

Department of Electronic & Mechanical Engineering

Dundalk Institute of Technology

CAD Labs Health & Safety File

April 2016

Rev: April 2016

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1. Introduction

Under the provisions of The Safety, Health and Welfare at Work Act 2005, Dundalk Institute of Technology is required to ensure so far as is reasonably practicable the health, safety and welfare of all its employees and students engaged in work or study, and all visitors to the Institute premises.

In view of the recent extensive expansion that has taken place on the campus and in order to comply with the requirements of the 2005 Act, the Institute has decided to review and update its Safety Statement. Dundalk Institute of Technology's safety management programme consists of a Parent Safety Statement supplemented by seven ancillary Safety Statements, which apply to different functional areas of the Institute. These ancillary Safety Statements take account of the diverse range of activities, which apply across the Institute.

The Institute's overall Safety Statement is comprised of the following documents:

- Parent Safety Statement
- Ancillary Safety Statement School of Business & Humanities
- Ancillary Safety Statement School of Health & Science
- Ancillary Safety Statement School of Engineering
- Ancillary Safety Statement School of Informatics & Creative Arts
- Ancillary Safety Statement Secretary/Financial Controller's Functional Area
- Ancillary Safety Statement Registrar's Functional Area
- Ancillary Safety Statement Regional Development Centre Functional Area
- Emergency Evacuations Procedures Manual

The purpose of the Ancillary Safety Statements is to provide details of the specific hazards and control measures which apply in these areas. Each Ancillary Safety Statement should be read in conjunction with the Parent Safety Statement.

2. General Statement of Policy within the School of Engineering

The School of Engineering Functional Area is committed to ensuring that high standards of health and safety are achieved and maintained throughout all areas under our control. The key mechanism for achieving and maintaining safety is Risk Assessment, by which we identify hazards, which have the potential for harming health or causing accidents, evaluate the risks arising and select and implement appropriate precautions.

Throughout the School of Engineering Functional Area, Risk Assessments are carried out in all areas under our control periodically. Risk Assessments must take account of any changes with regard to the structure of the organization, Academic Staff, work practices; use of machinery, design techniques or equipment all may necessitate periodic changes to this document as well as any periodical amendments or updates to legislation.

It is essential that all staff and students contribute and cooperate to this process, thus ensuring that the School of Engineering Functional Area's stated objective of providing in so far as is reasonably practicable a safe place of work is achieved. Employees are encouraged to contribute to the improvement of health and safety by making suggestions to their departmental manager. The success of this policy depends on the co-operation of all staff and students, and it is therefore extremely important that staff:

Read and understand the safety information provided

Know their role and responsibilities.

Always abide by the arrangements the Institute has put in place to ensure their health, safety welfare, and that of their colleagues and others.

The process of Risk Assessment in the School of Engineering Functional Area enables us to take all relevant precautions to ensure that Dundalk Institute of Technology's legal standard as an employer is fulfilled particularly in relation to:

- Exercising all due care
- Putting in place necessary protective and preventative measures
- Identifying hazards and assessing risks likely to result in accidents or ill-health
- Not being required to take further measures where these would be grossly disproportionate having regard to the unusual, unforeseeable and exceptional nature of the circumstances.

Health and Safety is overseen in the School by the Functional Area Safety Committee which contains representatives from all of the areas within the School (See Appendix I for membership details)

Signed on behalf of School of Engineering, Dundalk Institute of Technology,

Mr. Eugene Roe Head of School of Engineering

3.0 School of Engineering Functional Safety Area: Description

The School of Engineering is divided into Four Departments, one Research Centre.

- 1. Department of Electronic & Mechanical Engineering
- 2. Department of the Built Environment
- 3. Department of Engineering Trades
- 4. Centre for Renewable Energy at DkIT(CREDIT)

The School of Engineering is predominantly located in the following areas of the Institute:

Location	Description	Primary Activity
North Block	Dept. Electronic & Mechanical	 Lecture rooms
	Engineering	 Computer Labs
		 Office based activities
		 Work Placements
		 Laboratories
		Workshops
North Block	Dept. of the Built Environment	 Lecture rooms
South Block		 Computer Labs
		 Office based activities
		 Laboratories
		Fieldwork
North Block	Dept of Engineering Trades	 Lecture Rooms
South Block		 Computer Labs
The Carroll's Building		 Office based activities
		 Drawing Offices
		 Motor Engineering Workshop
		 Plumbing Workshops
		 Carpentry Workshops
		 Electrical Workshops
		 Motor Engineering Lab
		 Electrical Lab
		 Plumbing Lab

Risk Assessment is carried out at least once per year in each location in the School of Engineering functional area under the direction of the Head of School, Mr. Eugene Roe who is the responsible person.

The wide range of workplace activities and the associated risks to health, safety and welfare within the School of Engineering can be broadly categorized as follows:-

- Offices, (Administration and Lecturing Staff) low to medium risk.
- Lecture Rooms, Drawing Offices, Computer Labs. low to medium risk
- Workshops low to high risk

Refer to Appendix II for School of Engineering safety management organizational layout.

Hard copies of this Functional Area Ancillary Safety Statement are available at the following locations:

- 1. Administration Office, School of Engineering
- 2. Workshop locations
- 3. Laboratories

4.0 School of Engineering – Overview of Risk Assessment Process.

This Ancillary Safety Statement covers all activities carried out by the School of Engineering, and should be read in conjunction with the Institute Parent Safety Statement.

Dundalk Institute of Technology will adapt the "General principles of prevention" as outlined in the 2005 Act Schedule 3

When a hazard is identified and the risk assessed, the necessary arrangements are put in place to protect safety and health.

Dundalk Institute of Technology will utilize the hierarchy of controls A series of common sense steps for hazard control (often called hierarchy of control) where elimination of the risk is not reasonably practical.

These steps are:

- 1. Substitute the hazard (e.g. use a less harmful substance).
- 2. Isolate the hazard.
- 3. Use engineering controls (e.g. Physical controls).
- 4. Put in safe work practices (e.g. Instruction, training, supervision).
- 5. Use Personal Protective Equipment (PPE) such as gloves / overalls.

If a hazard cannot reasonably be eliminated it is the policy to work through this list to minimise exposure to risks. For example, the Institute will try to substitute the hazard first. If this is not possible, will go to the next step and so on. In some cases it may be appropriate to implement a combination of the steps e.g. Steps 3, 4 and 5.

The list above indicates an "order of priority" for remedial measures for any hazard situation which Dundalk Institute of Technology will adapt.

The process of Risk Analysis is by numerical format.

	KEY	
PROBABILITY	SEVERITY	RISK FACTOR
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

The above risk analysis is incorporated into the School's **Safe Work Practice Sheets**

The Analysis takes into account who is exposed
The initial Risk Rating before controls are implemented
The Reduction Risk Rating after controls is in place

A <u>risk</u> is the probability or likelihood of a hazard actually causing a degree of injury or damage.

A hazard is anything that can potentially cause harm.

After a hazard has been identified, it is evaluated in order to assess what its impact would be if steps to control it were not taken. In practical terms, one determines the likelihood of an accident happening and the consequences of it happening.

There are inevitable difficulties in assessing risks. Some risks such as exposure to e.g.-Chemicals / Manual Handling / Lone Workers / Trainees may require physical or organisational measurements to be taken. Risk depends on many (often related) circumstances:-

Is anyone exposed to the hazard? Is the hazard likely to cause injury? Is the hazard well controlled? Is the level of supervision adequate? How long people are exposed and what are are the levels of exposure that should not be exceeded (e.g. Equipment, chemicals, poor lifting techniques)

Risk Assessment will be carried out at least once a year in all of the different sites in the School. The Risk Assessment process adopted by the School of Engineering identifies hazards posed by activities within the School and quantifies the risk posed by same.

In most cases these hazards can be controlled by adhering to procedures detailed in the School's **Safe Work Practice Sheets** (Appendix III) which are developed on an as-needed basis and identified through regular area-by-area risk assessment / Inspection. As part of the annual Risk Assessment process, all Safe Work Practice Procedure Sheets will be reviewed and updated to ensure that they take account of any changing circumstances that have arisen during the course of the year, any changes to work practices, introduction of equipment, changes in legislation will also require updating as is necessary.

Safe Work Practice Sheets are available in the School of Engineering Administrative office, Heads of Departments, Workshop Locations, Laboratories and on the Institute's website

The list of these SWPS is also included in <u>Appendix III</u> of this document. More generic college wide SWPS are also to be adhered to and are available at:

The primary objective of the Safe Work Practice procedures is to eliminate, reduce or control any risks posed as a result of the hazards that exist throughout the School. These Safe Work Practice Procedures are also made available to all staff and students operating in any lab, workshop or classroom environment that is the subject of a risk assessment and safe work practice procedures.

Adherence to the Safe Work Practice Procedures is the primary means of risk control in the School of Engineering. However, hazards may arise from time to time, which are not covered by

these procedures. Under Section 13 (h)(i - iii) of the 2005 Safety, Health & Welfare at Work Act, all staff are required to report any hazards that they notice or observe to their employer. Within the School of Engineering, any hazard noted or observed by any member of staff must be reported to their immediate superior.

