

## **Sheerwater Design Workshop - Drainage**

**7pm on Wednesday 1<sup>st</sup> October 2014**

**Parkview Community Centre**

The purpose of this Design Workshop was to review the choices for developing a range of sustainable urban drainage systems (SUDS) throughout the emerging Masterplan. Participants engaged with the Project Architect and Civil Engineering Consultants to understand the different ways and uses of SUDS and to discuss how they could be used.

### **ATTENDEES:**

#### **Project Team**

Nathanal Crichton – Design Manager

Julia Finlayson – Urban Landscape Designer

Gelina Menville - Regeneration Manager

Alan Dumbrell - Civil Engineer

#### **Residents**

Albert Drive (1)

Dartmouth Avenue (2)

Woodlands House (1)

### **Discussion and Actions**

#### **1.0 Sustainable Urban Drainage Systems**

- The different types of SUDS and their uses were explained. The residents were shown examples of each type.
- Discussions took place about the importance of handling ground water as well as rainwater given the naturally high water table within Sheerwater.
- SUDS are an effective solution as water is held in smaller, more manageable pockets that is then allowed to drain at a more natural pace back into the ground.
- This will reduce the boggiessness of any grassed areas, and avoid the issues currently experienced on the Recreation Ground.
- It was clarified that permeable paving would not cause a trip hazard.
- A discussion took place about some of the SUDS on the table and residents were able to provide feedback on their own experience of SUDS uses.
- It is important to use aqua cells that can be maintained in the longer term, even though these are often more expensive at the start.
- A discussion around green roofs took place and residents agreed that they are a good use of creating additional green areas whilst attracting wildlife. They can also create pleasant additional areas to relax in.
- It was explained that green roofs are likely to be added to community buildings and have a bedding in period of about a year, after which time they start to look great.
- Ponds and wetland areas are good as they create natural areas to collect and store water in the short term allowing natural drainage to occur, but from within a designated space.
- Water courses can be used to create a dry or wet feature and would be dependant on the ground water levels of the area in which they are placed. They are different from standard water features which require clean (often pumped) water sources.

- Residents showed concern about the safety element of any water course, in particular to those with visual impairments. It was explained that any feature would be of gentle incline and that any such wet feature would not be designed with steep edges/sharp falls.
- Residents were reassured that there are also design guidelines about the safe use of water within design (RoSible) and would be used by the design team.
- Surfaces such as gravel and grass are less suitable for Sheerwater due to the naturally high water table.
- All homes will have access to water butts, although a fuller rain harvesting system is unlikely to be used here.

➤ Actions for the Project Team

- To explore the long term implications of using SUDS to include ease of and cost of future maintenance.

## 2.0 **Flooding and Flood Risk**

- It was explained to the residents that parts of the site are categorised as 'flood zone 2' (along the recreation area and school playing fields) but that this is a historical categorisation.
- There was an historic problem with the locks on the canal being too far apart. This meant that the canal was able to collect a back flow of water, which in turn caused flooding along the Sheerwater stretch.
- This issue has been fully resolved since by the upgrading of the towpath and the addition of the pumping station.
- There are no recorded flooding incidents from the canal since this work took place.

➤ Actions for the Project Team

- Discuss with the environment agency the defences, which will be incorporated as part of the Sheerwater Regeneration to protect against flooding. This in turn could lead to the downgrading of the 'flood zone 2' down to 'flood zone 1'.
- Discuss in more detail with the environment agency any possible upgrade works which may be needed for the current pumping system, how this will be funded and the and ongoing maintenance costs.

## 3.0 **Road Hierarchy, pathways and the use of SUDS**

- Incorporating SUDS into the design of the different road types (primary, secondary and tertiary) were discussed, including the merits of introducing features such as verges, road furniture (such as bollards and railings), double curbs, and shared surfaces.
- All roads will be built to adoptable standards, even if not all roads will be adopted.
- Shared surfaces, where pedestrians have right of way but can be used by vehicles (including emergency services) will be incorporated and could be identifiable by difference styles of permeable surfaces.
- Planting used as a drainage measure will combine SUDS with an aesthetically pleasing feature. Plants used in this way also help to keep the water naturally clean too.
- The use of flowers versus the use of green plants was discussed and the merits of each discussed – ease of maintenance against being more aesthetically pleasing.
- There was a specific concern from within the group, about the ease of use of any such surfaces, road treatment and pathway edge for those with visual impairments.

**Feedback about the session**

- It was useful to look at the possibilities [for drainage] and ask questions to people who know the answers.
- I feel comfortable to ask questions in a safe environment [of the design workshops].

