DSEAR Risk Assessment Verification SOP

1. Introduction

The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) 2002 require that any DSEAR risk assessment where the need for an EX Zone is identified, must be verified by a competent person independent from the activity being assessed and those involved. If the competency exists, verification can be carried out by someone within the University community, or if not, an external consultant can act as verifier.

Through benchmarking with the University of Brighton (UoB), the University of Sussex has adopted a risk-based approach to verification, whereby different teams within the University community will verify DSEAR risk assessments where a low or medium residual risk exists following control and mitigation.

Once verified, the risk assessment is signed off by the relevant responsible person and shared with either the Faculty Health and Safety Committee or Campus Operational Safety Group. This ensures that the relevant Executive Dean of Faculty or Executive Director of Professional Services remains aware of the presence of EX Zones within the areas they are responsible for.

2. Scope

- This instruction document covers the verification process to be followed by the Health, Safety and Wellbeing Team, Fire Safety Team and relevant Senior Technical Manager when they are informed that a DSEAR risk assessment identifies that an EX Zone needs to be established for an activity or area under the University's control.
- The process applies to DSEAR risk assessments where hazardous area classification has been carried out by the assessor, and it has been identified that an EX Zone needs to be established.
- DSEAR risk assessments that identify that an EX Zone does not need to be established, and all other types of risk assessment, are out of scope.

3. Definitions

Assessor – the Faculty/Division member of staff who has carried out the DSEAR assessment.

Hazardous Area Classification – the process of identifying where an explosive atmosphere may form and its extent.

EX Zone – a place where an explosive atmosphere may occur in quantities requiring special precautions to control ignition sources.

Verification – the mandatory, independent check confirming the overall explosion safety of a workplace, plant, equipment and protective systems before an activity is commenced for the first time.

Verifier – a member of University staff who is competent to review the controls and mitigations from their perspective in relation to their area of competence.

4. Responsibilities

4.1 Health, Safety and Wellbeing Team

The role of the Health, Safety and Wellbeing Team is to check that the risk assessment has been fully completed, and that the control and mitigation hierarchies have been sufficiently considered. Where this is not the case, a discussion will be held with the assessor/s to agree amendments. The Health, Safety and Wellbeing Team may ask pertinent questions about the activity to ensure their understanding when undertaking their part of the verification process.

The Health, Safety and Wellbeing Team will also confirm the results of any calculations carried out within the risk assessment if they are competent to do so. Where a verifier from the team is not competent to do this, they must speak to the Senior Safety Manager and a decision may be made to refer for external verification.

4.2 Fire Safety Team

The role of the Fire Safety Team is to check that fire safety has been considered adequately in the risk assessment. Where this is not the case, a discussion will be held with the assessor/s to agree amendments. The Fire Safety Team may ask pertinent questions about the work activity being assessed to ensure their understanding when undertaking their part of the verification process.

4.3 Senior Technical Manager for the area the DSEAR risk assessment applies

The role of the Senior Technical Manager (STM) is to confirm that the DSEAR risk assessment has taken into consideration any standard and emergency operating procedures that apply, such as those relating to substance segregation, compatibility and storage. They may act as a final check on any substance incompatibilities that may have been overlooked during the risk assessment process. Where they are competent to do so, the STM may also confirm the results of any calculations carried out within the risk assessment to support their justification for verifying the risk assessment. If they do not feel confident to check calculations, they should discuss this with the FoSEM Health and Safety Team or Health, Safety and Wellbeing Team.

The STM is not expected to have an extensive knowledge of the work being undertaken, however, as the STM for their Faculty, they are required to sign the verification to ensure oversight of the EX Zones in the Faculty and to reassure themselves that these zones will be effectively managed.

To support STMs in fulfilling this role they may delegate areas of these checks to other competent individuals within Technical Services, for example, to technical colleagues who have knowledge in the area of the work being assessed. They may also seek advice and guidance from the FoSEM Health and Safety Team. Outside of Technical Services, the STM may also discuss the work with the Principal Investigator or other responsible person to obtain reassurance that the work is being undertaken in a planned and controlled way.