Incidents and Dangerous Occurrences must be notified to the relevant supervisor using the forms included in Appendix IV.

5.0 Functional Area Safety Records

Functional Area safety records include but are not limited to the following documents:

- 1. Ancillary Safety Statement, including Safe Work Practice Sheets
- 2. Health and Safety Training Records
- 3. Accident, Incident and Near Miss Dangerous Occurrence Reports
- 4. Functional Area Safety Committee Meeting Records
- 5. Inspection Certificates (where applicable)

(1-5) can be located as follows for:

(a) The School of Engineering

Record Type	Building	Room No.	Contact
Ancillary Safety Statement,	North Block	School of Engineering Office, NC121	Orlagh Devine
including Safe Work			orlagh.devine@dkit.ie, ext. 2894
Practice Sheets		<u>Offices</u>	
	North Block	Mr. Eugene Roe (HOS) NC126	eugene.roe@dkit.ie ext. 2893
		Mr. Simon O'Neill (HOD) NC124	simon.oneill@dkit.ie ext. 2847
		Mr. Noel McKenna (HOD) NC127	noel.mckenna@dkit.ie ext. 2891
		Mr. Pat McCormick (HOD) NC128	pat.mccormick@dkit.ieext. 2551
		Mr. Padraig McGuigan NW207	padraig.mcguigan@dkit.ie
		(Section Head)	ext. 2698
		Mr James Mulvany NW216	james.mulvany@dkit.ie
		(Section Head)	ext 2520
	South Block	Mr. John Doherty S120	john.doherty@dkit.ie ext. 2692
		(Section Head)	
Training Records	North Block	School of Engineering Office, NC121	Orlagh Devine
			orlagh.devine@dkit.ie, ext. 2894
Incident & Accident Reports	North Block	School of Engineering Office, NC121	Orlagh Devine
			orlagh.devine@dkit.ie, ext. 2894
FASC Meeting Records	North Block	School of Engineering Office, NC121	Orlagh Devine
			orlagh.devine@dkit.ie, ext. 2894
Inspection Certificates	North Block	School of Engineering Office, NC121	Orlagh Devine
			orlagh.devine@dkit.ie, ext. 2894

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APPENDICES

Appendix I

Functional Area Safety Committee 2015/2016

- 1. Eugene Roe, Head of School of Engineering (Chairperson)
- 2. Simon O'Neill, Head of Department of Engineering Trades
- 3. Pat McCormick, Head of Department of Mechanical and Electronic Engineering
- 4. Padraig McGuigan, Head of Section: Mechanical Engineering
- 5. James Mulvany, Head of Section: Electronic Engineering
- 6. Noel McKenna, Head of Department of the Built Environment
- 7. John Doherty, Head of Section Carpentry/ Joinery / Plumbing
- 8. Orlagh Devine, Senior Administration
- 9. Jim Connolly, Senior Technical Officer
- 10. Paul Egan, Lecturer
- 11. William Lyons, Lecturer
- 12. Brendan Walsh, Lecturer
- 13. Dermot Clarke, Lecturer
- 14. Paul Durcan, Lecturer

Appendix II

List of Responsible Persons within the School of Engineering

Head of School Mr. Eugene Roe

Head of Dept of Mechanical & Electronic Mr. Pat McCormick

Engineering

Head of Section: Mechanical Engineering Mr. Padraig McGuigan

Head of Section: Electronic Engineering Mr. James Mulvany

Head of Dept of the Built Environment Mr. Noel McKenna

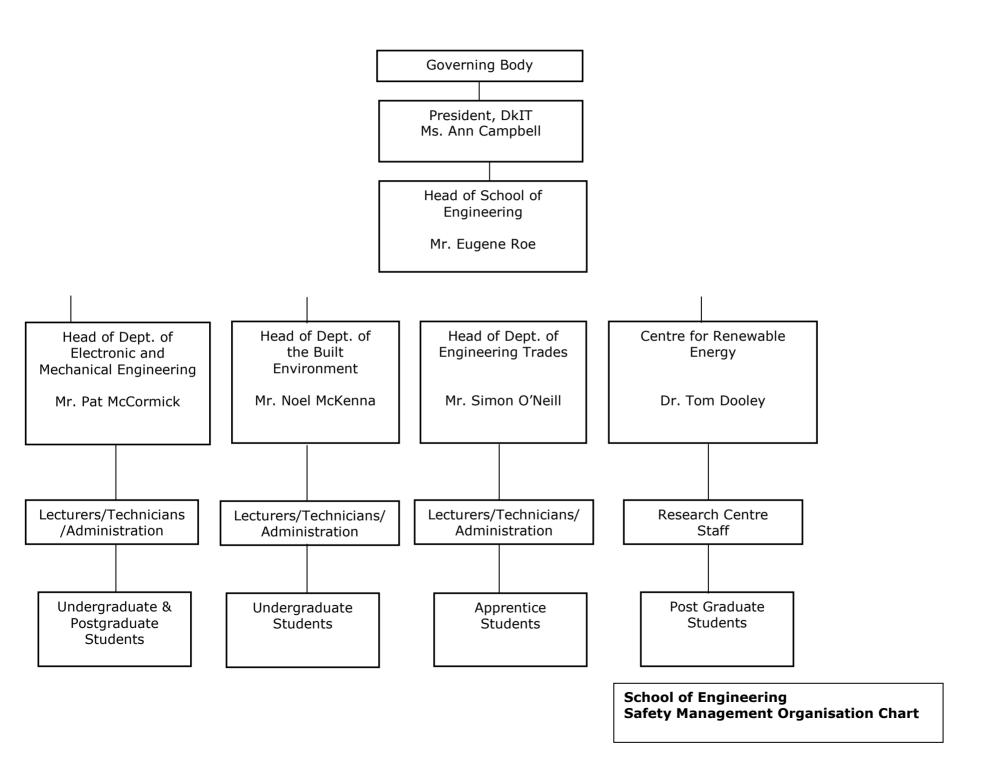
Head of Dept of Engineering Trades Mr. Simon O'Neill

Head of Section: C&J and Plumbing Mr. John Doherty

Centre for Renewable Energy at Dundalk Institute of Technology

(CREDIT)

Dr. Tom Dooley



Appendix III

Safe Work Practice Sheets

SWPS ID CAD Laboratories

General Routine Safe Work Practice Sheets Used in this Area:

GEN 001	General Rules
GEN 002	Access and Egress
GEN 003	Fire Safety
SWPS 08	Electrical Safety
GEN 005	Chemical Agents
GEN 009	Slips, Trips and Falls
GEN 010	Lone Person Working
SWPS 09	Manual Handling
GEN 019	Storage Areas
GEN 026	Use of Hand Tools
SWPS 007	Safe Use of Ladders/ Stepladders
SWPS 015	General Health and Welfare Provisions
SWPS 016	Emergency Response
SWPS 017	Emergency Contact Numbers



Appendix III

General Routine Safe Work Practice Sheets

Safe Work Practice Sheet General Rules

Ref: SWPS 001	
Date: July 09	
Assessed by: E.Roe	

Hazards		
There is always an ever-present risk of accidents occurring due to lack of vigilance		
and awareness of staff and students		
Person Exposed to Risk		
·		
✓ Students ✓ Employees □ Public □ Contractors □ Visitors		
Work Description		
·		
Everyday working environment		
Controls		
 Smoking, eating and drinking is prohibited in all areas other than designated 		
areas. Smoking is prohibited in all areas.		
 Exercise care when opening or closing doors on entering or leaving rooms. Never run. 		
Conduct yourself in a responsible manner and do not act in a way that could be dangerous to yourself		
 Conduct yourself in a responsible manner and do not act in a way that could be dangerous to yourself or others. Refrain from indulging inappropriate behavior 		
as it could have serious consequences.		
do R oddia navo donodo donodojadnodo.		
• No student or member of staff should ever work alone in a Laboratory, Workshop, Service Duct or Plant		
Room, without prior notification to Line Manager.		
All have and easts are to be left in decignated areas. All work and teaching areas about he kept tidy.		
 All bags and coats are to be left in designated areas. All work and teaching areas should be kept tidy when in use and left tidy when finished. 		
when in use and left duy when infished.		
 All accidents however minor must be reported to immediate superior. 		
 No member of staff or student is to interfere with any workplace equipment. 		
 Report any malfunctioning or dangerous or defective equipment to immediate supervisor without delay 		
Never attempt to effect repairs, no matter how trivial.		
Become familiar with position and use of safety equipment for each area in which you work.		
Become familial with position and use of safety equipment for each area in which you work.		
Study carefully and obey the Safe Work Practice Sheets for any area in which you are required to		
work.		
• Co-operate with Employer in fulfilling duties imposed under Section 13(1)(a- h) of the Safety, Health &		
Welfare Act 2005		
Wellale Act 2000		
Checks & Inspections		
Constant vigilance and awareness		
Constant rightenso and arranshood		

