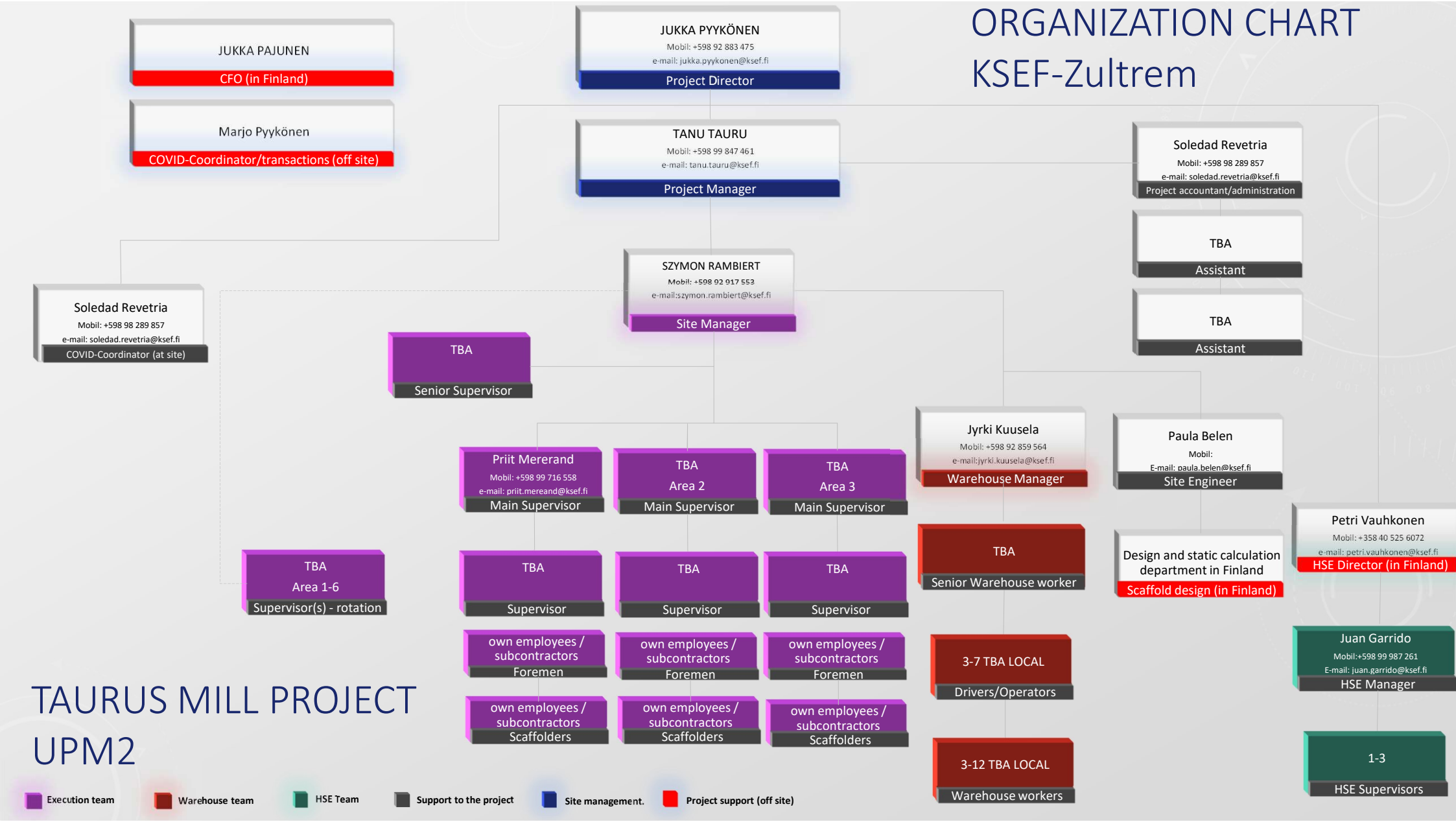
## 23. MONITORING AND COMPLIANCE

Management will monitor and enforce this method statement by periodic auditions and visits to site, throughout the whole duration of the job.

Frequency of such visits determined by the requirements of the client and/or by the complexity and the level of assessed risks.

