

Management and Maintenance Plan for Sustainable Drainage (SuDS):

Development at Baglan Boxing Club,
Fenbrook Close,
Port Talbot,
SA12 7PA

Prepared for:

Baglan Boxing Club

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1. INTRODUCTION

- 1.1. This SuDS Management and Maintenance Plan has been prepared by Vale Consultancy in support of a SuDS scheme for the proposed development at Baglan Boxing Club, Fenbrook Close, Port Talbot, SA12 7PA.
- 1.2. The proposed scheme is to construct three extensions to the existing structure as well as a new access road and car park.
- 1.3. The scheme incorporates a sustainable drainage system for surface water runoff, which consists of a detention basin, underground geo-cellular soakaway crates and raingardens.
- 1.4. The method for disposal of surface water runoff is to discharge to ground via infiltration.
- 1.5. The purpose of this document is to set out the overall management and maintenance objectives for the proposed SuDS components and to describe the long-term maintenance required to allow the system to continue operating as is it intended.
- 1.6. All references to SuDS components are based on the SAB submission drawings:
 - *10986-500: Drainage Plan*
 - *10986-501: Drainage Details*

2. MANAGEMENT RESPONSIBILITIES

- 2.1. The current site owner shall be responsible for the implementation of the Management and Maintenance Plan. If deemed necessary, all maintenance operations shall be undertaken by a suitable and qualified contractor appointed by the site owner.
- 2.2. All inspections and maintenance work must be recorded. This allows for future assessment of the maintenance activities and their response to the system. It can also provide protection against legal claims should the system be exceeded in a storm event leading to flooding elsewhere.

3. MANAGEMENT OBJECTIVES

- 3.1. The site shall be managed and maintained as an attractive, tidy, and safe finish to all landscape elements.
- 3.2. The proposed planting shall enhance the biodiversity and nature conservation interests.
- 3.3. The Site Owner shall ensure establishment and long-term health of all landscape elements for the benefit of the tenants and visual amenity of the area.
- 3.4. Best Health & Safety practices shall always be used.
- 3.5. To monitor standards and make amendments where required, it is expected that the Site

Owner will review the management work (with reference to this document) at least quarterly for the first year and annually thereafter.

4 INSPECTION AND MAINTENANCE ACCESS

- 4.1. Access for inspection and maintenance can be gained from the Fenbrook Close. Vehicle parking is available on site within the existing car park at the back of the club.

5 MAINTENANCE VISITS OR INSPECTIONS

- 5.1. The Site Owner or appointed maintenance contractor shall carry out a minimum of 12 maintenance visits or inspections per year to check drainage SuDS components. Visits shall be monthly. Additional visits may be needed to deal with extreme weather conditions or specific horticultural requirements.

6 GENERAL

- 6.1. All materials and workmanship are to be to the highest possible standards and shall be in accordance with relevant British Standards, good horticultural and arboricultural practices, and the landscape specification.
- 6.2. The Site Owner shall employ suitably qualified staff for all work and when using sprays and mechanical equipment. All equipment shall be kept in a sound condition, fit for use and purpose.
- 6.3. The Site Owner and their appointed contractors shall comply with all relevant Health and Safety regulations and good working practices.
- 6.4. The Site Owner shall take care when work is beside any structure or paved area and will, at their own cost, be responsible for making good any damage caused.
- 6.5. All work shall be carried out while soil and weather conditions are suitable.
- 6.6. Weeds, pruning's, leaves, rubbish and other arisings shall be removed from site for composting, where possible. No material shall be left on site, and the area shall be left in a neat and tidy condition after each visit.
- 6.7. Entomological or disease infestation shall be dealt with as required and shall be checked at each visit. Control shall be either by spraying with approved chemicals, pruning all dead wood by cutting back to an outward pointing bud or by removal of the affected plants.
- 6.8. Watering during the first two years after planting may be necessary during times of drought in summer months and, when watering is required, it shall be carried out on a regular basis to suit climatic conditions. If conditions are severe or soils are particularly free-draining, careful monitoring and more frequent watering may be necessary to maintain good plant

health and avoid plant failure.

- 6.9. Plants shall be re-firmed when necessary to ensure that plants are securely planted and upright.
- 6.10. Bark mulch levels shall be maintained, being topped up when necessary to a minimum depth of 50mm. Any spillages shall be swept back on to the bed from surrounding areas, ensuring no plants are smothered.
- 6.11. Edge valleys in beds shall be maintained to reduce mulch spillage and grass edges shall be cut at each maintenance visit.

