AI079	**Effluent Discharge**		**Occurence**	**Detection**	**Consequence**	**Operational Significance**	**Impact score**	**Significance**
Activity Description:	Liquid waste streams (Influent) are treated through the Anaerobic Digester (malted ingredients effluent) and the aerobic treatment plant (malt effluent), to reduce pollution content to a point where it is environmentally safe to discharge into the river. Influent from the MI plant is in excess of 40,000mg/l COD and from the maltings, in excess of 2,000mg/l. The WWTP removes reduces the COD content to between 100 and 135mg/l. In addition Suspended Solids, Nitrogen, Iron, Phosphorous, are also reduced to safe levels, diluted by a discharge consent of 1500m3. An increase in the discharge volume would not change the levels of these contaminants and provide further dilution to their presence. in addition, the discharge is a major source of water for the river in dry periods and an increase in discharge would further safe guard aquatic life	**Normal**	4.00	1.00	2.00		2	LOW
Source	Effluent is the main reason for the WWTP and AD plant. Effluent is produced from the malt and malt products production process and pumped to the plant. Potential sources are from leaks and spills, although consideration needs to be given to a catastrophic failure of containment	**Abnormal**	3.00	1.00	3.00		2	LOW
Pathway	Water-bourne through drains.	**Emergency**	3.00	2.00	3.00		3	LOW
Receptor	River Gipping	**Average**	**3.33**	**1.33**	**2.67**	**4.00**	**47.41**	LOW
Mitigation	Effluent is treated through either or both of the AD plant and the Aerobic Plant. Treatment removes environmentally dangerous levels of BOD, COD, Suspended Solids, Ammoniacal Nitrogen, Iron and Phosphorus. In addition pH levels are managed to be around neutral. Treated effluent is monitored and analysis conducted daily. Current discharge consent levels allows 1500m3 daily discharge. An increase in discharge volumes would reduce the mg/m3 levels in the final discharge.							
	Environmental Aspects							
Solid Waste	Effluent has the potential to give rise to solid wastes in the form of sludges, sediments and screenings							
Hazardous Material Usage	None							
Air Emissions	Effluent has the potential to emit odour if disturbed							
Raw Material Usage	None							
Land Use	Spreading of effluent on land							
Effluent	Effluent has the potential to give rise to solid wastes in the form of sludges, sediments and screenings							
Nuisance	Limited potential for odour							
Energy	Effluent used to generate energy							
	Environmental Impacts							
Solid Waste	Sludges etc can be disposed of as a solid waste giving potential for leachate and therefore pollution potential. This is thought to be unlikely							
Hazardous Material Usage	None							
Air Emissions	Low impact due to distance from significant receptors							
Raw Material Usage	Used as a raw material therefore does not deplete a non renewable resource to generate energy							
Land Use	Spreading of effluent on land with potential for leachate causing pollution. Deemed unlikely							
Effluent	The effluent here is high in sugar content, COD, BOD, suspended Solids and therefore has a potential to cause significant pollution if allowed to escape. Uncontrolled release of effluent is a polluting source with the potential to contamionate water courses and groundwater. Consequently bunding provided. EA licences allow for discharge to licensed sites.							
Nuisance	Odours can give rise to EHO complaints							
Energy	Use of a renewable resource to generate energy and remove from the waste stream.