1. With regards to the trade-off between cost and reliability, the power supply system should be reliable in that it is able to supply enough power to the pumps to deliver the required 3ML of processed water to the mine site per day. Failure to do so would be an unacceptable cost.

2. The amount of the downtime in the pumps is not critical as long as the required 3ML of processed water is delivered to the mine site per day.

3. The backup power supply system should come online within half a day’s time, but ideally it should come online instantaneously.

4. With regards to the expected solar usage, there is no specific number or percentage of solar usage in the proposed power supply systems expected. We should consider a design with a 10 year operating life and to use the project requirements and operating life to gauge how much renewable energy versus non-renewable energy to use. Make comparisons between fully renewable, on-grid and hybrid solutions.

5. The goals of this project should be aligned with the end client, the mining company that owns the borefields in Newman and to treat Jacobs as an intermediary between the team and the mining company. In addition, we could use any mining company’s goals as a reference.

6. With regards to risk assessment, only a risk register was expected and that a risk assessment with likelihoods and consequences or a risk ranking matrix was **unnecessary**. The risk register template was available on LMS. Furthermore, the risk register should include **both safety and business risks** at all stages of the project, such as the beginning, PPIR and design conceptualizing stages. (Assigning likelihoods and consequences to the risks was unnecessary and the key point was that the team identifies the risks and explain how to mitigate them as the client would perform their own risk assessment.)

7. 100W requirement includes the control panel in addition to the telemetry system.

8. With regards to how long should the back-up system last, the team would have to work it out based on their own system’s possible downtime. In addition, the risk of the main power supply system failing should be included in the risk register.

9. The team should assume that both the power supply system and the mine would **be decommissioned in 10 years**. The costs of decommissioning should be considered when calculating installation costs and described in qualitative terms as it may be difficult to obtain an accurate estimate.

10. The scope of the project includes the electrical connections between the power supply and the pump system but the team would **not** has to consider it in great detail. The amount of detail to go into would depend on the particular team design and the accuracy to which the team could estimate the costs. The important thing is to present the team’s findings.

11. With regards to the difference between requirements and constraints, the only requirement of the project is that the power supply system can reliably get the required amount of water to the mine site. The **constraints** would be the capacity of the 3ML storage tank and the 10 year lifetime of the project. There are no constraints on how much land the teams’ designs can use but **the cost of the land** would have to be considered.

12. The team could use the Rawlinsons Construction Cost Guide as a reference when estimating the prices. If the team could come up with a list of items they wanted pricing information for, John-Ross would try to obtain the relevant information. Remember to include the rates used to estimate costs in the final report.

13. One important thing is that the team should list out assumptions and explain the reasoning behind them, because the project seems to be open-ended.