7 ORNAMENTAL PLANTING

Specific objectives:

- To ensure early establishment and healthy growth
- To maintain a dense canopy cover
- To maintain year-round appearance and visual interest

Maintenance Operations:

- 7.1. All shrub beds in the raingarden shall be maintained substantially free of weeds. Work shall be done either manually or with appropriate selective weed killer in accordance with manufacturer's recommendations. If weed killer is used the dead weeds shall be removed at the next maintenance visit. Care must be taken to avoid damage to adjacent planting and grass and replaced immediately if affected by weed killer.
- 7.2. Once established, shrubs shall be selectively thinned or reduced in height as appropriate by removal or pruning to allow room for growth and avoid overcrowding/overshadowing and create a natural form rather than cube or cloud shapes. Care shall be taken to avoid over pruning and so creating obvious gaps in the shrub beds.
- 7.3. Ground cover plants shall be clipped or pruned, if necessary, to give a neat and tidy finish and contained within the planting bed. Work to remove dead vegetation shall be carried out during the winter months.
- 7.4. Pruning of herbaceous planting:
In spring cut stems close to the 'crown' or 'dormant' top of the plant, avoiding the removal of new shoots.
 - Tidy up the base of the plant, removing dead foliage and debris.
 - Remove all material from site.
 - If necessary, apply a 50mm layer of fine horticultural mulch. This will help moisture retention in the soil, contribute to weed suppression and allow delicate stems to grow.

- Leave dried flower head over winter for relevant species e.g., ornamental grasses.

7.5. Fertilising:

- One application, just before or at the time of spring growth.
- A balanced fertiliser is required, one high in Phosphorus (which encourages blooming as well as strong roots and disease resistance). Fertilisers high in nitrogen should not be used as nitrogen promotes excess foliage at the expense of flowers and roots which can result in weak stems

8 LITTER COLLECTION

- 8.1. All hard surfacing shall be swept as necessary, and all rubbish removed from site.
- 8.2. Litter picking/clearance shall take place during each maintenance visit and all waste shall be removed from site.
- 8.3. During autumn maintenance visits all fallen leaves shall be collected and removed from site.

9 TRADITIONAL DRAINAGE

- 9.1. A bi-monthly site inspection should be carried out, checking for any areas that are not operating correctly and collecting/removing litter and debris.
- 9.2. All rainwater pipes, channel drains, gullies and inspection chambers should be inspected biannually, typically spring and autumn.
- 9.3. Any excessive sediment build-up in rainwater pipes, channel drains, gullies or inspection chambers causing blockage or poor performance shall be cleared and cleaned as required.
- 9.4. Geo-cellular attenuation tanks require little to no maintenance. They should however be inspected after every major storm event. For traditional drainage systems it is recommended that a slit trap is incorporated into the pipework at the inlet to the tank. However, in SuDS applications silt and debris is usually removed by upstream SuDS components so there is less need for a silt trap.

10 SUMMARY OF INSPECTION AND MAINTENANCE

10.1. The following briefly summarises the frequency and type of inspections and maintenance required for the SuDS components and drainage system used in this scheme:

10.2. General

- General inspections of SuDS areas (permeable paving, raingarden, inlets and outlets) – monthly and shall include litter collection.
- Biannual check of traditional drainage including rainwater pipes, channel drains, gullies and inspection chambers (as applicable).

10.3. Bioretention areas (raingardens)

- Inspect surfaces for silting and ponding, record de-watering time to determine if any remedial work is required – annually
- Grass cutting (if deemed necessary) – bi-monthly during growing season (April – October)
- Pruning, weed removal and plant replacement, assess plants for disease infection, poor growth and invasive species – annually
- Inspect inlets for damage or blockage at general inspections
- Clear inlet of sediment build-up – as required

10.4. Detention Basin

- Maintenance of detention basins is relatively straightforward for landscape contractors and should only be a small amount of work (if any) over what is normally required for public open spaces.
- Monthly inspection – remove litter/debris, check inlets/outlets, manage surrounding vegetation and nuisance plants
- Cut grass – monthly during growing season (Spring-Summer)

11 LIFETIME MANAGEMENT AND MAINTENANCE COSTS

11.1. The costs associated with the management and maintenance of the SuDS system over the 60-year design life of the scheme has been estimated based on the inspection and maintenance activities in section 10, as follows:

11.2. General

- General monthly inspection by the site owner (incl. litter removal) – no cost as is incorporated in general site maintenance undertaken by site owner
- Biannual check of traditional drainage - no cost as is incorporated in general site maintenance undertaken by site owner

11.3. Bioretention areas (raingardens)

- Grass cutting - no cost as is incorporated in general site maintenance undertaken by site owner.
- Annual pruning/fertilising - no cost as is incorporated in general site maintenance undertaken by site owner.
- Plant replacement over 60 years, assuming 10% of plants need to be replaced each year ($10\% \text{ of } 2.52\text{m}^2 = 0.252\text{m}^2$) @ £15 / m² / year - £227

11.4. Detention Basin

- Cut grass – monthly during growing season (Spring-Summer) – over 60 years @ £15 per cut x 6 cuts per year - £5,400
- Plant replacement over 60 years, assuming 10% of plants need to be replaced each year ($10\% \text{ of } 48.9\text{m}^2 = 4.89\text{m}^2$) @ £15 / m² / year - £4,401

11.5. The total sum of management and maintenance costs for the proposed SuDS over a 60-year design life - **£10,028 or circa £167 a year**