ENVIRONMENTAL ASPECTS REGISTER

EA Code	Description	Type	Status	Source	Environmental Impact									Summary of Environmental Impact	Operating Condition	Legal/Other Requirements	Significance Assessment					Operating Control Procedures					Notes
					Emissions to Air	Water Contamination	Land Contamination	Use of Energy	Resource Consumption	Waste Handling	Energy Emissions	Fauna/Flora	Physical Attributes				Frequency	Influence	Impact	Score	Significance	Waste Management Register	Spill Control Procedure	Emergecny prep	Procedure	PM	
ACTIVITIES																											
EA01	Consumption of electricity (eg for machine operation, compressed air generating lighting etc).	Use of utility	Current	Production, Utilities				X	X					Consumption of non-renewable resources, release of CO_2 and local air pollutants at point of electricity generation.	Normal	No	5	4	4	80					x		A large proportion of our electricity now comes from renewable energy (AD plant and solar panels) to minimise the impact on the environment. Electricity usage is reviewed weekly and recorded on the site energy metrics file.
EA02	Consumption of mains water for production/cleaning and domestic use.	Use of utility	Current	Production, welfare facilities.					X					Consumption of a limited natural resource.	Normal	No	5	4	4	80					x		All water coming into site is monitored daily (Incoming and use). Water is recovered and reused where possible.
EA03	Consumption of Borehole water for production/cleaning and domestic use	Use of utility	Current	Production, welfare facilities.					X					Consumption of a limited natural resource.	Normal	Yes	5	5	4	100					x		A proportion of the water used on site is abstracted from a borehole situated on land not owned or leased by Konings. Konings have an abstraction licence from the Environment Agency for 20430m³ per year. Licence No. 8/36/16/G/0043. We are in direct control of when we abstract from the borehole and can stop abstracting at any time.
EA04	Consumption of LPG for the boilers to generate steam.	Use of utility	Current	Boiler house.	X			X	X		x			Consumption of a non renewable resource.	Normal	No	5	4	3	60					x	x	We record the LPG usage on a daily basis and review at the 09:00 meeting.
EA05	Consumption of gas oil the boilers to generate steam.	Use of utility	Planned	Boiler house,	X			X	X		X			Consumption of a non renewable resource.	Abnormal	No	3	4	4	48					x	x	We only use oil if we have issues with the LPG supply.
EA06	Emissions of CO_2 and other combustion gasses (e.g. NOx, SO_2) from boiler.	Production	Current	Boilers	X			X		X				Contribution to climate change from CO_2 and NOx emissions and localised air pollution.	Normal	Yes	5	4	4	80						x	Boilers used for steam have their burners serviced 6 monthly should there be any change in the colour of the emissions from the boiler stack it is reported to engineering and rectified as soon as possible. We run on LPG as our primary source of fuel which is less damaging than gas oil.
EA07	Use of cooling towers	Production	Current	Cooling towers	X			X						If controls were to fail there is a risk of a legionella outbreak. However controls and monitoring are in place to prevent this from happening.	Abnormal	Yes	1	5	5	25					x	x	There are three cooling towers at Konings one for the bottle blow moulder and two that cool the ammonia chillers. The towers are checked by engineering. Dip slides are taken and the cooling tower waters tested by the laboratory weekly. Legionella tests are performed quarterly by an external laboratory. Veolia complete monthly visits to test water samples.
EA08	Consumption of LPG for FLT's	Use of utility	Current	FLT's	X			X	X					Consumption of a non renewable resource.	Normal	No	5	5	2	50					x		
EA09	Bioreactor usage.	Application	Current	WWTP		x	x					x		The waste water treatment plant uses two aeration tanks as bioreactors if the volume being received from the factory is larger than the volume available in the aeration tank No.1 aeration tank will then over flow into aeration tank No. 2. This can then be transferred back to balance tank or tanker away. If not managed correctly tank could overflow onto the surrounding land.	Abnormal	yes	2	5	5	50					x		We have 4 hourly checks at the WWTP and the tank levels can be monitored directly from the Lab.
EA10	Use of printer ink/toner	Use of physical material	Current	Office					X					Cartridges are sent to be recycled.	Normal	No	5	4	2	40		X					
EA11	Use of pallets	Use of physical material	Current	Warehouse					X					Pallets are recycled. Red pallets belong to IPPL through Pepsi, all other pallets are sold to be reused.	Normal	No	5	4	1	20							All pallets are reused.