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable			
Initial Risk Rating (without an	y control measures)		
Probability : 2	x Severity 3	= Risk Factor 6 high risk	
	KEY		
PROBABILITY	SEVERITY	RISK FACTOR	
Probable 3	Critical 3	1-3 Low Risk	
Possible 2	Serious 2	4 Medium Risk	
Unlikely 1	Minor 1	6-9 High Risk	
Risk Factor = Probability x Severity			
Pick Poduction Pating (after a	controls introduced)		
Probability: 1	x Severity 3	= Risk Factor 3 low / medium risk	
Risk Assessment Review As and when process changes or yearly			

Safe Work Practice Sheet Access and Egress

Ref: SWPS 002
Date: July 09
Assessed by: E.Roe

	Assessed by: E.Roe		
Hazards Inadequate access and egress in the workplace can result in slips, trips and falls. Obstructed access roads and paths can also pose a risk of injury to pedestrians and to vehicle operators and can also delay emergency escape and emergency vehicle access.			
Person Exposed to Risk			
✓ Stude	ents ✓ Employees □ Public □ Contractors □ Visitors		
Work D	escription		
Everyday working environment on campus			
Control	S		
1.	 All doorways and access points in the workplace must be kept clear of obstructions. 		
2.	All passageways and pedestrian routes must be kept clear from obstructions.		
3.	3. Materials must be stored in designated areas away from pedestrian and vehicular routes.		
 All stairways with more than 3 steps should be provided with handrails and maintained in good condition. 			
Adequate lighting must be provided throughout the Institute at all entry points, exit points and along corridors and passageways.			
6.	6. Workplaces must be kept clean and tidy at all times.		
7.	7. All spillages must be cleaned up immediately.		
8.			
 Workplace floors must be kept in a level and even condition where possible in so far as is practicable. All holes and trip hazards should be removed, filled in or covered. 			

- 10. Trip hazards which cannot be removed must be clearly visible or signed as such.
- 11. Chairs, desks or drawers should never be used to access shelving or any other elevated area.
- 12. Stepladders or kick stools must always be used.
- 13. Vehicle drivers must exercise extreme caution when driving on Institute site.

All defects in flooring, lighting, stairwells, etc must be reported to the Estates Office via the Maintenance Request online system.

Checks	&	lnsc	ecti	ons
01100110	•	op	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	••

Constant vigilance and awareness.

Information,	Instruction	&	Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without ar	ny control measures)		
Probability : 2	x Severity 3	= Risk Factor 6	
	KEY		
PROBABILITY	SEVERITY	RISK FACTOR	
Probable 3	Critical 3	1-3 Low Risk	
Possible 2	Serious 2	4 Medium Risk	
Unlikely 1	Minor 1	6-9 High Risk	
Risk Factor = Probability x Severity			
Risk Reduction Rating (after controls introduced)			
Probability: 1 x Severity 3 = Risk Factor 3			
Risk Assessment Review As and when process changes or yearly			

Safe Work Practice Sheet Fire Safety

Ref: SWPS 003	
Date: July 09	
Assessed by: E.Roe	

Н	22	a	r	H	c

The outbreak of fire can lead to:

- Serious bodily injury or fatality
- Damaged property or plant
- Disruption of premises causing loss of facilities **Person**

Person	Expo	sed	to	Risk
--------	------	-----	----	------

✓ Students ✓ Employees □ Public □ Contractors □ Visitors					
	✓ Students	✓ Employees	☐ Public	□ Contractors	☐ Visitors

Work Description

There is always an ever-present risk of fire occurring in all workplaces. Common fire hazards include improperly stored combustible or flammable materials, the use of naked flames, faulty electrical equipment, the use of flammable fuels, the use of inappropriate equipment, the build up of flammable materials or wastes in the workplace and smoking in undesignated areas. The accidental release of chemical material may also lead to the outbreak of fire, especially if the material is pyrophoric, extremely flammable or is a strong oxidiser.

Controls

The Institute is committed to providing a fire safety programme that guards against the outbreak of fire in all areas and also makes provisions for the safety of all persons in the event of a fire. The Institute would like to reiterate to all staff at this point that every employee has a responsibility to guard against the outbreak of fire in the workplace through the implementation of good fire safety practises and where applicable the adherence to the control measures outlined below.

Employees should also refer to specific fire risk assessments that apply to their specified places / type of work.

Fire Detection, Equipment & Emergency Lighting

Layout drawings, detailing the location of the fire detection and alarm systems, throughout the campus have been prepared by the Estates Office. Copies of these drawings are held by members of the Caretaking Staff, to assist in the identification of the location of any alarm signal.

Fire detection and alarm systems are installed and maintained in accordance with current standards. Emergency lighting systems are in operation in all parts of the Campus. These are installed to and

regularly maintained in accordance with current standards.

Fire mains and Hydrants and Fire Hose Reels are inspected and maintained in accordance with current standards The date of the most recent inspection is noted on each hose reel. Test reports on ring mains and hydrants are held in the Estates Office and Fire Registers.

Portable fire extinguishers are inspected and maintained in accordance with current standards. The date of testing is noted on each extinguisher.

Copies of all testing and certificates are held in Estates Office in the Fire Register.

Emergency Response

- Each building has in place an emergency plan detailing the reponse to be taken in the event
 of the sounding of a fire alarm or the discovery of a fire. Refer to
 http://ww2.dkit.ie/about_dkit/health_safety/emergency_evacuations_procedures_manual for
 further details.
- 2. Fire response procedures are displayed in prominent locations within the area covered by their provisions.
- 3. Emergency response procedures are tested at least annually by use of a fire drill.

Procedural Controls

- It is prohibited to use a naked flame (outside of a laboratory area) or to engage in 'hot' work (outside of designated workshops) anywhere within the Institute without first obtaining a 'Hot Work Permit' from the Institute Estates Office. Hot work is defined as grinding, welding (all types), hot cutting, and any other work with the potential to generate a spark or an ignition source.
- It is prohibited to disengage a fire detection device, remove a fire extinguisher from its designated location or to isolate a component of a fire safety system without the express permission of the Institute Estates Office.

Training

- 1. It is the responsibly of individuals within the Institute to ensure that they are familiar with the provisions of any relevant emergency procedures.
- 2. Fire safety training is available through the Staff Training & Development Officer for all interested parties.

Means Of Escape

- 1. All Institute premises will be provided with clearly signed suitable means of escape and emergency exits for use in the event of a fire.
- 2. All escape routes and emergency exits throughout a building / premises must be kept clear at all times.
- 3. It is the responsibility of all Institute employees to ensure that escape routes and emergency exits in their working area are kept free from obstruction.
- 4. No individual may obstruct or remove from service an escape route or emergency exit without prior arrangement with the Institute Estates Office.
- 5. In the event that employees have a concern regarding means of escape then they must contact their manager immediately. Urgent concerns can be conveyed directly to the Institute Estates Office.

Hazardous Agents

- 1. As part of a hazardous agent risk assessment fire safety provisions for handling the agent(s) in question must be detailed.
- 2. Flammable materials may only be handled and stored in accordance with the requirements of their Material Safety Data Sheets, with due regard being paid to their fire risks.
- 3. Flammable materials must be stored in a suitable storage area. The requirement for low voltage or flame proof wiring should be considered.
- 4. The large scale storage of flammable materials (>200I / kg) in a single location requires completion of a specific risk assessment prior to storage taking place.
 - 1. Where new buildings are constructed by the Institute or existing buildings are substantially modified the requirements of Part B of the Building Regulations (1997) Technical Guidance Documents will be adhered to.
 - 2. Smoking is prohibited in all indoor workplaces within the Institute.
 - 3. Employees are encouraged to make themselves familiar with the location of alarm activation points and escape routes in their working areas.
 - 4. Employees must not attempt to repair any electrical equipment unless they are competent to do so. All electrical repairs and installations within the University must only be completed by a competent person, following the rules laid down in the National Rules for the Electrical Installations, as prepared by the Electro-Technical Council of Ireland.
 - 5. The amount of combustible materials stored within the workplace should be kept to a minimum.
 - 6. In the event of an evacuation all persons must leave the workplace without exception and assembly at their designated assembly point.
 - 7. Employees must adhere to any instructions given by Institute Fire Wardens or emergency services personnel in the event of an emergency.
 - 8. Persons must not fight workplace fires unless they have been trained to do so and it is safe to do so.

