



ENVIRONMENTAL BALANCE IN DESIGN AND CONSTRUCTION

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KILLARNEY WASTE DISPOSAL LTD

FIRE RISK ASSESMENT: KILLARNEY WASTE DISPOSAL LTD – AUGHACURREEN, KILLARNEY, CO. KERRY

JULY 2017



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FIRE RISK ASSESMENT: KILLARNEY WASTE DISPOSAL

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Abstract: This report presents a fire assessment for KWD, at their materials recovery facility at Aughacurreen, Killarney, Co. Kerry.

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1 INTRODUCTION

Killarney Waste Disposal Ltd. (KWD) is based at Aughacurreen, Killarney, Co Kerry.

KWD operate a materials recovery facility (MRF) under licence from the Environmental Protection Agency (EPA). The facility is subject to Waste Licence IED W0217- 01.

The EPA issued a technical amendment to this waste licence on the 29th June 2016. This technical amendment requests that within six months of this date, that the licensee engage an independent consultant to complete a fire risk assessment of their facility.

1.1 Fire Risk Assessment

The purpose of the risk assessment is to:

- Identify potential sources of ignition and combustible materials on site, both internally and externally at the facility.
- Assess all fire risks both internal and external at the facility.
- Identify controls and recommendations to eliminate or reduce the fire risk.
- Identify if prevention planning including maintenance, testing, inspections, procedures and training are in place
- Assess the provision of early fire detection and warning systems, in accordance with appropriate standards, including consideration of automatic detection systems and out-of-hours security arrangements etc.
- Assess the arrangements for 'first-aid' firefighting, automatic fire suppression systems (area of equipment specific) and provision of water for use by the fire service.
- Provide a recommendation for the location of the fire quarantine area. (A fire quarantine area is an area away from stockpiles that is always kept vacant. This area is used in a fire event to transfer waste materials here, to prevent the spread of a fire.)
- Inspect provisions to limit fire spread

Fehily Timoney and Company were appointed by Killarney Waste Disposal Ltd to undertake a fire risk assessment of the facility on their behalf. FT undertook the following work:

- Detailed site walkover and inspection of the facility to assess the facility construction, infrastructure and operations in compliance with the above.
- Comprehensive data gathering exercise to detail all existing plans, operations manuals, equipment specifications, certifications etc. for all physical infrastructure and associated management practices relating to fire and fire safety at the site.

The following report outlines the details of this risk assessment. The assessment has been carried out in accordance with the information contained within the following guidance notes which have been prepared by the Environmental Protection Agency (EPA) and the UK Environment Agency:

- EPA (2016) *Guidance on Fire Risk Assessment for Non-Hazardous Waste Facilities*¹
- EPA (2013) *Guidance Note – Fire Safety at Non-Hazardous Waste Transfer Stations*²
- EPA (1995) *Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities*³
- UK Environment Agency (2013) *Reducing fire risk at sites storing combustible materials: Technical Guidance Note 7.01*⁴

¹ <http://www.epa.ie/pubs/advice/waste/waste/guidanceonfireriskassessmentfornonhazardouswastefacilities.html>

² <https://epa.ie/pubs/reports/waste/guidanceonfiresafetyatnonhazardouswastetransferstations/guidanceonfiresafetyatnonhazardouswastetransferstations.html#.V8a7kPkrJ9M>

³ <http://www.epa.ie/pubs/advice/licensee/guidancenotetoindustryonfirewaterretentionfacilities.html>

⁴ www.esfrs.org/EasySiteWeb/GatewayLink.aspx?allId=1637

1.2 Limitations

This fire risk assessment completed is pertinent only in respect of the storage of waste and operations on or about the waste contained within the buildings as permitted under the Waste License.

It does not extend to making reference to other statutory considerations such as compliance with Building Regulations.

1.3 Site Location and Description

Killarney Waste Disposal Ltd is based at Aughacurreen, Killarney, Co Kerry, and is comprised of main office area, a recycling building, weighbridge, truck wash area, food waste bulking area and various stockpile locations. The site area measures approximately 20,200 m² with most of the site covered with concrete hardstanding.

Figure 1.2 gives an aerial view of the site and identifies the main areas of the site.

1.4 Site Meeting & Walkover

Mr Richard Power of FT conducted a site meeting walkover on the 28th March 2017 with Mr Brian Burton, EHS Manager.

The site meeting consisted of a detailed discussion and information gathering regarding the current management of fire risk at the site e.g. Records of training, management systems and standard operating procedures, inspection reports etc. Available records were inspected and several other records were provided following the site meeting. These records were referenced in the fire risk assessment are included in the appendices to this document.

1.4.1 Site Walkover

The walkover included:

- Site Entrance and Weighbridge area
- Diesel pump/storage area
- Yard and Circulation Area
 - Wood Storage (Shredded & Unprocessed)
 - Metal stockpile
 - Bailed plastic shed
 - Concrete/stone storage
 - Machine yard and workshop
 - Skip + bin storage yard
- Material Sorting Building
 - Administration and Ancillary Facilities
 - Recovered C&D Materials Storage (Soil and Stones, Concrete and Bricks)
 - Temporary Fines Storage
- Office
 - Canteen
 - Office areas
 - Emergency stairs

The waste tipping areas are shown in Figure 1.1. The waste licence boundary has also been shown for clarity in figure 1.2. Photographs taken during the site walkover are presented in Figure 1.3 to Figure 1.38 inclusive.

