

# BEER, FISH AND CHIPS? AN INTEGRATED AND SUSTAINABLE APPROACH TO HANDLING BREWERY WASTE STREAMS

*M Egan*

*SABMiller, SABMiller House, Church Street West, Woking, Surrey GU21 6HS UK*

## ABSTRACT

It could be said that Brewing Companies in the 1990's were predominantly focussed on the disposal of their brewery waste streams utilising the services of municipal infrastructure where it existed. Often the approach was one of how can one 'dispose' of this problem as cost effectively as possible.

Through recent significant shifts in consumer perception and local government regulations one sees a move from a traditional disposal mentality to one of waste beneficiation and technical governance, specifically from Farm to Table.

How can breweries become truly sustainable in this fast changing, environmentally aware era? As possibly one of the world's best examples of a natural biotechnology industry, brewing has one of the best chances of becoming completely sustainable. This paper will attempt to share some practical ideas as to why this is possible.

SABMiller plc's Ibhayi Brewery near Port Elizabeth, has formed a technology partnership with the Department of Ichthyology and Fishery Science at Rhodes University, South Africa to conduct a proof of concept pilot study to:

- treat and recycle brewery waste effluent
- recover waste water
- sequester carbon dioxide and harness solar power to produce algal biomass
- generate biogas and re-use excess heat from the brewery
- produce high value fatty acid rich algae, with the potential of producing fish feed ingredients and high value carotenoid pigments
- partially or fully support inputs for aquaculture and hydroponic production systems
- promote community involvement and education, through self-sustaining, economically independent commercial enterprises.