

Appendix J: Schedule 1D As-Built Plans and Documents

Schedule 1D

As-Builts Drawings

Information given on as-built drawings, submitted electronically in PDF format at a scale of 1:500, shall include but shall not be limited to: the following and is required on disc prior to the issue off the Section 224 Certificate.

(a) General:

- XY co-ordinates of all infrastructure surface features
- Separate summary drawing showing all services (without detailed information) and separate drawing for each infrastructure service (ie: roads, water, etc) in PDF and DXF format

(b) The co-ordinates of at least two points on each Plan in terms of an appropriate geodetic or cadastral datum and the origin of the plan level datum. Refer Supplement Document clause 1.5.2.2

(c) Roading Plan:

- | | |
|--|--|
| <input type="checkbox"/> Location | <input type="checkbox"/> Details of road marking |
| <input type="checkbox"/> Signs | <input type="checkbox"/> Amenities features, eg: seats |
| <input type="checkbox"/> Street Lights | <input type="checkbox"/> Centreline distances |
| <input type="checkbox"/> Road Names (as approved by Council) | <input type="checkbox"/> Sumps (Type/Lid Level/Co-ords) |
| | <input type="checkbox"/> Sump Legs (DN Size/Material) |
| | <input type="checkbox"/> Subsoil (DN Size/Material/DofC) |

(d) Typical Roading Cross Section Drawing Showing Pavement Layers. Scale 1:100

(e) Roading Longsection:

(f) Stormwater Reticulation Drawing:

- | | |
|---|---|
| <input type="checkbox"/> Co-ordinated positions of manholes | <input type="checkbox"/> Manhole inverts and lid levels |
| <input type="checkbox"/> Inverts of pipes | |
| <input type="checkbox"/> Position and depth of connections at lot boundaries (LH Bdy/RH Bdy) | |
| <input type="checkbox"/> Positions of connections shall be both co-ordinated and referenced to adjacent manhole lids and lot boundary pegs* | |
| <input type="checkbox"/> Pipe material | <input type="checkbox"/> DN size |
| <input type="checkbox"/> Class rating | <input type="checkbox"/> Joint type |
| <input type="checkbox"/> Pipe Grade as % | |
| <input type="checkbox"/> As a minimum, detention and the secondary flow path route to meet the 1% AEP flood event must be shown | |

(g) Wastewater Reticulation Drawing:

- | | |
|---|--|
| <input type="checkbox"/> Co-ordinated positions of manholes | <input type="checkbox"/> Manhole inverts and lid levels |
| <input type="checkbox"/> Inverts of pipes | <input type="checkbox"/> Measurements to house connections (from MH's) |
| <input type="checkbox"/> Position and depth of connections at lot boundaries | |
| <input type="checkbox"/> Positions of connections shall be both co-ordinated and referenced to adjacent manhole lids and lot boundary pegs* | |
| <input type="checkbox"/> Pipe material | <input type="checkbox"/> DN size |
| <input type="checkbox"/> Class rating | <input type="checkbox"/> Joint type |
| <input type="checkbox"/> Pipe Grade as % | |

(h) Water Reticulation Drawing:

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Results of pressure test pipes | <input type="checkbox"/> Joint type |
| <input type="checkbox"/> Pipe material, PN rating, joint type, DN size | |
| <input type="checkbox"/> Location of thrust blocks, fire hydrants, valves (FH and V shall be co-ordinated) | |
| <input type="checkbox"/> Distance of water connection (to by) (LH Bdy and RH Bdy) | |
| <input type="checkbox"/> Depth of cover and position of mains (grass or seal) | |

(i) Ducts:

- Position and diameter, cover and utility type for ducts installed for utilities

Schedule 1D

Post Construction Information

Post construction information is required in full prior to issue of the Section 224 Certificate but may be provided progressively as works are completed and tested.