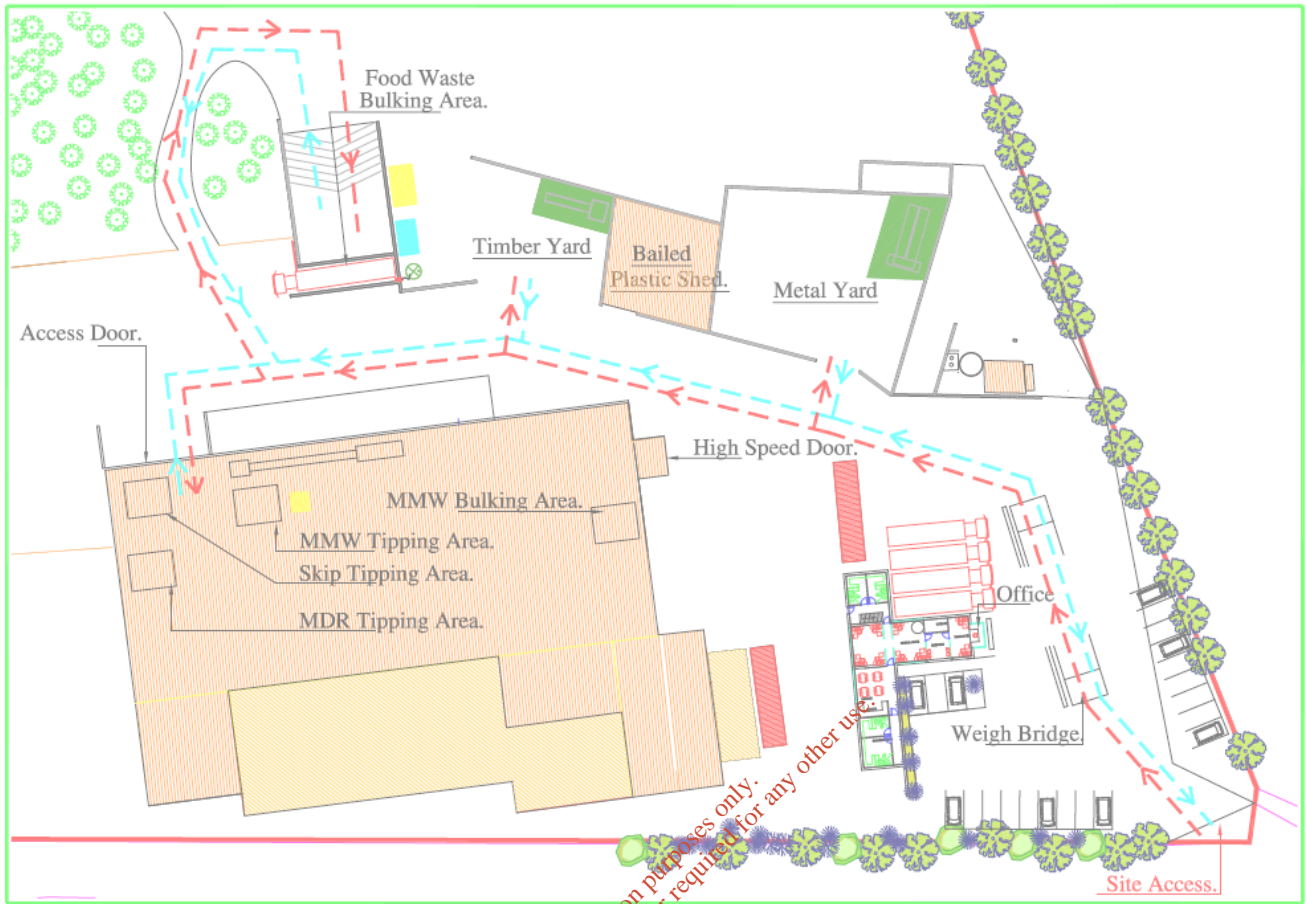


Figure 1.1: Site Layout & Waste Movement Drawing

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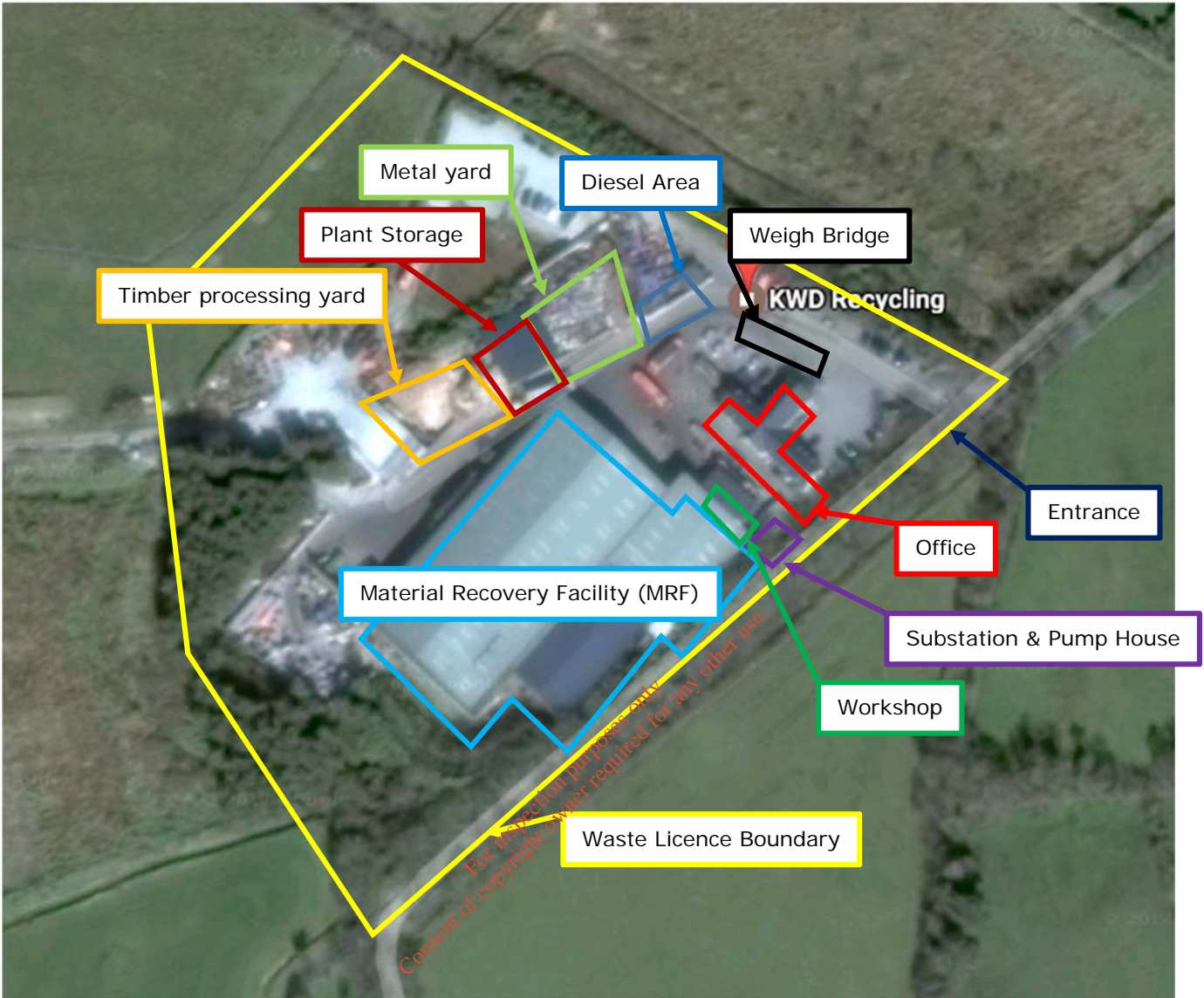


Figure 1.2: Site Layout Aerial View



Figure 1.3: Yard Area Front of Office



Figure 1.4: Yard Area: Weigh Bridge



Figure 1.5: Yard Area: Diesel Pump and storage



Figure 1.6: Yard Area: Rear of Office



Figure 1.7: Metal Storage Yard



Figure 1.8: Metal Storage Yard: Tyre Storage



Figure 1.9: Plant Storage Shed (previously bailed plastic shed)



Figure 1.10: Plant Storage Shed: Fire Extinguisher at Entrance



Figure 1.11: Timber Yard Timber Stockpile



Figure 1.12: Timber Yard: Shredder and Shredded Timber Stockpile



Figure 1.13: MRF: Fire Reel by Emergency Exit



Figure 1.14: MRF: Stockpile Storage Area

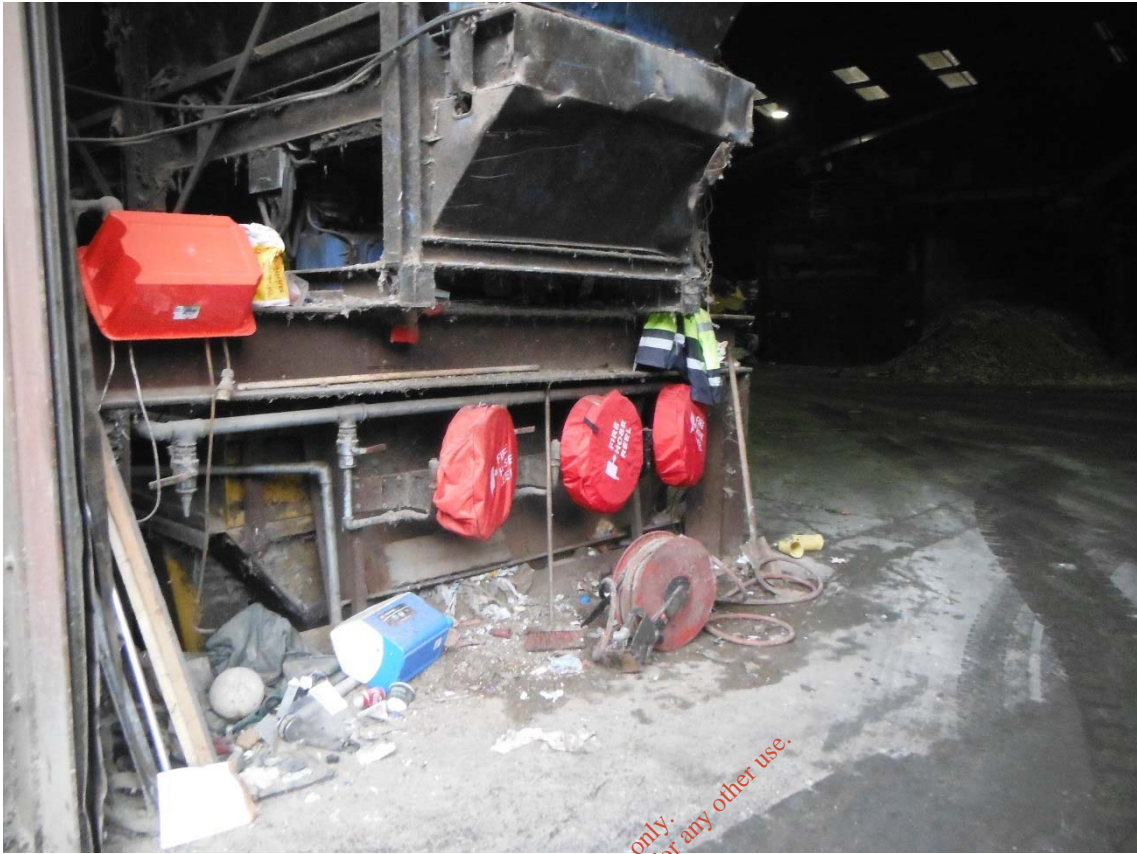


Figure 1.15: MRF: Fire Reel by Bag Opener



Figure 1.16: MRF: Skip & MDR Tipping Area



Figure 1.17: MRF: MMW Tipping Area, Bag Opener & Conveyor



Figure 1.18: MRF: Cardboard and fines stockpiles



Figure 1.19: MRF: Mattress Storage



Figure 1.20: MRF: Fire Extinguisher by Exit



Figure 1.21: MRF: Break Glass Alarm Unit



Figure 1.22: MRF: Fire Reels on West Side



Figure 1.23: MRF: Paper, Cardboard etc. Bales



Figure 1.24: Workshop: Fire Extinguishers & Oxy Acetylene for Welding/Cutting



Figure 1.25: Yard Area: Sprinkler Zone Map by Substation and Pump House



Figure 1.26: Yard Area: Emergency Key for Pump House



Figure 1.27: Pump House: Valves for Sprinkler System



Figure 1.28: Office Building: Designated Smoking Area outside canteen



Figure 1.29: Office Building: Fire Extinguisher in Canteen



Figure 1.30: Office Building: Break Glass Alarm Unit



Figure 1.31: Office Building: Fire Alarm Control Box



Figure 1.32: Office Building: Emergency Exit to Fire Stairs with Fire Extinguisher

