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Guidance Note on Façade Access Mechanical / Electrical Breakdown, Rescue and Rescue Planning.

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1. Introduction

This document has been prepared to assist duty holders (e.g. facilities managers, building owners, main contractors and other persons acting as "duty holder" for provision of temporarily and permanently installed suspended façade access systems, who may contract others to work at height and all equipment users.

The aim is to provide some guidance to assist with possible actions and planning in the case of mechanical / electrical breakdown and rescue planning for facade access equipment.
Duty holders have a responsibility for having a rescue plan in place (*WAHR:2005, regulation 4, all work at height should be properly planned, this planning should include planning for rescue*) This responsibility cannot be transferred to the equipment users however their Risk Assessment and Method statement documentation should incorporate their means of following the rescue plan and reducing any remaining risk's.

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2. Terms and Definitions

The regulations and standards used when compiling this Guidance Note are listed below.
The list used is not claimed to be conclusive, other regulations and standards may exist that offer further advice that should be considered regarding the Health & Safety of façade access equipment users when developing Rescue Plans.

- **WAHR 2005**: *Work at Height Regulations: 2005*
- **LOLER 1998**: *Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)*
- **PUWER 1998**: *Provision and Use of Work Equipment Regulations 1998. Open learning guidance*
- **BS 6037-1: 2017:** Planning, design, installation and use of permanently installed access equipment. Code of practice. Suspended access equipment.
- **BS 6037-2: 2004:** Code of practice for the planning, design, installation and use of permanently installed access equipment. Travelling ladders and gantries.
- **BS EN 361: 2002:** *Personal protective equipment against falls from a height. Full body harnesses*
- **BS EN 358: 2000:** *Personal protective equipment for work positioning and prevention of falls from a height. Belts for work positioning and restraint and work positioning lanyards.*
- **BS EN 813: 2008**: *Personal fall protection equipment. Sit harnesses.*
- **BS 7985: 2013:** *Code of practice for the use of rope access methods for industrial purposes. Recommendations and guidance supplementary to BS ISO 22846.*
- **HSE OC 282/31:** *Rope evacuation from mechanical handling equipment.*
- **City of London, Environmental Health:** *Working at Height - Emergency Rescue Planning Video.*

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3. SAEMA Position

The Specialist Access Engineering & Maintenance Association (SAEMA) recommends that the "Duty Holder" responsible for the upkeep of all the equipment that forms the façade access system on any specific building or structure should have a written Rescue Plan available on the site at all times. The person responsible for the employment of the users of the above mentioned system must also be aware that a rescue plan exists and be aware of its location on the specific building or structure, should the need arise for a Rescue Procedure to be implemented.

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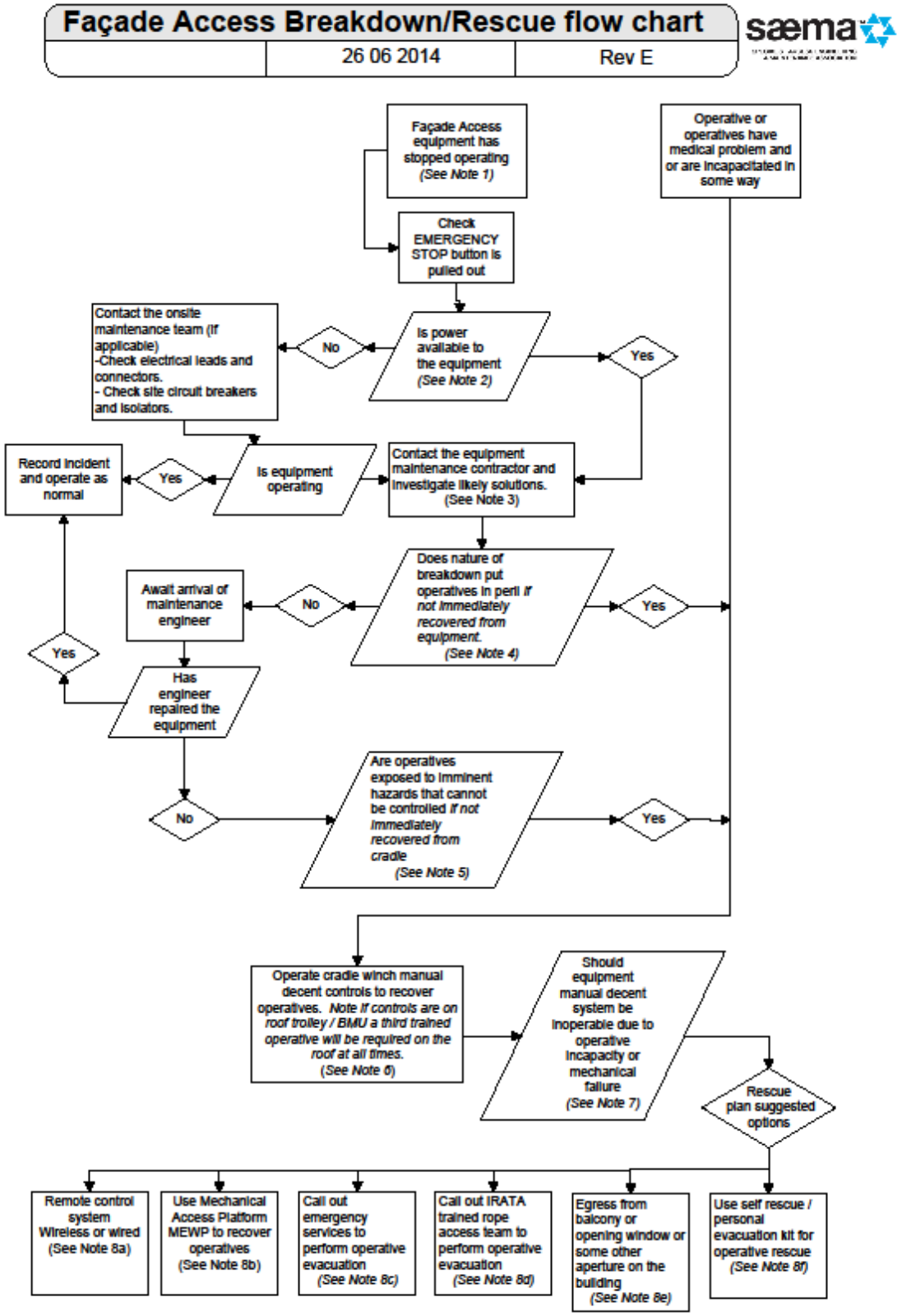
4. Purpose

