

Chapter/Appendix	Section	Amendments
Chapter 1: General	1.1 Introduction	
Chapter 1: General	1.1.1 The Engineering Standards	Add: If you identify any issues with this document, or any areas where improvements can be made, please contact Council at KDCEngineeringstandards@kaipara.govt.nz or council@kaipara.govt.nz
Chapter 1: General	1.1.4.3 WDC Documents	Documents: Appendix A- Health and Safety Requirements for Procurement Documents, November 2021, Contractor Health and Safety Handbook, WDC Urban Design Guidelines and Policy #0074 - Uncompleted Works Bond (2011) are not used by KDC. The current 'RAMM Template KDC' data collection form is available on request. The KDC 'Application to Connect to Services' form is available for the KDC website or on request.
Chapter 1: General	1.2.2 Relationship with the District Plan	
Chapter 1: General	1.2 Statutory Requirements	
Chapter 1: General	1.2.1 General	Add: Refer to v. KDC District Plan, w. KDC Stormwater and Land Drainage Bylaw, x. KDC Wastewater Drainage Bylaw, y. <i>KDC does not have a Water Supply Bylaw</i> , z. <i>KDC does not have a Trade Waste Bylaw</i> .
Chapter 1: General	1.3 Abbreviations and Definitions	
Chapter 1: General	1.4 General Engineering Requirements	
Chapter 1: General	1.5 Design	
Chapter 1: General	1.6 Construction	
Chapter 1: General	1.6.5.3 Registered and Licensed Contractors	Add: or contractor under supervision of the KDC Maintenance Contractor, KDC Operations Manager or delegate.
Chapter 1: General	1.6.5.7 Connection to Existing Services	Add to first paragraph: or contractor under supervision of the KDC Maintenance Contractor, KDC Operations Manager or delegate.
Chapter 1: General	1.7 Completion of Works	
Chapter 1: General	1.7.2 AS-Built Information	Add: ...Manuals apply to the installation or modification of all WDC <i>and Private</i> assets. Add: KDC Asset Schedule Template for developers is available on request and should be used for larger developments at the Development Engineers discretion.
Chapter 1: General	1.7.2.5 Asset Information Schedule	Add: KDC Asset Schedule Template for developers will be provided on request.
Chapter 1: General		Add: KDC does not generally accept Uncomplete Works Bonds
Chapter 2: Site Development Suitability	2.1 Introduction	
	2.1.3.3 WDC Documents	
Chapter 2: Site Development Suitability	2.2 Consents and Approvals	
Chapter 2: Site Development Suitability	2.2.2.4 Hazard Mapping	
Chapter 2: Site Development Suitability	2.3 Geotechnical/Hazard Assessment	
Chapter 2: Site Development Suitability	2.4 Geotechnical Design	
Chapter 2: Site Development Suitability	2.5 Construction	
Chapter 2: Site Development Suitability	2.6 Completion of Works	
Chapter 4: Stormwater and Drainage	4.1 Introduction	Add: Read all references to 'Stormwater Manager' as Asset Management/Infrastructure Manager or delegate
Chapter 4: Stormwater and Drainage	4.1.3 Performance Standards	Add to e: Alternatively HIRDS RCP 8.5 can be used Add to f: Stormwater system design shall prioritize LID and WSUD Add to b: Clarification, 50% AEP without surcharge, 20% AEP with surcharge.
Chapter 4: Stormwater and Drainage	4.1.5.3 WDC Documents	
Chapter 4: Stormwater and Drainage	4.1.7 Policy Requirements	Add to b: Retention of the natural hydrological parameters of the system. Add to last paragraph: Requirements of any applicable stormwater discharge consents will need to taken into account. This is especially applicable to sites that have potential to discharge contaminants to the network or store environmentally harmful chemicals.
