

Environmental Aspects / Impact Assessment

Introduction

A project specific register of environmental aspects and impacts has been developed from an initial environmental review (taking into account the scale, scope and location of the project works) and from consideration of CBUK's project activities.

Environmental Risk Rating Matrix

The table below illustrates the company environmental risk rating matrix in regard to project activity likelihood and severity:

		Severity (S)				
		1	2	3	4	5
Likelihood (L)	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25
		Green 1 to 6 = LowRisk (L)		Yellow 8 to 10 = Medium Risk (M)		Red 12 or more = High Risk (H)
Likelihood (L) Score x Severity (S) Score = Risk Rating						

Likelihood		Severity	
Score	Description	Score	Description
1	Very Unlikely	1	No adverse Impact
2	Unlikely	2	Minor Impact
3	Likely	3	Moderate Impact
4	Very Likely	4	Significant Impact
5	Highly Likely	5	Major Impact

Each specific activity is assessed in regard to environmental issue, sensitive receptor, potential impact and risk rating.

Once a rating has been produced, specific mitigation and appropriate control measures are implemented to reduce the initial risk rating.

The activity with mitigating/control measures is then re-assessed in regard to likelihood and severity with a new rating produced as 'residual risk'.

Project Specific Register of Environmental Aspects and Impacts

A project specific register has been produced for the work, see below:

Issue	Sensitive Receptors	Potential Impact	Rating	Mitigation/Control Measures	Residual Risk
AIR QUALITY (Pollution & Dust)	Local residential and commercial population	Air pollution caused by plant emissions during construction activities.	3x3=9	All plant will be inspected weekly and faults rectified immediately. Plant/vehicles to be switched off when not in use. No idling policy to be implemented for stationary vehicles.	2x3=6
		Air Pollution caused by open fires and smoking waste.	3x3=9	No burning policy (debris & materials) enforced on site as a mandatory rule.	1x3=3
		Dust created by materials storage and on-site construction activities.	3x4=12	Dust suppression to be used for materials storage e.g. covering, damping down. Imposing maximum site speed limit (10mph).	1x4=4
WATER QUALITY	Discharge to Watercourses	Pollution caused by site runoff (inc. silt) and accidental spillage of pollutants.	4x3=12	Site Specific controls required to ensure accidental spillages do not occur or will be prevented from entering soft ground or watercourses. Designated bunded areas to be established. Spill kits to be present and utilised where required by trained personnel.	2x3=6
	Discharge to Surface Water Drains	Pollution caused by site runoff (inc. silt) and accidental spillage of pollutants.	4x3=12	Domestic effluent released from the site accommodation toilets and domestic facilities discharged into a septic tank.	2x3=6
	Discharge to Foul Sewer	Additional effluent loading from welfare facilities.	3x3=9	Collection into septic tank and disposal via licensed waste contractor. Alternatively, obtain Water Authority consent for discharge to foul sewer.	2x3=6
LAND – (Ground Contamination)	Local Community. Final Disposal Option.	Inadvertent release of hazardous dust/ vapour. Disposal via wrong/ illegal disposal route.	4x3=12	Soil samples to be taken to identify contamination and determine safe working practices and disposal routes.	1x3=3
	Workforce.	Leptospirosis.	3x5=15	Use of adequate PPE, good hygiene during construction of drainage channels and discharge of foul water. Toolbox talks and additional briefing given to site staff.	1x5=5

Issue	Sensitive Receptors	Potential Impact	Rating	Mitigation/Control Measures	Residual Risk
<i>LAND – (Invasive Plants & Alien Species)</i>	Wider Environment.	Uncontrolled spreading of invasive plants.	3x3=9	Staff Briefing, warning signage and containment areas (exclusion zones) to be established. Prohibit use of tracked vehicles in area, ensure PPE is not contaminated etc.	2x3=6
		Uncontrolled disposal of invasive plants	3x3=9	Ensure correct, controlled and legal disposal of invasive plants removed from site.	2x3=6
<i>LAND – (Protected Species)</i>	Impact on Ecology - Protected species.	Negative impact upon protected species population.	4x4=16	Toolbox talks carried out on specific species in the area. Encapsulated scaffolds and other various measures Reasonably practicable measures to be implemented to minimise harm and disturbance to wildlife caused by noise and vibration, dust and air pollution where required. Site personnel to be made aware of protected species and biodiversity obligations via briefing and training delivery + COCP.	2x4=8
<i>LAND – (Visual Impact)</i>	Wider Environment	Negative visual impact upon the surrounding environment.	3x3=9	Avoidance of unnecessary tree and vegetation removal. Storing machinery and construction materials in a tidy manner in order to minimise visual impact on views. Covered over or stored behind hoarding when not in use. Lighting of site compounds will be restricted to agreed specification and Local Authority Consent. Hoarding to be utilised on site compounds to minimise visual intrusion of the surrounding landscape where required.	1x3=3

