

TRANSPORT FOR NSW (TfNSW)
QA SPECIFICATION 3557
FLEXIBLE STRIP FILTER DRAINS

NOTICE

This document is a Transport for NSW QA Specification. It has been developed for use with roadworks and bridgeworks contracts let by Transport for NSW or by local councils in NSW. It is not suitable for any other purpose and must not be used for any other purpose or in any other context.

Copyright in this document belongs to Transport for NSW.

REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0		New specification.	GM, IC	01.11.12
Ed 1/Rev 1	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	22.06.20

<p style="text-align: center;">GUIDE NOTES (Not Part of Contract Document)</p>

Using TfNSW 3557

This is a Quality Assurance specification.

It is to be used in contracts where a quality management system is required to be in place by the contractor/supplier.

The application of QA in contracts must be appreciated and understood prior to the use of this document.



FLEXIBLE STRIP FILTER DRAINS

Copyright – Transport for NSW
IC-QA-3557

VERSION FOR: DATE:

CONTENTS

CLAUSE	PAGE
FOREWORD	ii
TfNSW Copyright and Use of this Document	ii
Revisions to Previous Version	ii
Project Specific Changes	ii
1 SCOPE.....	1
2 STRUCTURE OF THE SPECIFICATION.....	1
2.1 Project Specific Requirements.....	1
2.2 Schedule of Identified Records.....	1
2.3 Frequency of Testing.....	1
2.4 Referenced Documents and Definitions	1
3 SUPPLIER’S QUALITY MANAGEMENT SYSTEM	2
4 REQUIREMENTS.....	2
5 LOAD BEARING CHARACTERISTICS.....	2
6 GEOTEXTILE.....	2
7 PRODUCT CERTIFICATION	2
8 PRODUCT IDENTIFICATION.....	3
ANNEXURE 3557/A – PROJECT SPECIFIC REQUIREMENTS	4
ANNEXURE 3557/B – (NOT USED)	4
ANNEXURE 3557/C – SCHEDULE OF IDENTIFIED RECORDS	4
ANNEXURES 3557/D TO 3557/K – (NOT USED)	4
ANNEXURE 3557/L – MINIMUM FREQUENCY OF TESTING	4
ANNEXURE 3557/M – REFERENCED DOCUMENTS	5
LAST PAGE OF THIS DOCUMENT IS	5

FOREWORD

TfNSW COPYRIGHT AND USE OF THIS DOCUMENT

Copyright in this document belongs to Transport for NSW.

When this document forms part of a contract

This document should be read with all the documents forming the Contract.

When this document does not form part of a contract

This copy is not a controlled document. Observe the Notice that appears on the first page of the copy controlled by TfNSW. A full copy of the latest version of the document is available on the TfNSW Internet website: <http://www.rms.nsw.gov.au/business-industry/partners-suppliers/specifications/index.html>

REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3557 Edition 1 Revision 0.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Any project specific changes are indicated in the following manner:

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

TfNSW QA SPECIFICATION 3557

FLEXIBLE STRIP FILTER DRAINS

1 SCOPE

This Specification sets out the requirements for the supply of flexible geocomposite plastic strip filter drains and their associated fittings.

Such flexible strip filter drains are used in soil nailing and for other subsurface drainage applications, but not in situations where they may be subject to traffic loading such as for pavement subsurface drainage.

The flexible strip filter consists of a single or double cusped type plastic core, encased in a geotextile which may act as a part of the structural composite.

2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

2.1 PROJECT SPECIFIC REQUIREMENTS

Details of the required type, size and length of the strip filter(s) are shown in Annexure 3557/A.

2.2 SCHEDULE OF IDENTIFIED RECORDS

The records listed in Annexure 3557/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

2.3 FREQUENCY OF TESTING

The minimum frequency of testing is shown in Annexure 3557/L.

2.4 REFERENCED DOCUMENTS AND DEFINITIONS

Unless specified otherwise, the applicable issue of a referenced document, other than a TfNSW Specification, must be the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 1234). For convenience, the full titles are given in Annexure 3557/M.

