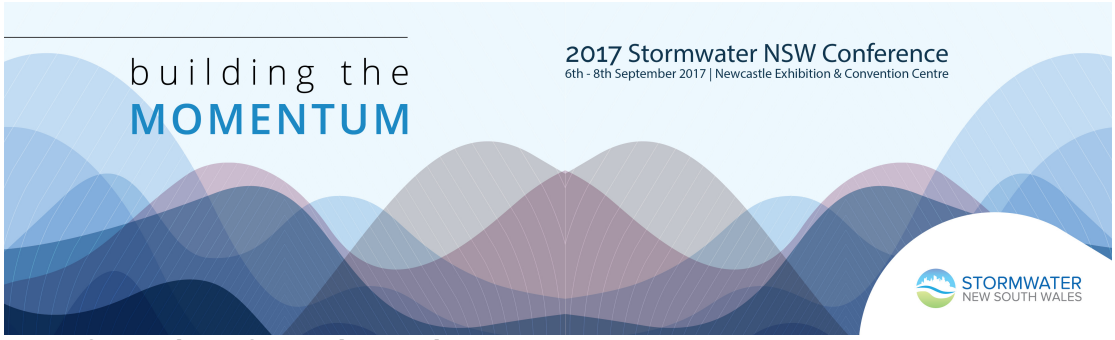

Transformation of an Urban Lake at Mt Annan, NSW

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Like many Councils in Australia, Camden Council strives to maintain green assets in its LGA. This is challenging in the case of Lake Annan which experiences severe algal blooms with associated odour and visual amenity decline. The community voiced their concerns about the Lake's amenity over the last decade. They wanted a picturesque and robust ecosystem as the backdrop for their views and community recreation activities.

In response, Council assessed a wide range of options to transform Lake Annan. The key was to create a resilient and self-sustaining system. A major constraint was the presence of an existing wet-sump GPT - the removal of which would have had a huge cost impact. The resulting system adopted re-purposed the GPT as an attractive, landscaped stormwater inlet. Floating Treatment Wetlands at the Lake's inlet zone provide rich habitat and ongoing pollutant removal.

The key elements of the inlet transformation are listed and described as follows:
· A new Gross Pollutant Trap – a large CDS
· Retention and re-purposing of the existing concrete GPT – landscaped to enhance its amenity and appearance as the existing GPT would no longer perform any pollution reduction function
· Passively irrigated garden beds along the new stormwater channel
· A stabilised inflow channel to the lake – use of rock-armoured low flow channel with grassed high flow overbanks
· Floating Treatment Wetlands (FTWs) placed along the flow path in the lake, adjacent to the inlet - Naturaft™ FTWs. The Naturaft™ FTW's have special bird protection systems to keep the existing Ibis and Swamp Hen populations at bay.
· Stabilisation of eroding island banks – using Naturaft™ Streambank Edge™

The result is a stunning transformation of the lake inlet that will also serve to improve lake water quality over the long term. The inlet works were completed in late 2016 and they have been subjected to very high inflows over the wet March-April period of 2017. They are in perfect condition with all areas stable, plants growing and healthy, and otherwise being enjoyed by the local community.

This project represents an excellent case study for the restoration of urban lakes in Australia. Existing stormwater assets can be re-purposed at low cost. Floating Treatment Wetlands and Streambank Edge have proven to be excellent and innovative products for transforming urban lakes.