MANAGEMENT OF OPEN SPACE AND SUSTAINABLE URBAN DRAINAGE SYSTEMS

APPLICATION FOR FULL PLANNING PERMISSION FOR THE ERECTION OF 150 DWELLINGS AND ASSOCIATED OPEN SPACE AND INFRASTRUCTURE AT LAND TO THE NORTHWEST OF HIGH ROAD WESTON, SPALDING, LINCOLNSHIRE

PERSIMMON HOMES EAST MIDLANDS

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1 Introduction

1.1 This Management of Open Space and Sustainable Urban Drainage Systems document supports a full planning submission for the erection of 150 dwellings and associated open space and infrastructure at Land to the northwest of High Road Weston, Spalding, Lincolnshire.

1.2 This document is put forward to set out a proposed maintenance regime for the Open Space and SUDs features within the site with particular relevance to the indicative layout put forward as part of the current outline planning application.

2 Management Objectives

2.1 In the short term, the primary objectives are to ensure satisfactory establishment and stabilisation of any systems and the adjoining areas of land, and to ensure that public safety is maintained.

2.2 In the medium to longer term, the management objectives will be as follows:-

- To ensure public safety.
- To ensure satisfactory operation of the systems as flood attenuation areas, in consultation with the water company as necessary. Periodic de-silting will take place.
- To maintain public liaison in order to explain the role of the SuDS and the importance of maintaining clean discharges from surface water areas entered into.
- To manage and develop the visual amenity of the pond and similar areas by maintaining the soft landscaping which includes the following operations:-

    - Grass cutting.
    - Litter picking.
    - Shrub maintenance.
    - Periodic inspection and management of tree species including coppicing.
    - Inspection and repair of perimeter fences, gates, paths and other features.
    - Regular inspection of structures associated with the function of the SuDS.

- To encourage the development of ecological interests, in so far as this can be achieved subject to the incoming water quality (taking account of highway salt and other materials that may be discharged by the public).

<u>Public Safety</u>

2.3 It is recognised that bodies of water and ditches, whilst they can represent very attractive features which have ecological value and play as an essential role in flood attenuation, represent a potential safety hazard, particularly to small children.

2.4 Whilst vegetation drainage areas is of benefit both ecologically, and visually, such planting will also be carried out and subsequently managed as part of the safety mechanisms for open water.

2.5 There may be occasions in the life of the system where children may enter areas of open water. To mitigate potential hazard SUDs are to be designed

with shallow side slopes so that it is possible to escape from the pond by crawling up the banks. RoSPA recommends that slopes should be sufficiently shallow that any person wading into water can proceed for at least twice their own height and remain standing with their head well above water. RoSPA also recommends the use of even grades and the avoidance of sudden shelving areas of deep water.

2.6 The provision of safety equipment requires very careful consideration as this can often be used as a substitute for proper safety planning. Any equipment, which may be installed, will be subject to periodic inspection in accordance with the summary regime.

2.7 Appropriate warning signs may also be placed around the pond edge, and subject to the inspection and maintenance regime.

2.8 SUDs information leaflets will be distributed to residents.

Maintenance

2.9 The maintenance regime is set out in the appendices, which outline suggested regimes for potential SUDs features put forward.

2.10 In addition to regular routing items, SUDs maintenance will be carried out, and may include pond de silting, usually carried out on a 10 – 15 year cycle. This can be intrusive operations when carried out within housing areas. Prior to any planned de-silting or dredging, consultation will be undertaken with the water company and the local planning authority.

2.11 Before these operations are carried out, members of the public in the general area will be informed and those in the immediate vicinity will be notified in writing well in advance of the commencement of works.

2.12 The dredging work will be carried out under the supervision of consulting engineers and to a pre- agreed method statement. In the event that the pond develops particular wildlife interests then careful consideration will be given to the timing of the operation.

Water Quality

2.13 The management company or other appointed body will be responsible for the removal of material deposited with the system during periodic de-silting and also the larger objects which will occasionally be dumped by members of the public. These larger objects will be removed as part of the periodic litter inspections, as will material around the pond edges.

2.14 In the unlikely event of severe pollution incidences, these will be dealt with on a one-off basis in close consultation with the Environment Agency, the water company and the Local Authority.

Periodic Review

2.15 In addition to the regimes detailed in the appendices, and the items already discussed, the SUDs system will be subject to a 5 yearly review to establish whether the management objectives require revision.

2.16 This review will be undertaken by the IDB or similar body and any recommendations will be addressed by the Management Company. This will include all short term actions and long term improvements where required to ensure capacity is retained in the existing and proposed SUDs features.

2.17 The Management Company or other appointed body will coordinate the review and will provide notice of intentions to Weston Parish Council when required.

3 Management – General Principles

3.1 A single management company or other such appointed organisation will be set and a Managing Agent will be appointed to deal with the management and maintenance of all public open space and SUDs features on the site.