The term “the Supplier” means the supplier of the product covered by the scope of this Specification.

3 SUPPLIER'S QUALITY MANAGEMENT SYSTEM

The Supplier must establish and maintain a Quality Management System complying with AS/NZS ISO 9001 as a means of ensuring that the product conforms to this Specification.

Provide evidence verifying compliance with this Clause.

The Quality Management System must include product certification and periodic verification of product conformity during production in accordance with Appendix A of AS 2439.1.

4 REQUIREMENTS

The flexible strip filter core together with its fittings must be manufactured from high density polyethylene composed of a cusped or sheet and post core wrapped with a geotextile serving as the outer boundary and drainage fabric.

The flexible strip filter core and fittings supplied must be packed, stored and transported to prevent damage.

If the flexible strip filter core is supplied in coils or bundles of straight lengths, any ties used must not cause permanent denting or deformation of the strip filter.

The flexible strip filter must show no signs of cracks, splits or significant signs of indentation when tested in accordance with Test Methods TfNSW T1508, T1509 and T1510.

5 LOAD BEARING CHARACTERISTICS

The flexible strip filter stiffness when tested in accordance with Test Method TfNSW T1507 in the horizontal direction must comply with the requirements of Table 3557.1.

Table 3557.1 – Stiffness Requirements for Flexible Strip Filter Drains

Horizontal Loading	Strip Filter Height		
	Up to 200 mm	200 to 400 mm	400 mm and above
Min force (kN) at 4 mm deflection	5.5	11	16.5

6 GEOTEXTILE

The geotextile wrapping must be a non woven geotextile meeting the requirements of strength class A and application class G3 in Specification TfNSW R63.

7 PRODUCT CERTIFICATION

Provide a certificate of compliance verifying that the flexible strip filter complies with all the requirements of this specification together with test results reported on NATA endorsed test documents. The certificate is for tests not more than six (6) months old.

8 PRODUCT IDENTIFICATION

Mark each Lot of strip filter supplied clearly with the following information on an adhesive label:

- (a) Manufacturer's name and/or trademark;
- (b) The nominal height and width of the strip filter;
- (c) Strip filter length;
- (d) Date of manufacture;
- (e) Unique coil/batch number.

ANNEXURE 3557/A – PROJECT SPECIFIC REQUIREMENTS

Dimensions of strip filter required:

Nominal Height (mm)	Nominal Width (mm)	Length (m)

ANNEXURE 3557/B – (NOT USED)**ANNEXURE 3557/C – SCHEDULE OF IDENTIFIED RECORDS**

Refer to Clause 2.2.

The records listed below are Identified Records for the purposes of TfNSW Q Annexure Q/E.

Clause	Description of Identified Record
7	Certificate of compliance

ANNEXURES 3557/D TO 3557/K – (NOT USED)**ANNEXURE 3557/L – MINIMUM FREQUENCY OF TESTING**

Clause	Characteristics Tested	Test Method	Minimum Frequency of Testing
5	Load bearing characteristic	T1507	One per 2,000 m or part thereof
4	Low temperature resistance during straightening	T1508	One per 2,000 m or part thereof
4	High temperature impact resistance	T1509	One per 2,000 m or part thereof
4	Low temperature impact resistance	T1510	One per 2,000 m or part thereof

ANNEXURE 3557/M – REFERENCED DOCUMENTS

Refer to Clause 2.4.

TfNSW Specifications

TfNSW Q	Quality Management System
TfNSW R63	Geotextiles (Separation and Filtration)

TfNSW Test Methods

TfNSW T1507	Determination of the Compressive Stiffness of Strip Filters
TfNSW T1508	Determination of the Low Temperature Resistance of Strip Filters during Straightening
TfNSW T1509	Determination of the High Temperature Impact Resistance of Strip Filters
TfNSW T1510	Determination of Low Temperature Impact Resistance of Strip Filters

Australian Standards

AS 2439.1	Perforated plastics drainage and effluent pipe and fittings – Perforated drainage pipe and associated fittings
AS/NZS ISO 9001	Quality management systems – Requirements