ACID SULFATE SOIL, BAIGUP RESERVE, SWAN RIVER TRUST INVESTIGATION

2240. Hon Jim Scott to the Minister for Local Government and Regional Development representing the Minister for the Environment

I refer the Minister to the media statement from the Swan River Trust of March 25, 2004 regarding acid sulphate soil identified at a Bayswater wetland and the investigation initiated by the Swan River Trust and the DoE -

(1) What did the Swan River Trust identify as the cause of the acid sulphate mobilisation?

(2) Is acid sulphate discharging from the Baigup Reserve into the Swan River?

(3) If so, what action is the Swan River Trust and the DoE taking?

(4) Will the Minister table the location of acid sulphate monitors currently operating at the Baigup Reserve?

(5) Will the Minister table the detailed sample analysis carried out by the Swan River Trust and the DoE at the Baigup Reserve?

(6) Will the Minister table the investigation carried out by the Swan River Trust and the DoE into the occurrence of acid sulphate mobilisation at the Baigup Reserve?

(7) Will the Minister table the stringent requirements for developers who apply for new development proposals along the riverfront mentioned by Dr Latchford in the media statement?

(8) Has the Government set up a Ministerial Advisory Committee on acid sulphate soils?

(9) If yes to (8), who are the members and which organisation do they represent?

(10) Why is the DoE failing to employ the precautionary principle regarding development on areas of high-risk acid sulphate soils?

Hon TOM STEPHENS replied:

The Minister for the Environment has provided the following response:

1) Baigup Reserve is underlain by naturally occurring acid sulphate soils that have progressively been acidified in many areas due to alteration in drainage in the reserve over the last 20 years. The hydrology of the reserve has been altered by the construction of a causeway that has restricted tidal flushing; by drainage; and by the excavation of two artificial lakes between 1986 to 1997. These changes have caused soils in many parts of the reserve to dry out and be exposed to air.

2) It is likely that sufficient acid is now stored within soil profiles within the reserve to continue discharging acidic waters into the Swan River for many decades, without treatment. Chemical analysis and ongoing monitoring of the quality of groundwater and surface runoff in Baigup Reserve has confirmed that drainage from the site into the Swan River is highly acidic and has the potential to cause environmental harm.

3) As an immediate short-term management response, the Swan River Trust (SRT) and the Department of Environment (DoE) have modified drainage at the site to minimise the rate of acid discharge to the river. The DoE has also recommended a medium to long term remediation strategy for the drainage using compost (anaerobic) treatment wetlands to stop the soils acidifying and a fluidised bed reactor system to neutralise the acidic water. The wetland rehabilitation proposal has been provided to the SRT, City of Bayswater and the Department for Planning and Infrastructure (DPI) for consideration. The wetland mitigation measures would need to be implemented until the acidity stored in soils has been reduced sufficiently to allow natural tidal flushing to be reintroduced into the wetland.

4) The location of current bore monitoring and water quality sampling sites is attached.

5) Since May 2004 the SRT has been monitoring eight sites for baseline data within the reserve. Physical water quality data has been collected on each sampling occasion in conjunction with total acidity (TAA). When applicable water chemistry samples were collected for total heavy metal and nutrient analysis. Results from the regular water quality sampling sites are attached.

6) The report from the investigation into the occurrence of acid sulphate mobilisation (which includes the bore monitoring) is incomplete and therefore not available.

7) The Western Australian Planning Commission Bulletin 64 is attached and further information is available from www.environment.wa.gov.au.

8) The Government has not set up a Ministerial Advisory Committee on acid sulphate soils. The recently released Proposed Framework for Managing Acid Sulfate Soils - June 2004 has recommended that a

Western Australia Acid Sulfate Soil Advisory Committee be established to implement the proposed framework. An Acid Sulphate Soils Working Group is currently in operation.

9) Not applicable.

10) Since the release of the Planning Bulletin 64 in November 2003, the DoE has been working closely with the DPI to ensure that developments in high risk areas have investigated acid sulfate soil risk and prepared management plans to address the soil disturbance and dewatering operations.

[See paper no 2605.]