

# D. O'BRIEN ENGINEERING SERVICES PTY. LTD.

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Mr and Mrs Erbag  
77 Clontarf St  
Seaforth NSW 2092

15/10/10  
ref: csw10151

Dear Mr and Mrs Erbag

RE: Alterations and Additions to Existing Residence at  
77 Clontarf St Seaforth NSW  
Stormwater Management

## Proposed Alterations and Additions

The proposed alterations and additions to the existing residence at 77 Clontarf St Seaforth are shown on the architectural drawings sheets 1 to 11, by MI Airey Drafting. The structural design and details for the alterations and additions to the existing residence at 77 Clontarf St Seaforth are shown on engineering drawing number 10151/S1.

The proposed alterations and additions to the residence consist of removing some internal walls, relocating the kitchen and laundry/bathroom, installing new sliding doors and windows and replacing the existing flat roof over the rear of the residence with a pitched roof. The other alterations to the residence are some minor internal alterations.

## Stormwater Management

The alterations to the residence have the same footprint as the previously existing roof area. There is no overall increase in the impervious area of the site over and above the impervious area of the existing residence. The impervious surface area for the new alterations and additions is similar to the surface area for the previously existing sloping tiled roof and rear area flat roof.

The new and existing downpipes shall be checked on site by a qualified plumber for compliance with AS3500.3 and accepted industry standards. The stormwater from the roof areas shall be collected in eaves gutters and 100mm downpipes and directed to the

D. O'BRIEN  
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to be read in  
conjunction with

\_\_\_\_\_ cdc

04/2010cdc

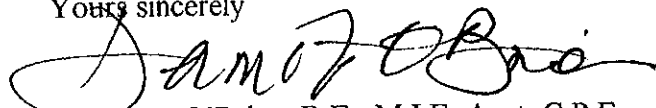
front of the residence. For the new and existing stormwater drainage use 100mm dia. downpipes and 100 dia. drainage lines min. and with falls at 1:80 min. and discharge the lines to the existing Council stormwater kerb and gutter system in Clontarf St.

Based on our assessment and in accordance with Manly Councils' Specification for On-site Stormwater Management 2003 (Clause 4.1) and for a Zone 1 site, no OSD is required where the increase in impervious area of less than 50m<sup>2</sup>. The proposed work for the alterations at 77 Clontarf St Seaforth does not alter the existing stormwater collection and management system on site.

In my opinion, for the new alterations work at 77 Clontarf St Seaforth, there is no change in the roof impervious area and in the stormwater management system for the site. All new plumbing and drainage details shall be in accordance with the relevant clauses of the following:

- Australian Standards including AS/NZS 3500.3 (Plumbing and drainage)
- Manly Council - Specification for On-Site Stormwater Management 2003
- Manly Council - Specification for Stormwater Drainage 2003

Yours sincerely

  
Dermot J. O'Brien, B.E., M.I.E. Aust. C P Eng

**JJ BRIGGS**  
**ASSOCIATES**  
PO BOX 650 BIRCHVALE 2103

This Plan / Detail is  
to be read in  
conjunction with  
CONSTRUCTION CERTIFICATE  
No. 123456789