

Unit IG2: Risk assessment

Declaration: By submitting this assessment (Parts 1 – 4) for marking I declare that it is entirely my own work. I understand that falsely claiming that the work is my own is malpractice and can lead to NEBOSH imposing severe penalties (see the NEBOSH Malpractice Policy for further information).

Important note: You must refer to the document ‘Unit IG2: risk assessment – Guidance and information for learners and Learning Partners’ while completing all parts of this assessment. Your Learning Partner should provide you with a copy, but it can also be downloaded from the relevant resources section for this qualification on the NEBOSH website.

Part 1: Background

You should aim to complete this section in 150 - 200 words.

Topic	Comments
Name of organisation*	MSG Construction Company
Site location*	Islamabad, Pakistan
Number of workers	120
General description of the organisation	MSG Construction company was found in 2005.its main office is in Islamabad with regional offices in 4 main cities in Peshawar, Lahore, Faisalabad and Rawalpindi. Company has 17 years of experience in construction related work. Staff working in company range from managers, engineers, safety officers, supervisors and labours the company specializes in a diverse range of services, including commercial construction, Home construction, industrial projects, and renovation endeavours. MSG Construction is committed to delivering high-quality work. They are certified by ISO, which means they follow strict global standards of safety measures. On the basis of client need and for their satisfaction MSG construction company works closely with their client. The company does many different tasks, like working with concrete, mixing concrete, working at heights, welding, cutting, grinding, handling things by hand, sand blasting, digging wells, excavation using big cranes, and doing electrical, plumbing and mechanical work. I visited this site on 11/12/2023
Description of the area to be included in the risk assessment	MSG construction company risk assessment team cover all the workplace by observing working activities as well as reviewing previous record
Any other relevant information	HSE officer is responsible for managing health and safety at site

* If you're worried about confidentiality, you can invent a false name and location for your organisation but, all other information provided must be factual.

You should aim to complete this section in 100 - 200 words.

Note: this section can be completed after you have completed your risk assessment.

<p>Outline how the risk assessment was carried out this should include:</p> <ul style="list-style-type: none"> • sources of information consulted; • who you spoke to; and • how you identified: <ul style="list-style-type: none"> - the hazards; - what is already being done; and - any additional controls/actions that may be required. 	<p>Before starting the risk assessment, I did online search about health and safety management in the construction company I explored the ILO website and read information about health and safety management I closely examined the ILO convention c155 extracting the valuable insight from the content on this site.</p> <p>After getting some information from the ILO I visited the HSE website and found the documents about health and safety in the construction company https://www.hse.gov.uk/pubns/priced/hsg150.pdf</p> <p>Following my initial online research, I visited to the site for field assessment where I spoke to worker, site supervisor and site engineers and took their opinion regarding safety measures. Then I checked record of accidents, their nature and cause. I checked the working place, workers and machineries. I examined the existing controls measures at the site and observe that workers were provided with basic personal protective equipment</p> <p>To suggest the additional control measure I used the HSE documents. Following are the documents that I have used for suggesting additional control measure.</p> <p>Workplace transport safety: A brief guide www.hse.gov.uk/pubns/indg199.pdf , Providing and using work equipment safely www.hse.gov.uk/pubns/indg291.pdf , Manual Handling at work : A brief guide www.hse.gov.uk/pubns/indg143.PDF</p>
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Part 2: Risk Assessment

Organisation name: MSG construction company

Date of assessment: 11/12/2023

Scope of risk assessment: Whole Construction site of Battagram majesty mall .

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
1.Hazardous Substance Workers adding cement to the concrete mixture create excessive airborne dust during the process	workers, staff and the visitor	Face mask is already given to the worker	The activity area must be isolate in order to minimize the exposure of dust to other people who work there	1 week	Supervisor
	Inhaling airborne dust can cause a serious problem like respiratory irritation, Reduced lung functioning Increased the risk of heart attack	Clear and prominent signage has been placed in the hazardous area	Water spraying or dipping technique is necessary to mitigate the dust	2 days	Supervisor
			Rotation of worker must be done to reduce the exposure time	1 week	Supervisor
			Proper training is required to the worker about how to work with hazardous substance	1 month	Safety officer
			An extraction system should be in place to gather the dust and clean the air at the site	2 months	Site manager
2.Noise On the working site excessive amount of noise is produced by the concrete mixture, excavator	Workers, visitors and people who are living nearby	Earmuff was already given to the workers	Position noisy concrete mixture away the area where other workers might be affected from the Nosie	1 week	Supervisor
	People who are exposed to the noise of concrete mixture have adverse effect on their health Like headache, stress, mental fatigue, hearing loss.	Machine inspection was already done	Silencer must install to the concrete mixture	2 weeks	Supervisor
			Ensure the maintenance of the equipment	1 month	Site manager
			Not working with noise producing machinery during resting hours	1 day	supervisor

