

12 September 2007

Josh Clydesdale  
Senior Policy Analyst  
Queenstown Lakes District Council  
Private Bag 50072  
Queenstown 9348



6CWM03.48

## **Re: Oxidation Ponds Site, Wanaka – Plan Change**

Dear Josh,

Further to your e-mail correspondence dated 27 August 2007 we have addressed your questions concerning proposed development within and around the oxidation ponds located along Ballantyne Road near its intersection with Riverbank Road. In particular we have provided comment on the following issues:

- Development within the existing oxidation ponds structure.
- Adequacy of the existing Opus International Consultants "Geotechnical/ Hazard Assessment, Three Parks Land, Wanaka; Report No. 1184" as it relates to development of the oxidation ponds

### **Development within existing oxidation ponds**

As outlined in Opus report No. 1184, test pits were not excavated beneath the oxidation ponds during the site investigation and the closest test pits were numbers TP2, TP6 and TP8. These test pits revealed an underlying geology consisting of sands and gravels that became dense at approximately 1 – 2m depth. Based on the site investigation results it is our assessment that similar materials are likely to underlie the oxidation ponds.

The MWH 2005 report "Remediation of the Oxidation Ponds site in Ballantyne Road" noted that the ponds have an outer embankment, and are lined with a clay blanket. Development of the site would require removal of any sludge in the ponds, and possibly removal of the clay blanket, as this liner may be compressible and prone to settlement. The area of excavated material could then be backfilled with engineered fill to meet requirements for proposed development. Site contamination issues associated with the oxidation ponds will be largely mitigated by removal of the sludge and clay liner from the site.

### **Adequacy of the Existing Hazard Assessment**

The existing hazard assessment completed by Opus has provided a preliminary assessment of geological hazards associated with development at the oxidation ponds. It is our opinion that this assessment provides adequate information concerning these hazards to progress a yard based concept for the oxidation pond area. As outlined in Report No. 1184, more detailed investigation will be required prior to construction to determine site specific



conditions and solutions.

I trust the above information is sufficient for your purposes. If you have any questions or concerns please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Shane Greene", with a long horizontal flourish extending to the right.

Shane Greene  
ENGINEERING GEOLOGIST