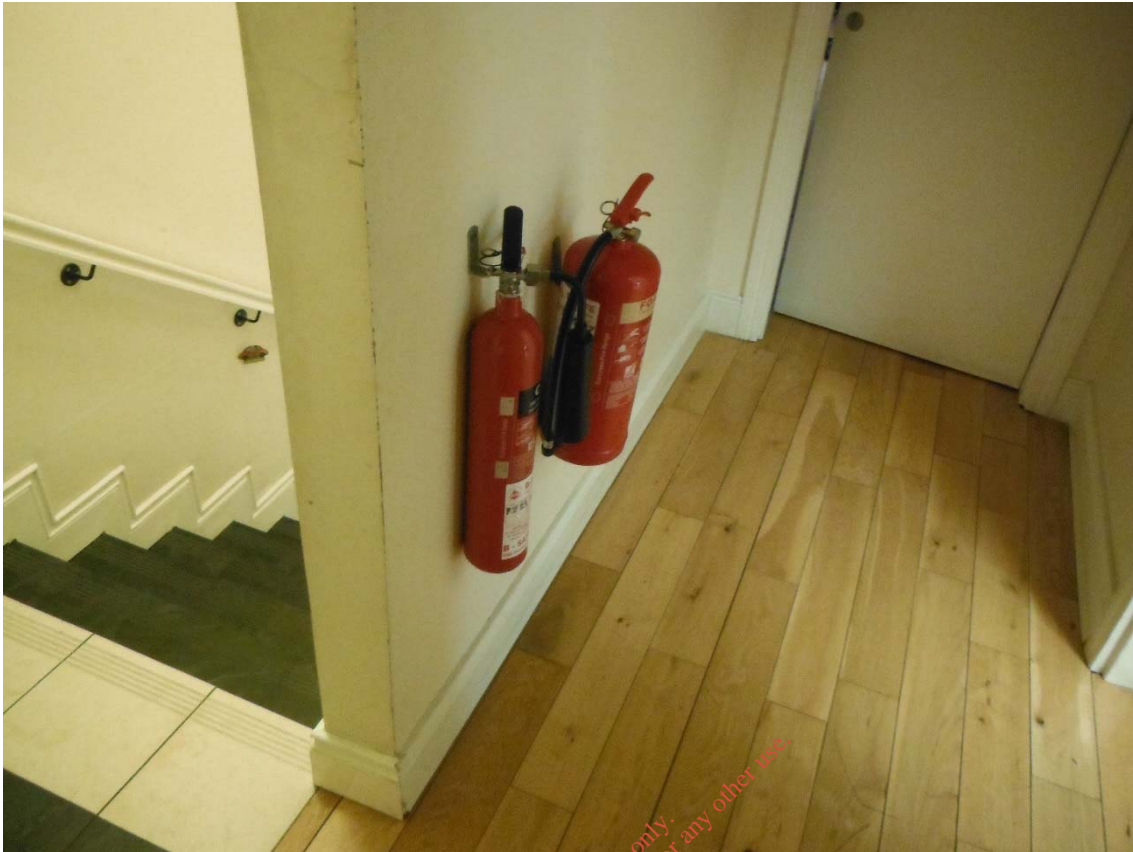


Figure 1.33: Office Building Fire Extinguishers



Figure 1.34: Office Building: Fire Alarm Beacon

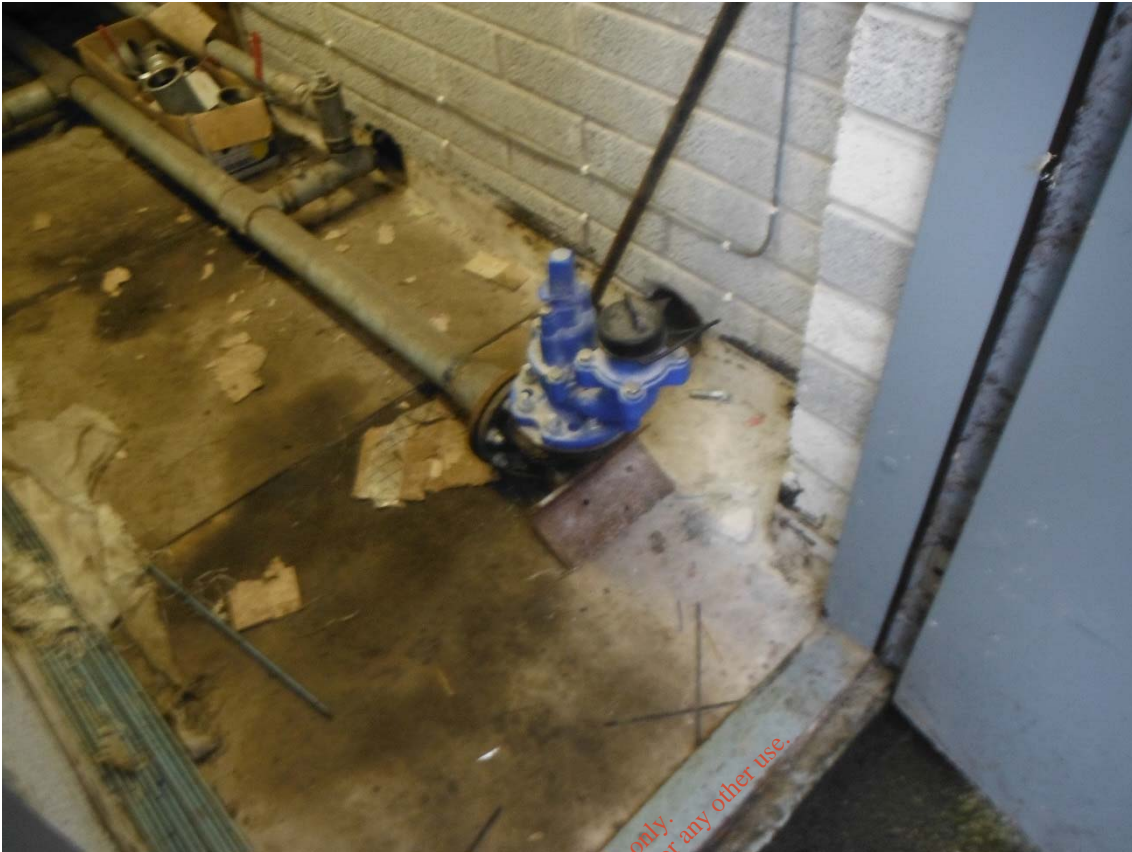


Figure 1.35: Pump House: Hydrant in Pump House



Figure 1.36: Road: Fire Hydrant by Entrance



Figure 1.37: Yard Area: Assembly Point



Figure 1.38: MBS: Bailer

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2 FIRE RISK ASSESSMENT

To determine the potential risk posed by activities onsite, a risk assessment has been carried out. A risk assessment is a tool that may be used to measure the risk involved for any scenario. In this case, it has been specifically tailored towards the risk of a fire at the site.

The assessment of a risk comprises three sub-stages:

- Risk identification
- Risk analysis
- Risk evaluation

Following the completion of the above sub-stages and a full determination of the level of risk posed to the environment, a response to the risk is outlined. The recommendations of improvements to mitigate against the risk of a fire are outlined in Section 3.

2.1 Step 1 – Risk Identification

In identifying the risk posed from a fire, the following three aspects need to be considered:

- Fire Risk – the likelihood of ignition of flammable materials
- Fire Exposure – the quantity of combustible materials located in an area at risk of a fire
- Environmental Severity – the potential damage to the receiving environment

2.1.1 Fire Risk

Fire risk identifies the likelihood of flammable materials igniting at a site. In determining the fire risk at the proposed development site, the following three aspects are considered:

- Risk of ignition
- Risk of non-detection
- Risk of failure to respond to the fire promptly

Risk of ignition considers how close a source of ignition is to the flammable material. When no source of ignition is present, there will be no risk.

The risk of non-detection considers whether a fire will be detected and the speed at which it will be detected. It is dependent on the location of the fire, the presence of a fire detection system and human presence near the fire location.

The risk of failure to respond to the fire promptly considers the effectiveness of the fire response system and procedures which will be initiated following the commencement of a fire.

In determining the fire risk for this risk assessment, the level of risk will be classified as either low, medium or high. A factor rating will be assigned to the fire risk, depending on the level of risk classified. The classification of fire risk is presented in Table 2.1 over.

Table 2.1: Classification of Fire Risk

Risk	Description	Factor Rating
Low	Low: Unusually low likelihood of a fire as a result of negligible potential sources of ignition	1
Medium	Medium: Normal fire hazards (e.g. potential ignition sources) for this type of occupancy, with fire hazards generally subject to appropriate controls (other than minor shortcomings)	2
High	High: Lack of adequate controls applied to one or more significant fire hazards, such as to result in significant increase in likelihood of fire.	3

2.1.2 Fire Severity

Fire severity attempts to quantify or rate the potential severity of a fire on persons or the environment. The severity rating considers the nature of the building and the occupants as well as the fire protection and procedural arrangements observed at the time of the risk assessment.

The severity level will be classified as either slight, moderate or extreme harm.

Table 2.2: Fire Severity Factors

Severity	Description	Factor Rating
Slight Harm:	Outbreak of fire unlikely to result in serious injury or death of any occupant (other than an occupant sleeping in a bedroom in which a fire occurs).	1
Moderate Harm:	Outbreak of fire could result in injury of one or more occupants, but it is unlikely to involve multiple fatalities.	2
Extreme Harm:	Significant potential for serious injury or death of one or more occupants.	3

2.1.3 Risk Rating

The results of the fire risk and fire severity assessment will be combined (by multiplication) to calculate the risk rating.

Table 2.3: Fire Risk Factors

Fire Hazard (Probability)	Potential Consequences of Fire (Severity)		
	Slight Harm - 1	Moderate Harm – 2	Extreme Harm - 3
Low -1	Negligible	Tolerable Risk	Moderate Risk
Medium – 2	Tolerable Risk	Moderate Risk	Substantial Risk
High - 3	Moderate Risk	Substantial Risk	Intolerable Risk

Score	Risk Rating
1	Negligible
2	Tolerable
3-4	Moderate
6	Substantial
9	Intolerable

The existing site hazards will then be ranked in accordance with their risk rating and a Fire Risk Action Plan developed for those risks with the highest risk rating.