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
			Proper training must be given to the workers and educate the workers about the potential hazard associated with the machine	1 month	Safety officer
			Rotation of the workers must be done	1 week	supervisor
3.Manual handling Manual handling of heavy load like lifting and carrying heavy cement bag by worker from storage to the designated working area	Workers who are involved in lifting of heavy cement bag can be harmed Workers engaging in Carrying heavy cement bags from storage area to the working area are exposed to potential harm the absence of machinery for lifting and carrying heavy cement bags leads worker to the range of injuries like neck and back pain, joint dislocation	Workplace were well organised with clear pathways They prefer physically fit workers for the activity	Sack trucks, wheelbarrow and lifting aid trolleys must provided to the workers for the transportation of material to avoid manual handling Decreasing the size and weight of material is essential for workers involved in manual handling Job rotation must be done in order to minimize the exposure time Proper training must be provided to the workers about manual handling and educate them about the potential hazard associated with manual handling To mitigate the health and safety risk it essential to increase the number of workers for the heavy material lifting activity	1 month 3 weeks 1 week 1 month 3 weeks	Site manager Site manager Supervisor Safety officer Site manager

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
4.Working at height Construction at height, Applying paint to the exterior of building Using planks without any protection	Workers who are engaged in this activity or people who walk below working site The workers are at risk due to working at height without any protection edge can cause fall from height lead worker to severe injuries such as bone fracture, spinal cord injury leading to paralysis, Head injury causing death People walking below working site maybe injured from heavy object falling from above causing similar injuries as mentioned above	Workers are equipped with proper PPE like gloves, hard hats and non-slippery footwear The area surrounding the activity is already barricaded	scaffold should provide to the workers in order to minimize the ratio of falling It is necessary to conduct supervision at working site to reduce accidents Ensure that scaffold is not overloaded with material or workers which increase the chances of collapsing For the safety of workers, it is important to install edge protection on the side of scaffold Training must be provided to workers about how to safely work at height	1 month 3 days 3 weeks 1 week 1 month	Site manager Supervisor Supervisor Supervisor Safety officer
5.Movement of People and vehicles Vehicles and pedestrian share the same route at the work place	Workers, children At the working site vehicles and pedestrian share the same route, increasing the likelihood of accidents that may result in injuries such as head injury, bone fracture, ribs fracture spinal cord damage etc	area already barricaded from children Suitable lightning was in place at the work site	Separate route must be constructed at the working site both for pedestrian and for vehicles Proper maintenance of vehicles is required Training must be provided to the drivers as well as other worker and educate them about the rule at the working site	1 months 1 week 1 week	Site manager Supervisor and drivers Safety officer

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
			Banksman must provide to every driver	2 weeks	supervisor
			To reduce the risk of accident communication devices must be provided at the workplace	1 month	site manager
6.Slips and trips Oil leakage and scattered waste bags, bricks are present in the walkways	Workers, visitors The presence of oil leakage from diesel cans and scattered waste bags and bricks in the walkway can pose a slip hazard resulting potential injuries for workers in the area including, joint dislocation, head injury, fracture	First aid box was present at the site Gloves and safety helmet were already provided to the workers	Ensure proper lightning in the working area to increase visibility and reduce the risk of slip Implement foot ware policy which requires workers to wear slip resistant shoes in the area where slip hazard is present Place the physical barriers around the area where slip hazard is present Matting the area where chances of leakage of oil are present A clear and easily understandable signboard should be positioned in the area where slip and trip hazard exist	1 month 3 weeks 1 week 3 weeks 1 week	Site manager Site manager Supervisor Site manager Safety officer
7.Fire Welding work near flammable material	Workers, visitors Doing welding activity near flammable and combustible material can cause burn to face, hands And even death	Personal protective equipment was already given to the workers like gloves, glasses, flame resistant clothing Signboard is already placed in welding area	Keep all the flammable material in a separate area Ensure proper ventilation in the welding area to disperse welding fumes and prevent the build-up of hazardous gases	3 weeks 10 days	Site manager Supervisor

