

Advisory Council on the Environment

(16.5.1994)

(ACE 27/94)
for information

Review of Strategic Sewage Disposal Scheme - Stage II Options

It was agreed that two reviews would be undertaken of different aspects of the Strategic Sewage Disposal Scheme (SSDS).

2. The first review, which is presently on-going under the direction of the Drainage Services Department, is to address the use of chemical coagulants in the primary treatment process at the Stonecutters Island sewage treatment works to achieve precipitation of heavy metals and for disinfection purposes.

3. The second review which is discussed in this paper is to examine alternatives to the oceanic outfall proposal for marine treatment of the discharges from the Stonecutters Island and the Mount Davis primary sewage treatment works.

4. The main objective of this review is to ascertain whether scientific and engineering advances in biological treatment processes since the SSDS was proposed in 1989, have been such as to make the original decision to use oceanic disposal of primary treated effluent less desirable or in any way inappropriate.

5. Whilst biological treatment was fully considered in developing the SSDS, it is recognised that process technology has developed since 1989.

6. There are two fundamental options that must be considered when addressing the use of biological treatment processes, as under normal operations such treatment works produce nutrient enriched and bacterially contaminated effluents; the options are :

- i) whether to use the conventional biological process and discharge to oceanic waters where nutrients and bacteria can be readily dispersed; or
- ii) whether to incorporate nutrient and bacteria removal into the biological process and to discharge the effluent to inshore waters.

7. A locally based consultant who has had no previous involvement in the SSDS is to be appointed by mid June to investigate the feasibility of providing a biological treatment works for SSDS flows. A list of appropriate biological processes will be derived and all the necessary capital and operational cost data will be obtained in order that a comparison can be made with the existing proposal. Process reliability and environmental factors will be fully addressed.

8. The consultant will specifically address the two fundamental options outlined in paragraph 6 above and determine the relative capital and operational costs of the alternatives using Net Present Value analysis techniques. On completion of the study a Review Report will be prepared which will outline the arguments for and against the alternatives and present the detailed costings and environmental implications.

9. In addition it is intended to bring together a panel of three internationally acclaimed experts in the field of wastewater disposal from China, Europe and the USA to present their views on the alternatives of treatment and disposal that have been addressed by the consultant, together with their own views on the existing SSDS proposal.

10. A meeting between Members and the international experts could be arranged at the end of the year to discuss the outcome of the Review.

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Environmental Protection Department