The purpose of this SAEMA Guidance Document is to help to make Duty Holders alert to the importance of adequate Rescue Planning and hopefully point them in the right direction should they feel they need help on this subject.

Appendices

A1: Façade Access Breakdown & Rescue Flow Chart



A2: General Guidance

In all cases, Façade Access Equipment should only be used by trained and experienced operators. The Work at Height regulations 2005 states "those involved in work at height are trained and competent".

Operator training should include:

- General working at height, use of fall protection equipment, including selection, inspection, fitting and use in conjunction with the applicable fall risks
- Specific user training for the safe use of the installed Façade Access Equipment on the building including but not limited to:
    - Safe access and egress to and from the equipment
    - Access system overview
    - Access system safety devices and checks
    - Access system operation
    - Access system emergency procedures

A3: Notes to be Read in Conjunction with Flow Chart

Note 1 **Machine stopped working**

When equipment stops working in most cases the cause is of a minor nature or by design i.e. safety device has activated. By using a methodical approach, the problem can usually be solved by the trained equipment operatives on site.

Note 2 **Is power available at the equipment – Initial site assessment**

There are many types of Suspended Access Equipment, which differ from one another in many ways, however most equipment will have a power indicator light on the front of the electrical control panel. Check this is activated if fitted.
If there is no power to the equipment, check all connections to the building power supply and if possible that the building electrical power supply is still present. *This applies only where the in-house team is fully conversant with simple fault-finding procedures and/or **is** qualified to deal with power outages*.

Note 3 **Contact maintaining engineer**

If the cause of breakdown is not immediately apparent the maintaining engineer must be called. The duty holder on site should be informed of the breakdown, so they are aware that the façade emergency rescue plan may need to be used.

Note 4 **Does the nature of breakdown put operatives in peril if not immediately recovered?**

The Duty Holder must assess whether the speed of response by the maintaining engineer is appropriate given the nature of the breakdown. At this stage the Duty Holder should monitor the situation and if they believe the operative's situation is deteriorating, then consideration should be given to implementing the rescue plan.

Note 5 **Are the operatives exposed to a more imminent hazard that cannot be controlled?**
In the event of serious mechanical failure, rapidly deteriorating weather or where immediate medical attention is required the Duty Holder should initiate the rescue plan.

Note 6 **Operate manual ascent/decent system**
Manual-descent/ascent procedures should be implemented. Power operated suspended access equipment should have a means of manual descent designed into its systems for emergency rescue purposes. Manual-descent should only be undertaken by trained and qualified personnel and only when satisfied that the platform can be lowered to a place of safety without increasing the risk to operatives or indeed members of the public. In the majority of cases the manual descent system has been proved sufficient to recover operatives.

Note:

- All equipment should be regularly maintained in line with the applicable legislation**,** by a reputable competent organisation.
- Operatives have suitable and sufficient specific equipment training.
- Operative complete full pre-use checks of the suspended access equipment prior to use, in line with the equipment manufacturer's recommendations. **I**ncluding the manual descent system.
- Roof rescue operative –Whilst the façade access equipment is in use**,** a third party should be on site that is trained in the use of the equipment rescue procedure.

