

Environmental Management

Environmental Aspect and Impact Register for UNSW Laboratories

Never Stand Still

Sustainability

Environmental Aspect and Impact Register for UNSW Laboratories

ACTIVITY	ENVIRONMENTAL ASPECTS	POSSIBLE ENVIRONMENTAL IMPACTS	SEVERITY OF IMPACTS
Storage of Hazardous substances and Dangerous goods.	Spillage of hazardous chemicals	<p>Spillage of hazardous chemicals may result in:</p> <ul style="list-style-type: none"> *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site; *Community concern. 	High
	Fumes or emissions due to Fire or explosion in storage area	<p>Fumes or emissions due to fire or explosion in storage areas of hazardous chemicals/dangerous goods may result in:</p> <ul style="list-style-type: none"> *air pollution; *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site; *Community concern. 	High

Handling of Hazardous substances and Dangerous goods. (spillage, solid and liquid waste, accidents, fire, etc)	Hazardous waste generation	Mismanagement of hazardous waste may result in : *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for proper disposal of the waste.	High
	Airborne emissions	Unchecked airborne emissions from hazardous chemicals can cause: *Exposure to Lab user; *Exposure to onsite and offsite residents; *Affect on flora/fauna or human health; *Compliance issues, breach of licences resulting in fines and/or goal; *Community concern.	High
	Emissions to Water	Mismanagement of Liquids effluents may result in: *Contamination of surface waters; *Contamination of Ground waters; *Storm water pollution; *Soil Contamination; *Affect on Ecosystem and human health; *breach of the Sydney Water Trade Waste Agreement; *Fines and Compliance issues.	High
	Spillage of hazardous chemicals	Spillage of hazardous chemicals may result in : *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site; *Community concern.	High

	Fumes or emissions due to Fire or explosion in laboratory	<p>Fumes or emissions due to fire or explosion in a lab may result in :</p> <ul style="list-style-type: none"> *air pollution; *soil and water pollution; *affect on flora/fauna or human health due to emissions; *affect on landscape and natural beauty due to emissions; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site; *Community concern. 	High
Storage and handling of Radioactive substances.	Radioactive waste generation	<p>Mismanagement of radioactive substances can cause:</p> <ul style="list-style-type: none"> *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Expensive storage requirements for the waste till it neutralizes; *Can raise concern in community. 	High
	Accidents/Spillage of radioactive substances	<p>Spillage of Radioactive substances may result in :</p> <ul style="list-style-type: none"> *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site; *Can raise concern in community. 	High
Storage and handling of Biological / pathological substances.	Biological / pathological / infectious/ Medical waste generation	<p>Mismanagement of Biological/pathological waste may result in :</p> <ul style="list-style-type: none"> *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for proper disposal of the waste. 	High

	Accident/spillage of biological/pathological substances	<p>Spillage of Biological/pathological substances may result in:</p> <ul style="list-style-type: none"> *Adverse affect on human health; *Soil and water pollution; *affect on flora/fauna; *affect on landscape and natural beauty; *Compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of site; *Additional negative impacts on the point of disposal offsite; *Can raise concern in community. 	High
Transport of hazardous substances/dangerous goods/radioactive subs/biological subs	Accidents, release in environment	<p>Accidental release of these hazardous substances may result in :</p> <ul style="list-style-type: none"> *soil and water pollution; *affect on flora/fauna or human health; *affect on landscape and natural beauty; *compliance issues, breach of licences resulting in fines and/or goal; *Huge costs for remediation of the site (e.g. heavy metal contamination); *Community concern; *Irreversible damage to the ecosystem (via storm water pollution which directly goes Botany Aquifer and to the sea). 	Moderate to high
General Activities	Mixed waste generation	<p>Mismanagement of municipal waste can cause:</p> <ul style="list-style-type: none"> *Soil and/or water contamination *Affect flora/fauna or human health; *Affect landscape and natural beauty; *Heavy costs for the removal of waste; *Burden on landfill. 	Low
Equipment, lighting etc	Energy consumption, Atmospheric emissions	<p>Excessive energy consumption may result in:</p> <ul style="list-style-type: none"> *depletion of natural resources; *contribution to the green house gas emissions; *deleterious environmental impacts at the power generation source (both air and water emissions); *Huge energy costs. 	Low

	Environmental Noise	Excessive noise generation can cause: *community concern; *effect on lab inhibitor's health; *Can result in compliance issues and fines.	Low
Water Usage	Water consumption	Excessive water consumption may result in: *depletion of water resources; *effects on eco system; *Water costs.	Low
Office materials usage such as paper, plastic, printer cartridges, white goods etc	Waste generation	Excessive use of paper and other resources may result in: *Declining non-renewable resource stocks for current and future generations; *contribution towards the increasingly unsustainable use of renewable resources *increased landfill space requirements; green house gas emissions (methane from landfill, energy during life cycle of the goods).	Low

Note: The severity of the Environmental impacts is assessed based on the risk posed to the environment/public. The main criteria used for determining the significance of impact are: frequency/probability; magnitude; duration; location and timing; concerns of the community. (Australian Standard HB 206 pp 22)

References

Australian Standard HB 206 (2004), " Handbook: Initial environmental review", Standards Australia International, Sydney