Table 2.4: Fire Risk Assessment Matrix Killarney Waste Disposal

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Fixed Installations	<p>The following fixed installations are on site;</p> <ul style="list-style-type: none"> • Baler • Trommel • Shredder • Wrapping machine • Conveyor • Bag opener • Ballistic separator • Pelletiser • Vortex dryer • Air filter • Air compressors • Heat exchanger • Metal compactor/shearer • Picking lines (not used) <p>Service and Maintenance carried out when needed.</p> <p>No records available for inspections of fixed line processing electrical infrastructure i.e. control cabinets</p>	2	1	2
Portable Appliances	<p>Limited portable appliances utilised onsite. All works subject to method statement and risk assessment.</p> <p>Electrician carries out an annual check. See cert in appendix</p>	1	1	1
Smoking	<p>No smoking allowed onsite except in designated area. Smoking rules are part of the induction.</p>	1	1	1
Arson	<p>CCTV in place site securely fenced across perimeter. Office building has burglar alarms installed.</p>	1	1	1
Portable Heaters	<p>No portable heaters on site</p>	1	1	1
Cooking	<p>Microwaves & kettles present in canteen areas. Appropriate firefighting</p>	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
	equipment provided i.e. fire blankets and extinguishers			
Lightning	Low risk area	1	1	1
Other Ignition Sources	Mobile plant is maintained and serviced in accordance with manufacturer's instructions and subject to daily checks. Some service records are in the appendices.	1	1	1
Self-Combusting Materials	<p>Low risk of self-combustion of stockpiled materials. The following materials are stockpiled onsite:</p> <ul style="list-style-type: none"> • Skip waste • Mixed municipal waste • Mixed dry recyclables • Cardboard • Bailed paper • Bailed cardboard • Bailed plastic • Wood <ul style="list-style-type: none"> ○ Shredded ○ Unprocessed • Processed Fines 	1	1	1
Frictional Heat	<p>Mobile plant is subject to regular checks and maintenance by the associated manufacturer.</p> <p>Fixed plant is maintained and repaired as is needed.</p>	1	1	1
General Housekeeping	General housekeeping was seen to be of a good standard around the facility.	1	1	1
Combustible Materials	<p>The following combustible materials are stored onsite:</p> <ul style="list-style-type: none"> • Skip waste • Mixed municipal waste • Mixed dry recyclables • Cardboard • Bailed paper • Bailed cardboard • Bailed plastic • Wood <ul style="list-style-type: none"> ○ Shredded ○ Unprocessed • Processed Fines • Diesel <p>These materials are separated by fire walls or have an adequate gap of 6m between stockpiles.</p> <p>During the inspection, the MDR stockpile was overflowing the fire wall and onto the skip tipping stockpile.</p>	2	2	4
Stockpiles	<p>The following materials are stockpiled onsite:</p> <ul style="list-style-type: none"> • Skip waste • Mixed municipal waste 	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
	<ul style="list-style-type: none"> Mixed dry recyclables Blocks and Stones Cardboard Bailed paper Bailed cardboard Bailed plastic Wood <ul style="list-style-type: none"> Shredded Unprocessed Processed Fines <p>Quantities stored onsite at time of risk assessment are estimated to be within limits set by the EPA.</p>			
Outside Contractors	All outside contractors are inducted on site.	1	1	1
Building Works e.g. hot works	Designated area (workshop) where all hot works take place. A 'Hot Works Permit' system is also in place when work is required outside this area.	1	1	1
Hazardous Materials	Diesel stored on site in bund.	1	1	1
Works involving hazardous materials	n/a	1	1	1
Safe Systems of Works	Works subject to method statement and risk assessment. See Safety induction in appendices.	1	1	1
Explosive Atmosphere	Not applicable. dust control in place for site. Building are open and ventilated. Sweeper and water down when dusty.	1	1	1
Sources of oxygen	Oxy Acetylene for welding/cutting. Only 1 tank at a time as required. The tank is stored in accordance with Safety data sheet from Irish Oxygen, (see attached in appendices).	1	1	1
Oxidising Material	Not applicable	1	1	1
Means of escape	See Safety induction for escape routes.	1	1	1
Fire Exits	See Safety induction for fire exits and escape routes. All fire exits have emergency lighting above doors.	1	1	1
Obstruction to Escape routes	Means of escape seen to be clear and free of obstruction at the time of the survey.	1	1	1
Fire Assembly Points	Designated fire assembly point sign posted on site, (see figure 1.37).	1	1	1
Fire Spread: Compartmentalisation	<p>The following materials are stockpiled onsite:</p> <ul style="list-style-type: none"> Skip waste Mixed municipal waste Mixed dry recyclables Dry C&D waste Cardboard 	2	2	4

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
	<ul style="list-style-type: none"> • Bailed paper • Bailed cardboard • Bailed plastic • Wood <ul style="list-style-type: none"> ○ Shredded ○ Unprocessed • Processed Fines <p>Incoming skip waste is stockpiled in the MRF building. The stockpile is contained on two sides by the buildings external concrete walls and on the other side by a precast concrete block wall. A clear zone exists to the face of the stockpiles.</p> <p>Mixed dry recyclables are stockpiled in the MRF building in the MDR tipping area. The stockpile is contained on one sides by the reinforced concrete wall of the building and on another side by a wall of large concrete blocks. A clear zone exists to the two faces of the stockpiles. This stockpile was overtopping the precast concrete block wall during the assessment.</p> <p>Mixed municipal waste is stockpiled in the MRF building in the MMW tipping area. The stockpile is contained on two sides by walls of large concrete blocks. A clear zone exists to the two faces of the stockpiles.</p> <p>The incoming unprocessed wood stockpile is stockpiled in the timber yard. This stockpile is separate to all other stockpiles. As per EA guidance the recommended stockpile quantity for shredded timber was below 750 m³.</p> <p>Shredded wood is stockpile against a reinforced concrete wall in the timber yard, by the timber shredder. This stockpile is separate to all other stockpiles. As per EA guidance the recommended stockpile quantity for shredded timber was below 300 m³.</p> <p>Blocks/stones from C&D waste are stored outside the MRF building. This stockpile is stored against the building wall on one side and by steel walls dividing the stockpile areas. There is an open face on the other side onto the yard.</p>			

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
	<p>Cardboard is stockpiled in the MRF building before being bailed. The stockpile is contained on two sides by the base of the old picking line, (reinforced concrete wall). A clear zone exists to the two faces of the stockpiles.</p> <p>Baled paper, baled cardboard and baled plastic are stored in the MRF building. These bales are stored without separation from each other.</p> <p>Processed fines are stored in the MRF building. The stockpile is contained on two sides by the base of the old picking line, (reinforced concrete wall). A clear zone exists to the two faces of the stockpiles.</p> <p>The stockpiled heights at the time of surveying were estimate to be less than excess of 4m.</p>			
Fire Spread Build Fabric	<p>The MRF buildings is constructed using:</p> <ul style="list-style-type: none"> • Steel Portal Frame • Reinforced concrete walls • Profiled Steel Cladding and Sheeting <p>The office is of blockwork construction.</p>	1	1	1
Fire Spread: Suppression Systems	<p>Manual sprinkler system in place in MRF building. Fire hose reels and fire extinguishers provided.</p> <p>See information in appendices.</p>	1	1	1
Fire Warning: Alarm & Detection System	<p>The following fire alarm and detection systems are installed within the following licenced areas</p> <p>Office Building</p> <ul style="list-style-type: none"> • Smoke Detection • Heat Detection • Break Glass Units • Audible Alarms <p>MRF Building</p> <ul style="list-style-type: none"> • Smoke Detection • Break Glass Units • Strobe/sounder unit <p>All alarm and detection systems are regularly serviced.</p>	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Fire Extinguishing: Portable Appliances	Fire extinguishers evident about site. Subject to regular maintenance, inspection records 27th March 2017, See Appendix. See Fire Zone Plans	1	1	1
Fire Extinguishing: Training	4 no. staff have been trained as fire wardens. This training involves the use of fire extinguishers.	1	1	1
Fire Extinguishing: Location and Suitability	Fire extinguishers and fire reels, strategically placed about site. Subject to regular maintenance, inspection records March 2017. See information in Appendices.	1	1	1
Fire Extinguishing: Operational Maintenance	Inspected and certified: March 2017 Checked weekly.	1	1	1
Fire Extinguishing: Hose Reels Condition	Inspected and certified: March 2017 Checked weekly.	1	1	1
Fire Extinguishing: Hose Reels: Suitability of Supply	Hose reels located onsite are supplied directly from the site mains and are powered by electric pumps.	1	1	1
Fire Extinguishing: Hydrants	Fire hydrant connection located onsite in the pump house. Fire hydrant connection located offsite by entrance to site. Fire Hydrant located by road was marked/sign posted whereas the hydrant in the pump house was not obvious. See figure 1.35 and figure 1.36	1	2	2
Fire Extinguishing: Automatic Fixed Systems	No automatic fire extinguishing system present within the licenced area. (Manual sprinkler system in place).	1	2	2
Appropriate Fire Procedures	See Safety Induction.	1	1	1
Staff Training Emergency Plan	Site Evacuation drill completed. See record in appendices.	1	1	1
Staff Training Dangerous Substances	n/a	1	1	1
Staff Training: Temporary Staff	Temporary staff subject to site induction training.	1	1	1
Training: Contractors	All contractors subject to site induction training.	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Contractors: Training Records	No records kept of external contractor induction	2	1	2
Training: Fire Wardens	4 no. staff are trained as fire wardens.	1	1	1
Training: Fire Response	See safety induction	1	1	1
Training: Information for Fire Response	See safety induction	1	1	1
Training Fire Service: Pre-Inspection	Fire Service have conducted a pre-inspection of the facility in 2010	1	1	1
Training: Fire Service Information Package	A Fire Service information package has been completed and is located by the fire assembly point for easy access during a fire event.	1	1	1
Training: Fire Safety	See fire safety section of safety induction.	1	1	1
Training: Refresher Training	No refresher training system in place	1	2	2
Training: Fire Drills	Site Evacuation drill completed. Record in appendices	1	1	1
Testing and Maintenance: Workplace	Daily, weekly and monthly checklists. See weekly checklist attached in the Appendices.	1	1	1
Testing and Maintenance: Fire Detection and Alarm	Inspected and certified: 16-02-17	1	1	1
Testing and Maintenance: Emergency Lighting	Checked monthly	1	1	1
Testing and Maintenance: Fire Extinguishers	Serviced records inspected March 2017 See attached in the appendices.	1	1	1
Testing and Maintenance: Sprinkler Installations	Sprinkler pumps tested monthly as part of monthly checklist. Checked annually by external consultant.	1	1	1
Testing and Maintenance: Dry Risers	Checked as part of the sprinkler annual test.	1	1	1
Testing and Maintenance: Fire Fighting Lifts	n/a	1	1	1
Testing and Maintenance: Stair cases and Gangways	Stairs at the side of MRF building are currently not inspected.	2	1	2
Testing and Maintenance: Lightening protection Systems	n/a	1	1	1
Testing and Maintenance: Fire Hydrants	No testing carried out on fire hydrants	1	2	2
Testing and Maintenance: Other	n/a	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Records: Fire Training and Evacuation Drills	Records for fire drill are kept and an example is attached in appendices.	1	1	1
Records: Fire Alarm Tests	Fire Alarm test records attached in appendices	1	1	1
Records: Escape Lighting	No records kept	1	2	2
Records: Other Fire Protection Systems	n/a	1	1	1
Records: Fire Plan	See safety induction	1	1	1
Records: Availability to relevant third parties	Records available on request	1	1	1