All employees are reminded of their statuary obligation to protect their own and their coworkers safety by guarding against the outbreak of fire in the workplace through the use of safe systems of work

Checks & Inspections			
Checks & Inspections			

Information, Instruction & Training

- Fire Drills
- Fire Warden Training
- Use of fire fighting equipment

Personal protective equip	ment required (last resort)
Not applicable	
Initial Risk Rating (without a	ny control measures)
Probability : 2	x Severity = Risk Factor 6 high risk
	KEY

PROBABILITY	SEVERITY	RISK FACTOR
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		
Risk Reduction Rating (after Probability: 1	controls introduced) x Severity 3	= Risk Factor 3 Low Risk
Risk Assessment Review As and when process chang	es or yearly	

Safe Work Practice Sheet Electrical Safety

Ref: SWPS 08	
Date: 30/03/2011	
Approved by: E. Roe	

Hazards

- Electrocution
- Electric shock
- Burns
- Inadvertent starting of machines

Person Exposed to Ris

☑ Students	☑ Employees	☐ Public	☑ Contractors	☐ Visitors	
W I D ' (·	1 (1 1	P I	0	D (: OI (

Work Description. A range of electrical appliances are used in the School. This Safe Work Practice Sheet covers Portable Appliance Testing, general electrical safety, lock out procedure

Controls

- Installation or repair work may only be carried out by qualified electricians.
- New installations will comply with the requirements of the General Application Regulations and the Electro-Technical Council of Ireland publication 'National Rules for Electrical Installations'.
- Flexible cables will be adequately protected against external mechanical and heat damage.
- Flexible cables should not be run across floors or walkways. Where electrical cables have to be run across open floor areas ramps will be placed over them to prevent the tripping and damage to cables.
- Adequate fusing or excess protection, e.g. circuit breakers, must be provided for all fixed and portable equipment.
- RCDs in workshops should be tested at the beginning of each term
- Areas around fuse boards will be kept clear of flammable materials and the fuse board cabinets will be kept closed at all times.
- Work on electrical appliances by contractors or work requiring isolation of electrical supplies requires an Electrical Work Permit. Buildings and Estates must be contacted.
- Staff must report defective equipment and take out of service
- Portable AC electrical appliances that may be subject to deterioration as a result of their use such as power supplies and oscilloscopes must be visually inspected and tested at regular intervals. The schedule of testing should be determined by following the Electrical Technical Councils guidelines available at www.etci.ie/docs/ET215(2008).pdf. A record of testing and inspection must be kept by the relevant departments.
- Live working is prohibited except in circumstances where it is not possible to carry out the work in any other manner. The following precautions must include as appropriate;
 - the use of people who are properly trained and competent to work safely on live equipment
 - o the provision of adequate information to the person carrying out the work, about the live parts involved, the associated electrical installation and the likely risks,
 - the use of suitable tools including insulated tools, equipment and protective clothing For example, insulating gloves, insulating boots and insulating rubber matting,
 - o the use of suitable insulated barriers or screens.
 - the use of suitable instruments and test probes.
 - accompaniment by a second person who is trained and able to act in an emergency,
 e.g. switch off power and give first aid treatment for electric shock,

_	effective	control	of any	oroo	whore	thora	io	dongor	from	livo	norto
\circ	enective	COHLION	u anv	area	wilele	ulele	15	uanuer	110111	IIVE	Daris.

o A safe system of work must be drawn up.

Checks & Inspections

- Portable appliance testing must be carried out on certain portable AC electrical equipment
- RCDs tested once per term
- Electrical circuits tested every 3 years

Information, Instruction & Training

- Trained First Aider/CPR (available when live working is carried out)
- Electrical Technician to wear Personal Alarm (when carrying out live work during lone working

Periods)	,		
Personal protective equipmediately boots	nent required (last resort)		
Initial Risk Rating (without an	y control measures)		
Probability: 3	x Severity 3	= Risk Factor 9 High Risk	
	KEY		
PROBABILITY	SEVERITY	RISK FACTOR	
Probable 3	Critical 3	1-3 Low Risk	
Possible 2	Serious 2	4 Medium Risk	
Unlikely 1	Minor 1	6-9 High Risk	
Risk Factor = Probability x Severity			
Risk Reduction Rating (after	controls introduced)		
		Diels Footen A Modition state	
Probability: 2	x Severity 2	= Risk Factor 4 Medium risk	
Risk Assessment Review			
As and when process change	es or yearly		

Safe Work Practice Sheet Chemical Agents

Ref: SWPS 005	
Date: July 09	
Assessed by: E.Roe	

Hazards

Exposure to certain chemical agents can cause a range of injuries from minor to serious long term damage. A chemical is regarded as any substance (solid, liquid, aerosol or gas) which is used for the purpose of reacting with or effecting a change in another material. This definition extends beyond the narrow context of laboratory use and embraces broadest possible interpretation. It includes substances such as solvents, cleaning fluids, detergents, glues/resins, drain cleaners, paint strippers, preserving fluids as well as chemical reagents. A broad range of chemicals are in use throughout the Institute consisting of seemingly harmless readily available substances to highly specialised and reactive laboratory agents. Exposure may be through ingestion, inhalation, skin absorption, absorption through the mucous membranes.					
Person Exposed to Risk					
✓ Students ✓ Employees □ Public □ Contractors □ Visitors					
Information Instruction 9 Training					
Information, Instruction & Training					
The hazards associated with each chemical substance are brought to the attention of the users (Senior technical staff are responsible for informing other technical staff, lecturers are responsible for informing students)					
Ensure Material Safety Data Sheets are made available					
Personal protective equipment required (last resort)					
Care must be taken in the selection of personal protective equipment, eg. select the correct glove to ensure that the chemical does not readily break through Personal Protective Equipment should be CE marked.					
Initial Risk Rating (without any control measures)					
Probability: 2-3 x Severity 2-4 = Risk Factor 4-9					
KEY					
PROBABILITY SEVERITY RISK FACTOR					
Probable 3 Critical 3 1-3 Low Risk					
Possible 2 Serious 2 4 Medium Risk					
Unlikely 1 Minor 1 6-9 High Risk					
Risk Factor = Probability x Severity					
Risk Reduction Rating (after controls introduced)					
Probability: 1 x Severity 2-3 = Risk Factor 2-3					
Risk Assessment Review					

As and when process changes or yearly

Safe Work Practice Sheet Slips, Trips & Falls

Ref: SWPS 009
Date: July 09
Assessed by: E.Roe

Hazards

Slips are caused by the presence of substances such as water, grease, oil, fats, soaps, granules, plastic sheets, packaging, leaves, ice etc deposited on the floor arising from the working conditions or in some cases the weather. Slip hazards can be found on both wet and dry surfaces.

Trips can be caused by such features as electric cables or compressed-air lines across walkways, curled-up or worn carpets, uneven floor surfaces and steps, or discarded work items.

Falls may be caused by slips or trips or when adjacent surfaces are at different levels leading to persons losing their balance because they had not anticipated the change in level. Slips or trips on stairs are particularly dangerous.

The hazards listed above are so ordinary and commonplace that people often accept them as part of normal living until they or someone close to them has an accident and is seriously hurt.

Person Exposed to Risk

✓ Students ✓ Employees ✓ Public ✓ Contractors ✓ Visitors

Work Description

Everyday activity on campus

Controls

Observe & Adhere to Health & Safety Authority Guidelines as below

- The starting point lies with everybody becoming aware of these hazards and taking appropriate action.
- Management must take responsibility for controlling these hazards and must assign appropriate
 responsibilities to staff. Clear policies should address what people need to do to identify and
 monitor slip, trip and fall hazards and the action to take once they identify a hazard.
- Slips, trips and falls must be considered in the workplace hazard assessment that is required by law. This assessment should take account of:
- The type of hazard including how likely it is to occur
- Characteristics of the workplace such as the nature and condition of floor surfaces, quality
- of lighting
- Influence of the weather (e.g. rain, frost or leaves)
- Maintenance and cleaning procedures
- Workplace users
- Where workplaces are being modified or constructed there is an excellent opportunity to prevent slips and trips by selecting appropriate floor materials that are slip resistant and
- installed so as to minimise trip hazards.

Nature of the hazard

In some work areas such as certain food processing activities slip hazards may not always be completely avoidable and the control measures will need to assume the hazard is always present.

- In other situations the floor surface may be non-slippery for most of the time but leaks from

- plant or bad weather may lead to the creation of a slip hazard. It only takes a small amount
- of liquid on a smooth floor to create a hazard. In these situations the immediate control
- measures will focus upon detection of liquids and the actions to be taken to remove the hazard or reduce it by the provision of warnings and cordoning off areas.
- Permanent trip hazards should be removed as far as possible by such measures as the rerouting of pipes or cables, provision of more sockets to reduce long cable lengths, use of battery powered tools and the repair of uneven floor and stair surfaces.
- A good housekeeping regime will go a long way to reduce intermittent hazards from badly stored or discarded items. Materials should never be left or stored on stairs.
- Where changes in floor level cannot be avoided they should be clearly marked and the provision of handrails to control the movement of persons may be appropriate.
- Changes in level should not take people by surprise.

Characteristics of your workplace

- It is better to eliminate slip hazards by choosing a suitable surface rather than depending on cleaning regimes to keep a floor safe. Building designers should ensure that the intended appearance of a building does not compromise the choice of inherently safer floor options.
- Macro-rough surfaces (i.e. those that contain an aggregate) are recommended for areas that
 are expected to experience high levels of contamination. Floors that have hard particles
 throughout their thickness can maintain their slip resistance throughout their life but floors
 with a superficial layer of grit or slip resistant paint can become slippery as the layer is worn
 away.
- Profiled floors (ridges or blisters) are sometimes used in areas subject to slip hazards but these can become slippery over time as the profile becomes worn and contaminants can be left trapped within the profiles.
- Carpets or mats placed on smooth floors can pose both slip and trip hazards and, if used, should be securely fixed to the floor at their edges and at any joints.
- The slip resistance of steps is improved by the fitting of nosings which protect the edge of the step from wear and help users to the place their feet more accurately on it. Care has to be taken that the nosing itself does not constitute a hazard.
- The design of stairways in buildings will need to take account of Technical Guidance Documents B (Fire Safety), K (Stairways, etc) and M (Access for People with Disabilities) produced by the Department of Environment, Heritage and Local Government.
- Adequate lighting, including the avoidance of glare and shadows, is necessary to expose slip /trip hazards. Higher lighting levels are needed where older people are present.
- Poorly sited or excessive signage can distract people who are then less likely to notice slip or trip hazards.

