A.4 Water Management Assessment

A number of existing swales on the campus are degraded or have not been formalised. Restoring and enhancing these swales would improve the campus' ecology, habitat corridors, water quality, aesthetics and connect people to water.

Refer Photographs A.4.1 & A.4.2

There are a number of informal car parks around the University which are currently discharging sediment and other contaminants to the already degraded drainage lines. In some locations, appropriate intervention measures such as temporary grassed swales have been utilised to minimise impacting the water bodies on site. Such measures should be incorporated at other informal parking areas as soon as practicable. While these measures are not ideal, in the short term they will result in reduced sediment loads to the lakes and other water features on campus and therefore assist in minimising future water quality issues.

Refer Photograph A.4.3

Other integrated water management features have been impacted by construction activities; for example, some bio-filtration systems on site are clogged with silt and are no longer functioning properly.

Refer Photograph A.4.4

During construction activities, existing integrated water management features should be isolated through the use of suitable sediment control fencing. Proper erosion and sediment controls should also be incorporated into the construction zones as required under legislation. Irrespective of construction stage measures, the increasing building density and patronage of the University is likely to lead to further reductions in the quality of stormwater runoff from the campus into the lakes.

A formal programme for ongoing swale maintenance is recommended, involving some redesign of existing bio-filtration systems. Retrofitting advanced bio-filtration systems would be advantageous in the long term as they offer low maintenance, better landscape integration, reduced clogging, and better treatment performance. As such, where construction activities are being planned that will impact upon existing bio-filtration systems the opportunity for redesigning and rebuilding these systems should be taken, as it will assist their capacity to handle increased loads from newly developed areas, while the improved design would result in lower maintenance requirements and better performance.

Future Opportunities

There are a number of possibilities for developing the campus' network of bio-filtration systems. For example, streetscape bio-filtration can easily be incorporated into new and existing roads, in both soft and hard landscaped areas.

Refer Photographs A.4.5 & A.4.6

Opportunities exist for enhancing the landscape aesthetic through developing more formalised and vegetated swales. These can be readily integrated into a range of built environments, such as urbanised settings or the open campus green.

Refer Photograph A.4.7 & A.4.8

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A.4.1

A.4.2

A.4.3

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A.4.5

A.4.6

A.4.7

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