Chapter 4: Stormwater and Drainage	4.2 Receiving Environment Requirements	
Chapter 4: Stormwater and Drainage	4.2.2 Discharge into a stream or water course	Add a. '...until the public assets are vested in the WDC <i>and the defects liability period is complete.</i> '
Chapter 4: Stormwater and Drainage	4.3 Design	
Chapter 4: Stormwater and Drainage	4.3.6.1 Content of design submission	Add to f: '...AEP and associated flows and velocities at outlets, watercourses and along OLFPS (if parameters outside those listed in Table 4-7: <i>Maximum Velocities in Channel</i>), and...'
Chapter 4: Stormwater and Drainage	4.3.7 Design Life	Add: Alternative Design Life values can be submitted for components of the system at the discretion of the Asset Manager
Chapter 4: Stormwater and Drainage	4.3.8 Approved Products Materials	
Chapter 4: Stormwater and Drainage	4.3.9.1 General	Add: g. Where the primary network is in private property, an easement or otherwise record any limitations or public interests on the title shall be at the KDC's discretion. Sufficient width will be provided to allow for maintenance at KDC's discretion with a minimum width of 3m.
Chapter 4: Stormwater and Drainage	4.3.9.1 General Table 4-1	Add under Water Quality Volume/When Required: <i>Or discharged via piped network to natural stream or manmade channel. Retention of the pre-development flows for the frequent low intensity rainfall events equivalent to 1/3 2-year rainfall event.</i> Add under Water Quality Rainfall/Design Parameter: <i>Equivalent to 1/3 2-year rainfall event.</i> Add to Volume/When Required: <i>Or discharged via piped network to natural stream or manmade channel.</i>
Chapter 4: Stormwater and Drainage	4.3.9.2 Primary Network Design Requirements	Add: i. uVPC pipe may be substituted for RC up to DN375 and must be a minimum of SN16 and installed as per AS/NZS2032 and AS/NZS2566. This is the AC requirement, check that this is not already in the WDC Approved Materials List. Add: b(2nd). The ponds or wetlands, including associated lands shall be contained within its own land title(s) and it can be vested to KDC for drainage purposes at no costs to KDC, (specific department ownership should be confirmed before vesting) or can be retained in private ownership... 1st Paragraph add: '... public ownership or private control.' 4th Paragraph add: '... or provide an easement or otherwise record any limitations or public interests on the title shall be at the KDC's discretion. Sufficient width will be provided to allow for flood extent and maintenance at KDC's discretion.'
Chapter 4: Stormwater and Drainage	4.3.9.3 Secondary Stormwater Network Design Requirements	
Chapter 4: Stormwater and Drainage	4.3.10.1 Design Rainfall Event	Correct: Table 4-2 b. 'allowing surcharge ...'
Chapter 4: Stormwater and Drainage	4.3.10.5 Design Storm	Add: NIWA profile for the upper North Island is also acceptable.
Chapter 4: Stormwater and Drainage	4.3.11.5 Minimum Pipe Roughness	Add: Clarify that 0.6 is used for Colebrook-White calculations and 0.013 for Mannings as per Auckland Council SWCoP v4.
Chapter 4: Stormwater and Drainage	4.3.11.7 Freeboard requirements	Add: Floor Level Freeboard requirements are outline in the KDC District Plan
Chapter 4: Stormwater and Drainage	4.3.12.1 General Requirements	Add to 1st paragraph: 'The watercourse area shall be of sufficient width to contain the design storm flow from 1% AEP + <i>Climate Change</i> .'
Chapter 4: Stormwater and Drainage	4.3.12.3 Open Chennel Flow Calculations	Add: Flow calculations should employ the best practice method.
Chapter 4: Stormwater and Drainage	4.3.17.6 Materials and Parameters	Add: h. Manhole covers shall be painted blue.
Chapter 4: Stormwater and Drainage	4.3.22.3 Proprietary Treatment Systems	Add: d. When there are demonstratable site constraints precluding green infrastructure.
