

Tukituki Land Care: Catchment Appendices

Mangamahaki Catchment maps

These maps have been created as part of <u>THE BIG PICTURE PROJECT</u> and have been compiled as an appendix to the catchment planning project undertaken by EIS. While these maps maybe a useful resource for TLC, they are supplementary to the outputs provided as part of that project.

December 2024

ENVIRONMENT INNOVATION Current Wetland Extent - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata **Current Wetland Extent** Priority Wetlands - Hawkes Bay Regional Council Regional Resource Management Plan (RRMP)

MfE wetland extent (2001-2016) Wetlands of National Importance (WONI) Miscellaneous O Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Cyclone Gabrielle Sediment Deposition Areas 2023 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Science HBRC: Cyclone Gabrielle Sediment Deposition Areas 2023 Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Cyclone Gabrielle Sediment Deposition Areas 2023 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Science HBRC: Cyclone Gabrielle Sediment Deposition Areas 2023 Confidence: Low Medium High Submerged Miscellaneous O Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Flood Risk Areas - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Flood Risk Areas Flood risk areas Low risk areas Miscellaneous Townships Catchment Boundries State Highways & Major Roads Local RoadsMangamahaki Stream

Geology QMAP: GNS - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Geology QMAP : GNS 1:250K geological units **o** breccia claystone gravel limestone mudstone peat sand sandstone melange Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Irrigated Land 2017 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Irrigated Land (2017) Drip/micro Gun K-line/Long lateral Lateral Linear boom Pivot Rotorainer Unknown Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Irrigated Land 2020 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Irrigated Land (2020) Drip/micro Gun K-line/Long lateral Lateral Linear boom Pivot Rotorainer Unknown Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Land Cover 2001 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Land Cover (2001) Indigenous Forest **Exotic Forest** Manuka and/or Kanuka Indigenous Scrub **Exotic Grassland** Arable **Exotic Scrub** Orchards & Vineyards Urban Wetlands Lakes & Rivers Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Land Cover 2018 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Cover (2018) Indigenous Forest Exotic Forest Manuka and/or Kanuka Indigenous Scrub **Exotic Grassland** Arable **Exotic Scrub** Orchards & Vineyards Urban Wetlands Lakes & Rivers Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Land Use (LUCAS SubName) 1989 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Use 1989 Tall Forest Shrubland Regenerating Natural Species Naturally occurring **Unspecified Exotic Species** Pinus radiata Douglas fir Grazed - dairy Grazed - non-dairy Ungrazed Wilding trees Peat mine Other Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

Land Use (LUCAS SubName) 2020 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Use 2020 Tall Forest Shrubland Regenerating Natural Species Naturally occurring **Unspecified Exotic Species** Pinus radiata Douglas fir Grazed - dairy Grazed - non-dairy Ungrazed Wilding trees Peat mine Other Miscellaneous O Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Land Use (LUCAS) 1989 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Land Use 1989 Natural Forest Planted Forest - Pre 1990 Arable Orchards & Vineyards Grassland - High producing Grassland - Low producing Grassland - With Woody Biomass Wetland Urban Lakes & Rivers Miscellaneous Townships Catchment Boundries State Highways & Major Roads Local Roads Mangamahaki Stream

Land Use (LUCAS) 2020 - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Land Use 2020 Natural Forest Planted Forest - Pre 1990 Planted Forest - Post 1989 Arable Orchards & Vineyards Grassland - High producing Grassland - Low producing Grassland - With Woody Biomass Wetland Urban Lakes & Rivers Miscellaneous O Townships **Catchment Boundries** State Highways & Major Roads Local Roads Mangamahaki Stream

Potential Indigenous Vegetation - Mangamahaki Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Potential Indigenous Vegetation Kahikatea dominated forest Kauri / taraire-kohekohe-tawa forest Rimu / tawa-kamahi forest Hall's totara dominated forest Matai dominated forest Mountain beech dominated forest Red beech-silver beech forest Rimu dominated forest Scrub, tussock-grassland & herbfield above treeline Wetland Miscellaneous O Townships **Catchment Boundries** State Highways & **Major Roads** Local Roads Mangamahaki Stream

