Please include this checklist with your drawings submitted for approval. The checklist summarises the requirements of Kāpiti Coast District Council’s Land Development Minimum Requirements document (LDMR).

1. **Electronic File Format**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | PDF format |
|  |  | Option 1 or 2   1. AutoCAD (.dwg) or DXF and Excel Spreadsheet (see Appendix A) 2. Esri Shapefile or File Geodatabase (see Appendix A) |
|  |  | New Zealand Geodetic Datum 2000 coordinates (NZTM projection). |
|  |  | Wellington Vertical Datum 1953. (New Zealand Vertical Datum 2016 in near future) |

1. **Hard Copy Format**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | North point |
|  |  | Lot boundaries, lot numbers or property numbers (if available). |
|  |  | RM number (and contact number for Council contracts) |
|  |  | Projection/co-ordinate system used in electronic drawing. |
|  |  | The co-ordinates of at least two points on each point. |
|  |  | Benchmark information (including Coordinates and Elevation) |
|  |  | Plan scales to be 1:250 or 1:500 to suit, with appropriately sized details. |
|  |  | Plan sizes to be A3 or A2 paper as appropriate. |
|  |  | Abandoned and removed assets are clearly identified. |
|  |  | Assets to vest with Council are clearly identified. |

1. **Roading**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | Chainage - distance measured in metres along the centre line of the road. |
|  |  | Location, with type identified (where applicable) of sumps, signs and street markings, streetlights, traffic management features (i.e. roundabouts and traffic islands), vehicle crossings, footpaths, rain gardens, swales, berms, landscape features, sub-surface drainage, retaining walls. |
|  |  | The detail of all non-standard features such as swales, versitanks, rain gardens, etc. |
|  |  | Specification for streetlights (compliance with AS/NZS 1158.3.1:2020) |
|  |  | Cross-section showing construction of road, footpaths, vehicle crossing. |

1. **Water Reticulation**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | Watermain, alignment, depth, diameter (IDmm, ODmm), material, pressure rating, etc. |
|  |  | Coordinated positions of water meter manifolds. |
|  |  | Water meter serial number, manufacturer, model and mechanism |
|  |  | Water meter connection date and opening read |
|  |  | Location of valves, hydrants, pump stations, and all fittings. |
|  |  | Connection details shown, including manifold type (restrictor dual manifolds, meter manifold), etc |
|  |  | Valve and pipe connections in separate box with detailed components and connections. |
|  |  | Connections to existing assets are shown and all features accurately dimensioned, coordinated and referenced by boundary pegs. |

1. **Wastewater and Stormwater Reticulation**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | Coordinated positions of manholes. |
|  |  | Manhole inverts. |
|  |  | RL (Reduced Level or lid level). |
|  |  | Invert level of pipes when different from manhole or pump station invert. |
|  |  | Pipe diameter and material, Up Stream invert level or Down Stream invert level if different from manhole invert (diam, IDmm, ODmm, pipe material, jointing system, pipe class and grade). |
|  |  | Measurements to house connections, laterals, their length and position. Positions of connections and laterals shall be both coordinated and referenced to adjacent manhole lids and boundary pegs. (Not relevant if electronic as-built plans are supplied). |
|  |  | The details of all existing and non-standard connections are shown. |
|  |  | Sumps will be labelled with type (this can be shown in notes box for general and individually labelled if different or special type i.e.,quad sump or enviropod). |
|  |  | Pump stations and Rising main (diam, IDmm, ODmm, pipe material, jointing system and pipe class). |
|  |  | Pump set details and switch levels. |
|  |  | Connection to existing assets shall be shown. Where appropriate cross-section references to be provided. Positions of connections and laterals shall be both coordinated and referenced to adjacent manhole lids and boundary pegs. |
|  |  | Stormwater Attenuation shows Q100 Extent – including freeboard volume of storage, contour plan and cross sections. |
|  |  | Details of all drainage structures (e.g. flap gate, scruffy domes) including brand and supplier. |
|  |  | Details of all soak pits, including invert levels and cross sections. |
|  |  | Any maintenance requirements. |
|  |  | Pump stations and Rising main (diam, IDmm, ODmm, pipe material, jointing system and pipe class). |

1. **Earthworks**

|  |  |  |
| --- | --- | --- |
| **N/A** | **Yes** | **Item** |
|  |  | Extent of earthworks, finished 1 m contours, batter slopes and location of subsoil drainage. |
|  |  | Details of retaining structures |

**Specification for As-built Excel Spreadsheet, Shapefiles and File Geodatabase**

New Zealand Geodetic Datum 2000 coordinates (NZTM projection).

Each new asset shall be stored as a separate feature in a shapefile. For each asset the appropriate attributes shall be supplies as follows.

