Post-harvest report for Harvest Area 4718, Beverley Block, Wakamarina Valley

In fulfilment of Authority 2018/502

For P.F. Olsen Ltd on behalf of A. Beverley

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Introduction

PF Olsen Ltd were contracted to manage the harvest of a plantation of mature *Pinus radiata* on a block of land owned by AM Beverley up the Wakamarina Valley in Marlborough, HA 4718. The archaeological assessment¹ found there were four sites within the block that might be affected by harvesting or earthworks and it was advised that an Authority be sought to manage the potential damage to those sites.

This is the final report of the post-harvest inspection of the features, as required by Condition 10 of the Authority, 2018/502.



Location Map

Figure 1: Aerial showing extent of harvest areas within the block *(retrieved from Smart maps)*. The Authority covers only HA 4718.



Figure 2: Aerial image showing boundaries of the block containing the block to be harvested (retrieved from Smart Maps)



Figure 3: Aerial showing plotted co-ordinates of recorded sites (Smart maps tool)

Physical Environment

The forestry block is situated on the north bank of the Wakamarina River and extends in a south-westerly direction from the true right bank of Little Mountain Camp Creek. The block extends abut 400m along the road frontage. A narrow strip of gently contoured river terrace along the road gives way to a steep slope that rises to 280m a.s.l.

The block was farmed until relatively recently. The trees were planted in 1993.

The Marlborough District Council soil map describes the soils as 47b, Opouri Series, Steepland complex.

Summary of Authority Assessment

A total of four features were identified during the site survey: the water race recorded as O27/248, part of the tramline formation (O27/247), Rasmussen's house site (newly recorded as O27/291), and a previously unrecorded race (O27/292) (Figure 3). Historic research found that the tramline (O27/247) and the house site (O27/291) demonstrably post-date 1900, but that the two water races (O27/248 and O27/292) were possible associated with 19th century mining activity.

The remains of the tramline, O27/247, were visible as a narrow benched track above Gold Road, having already been damaged by formation of the road. The site was not expected to be impacted by the forest harvest.

The three remaining sites – the two water races and the house site – were all within the area planted with *P. radiata* and were at risk of damage from harvest and earthworks.

Description of Archaeological Work Undertaken

An initial site visit was carried out on 17th January 2018 to confirm the type and condition of the archaeological features in the harvest area, together with Campbell Harvey and Terry Carran, harvest planners for PF Olsen Ltd.

The features were recorded and photographed, and we discussed ways in which the trees could be removed without damaging the sites. PF Olsen Ltd has a robust environmental protocol which includes identifying archaeological sites with distinctive yellow triangular markers and tape. The triangles are placed on standing trees around the perimeter of the features to alert the contractors to leave those stumps high, so the trees do not fall across the sites.

A second site visit was carried out on 10th April 2018, immediately prior to harvest. The harvest crew from Chamois Logging were present and were made aware of the features and the importance of avoiding damaging them. Again, there was group discussion around how that might be best achieved. There were numerous portable relics around Rasmussen's house site which were noted during the original survey; these were collected and placed inside the remains of the Orion oven to protect them from being smashed or covered by the felled trees. The old post and wire fence was singled out as being particularly vulnerable to damage.

The post-harvest inspection was carried out on the 26th June 2018, with Terry Carran. The site records were updated with the results and photographs.

Results

All the conditions of the Authority were met, and in fact the outcome exceeded expectations. All the extant features of the Rasmussen house site, including the post and wire fence, were left in the same state as they were prior to harvest. The section of the deep water race O27/248 was untouched. The only damage incurred was in one spot along the shallow race recorded as O27/292, where machinery had to cross it to get to the other side. Damage was minimal as it was a high point where the race was barely discernible, and damage was confined to a single crossing point.

The contractors, Chamois Logging, (Nigel Bryant Ltd), were particularly fussy about avoiding damaging the sites and approached the removal of the trees as a challenge, taking pride in achieving the best outcome where it would have been far easier to claim destruction of the sites as inevitable collateral damage.

Future Management

In time the area will be replanted, and it is important to continue the positive outcome of the current harvest by leaving a buffer zone around the recorded sites. This was evidently not considered when the trees were planted in 1993, but with heightened awareness of the sites it should be easy enough to tailor the planting to make future harvest less risky.

A standard recommended buffer zone is 20m from the perimeter of a site, but in this case that distance will impose an unnecessary restriction of the land use. With the knowledge of the methods used to harvest this crop of trees, it is suggested that planting is planned to make future harvest less risky for the sites and less of a challenge for the harvest crew.

In practice this may mean leaving at least a 2m buffer from the sites and ensuring that there are no trees planted in areas where they cannot be extracted without impacting the sites. The Harvest Managers are best placed to determine any exclusion zones.



Photographs taken during post-harvest inspection 26th June 2018

Tree marked with yellow triangle to leave as high stump



Water race O27/292



Relics from the Rasmussen house site placed inside oven



Looking south across Rasmussen's house site in the foreground, surrounded by high stumps



The fence around Rasmussen's house site, intact after harvest



The fence around Rasmussen's house site, intact after harvest