3.2 Based on the constraints and merits of the site, those managing the open space are anticipated as requiring to cover the following areas on the site:-

Landscape and Ecological Design

Areas of open space are provided for in various areas of the site, with the largest area of open space located centrally within the site. This includes a play area, open grassland and drainage ditches which it is anticipated will be predominantly dry apart from during heavy rainfall events. The landscaping of these areas is to be agreed at a future point but it is anticipated that landscape features will include native planting and seed mixes. The central area of open space provides for LAP. These areas will provide a popular area for recreation and will include the following features:

- Grassland to be managed for recreation;
- Amenity grassland to be cut in a regular basis;
- Native seed mixes; and
- Space for children to play

Play Area

The play area will consist of a grassed area of open space intended to serve as an informal area for children range. There are also opportunities for informal recreation throughout the development. This may include kick about areas, hide and seek and nature walks. These areas will be subject to annual inspections.

SUDs and Ditches

The SUDs feature on the development consists of a series of drainage ditches and balancing ponds alongside the existing ditches which run around the borders of the site. Those managing these areas should have trained staff who will be experienced in inspecting and maintaining these systems.

Ground Maintenance Specification

There will be flexibility in the maintenance specifications and these can be varied on site depending upon the requirements for the Site and the needs of residents.

It is anticipated that maintenance visits will be fortnightly in the summer and monthly in the winter.

Maintenance Breakdown:

- Remove litter and empty bins;
- Cut grass and mulch arisings on amenity areas (remove arisings around infiltration basins, play area and close to pathways);
- Trim around edges of borders and paths;
- Strim grass edges and banks;
- Weed control;
- Use of selective herbicides;
- Prune shrub beds;
- Maintain wildflower areas and aquatic planting; and
- Sweep/ Blow pathways

Site Inspection Regime

- Inspect structures for evidence of poor operation (monthly);
- Inspect banksides, structures and paperwork for evidence of damage (monthly);
- Inspect water bodies for signs of eutrophication (monthly May to October);
- Inspect safety signage and safety equipment (monthly);
- Inspect inlets and pre- treatment components for silt accumulation (6 monthly); and
- Check mechanical devices within chambers (6 monthly)

Residents Management Company

It is proposed that each property on the development will be members of the Residents Management Company, who will pay equal shares, by way of a service charge to cover the costs of maintaining the managed areas and administering the Company. Those managing the open space and drainage areas for the site will take instruction from the Residents Management Company through an appointed 'Managing Agent' and provide professional advice and expertise to ensure compliance with all necessary legislation.

Annual Management Charge Specification

It will be expected that the managing agent from the organisation managing organisation's responsibilities will include:

- Providing an annual budget for maintenance of the estate;
- Administering a sinking fund to cover any large items of future expenditure. This fund is kept in a separate account on behalf of the residents;
- Arranging necessary insurances;

- Arranging the grounds maintenance and regularly monitoring to ensure that standards are kept high;
- Ensuring that any staff allowed onto the development have sufficient knowledge of health and safety legislation and provide the relevant method statements and risk assessments;
- Ensuring that the estate is safe and complies with all necessary legislation;
- Provide full accounting information on demand and having fully audited books available at the end of each accounting year;
- Organising and attending an Annual General meeting if necessary;
- Responding to residents' queries and generally communicating with them whenever necessary; and
- Any other duty that is required to ensure that the estate is well maintained, has pleasant well cared for grounds and is a safe environment for residents

Service Chare Budget

It is expected that the service charge budget will be made up from the following elements:-

- Grounds Maintenance visits;
- Hedge and wildflower meadow maintenance;
- Balancing pond and aquatic planting;
- Play area inspections;
- Repairs and replacements;
- Sundry items;
- Public liability insurance;
- Bank and admin fees;
- Accountancy fees;
- Management fee; and
- Reserve fund

Appendix A
Summary Specification for the Maintenance of the SuDS

Infiltration Ponds

Infiltration ponds are subject to a routine monitoring and maintenance schedule. These will be carried out at regular intervals between 1 April and 31 October, and monthly intervals between 1 November and 31 March, unless otherwise detailed below, and shall comprise the following:-

- Collection and removal of litter from the pond, inlet, outflow, and water margins
- Inspection of the pond to check the following and repair as necessary:
    - Any failure on the operation of the inlet and outlet
    - Any damage or erosion to the perimeter edges and slopes of the pond
    - Damage to, or weed build-up within, the perimeter aquatic vegetation
    - The integrity of all fences and the condition of all safety equipment
- An annual check carried out by a suitably qualified person, to assess the condition and operation of the pond inlet and outflow, and the accumulation of silt/ sediment
- A record of maintenance visits and remedial operations shall be maintained.

The above operations will be carried out by the management company in conjunction with the routine ground maintenance operations of the landscaped areas within the development.