This document will be updated and modified to reflect possible changes in the working procedures, risks, or other relevant changes in work.

# ORGANIZATION CHART
# KSEF-Zultrem




# TAURUS MILL PROJECT
# UPM2

| KSEF CONSORTIUM | RISK ASSESSMENT<br>SCAFFOLDING WORKS | No.: | Rev.: 01 |
|---|---|---|---|
| | | Date.: 2.12.2020 | Page No: Page 1 of 8 |
| **Project: TAURUS Project, UPM, Paso de los Toros**<br>**Task: Scaffolding works** | | **Prepared by: Petri Vauhkonen**<br>**Approved by:** | |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **1. LOGISTICS**<br>**1.1 Containers**<br>Deliver by truck | - Site equipment and/or vehicle collission (people and property)<br>Crushing, serious or fatal injury. | Personnel on routes | 3 | 4 | A | - separated routes for pedestrian and vehicles<br>- only trained drivers/operators<br>- low speed | 2 | 2 | D |
| | - Contact and/or collision between vehicles and people.<br>Serious or fatal injury from trapping, crushing and falling objects | Personnel on routes | 3 | 4 | A | - minimum number of persons to be engaged during the operation.<br>- use barriers, tape, signs etc.<br>- Vehicles must be in good efficient state and repair.<br>- Vehicles shall not be overloaded<br>- good visibility, vehicle in condition | 2 | 2 | D |
| Unloading and placing | Siting, stability and placement of containers<br>- Poor ground conditions.<br>- machines used in the inappropriate conditions | Personnel at the area | 2 | 4 | B | Ensure ground conditions are capable of withstanding pressures exerted. Heavy machines need solid ground<br>- secure distance from excavation s, cables etc.<br>- place containers on even ground to ensure the container does not roll over or that the goods shift during unpacking<br>- place the container within secure premises–if this is not reasonably practicable, place the container away from vehicle traffic and use barriers and signs to restrict access<br>- ensure there is adequate space around the container for unpacking, and<br>- ensure the container is not placed under overhead electric lines. | 1 | 3 | D |
| | - Unloading and placing the containers by crane | Personnel at the area | 3 | 4 | A | Crane operator must have unrestricted view<br>- correct signs and radio contact if needed. | 1 | 3 | D |
| | - lifting accessories not in good shape | Personnel at work | 2 | 3 | C | - lifting accessories ce-marked and inspected | 1 | 2 | - |
| Unloading and placing (continued) | Positioning of slings | Personnel at work | 2 | 3 | C | Positioning of slings made only by qualified personnel. | 1 | 2 | - |
| | Crane's work in the restricted conditions | Personnel at the area | 3 | 4 | A | Collaboration between crane operator and other workers (lifting operations), keeping attention.<br>- Use barriers and signs at unloading area | 1 | 3 | D |
| | Wrong spacing of slings or not sufficient clamping of the container | Personnel at work | 3 | 4 | A | - Verify the slings before use / visual inspection.<br>- Check the certificates | 2 | 2 | D |
| Working at height<br>Use of ladder | Fall from height whilst attaching / detaching lifting slings.<br>Walking on container roof, no edge protection | Personnel working at height | 2 | 3 | C | Hazards and risk when working at height<br>-Training and Toolbox Talks.<br>- Ladder only for short-period tasks like attaching lifting hook<br>- Ladders certified and inspected before use.<br>- Ladder to be footed or stabiliser attached.<br>- Over reaching to be avoided.<br>- Check for electric cables<br>- Preferably avoid roof access by locating ladder at each lifting point. | 2 | 2 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **1.2 Storage** | Unsuitable storage facilities.<br>Unstable ground.<br>Stacking of steelwork | Personnel working and visiting storage | 3 | 3 | B | Storage manager has been provided with appropriate information, instruction and training.<br>Storage equipment is suitable and of sufficient strength and stability.<br>The stacks are to be secured from falling**. Check part 7 from Method Statement: "Packing of scaffolding stacks".** | 2 | 2 | D |
| | Storage at height<br>- falling, tripping | Personnel working and visiting storage | 3 | 3 | B | Avoid the storing at height.<br>- The suitable access must be available e.g stairways, stepladders | 1 | 2 | - |
