

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

HOW PROPERTY
(PEEL FOREST LODGE)



Report prepared for Timaru District Council by Mike Harding
July 2010

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Bert and Penny How (Peel Forest lodge)
Valuation References: 24640/046.00
Address: Brake Road, Peel Forest
Location: Between Peel Forest village and Kowai River, near Peel Forest
Park Scenic Reserve.
Ecological District:..... High Plains Ecological District.
TDC Land Type:..... Plains.
Land Environment: N3 (eastern South Island undulating plains and hills).

ECOLOGICAL CONTEXT:

The property lies on the gently sloping upper plains on the floodplain of Kowai River at Peel Forest. It lies at the boundary of Geraldine, Orari, Low Plains and High Plains ecological districts, though has characteristics most representative of the High Plains Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest, with localized areas of kowhai-kanuka forest and shrubland alongside active stream channels. Minor areas of matagouri-*Coprosma-Olearia* shrubland and small wetlands were likely to have been present on recently disturbed surfaces. The indigenous fauna would have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

Indigenous vegetation on the property comprises podocarp-sycamore forest, with large old podocarp trees emergent from a canopy of naturalized sycamore trees. This forest lies close to other indigenous vegetation on nearby properties, including that protected within Dennistoun Bush and the regionally-important Peel Forest Park Scenic Reserve. The property lies within the known distribution of the South Canterbury population of long-tailed bat (a nationally endangered species).

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during July 2010. One area, totalling approximately four hectares and comprising most of the property, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria. This SNA is listed in the table below.

Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
660	How Forest	J37: 694-985	3.82	Sycamore-podocarp forest

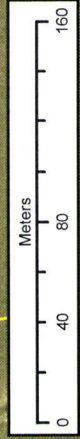
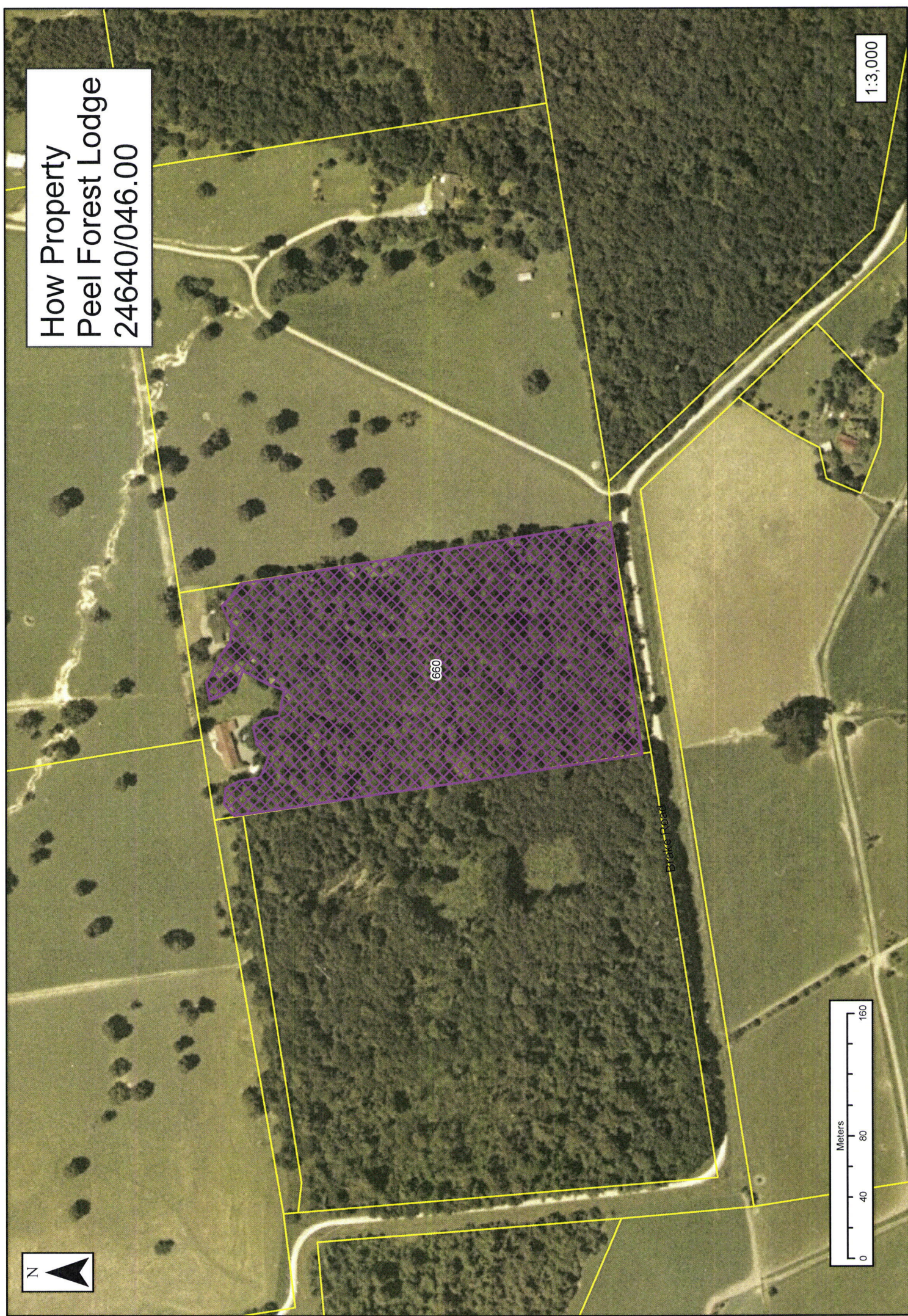
This SNA is illustrated on the attached aerial photograph and described in greater detail on the SNA Survey Form in this report. Note that the boundaries of the SNA are indicative, rather than precise. This area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and is considered to be sustainable with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and habitat which meet the Interim Definitions.