Chapter 4: Stormwater and Drainage	4.3.21 Soakage Devices	Add: g. '... capacity of the soakage device <i>and calculated assuming 100% devices blockage</i> ' Add to paragraph: 5. '...for maintenance and shall consider geotechnical conditions for the proposed location. <i>Maintenance responsibilities, schedules and procedures shall be clearly defined.</i> '
Chapter 4: Stormwater and Drainage	4.4 Construction	
Chapter 4: Stormwater and Drainage	4.5 Completion of Works	
Chapter 5: Wastewater	5.1 Introduction	Add: Read all references to 'Wastewater Manager' as Asset Management/Infrastructure Manager or delegate
Chapter 5: Wastewater	5.1.4.3 WDC Documents	
Chapter 5: Wastewater	5.2 Design	
	5.2.4 Design Life	Add: Alternative Design Life values can be submitted for components of the system at the discretion of the Asset Manager
Chapter 5: Wastewater	5.3 Construction	
Chapter 5: Wastewater	5.4 Completion of Works	

	5.4.1. Testing and Inspections for Pipelines	Add: 'Connection shall only be carried out by a Registered contractor, or contractor under supervision of the KDC Maintenance Contractor, KDC Operations Manager or delegate, and the connection shall...'
Chapter 6: Water Supply and Reticulation	6.1 Introduction	Add: Read all references to 'Water Manager' as Asset Management/Infrastructure Manager or delegate
Chapter 6: Water Supply and Reticulation	6.1.4.3 WDC Documents	
Chapter 6: Water Supply and Reticulation	6.1.7.1 Work on Existing Mains	Add: 'Only a Licensed Contractor will be permitted to work on existing live water mains, or contractor under supervision of the KDC Maintenance Contractor, KDC Operations Manager or delegate.'
Chapter 6: Water Supply and Reticulation	6.2 Design	
Chapter 6: Water Supply and Reticulation	6.2.2.1 General requirements	Add: b. KDC requires a capacity assessment (using the network model) to be completed by KDC's consultants for development over 3 new residential connections (or equivalent) at the developers cost.
Chapter 6: Water Supply and Reticulation	6.2.2.3 Domestic Demand	Add: 4 people per household is the default value for KDC.
Chapter 6: Water Supply and Reticulation	6.2.5 Design Life	Add: Alternative Design Life values can be submitted for components of the system at the discretion of the Asset Manager
Chapter 6: Water Supply and Reticulation	6.2.7.2 Standard Pipe Sizes	Correct: Table 6-4 . 1530= 15 and 715= 7
Chapter 6: Water Supply and Reticulation	6.2.12.2 Meters	
Chapter 6: Water Supply and Reticulation	6.2.12.2 Meters	Add: c. Use KDC Application to Connect to Services available from the KDC website or on request.
Chapter 6: Water Supply and Reticulation	6.3 Construction	
Chapter 6: Water Supply and Reticulation	6.4 Completion of Works	
Chapter 7: Public Spaces and Landscape Works	7.1 Introduction	
Chapter 7: Public Spaces and Landscape Works	7.1.4.3 WDC Documents	Add: WDC Urban Design Guidelines are not used in Kaipara
Chapter 7: Public Spaces and Landscape Works	7.2 Design	
Chapter 7: Public Spaces and Landscape Works	7.2.3 Design of Reserve and Linkages	Add: a. '...unless reasonable case can be made for a smaller area.' Add: e. Seek to maximise ecological and overland flow linkages
Chapter 7: Public Spaces and Landscape Works	7.2.6.1 Play Equipment	Add: KDC does not have a Play Strategy
Chapter 7: Public Spaces and Landscape Works	7.3 Landscape Works	
Chapter 7: Public Spaces and Landscape Works	7.4 Completion of Works	
Chapter 8: Electricity, Telecommunications and Gas	8.1 Introduction	
Chapter 7: Public Spaces and Landscape Works	8.1.3.3 WDC Documents	Add: WDC Urban Design Guidelines are not used in Kaipara district
Chapter 8: Electricity, Telecommunications and Gas	8.2 Design	
Chapter 8: Electricity, Telecommunications and Gas	8.2.2 Reticulation Layout	Add: WDC Drawings S29 and S30 should be used over RITS D3.1.3 for underground services layout.
Chapter 8: Electricity, Telecommunications and Gas	8.3 Construction	
Chapter 8: Electricity, Telecommunications and Gas	8.4 Completion of Works	