| | Manual handling<br>- Bruising, sprains and strains. | Personnel working and visiting storage | 2 | 3 | C | The heavy items are stored at low level to reduce the risk of manual handling injures. Ensure workers:<br>- are trained to manually pack/unpack goods<br>- safely handle goods between knee and shoulder height<br>- secure load fastening before moving the load. | 2 | 2 | D |
| | Poor housekeeping | Personnel working and visiting storage | 3 | 4 | A | The storage area is to be kept free of obstructions to provide ready access to stored items and to prevent slips, trips, falls. Access to be kept clear. | 2 | 2 | D |
| | Environment<br>Heat, cold, rain, noise and poor lighting and ventilation can create an unsafe working environment leading to injuries. | Personnel working and visiting storage | 4 | 3 | A | If packing/unpacking needs to be done in these environments, you should reduce the physical and mental stress and risk of injuries by implementing appropriate controls like:<br>- fans or heaters for cooling or heating<br>- additional lighting provided to prevent slips, trips, falls<br>- supplies of water to prevent dehydration, and<br>- wet weather protection, rain clothes | 2 | 2 | D |
| | Unauthorised access | Personnel working and visiting storage | 2 | 3 | C | Storage to be always kept secure.<br>- clear routes -> no accidental enters<br>- barriers and signs<br>- site guarding 24/7 | 1 | 2 | - |
| | Slips, trips and falls | Personnel working and visiting storage | 4 | 3 | A | To reduce the risks associated with slips, trips, and falls when packing/unpacking you should, so far as is reasonably practicable:<br>- keep the area around stacks, pallets and containers clear of obstructions<br>- ensure floor surfaces are even and undamaged<br>- clean up spills when they occur and use barricades and signage to prevent access to unsafe areas<br>- ensure workers have non-slip and sturdy footwear. | 2 | 2 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **1.3 Horizontal transport** | - Serious or fatal injury.<br>- Collisions<br>Injuries to personnel when manually moving:<br>- bruising, sprains and strains.<br>- Slips, trips, falls<br>Environment<br>- heat, cold, rain, ice, wind, lighting | Personnel involved to transport | 3 | 4 | A | Manual work should be minimized by using mechanical solutions<br>When using a vehicle<br>- Use designated and safest routes only<br>- Keep emergency routes clear<br>- Must have the unrestricted view<br>- use reversing alarm, warning lights, horns, visual signs voice.<br>Operators using vehicle<br>- Induction, training, tool box talks<br>- Authorized to use vehicle<br>- appropriate PPE<br>Controlling environmental hazards<br>- fans or heaters for cooling or heating<br>- additional lighting provided to prevent slips, trips, falls<br>- supplies of water to prevent dehydration, and<br>- wet weather protection, rain clothes | 2 | 2 | D |
| | Forklifts, tractors, handlers, MEWPS used in inappropriate conditions<br><br>Poor ground conditions. | Personnel operating vehicles and working at the area | 2 | 4 | B | Vehicles are<br>- Inspected and in condition required by authorities<br>- Serviced<br>- Safe to use<br>Ensure ground conditions are capable of withstanding pressures exerted. Forklifts or MEWPS should be used on the hardened ground; secure distance from any excavation or trenches | 1 | 2 | - |
| | Untrained persons using vehicles | Personnel operating vehicles | 3 | 3 | B | - Training course and authorization to use vehicle are required for **all personnel using vehicles** | 2 | 2 | C |
| | Break-down of slings | Personnel working at the area | 2 | 3 | C | Check the slings before use/ visual inspection.<br>Check the labels, max load, certificates. | 1 | 2 | - |