Pre-Human Wetland Extent - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Pre-Human Wetland extent Prediction of wetlands before humans arrived Marsh Seepage Swamp Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream

QEII Covenants (as at 30.09.2024) - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke **QEII Covenants** QEII Covenants (as at 30.09.2024) Miscellaneous Townships **Catchment Boundries** State Highways & Major Roads Local Roads Mangamahaki Stream

Riparian Assessment 2014 - Stock Access - Mangamahaki Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Riparian Assessment 2014 Stock Access Excellent Fair Good Poor — N/A Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Riparian Assessment 2014 - Riparian Class - Mangamahaki Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Riparian Assessment 2014 Riparian Class Excellent Fair Good Poor — N/A Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

Riparian Shading Assessment - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke Riparian Shading <1 metre 1 - 5 m 5 - 15 m >15m Miscellaneous O Townships Catchment Boundries — State Highways & Major Roads Local Roads Tukituki River

Roughness Areas- Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Roughness Areas Medium **High** Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Tukituki River

SedNET Net Bank Sediment - River Bank Erosion Yield - Mangamahaki Mangarara Upper Tukituki Corridor Maharakeke River Bank Erosion Yield **—** 0 - 3 --- 6 - 12 --- 12 - 50 50 - 26000 Miscellaneous O Townships Catchment Boundries State Highways & Major Roads Local Roads Tukituki River

SedNET Net Bank Sediment Yield 2020B - TotSedYld - Mangamahaki Mangarara Upper Tukituki Corridor Waipukurau Maharakeke SedNET Net Bank Sediment Yield 2020B **Total Sediment Yield —** 0 - 50 **—** 50 - 200 **—** 200 - 400 **—** 400 - 800 800 - 25172 Miscellaneous Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

SedNET Sediment Budget 2020B - TotSedYield - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Mangatarata Maharakeke SedNET Sediment Budget 2020B **Total Sediment Yield** 0 - 500 500 - 1500 1500 - 4000 4000 - 12000 12000 - 25172 Miscellaneous O Townships Catchment Boundries — State Highways & Major Roads Local Roads Mangamahaki Stream

SMAP Relative Bypass Flow Susceptibility - Mangamahaki Mangarara Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata SMAP Relative Bypass Flow Susceptibility High Medium or high Medium Low Miscellaneous Townships **Catchment Boundries** __ State Highways & Major Roads Local Roads Mangamahaki Stream

SMAP Nitrogen Leaching Susceptibility - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata SMAP Nitrogen Leaching Susceptibility Very High High Medium Low Very Low Miscellaneous Townships **Catchment Boundries** State Highways & Major Roads Local Roads Mangamahaki Stream

SMAP Soil Order - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata SMAP Soil Order Brown Gley Melanic Organic Pallic Raw Recent Allophanic Miscellaneous Townships Catchment Boundries State Highways
 & Major Roads
 Local Roads Mangamahaki Stream

MfE: Stock Exclusion - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata MfE: Stock Exclusion Low Slope Land Medium Slope Land Miscellaneous Townships **Catchment Boundries** __ State Highways & Major Roads Local Roads Mangamahaki Stream

Sustainable Land Use Capability - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Sustainable Land Use Capability Horticulture Cropping Pastoral Farming Pastoral Farming with Trees Dairying Forestry Protection Miscellaneous Townships **Catchment Boundries** State Highways & Major Roads Local Roads Mangamahaki Stream

Topographic Wetness Index - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Topographic Wetness Index Critical Source Areas (CSA) & Flow Network Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Lakes & Ponds Rivers & Waterways

RUSLE - Revised Universal Soil Loss Equation - Mangamahaki Mangarara Makaretu Upper Tukituki Corridor Waipukurau Maharakeke Mangatarata Tukituki RUSLE 99 Percent 95 Percent 90 Percent 75 Percent 50 Percent Miscellaneous Townships **Catchment Boundries** — State Highways & Major Roads Local Roads Mangamahaki Stream