The weather

- Building entrances can become slippery due to the ingress of moisture, mud and debris in bad weather. Measures such as having a slightly higher internal air pressure in the vestibule or the provision of a suitably designed shelter or canopy above the entrance can reduce the ingress of rain. Another simple measure is the installation of doors that do not blow open in the wind.
- Where matting is provided it should be aligned with the way pedestrians use the entrance. It should be laid immediately inside the door entrance and extend across the full width of the door. The existence of wet footprints beyond the entrance or matting is usually a sign that existing controls are not sufficient.
- Where mats in mat-wells are prone to becoming waterlogged the provision of drainage holes should be considered.

Maintenance and cleaning procedures

- Floor cleaning procedures should be incorporated in the operation and maintenance procedures for a company. The procedure should specify the methods and materials to be used as the use of the wrong cleaning method can increase the area of hazard and level of risk. The cleaning agent used should be suitable for the floor surface and the type of contamination encountered. A build -up of polish or detergent residues should be avoided. The drying of floors after cleaning is most important for the control of slip hazards. Staff should be informed, trained and supervised with regard to:
- Cleaning and drying floors
- Importance of dealing with spillages/leaks

"Cleaning as you go"

- Reporting hazards as they arise and any equipment defects contributing to slip hazards or problems with the cleaning equipment itself
- Prompt incident reporting
- Use of suitable footwear
- Cleaning should, where practical, be carried out when there are less people around.
- Cleaning activity should be organised so as to provide dry paths through areas being cleaned. It
 is better to restrict access to areas that are being cleaned by the use of barriers rather than
 depending on the use of cones or signs alone.
- Research has shown that forewarning people of a hazard can lead them to modifying their gait so as to anticipate the situation but attention must be paid to removing signs when the hazard has been dealt with; otherwise people will tend to ignore them if their experience tells them that the signs are always displayed irrespective of the conditions underfoot.
- Where existing unsuitable floor surfaces are identified, the hazard can be reduced by controlling contamination, using mats, treating the surface or in some cases replacing it altogether with a safer material.

Workspace users

- Where there is control over access to the workspace, the risk of falls can be reduced by the introduction of a "sensible shoe" policy i.e. no high heels or loose fitting shoes. In addition: Shoe soles should have deep cleating and a well defined tread pattern.
- Safety footwear may not always be slip-resistant and purchasers should check that it is suitable for the conditions under which it is going to be used.
- Slip resistant shoes will not remain so if they become worn or contaminated underfoot.
- The risk of slipping while barefoot is often greater than when wearing shoes, so this factor needs to be taken into account in shower areas and in other tiled areas associated with swimming pools, etc
- Disposable plastic overshoes can have poor resistance on smooth floors
- In other workspaces where there is general public access there will greater dependence on the selection of floor material in combination with maintenance regimes to control slip, trip and fall hazards.

Checks & Inspections

- Visual checks and Risk Assessments as required in each Functional Area

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)					
Probability : 2	x Severity 3	= Risk Factor 6 High RISK			
	KEY				
PROBABILITY	SEVERITY	RISK FACTOR			
Probable 3	Critical 3	1-3 Low Risk			
Possible 2	Serious 2	4 Medium Risk			
Unlikely 1	Minor 1	6-9 High Risk			
Risk Factor = Probability x Severity					
Risk Reduction Rating (after	controls introduced)				
	· -				
Probability: 1	x Severity 2	= Risk Factor 2 Low Risk			
Risk Assessment Review					
As and when process chan	ges or yearly				

Safe Work Practice Sheet Lone Person Working

Ref: SWPS 010
Date: March 09
Assessed by: E.Bell

Hazards

- Persons working alone using hazardous chemicals or equipment may not be able to summons
- help in the event of an accident or spillage.
- Certain exit routes may not be available during out of hours working.
- Entrapment in areas or spaces due to negligence or accident

Person Exposed to Ris	k
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☐ Students	✓ Employees	☐ Public	☐ Contractors	☐ Visitors

Work Description

Definition of lone working

Lone working/out of hours working is defined as follows

Any Laboratory / Experimental work carried outside of 9 am - 5 pm Monday – Friday when there are no persons aware of your work within calling distance.

Any other work undertaken outside of 7 am-10 pm Monday – Friday and during the hours of 9am - 6pm on Saturday, Sunday & Bank Holidays.

All buildings must be vacated by 6pm on Saturdays, Sundays and Bank holidays to allow for full lock up. At Christmas & Easter the campus will close down for a specified number of days and access will only be granted under exceptional circumstances .

Lone working includes carrying out field work in hazardous terrain or in areas where there is a risk to personal safety.

Lone working may also include carrying out routine maintenance work in isolated areas such as roofs or plant-rooms.

Controls General

- Lone working in laboratories is not permitted unless a risk assessment has been carried
 out in conjunction with an academic supervisor and the risk is deemed to be low. Typical
 work that may be allowed includes work on PCs, microscope work, viewing plates, taking
 items in and out of incubator.
- The supervisor may allow working on high risk activities if the person is competent (typically an experienced member of staff) and a buddy is in attendance.
- The supervisor may allow work on medium risk activities for competent researchers (with or without a buddy present).
- Where a person is working alone without other persons within shouting distance then a phone or mobile phone must be readily available. They must also notify a colleague of their intention, how long they intend to be working in the isolated area, and check back with the colleague at an agreed, pre-determined time, when the work in the isolated area is complete.
- Field work in hazardous terrain or where there is a risk of personal injury as a result of confrontation must not be carried out alone (see SWPS Fieldwork).
- Hazardous experiments must not be left unattended overnight.

Out of hours access

- If out of hours work is required permission must be sought from the Head of Department.
- All persons requiring 'Out of Hours' access must be aware of what to do in the event of an emergency, i.e. what emergency exit doors are available, how to raise the alarm, where to go etc.
- The Head of School must provide Security with the names and locations of persons working out of hours. The person must contact Security on leaving the building.
- Persons authorised to work out of hours must not admit any other person to the building out
 of hours. Persons claiming to be authorised but without a swipe access card or key should be
 referred to Security for access.
- Where the fire alarm is activated in the building after hours, those evacuating the building must assemble at the building fire assembly point. Otherwise emergency services will assume that they are still in the building.
- Researchers or Staff members who in exceptional circumstances, due to the nature of their research work, require access during 'Lock-Up' must seek authorisation for such access from Buildings and Estates.

Checks & Inspections

Visual checks and Risk Assessments as required in each Functional Area

Information, Instruction & Training Not applicable					
Personal protective equipment	nent required (last resort)				
Not applicable					
Initial Risk Rating (without ar	ny control measures)				
Probability : 2	x Severity 2-3	= Risk Factor	4-6		
	-				
	KEY				
PROBABILITY	SEVERITY	RISK FACTOR			
Probable 3	Critical 3	1-3 Low Risk			
Possible 2	Serious 2	4 Medium Risk			
Unlikely 1	Minor 1	6-9 High Risk			
Risk Factor = Probability x Severity					
Risk Reduction Rating (after controls introduced)					
Probability : 1	x Severity 2-3	= Risk Factor	2-3		
Risk Assessment Review					
As and when process changes or yearly					

Lone working/Out of Hours working

	Name	Position	Date
Prepared by			
Reviewed by:			
Approved by			

Revision	Date	Ву	Description
1			
2			
3			

Safe Work Practice Sheet Manual Handling

Ref: SWPS 09
Date: 30/03/2011
Approved by: E.Roe.

Н	а	za	rc	le

Incorrect method of lifting

Attempting to lift something which is to heavy

Lifting sharp/awkward shapes

The main injuries associated with manual handling and lifting are:

Back strain, slipped disc, hernia,

Lacerations, crushing of hands or fingers.

Repetitive Strain Injury.

Bruised or broken toes or feet.

Various sprains, strains, etc.

Person Exposed to Risk

Work Description

Staff and students may be required to lift or move heavy items from time to time including large pieces of wood, bags of aggregate, metal piping, moving rotating electrical boards, pushing/pulling trolleys and lifting engines and transmissions and various motor parts

Controls

- Risk assessments must carried out on manual handling tasks normally performed by staff. As a rule of thumb an assessment is required where weights are above the guideline weights set out by the Health and Safety Authority and reproduced overleaf in figure 1. The assessment should be in writing and set out on form 1 Manual handling assessment attached to this procedure.
- Manual handling will be avoided where possible. Mechanical or other means of moving or lifting will be used such as trolleys and winches.
- Staff will be provided with manual handling training where manual handling is a regular part of their job.
- Seek assistance where possible when lifting heavy items.