| **1.4 Vertical transport**<br>Pulley wheels<br>Lifting equipment | Injury of personnel:<br>- sprains and strains.<br>- Slips, trips, falls.<br>Falling goods<br>Break down of lifting equipment and/or accessories | Personnel working at the area | 3 | 4 | A | Minimizing the need of muscle power, use:<br>- use pulley wheels and lifting equipment<br>To use these, you have to be<br>- authorized by the company to operate the machine<br>- correspondingly instructed and informed about the risks<br>- inducted to the assembly and operating manual<br>Check lifting accessories before use<br>- visual inspection.<br>- maximum load and certifications.<br>- Do not overload<br>Appropriate PPE | 2 | 2 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **2. SCAFFOLDING**<br>**2.1 Scaffold order** of the scaffolding (Purchase order)<br>- who is ordering scaffolding<br>- language barrier<br>- according to manual / drawing and calculations<br>- loads, sizes<br>- timetable<br>- work to be done<br>- materials and tools to be used at work<br>- special needs: covering, | If scaffolding is not suitable for work, it causes:<br>- bad ergonomic<br>- unnecessary risks are taken<br>- unauthorized person modifying scaffolding | Personnel using scaffolding | 4 | 4 | A | - Only pre-named persons are allowed to order scaffolding -> list of approved persons to scaffolding company<br>- both orderer and deliverer speak same language<br>- normally scaffolding done according to manual. If demanding scaffolding -> design & calculations | 1 | 2 | - |
| | Loads to scaffolding | Personnel using scaffolding | 3 | 4 | A | - Loads informed to scaffolding contractor<br>- Special attention to exceptional situations -> scaffolding designed according to the worst situation | 2 | 2 | D |
| | Emergency exits and routes<br>Logistic is difficult because limited space | Personnel using scaffolding | 3 | 4 | A | - Using staircases<br>- Design of scaffolding according to needs | 2 | 2 | D |
| | Special work to be done<br>- hot work, x-rays etc | Personnel using scaffolding | 3 | 4 | A | - non-flammable materials, fire protection | 1 | 3 | D |
| **2.2 Delivering scaffolding material** to the site<br>- vehicle traffic<br>- loading/unloading material<br>- area for site storage | Vehicle collision with persons, equipment, other vehicles<br>-> serious or fatal injury.<br>-> damage to equipment and property | Personnel at site | 3 | 4 | A | - pedestrian and vehicle traffic separated<br>- signals to be used: reversing alarm, warning lights<br>- Site storage as close as possible to actual scaffolding | 1 | 3 | D |
| | Unloading/loading<br>- Falling material | Personnel nearby | 3 | 3 | B | -Only trained persons operate lifting equipment<br>- no persons near/under when scaffolding material moved/lifted | 2 | 2 | D |
| | Site Storage is too small/far away -><br>- risk of stumbling in tight area<br>- reaction time to modifying requests get longer -> risk to unauthorized modifying | Personnel at site | 3 | 3 | B | - Site storage large and close enough of actual scaffolding site | 3 | 1 | D |
| **2.3 Starting the assembly of scaffolding**<br>Lifting scaffolding material<br>- crane<br>- manual | simultaneous work<br>-> falling scaffolding parts<br>-> other works causes hazard to scaffolders | Personnel on scaffolding and nearby | 3 | 4 | A | - no simultaneous work when scaffolding work is done<br>- flag line around the working area<br>- only minimum number of persons allowed outside flag line -> falling part can jump surprisingly far. | 2 | 2 | D |
| | When using crane& lifting equipment<br>- load hits something<br>- load falling | Personnel nearby | 3 | 3 | B | - when using crane: correct signals, load tying<br>- using any lifting equipment: only trained persons are allowed to use<br>- check slings before use, ce-markings | 1 | 3 | D |
| Transportation of parts | - Stumbling, falling<br>- hitting with scaffold part when walking, turning | Personnel at site | 4 | 3 | A | - Check routes in before hand<br>- pay attention where you walk especially when carrying parts<br>- use PPE | 3 | 1 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **2.4 Assembly and modification of scaffolding** | Falling from height | Personnel working at the scaffolding | 4 | 4 | A | ALWAYS take care of the falling protection<br>- guard rails and wear safety harnesses<br>- when removing the handrail, make sure the safety harness is used<br>When entering a scaffolding<br>- Safety orientated attitude<br>- Know what you are doing<br>Follow Alfix manual and/or scaffolding plan<br>- check that scaffolding is made according the regulations and that it is suitable for your job | 2 | 2 | D |