4.4 Faculty Health and Safety Committee / Campus Operational Safety Group

Executive Deans of Faculty and Executive Directors of Professional Service must be kept informed of the EX Zones that exist within their Faculty or Division. To ensure this, the assessor should include notification of any new EX Zones on the agenda of the relevant Faculty Health and Safety Committee or Campus Operational Safety Group.

5. Health, Safety & Environmental Controls

This section is not relevant to the scope of this document.

6. Procedures

6.1 General

Verification is only required if a hazardous area (EX Zone) needs to be established. The verification process must be undertaken by the Health, Safety and Wellbeing Team, Fire Safety Team and the Senior Technical Manager for the area for which DSEAR risk assessment will apply. This process does not need to be followed routinely for all risk assessments. The person carrying out the assessment will keep all parties informed of their assessment.

If verifiers decide that the assessment falls outside of their level of competence (e.g. the residual risk following controls and mitigation remains high, complex research setups etc.), verifiers must advise the assessor that an external consultant will need to verify the assessment or carry out their own DSEAR risk assessment for the assessor. The cost of external verification is the responsibility of the Faculty or Division to which the DSEAR assessment belongs to. Therefore, research proposals and other projects will need to factor this cost into grant applications and other budgetary arrangements.

Due to the cost associated with external verification and DSEAR risk assessment, it should be reserved for DSEAR risk assessments where:

- The residual risk is 'high' or 'severe'.
- The assessment covers a large-scale/complex process.
- The activity requires specialist knowledge and expertise that is not available within the University community.
- A second, external opinion, is deemed necessary.
- The activity to be verified is outside of the usual verifier's competence.

For low or medium residual risk assessments, verification is a shared role between the Health, Safety and Wellbeing Team, Fire Safety Team and Technical Services.

Once it becomes apparent that an EX zone will need to be established in a work area, the assessor will engage the following people as early on as possible:

- Senior Technical Manager for the work area.
- FoSEM Health and Safety Team (safetyscienceschools@sussex.ac.uk).
- University Health, Safety and Wellbeing Team (healthsafety@sussex.ac.uk).
- Fire Safety Team (healthsafety@sussex.ac.uk).

By engaging these people at an early opportunity, this ensures all parties are aware of the planned work and the reasoning behind the need for an EX zone to be established. They will then be able to feed into the DSEAR risk assessment process to ensure key control and mitigation measures are

considered through the planning. This will subsequently speed up the verification process once the risk assessment has been drafted.

Once the risk assessment, that identifies the need for an EX Zone has been drafted, the assessor will share a copy with the verifiers.

6.2 Verification

Once all three parties have agreed that their respective area of the verification process has been addressed, they must sign and date the verification section of the risk assessment to confirm this. Any amendments made through the verification process should be documented, for example, in an email and attached to the finalised risk assessment, or via a shared copy of the assessment with comments tracked. Verification must not be confirmed until agreed amendments are made.

By acting as verifiers, the Health, Safety and Wellbeing Team, Fire Safety Team and Technical Services Managers are not:

- Signing off the risk assessment as the assessor, this remains the role of the person who is carrying out the risk assessment.
- Acting as the responsible person signing off the whole risk assessment and taking on the risks of the work activity. This remains the role of the responsible person, Principal Investigator, Executive Dean of Faculty/Executive Director of Professional Service etc.
- Carrying out a formal review as would be carried out by those responsible for the work activity at regular intervals (e.g. annually).

If the work activity requires the establishment of an EX-zone, the activity is not permitted to begin until all three parties have verified the assessment from their perspective, the risk assessment has been signed off following the Faculty/Division's usual sign off process and all detailed actions, controls and mitigations have been put in place.

If a verifier becomes aware that an activity has started before the DSEAR assessment is verified, they may request those involved in the activity to pause until verification has been agreed.

7. Further Information / Guidance

- Dangerous Substances and Explosive Atmospheres Regulations webpage (UoS)
- HS C804 Management of DSEAR Safety Code of Practice
- HS G807 Guidance on Completing DSEAR Assessments
- HS I802 DSEAR Laboratory and Workshop Standard
- HS F052 Dangerous Substances Identification Sheet
- HS F053 List of Equipment for Area Classification (LEAC)

8. References

- Dangerous Substances and Explosive Atmospheres Approved Code of Practice (HSE)

9. Appendices

This section is not relevant to the scope of this document.

10. Document Control

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