EA12	Creation of general waste	Production	Current	All activities					X	X				Generation of odour if it sits outside for too long. All waste created will need to be disposed of. (see disposal of general waste).	Normal	No	5	3	3	45		X			x		Waste Generation (General Commercial waste). Non–recyclable waste for energy use. All waste generated on site is stored and prepared for transportation by a reputable licensed carrier, Environment Agency certificates and permits to transport waste are checked by Konings.
EA13	Creation & disposal of hazardous waste (including chemical waste, batteries, fluorescent tubes, sanitary waste, oil waste)	Production	Current	All activities					X	X				Hazardous waste can be generated in many forms on site, for example through Lab testing, spills, engineering etc. The impact varies depending on how the different forms of hazardous waste are disposed of.	Normal	No	5	3	5	75		X			x		
EA14	Discharge from WWTP to Lagoon/River Box	Production	Current	All activities		X	x					x		The discharge from the waste water treatment plant is sent into a land locked lagoon situated on land not owned by Konings. If the waste water treatment plant is unable to process the effluent effectively the divert system will operate and the plant will not discharge. Partially treated or untreated waste could be discharged to the lagoon should this system fail. Konings Juices & Drinks UK Ltd have been given consent to discharge treated effluent to the river Box when the consent levels have been reached and maintained in the final effluent. If when discharging into the river the final effluent exceeds the consent level on one or more parameters and emergency conditions are reached, then out of specification discharge could enter the river Box. Currently not discharging directly to the river, discharge is to the lagoon.	Normal	Yes	5	4	5	100					x	x	The discharge from the waste water treatment plant is end into a land locked lagoon situated on land not owned by Konings. If the waste water treatment plant is unable to process the effluent effectively the divert system will operate and the plant will not discharge. Partially treated or untreated waste could be discharged to the lagoon should this system fail. Konings Juices & Drinks UK Ltd have been given consent to discharge treated effluent to the river Box when the consent levels have been reached and maintained in the final effluent. If when discharging into the river the final effluent exceeds the consent level on one or more parameters and emergency conditions are reached, then out of specification discharge could enter the river Box. Currently not discharging directly to the river discharge is to the lagoon.
EA15	Waste paper	Production	Current	Office					X	X				Paper is put in with the mixed recycling and is sent to be recycled. However the impact also depends on where the paper was sourced. The impact of recycled paper use is less that that of new paper.	Normal	No	5	3	2	30		X					
EA16	Waste cardboard	Production	Current	Warehouse						X				Most cardboard is sent to be recycled. Some is sent back to the manufacturer to be reused.	Normal	No	4	3	2	24		X					
EA17	Creation of fire water	Production	Current	Emergency response		X	X			X		X	X	In the event of a fire there is a risk that any extinguishing mediums could find their way to the storm drains that would then go to the lagoon.	Abnormal	No	1	3	5	15				X			We are looking at purchasing a bund so that the emergency services can block the storm drain.
EA18	Creation of fire smoke	Production	Current	Emergency incident	X					X			X	Fire smoke will create emissions to air.	Abnormal	No	1	3	5	15					X		
EA19	Creation of odour	Production	Current	Waste water treatment plant	X									Risk of odour generation if the lagoon aeration fails.	Abnormal	No	3	4	3	36					x	x	The lagoon is aerated at all times to prevent anaerobic conditions occurring which cause an unpleasant odour. If the aeration system fails and emergency conditions occur an odour could be generated.
EA20	Disposal of general waste	Application	Current	All activities	X		X			X			X	Use of landfill capacity; potential contribution to leachate and landfill gas generation. Incineration gives rise to air emissions.	Normal	Yes	5	4	4	80		X			x		Waste Generation (General Commercial waste). Non–recyclable waste for energy use. All waste generated on site is stored and prepared for transportation by a reputable licensed carrier, Environment Agency certificates and permits to transport waste are checked by Konings.
EA21	Disposal of WEEE	Application	Current	Office			X			X			X	Impact depends on what happens to the WEEE waste. The impact is less if the waste is reused and recycled.	Normal	Yes	2	4	5	40		X					
EA22	Disposal of waste paper	Application	Current	Office			X			X			X	Impact depends of method of disposal. Most paper is recycled where possible which greatly reduces the potential impact.	Normal	Yes	5	4	2	40		X					
EA23	Disposal of waste cardboard	Application	Current	Warehouse			X			X			X	Impact depends of method of disposal. Most cardboard is recycled where possible which greatly reduces the potential impact.	Normal	Yes	5	4	2	40		X					
EA24	Storage of hazardous substances	Use of physical material	Current	Warehouse		X	X							Chemicals are stored in bunded containers. If they were to spill they should be captured before they are able to cause land or water contamination.	Normal	Yes	5	5	2	50			x				Waste chemicals are stored in bunded containers if they were to leak the contents would not be able to go to the drains. Spill kits are also stored in various locations across site.
