walkerassociates
CONSULTING LIMITED

# SUDS Outline Strategy Report

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For

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**Sustainable urban drainage system –** The idea behind SUDS is to try to replicate natural drainage into the ground using cost effective solutions with low environmental impact to drain away surface water run-off through collection, storage, and cleaning before allowing it to be released slowly back into the ground, such as into water courses. This is to counter the effects of conventional drainage systems that often become overloaded in heavy rain leading to flooding and in some instances pollution of the environment.

Table 1 below assesses the suitability of the various SUDS approaches for this site.

Table 1: Assessment of suitability of SUDS at the Project Site

| SUDS | Viability | Comments |
|---|---|---|
| Rainwater harvesting, | X | Not considered viable on flats due to due to tenure restrictions, and lack of available roof area. |
| Swales (shallow grass ditches) | X | Limited available space, and restriction to layout. |
| Filter trench | X | Low permeability in sub soils, made ground present, and lack of space. |
| Porous surfacing | X | Low permeability in sub soils, and made ground present. Site drainage levels are very tight, making tanked system not viable. |
| Balancing Pond | X | Limited available space |
| On site storage | ✓ | Storage is possible in over-sized drainage pipes, storm cell units. |
| Living/biodiversity Roofs | ✓ | Green roofs to be utilised where possible. |

With the above in mind, the Sustainable Urban Drainage System (SUDS) on this development incorporates;

1) Matching or reducing the existing run off from sites by reducing site run-off to 5l/s, and storage for the 1in100 year event with climate change.

2) Green roofs to be utilised where possible.