| | Falling of material | Personnel at the site | | | | Do not keep unnecessary storage on scaffolding<br>- handle parts carefully<br>- use lifting devices, secure material from falling<br>- no simultaneous work when scaffolding work is done<br>- flag line around the working area<br>- only minimum number of persons allowed outside flag line -> falling part can jump surprisingly far. | 2 | 2 | D |
| **2.5 Dismantling of scaffolding** | Falling scaffolding parts | Personnel on scaffolding and nearby | 3 | 4 | A | - Handle parts with care, never throw down any material<br>- no simultaneous work when scaffolding work is done<br>- flag line around the working area<br>- only minimum number of persons allowed outside flag line -> falling part can jump surprisingly far.<br>- Immediately remove components that have been loosened.<br>- Parts should not be stacked or left on the structure temporarily but brought to the ground straight away.<br>- The scaffolding components should be inspected when they have been dismantled. Possibly damaged parts are set away from parts that are fit for use. | 2 | 2 | D |
| | Falling from height | Personnel using scaffolding | 4 | 4 | A | - dismantling statistically most dangerous phase of scaffolding work -> focus!<br>- PPE: Correct use of Safety Harnesses<br>- Dismantling in correct order (story by story)<br>- Ensure that the structure remains stable and that it does not become overloaded with dismantled materials at any time.<br>- In general, scaffolds will be dismantled in reverse order to the erection procedure. | 3 | 1 | D |
| | Falling small objects and trash | Personnel on scaffolding and nearby | 3 | 3 | B | Platforms have to be cleaned by users of scaffolding before dismantling starts<br>- PPE, especially helmets and safety goggles | 2 | 2 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **2.6 Mobile scaffolding** | Scaffolding fall | Personnel using scaffolding | 2 | 3 | C | -The scaffold must be levelled at the beginning<br>-pay attention to dimensions to assure its stability: indoor scaffolds 1/4 (base/height) and outdoor scaffolds 1/3 (base/height)<br>- use of mobile scaffolds on uneven soil It's strictly forbidden | 1 | 2 | - |
| | Falling from height | Personnel using scaffolding | 3 | 4 | A | - ALWAYS take care about the falling protection<br>-> guard rails and wear safety harnesses<br>- when entering a scaffolding -> Safety orientated attitude, know what you are doing<br>- check that scaffolding is made according the regulations and that it is suitable for your job<br>- Visual check of the wheels<br>-When using mobile scaffolding -> wheels locked | 1 | 3 | - |
| | Falling material | Personnel using scaffolding and working below | 3 | 3 | B | Do not keep unnecessary storage on scaffolding<br>- handle parts carefully<br>- use lifting devices, secure material from falling<br>- no simultaneous work when scaffolding work is done<br>- flag line around the working area<br>- only minimum number of persons allowed outside flag line -> falling part can jump surprisingly far. | 1 | 1 | - |
| **2.7 Suspended scaffolding** | Scaffolding fall | Personnel on scaffolding | 3 | 4 | A | Assembly according to the design and calculations referring to the erection steps and cautions. | 1 | 3 | # |
| | Falling from height | Personnel on scaffolding | 3 | 4 | A | ALWAYS take care of the falling protection<br>- guard rails and wear safety harnesses<br>- when removing the handrail, make sure the safety harness is used<br>When entering a scaffolding<br>- Safety orientated attitude<br>- Know what you are doing<br>Follow Alfix manual and/or scaffolding plan<br>- check that scaffolding is made according the regulations and that it is suitable for your job | 1 | 2 | # |
| | Falling of material | Personnel using scaffolding and working below | 3 | 3 | B | Do not keep unnecessary storage on scaffolding<br>- handle parts carefully<br>- use lifting devices, secure material from falling<br>- no simultaneous work when scaffolding work is done<br>- flag line around the working area<br>- only minimum number of persons allowed outside flag line -> falling part can jump surprisingly far. | 2 | 2 | D |

