

**Response to Commissioner Taylor’s question regarding basis for weighting of wetland impact in Appendix 3 to application (multi-criteria analysis)**

**Prepared by Micah Sherman (MEL), 6 August 2024**

The alternatives and optimisation multi-criteria analysis was undertaken to help assess the relative advantages and disadvantages of a number of solar farm layouts. The bespoke assessment allowed MEL to undertake an inclusive assessment where qualitative criteria could be analysed alongside quantitative criteria.

With regards to the multi-criteria analysis the following criteria and relative weightings were assessed:

Criteria	Cost	Capacity	Yield	Transmission Route	Flood Risk to Asset	Flood risk to Other Properties
Weighting	100	25	100	50	90	100

Criteria	Wetland Effect	Constructability	Safety	Maintainability	Sustainability
Weighting	50	75	100	100	75

During the hearing, Commissioner Taylor questioned why wetlands have been given a lower rating than other criteria.

Within the alternatives and optimisation assessment, the criteria given the highest weighting were critical to maintaining a functional project. These included Cost, Yield, Flood Risks to Asset, Flood Risk to other properties, safety and maintainability, i.e. a design that failed to score high in these areas was unlikely to be economic, able to achieve consent, and/or obtain board approval for the final investment.

Constructability and Sustainability were given high weighting as well as these criteria were also critical to project viability, and required to gain board approval, though to a slightly lesser degree than the criteria listed above.

At the time of the optimisation assessment, MEL was aware that the economics of the solar project were marginal and that avoidance of all wetlands on Site 1 would not be possible while retaining an economic project. MEL was also aware that the wetland (area) and solar yield criteria were inversely correlated, i.e. layouts with higher yields would inevitably have a larger impact on the wetlands (and vice versa). Thus, we determined that a lower wetland weighting was appropriate, this would then help bring to the forefront the layouts which had had high yield while also applying the effects management hierarchy.

At a later stage in project development (as discussed in my evidence) we again explored whether additional wetlands could be removed from Site 1 while still retaining a functional project. The analysis considered an additional four scenarios all of which were variations on Option 4 (from the previous Beca analysis). Based on this analysis, it was confirmed that in order to maintain a functioning project, no further wetland removal on Site 1 could be avoided.

While the alternatives and optimisation multi-criteria analysis was a key aspect of MEL’s decision making within the effects management hierarchy, other aspects that were critical to the decision-making included input from Boffa Miskell and MEL’s economic analysis of the various options considered.