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3 FIRE RISK ACTION PLAN

The following sections outlines the fire risk action plan for the site. The risks identified have been ranked in order of risk rating and collated in Table 3.1 below. The proceeding sections outlines the proposed action items for each risk.

Table 3.1: Fire Risk Items

Fire Risk Items		Recommendations
Combustible Materials	During the inspection, the MDR stockpile was overflowing the fire wall and onto the skip tipping stockpile.	4 See Section 3.1.1
Fire Spread: Compartmentalisation	<p>The following materials are stockpiled onsite:</p> <ul style="list-style-type: none"> • Skip waste • Mixed municipal waste • Mixed dry recyclables • Blocks and Stones • Cardboard • Bailed paper • Bailed cardboard • Bailed plastic • Wood <ul style="list-style-type: none"> ○ Shredded ○ Unprocessed • Processed Fines <p>Incoming skip waste is stockpiled in the MRF building. The stockpile is contained on two sides by the buildings external concrete walls and on the other side by a precast concrete block wall. A clear zone exists to the face of the stockpiles.</p> <p>Mixed dry recyclables are stockpiled in the MRF building in the MDR tipping area. The stockpile is contained on one sides by the reinforced concrete wall of the building and on another side by a wall of large concrete blocks. A clear zone exists to the two faces of the stockpiles. This stockpile was overtopping the precast concrete block wall during the assessment.</p> <p>Mixed municipal waste is stockpiled in the MRF building in the MMW tipping area. The stockpile is contained on two sides by walls of large concrete blocks. A clear zone exists to the two faces of the stockpiles.</p> <p>The incoming unprocessed wood stockpile is stockpiled in the timber yard. This stockpile is separate to all other stockpiles. As per EA guidance the recommended stockpile quantity for shredded timber was below 750 m³.</p>	4 See Section 3.1.1

Fire Risk Items		Recommendations
	<p>Shredded wood is stockpile against a reinforced concrete wall in the timber yard, by the timber shredder. This stockpile is separate to all other stockpiles. As per EA guidance the recommended stockpile quantity for shredded timber was below 300 m³.</p> <p>Blocks/stones from C&D waste are stored outside the MRF building. This stockpile is stored against the building wall on one side and by steel walls dividing the stockpile areas. There is an open face on the other side onto the yard.</p> <p>Cardboard is stockpiled in the MRF building before being bailed. The stockpile is contained on two sides by the base of the old picking line, (reinforced concrete wall). A clear zone exists to the two faces of the stockpiles.</p> <p>Baled paper, baled cardboard and baled plastic are stored in the MRF building. These bales are stored without separation from each other.</p> <p>Processed fines are stored in the MRF building. The stockpile is contained on two sides by the base of the old picking line, (reinforced concrete wall). A clear zone exists to the two faces of the stockpiles.</p> <p>The stockpiled heights at the time of surveying were estimate to be less than excess of 4m.</p>	
Fixed Installations	<p>The following fixed installations are on site;</p> <ul style="list-style-type: none"> • Baler • Trommel • Shredder • Wrapping machine • Conveyor • Bag opener • Ballistic separator • Pelletiser • Vortex dryer • Air filter • Air compressors • Heat exchanger <p>Service and Maintenance carried out when needed.</p> <p>No records available for inspections of fixed line processing electrical infrastructure i.e. control cabinets</p>	<p>2</p> <p>See Section 3.1.2</p>

Fire Risk Items			Recommendations
Fire Extinguishing: Hydrants	<p>Fire hydrant connection located onsite in the pump house.</p> <p>Fire hydrant connection located offsite by entrance to site.</p> <p>Fire Hydrant located by road was marked/sign posted whereas the hydrant in the pump house was not obvious.</p> <p>See figure 1.35 and figure 1.36</p>	2	See Section 3.1.3
Fire Extinguishing: Automatic Fixed Systems	No automatic fire extinguishing system present within the licenced area. (Manual sprinkler system in place).	2	See Section 3.1.4
Contractors: Training Records	No records kept of contractor induction	2	See Section 3.1.5
Training: Refresher Training	No refresher training system in place	2	See Section 3.1.6
Testing and Maintenance: Stair cases and Gangways	Stairs currently not inspected.	2	See Section 3.1.7
Testing and Maintenance: Fire Hydrants	No testing carried out on fire hydrants	2	See Section 3.1.8
Records: Escape Lighting	No records kept	2	See Section 3.1.9

3.1.1 Fire Spread: Stockpile Management and Compartmentalisation

Table shows the EA recommended guidance on maximum stockpile sizes.

Table 3.2: Stockpile Management: Sizing

Maximum Waste Stockpile			
Waste type	Loose and more than 150mm	30 to 150mm or baled	Less than 30mm
Tires and rubber	450 m ³	300 m ³	300 m ³
Wood	750 m³	450 m³	300 m³
Compost and green waste (excluding during the active composting process)	750 m ³	450 m ³	450 c m ³
RDF and SRF	450 m ³	450 m ³	450 m ³
Plastics	750 m³	450 m³	300 m³
Paper and cardboard	750 m³	750 m³	450 m³
Textiles	750 m³	750 m³	400 m³
WEEE containing plastics, including fridges, computers and televisions	450 m ³	450 m ³	450 m ³
Metals other than WEEE	750 m ³	450 m ³	450 m ³
Fragmentiser fluff	450 m ³	450 m ³	450 m ³

*materials closely associated with those currently onsite in **bold**

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It is noted on all waste piles:

- the maximum height allowed is 4 metres.
- the maximum length or width allowed (whichever is the longest) is 20 metres.

EA guidance on the prevention of fire spread recommends:

- combustible wastes are stored with a separation distance of at least 6 metres between stockpiles
- a separation distance of at least 6 metres between waste piles and the site perimeter, any buildings, or other combustible or flammable materials

It is further advised that distances may be reduced by using fire walls and bays. Fire walls and bays must be designed to:

- resist fire (both radiative heat and flaming)
- have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours

Wastes stored in fire bays must be subject to:

- full and frequent stock rotation i.e. a first in, first out policy
- temperatures check as required

The design of fire bays should ensure:

- an adequate thermal barrier to prevent transmission
- that all joints will be adequately sealed
- that construction has into accounted calculation of flame height and radiation in preventing the spread of fire between piles
- adequate 'freeboard' to top and sides of the walls clear at all times to prevent fire spreading over the walls
- bays are accessible for the quick removal of waste and availability of a quarantine area

It is recommended that a Waste Storage Plan for the site be developed in accordance with EA and EPA guidelines for the storage of waste. The design and construction of all fire wall and separation structures should meet the requirements as outlined above.

The recommendations of the waste management plan should be further integrated into the daily checklists for the site to ensure stockpiles are maintained appropriately, ensuring maximum stockpile sizes and adequate freeboard and/or separation distances are maintained.

It is recommended that the stockpile location plan is updated as the picking line has been removed and some stockpiles locations have changed.

3.1.2 Fixed Installations

It is recommended that all electrical installations associated with fixed installation infrastructure i.e. waste processing lines be subjected to annual (or other suitable periodic inspection) testing by an appropriately qualified electrician or specialist. Testing should include infrared heat monitoring on all electrical installation panels for fault detection.