To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.



How Property
Peel Forest Lodge
24640/046.00



1:3,000

Area Name: How Forest**Location (central map reference):** J37: 694-985**Ecological District:** High Plains**Surveyors:** Mike Harding**Property:** Bert and Penny How (Peel Forest Lodge)**Nearest Locality:** Peel Forest**Area Size (ha):** 3.82**Altitude (m):** 300**Survey Time:** 2½ hours**Survey Date:** 20-07-10

General Description:

This SNA is a modified remnant of original (old growth) forest. It lies on a gently sloping terrace, presumably an old outwash surface of the Kowai River. The forest adjoins a similar area of forest protected as public conservation land on its western boundary and lies close to other areas of indigenous forest, including a large area of sycamore-dominated forest at its southeast corner.

Plant Communities:

The main plant community present is sycamore-podocarp forest, described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by sycamore* with tall emergent trees of kahikatea, matai, totara, lowland ribbonwood and narrow-leaved lacebark. Trunk diameters (cm at breast height) of the larger trees are: kahikatea, 135-180; totara, 100-110; matai, 95-140; and sycamore*, 50-60. Other canopy or sub-canopy species are fuchsia, wineberry, kaikomako, kowhai, pokaka, broadleaf, matipo, marbleleaf, pohuehue and occasionally old man's beard*.

The forest understorey is dominated by mahoe, shrubby mahoe, horopito, *Coprosma rotundifolia* and *Coprosma rubra*. Other understorey species are lemonwood, matipo, pokaka, poataniwha, pate, *Raukaua anomalus*, kaikomako, lancewood, five-finger, mapou, weeping mapou, holly*, Himalayan lily*, cherry laurel*, plum*, native jasmine, bush lawyer and leather-leaf fern (on tree trunks). Saplings of kahikatea, totara, matai, lowland ribbonwood and narrow-leaved lacebark are also common.

The forest floor is dominated in most places by prickly shield fern and moss. Other ground-cover species are hound's tongue fern, hen and chickens fern, hanging spleenwort, black nightshade*, bush lily and seedlings of sycamore*, narrow-leaved mahoe, wineberry, broadleaf, totara, horopito, kowhai, holly*, pohuehue and *Coprosma* species.

Species commonly present in forest openings are blackberry*, bracken, *Hypolepis ambigua*, native convulvulus and pasture grasses. Additional species present on the forest margin at Brake Road are elderberry*, ash* and old man's beard*. Additional species present at the northern edge of the forest (near the lodge) are mistletoe (on totara), narrow-leaved mahoe, cabbage tree, *Melicytus* "blondin" and a number of planted native species.

Birds/Fauna Observed:

Native birds observed during this brief survey were kereru (NZ pigeon), grey warbler, fantail, bellbird and paradise shelduck (flying overhead). Native 'leaf-veined' slugs were observed under rotting wood on the forest floor.