One Shapefile or File Geodatabase Feature Class per asset type:

1. **Water services**

|  |  |  |  |
| --- | --- | --- | --- |
| **Asset Type** |  | **Attributes** | **Shapefile heading** |
| **Points** | 1 | Unique Identifier | ID |
| 2 | X NZTM (m) | X\_Nztm |
| 3 | Y NZTM (m) | Y\_Nztm |
| 4 | Asset type e.g. Tee, Gate Valve, Sluice, Hydrant etc | Type |
| 5 | Size or Diameter (mm) | Diameter |
| 6 | Install Date (dd/mm/yyyy) | InstDate |
| 7 | Additional Descriptions and Comments | Comments |
| **Pipes** | 1 | Unique Identifier | ID |
| 2 | Pipe type e.g. Reticulation, Rider Main, Scour. | Type |
| 3 | Start Node ID | StartNode |
| 4 | End Node ID | EndNode |
| 5 | Nominal Diameter (mm) | Diameter |
| 6 | Pipe Inside Diameter (mm) | IDiameter |
| 7 | Pipe Outside Diameter (mm) | ODiameter |
| 8 | Pipe Material | Material |
| 9 | Series (e.g. PVC series 1, series 2) | Series |
| 10 | Joint Type | JointType |
| 11 | Length (m) | Length |
| 12 | PN Rating | PnRating |
| 13 | Install Date (dd/mm/yyyy) | InstDate |
| 14 | Additional Descriptions and Comments | Comments |
| **Service pipes (laterals)** | 1 | Unique Identifier | ID |
| 2 | Nominal Diameter (mm) | Diameter |
| 3 | Pipe Material | Material |
| 4 | PN Rating | PnRating |
| 5 | Length (m) | Length |
| 6 | Install Date (dd/mm/yyyy) | InstDate |
| 7 | Additional Descriptions and Comments | Comments |
| **Polygons** | 1 | Unique Identifier | ID |
| 2 | Type e.g. Pump station | Type |
| 3 | Construction Date (dd/mm/yyyy) | ConstrDate |
| 4 | Additional Descriptions and Comments | Comments |
| **Water meter and manifold** | 1 | Meter serial | MtrSerial |
| 2 | X NZTM (m) | X\_Nztm |
| 3 | Y NZTM (m) | Y\_Nztm |
| 4 | Meter Manufacturer | MtrManufac |
| 5 | Meter Model | MtrModel |
| 6 | Meter Diameter (mm) | MtrDiametr |
| 7 | Mechanism | MtrMecha |
| 8 | Meter Install Date (dd/mm/yyyy) | MtrInstall |
| 9 | Meter Opening Read (m3) | MtrOpnRead |
| 10 | Meter Housing Type e.g. Box, Manhole, Upstand | MtrHousing |
| 11 | Configuration (standard, PC75 dual feed, restrictor) | Config |
| 12 | Manifold Manufacturer | ManManufac |
| 13 | Manifold Model | ManModel |
| 14 | Additional Descriptions and Comments | Comments |

1. **Wastewater and Stormwater services**

|  |  |  |  |
| --- | --- | --- | --- |
| **Asset Type** |  | **Attributes** | **Shapefile heading** |
| ***Points*** | *1* | Unique Identifier | ID |
| *2* | X NZTM (m) | X\_Nztm |
| *3* | Y NZTM (m) | Y\_Nztm |
| *4* | Asset Type e.g. Manhole, Pump, Valve, Sump, | Type |
| *5* | Invert Level (m) | InvertLvl |
| *6* | Lid Level (m) | LidLvl |
| *7* | Chamber Dimension (mm) | ChamberDim |
| *8* | Chamber Material | ChamberMat |
| *9* | Chamber Shape | ChamberShp |
| *10* | Install Date (dd/mm/yyyy) | InstDate |
| *11* | Additional Descriptions and Comments | Comments |
| ***Pipes*** | *1* | Unique Identifier | ID |
| *2* | Pipe type e.g. Gravity Main, Rising Main, Culvert | Type |
| *3* | Upstream Node ID | UsNodeId |
| *4* | Downstream Node ID | DsNodeId |
| *5* | Upstream Invert Level (m) | UsInvLvl |
| *6* | Downstream Invert Level (m) | DsInvLvl |
| *7* | Nominal Diameter (mm) | Diameter |
| *8* | Pipe Inside Diameter (mm) | IDiameter |
| *9* | Pipe Outside Diameter (mm) | ODiameter |
| *10* | Pipe Material | Material |
| *11* | Pipe Class | Class |
| 12 | Joint Type | JointType |
| 13 | Length (m) | Length |
| 14 | Gradient | Gradient |
| 15 | Install Date (dd/mm/yyyy) | InstDate |
| 16 | Additional Descriptions and Comments | Comments |
| **Laterals/connections** | 1 | Unique Identifier | ID |
| 2 | Nominal Diameter (mm) | Diameter |
| 3 | Pipe Material | Material |
| 4 | Pipe Class | Class |
| 5 | Length (m) | Length |
| 6 | Install Date (dd/mm/yyyy) | InstDate |
| 7 | Additional Description and Comments | Comments |
| **Polygons** | 1 | Unique Identifier | ID |
| 2 | Type e.g. Pump station, Pond | Type |
| 3 | Construction Date (dd/mm/yyyy) | ConstrDate |
| 4 | Descriptions and Comments | Comments |

Specification for As-built CAD and Excel Spreadsheet

New Zealand Geodetic Datum 2000 coordinates (NZTM projection).

As-builts can also be supplied as CAD (DWG or DXF format) files provided the attribute data is also supplied in the form of an Excel spreadsheet. Each feature (point or pipe) shall have a unique identifier so that it can be linked to its attributes in the Excel spreadsheet. Attributes for each asset type shall be stored in a separate spreadsheet or worksheet. New assets can be stored in a single CAD file provided that separate layers are used for each asset type.

The Excel tables should have the same attributes as the Shapefiles described above.