Consideration must be given to the arrangement of stored items so that heavier items are not stored near floor or above shoulder height.

Risks

The injuries associated with objects involving, lifting, lowering, manoeuvring and handling objects are:

- Back injury, including slipped disks. The effect of the injury may be cumulative over a period of years (as with chronic backache).
- Pulled muscles and strained ligaments.
- Note: once the back or any other part of the body "goes", then it is easier to go again.

Primary controls

- Trained in the correct manual handling techniques and requirements
- Whenever and wherever possible and practicable use the correct mechanical means to lift, lower or manoeuvre heavy or awkwardly shaped loads.
- Split large loads into several smaller loads if possible.

Basic controls

1 Assessment

Carry out the following assessment process before you begin:

- Is it too heavy, too large, unwieldy or unstable?
- Will it require an unstable body posture position?
- Is the ground, floor or surface uneven or slippery?
- Are you able to maintain good posture while lifting?
- Will it require excessive lifting, lowering or carrying distances?
- Are you physically suited to carry out the task (e.g. physique, fitness, body strength)?
- Are you wearing suitable PPE (e.g. gloves, safety footwear)?

2 Safe to Manual Handle

When your assessment indicates that you can safely undertake the manual handling task, then proceed as detailed in section 3

Even when considered safe you should still use the correct mechanical means whenever and wherever possible and practicable.

3 If there is no alternative way then:

Protect your back

- If you must lift, carry and move an object yourself or with others, then you must do so in accordance with the correct techniques that you have learned in training. These correct techniques are summarised as follows:
- Lifting: Stand close to the load, bend the knees, not the back. Get a firm grip of the load and rise up straight.
- Carrying: Keep the load close to the body, with back straight, and turn by pivoting your feet.
- Lowering: Lower the entire body bending the knees, with back straight.

Special Controls Loading, transporting & off-loading materials

- Use mechanical means to load heavy and awkward loads
- Wear gloves and boots to protect body from getting trapped between the load and any other surface.
- Secure and store safely on the transport vehicle

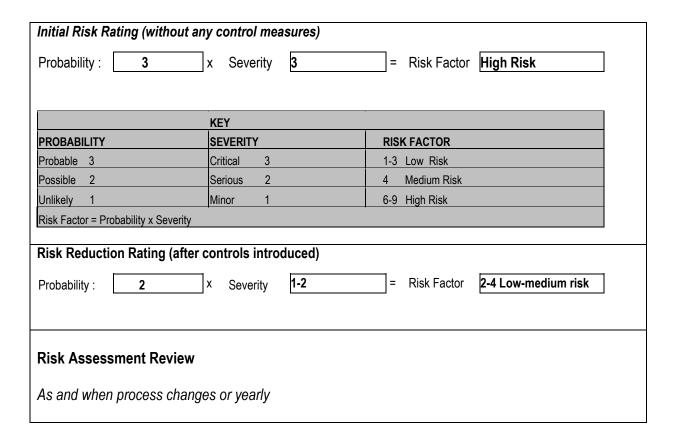
Checks & Inspections

- Senior technician to monitor that correct manual handling technique is being used.
- Trolleys should be visually checked before use. Trolleys with damaged wheels should be taken out of service.

Information, Instruction & Training

 Manual Handling Training provided to relevant staff. Manual Handling activities are monitored and refresher training and /or reinstruction is an integral part of the safety management programme.

Personal protective equipment required (last resort)



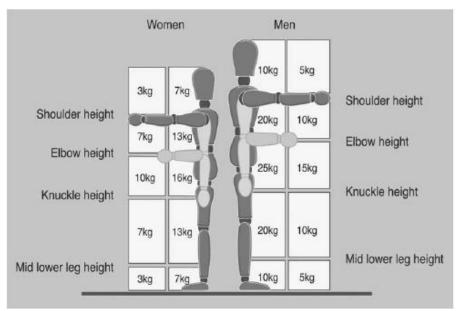


Figure 1. Guideline weights issued by the Health and Safety Authority.

Form 1 Manual handling risk assessment

Section A – Preliminary

* Circle as appropriate

Job Description	(i.e. Is there a potential risk for injury, and are the factors beyond the limits of the guidelines?)
Factors beyond the limits of the guideline weights? (See SWPS Manual handling)	Yes / No*
If 'yes' continue. If 'no' the assessment need go no further.	
Operations covered by this assessment (detailed description):	Diagrams or other information:
Locations:	
Personnel involved:	
Date of assessment:	
Section B – See over for detailed analysis	
·	/Med/High*
Section D – Remedial action to be taken:	
Remedial steps that should be taken, in order of priority:	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
Date by which action should be taken:	
Date by which action should be taken: Date for reassessment:	

		f yes, ti	ck	Problems occurring	Possible remedial action
Questions to consider:		priate l		from the task (Make	(Possible changes to be
	арріс	risk	CVCIOI	rough notes in this	made to system/task, load,
		HON		column in preparation	workplace/space,
					environment.
				for the possible	
				remedial action to be	Communication that is
	1	Ma al	I Carla	taken).	needed.
The teaks do they involve:	Low	Med	High		
The tasks – do they involve:					
 holding loads away from trunk? 					
twisting?					
stooping?					
reaching upwards?					
 large vertical movements? 					
 long carrying distances? 					
 strenuous pushing or pulling? 					
 unpredictable movement of 					
loads?					
 repetitive handling? 					
 insufficient rest or recovery? 					
a work rate imposed by a					
process?					
The loads – are they:					
heavy?					
bulky / unwieldy?					
difficult to grasp?					
 unstable / unpredictable? 					
 intrinsically harmful (e.g. sharp 					
/ hot)?					
The working environment – are					
there:					
 constraints on posture? 					
poor floors?					
 variations in levels? 					
 hot/cold humid conditions? 					
 strong air movements? 					
strong air movements?poor lighting conditions?					
Individual capability – does the job:					
 require unusual capability? 					
hazard those with a health problem?					
problem?					
hazard those who are					
pregnant?					
call for special information /					
training?					
Other factors:		/FO / N	^		
Is movement or posture hindered by		YES / N	U		
clothing or personal protective equipment?					

Back to contents page

Safe Work Practice Sheet Storage Areas

Ref: SWPS 019 Date: July 09 Assessed by: E.Roe

Hazards		
Slips, trips, falls		
Cut		
Back Injury		
Sprains		
Falling object		
Fire		
Person Exposed to Risk		
✓ Students ✓ Employees □ Public	☐ Contractors	☐ Visitors
Ctadonto Employodo En ablic		_ violete
Work Description		
Work Description		
Otanana af banandana and man banandana		:-!-
Storage of hazardous and non-hazardous	s substances and mater	iais
Controls		

Checks & Inspections

- Keep all pathways clear
- Do not climb on shelves or storage racks
- Do not climb on shelves to reach heights use stepladders only
- Keep aisleways clear
- Do not keep any hazardous materials and substances in general storage areas they must be kept in designated protected store located in Maintenance Building.
- Store heavy items at low level.
- Store medium weight items on middle shelves.
- Store light items on high shelves.
- Store items on shelves in such a way that they can not fall off.
- Keep all hazardous materials and substances, papers, boxes, etc. away from electric heaters.
- Store material lengths or racking parallel to the aisle.
- Storage areas to be kept locked at all times.
- Only authorized personnel are allowed access to Storage Areas.
- Do not attempt to lift any loads unless you have received appropriate training in safe manual handling techniques.
- Smoking, eating and drinking is prohibited in all storage areas.

Inf	orma	itio	n,	Instruction	&	Training

Not applicable

Personal protective equipment required (last resort)

Not applicable		
Initial Risk Rating (without an	y control measures)	
Probability : 2	x Severity 2	= Risk Factor 4
	KEY	
PROBABILITY	SEVERITY	RISK FACTOR
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		
Risk Reduction Rating (after o	controls introduced)	
Probability : 1	x Severity 2	= Risk Factor 2
Risk Assessment Review As and when process change	es or yearly	

Safe Work Practice Sheet Use of hand tools

Ref: SWPS 026 Date: Aug 09 Assessed by: E.Roe

Hazards					
Cuts Ejection of mate Eye damage Stab injuries Head injuries	rial				
Person Expose	ed to Risk				
☐ Students	✓ Employees	□ Public	☐ Contractors	☐ Visitors	
Work Descripti	on				
•		ls Stanley	knives, hammers,	drills etc	
Jones Harra (Joseph		io, otaliioj		dimo otor	
Camtuala					

Controls

- Only staff with appropriate training or experience may use hand tools.
- The tools should be checked before use for signs of wear and tear. Damaged items should be taken out of service for repair or replacement.
- No power tools or electrical equipment of greater voltage than 110 volts shall be used in external locations.
- Where power tools have to be used off the main supply the source of supply must be fitted with residual current devices (ELCB) rated at 30 mAmps at 30 msecs.
- All cable connections must be properly made; under no circumstances is insulation tape to be used for any repair or joint in extension.
- Power tools must be maintained in good condition with casing intact and label fitted showing voltage and other information. An annual formal documented inspection should be carried out by a competent person.
- Mains operated equipment must be electrically tested.
- Where there is a risk of particles hitting the eye, eye protection must be worn.
- Ear defenders will not normally be required as the duration of exposure is expected to be low and infrequent.
- Tools should not be left unattended in public areas when going for breaks.
- Staff should not repair tools unless they are trained to do so.
- Only use tools in the manner in which they were designed to be used.
- Return tools to the workshop at the end of each day.

