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Dear Elliott,

Proposed fungi translocation at Pengarnddu service reservoir

Following our site visit this morning, it is clear the fungi translocation as originally proposed will need to be modified to overcome the various engineering constraints and the realigned fence, and because the turf in the affected area appears to be relatively shallow and stony. I have therefore proposed the following modified method that will still meet the main objectives for conserving the fungi and contributing towards the scientific studies of fungi translocation and eDNA work.

1. The area of high value turf adjacent to the access road must be retained undisturbed wherever possible, and not used for parking or storage. In particular, the skip placed on the grass near the site entrance should be removed as soon as possible, and the Heras fencing moved back to the edge of the stone-chipped surface to prevent further disturbance.



2. The turf translocation will be on relatively rocky ground, which will complicate the turf removal. In addition, the realignment of the DCWW construction boundary fence and prohibition of excavators across buried structures in the compound area will mean that it will not be possible to access the donor turf area from the north side, or gain access to potential receptor areas within the realigned fence.



The excavator will need to cross the donor area once to reach the work site, so it is proposed to use a relatively small (approx. 8 ton) tracked excavator, to minimise the ground pressure. Ground mats are unlikely to be

helpful given the steep gradients of the bank. Efforts would be made to track it over the stoniest route rather than the deeper soil. In addition, it will also be necessary to use a smaller bucket than originally envisaged (this will be easier for cutting turves in the relatively rocky ground). Straight edged buckets 50cm and 1m wide (or nearest available equivalent) will probably be best.

3. It is now proposed to use damp ground within the former reservoir bed as the receptor area, as this is much closer to the donor site and will not involve repeated tracking across the small stream. The turf would be cut from the old reservoir bank and simply placed on top of the damp grassland in the reservoir bed. The optimum area for the receptor site is currently visible as a belt of Meadow Buttercup and Oval Sedge (higher than the wettest ground, but not so high as to affect ground that might already support good numbers of waxcap fungi).



4. It is likely that the large rocks in the donor area are part of the original armouring of the reservoir bank, so these will be moved away using a crowbar and/or excavator bucket where possible, to allow larger, deeper turves to be cut (approximately 10cm depth if possible). A spade or turf slicer will be used to cut the roots at the sides of the turf to obtain neater edges if necessary, as this will help to lay the turves more closely together at the receptor site. The turves will be laid carefully onto the receptor site and nudged into position by the excavator or by hand. The excavator bucket may be used to gently press the turves onto the damp ground, but the turf will not be tracked over. The excavator will work systematically from the northern slope of the bank, across the stony top, and down the south-eastern side.
5. Once completed, a Heras fence will be installed between the construction corridor and the receptor area and other retained grassland, so that the translocated turf can continue to be grazed by the local horses, and to prevent accidental damage by subsequent construction activity. (NB. The receptor area to the north of the new road would not be grazed until the fences are removed at the end of the construction period)
6. Soil eDNA samples would be collected from a total of 6-8 locations in the donor and receptor areas, and in retained grassland for comparison. As a minimum, the likely locations are as follows:
 - Donor site (shallow stony soil)
 - Donor site (deeper soil)
 - Retained grassland adjacent to donor site (control)
 - Receptor site prior to turf placement
 - Grassland slope where road enters compound
 - Adjacent retained grassland slope in compound (control)

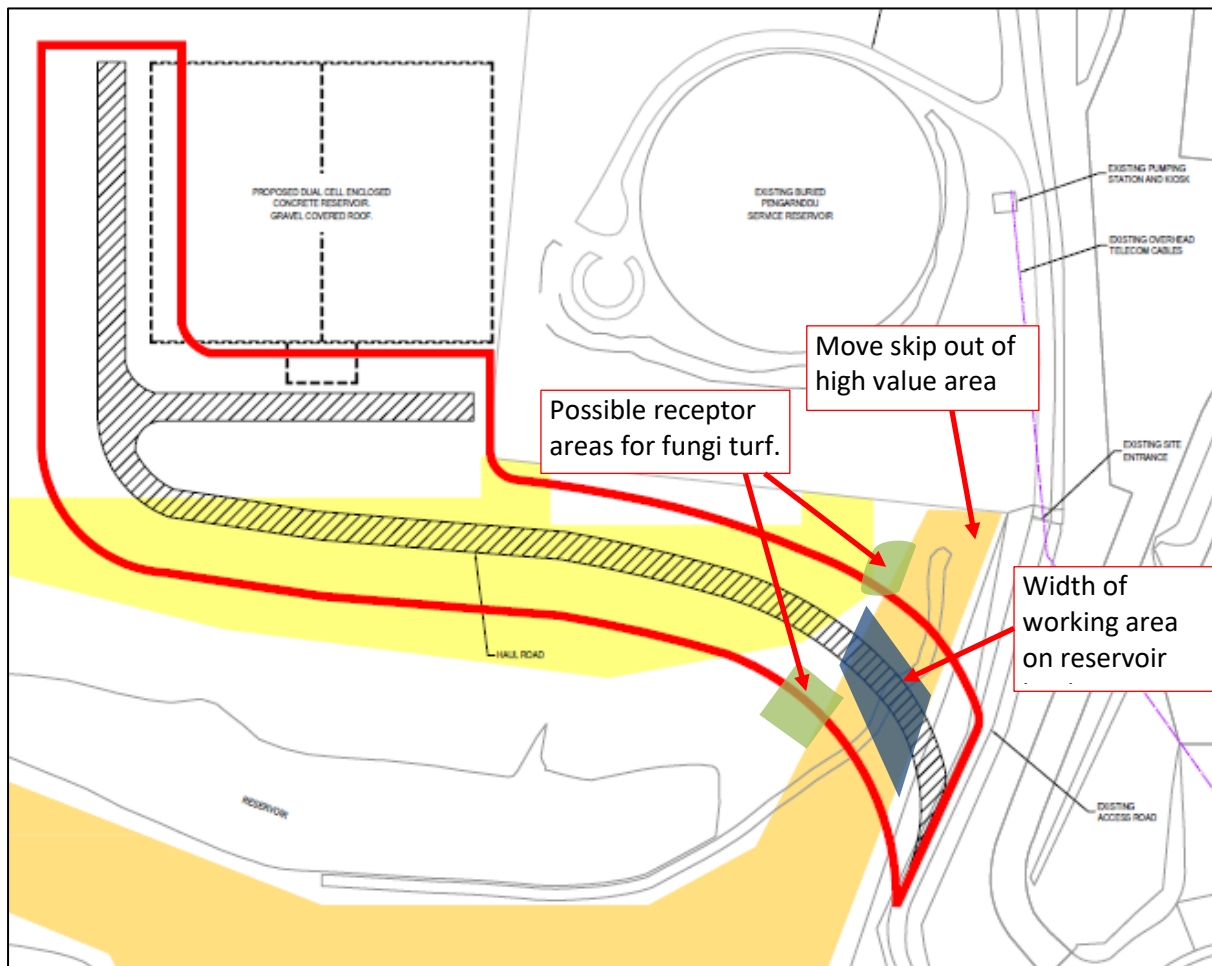


Figure 1. Revised potential locations for turf receptor areas.

I trust that these revisions are an acceptable means of overcoming the various constraints on this site, but please let me know if you think any other revisions are needed.

Yours sincerely,

P.W. Sturges

Peter Sturgess