Auckland Transport
An Auckland Council Organisation

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Document Type: Practice Note

Title: Road Stormwater Catchpit – Spring Latch (Safety) Grates

Document number: 1

Version: 1

1. Purpose

This practice note (PN) introduces the use of the spring latch (safety) grate on catchpits (CP) to mitigate identified hazards presented by catchpits with standard grates that solely rely on their weight to keep it closed but can be easily accessed to retrieve dropped items in CP.

The purpose of the PN is to ensure that there is a consistent approach across the Auckland region for activities that involve Auckland Transport's (AT's) stormwater catchpits, particularly their grates.

The PN brings to the reader's notice that the CP drawings in AT's Transport Design Manual (TDM) have now been changed. Spring latch (safety) grates are now required to be used on all new and renewed CP grates, including CP improvement works on the roads and places within AT's controlled area and via third parties any roads and places about to be vested to AT.

This approach applies to road drainage infrastructure works covered by: i) the Land Development Engineering Plan Approval (EPA) process, ii) any AT approved works programme/ project involving upgrading and redevelopment of road infrastructure works, iii) third party developed roads and other infrastructure to be vested to AT, iv) retrofitting of 'spring latch (safety) grates' on catchpits that are considered higher priority on Auckland Council's asset improvement programme and v) any other Auckland Council (AC) and/or AT approval process, which involves stormwater catchpits including their grates in a manner that:

- All infrastructure complies with AT's and AC's safety requirements.
- Transport infrastructure complies with AT's Transport Design Manual requirements.
- Infrastructure is constructed, operated, and maintained in accordance with the Health and Safety at Works Act 2015 and H&S Regulations 2016.
- Implementation comes into/ takes effect immediately on the signed date shown at the end of this PN.

2. Definition

A catchpit in a drainage system is installed to intercept surface water flow. It is an empty chamber that is installed into a stormwater drainage system to prevent silt and debris from building up and causing blockages. Catchpits are essential in preventing pipe blockages, which would otherwise will result in the backing up of water in the drainage system – therefore leading to flooding.

A stormwater catchpit consists of a grate, small chamber, and sediment trap. It may be private or public and is usually associated with the drainage of roads or driveways. There are various types of stormwater catchpit and include but are not limited to: standard catchpit, double catchpit, supa-pit, mega-pit or splay-pit.

5. Revised Standards

All stormwater catchpits including their grates on the AT network shall comply with the requirements of AT's TDM - Engineering Design Code Road Drainage and Surface Water Control – Section 6.5. Catchpit inlet selection has been updated to include spring latch (safety) grates, as follows.

New and replacement grates and frames must meet AC and AT safety requirements. Grates should be:

- Spring latched.
- Captive hinged.
- Flat topped.
- Frame support allowing closure without clogging by debris.

The following revised AT (TDM) standard engineering drawings also apply and supersede any previous drawings with the same number:

1. RD0003 Rural side drain culvert inlet
2. RD0020 Semi recessed catchpit
3. RD0022 Street catchpit 800 x 500
4. RD0023 Street catchpit 800 x 500 precast lintel detail
5. RD0024 Splay catchpit 800 x 500 precast unit detail
6. RD0027 Replacement standard catchpit
7. RD0028 Field catchpit 440 x 440
8. RD0030 Mega-pit
9. RD 0041 Catchpit back plate installation detail
10. RD 0042 Spring latch (safety) Grate Catchpit

This information is available on the TDM website under Section 2 Detailed technical requirements;

https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual

3. Qualified Person

Qualified person has the same meaning as in the Auckland Unitary Plan.

4. Legislative requirements

The reviewers of any road drainage infrastructure works, which are covered under items i) - v) described in this PN's purpose, need to implement the recommendations made within a Coroner's report about a drowning within a stormwater catchpit and which occurred in South Auckland. Consequently, Spring latch (safety) grates are required to be used on all new and renewed catchpits for all roads and other places currently controlled by AT and includes any long private driveways on public paper/unformed roads if standard AT catchpits are required, plus via third parties, any roads and other infrastructure that are about to be vested to AT.

When assessing applications on the above-mentioned works, AC and AT staff officers need to be satisfied on reasonable grounds that all works will comply with the provisions of AT's TDM.

For RMA/EPA applications, this requirement is contained in Section 88 of the Resource Management Act (Schedule 4). It is critically important to ensure that the catchpit device is safe for the public, as well as for the operation and maintenance staff.

Design and renewal of all stormwater assets shall consider the Health and Health and Safety at Works (HSW) Act 2015 and H&S Regulations 2016 regarding the risks throughout the whole of the life of the asset and shall help to promote the safety of AC and AT employees, contractors, property, operations, and maintenance personnel, as well as the general public.

Under the HSW Act, Persons Conducting a Business or Undertaking (PCBUs), designers, architects, engineers, manufacturers, and suppliers or installers of structures, such as stormwater catchpits including their grates, hold a duty of care to ensure that any identified health and safety risks are notified to downstream activities and where possible to ensure that these health and safety risks are either eliminated, isolated or minimised depending on practicality. PCBUs are required to consider all aspects of health and safety risks during all phases of the asset life, including design, construction,

operation, and decommissioning. Operational risks shall be considered during both normal use and in extreme storm events.

Operation and maintenance activities often involve personnel working within both road and stormwater live networks. Design and project engineers shall ensure that all practicable measures are included in the design to facilitate safe working conditions in and around the asset.

Authorised for circulation:
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Signed:  Date: 30th November 2021