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
			<p>Welding activity must be done under the supervision of expert and trained person</p> <p>There should a designated area for welding activity away from the traffic zone</p> <p>Ensure the regular inspection of the welding equipment whether it is in good working condition</p> <p>Training must give to the worker about how to work safely with fire</p>	<p>8 days</p> <p>3 weeks</p> <p>12 days</p> <p>1 month</p>	<p>Safety officer</p> <p>Site manager</p> <p>Safety officer</p> <p>Safety officer</p>
8.Electricity Damage wires Without proper insulation	Workers, visitors Some tools are connected with damage power cables possess a significant risk of electric shock which leads to burn, occupational disability and death	Personal protective equipment was already given to the workers like insulated gloves and boots All electric wires were in good condition with proper insulation	Provide double insulated cables to all the equipment in order to reduce the risk Conduct routine inspection upon power cables and equipment Immediately repair or replace damage power cables upon detection Install trip devices to mitigate the risk of potential hazard	<p>1 month</p> <p>12 days</p> <p>10 days</p> <p>3 weeks</p>	<p>Site manager</p> <p>Safety officer</p> <p>Supervisor</p> <p>Site manager</p>

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
9.Vibration Prolong use of jackhammer expose operator to hand arm vibration	Jackhammer operator, other workers Prolong exposure to the vibration generated by tool leads to various problems like hand arm vibration syndrome, vascular disorder, musculoskeletal disorder, nerve damage etc	Job rotation was already done in order to decrease the exposure time Maintenance of the equipment was already done	Must provide personal protective equipment to workers such as anti-vibration gloves	2 weeks	site manager
			Must conduct a comprehensive training session for the worker on the risk of hand-arm vibrations and the importance of using proper technique	1 month	safety officer
			Install anti-vibration tool with jackhammer in order to minimize the transmission of vibration to the operator	3 weeks	supervisor
			Conduct health assessment to monitor the early symptom of HAVS	2 weeks	safety officer

Hazard category and hazard	Who might be harmed and how?	What are you already doing?	What further controls/actions are required?	Timescales for further actions to be completed (within ...)	Responsible person's job title
10.Load Handling Equipment Lifting of steel beams and columns with cranes	Operator, workers and pedestrian nearby construction site During working the operator ignore the load limit this makes a heavy object fall, hurting workers badly like crushing, back and neck injuries, broken bones, fatalities	Crane was already inspected and was in good condition Positioned area for the crane were stable	Surround the heavy loading activity with proper barricade Provide a comprehensive training to the operator about a safe operation of load equipment Communication devices must provide to the workers A signaller should be provided to the crane operator in order to give instruction	3 weeks 1 month 10 days 1 week	Supervisor Safety officer Site manager Supervisor

Part 3: Prioritise 3 actions with justification for the selection

Suggested word counts

Moral, general legal and financial arguments for all actions: 300 to 350 words

For EACH action:

Specific legal arguments: 100 to 150 words

Likelihood AND severity: 75 to 150 words

How effective the action is likely to be in controlling the risk: 100 to 150 words

Moral, general legal and financial arguments for ALL actions

Moral, general legal and financial arguments	<p>Moral arguments</p> <p>It is the moral responsibility of the organization to provide a healthy and safe work environment for their employee and provide personal protective equipment, as well as basic welfare facilities like washroom, and changing room. It is an organization's moral duty to monitor its workplace quickly and should take action against the potential hazard in the workplace and ensure the safety of its employees. The organization also treats its employees with dignity and respect and also pay them fair wages. If any accident occurs with a worker organisation have moral responsibility to take him to the hospital, bear their medical expenses, and support their family in the shape of sick pay</p> <p>General Legal Arguments</p> <p>The Legal responsibility of the organisation is to create safe and healthy working place for workers According to ILO c155 organisation should provide health and safe environment to workers provide PPE as well as conduct training session to workers organisation also have responsibility to identify the potential hazard in the workplace and implement a control measure to mitigate the hazard this may include engineering control and administrative controls if organisation fail to meet their responsibility regarding safety and health under ILO C155 organisation may face fines as well as legislation in the court if accident occur due to poor health and safe environment in the workplace the reinforcement agencies will take action against the company in term of fines or maybe banned the company</p> <p>Financial Arguments</p> <p>The Failure of a company to fulfil its financial responsibilities can result in various consequences particularly when accident occur due to poor health and safety environment. In such instances the company become liable for expenses related to hospitalization, treatment damage to product,</p>
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	equipment repairs and the cost associated with hiring workers. Failing to meet these financial obligations may lead to the cancelation of projects and decline in the company's goodwill among customer. Additionally, the company may incur significant legal cost. Moreover, the amount of insurance premium paid to the insurance company is likely to increase if financial responsibility is not met, thus maintaining financial responsibility is crucial for the overall stability and reputation of the company
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Justification for action 1