3.1.3 Fire Extinguishing: Hydrants

No appropriate signage for the fire Hydrant located in the pump house was noted. It is recommended that appropriate signage is erected identifying the location of the fire hydrant

3.1.4 Fire Spread and Extinguishing: Automatic/Fixed Systems

EA guidance on fire prevention states

*If you store waste in a building, you must install a fire suppression system. This system should be **proportionate to the nature and scale** of waste management activities you carry out and the associated risks.*

The guidance states appropriate fire suppression systems may include:

- sprinklers
- water spray (deluge) systems
- water curtains
- fire blankets

It is recommended that due consideration be given to upgrading the current sprinkler system to an automated fire suppression system and to extend this into the workshop area.

3.1.5 Contractor: Training Records

Although contractors are inducted to site, it is recommended that a record of these inductions are kept.

3.1.6 Training: Refresher Training

It is recommended all staff be trained in the use of firefighting equipment and refresher courses given periodically.

3.1.7 Testing and Maintenance: Stair cases and Gangways

Stair cases and gangways should be subject to regular inspection.

3.1.8 Testing and Maintenance: Fire Hydrants

It is recommended that all fire hydrants be appropriately tested and certified by a competent professional. Testing should be repeated at appropriate intervals.

3.1.9 Records: Escape Lighting

Although the escape lighting is checked during the annual inspection, this is not recorded. Testing or maintenance of the escape lighting, (or any other fire safety related testing or maintenance), should be recorded in a fire register.

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Appendix 1

Safety Induction

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Safety Induction

Signed: _____

Print Name: _____

Date: _____

Pages 1 to 49



Zasady bezpieczeństwa

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Инструктаж по технике безопасности



28/03/2017

Environmental Health and Safety Induction Powerpoint
Translation Aug 2015 Rev A

1

Site Safety Philosophy

KWD is committed to providing and maintaining a safe and healthy working environment for all its team members and contractors.

- The site has embraced Safety management and aims for the highest performance in order to provide and maintain a safe and healthy environment.
- We will comply with Legal obligations under the Health and Safety Act.
- We will include Employees and contractors in continuous improvement of health and safety practices.
- Maintain a high standard of Environmental care.

Zasady bezpieczeństwa w miejscu pracy

KWD podejmuje starania na rzecz zapewnienia bezpiecznego środowiska pracy wszystkim swoim pracownikom i kontrahentom.

- Dzięki nowemu systemowi zarządzania bezpieczeństwem chcemy zapewnić jak najbezpieczniejsze warunki pracy, zgodne z zasadami BHP.
- Spełnimy wszelkie wymogi ustawy dotyczącej bezpieczeństwa i higieny pracy (Health and Safety Act).
- Chcemy, aby pracownicy i kontrahenci również uczestniczyli w procesie poprawy bezpieczeństwa i higieny pracy.
- Będziemy dbać o utrzymanie wysokiego poziomu ochrony środowiska.

Принципы безопасности на рабочей площадке

Компания KWD стремится обеспечить и поддерживать безопасную и здоровую рабочую среду для всех членов своей команды и подрядчиков.

- На рабочей площадке применяется система управления техникой безопасности, целью которой является максимальная производительность для обеспечения и поддержания безопасной и здоровой окружающей среды.
- Мы будем соблюдать правовые обязательства в рамках Закона об охране здоровья и обеспечении безопасности.
- Мы будем привлекать сотрудников и подрядчиков к деятельности по охране здоровья и обеспечению безопасности с целью непрерывного совершенствования.
- Мы будем поддерживать охрану окружающей среды на высоком уровне.



Employer Responsibility

KWD are responsible for creating and maintaining a safe and healthy workplace.

Managing and conducting all work activities so as to ensure the safety, health and welfare of people at work:

- Designing, providing and maintaining a safe place of work
- Safe access and egress
- Safe plant and machinery
- Safe and Risk free systems of work
- Provide and maintain welfare facilities
- Provision of information, instruction, training and supervision
- Employ competent workforce

Odpowiedzialność pracodawcy

Firma KWD jest odpowiedzialna za zapewnianie i utrzymywanie warunków pracy zgodnych z zasadami BHP.

Praca i zarządzanie nią w sposób zapewniający pracownikom bezpieczeństwo, zdrowie i dobre samopoczucie:

- Tworzenie, zapewnianie i utrzymywanie bezpiecznego miejsca pracy
- Bezpieczne wejście i wyjście z zakładu pracy
- Urządzenia i maszyny niestanowiące zagrożenia.
- System pracy gwarantujący bezpieczeństwo i minimalizację ryzyka
- Zapewnianie i utrzymanie pomieszczeń socjalnych
- Zapewnianie informacji i instrukcji oraz szkolenia i nadzór pracowników
- Zatrudnianie kompetentnych pracowników

Ответственность работодателя

Компания KWD несет ответственность за создание рабочих мест и за поддержание техники безопасности и охраны здоровья на них.

Управление и проведение всех видов работ для обеспечения безопасности, здоровья и благополучия людей на рабочем месте:

- проектирование, создание и поддержание безопасного рабочего места;
- безопасный доступ и выход;
- безопасные машины и оборудование;
- безопасные системы работы, не представляющие рисков;
- обеспечение и поддержание социально-бытовых объектов;
- предоставление информации, проведение обучения, подготовки и надзора;
- наем квалифицированного персонала.



Why is Safety Important?

Safety is important because:-

- It helps us to look after staff and service users.
- It improves the quality of the service we provide.
- It helps to stop people from being injured in accidents at work. Less accidents means less people get injuries or illnesses.
- It is the Law. Employers can be prosecuted by Inspectors for accidents.

Dlaczego bezpieczeństwo jest ważne?

Bezpieczeństwo jest ważne, ponieważ:

- Pomaga nam dbać o zdrowie pracowników i klientów.
- Poprawia jakość świadczonych przez nas usług.
- Zapobiega urazom na skutek wypadków w miejscu pracy. Mniejsza liczba wypadków oznacza mniejszą liczbę urazów i zachorowań.
- Przestrzegania jego zasad wymaga prawo. Pracodawca może zostać pociągnięty do odpowiedzialności za wszelkie wypadki w miejscu pracy.

Почему важна безопасность?

Безопасность важна, потому что:

- она помогает нам заботиться о персонале и потребителях услуг;
- она улучшает качество предоставляемых нами услуг;
- она помогает предотвратить травмирование людей в результате несчастных случаев на работе. Чем меньше несчастных случаев, тем меньше травм или заболеваний получают люди;
- это закон. Инспекторы также могут привлечь работодателей к ответственности за несчастные случаи.

Site Rules

- Smoking only permitted in the designated area (outside canteen).



- PPE must be worn.



- Always Wash hands before eating.



Wash
Hands

Zasady obowiązujące w miejscu pracy

- Palenie dozwolone jest tylko w wyznaczonej strefie (poza stołówką).

- Należy zawsze stosować środki ochrony osobistej.

- Należy zawsze myć ręce przed jedzeniem.

Правила на рабочей площадке

- Курение разрешено только в специально отведенном месте (за пределами столовой).

- Необходимо использовать СИЗ.

- Перед едой всегда необходимо мыть руки.

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Site Rules

- Smoking is only allowed in designated areas.
- Do not interfere with safety devices or deface safety signs on equipment.
- Do not obstruct general safety signs throughout the site.
- Don't horse play; avoid distracting others

Zasady obowiązujące w miejscu pracy

- Palenie dozwolone jest wyłącznie w wyznaczonych strefach.
- Zabrania się zakłócania pracy urządzeń zabezpieczających i niszczenia znaków ostrzegawczych na urządzeniach.
- Zabrania się zastaniania ogólnych znaków ostrzegawczych na terenie zakładu.
- Należy unikać nieodpowiedzialnych zachowań podczas pracy i odwracania uwagi innych pracowników.

Правила на рабочей площадке

- Курение разрешено только в специально отведенных местах.
- Не препятствуйте работе защитных устройств и не портите знаки безопасности на оборудовании.
- Не закрывайте знаки общей безопасности на рабочей площадке.
- Не шумите; не отвлекайте других.

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Site Rules

- Follow instructions;
- Don't take chances.
- If you don't know, ask.
- Being under the influence of an intoxicant will not be tolerated.
- Obey all rules, signs, and instructions.
- Keep all walkways and exits clear.
- Do not run, always walk.

Zasady obowiązujące w miejscu pracy

- Należy postępować zgodnie z zasadami.
- Nie należy podejmować niepotrzebnego ryzyka.
- Należy dążyć do wyjaśnienia wszelkich wątpliwości.
- Praca pod wpływem środków odurzających jest zabroniona.
- Należy przestrzegać wszystkich zasad, oznaczeń i instrukcji.
- Zabronione jest blokowanie przejść i wyjść.
- Bieganie jest zabronione.

Правила на рабочей площадке

- Следуйте инструкциям.
- Не рискуйте.
- Если не знаете, спросите.
- Запрещено находиться в состоянии алкогольного опьянения.
- Соблюдайте все правила, знаки и инструкции.
- Все проходы и выходы должны быть свободны от препятствий.
- Не бегайте, всегда ходите.

Risk Assessment

- All work must be risk assessed in advance
- Controls put in place
- Injury / ill health not an option

Ocena ryzyka

- Każda praca musi zostać wcześniej oceniona pod kątem ryzyka.
- Należy zastosować odpowiednie środki kontroli.
- Zabrania się pracy osobom chorym lub kontuzjowanym.

