



# Wine Waste Minimisation Club

## Case Study

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### Background

This document is a preliminary case study of the Waste Minimisation Club for Wineries in the Robertson area that serves as a update on the progress of the club. This study will only be complete once recommendations have been implemented (1/2 years time).

The Waste Minimisation Club for Wineries in the Robertson Area focuses on waste minimisation in order to reduce the environmental footprint of the industry. This partnership has the following objectives:

1. Improve the productivity, competitiveness and efficiency of the associated companies and reduce their pollution and waste;
2. To determine the “environmental footprint” of the Robertson wine industry and assist them in developing market models that ensure sustainable practices.
3. Exchange information and experiences with other companies within the sector, as well as with customers;
4. Be informed about subjects or developments related to waste minimisation, such as cutting-edge technologies, legislation, Occupational Health and Safety improvements etc.;
5. Improve information exchange and cooperation with local and regional government.

### Process

Audits and training session will provide members handles to improve their efficiency and productivity in a way that contributes beneficially to the environment, such as:

1. Reduced end of pipe treatment costs,
2. Reduced raw material consumption,
3. Reduced waste disposal costs,
4. Reduced effluent disposal costs,
5. Reduced energy utilisation.

In combination with the increased awareness and up-to-date internal and external information, audits and training sessions will in the longer term lead to improved efficiency, productivity and competitiveness of the associated companies.

### Identification of Waste Minimisation Options

Various areas where modifications in the process upstream could result in both a reduction in resource consumption as well as improved process yield at the member companies. The identified savings per company is listed in Table 1.

Table 1. Summary of Identified Waste Minimisation Options at Member Companies

| Company       | Identified Opportunities |
|---------------|--------------------------|
| Ashton Kelder | R255 000                 |
| Clairvaux     | R5 500                   |
| De Wetshof    | R73 000                  |
| Distell       | R23 500                  |
| KWV           | R286 000                 |
| Langeberg     | R78 000                  |
| McGregor      | R63 500                  |
| Robertson     | R166 000                 |
| Roodezandt    | R68 500                  |
| Zandvliet     | R17 000                  |

Please note: Feasibility studies on cost viability still need to be conducted on some of the listed “identified savings”.

### Characterisation of Waste Minimisation opportunities

The waste minimisation options included savings in water, energy, product recovery and improved monitoring systems. The estimated savings identified pertaining to each area are broadly outlined in table 2.

Table 2. The areas of focus and the estimated identified savings

| Recommendation                            | Savings Identified - Appr. R/year |
|---|-----------------------------------|
| Improved monitoring and control           | R114 000                          |
| Product recovery                          | R360 000                          |
| Energy                                    | R511 000                          |
| Water and effluent                        | R86 000                           |
| <b>Total Estimated Savings Identified</b> | <b>R1 071 000</b>                 |

Detailed case studies accounting for the recommendations made and implemented interventions will be provided for each company at the end of the project.

### Environmental Benefits

As a result of the waste minimisation programme, benefits to the environment have also been realized. These include:

- Reduced energy consumption and therefore emissions.
- Implementation of informal Environmental Management Systems (EMS)
- Reduced water consumption and effluent load
- Increased environmental awareness and prioritisation