Action (Taken from column 4 of risk assessment)	scaffold should provide to the workers in order to minimize the ratio of falling (Hazard Category:4-Work At Height)
Specific legal arguments	<p>As per ILO convention c167 safety and health in construction (article 14) states that "Where work cannot safely be done on or from the ground or from part of a building or other permanent structure, a safe and suitable scaffold shall be provided and maintained, or other equally safe and suitable provision shall be made"</p> <p>According to ILO convention c062 safety provision article 7 states that "Suitable scaffolds shall be provided for workmen for all work that cannot be safely done from a ladder or by other means"</p>
Consideration of likelihood AND severity <ul style="list-style-type: none"> types of injury or ill health number of workers at risk how often the activity is carried out how widespread the risk is 	<p>The likelihood of injuries in the hazard of workers falling from height is very High due to the absence of edge protection on the plank used for painting work activity additionally the duration of work at height increase the probability of fatigue, which, in turn raises the likelihood of accident among workers</p> <p>Injuries occurring from falling from height can be fracture of bones, paralysis from spinal cord damage and even death from head injury</p> <p>6 people are engaged in painting work at height and access to the area is restricted no other individual are allowed to the work area</p> <p>The painting work activity is conducted for approximately 8 hours which is done on the daily basis</p> <p>The risk is limited to painters</p>
How effective the action is likely to be in controlling the risk. This should include: <ul style="list-style-type: none"> the intended impact of the action; 	<p>Providing scaffolding for workers engaging in activity such as painting or other task at height significantly reduce the risk of falling because scaffolds offer protective edges that act as barrier enhancing safety, moreover scaffold provide suitable platform for workers to perform tasks as well as facilitate the placement of material</p>

<ul style="list-style-type: none"> justification for the timescale that you indicated in your risk assessment; and whether you think the action will fully control the risk 	<p>I have allocated a one-month timescale for the provision of scaffolding to the workers as this process need the approval of higher authority like finance manager I am optimistic that the given time frame will be appropriate to facilitate the necessary action</p> <p>I am hopeful that this action will effectively reduce the risk of falling to a significant extent</p>
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Justification for action 2

Action (Taken from column 4 of risk assessment)	Provide double insulated cables to all the equipment in order to reduce the risk (Hazard Category:8-Electricity)
Specific legal arguments	<p>According to the ILO convention c167 for safety and health in construction article 26</p> <p>states that</p> <p>1-Before construction is commenced and during the progress thereof adequate steps shall be taken to ascertain the presence of and to guard against danger to workers from any live electrical cable or apparatus which is under, over or on the site</p> <p>2- All electrical equipment and installations shall be constructed, installed and maintained by a competent person, and so used as to guard against danger</p> <p>3- The laying and maintenance of electrical cables and apparatus on construction sites shall be governed by the technical rules and standards applied at the national level</p>
<p>Consideration of likelihood AND severity</p> <ul style="list-style-type: none"> types of injury or ill health number of workers at risk how often the activity is carried out how widespread the risk is 	<p>The likelihood of injuries in the hazard of electric shock is very high because the equipment used by the worker at the construction site having damaged power cable which leads worker to the injuries</p> <p>The injury occurred to the worker can be major such as skin damage, unconsciousness, and potentially fatal outcome due to high exposure of electric current like disability and death</p> <p>4 people are engaged in grinding work and 2 people are with electric drills and access to the area is restricted no other individual are allowed to the working area</p> <p>The activity is carried about 6 hours which is done on the daily basis</p> <p>The risk is limited to grinding and drilling area</p>
How effective the action is likely to be in controlling the risk. This should include:	Utilizing double insulated cables for grinders and drill mitigate the risk of accident as the double insulation prevent direct contact of worker's body with cables

