

Completed example of a KGW

# Kahikatea Green Wheel Site Datasheet<sup>1</sup>: To assess Kahikatea Forest Recovery

Site name: Rotopiko/Turney Bush Date: 5 Aug 2019

Site UKID number<sup>2</sup>: #638

Assessor: Karen Denyer Date of last assessment (n/a if first one): n/a, first assessment

Location (district): Waipā, SH3, south of Ōhaupō

Location (NZTM): E 1803749 N 5796849

Soil type:

Peat  Gleyed silt loam  Pumice  Other(state): \_\_\_\_\_

Landform (tick all that apply and circle the predominant one):

Flat  Gentle slope  Basin  Steep slope

Original forest type<sup>3</sup>: Not mapped in Waikato RC pre-human but nearest examples are WF8: kahikatea-pukatea forest

Birds noted during visit: Tūī, fantail, grey warbler, morepork, falcon and exotic passerines

Special features (e.g. threatened species): Planted swamp maire, swamp astelia, long-tailed bats

Tree/shrub species present only as seedlings: Pōkākā, Melicytus micranthus, white maire (planted)

General site description (brief notes): \_\_\_\_\_

Site sketch/location<sup>4</sup>: \_\_\_\_\_

20-30 year old planted  
kahikatea stands

Turney Bush  
(mature kahikatea/pukatea forest)



1 Complete a separate datasheet for each individual kahikatea stand

2 Obtain UKID number from the WRC website: <https://waikatomap.waikatoregion.govt.nz/Viewer/?map=49a72640c5474484b156d453144044a3>

3 Provided by Waikato Regional Council via Singers and Rogers original vegetation type map. Use to assess representative plant species

4 Draw a sketch map or inset an air photo to show the kahikatea fragment (you can take a screen shot from the WRC website).

SUB-ATTRIBUTES	RECOVERY LEVEL (1-5 or n/a) <sup>5</sup>	EVIDENCE FOR RECOVERY LEVEL (notes)	Method
<b>A Threats</b>			
<b>1 Stock access</b>	5	No stock – securely fenced since 2008.	Visual check
<b>2 Feral ungulates</b>	5	Fully pest-proof fenced since 2011, unlikely to have had feral browsers – too isolated and small.	Visual check
<b>3 Browsers</b>	5	All ground browsers eradicated in 2011.	Visual check
<b>4 Mammalian predators</b>	5	Fully pest-proof fenced since 2011.	Tracking tunnels, chew cards
<b>5 Canopy weeds</b>	5	No canopy weeds present.	Visual check
<b>6 Shrub layer weeds</b>	5	Virtually no shrub layer weeds present, occasional tree privet seedling.	Visual check
<b>7 Ground cover weeds</b>	4	Adventives in light gaps (Yorkshire fog, cock's foot) and sparsely under full canopy (some blackberry, Jerusalem cherry, stinking iris, arum) – all subject to regular control.	Visual check
<b>8 Pest plant presence</b>	2	Five species: Hedychium species (not flowering) – one specimen has been found and dug out, tutsan, Taiwanese cherry (seedlings only) several large-leaved and Chinese privet trees/seedlings have been found and will be progressively removed.	Species list
<b>9 Nutrient input</b>	2	Subject to runoff from grazed slopes above and high numbers of roosting birds following mammalian pest exclusion – though mostly only at the edge.	Visual check
<b>10 Drainage</b>	2	Subject to past drainage which has lowered soil surface up to 1m, no plans to reflood (would require pumps or flood neighbours).	Visual check/ local knowledge
<b>11 Human damage</b>	4	Tracks and activity stations installed for visitors.	Visual check/ local knowledge
<b>AVERAGED SCORE</b>	<b>4</b>	<b>KEY ISSUES:</b> Excessive nutrient input from large bird roost and limited ability to repair past drainage, also RPMS weeds	
<b>B Physical conditions</b>			
<b>12 Size</b>	2	1.3ha (Waikato RC)	GIS analysis
<b>13 Shape</b>	5	1.3 (Waikato RC) – relatively compact	GIS analysis
<b>14 Forest interior</b>	1	None of the kahikatea forest is more than 60m from the native forest edge.	GIS analysis
<b>15 Buffering</b>	3	About 40% of the stand has a dense planted buffer and most of the remaining edge has dense vegetated margin planting.	Visual check
<b>AVERAGED SCORE</b>	<b>2.8</b>	<b>KEY ISSUES:</b> This stand is very small and has no interior forest. With time, as adjacent planted forest matures and planted, this will improve to some extent. At this stage there are few management options other than time.	