Note 7 **Manual Descent**
To allow for the unlikely scenario where the manual-descent is inoperable or the operative(s)is/are incapacitated, an alternative rescue solution is required.
Some suggested rescue options are listed below but these options may have serious implications. When assessing alternative forms of rescue, you should satisfy yourself that you are not introducing unacceptable risk into the equation.
Determining the most appropriate means of rescue is a risk assessment process and you will need to complete one as part of the planning process.

Note 8a **Use remote controls to recover operatives**
Some equipment may have controls installed, to allow the cradle / platform to be remotely operated, allowing it to be raised or lowered to safe position, to allow the user to be rescued. This could be due to operative(s) being incapacitated for instance.

Note: A trained third party will use the controls to rescue operatives from the equipment in the case of control being lost from within the cradle.

Note 8b **Use Mechanical Access Platform to recover operatives**

- The mechanical access platform would need to be on standby, in order to ensure callout response times are acceptable in the emergency.
- Can a machine be used to reach all areas where a rescue may be required?
- Is the ground able to support the loads applicable to the size of machine required?

- Are the areas below subject to traffic flow or other hazards?
- Thought and planning should also be given to the recovery of the suspended access equipment once the operatives have been rescued.

Note 8c **Call out emergency services to perform operative evacuation.**

- In general the emergency services will not allow themselves to be used as a pre-planned rescue option for suspended access equipment.
- A rescue plan should not be reliant on calling out the emergency services without having consulted with them in advance and agreed that they have the necessary equipment and capabilities to complete a rescue.
- That they are able to provide the required response times.
- Thought and planning should also be given to the recovery of the suspended access equipment once the operatives have been rescued.

Note 8d **IRATA-trained rope access technicians to provide third-party rescue.**

- The rope access team would need to be on standby, in order to ensure callout response times are acceptable in the emergency.
- The rope access company will have to pre plan and assess the rescue techniques and equipment required in advance of any rescue being required.
- Suitable tested and inspected, rope access suspension points will be required around the roof of the building in all areas where a rescue could be required. Note – it is not acceptable to assume that the BMU (Roof Trolley) / or cradle tracks can be used as a rope access suspension point. This will need confirming with the system designer, manufacturer, installer or access equipment maintaining organisation.
- Thought and planning should also be given to the recovery of the suspended access equipment once the operatives have been rescued.

Note 8e **Egress from a balcony or opening window or some other aperture on the building**

The welfare of operatives must remain the primary concern and it may on occasions be necessary to plan for the potential for having glass removed to facilitate recovery of personnel into the building. This may be at height but also at intermediate roof levels where there is no roof access in place.

It may be possible to use this method but it will not normally be used as part of a robust plan.

Note 8f **Self-rescue / personal evacuation kits**

- These items of equipment are increasingly being put forward by organisations looking for a quick fix to rescue, however they are often not appropriate. The following must be considered / allowed for by the duty holder prior to their use.
- Has the manufacturer of the facade access equipment verified that the planned anchorage point on the façade access equipment is capable of sustaining the imposed loads that could be applied to it during a rescue operation when the rescue kit is used?

- Has the facade access equipment manufacturer verified that the roof suspension of the access equipment system is designed to accommodate the possible loads of the rescue kit when in use?
- Rescue kits are used to lift / lower people. Lifting Operations and Lifting Equipment Regulations 1998 states *"(3) Subject to paragraph (6), every employer shall ensure that lifting equipment which is exposed to environmental conditions that could result in deterioration, which is liable to result in a dangerous situation is –*
  (a) Thoroughly examined -
  (i) in the case of lifting equipment for lifting persons or an accessory for lifting, at least every 6 months"
- Operatives using the rescue kits should be suitably trained to safely use the equipment in an emergency situation.
- If the reason for rescue is an incapacitated operative they will not be able to use this method of rescue.
- The rescue kit will have to be supplied by the duty holder in order for them to control the suitability of anchorages / suspension system as detailed above.
- The harness normally used by the operatives in the access equipment may not be suitable to use with the self rescue equipment. The harness will need to be suitable for work positioning rather than fall arrest.
- Rescue equipment should be stored in a cool dry environment.
- Where practicable, the rescue equipment should be subjected to pre-use checks by a competent person.

Note 8h **Rope evacuation from mechanical handling equipment**

HSE OC 282/31, 2013 states *"The HSE position is that Rope evacuation is a 'last resort', which is only to be used only in in exceptional circumstances where;*

1 *The equipment is immobilized and cannot be repaired, lowered or long travelled in a reasonable time; OR*
2 *An alternative 'safer' means of escape cannot reasonably be provided; OR*
3 *The operator is at risk from another more imminent hazard, which cannot reasonably be controlled to allow rescue without using the rope evacuation system"*

References

Work at Height Regulations 2005, SI 2005/735

Lifting Operations and Lifting Equipment Regulations 1998, SI 1998/2307

HSE (Health & Safety Executive). 2013. *Rope evacuation from mechanical handling equipment.* [Online]. UK Government. Available from: http://www.hse.gov.uk/foi/internalops/ocs/200-299/282_31.htm [Accessed 6th April 2018].