<ul style="list-style-type: none"> the intended impact of the action; justification for the timescale that you indicated in your risk assessment; and whether you think the action will fully control the risk 	<p>I have allocated a one-month timescale for the provision of new double insulated cables for grinding and drilling activity to the workers as this process need the approval of higher authority like finance manager I am optimistic that the given time frame will be appropriate to facilitate the necessary action</p> <p>This action will effectively reduce the effect of electric shock to a significant extent</p>
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Justification for action 3

Action (Taken from column 4 of risk assessment)	<p>Keep all the flammable material in a separate area (Hazard Category:7-Fire)</p>
Specific legal arguments	<p>As per ILO Convention C167- Safety and Health in Construction (Article 29), the employer is responsible to take all the appropriate measures to avoid the risk of fire, he will ensure that there is a sufficient and proper suitable storage area available to store flammable liquids, solids and gasses.</p> <p>According to the ILO Code of practice “Safety and Health in Construction” (Section 3.6), the employer should provide a highly secure place for flammable liquid, solid, and gasses such as; gas cylinders, petrol, paints, etc.</p> <p>In accordance with the ILO code of practice “Safety in use of chemicals at work” (Section 6.6), all the workers should be kept in a safe workplace and protected from the risks of injuries caused by the use of flammable or explosive chemicals. A combination of different measures should be used to reduce the risk of fire or explosion.</p>
<p>Consideration of likelihood AND severity</p> <ul style="list-style-type: none"> types of injury or ill health number of workers at risk how often the activity is carried out how widespread the risk is 	<p>The likelihood of injuries in the hazard of fire is very high due to the absence of proper segregation of flammable materials. Additionally, activities such as welding are being carried out concurrently increase the potential of fire incident</p> <p>The injuries occur to the worker can be major such skin burn, reparatory distress, loss of consciousness and also have potential to fatal outcome such as death</p> <p>3 workers are carrying out welding activity and is not restricted to the visitor</p> <p>The activity is carried out about 6 hours which is a routine base</p> <p>The risk is to the whole working area</p>

<p>How effective the action is likely to be in controlling the risk. This should include:</p> <ul style="list-style-type: none"> the intended impact of the action; justification for the timescale that you indicated in your risk assessment; and whether you think the action will fully control the risk 	<p>Keep flammable materials in separate, well-ventilated storage area also maintain a safe distance between flammable materials and potential ignition source</p> <p>I have allocated 3 weeks of timescale for the completion of this task because the allocation of separate and well-ventilated area for flammable materials require budget as well as workers for this task, I am optimistic that the given time frame will be appropriate to facilitate the necessary action</p> <p>This action will markedly reduce the effect of fire along with the provision of other control measured mentioned above</p>

Part 4: Review, communicate and check

Suggested word counts for each section:

- Planned review date or period and reasoning for this: **50 - 100 words**
- How the risk assessment findings will be communicated and who needs to know the information: **100 - 150 words**
- Follow up on the risk assessment: **100 - 150 words.**

Planned review date/period with reasoning	<p>Based on ILO recommendation risk assessment review should be done annually which in this case will be on 11/12/2024 furthermore if any of the following occurs, review maybe conducted a bit earlier like occurrence of fresh accident at work site, change in man power or machinery at work site</p> <p>Modification in rules and regulation</p>
How the risk assessment findings will be communicated AND who you need to tell	<p>After conducting risk assessment review, I will consolidate all the finding and create a power point presentation subsequently I will call and arrange a meeting in which all the relevant staff of the project including project manager will be invited. I will not only highlight the identified risk but also emphasize the importance of proactive risk management and encourage a collaborative discussion among team members. I will present all my finding and measure to mitigate every risk through project manager. Additionally, I will write an email to finance officer requesting the provision of all necessary items to implement the risk mitigation strategies</p>
How you will follow up on the risk assessment to check that the actions have been carried out	<p>To follow the actions to be carried out after risk assessment I will make a check list of all the actions, timeline for completion, name of person or authority responsible for carrying out that particular action. I will set a reminder one day before follow up visit and i will inform the responsible authorities or person of my next day visit during my visit I will go to the site and check the action</p>

	whether it has been carried out or not in case of incompleteness. I will sort out the reason for not carrying out that particular activity and I will inquire from the person in whom responsibility it was in case there are budget issues I will communicate with the finance department of the project to allocate funds in order to complete safety work I will re-educate the responsible person and will give time line and plan revisit in the nearest possible time
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