Appendix N: Performance Standard for Off-Peak and Low Pressure Wastewater Disposal ~~Testing Schedule Summary~~

Commented [SC1]: New Appendix N was previous Appendix Q. Old Appendix N now in new Appendix L

Commented [SC2]: Inclusion of 'low pressure' into title - new app N/previous app Q

Performance Standard for Off-Peak and Low Pressure Wastewater Disposal

BACKGROUND

Developers have proposed an alternative method of wastewater disposal in greenfield sites outside of the residential zone and outside of the reticulated wastewater system. An alternative method of wastewater disposal is on-site storage coupled with **off-peak pumping** to Council's wastewater system ("off peak disposal system"). This document provides the required minimum standard where on-site storage coupled with off peak pumping is being considered.
In 2016 Council has identified low pressure pump systems as a potential alternative method for wastewater disposal on sites zoned Residential in the Whanganui District Plan and unable to be serviced via traditional reticulated wastewater methods.

1. Permitted Areas

An off peak disposal system is only permitted in an area adjacent to an existing residential zone and where Council's wastewater system has sufficient off peak disposal capacity and the Council system is a gravity system.
A low pressure pump system shall only be considered as a potentially acceptable method to service existing residential zoned sites where the reticulated network is constrained and would otherwise prevent development at a residential scale.

2. Specification

The storage, pump and electrical components of an off peak or low pressure disposal system must comply with the minimum standards as detail in Appendix 1. This document will become an Appendix to the Supplement Document to NZS4404. The specification shall be additional to any building code requirements and AS/NZS3500.2.
The performance standard for low pressure pump systems is the same as for off-peak wastewater disposal systems, however the requirement to discharge during off-peak is not applicable.

3. Legal/Maintenance

Any approval granted by Council for an off peak or low pressure disposal system is on the prior written undertaking by the developer or property owner that ownership of the off peak or low pressure disposal system stays with the property owner and that the property owner is required to maintain the off peak or low pressure disposal system. Where title is created via a subdivision then a consent notice will attached under section 221 of the Resource Management Act.
Where this method of disposal is requested as part of a Building Consent, a similar consent notice shall be added to the title.

Consent Notice Wording:

In the case of an off peak disposal system the following words shall be used:

"The requirement for wastewater disposal for lot **xy** shall be met by the use of an off peak wastewater disposal system. The performance standard for the off peak wastewater disposal system shall be in accordance with Appendix A of the Whanganui District Council's "Performance Standard for Off-Peak or Low Pressure Wastewater Disposal". Ownership and maintenance of the system shall be the lot owner's sole responsibility."

Or in the case of a low pressure disposal system the following words shall be used:

"The requirement for wastewater disposal for lot **xy** shall be met by the use of a low pressure wastewater disposal system. The performance standard for the off peak wastewater disposal system shall be in accordance with Appendix A of the Whanganui District Council's "Performance Standard for Off-Peak or Low Pressure Wastewater Disposal". Ownership and maintenance of the system shall be the lot owner's sole responsibility."

4. Rates implications

As the property will have a connection to the Council wastewater system the residential wastewater rate shall apply. This needs to be captured at time of building consent application.

5. Development Contribution

Any connection to the wastewater system will incur the standard wastewater development contribution, as there will be no impact on the capacity wastewater system.

Appendix 1

Additional Specification

Item	Minimum Standard		Exceeds Minimum Standard Detail
Tank			
Certification	AS/NZS 1546.1.2008 (supplier to provide certificate for tank model tendered)		
Structurally Sound and Watertight Tank Guarantee	5 year from date of installation & manufacturers signed guarantee		
Emergency Storage above High Level Alarm and Below Inlet Invert	2000L		
Controls			
Controls	Float switch, pressure switch or poles, Timer switch(Timer must be set to ensure off-peak pumping only as directed by WDC at time of installation)		
Effluent Pump			
Warranty	5 years from the date of installation against defects in materials or workmanship		
Control Panel			
Warranty	2 years from the date of installation against defects in materials or workmanship		
Ownership & Maintenance			
	The property owner will own and maintain the storage, pump and		

Item	Minimum Standard		Exceeds Minimum Standard Detail
	electrical systems including all pipe work. Yearly report by IQP (Independent Qualified Person) to be made available on request to WDC.		
Manuals			
Manual	Detailed installation instructions		
Manual	Operating instructions		
Manual	Maintenance instructions		
Manual	Wiring diagram		
Manual	Homeowners manual		

~~Summary of testing requirements as specified in Wanganui Land Development and Subdivision Engineering Document (Supplement to NZS 4404: 2004) Appendix I, Technical Specifications.~~