Checks & Inspections

- Check all tools before each use.
- Annual electrical test for mains operated equipment.

Information, Instruction & Tra - Only trained staff may - competent member of	y operate equipn	nent. Training	may be provided in	house by another				
Personal protective equipro	nent required (last resort)						
Personal protective equipmen particles then eye protection s		l being used. \	Where there is a risk	of flying				
Initial Risk Rating (without ar	ny control meas	ures)						
Probability : 2	x Severity	3	= Risk Factor	6 High Risk				
	KEY							
PROBABILITY	SEVERITY		RISK FACTOR					
Probable 3	Critical 3		1-3 Low Risk					
Possible 2	Serious 2		4 Medium Risk					
Unlikely 1	Minor 1	Minor 1 6-9 High Risk						
Risk Factor = Probability x Severity								
Risk Reduction Rating (after	controls introdu	ıced)						
Probability: 1	x Severity	3	= Risk Factor	3 Low Risk				
Risk Assessment Review								
As and when process chang	es or yearly							

Safe Work Practice Sheet Use of Ladders / Stepladders

Ref: SWPS 007
Date: 10/05/2011
Assessed by: P. Killeen
Approved by: E. Roe

Hazards

- Physical injury due to fall of persons from ladder
- Objects dropped by ladder / stepladder user

Person I	Exposed	to Ris	k
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✓ Students	✓ Employees	□ Public	□ Contractors	□ Visitors

NOTE:

The use of Ladders / stepladders is restricted to activities where the risk is deemed to be low (that it would be unlikely to cause injury), the work is of short duration (30mins max) or brief periods at a time, and where the risk assessment shows the use of other work equipment (e.g. working platforms) is not justified.

Low Risk is considered when: where the operator can maintain a handhold / grip on stile whilst placing a box on a shelf and where the user's both feet are fully supported on the same step / rung.

Ladders/ stepladders are not suitable for strenuous or heavy work or where the work involves carrying awkward objects, tools or equipment.

Work Description

The use of Ladders / Stepladders by staff is infrequent. As part of their work technicians on occasions access shelving and storage areas to gain access to materials or parts.

Controls

- Ladder work is restricted to work which can be carried out using one hand only and of short duration.
- The base of the ladder must be on firm and level ground.
- For extension ladders they must be at the correct angle of rest 75 degrees or a base to height ratio of 1:4 (1 out to every 4 units up) and made secured (tying at the top or bottom)
- Stepladders must be fully opened out.
- There must be no sideways loading.
- Maintain 3 points of contact (both feet on the same rung, firm grip on the stile or handrail)
- Over reaching from ladders / stepladders will be avoided.
- Do not work on the top 3 rungs of a ladder, or top 2 steps for stepladders (regardless of length)
- Do not straddle (or sit at the top) of an A frame ladder.

Checks & Inspections

- Ladders will be checked for the correct type of equipment for the job at hand.
- Ladders / Stepladders must be visually inspected before use.
- Inspection of ladders must be recorded on form GA3 for every 7 day of use or used for the first time.

Information, Instruction & Training

- Operatives will be instructed to the safe use of ladders and the hazards which are to be avoided.
- Operatives to follow the controls
- Operatives to report any defects
- A further risk assessment will be necessary where the work activity is deemed to be medium or a high risk

A further his	sk assessiii	ent w	iii be neces	ssary where	e the work	activity is dee	med to be	mealum or	a nign risk.
Personal protecti	ve equipn	nent	required	(last reso	rt)				
■ PPE may b	e a require	ment	dependant	on the Risl	k Assessm	nent			
Initial Risk Rating	g (without	any	control m	easures)					
Probability :	2	X	Severity	2	=	Risk Factor		4	
		KEY	,						
PROBABILITY		SEV	ERITY		RIS	K FACTOR			
Probable 3		Critic	cal 3		1-3	Low Risk			
Possible 2		Serio	ous 2		4	Medium Risk			
Unlikely 1		Mino	or 1		6-9	High Risk			
Risk Factor = Probabi	lity x Severit	y							
Risk Reduction R	ating (afte	er co	ntrols int	roduced)					
Probability :	1	X	Severity	2	=	Risk Factor		2	
Risk Assessment									
Risk Assessment wi	'll be review	ed pe	eriodically						

Safe Work Practice Sheet General Health and Welfare Provisions

Ref: SWPS 015
Date: 2/02/2011
Assessed by: P. Killeen
Approved by: E. Roe

The workplace regulations (general application) regulations 2007 S.I. No. 299 in particular regulation 18 and 19 gives specific standards to be maintained in the place of work.

These regulations refer to adequate facilities for "taking meals / consumption of food" "cleanliness," also that rest areas are "large enough". These facilities must be kept in a state that is free from accumulations of any dirt, dust etc..

Regulation 18 states:

(f) "the taking of meals by employees is <u>prohibited</u> at any location in the place of work where there is likely to be a risk to safety, health or welfare."

The Laboratories would not be deemed suitable as a place for taking meals (which includes beverages) for a number of reasons including the space limitations, the location of items stored at height, the lack of hygiene facilities and the fact that it is deemed a work area for a member of staff.

Regulation 19 states:

An employer shall ensure that—

- "(a) where, because of—
- (i) the type of activity carried out, or
- (ii) the presence of more than a certain number of employees, and
- (iii) the safety, health and welfare of employees so requires, employees are provided with an easily accessible rest room or appropriate rest area,"

providing relaxation during breaks,

(b) rest rooms are large enough and equipped with tables with easily cleaned surfaces and seats with backs, adequate for the number of employees,

The Laboratories would not meet the criteria set out in section 19 above, because of the work activity carried out (where there is a presence of dirt and dust) and (it is deemed a work area) and (Insufficient space). Therefore under both sections of the Safety, Health and Welfare at Work (general application) regulations 2007 DkIT would be breaching the requirements.

Washing, food preparation and eating areas are made available at various locations: Starbucks, The Main Canteen, The Well, The Coffee Dock, The Staff Room.

Information, Instruct	

To meet the requirements of Health and Safety Legislation and to ensure that good hygiene practices are employed at all times, it is prohibited to consume or bring into laboratories or workshops any drinks or beverages.

Signed:	
_	Head of School of Engineering

EMERGENCY RESPONSE

Ref: SWPS 016
Date: 26/01/2011
Assessed by: P. Killeen
Approved by: E. Roe

Person Exposed to Risk							
✓ Students	✓ Employees	□ Public	☐ Contractors	□ Visitors			
Work Description							
Emergency protocol for everyday working environment.							

Emergency Contacts

- Dial 9 for an outside line, then 999 or 112 and you will be connected directly to the emergency services.
- Be prepared to give the following information:
- Information on the condition of the victim, if there is a casualty.
- Details of any hazards, i.e. fire/chemical/gas/structural collapse etc.
- Exact location of the accident (room number and building).
- Call the Estates Office (2671/2670) and give the above details.
- If deemed necessary, contact the Nurse (2777) and trained Department first aiders.
- Call Reception (500), ask them to alert the caretaker on duty and give them the above details.
- Report to the Head of Department, Head of School, and your Supervisor (where relevant).
- As soon as practically possible, report the accident on an accident/incident report form and submit to the Head of Department/ Head of School of Engineering
- Emergency contact numbers are strategically located throughout the School of Engineering

Fire Fighting Equipment

The majority of fire-fighting equipment points are located in workshops, laboratories and on each floor in the School of Engineering building. There are a number of trained fire wardens in the School. Fire warden courses are run on a regular basis and are available through the

Estates Office. The School abides by the Institute Policy and Procedures on fire safety.

Information, Instruction & Training

All training in First Aid, Emergency Response, and Fire Safety/Wardens is available through consultation with your Head of Dept and HR Office. The School abides by the Institute Policy on first aid safety.

EMERGENCY EVACUATION AND FIRE

SOUNDING OF THE FIRE ALARM

On hearing the fire alarm sound intermittently all persons should prepare to evacuate the building. If after 3mins of intermittent sounding the system goes into full alarm mode by:

A continuous bell signal indicates a real fire and <u>all</u> occupants <u>must leave the premises</u> immediately

Delegated staff will dial the emergency services (Emergency Phone No's are displayed at Strategic Points) see SWPS "EMERGENCY RESPONSE"

- Staff will initiate evacuation procedures.
- Delegated trained staff will assist in evacuation and sweep of building in the event of alarm activation of their departmental areas of responsibility.
- Ensure assistance is provided for disabled persons or venerable persons.
 - λ Leave the building or work area and go directly to the agreed assembly point.
 - λ Using the "nearest and shortest safe" exit.
 - λ Do not re-enter the building or area while the fire or emergency situation still stands.
 - λ Follow the instructions of the Institutes representative at the assembly point.
 - λ Do not leave the assembly point or return to the building unless instructed to do so.
 - λ Remove students to a safe area and insure the safety of the public at all times.
 - λ All staff and students must proceed to their ASSEMBLY POINT

All staff and students at this location must proceed to ASSEMBLY POINT



Individuals who fail to co operate in any Emergency Response will be placing themselves and others at risk if a real life event. "THINK" - & DON'T LET THIS BE YOU.