EA25	Bulk liquid delivery	Transport	Current	Yard, Caustic/Juice unloading area		X	X			X		X		Caustic and juice are delivered to site in bulk tankers/IBC's. Large amounts of liquid could be spilt from the coupling or pipe valve. This could enter the storm drains and then lagoon.	Abnormal	Yes	2	4	5	40			x				There is a spill kit in location and a drain mat that can be deployed. Someone should always be in the area during the delivery.
EA26	Spillage of hazardous substances	Application	Current	Emergency incident	X	X	X			X		X		The impact depends where the spill occurs. If the spill is inside the factory the spill can be diverted to the sump pit and taken away before it reaches the WWTP. If the spill is outside there is a risk that it could reach the storm drains and the lagoon.	Abnormal	Yes	3	4	4	48			X				Spill kits and bungs are available in the event of a spill.
EA27	Use of air conditioning systems.	Use of physical material	Current	Office/Meeting Rooms/Canteen					X					The air conditioning units contain F-Gas. This is on the register. The systems have recently been assessed for their performance and came out at a B.	Normal	Yes	5	3	2	30						x	All air condition systems have are on the site register and are inspected and serviced according to the regulations.
EA28	Leaks of refrigerants from air conditioning	Application	Current	Emergency incident	X	X	X			X		X		Contribution to localised air pollution. Potential for ozone depletion.	Abnormal	Yes	1	2	5	10			X			x	All air condition systems have are on the site register and are inspected and serviced according to the regulations.
EA29	Light Pollution	Production	Current	Lighting									X	Light pollution due to outside lighting.	Normal	Yes	5	5	2	50							Most of the outside lighting is downward facing and on a dusk till dawn sensor.
EA30	Consumption of diesel/petrol	Transport	Current	Delivery/Collections				X	X					Emissions to air through transport vehicles	Normal	No	5	2	5	50							With the exception of the on site shunter we don't own any transport vehicles so our influence is minimal. However the use of pre forms and bulkers for apple deliveries helps us to minimise the vehicles coming to site.
EA31	Use of vehicles/oil spills	Transport	Current	Delivery/Collections	X				X		X			There is a risk of an emergency of an oil spill from a fuel tank where the fuel could enter the storm drains. In line interceptors are installed in the storm water drainage systems.	Abnormal	Yes	2	1	5	10		x				x	The interceptors are emptied/cleaned by Binder to make sure they remain effective.
EA32	Creation of CO_2	Transport	Current	Delivery/Collections	X			X			X		X	Creation of CO_2 during through transport.	Normal	No	5	2	5	50							
EA33	Creation of waste packaging materials	Production	Current	End user			X		X	X				Use of non renewable resource	Normal	No	5	1	4	20							
EA34	Purchasing - End of life equipment	Production	Current	Equipment			X	X		X				Disposal of old equipment - Impact depends on disposal method	Abnormal	No	1	4	4	16							End of life of our equipment needs to be considered, for example how will we dispose of it safely. In most cases with large machinery equipment will be sold on for reuse. Most equipment is also stainless that can be broken down and reused.
EA35	Disposal of end-of-life product (waste packaging materials)	Application	Current	End user		X	X			X		X	X	After being consumed the bottle, cap and label will need to be disposed of. The bottle is recyclable but it may end up in landfill. The final product is the property of Pepsico and it is produced to their specification so there is little we can do to influence the materials used.	Normal	Yes	5	1	5	25							End product is the property of our customer (Pepsico) we have no influence of the end of life of the product/packaging.
EA36	Rotten apple storage	Application	Current	Rejected apples that are not suitable for production.		x	x							The rotten apples can leak from the back of the bulker and there is a risk that they could leak into the storm drains if they aren't parked correctly.	Abnormal	No	2	5	3	30		x			x		The bulkers are parked so that any leakage from its back tailgate drips into the effluent drain. They would only go to the storm drains in and abnormal situation.

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EA37	All cleaning including product inside the factory.	Production	Current	Production		x								All the internal drains go to the waste water treatment plant where the water is treated before it is sent to the lagoon. The water can be diverted to the sump pit if it looks like the WWTP won't be able to cope with the contents being sent down the drains.	Normal	No	5	5	2	50					x		Cleaning procedures in place.
