

Stormwater Catchment	Catchment/Zone Description	Receiving Environment	Proposed Stormwater Devices	Water Quality Treatment Proposal	Proposed Hydrological Mitigation	Anticipated Stormwater Treatment Efficacy
Catchment 01, 03, 05, 06, 07, 08, 09	Northern catchments. Consisting of residential, commercial and local centre zones West-bound Jack Lachlan Drive (07)	Northern Watercourse	- On-lot Stormwater Tanks - GPT/Proprietary Treatment Device - Bioretention Wetlands	At-Source – Inert roofing materials to minimise stormwater contaminants at source. Pre-treatment – All water quality flows generated by impervious areas to pass through a proprietary treatment device for initial gross-pollutant and sediment capture Primary Treatment – Catchment flows to convey through a bio-retention wetlands, designed in accordance with GD01 to achieve additional water quality treatment for proposed impervious area. Jack Lachlan Drive – Runoff to be conveyed into proposed development to Wetland 07 for water quality treatment wherever practicable.	SMAF 1 – Retention & Detention of the 95thile storm event via proposed on-lot stormwater tanks and bio-retention wetland devices. 50% AEP – Attenuation to be provided within bio-retention wetland devices. 10% AEP & 1% AEP – Attenuation to be provided within existing basins downstream of proposed bio-retention wetlands, prior to off-site discharge further north. Jack Lachlan Drive – Attenuation of runoff during 50%, 10% and 1% storm events, providing betterment to west-bound lane of JLD, which would otherwise be unattenuated.	Proprietary Treatment Device – reference to be made to manufacturer guidance for treatment efficiency. Target contaminants include: - Gross Pollutants - Total Suspended Sediment (TSS) - Heavy Metals - Hydrocarbons Bio-retention Wetland – treatment efficiency in accordance with GD01 guidance.
Catchment 02, 04, 10, 11	Western catchments. Consisting of residential, commercial and local centre zones	Waikopua Creek	- On-lot Stormwater Tanks - GPT/Proprietary Treatment Device - Bioretention Wetlands	At-Source – Inert roofing materials to minimise stormwater contaminants at source. Pre-treatment – All water quality flows generated by impervious areas to pass through a proprietary treatment device for initial gross-pollutant and sediment capture. Primary Treatment – Catchment flows to convey through a bio-retention wetlands, designed in accordance with GD01 to achieve additional water quality treatment for proposed impervious area.	SMAF 1 – Retention & Detention of the 95thile storm event via proposed on-lot stormwater tanks and bio-retention wetland devices. 50%, 10% & 1% AEP - Runoff in excess of the 95thile storm event to freely discharge into the western EPAN area and the Waikopua Creek.	
Catchment 12, 13, 15	Eastern industrial zone road networks (12 & 13) Southeast development access road (15)	Northern Watercourse	- GPT/Proprietary Treatment Device - Bioretention Rain Gardens	Pre-treatment – All water quality flows generated by impervious areas to pass through a proprietary treatment device for initial gross-pollutant and sediment capture. Primary Treatment – Catchment flows to convey through a bio-retention raingardens, designed in accordance with GD01 to achieve additional water quality treatment for proposed impervious area.	SMAF 1 – Retention & Detention of the 95thile storm event via proposed bio-retention raingardens. 50%, 10% & 1% AEP - Runoff in excess of the 95thile storm detention volume to freely discharge into the existing stream network and attenuated within the existing downstream basins prior to off-site discharge further north.	Proprietary Treatment Device – reference to be made to manufacturer guidance for treatment efficiency. Target contaminants include: - Gross Pollutants - Total Suspended Sediment (TSS) - Heavy Metals - Hydrocarbons Bio-retention Raingarden – treatment efficiency in accordance with GD01 guidance.
Catchment 14	Southern residential zone	Waikopua Creek	- On-lot Stormwater Tanks - GPT/Proprietary Treatment Device - Bio-retention Rain Garden	At-Source – Inert roofing materials to minimise stormwater contaminants at source. Pre-treatment – All water quality flows generated by impervious areas to pass through a proprietary treatment device for initial gross-pollutant and sediment capture. Primary Treatment – Catchment flows to convey through a bio-retention raingarden. designed in accordance with GD01 to achieve additional water quality treatment for proposed impervious area.	SMAF 1 – Retention & Detention of the 95thile storm event via proposed on-lot stormwater tanks and bio-retention raingarden. 50%, 10% & 1% AEP - Runoff in excess of the 95thile storm event to freely discharge into the western EPAN area and the Waikopua Creek.	
Catchment 16	Jack Lachlan Drive (East-bound) located to the east of development area.	Northern Watercourse	N/A	N/A – Generated runoff to continue conveyance to existing discharge points as per existing conditions.	N/A – Generated runoff to continue conveyance to existing discharge points as per existing conditions.	N/A
Catchment 17	Remaining proposed development lots outside of communal stormwater device catchments	Northern Watercourse & Waikopua Creek	- On-lot Stormwater Tanks - Industrial Level Water Quality Treatment Device(s) - TBC	At-Source – Inert roofing materials to minimise stormwater contaminants at source. Residential Lots – Not considered high contaminant generating area. No water quality treatment proposed. Industrial Development Lots – As part of conditioning process water quality treatment within far eastern industrial lots to be designed, managed and maintained by respective lot owners.	SMAF 1 – Retention & Detention of the 95thile storm event via proposed on-lot stormwater tanks. Northern Watercourse Discharge – 50%, 10% & 1% AEP runoff to convey to existing downstream stream basins where practicably possible for attenuation prior to offsite discharge. Waikopua Creek Discharge – Free discharge beyond 95thile storm event.	Residential Lots – N/A Industrial Development Lots - Proposed water quality treatment to be designed in accordance with GD01 guidance for all impervious area. Level of treatment to be proportional to intended on-lot activity.