Issue	Sensitive Receptors	Potential Impact	Rating	Mitigation/Control Measures	Residual Risk
WASTE	Use of landfill space. Prolonged site storage encourages vermin/insects.	General office waste.	2x2=4	Waste paper to be re-used on reverse as scrap paper. Paper recycling to be utilised. Other office/canteen waste stored in covered skip to prevent unauthorised access and wind blown litter. Good housekeeping policy to be adopted during the lifecycle of the project with regular removal instigated.	1x2=2
		Operational waste 'Hazardous', 'Controlled' and 'Inert'.	4x4=16	Comply with duty of care obligations and waste management legislation. Segregation of waste types to encourage re-use, recycling and avoid landfill. Hazardous Waste Premises Code issued by EA. Suitable containment of all waste to prevent discharges or leaks. Waste Management Plan to be utilised. Waste to be disposed by means of an approved licensed contractor.	3x3=9
MATERIAL STORAGE & USE	Watercourses, drains and sewers. Soil/ground contamination.	Fuels, Oils, Hazardous Substances	3x4=12	Stored quantities kept to minimum. Adequate containers (e.g. drums, bowsters, drip trays). Stored in bunded area and dispensing areas. Drip trays used beneath static plant. Spillages cleaned immediately using spill kits.	2x4=8
		Concrete	3x3=9	Storage area for dry cement products bunded and protected from weather conditions. This shall also be protected to ensure dry cement particles do not blow near sensitive receptors. Concrete runoff and wash down of plant to be contained.	1x3=3
		Paint products	4x3=12	Bunded, fire resistant storage containers. Drip trays utilised during work activities.	4x2=8

Issue	Sensitive Receptors	Potential Impact	Rating	Mitigation/Control Measures	Residual Risk
ENERGY USAGE (Electricity)	Wider environment	Use of limited resources.	4x2=8	Power to be isolated/switched off when not in use. Use of mains supplied electricity rather than generators – best practicable means option to be utilised.	2x2=4
WATER USAGE	Wider environment	Use of limited resources.	4x2=8	For welfare facilities only, essential to maintain site/operative hygiene. Water meter to be utilised to measure usage. To be measured as per NR KPI's – submitted at period report date.	2x2=4
CONSTRUCTION NUISANCE – (Noise & Vibration)	Disturbance to local community, commercial properties, client staff & workforce.	Noise & Vibration during construction activities.	4x4=16	Utilisation of 'Best Practicable Means' to mitigate potential effects of noise and vibration: Selection of low noise and vibration techniques and tools. Monitoring noise levels at frequent intervals to conform to project noise limits. Secure consents/Permits where required with local Environmental Health Departments. Local 'Letter Drop' scheme to be utilised to inform affected neighbours/dwellings. Implement Noise Barriers as required to minimise effects to local dwellings. Shouting and raised voices to be kept to a minimum. Prohibited use of tannoy and radios (except for urgent communication). Site induction to include instruction on measures to reduce noise and vibration activities. Compliance with project specific noise and vibration management plan.	2x4=8
		Damage to infrastructure.	4x3=12	Selection of low vibration techniques and tools.	2x3=6
		Interruption of Infrastructure Operations.	4x2=8	Selection of low noise techniques and tools to avoid interruption of station PA.	2x2=4
CONSTRUCTION NUISANCE – (Site Lighting)	Blinding of vehicle drivers, disturbance to	Site Lighting (Light pollution after dark).	3x3=9	Lighting scheme for compound and work areas to be identified during production of Method Statements.	2x3=6

Issue	Sensitive Receptors	Potential Impact	Rating	Mitigation/Control Measures	Residual Risk
	local community and commercial properties.			Only to be used when necessary.	
TRAFFIC – (Road/Highway Traffic)	Disturbance to local community, commercial properties depot staff.	Mud on road/highway resulting in skidding/vehicle accidents.	3x4=12	Provide Road Sweeping contractor to maintain highway in safe condition, frequency of cleaning as required. Ongoing assessment of highway condition, provide on-site wheel wash facilities if required.	1x4=4
	Disturbance to local community, commercial properties, client staff.	Off-site/On-site congestion caused by type, volume and timing of shift start/finish and deliveries.	3x4=12	On-site parking for management team, operatives and sub-contractors. On-site parking for deliveries. Specified delivery times avoiding peak times. Clearly marked access route and entrance (including authorised crossings). Entrance/traffic control to comply with highway standards (NR&SW). Banksman provided to control vehicles at entrance and on-site. Traffic Management Plan arrangements covering the site and access routes contained within the construction phase plan. <i>(Site deliveries to be managed, conducted and controlled in a suitable manner as per project code of conduct).</i> Compliance with project specific Traffic Management Plan.	1x4=4
TRESPASS/ VANDALISM	Client and Contractor Property	Personal Injury. Release of hazardous materials. Vandalism to infrastructure. Inadequate site security management	4x2=8	Introduce security systems. All materials/ tools to be secured/ removed from working areas. All site access gates to be locked and secure when not in use. All construction personnel to visibly display/carry identification during the project	2x2=4
ARCHAEOLOGY	None				