EA38	Oil storage	Use of utility	Current	Storage tanks		X	X					X		Diesel oil is stored in two above ground tanks, one on the hard stand area and the other on the outside of the utilities building near the staff entrance. Engineering oils are stored in a bunded shelter on the hard stand area. If an accident happened and a tank was damaged or the valve opened in error diesel oil could spill onto the yard and enter effluent and water drains which have in line interceptors.	Abnormal	No	2	4	5	40			x				Spill kits are located next to the oil tanks. There have been no reported spills.
EA39	Chilling Ammonia	Use of physical material	Current	Production, Utilities	X	X	X						X	The ammonia chillers on site are used to cool the glycol and are situated in the utilities building. In an emergency situation if the outer casing became damaged ammonia could escape onto the ground and into the air.	Abnormal	Yes	2	5	5	50				x	x	x	The ammonia system is regularly serviced. If a leak is detected they system will automatically shut off.
EA40	Chilling Glycol	Use of physical material	Current	Storage tanks/Pipework		x				x				We use a glycol chiller t chill the juice. If a leak were to occur glycol could leak out into the drainage system.	Abnormal	No	3	4	4	48			x			X	Any leaks would be contained within the system and not able to reach the storm drain/lagoons.
EA41	Apple storage	Transport	Current	Apple bulkers/bins		x	x					x		Apples are stored in bulkers and bins in the yard. If apples were to fall on the floor and get crushed then apple juice could enter the storm drain. This would be an emergency situation.	Abnormal	Yes	3	5	4	60			x				We have a clean as you go policy. Most of out apples now arrive in bulkers so the chance of spillages has been decreased. The drains surrounding the bulker offloading point go to the WWTP.
EA42	Juice storage	Application	Current	Storage tanks		x								All the drain around the juice storage tanks lead to the WWTP. If high levels of juice were to reach the WWTP they could damage the plant so we are not able to discharge.	Normal	No	4	5	2	40			x				Pressed apple juice is stored in the tank farm in the pressroom. All drains in the pressroom lead to the waste water treatment plant. A refractometer diverts all waste liquid with a brix of above 1.4 to the sludge tank for disposal.
EA43	Sewage disposal	Application	Current	Waste - Klargester		X	X			X				We have a Klargester on site for all sewage waste. The outfall of this is then disposed of via the effluent plant. Any solids are removed by a 3rd party contractor on a regular basis.	Normal	No	5	2	4	40						X	Binder are contracted to maintain and clean the Klargester for us.
EA44	Failure of Klargester/ Odour	Application	Current	Klargester	X									In the event of the Klargester failing an unpleasant odour may start to be emitted.	Abnormal	No	2	2	2	8						X	Binder are contracted to maintain and clean the Klargester for us.
EA45	Contractors/Construction	Production	Current	Breakdowns/New construction		x	x	x	x			x		Contactors may not be aware of our site rules and procedures. There is a risk that they could dispose of any waste generated incorrectly or put chemicals down the drains etc.	Normal	No	5	3	4	60		X			X		Contractors are inducted and informed of site rules. No contractors are permitted to start work without a permit to work.
EA46	Filling the LPG/Diesel tanks	Application	Current	Deliveries		X	X						X	Any leaks could enter the storm drains and find their way to the lagoon.	Abnormal	No	1	3	5	15					X		There are spill kits in place. The drivers have strict delivery procedures that must be followed during the delivery. There have been no records of spills happening during deliveries on site.
EA47	Visual impact of site.	Application	Current	Site									x	We are located in a AONB so it is important that we minimise the effects of the visual impact of the site.	Normal	No	5	3	1	15							We keep the site as clean and tidy as possible. The building is painted green to minimise its impact.
EA48	Ground maintenance activities	Application	Current	Site		X	X						X	Potential to increase or preserve biodiversity and improve visual appearance on site. Overuse of chemicals and removal of vegetation could harm biodiversity and disturb wildlife.	Normal	No	4	4	1	16					X		We usually subcontract any grounds activities to a 3rd party.
EA49	Vehicle cleaning	Production	Current	AB Texel vehicles		X	X			X			X	The runoff will be a mix of apple waste and water (chemicals are not used). The vehicles are cleaned in the bays and the drains go to the lagoons. However if excess water is used the runoff may find its way to the storm drains/lagoon.	Normal	No	5	4	3	60					X		This activity must take place in the bays as the drains go to the WWTP.
EA50	Disturbance from traffic coming to site	Transport	Current	Collections/Deliveries									x	Noise from traffic driving to site. Disturbance to wildlife. The roads can also become blocked if the vehicles go the wrong way, for example down Stone Street.	Normal	No	5	2	1	10							We inform any delivery drivers on the correct route they should take when coming to site.
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