Оценка рисков

- Необходимо заранее оценивать все работы на предмет рисков.
- Необходимо предпринять все меры безопасности.
- Не допускается получение травм/причинение вреда здоровью.

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Risk Assessment- Site Hazards

- Slips, trips and falls.
- Cuts from the conveyor line.
- Moving Machinery.
- Electricity.
- Manual handling.
- Biological Hazards.
- Noise from machinery.
- Exposure to chemicals at the premises.



Ocena ryzyka – zagrożenia w miejscu pracy

- Poślizgnięcia, potknięcia i upadki.
- Przecięcia podczas pracy przy linii przenośnikowej.
- Ruchome elementy urządzeń.
- Prąd elektryczny.
- Przenoszenie ręczne.
- Zagrożenia biologiczne.
- Hałas generowany przez urządzenia.
- Narażenie na działanie substancji chemicznych na terenie zakładu.

Оценка рисков. Опасности на рабочей площадке

- Риск поскользнуться, споткнуться и упасть.
- Риск получить порезы от конвейерной линии.
- Риск получить травму от движущихся деталей станков.
- Риск электротравмы.
- Риск во время выполнения ручных погрузочно-разгрузочных работ.
- Биологические опасности.
- Шум от станков.
- Воздействие химических веществ в помещениях.

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Risks-Controls

SLIPS TRIPS AND FALLS

- USE OF SAFETY FOOTWEAR
- DO NOT RUN
- WALK WITH CARE
- ENSURE GOOD HOUSEKEEPING
- KEEP WORKPLACE TIDY AT ALL TIMES
- REPORT SPILLS IMMEDIATELY

COMPRESSED AIR

- NOT FOR USE ON BODY / SKIN AT ANY TIME

CHEMICALS

- ONLY TRAINED PERSONNEL MAY HANDLE.
- FAMILIAR WITH SDS AND LOCATION.
- USE S.O.P AND CORRECT P.P.E.

Zapobieganie ryzyku

POŚLIZGNIĘCIA, POTKNIĘCIA I UPADKI

- NALEŻY STOSOWAĆ OBUWIE OCHRONNE
- NIE BIEGAĆ
- ZACHOWAĆ OSTROŻNOŚĆ PODCZAS PRZEMIESZCZANIA SIĘ
- DBAĆ O UTRZYMANIE PORZĄDKU
- ZAWSZE UTRZYMYWAĆ MIEJSCE PRACY W CZYSTOŚCI
- NIEZWŁOCZNIE ZGŁASZAĆ WSZELKIE WYCIEKI

SPRĘŻONE POWIETRZE

- NIE STOSOWAĆ NA CIELE/SKÓRZE

CHEMIKALIA

- DOSTĘP DO CHEMIKALIÓW POSIADA JEDYNI PRZESZKOLONY PERSONEL.
- NALEŻY ZAPOZNAĆ SIĘ Z KARTĄ CHARAKTERYSTYKI I JEJ LOKALIZACJĄ.
- NALEŻY PRZESTRZEGAĆ STANDARDOWEJ PROCEDURY DZIAŁANIA I STOSOWAĆ ODPOWIEDNIE ŚRODKI OCHRONY OSOBISTEJ.

Меры защиты от рисков

РИСК ПОСКОЛЬЗНУТЬСЯ, СПОТКНУТЬСЯ И УПАСТЬ

- ИСПОЛЬЗУЙТЕ БЕЗОПАСНУЮ ОБУВЬ
- НЕ БЕГАЙТЕ
- ХОДИТЕ ОСТОРОЖНО
- ПРОВОДИТЕ НАДЛЕЖАЩУЮ УБОРКУ
- СОБЛЮДАЙТЕ ЧИСТОТУ И ПОРЯДОК НА РАБОЧЕМ МЕСТЕ
- НЕМЕДЛЕННО СООБЩАЙТЕ ОБ УТЕЧКАХ

СЖАТЫЙ ВОЗДУХ

- НЕ ПОДВЕРГАЙТЕ ВОЗДЕЙСТВИЮ ТЕЛО/КОЖУ

ХИМИЧЕСКИЕ ВЕЩЕСТВА

- РАЗРЕШЕНО ОБРАЩАТЬСЯ ТОЛЬКО ОБУЧЕННОМУ ПЕРСОНАЛУ.
- ОЗНАКОМЬТЕСЬ С ПАСПОРТОМ БЕЗОПАСНОСТИ ВЕЩЕСТВА (SDS) И МЕСТОПОЛОЖЕНИЕМ.
- ИСПОЛЬЗУЙТЕ СТАНДАРТНЫЕ ОПЕРАЦИОННЫЕ ПРОЦЕДУРЫ И НАДЛЕЖАЩИЕ СИЗ.

Machine Guarding

Never work on unguarded machine

Always replace guards

Report damaged or missing guards

Zabezpieczanie maszyn

Nie należy pracować na maszynie bez zamocowanych osłon.

W razie potrzeby należy wymienić osłony.

Należy zgłosić uszkodzone lub brakujące osłony.

Защитные устройства для оборудования

Никогда не работайте на оборудовании без применения защитных устройств.

Всегда устанавливайте защитные ограждения.

Сообщайте о поврежденных или отсутствующих защитных ограждениях.

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Tools & Equipment

Never operate a machine you have not been trained and authorised to use.

- Report any faults or defects to safety guards or machinery immediately to a member of management
- All tools in good condition & regular checks carried out.
- Certification & training as required by law
- **Never** attempt to make repairs or to free caught product/materials
- **Never** use machinery or equipment unless you have been trained to do so

Narzędzia i urządzenia

Nie należy korzystać z maszyny bez odpowiedniego przeszkolenia i pozwolenia.

- Wszelkie uszkodzenia maszyn lub ich osłon należy niezwłocznie zgłosić przełożonym.
- Należy utrzymywać narzędzia w odpowiednim stanie i przeprowadzać regularne kontrole.
- Należy zadbać o uzyskanie certyfikatów i przeprowadzenie szkoleń wymaganych przez prawo.
- **Nigdy** nie podejmować prób przeprowadzania napraw ani nie wyciągać zablokowanych produktów/materiałów.
- **Nigdy** nie przystępować do obsługi maszyn bez odpowiedniego przeszkolenia.

Инструменты и оборудование

Никогда не работайте на оборудовании без прохождения обучения и без специального разрешения.

- Немедленно сообщайте руководству о любых неисправностях или дефектах защитных ограждений или оборудования.
- Все инструменты должны находиться в хорошем состоянии и должны регулярно проверяться.
- Сертификация и обучение в соответствии с требованиями закона.
- **Никогда** не пытайтесь осуществлять ремонт или извлекать застрявший продукт/материалы.
- **Никогда** не используйте машины или оборудование без предварительного обучения.

Tools & Equipment

- **Do not** under any circumstance remove or bypass safeguards
- **Do not** leave a machine which is switched on unattended
- **Do not** use equipment with frayed wires.
- **Do not** tamper with any equipment labeled with a “**Lock Out Tag**”.
- Use appropriate **Personal Protective Equipment (PPE)** as required

Narzędzia i urządzenia

- **Nie należy**, pod żadnym pozorem, zdejmować lub omijać osłon.
- **Nie należy** pozostawiać włączonej maszyny bez nadzoru.
- **Nie należy** używać urządzeń, jeśli podłączone przewody są uszkodzone.
- **Nie należy** podejmować prób obsługi urządzeń z oznaczeniami procedury **LOTO**.
- Należy stosować wymagane **środki ochrony osobistej**.

Инструменты и оборудование

- **Не** удаляйте или не обходите предохранительные устройства ни при каких обстоятельствах.
- **Не** оставляйте включенную машину без присмотра.
- **Не** используйте оборудование с изношенными проводами.
- **Не** вскрывайте оборудование с маркировкой «**Заблокировано**».
- Используйте надлежащие **Средства индивидуальной защиты (СИЗ)** в соответствии с требованиями.

Noise

The Safety Health and Welfare at Work (Control of Noise at Work) Regulations 2007 state:

- Where noise levels exceed 80dB(A), hearing protection will be made available to all employees
- Training will be given on the use of hearing protection
- Hearing protection is available to all employees
- **The Noise Survey conducted on this site highlighted certain areas that were over 80dB(A). Safety signs are posted up in these areas.**



Hałas

Zgodnie z rozporządzeniem The Safety Health and Welfare at Work (Control of Noise at Work) w sprawie bezpieczeństwa i zdrowia w pracy (ograniczania hałasu w pracy) z 2007 roku:

- Jeśli poziom hałasu przekracza 80 dB(A), wszystkim pracownikom należy zapewnić środki ochrony słuchu.
- Stosowanie środków ochrony słuchu jest poprzedzone odpowiednim szkoleniem.
- Należy udostępnić i umożliwić korzystanie ze środków ochrony słuchu wszystkim pracownikom.
- **Badania hałasu przeprowadzone na terenie zakładu wykazały, że w niektórych obszarach poziom hałasu przekracza 80 dB(A). W tych miejscach umieszczono tablice ostrzegawcze.**

Шум

Правила охраны труда и техники безопасности на рабочем месте (контроль уровня шума на рабочем месте), принятые в 2007 г., указывают:

- при превышении допустимого уровня шума 80 дБ (А) всем работникам должны быть предоставлены средства защиты органов слуха;
- необходимо проводить обучение по использованию средств защиты органов слуха;
- средства защиты органов слуха выдаются всем работникам.
- **Съемка карты шумов, проведенная на данной рабочей площадке, выявила некоторые зоны, звук на которых превышает 80 дБ (А). В этих зонах установлены знаки безопасности.**