Appendix B
Specification for Infiltration Ponds/Swales

Ponds

Maintenance Category	Maintenance Activity	Comments	Responsibility	Frequency
Routine Maintenance	Litter and debris removal.	Litter and debris to be removed prior to any grass cutting activity (of perimeter areas) to minimise the risk of shredding litter. Particular attention should be paid to inlet/ outlet pipes and grilles where in place.	Management Company	Monthly.
Routine Maintenance	Grass cutting: landscaped areas, spillways and access routes.	All cuttings to be removed from SuDS component.	Management Company	Monthly (during growing season) or as required.
Routine Maintenance	Grass cutting: meadow grass.	All cuttings to be removed from SuDS component.	Management Company	Half yearly (Spring before nesting season and Autumn).
Routine Maintenance	Remove dead vegetation from pond edge.		Management Company	1 – 3 years, or as required.
Routine Maintenance	Hand cut submerged and emergency aquatic plants (at a minimum	Thinning of emergence barrier vegetation. Areas of tall emergent	Management Company	As required.

	of 0.1m above pond base; max 1/3 of pond surface).	plants obscuring visual inspection (for safety) of the open water would be trimmed regularly.		
Routine Maintenance	Cut and remove bank vegetation from waters edge to a minimum of 1m above water level.	To provide access to pond edge / emergent vegetation for maintenance and inspection.	Management Company	Monthly (for first 3 years) then as required.
Routine Maintenance	Manage other vegetation and remove nuisance plants.	To include wetland plants in permanent pools. Weeding should be conducted by hand or use non-toxic and biodegradable weed killer. Invasive species should be removed in accordance with best practice.	Management Company	Monthly (at implementation) then as required.
Routine Maintenance	Tidy all dead growth before start of growing season.		Management Company	Annually.
Routine maintenance	Remove sediment from pre-treatment (if applicable)	When level reaches 50% of inspection chambers sump / forebay.	Management Company	Annually or as required.

Routine Maintenance	Ice warning safety signage.		Management Company	To be erected at the end of September and removed at the end of March.
Infrequent Maintenance	Re-seed or replant areas of poor vegetation growth.		Management Company	As required.
Infrequent Maintenance	Prune and trim trees and remove cuttings.	Where vegetation is planted as a barrier management of upward growth to encourage outward growth is necessary (after shrub seedlings are established).	Management Company	
Infrequent Maintenance	Remove sediment from forebay	If pond is lined care should be taken to protect the liner; this may include digger buckets without teeth etc. Care should be exercised to limit re-suspension of sediment into main pool.	Management Company	As required.
Infrequent Maintenance	Remove sediment from main body of large ponds when pool value is reduced by 20%	Sediment level will be dependent upon presence and type of upstream SuDS, size and	Management Company	> 10 years usually or as required.

		land use catchment as well as local soil conditions,		
Corrective Maintenance	Repair erosion or other damage.		Management Company	As required.
Corrective Maintenance	Re-alignment of rip-gap.		Management Company	As required.
Corrective Maintenance	Aereate pond when signs of eutrophication are detected.		Management Company	As required.
Corrective Maintenance	Repair/ rehabilitation of inlets, outlets and overflows.		Management Company	As required.
Inspection	Inspect structures for evidence of poor operation.		Management Company	Monthly.
Inspection	Inspect backsides, structures, pipe works etc for evidence of physical damage.		Management Company	Monthly.
Inspections	Inspect water body for signs eutrophication .		Management Company	Monthly (May – October)
Inspections	Inspect inlets and pre-treatment components for silt accumulation.	Includes visual inspection of chamber (where present) and inspection of flow control.	Management Company	Half Yearly.
Inspections	Check mechanical devices within chambers.	Includes cracking of seals on penstocks,	Management Company	Half yearly.

		testing Hydro-Brake by-pass door.		
Inspections	Safety signage and safety equipment inspection.	Ensure permanent and seasonal safety signs in place. Safety equipment should be inspected to ensure it is available and in good repair.	Management Company	Monthly.

Private Soak Aways / Attenuation Tanks

To prevent silt from entering the private soak away, a catch pit will be located upstream for soak away maintenance inspection as per the Building Drainage and External Works Plan which accompanies this submission.

Maintenance Category	Maintenance Activity	Comments	Responsibility	Frequency
Routine Maintenance	Litter and debris removal.	Litter and debris to be removed.	Home Owner	Monthly.
Routine Maintenance	Manage other vegetation and remove nuisance plants.	Weeding should be conducted by hand or non-toxic and biodegradable weed killer. Invasive species should be removed in accordance with best practice.	Home Owner	Monthly (at implementation then as required).
Routine Maintenance	Clear upstream catch pit of silt build up.		Home Owner	Annually
Corrective Maintenance	Remove build up of sediments where		Home Owner	As required.

	hydraulic performance is affected.			
Inspection	Inspect of blockages.		Home Owner	Monthly
Inspection	Inspect for ponding, compactions and silt accumulation.		Home Owner	Monthly

Private Gullies

Maintenance Category	Maintenance Activity	Comments	Responsibility	Frequency
Routine Maintenance	Litter and debris removal.	Litter and debris to be removed.	Home Owner	Monthly.
Corrective Maintenance	Remove build up of sediments where hydraulic performance is affected.		Home Owner	As required.
Inspection	Inspect of blockages.		Home Owner	Monthly.