

14 November 2007

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Dear Mr. Hannah

### **Stormfilter Treatment Device - Discussion of Pre-treatment and Practice Acceptance**

I am responding to your request for clarification of item 1 in the 27 August 2004 letter regarding acceptance of the Stormfilter treatment device for use in the Auckland Region. That letter had a condition of acceptance (item 1) that stated in part "This includes the use of Enviropods for pre-treatment of stormwater flows entering the Stormfilter".

You had requested clarification of whether the ARC acceptance required that Enviropods be used for pre-treatment of flows entering Stormfilters. Please be advised that it is not an ARC requirement that Enviropods be used as pre-treatment for Stormfilters. The initial 2 April 2003 acceptance letter for Stormfilters using perlite did not have that requirement and it was apparently added during discussions with you regarding desired maintenance frequencies during the acceptance process of the zeolite, activated carbon and perlite mixture. It should not have been made a requirement but rather mentioned as a desirable element to reduce maintenance frequency.

As a result, this letter supersedes the letter of 27 August 2004.

Please be advised that the ARC accepts the Stormfilter device for use in the Region as meeting technical guidelines provided in Technical Publication No. 10, Stormwater Management Devices: Design Guidelines Manual (ARC 2003) subject to the following conditions:

1. The design shall be in accordance with design standards previously submitted by Stormwater 360 for practice sizing.
2. The acceptance is for Stormfilters using activated carbon, zeolite and perlite in a 1:9:11.6 mix.
3. The acceptance is for general use except for those high risk industrial sites identified in Schedule - 3 of the Air, Land and Water (ALW) Plan dated October 2001, unless specifically accepted on a specific site.
4. Where possible and appropriate, the Stormfilter will be used in conjunction with swales or filter strips to enhance capture of metals.
5. This letter is specific to the Stormfilter product and not for the Stormscreen, Stormgate Separator, Stormgate or other products.

We look forward to working with Stormwater 360 on efforts to improve the quality of Auckland's aquatic environment.

If you have any questions or comments, please do not hesitate to contact the author.

Yours faithfully

Matthew Davis  
**Team Leader**  
**Stormwater Action Team**

27 August 2004

Mike Hannah  
Technical Director  
Ingal Environmental Services  
PO Box 302 890  
Albany  
**North Harbour**

Dear Mike

### **Acceptance of Ingal Stormfilter Product**

File Ref

On 2 April 2003 the ARC posted a letter to you regarding acceptance of the Stormfilter treatment device using perlite for achieving the removal of 75% of total suspended solids. This acceptance had a condition (1) that "other filter media, such as zeolite will require submission of additional testing information prior to consideration". Ingal Environmental Services has recently submitted additional information relating to zeolite to obtain ARC acceptance for contaminants other than total suspended solids.

We have reviewed numerous documents submitted by Ingal Environmental Services with respect to the Stormfilter product using activated carbon, zeolite and perlite for use on roads and car parks. The documentation includes information that you submitted in addition to a recent study that the ARC obtained entitled "Environmental Technology Verification Report Stormwater Source Area Treatment Device The Stormwater Management Stormfilter Using ZPG Filter Media" that is being published by Earth Tech Inc

We have also met several times to discuss the information including most recently 26 August where outstanding issues were discussed and decisions made.

Please be advised that the Auckland Regional Council accepts the Stormfilter device for use in the Region as meeting technical guidelines provided in Technical Publication No. 10, Stormwater Management Devices: Design Guidelines Manual subject to the following conditions:

1. The design shall be in accordance with design standards previously submitted by Ingal Environmental Services for practice sizing. This includes the use of Enviropods for pre-treatment of stormwater flows entering the Stormfilter.
2. The acceptance is for Stormfilters using activated carbon, zeolite and perlite in a 1:9:11 6 mix.
3. The acceptance is for general use except for those high risk industrial sites identified in Schedule - 3 of the Air Land and Water (ALW) Plan dated October 2001 unless specifically accepted on a specific site.
4. Where possible and appropriate, the Stormfilter will be used in conjunction with swales or filter strips to enhance capture of metals.
5. This letter is specific to the Stormfilter product and not for the Stormscreen, Stormgate Separator, Stormgate or other products

2003 ACHIEVEMENT AWARD WINNER



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We look forward to working with Ingal Environmental Services on efforts to improve the quality of Auckland's aquatic environment.

If you have any questions or comments, please do not hesitate to contact the author

Yours faithfully/sincerely

Earl Shaver  
**Technical Specialist**

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