| ACTIVITIES | HAZARDS | | Risk assessment (no controls) | | | CONTROLS | Risk assessment (with controls) | | |
|---|---|---|---|---|---|---|---|---|---|
| | HAZARDS | PERSONNEL EXPOSED TO HAZARDS | P | S | R | | P | S | R |
| **2.8 Mobile elevating work platforms** (MEWPs)<br>Mobile platforms<br>Cherry pickers | **Entrapment:** operator trapped between part of the basket and a fixed structure | Operator | 2 | 4 | B | - **Trained operators** (with written permit) and the safe system of work to be followed.<br>- If there are overhead structures->consider selecting a MEWP that has been designed to prevent such accidental contact.<br>- Keeping the platform tidy will reduce the risk of the operator tripping or losing balance while in the basket.<br>- The platform should be used on firm and level ground. No manholes, soft ground etc<br>Make sure the work platform is fitted with effective guard rails and toe boards.<br>- Safety Harness must be used<br>- Look the way you're driving<br>- do not operate a MEWP close to overhead cables or other dangerous machinery, or allow any part of the arm to protrude into a traffic route | 1 | 3 | D |
| | **Overturning:** the machine may overturn throwing the operator from the basket | Operator | 3 | 3 | B | | 1 | 2 | - |
| | **Falling:** an operator may fall from the basket | Operator | 3 | 4 | A | | 1 | 3 | D |
| | **Collision:** the vehicle may collide with pedestrians, overhead cables or nearby vehicles. | Personnel working at the site | 3 | 3 | B | | 1 | 3 | D |
| **3. SHARED WORK PLACE** | Hazard caused by/to other workers/companies<br>- cultural differences | Personnel at the site | 2 | 3 | A | For every Subscriber individual Risk Assessment is done<br>- All hazardous situations should be reported<br>- Consider other's work -> Communication!<br>- Good site induction and rules ensure smooth operations | 2 | 2 | D |
| **4. ENVIRONMENT** | Environment can create an unsafe working environment leading to injuries.<br>Heat<br>Cold<br>Rain<br>Poor lighting<br>Poor ventilation<br>Noise<br>Dust, fibres<br>Chemicals: toxic fumes, corrosive, inflammable | Personnel working at the site | 3 | 3 | B | - Fans or heaters for cooling or heating<br>- Additional lighting<br>- Water supplies to prevent dehydration<br>- Wet weather protection.<br>- Find working methods to reduce noise<br>- Use proper PPE<br>- Identify the chemical you are using (Safety Data Sheet)<br>- Handle chemicals according to safety regulations<br>- Dust, mineral wool: do not harm health but protective equipment is recommended to avoid skin irritation. | 3 | 1 | D |
| **5. MENTAL HAZARDS** | Mental hazards<br>Tiredness<br>- lack of concentration<br>Bad atmosphere<br>- lack of motivation<br>Covid 19, sickness<br>- risk of serious disease or accident<br>- infecting co-workers<br>- site closure possible | All Personnel | 3 | 3 | B | - When not at work, rest enough (eat, sleep, water)<br>- Take a short break instead of pushing yourself over the limit<br>- Don't hide problems concerning work or co-workers at site but inform them openly<br>- Notice your co-workers<br>- Follow Covid-19 instructions strictly<br>- When you are sick, do not work<br>- If necessary, contact medical care | 3 | 1 | D |

| | P – PROBABLITY (1-4) | S – SEVERITY (1-4) | RISK CATEGORY | | | | |
|---|---|---|---|---|---|---|---|
| | 1. Improbable | 1. Negligible | | S1 | S2 | S3 | S4 |
| | 2. Remote | 2. Minor | P1 | - | - | D | C |
| | 3. Possible | 3. Severe | P2 | - | D | C | B |
| | 4. Probable | 4. Extreme | P3 | D | C | B | A |
| | | | P4 | # | B | A | A |

**Risk Categories / conclusions**

A: Critical risk. Hazard must be eliminated
B: High risk. Hazard should be eliminated, or the level of risk reduced significantly and reliably by controls
C: Medium risk. Risk to be controlled as far as reasonably practicable
D: Risk is controlled as far as reasonably practicable
-: No special control measures necessary

After controlled measures Risk category **must be D or lower.**

**Risk controls hierarchy principle**

The most effective method is elimination for example physically remove the hazard.
PPE is the least effective but still necessary method