Personal Protection Equipment-Hearing Protection

- Hearing Protection zones are located on the ground and Upper floors as indicated by signs.
- You **must** wear Hearing protection if you are working in these zones.
- **Contact your supervisor if you need this PPE!**

Środki ochrony osobistej Środki ochrony słuchu

- Strefy, w których wymagane jest stosowanie środków ochrony słuchu znajdują się na parterze oraz na wyższych piętrach i są odpowiednio oznakowane.
- Stosowanie środków ochrony słuchu podczas pracy w tych strefach jest **obowiązkowe**.
- **W przypadku braku tych środków należy skontaktować się z przełożonym!**



**Hearing
protection must
be worn**

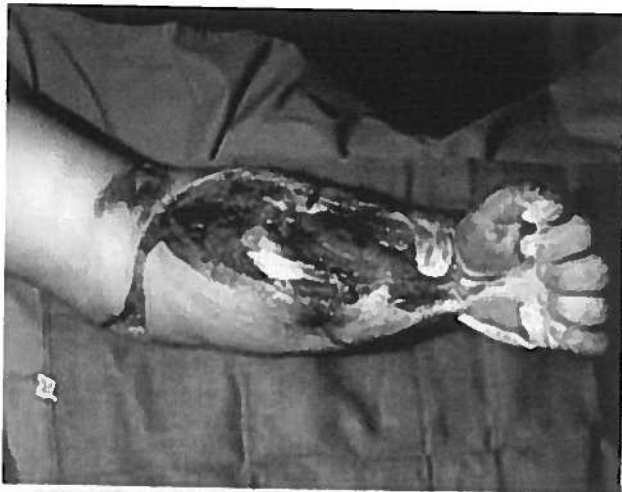
Средства индивидуальной защиты органов слуха

- Зоны, в которых необходима защита слуха, расположены на первом и верхних этажах и отмечены знаками.
- **Обязательно** надевайте средства защиты органов слуха во время работы в этих зонах.
- Свяжитесь со своим руководителем при необходимости такого СИЗ!

Risks

ELECTRICITY

- Overhead power lines
- Underground cables
- Control Rooms
- Electrical Control Panels



Arm with third degree burn from high-voltage line.

Electricity ranges from
110v to 11,000v

Ryzyko

PRĄD ELEKTRYCZNY

- Napowietrzne linie energetyczne
- Kable podziemne
- Sterownie
- Elektryczne panele sterowania

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Napięcie prądu wynosi od
110 V do 11 000 V

Риски

ЭЛЕКТРИЧЕСТВО

- Воздушные линии электропередач.
- Подземные кабели.
- Аппаратные помещения.
- Электрические панели управления.

Номинальное напряжение
110–11 000 В

Controls

ELECTRICITY

- Avoid long trailing leads.
- Only certified electrical personnel allowed to work with electricity on this site with prior KWD authorisation.
- All tools---110volt only
- Report electrical defects immediately
- Report any electrical Hazard immediately.
- Do not interfere in any way with electricity
- Always call electrician

Środki zapobiegawcze

PRĄD ELEKTRYCZNY

- Nie stosować długich, ciągnących się po podłożu przewodów.
- Wszelkie naprawy układów elektrycznych na terenie zakładu mogą przeprowadzać wyłącznie elektrycy posiadający odpowiednie uprawnienia i upoważnienie KWD.
- Należy używać jedynie urządzeń zasilanych napięciem 110 V
- Należy niezwłocznie zgłosić wszelkie uszkodzenia układu zasilania elektrycznego.
- Należy niezwłocznie zgłosić zagrożenie porażeniem prądem elektrycznym.
- Nie ingerować w układy elektryczne.
- W razie potrzeby należy skontaktować się z elektrykiem.

Меры защиты

ЭЛЕКТРИЧЕСТВО

- Избегайте длинных тянущихся проводов.
- Только дипломированным электрикам разрешено работать с электричеством на этой рабочей площадке после получения предварительного разрешения компании KWD.
- Все инструменты — только 110 В.
- Немедленно сообщайте о неисправностях электрооборудования.
- Немедленно сообщайте о любой опасности поражения электрическим током.
- Не прикасайтесь к электрооборудованию.
- Всегда обращайтесь к электрику.



28/03/2017

Environmental Health and Safety Induction Powerpoint
Translation Aug 2015 Rev A

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RISK-DUST

- Asthma, allergies, biological hazards
- Do not breathe in dust
- Wear correct P.P.E.

RYZYKO – PYŁ

- Astma, alergie, zagrożenia biologiczne
- Należy unikać oddychania zapyłonym powietrzem.
- Należy stosować odpowiednie środki ochrony osobistej.

РИСК ОТ ПЫЛИ

- Вызывает астму, аллергию, является биологически опасным фактором.
- Не вдыхайте пыль.
- Надевайте надлежащие СИЗ.

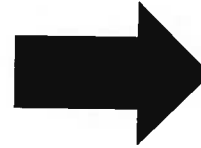
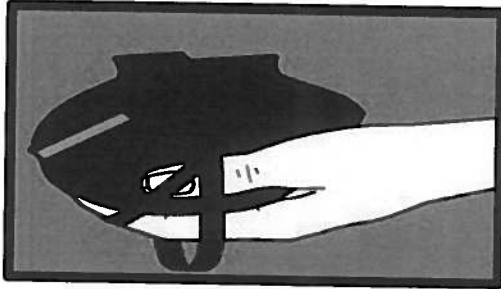
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Wear your Dust Mask - Stay Healthy

Maska przeciwpyłowa – ochrona zdrowia

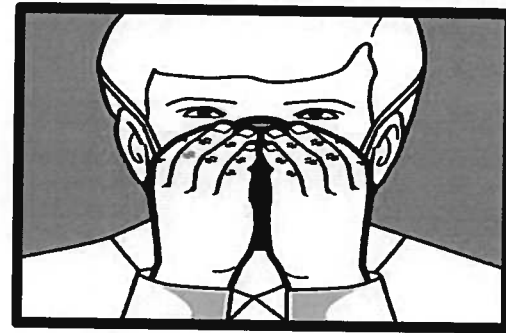
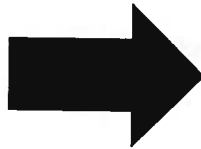
Носите пылезащитную маску — оставайтесь здоровым

Dust masks prevent dust from entering the lungs. When you inhale, air passes through the dust mask, trapping dust particles on the surface of the mask.
 Maski przeciwpyłowe zapobiegają dostawaniu się pyłu do płuc. Podczas wdechu powietrze przenika przez maskę, a pył zatrzymuje się na jej powierzchni.
 Пылезащитные маски предотвращают попадание пыли в легкие. При вдыхании воздух проходит через пылезащитную маску, которая задерживает частицы пыли на своей поверхности.



Place the mask over your face and make sure it covers your mouth and nose.
 Nałożyć maskę na twarz tak, aby zakrywała usta i nos.
 Наденьте маску на лицо и убедитесь в том, что она закрывает рот и нос.

Place the lower strap behind your ears, and the upper strap above your forehead.
 Umieścić dolny pasek za uszami, a górny powyżej czoła.
 Поместите нижний ремешок за ушами, а верхний ремешок выше лба.



Using both hands press the nose clip over the lower part of nose.
 Obiema dłońmi docisnąć zacisk na dolnej części nosa.
 Двумя руками нажмите на носовой зажим над нижней частью носа.

Make sure there is a tight seal against your face in order to provide full protection.
 Należy upewnić się, czy maska przylega szczelnie do twarzy i zapewnia pełną ochronę.
 Убедитесь, что маска плотно прилегает к лицу для обеспечения полной защиты.

Test: Cover your hands over the respirator and exhale strongly. If air flows around your nose then tighten the nose piece and if air escapes at the edges then adjust the straps.
Test: Zakryć maskę dłońmi i mocno wypuścić powietrze. Jeśli powietrze ucieka w pobliżu nosa lub na krawędziach, należy docisnąć odpowiedni obszar maski za pomocą pasków.
Проверка. Возьмите респиратор в руки и сделайте сильный выдох. Если воздух проходит возле носа, затяните носовую часть маски, а если воздух выходит по краям, отрегулируйте ремешки.
 Change your dust mask every 8 hours and wash hands and face after removing. / Maskę należy wymieniać co 8 godzin, a po każdej wymianie należy myć ręce i twarz. / Меняйте пылезащитную маску каждые 8 часов. После снятия вымойте руки и лицо.
 If your mask doesn't fit correct contact the Safety department. / Jeśli maska nie pasuje, należy skontaktować się z działem bezpieczeństwa. / Если ваша маска не подходит, свяжитесь с отделом по технике безопасности.

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RISK- Biological

- Hepatitis
- Weils disease
- Legionnaires
- Tetanus
- **Always follow Good Hygiene Practices**
- Sign up for vaccines

RYZYKO – biologiczne

- Żółtaczką
- Choroba Weila
- Choroba legionistów
- Tężec
- **Należy zawsze przestrzegać zasad higieny osobistej**
- **Należy poddawać się szczepieniom**

БИОЛОГИЧЕСКИЙ РИСК

- Гепатит
- Лептоспироз
- Болезнь легионеров
- Столбняк
- **Обязательное соблюдение необходимых правил гигиены**
- Вакцинация