<sup>5</sup> n/a = not applicable or not able to be assessed. Recovery level is the KGW star value.

SUB-ATTRIBUTES	RECOVERY LEVEL (1-5 or n/a) <sup>5</sup>	EVIDENCE FOR RECOVERY LEVEL (notes)	Method
<b>C Species composition</b>			
<b>16 Dominance of native plants</b>	4	73% of species present are indigenous species that naturally occur in kahikatea forest (74 of 102 species).	Species list with relative abundance
<b>17 Characteristic plant species</b>	4	42 species of highly representative kahikatea forest plants are present in the stand.	Species list with relative abundance
<b>18 Indicator animal species</b>	4	Wētā in 3 of 10 tunnels (equivalent rate as 6 out of 20) deployed 8 July to 20 July 2018.	Tracking tunnels
<b>AVERAGED SCORE</b>	<b>4</b>	<b>KEY ISSUES:</b> The site is scoring relatively highly, there is scope to improve attribute #18 through eradication of the 5 RPMP species, and of #19 through further planting.	
<b>D Community structure</b>			
<b>19 Vegetation layers</b>	4	Relatively dense canopy and shrub layer, but ground layer bare under dense mahoe, some canopy gaps in exotic grass.	Visual check
<b>20 Canopy condition</b>	5	Little evidence of dieback when viewed externally or using aerial images.	Visual check
<b>AVERAGED SCORE</b>	<b>4.5</b>	<b>KEY ISSUES:</b> Ground layer depauperate or exotic-dominant in places.	
<b>E Ecosystem function</b>			
<b>21 Winter bird food</b>	5	17 winter bird-food species are present, most of them as established individuals.	Species list with relative abundance
<b>22 All season bird food</b>	5	46 bird food plant species are present, some are only as young planted specimens.	Species list with relative abundance
<b>23 Plant recruitment</b>	3	39 shrub/tree species are present, of which 21 (54%) have established seedlings. Many native shrub/tree species have been recently planted and not yet reproducing.	Plot data
<b>AVERAGED SCORE</b>	<b>4.3</b>	<b>KEY ISSUES:</b> Just needs time for planted species to mature	
<b>F External exchanges – links to other natural areas</b>			
<b>24 Landscape matrix (nearby habitat)</b>	2	5.8% - so less than or equal to 25% of the land within a 1km radius of the site is in indigenous forest or indigenous scrub.	GIS analysis
<b>25 Habitat links (terrestrial)</b>	2	4160m from nearest patch of indigenous forest and/or scrub >25ha.	GIS analysis
<b>26 Habitat links (aquatic)</b>	1	A drain runs along the edge of the stand and is fully planted and connected with the peat lake downstream. However, there are minimal links between the stand and the incised drain.	Field analysis
<b>AVERAGED SCORE</b>	<b>1.7</b>	<b>KEY ISSUES:</b> Distant from large stands of native vegetation and in a pastoral catchment – limited ability to improve this score as relies on actions by other landowners.	

SUB-ATTRIBUTES	RECOVERY LEVEL (1-5 or n/a) <sup>5</sup>	EVIDENCE FOR RECOVERY LEVEL (notes)	Method
<b>G Management regime</b>			
<b>27 Legal protection</b>	5	District council reserve	Landowner knowledge
<b>28 Management plan</b>	4	Part of a plan for the East Lake complex within the pest fence.	Landowner knowledge/ records
<b>29 Animal pest control effort</b>	5	Within predator fence, all mammalian predators excluded, no mice recorded here since 2012.	Landowner knowledge/ records
<b>30 Invasive plant control effort</b>	5	Regular annual control of exotics.	Landowner knowledge/ records
<b>31 Revegetation effort</b>	4	Some understorey and buffer planting to improve structure and diversity.	Landowner knowledge
<b>AVERAGED SCORE</b>	<b>4.6</b>	<b>KEY ISSUES: Weeds</b>	
<b>TOTAL SCORE<sup>6</sup> score/max</b>	<b>26 /35</b>		
<b>Bonus (optional)</b>			
<b>32 Long-tailed bats</b> If you have been monitoring bats each year enter your score here.	<b>2</b>	Bats were detected in the site using automatic bat recorders in 2012, but despite being checked every year since were only detected in 2019.	

**Key positive features/changes since last visit:**

n/a – first assessment

**Key issues that could be addressed to improve the health of this forest:**

Increase weed control and focus efforts on reducing exotic bird roost. Limited scope to reconnect the forest to the peat lake as unfeasible to raise water levels by the 1m or more that would be required.

**Paste a screen shot of your completed Green Wheel from the KGW spreadsheet here:**