ALL HAVE A RESPONSIBILTY TO CO OPERATE FULLY

EMERGENCY CONTACT NUMBERS

Ref: SWPS 017
Date: 26/01/2011
Assessed by: P. Killeen
Approved by: Eugene Roe

Person Expo	Person Exposed to Risk					
✓ Students	✓ Students ✓ Employees □ Public □ Contractors □ Visitors					
	Work Description Important contact details which are available throughout all Departments in case of emergency					
General						
• Amb	oulance/Fire Brigad	le:		112 or 99	99	
Health Centre/Campus Nurse:		s Nurse:		277	7	
Doctor: Dr. Shane Gleeson:		eson:	2702/ 042 9320038			
Hospital: Louth Hospital:		al:	(042) 933 4701			
A List of First Aiders is prominently displayed in all workshops and Lab Locations						



Appendix IV

Accident / Incident, Near Miss and Dangerous Occurrence Reporting Procedures

ACCIDENT, INCIDENT, NEAR MISS AND DANGEROUS OCCURRENCE REPORTING PROCEDURES

Dundalk Institute of Technology is committed to reducing accidents and ill-health to staff and students of the Institute. Procedures are in place in the Institute to ensure that all Accidents, Near Misses and Dangerous Occurrences are recorded. These procedures not only ensure compliance with the law, but are also used as a basis for analysing trends throughout the Institute, in an effort to reduce accidents and ill-health to staff and students. All reports are reviewed at each meeting of the Institute Safety Monitoring Committee.

The purpose of an investigation is to establish all the facts relating to the incident, to draw conclusions from the facts and to make recommendations to prevent reoccurrence. Each incident will be looked at from the point of view of place, plant, procedures and people, to see where the safety system has failed and to tighten controls. It is important to note the definitions of all incidents (Accidents, Near Misses & Dangerous Occurrences) in order to take the correct action.

DEFINITIONS

An <u>Accident</u> is defined as an unplanned event resulting in personal injury or property damage. This could include, but is not limited to:

- Sprain
- Laceration
- Broken bone
- Concussion
- Unconsciousness
- III-health

- Sickness due to exposure to a dangerous substance, fumes or gases, fire or explosion
- Sickness due to a chemical spill or environmental pollution
- Damage to building
- Damage to property

A <u>Near Miss</u> is defined as an incident in which there was no injury or property damage but where the potential for serious consequences existed.

A <u>Dangerous Occurrence</u> is one of a number of specific, reportable adverse events, which are defined within the Twelfth Schedule of the General Application Regulations 2007. Dangerous Occurrences are reportable to the Health & Safety Authority (HSA) using Form lR3 or via the HSA

online notification process. Any Dangerous Occurrences which are notifiable to the HSA will be forwarded by the Health & Safety Co-ordinator.

These are incidents with a high potential to cause death or serious injury, but which happen relatively infrequently. Dangerous occurrences usually include incidents involving:

- Lifting equipment
- Pressure systems
- Overhead electric lines
- Electrical incidents causing explosion or fire
- Explosions, biological agents
- Radiation generators and radiography
- Breathing apparatus
- Diving operations
- Collapse of scaffolding
- Train collisions
- Wells
- Pipelines or pipeline works

All Accidents are 'Incidents'. However, the definition of an Incident is wider in that it includes Dangerous Occurrences and Near Misses.

REPORTING PROCEDURES

All incidents must be reported immediately using the DkIT relevant incident report forms. These are located in the Parent Safety Statement and also on the DkIT website at https://www.dkit.ie/safety/incidents-accidents-reporting-procedures. All sections of the form must be completed with as much accurate information as possible.

The immediate supervisor must investigate the cause of the incident, and complete the Institute Accident/Incident Report Form or Near Miss Form. A copy of this form must then be made available to the Head of Department/School/Function for review and final sign off. Copies of the completed form should be forwarded to the Health & Safety Co-ordinator, Secretary/Financial Controller and the Estate's Office. Copies of these forms are contained within this document.

Accidents involving visitors and contractors must be investigated by the staff member to whom the injury was reported, in conjunction with the staff member they are visiting or working with.

Accidents, which involve serious or fatal injuries to an employee, student or any third party must be notified to the Health and Safety Co-ordinator and the HSA without delay.

Any accidents at work that involve an employee being unable to carry out his/her duties for three or more consecutive days, or that involve a third party being injured and requiring treatment from a medical practitioner, are reportable to the HSA and must be notified using Form lR1 or via the HSA online process, as soon as practicable. Dangerous Occurrences are reportable to the HSA using Form lR3 or via the HSA online notification process. Any incidents, which are notifiable to the HSA, will be forwarded to the HSA by the Health & Safety Co-ordinator.

Internal Reporting Procedure

It is the responsibility of each Head of Department/School/Function to ensure that the appropriate investigation procedures take place in the event of an Accident, Near Miss or Dangerous occurrence arising in their area. Heads of Department/School/Function must also ensure that the appropriate forms are completed and forwarded to <u>each</u> of the relevant parties (i.e. Estates Office, Secretary/Financial Controller, Health & Safety Co-ordinator).

It is the responsibility of the Health & Safety Co-ordinator to ensure that all reported incidents are tabled and discussed at each ISMC meeting.

External Reporting Procedure

Arising from the internal reporting procedure, any incidents, which are notifiable to the HSA, will be forwarded to that body by the Health & Safety Co-ordinator.

ACCIDENT / INCIDENT REPORT FORM

Note:

This form should be completed whenever an accident or incident occurs which <u>results in injury or</u>

damage to personnel or property.

If personnel or property <u>WERE NOT</u> injured or damaged during the Accident/ Incident, do not use this form. Use the NEAR MISS REPORT FORM.

	Accident / Incident Report Form						
i	Name of person involved in						
	Accident/Incident:						
ii	Address:						
	Phone:						
iii	Who was involved in the Accident,	/Incident:					
	☐ Student ☐ Employee	☐ Public	□ Contractor	□Visitor			
iv	Occupation:						
	-						
V	If an employee of the Institute plea	ase state Depa	rtment:				
vi	If no, please elaborate:						
vii	Particulars of Accident/Incident &		under which the A	ccident/Incident occurred:			
	Use additional pages and/or photos	s if necessary.					
	News						
viii	Place:		D-1				
ix	Time:		Date:				
Х	Witness Phone No & Address:						
	Witness Phone No & Address:						
	withess Phone No & Address:						
хi	When and to whom was the Accide	ent/Incident in	itially reported?				
^1	when and to whom was the Accide	ent/incluent in	itiany reporteu:				
1							

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(Copies of the completed Institute Accident Report are to be sent <u>separately</u> to the Institute Health & Safety Coordinator, the Secretary/Financial Controller and the Estates Office)

NEAR MISS REPORT FORM

Note:

This form should be completed whenever a Near Miss occurs - <u>that is an incident WITHOUT injury to person or damage to property</u>.

If personnel or property were injured or damaged during the incident, do no use this form. Use the 'ACCIDENT / INCIDENT REPORT FORM'.

	NEAR MISS REPORT FORM						
	Date of Near Miss:	Time of Near Miss:					
ii	Location of Near Miss:						
iii	Who was involved in the Near Miss:						
	☐ Student ☐ Employee ☐ Public	☐ Contractor ☐ Visitors					
iv	Name of person(s) involved in Near Miss:						
V	Name, Address & Contact details of any witness	ses to Near Miss:					
vi	Description of Near Miss:						
vii	Steps taken to prevent a reoccurrence of this t	ype of Near Miss incident:					
	Signature of person completing report:		Date:				
	Print Name & Job Title:						
	Signature of Head of Department/School/Fund	tion:	Date:				
	Print name:						

(Copies of the completed Near Miss Report Form are to be sent to the Health & Safety Co-ordinator, the Secretary/Financial Controller and the Estates Office)

First Aid and Emergency Contacts

Location

Jim Connolly Mechanical Engineering Workshop Ext 2966 Phil Dillon **Engineering Administration** Ext 2754 Plumbing Workshop Simon O' Neill Ext. 2847 Plumbing Workshop Larry Quigley Ext. 2594 Plumbing Workshop Nick O'Rourke Ext. 2593 Alan Gorham Plumbing Workshop 042 9396510

• Ambulance/Fire Brigade: 112 or 999

Health Centre/Campus Nurse:

Doctor: Dr. Shane Gleeson: 2702/ 042 9320038

Hospital: Louth Hospital: (042) 933 4701