Notable Flora, Fauna and Habitats:

Important features of this area are the number and size of the old podocarp (kahikatea, matai and totara) trees, the presence of locally-uncommon plant species (*Raukaua anomalus* and *Melicytus* "blondin"), the dominance of the relatively uncommon *Coprosma rubra* in the understorey, the habitat the area provides for forest birds (including rifleman, an 'at-risk' species) and possibly long-tailed bat (a nationally-endangered species), and the proximity of the area to regionally-important areas of protected forest at Dennistoun Bush and Peel Forest Park Scenic Reserve.

Notable Plant and Animal Pests:

Sycamore is the most important plant pest present. It dominates the forest canopy over large parts of this SNA and is present in the forest understorey. Old man's beard is also present in patches throughout the

forest, though is only dominant along the Brake Road boundary. Ash, holly, elderberry, cherry laurel, plum and Himalayan lily are occasionally present. Animal pests were not surveyed.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

This forest is buffered on its western boundary by protected forest and is fenced from grazing on all other boundaries. It has a good size and shape and lies close to other areas of regionally-important indigenous forest.

Condition and Management Issues:

The main management issue is the control (and eventual removal) of sycamore. Larger sycamore trees have been removed from parts of the forest. However, many stumps have coppiced, leaving vigorous re-growth of smaller trunks. Control of old man's beard is the next most important weed control issue. Removal of other woody plant pests would also benefit the forest.



Interior view of the northwest part of the forest

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A modified (by sycamore) example of the forest originally present in this part of the ecological district.
Rarity	M/H	Large old podocarp trees are uncommon in the ecological district. The forest supports locally uncommon plant species. Larger trees provide suitable habitat for a nationally-endangered species (long-tailed bat).
Diversity and pattern	M	A relatively diverse range of plant species is present, though diversity is reduced from that formerly present.
Distinctiveness/special features	H	The number and size of the old podocarp trees is a special feature. One kahikatea tree has a trunk diameter of 180cm.
Other Criteria		
Size/shape	H	A relatively large area of forest for the ecological district, with a good shape.
Connectivity	M/H	Adjoins protected forest on one boundary and lies close to other areas of indigenous forest.
Long-term Sustainability	L/M	Protection of ecological values in the long term will probably be dependent on control of sycamore and old man's beard.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

This area of forest has been informally protected by the landowner. It has been managed, in part, for timber production, though this has not reduced its ecological value. The future ecological value of the forest will probably require permanent removal of sycamore.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the number and size of the old podocarp (kahikatea, matai and totara) trees, the presence of locally-uncommon plant species, the dominance of the relatively uncommon *Coprosma rubra* in the understorey, the habitat the area provides for forest birds (including rifleman, an 'at-risk' species) and possibly long-tailed bat (a nationally-endangered species), and the proximity of the area to regionally-important areas of protected forest at Dennistoun Bush and Peel Forest Park Scenic Reserve.



Scientific names of species cited by common name in this report

(Note: this is not a complete species list; it is a list only of species cited by common name in this report)

Common Name	Scientific name
(* = naturalised species)	
ash*	<i>Fraxinus excelsior</i>
blackberry*	<i>Rubus fruticosus</i>
black nightshade*	<i>Solanum nigrum</i>
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia</i> sp.
cabbage tree/ti rakau	<i>Cordyline australis</i>
cherry laurel*	<i>Prunus laurocerasus</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
fuchsia	<i>Fuchsia excorticata</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hen and chickens fern	<i>Asplenium bulbiferum</i>
Himalayan lily*	
holly*	<i>Ilex aquifolium</i>
horopito/pepperwood	<i>Pseudowintera colorata</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
kaikomako	<i>Pennantia corymbosa</i>
kanuka	<i>Kunzea ericoides</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
leather-leaf fern	<i>Pyrrosia eleagnifolia</i>
lemonwood	<i>Pittosporum eugenioides</i>
lowland ribbonwood	<i>Plagianthus regius</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mistletoe	<i>Ileostylis micranthus</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
narrow-leaved mahoe	<i>Melicytus lanceolatus</i>
native convolvulus	<i>Calystegia tuguriorum</i>
native jasmine	<i>Parsonsia</i> sp.
old man's beard*	<i>Clematis vitalba</i>
pate	<i>Schefflera digitata</i>
plum*	<i>Prunus</i> sp.
poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>
pokaka	<i>Elaeocarpus hookerianus</i>
prickly shield fern	<i>Polystichum vestitum</i>
shrubby mahoe	<i>Melicytus micranthus</i>
sycamore*	<i>Acer pseudoplatanus</i>
totara	<i>Podocarpus totara</i>
wineberry	<i>Aristotelia serrata</i>