Testing Requirements	Frequency
Section 2 Earthworks Earth fill density compaction For granular material, test required is density index test For non granular material, test required is air voids & shear vane test.	Large Scale Operations greater than 1,500m2, e.g. subdivisions, large lots or road embankments. 1 test per layer per material per 2500m2 or 1 test per 500m3 distributed evenly throughout full depth and area or 3 tests per lot. Small scale operations e.g. (Individual residential lots) 1 test per layer per 1000m2 or 1 test per 200m3 distributed evenly throughout full depth and area or 1 test per residential lot per layer. Concentrated operations less than 500m2, e.g. backfill small farm dams, gullies and similar. 1 test per layer per 500m2 or 1 test per 100m3 distributed throughout full depth and area or 3 tests per visit. Confined operations e.g. filling behind structure 1 test per 2 layers per 50m2 Trenches 1 field density test per 2 layers per 40 linear metres. For earthworks, the test option to be used is which ever requires the most tests.
Section 3 Trench Excavation Clause 3.2.3 Pipe foundation test as approved by the Authorised Representative	1 test per pipe length.
Section 4 Pipe line Construction Drainage. Grading on bedding material Bedding and haunch zone material compaction test. Backfill material compaction For Granular Material, test required is Density Index test	As requested by the Authorised Representative. At least one test every 10 metres of trench

Testing Requirements	Frequency
For Non granular Material, test required is Air voids & Shear Vane test. In berms In carriageways or under footpaths. Pipe Line testing, pressure and Vacuum tests	One test per layer of backfill per 15 metres of trench, with a minimum of two tests. 1 field density test per 2 layers per 40 linear metres. For indirect tests the Scala or Clegg Hammer may be used. One test per layer of backfill per 5 metres of trench, with a minimum of two tests. 1 field density test per 2 layers per 40 linear metres. For indirect tests the Scala or Clegg Hammer may be used. All pipe line lengths
Section 5. Pipeline Construction Water Supply Personnel Public health Hepititis A Grading on bedding material Backfill compaction, clause 5.14.3 In berms In carriageways and under footpaths.	 Prior to starting work and retested every 12 months As requested by the Authorised Representative. Trenches One test per layer of backfill per 15 metres of trench, with a minimum of two tests.1 field density test per 2 layers per 40 linear metres. One test per layer of backfill per 5 metres of trench, with a minimum of two tests. 1 field density test per 2 layers per 40 linear metres. For indirect tests the Scala or Clegg Hammer may be used. All pipe lines to be tested.

Testing Requirements	Frequency
Pipeline testing, pressure and vacuum tests.	
Section 6. Manholes and Sumps	
Manhole, water testing or inspection test.	Each man hole.
Backfill compaction tests	Where excavated area is greater than 0.5m2 and less than 5m2 one test per backfill layer is required.
Section 7 Concrete Work	
Test certificate for concrete materials	As requested by the Authorised Representative.
Section 8 Pavement Construction	
Subgrade Shape	Lift pegs installed at a maximum spacing of 20 metres on straights and 10 metres where super-elevation changes.
Subgrade Strength.	
Field Insitu CBR tests	Every 75m, with a minimum of 3, located at each end of the subdivision and midway between ends.
Laboratory soaked CBR tests	Prior to starting the fill operation and on completion a test every 75m along the subgrade.
Benkelmen Beam testing	At 10m intervals, in both wheel paths of each lane.
Pavement materials	
Subbase. Test required, grading, soaked CBR and Sand Equivalent.	One test prior to commencement and then two tests per site or one test per 200m3 of material.
	One test prior to commencement and then two tests per site or one test per 200m3 of material.
Basecourse. Tests required, gradin, Sand Equivalent, broken faces. If shellrock is used clay index is required and broken faces not required.	One test prior to commencement and then two tests per site or one test per 200m3 of material.
	One test prior to commencement and then two tests per site or one test per 200m3 of material.
Pavement Surface finish.	
Benkelman Beam testing	Prior to surfacing, in both wheel paths of each lane at a maximum interval of 10 metres.

~~Testing Requirements~~	~~Frequency~~
~~Surface Shape~~ ~~Pavement materials compaction, MDD testing~~ ~~Surface Roughness~~	~~As for subgrade surface shape.~~ ~~As required by TNZ B/2 Specification.~~ ~~Prior to surfacing, readings at 20 metre intervals and in each lane.~~
~~Section 9 Chip Sealing~~ ~~Sealing chip, chip size, shape and cleanliness~~	~~One test prior to commencement and then one test per chip size per 800 lineal metres of subdivision..~~
~~Section 10. Thin Asphaltic Surfacing.~~ ~~Provide job mix formula~~ ~~Asphalt Concrete~~	~~One test prior to commencement.~~ ~~One test to provide evidence of compliance with job mix~~
~~Section 11. Kerb & Channel, Footpath and Vehicle Crossings Construction~~ ~~Test certificate for concrete materials~~	~~As requested by the Engineer~~