(a) Road Information – General:

- Source of aggregates
- Pavement design including subgrade test results (compaction and CBR) and pavement depth
- Grading and sand equivalent of basecourse
- Compaction of basecourse (as required by NZS 4404 and TNZ B/2)
- Benkelman Beam test results on finished basecourse (s. 3.4.11 of NZS 4404)
- Source of pavement and surfacing materials

(b) Road Surfacing Information – For Sealed Roads:

- Binder type and application rate
- Adhesion agent type and quantity
- Chip size
- Width, length and area of each street sealed
- Discussion on any reasons for differences between design and applied rate
- Mix design for asphaltic concrete
- Density tests and air voids content for asphaltic concrete
- Asphalt details including mixture and thickness
- Interface details between asphalt surfacing and basecourse
(ie: tack coat or full chip seal, etc)
- Cutter type and quantity
- Type and quantity of other additives
- Design basis for binder application rate
- Source of aggregates

(c) Stormwater Reticulation Information:

- Results of pressure test of pipes
- Test results of backfill for all lines including bedding
- CCTV inspection records of all stormwater pipelines (flush lines first)
- WDC MH inventory data sheets

(d) Wastewater Reticulation Datasheets:

- Results of pressure test of pipes
- Test results of backfill for all lines including bedding
- CCTV inspection records of all wastewater pipelines (flush lines first)
- WDC MH inventory datasheets

(e) Water Reticulation Information:

- Results of pressure testing of pipelines
- Test results of backfilling for all lines including backfill
- CCTV inspection of all large water pipelines at Engineers discretion (flush lines first)

(f) Geotechnical Completion Report:

- Bulk fill test results (TNZ F/1)
- Test results for residential (building platform) fills (NZS 4431)
- Statement of suitability (Schedule 2A NZS 4404)
- As-built surface contour drawing inclusive of all areas of undisturbed and cut/fill ground to indicate the finished ground and any deviation from approved design plan, also delineating zone areas of low density



Manhole Inventory Form

Manhole Asset ID

Effluent Type: Stormwater
 Wastewater

Address:

Construction Date (if new) or Inspection Date:

(C) (I)

Contractor:

Diagram: Show inverts, direction and sizes (include MH diameter in mm)
 North

Location Details

Berm Private Property
 Carriageway Reserve

Fixing Details

Cover Level	Depth (m)	Invert Level	Easting (X)	Northing (Y)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Structural Details

Manhole Type	Chamber	Cone	Steps	Cover
<input type="checkbox"/> Standard	<input type="checkbox"/> Brick	<input type="checkbox"/> Brick	<input type="checkbox"/> Safety	<input type="checkbox"/> Standard
<input type="checkbox"/> Cross-over	<input type="checkbox"/> Precast Concrete	<input type="checkbox"/> Precast Concrete	<input type="checkbox"/> Non-safety	<input type="checkbox"/> Non-rock
<input type="checkbox"/> Diversion	<input type="checkbox"/> In-situ Concrete	<input type="checkbox"/> In-situ Concrete	<input type="checkbox"/> No Steps	<input type="checkbox"/> Locked
<input type="checkbox"/> Internal Drop	<input type="checkbox"/> Other <input type="text"/>	<input type="checkbox"/> Other <input type="text"/>	<input type="checkbox"/> Steel	<input type="checkbox"/> Sealed
<input type="checkbox"/> External Drop	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Plastic	<input type="checkbox"/> Banded
<input type="checkbox"/> Riser Manhole				<input type="checkbox"/> Caged
<input type="checkbox"/> Rising Main Discharge				

If cover is AS/NZS 3996, indicate class (B, C or D)

Condition Details

Chamber	Channel/Base	Cone	Steps	Cover
<input type="checkbox"/> Good	<input type="checkbox"/> Good	<input type="checkbox"/> Good	<input type="checkbox"/> Good	<input type="checkbox"/> Good
<input type="checkbox"/> Fair	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair
<input type="checkbox"/> Poor	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor

General Information

Evidence of:	Dewatering:
<input type="checkbox"/> Surcharge	<input type="checkbox"/> Required
<input type="checkbox"/> Infiltration	<input type="checkbox"/> Not required
<input type="checkbox"/> Roots	<i>Indicate severity in comments box</i>
<input type="checkbox"/> Debris / Silt	

Comments

Version No: LIAM - 1 A, Release Date: 2 February 2007