Reviewer 1:

That an optimal solution is much faster is surprising and is one of the particularly useful points in this manuscript worth comparing to other studies which have found previously that optimal solutions were much slower.

Of particular note the authors should refer to the comprehensive review of studies and tools presented by Sarkar et al. and a similar study by Moore that discusses the advantages and settings for different approaches (Moore et al. 2003; Sarkar et al. 2006).

Secondly, the authors comparison of Marxan and PriortizR and the recommendations they make are rather shallow in terms of real world application – they suggest that an optimal solution is preferable and that time and cost savings would translate into further acquisitions – but the world is not optimal and only one documented minimum set style designed reserve has been implemented in full (see Sarkar for discussion of this) whereas the hundreds to thousands of other plans based on marxan like approaches have been applied piece meal and requiring dynamic planning.

It’s unclear to me what advantages PrioritizR has in this case and in fact may present some disadvantage by having only a singular solution rather than a range fo good solutions for stakeholders to negotiate over. A more thoughtful discussion of what role optimal solutions have in a complicated and messy world is needed.

Moore JL, Folkmann M, Balmford A, Brooks T, Burgess N, Rahbek C, Williams PH, Krarup J. 2003.

Heuristic and optimal solutions for set-covering problems in conservation biology. Ecography 26:595-601.

Sarkar S, et al. 2006. Biodiversity conservation planning tools: Present status and challenges for the future. Annual Review of Environment and Resources 31:123-159.