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MAINTENANCE AND MANAGEMENT PLAN

PROPOSED RESIDENTIAL
DEVELOPMENT AT
LAND TO THE REAR OF SEION CHAPEL
PONTFADOG
LLANGOLLEN
LL20 7AS

JUNE 2019

1. Introduction

- 1.1 This is a Maintenance and Management Plan for the non-adoptable works on the proposed development located at – Land to the rear of Seion Chapel, Pontfadog, Llangollen, LL20 7AS. The proposal is contained within a site of approximately 0.15Ha. The site is located at grid reference: **SJ 23417 30202**. See Appendix A for the areas of non-adopted areas.
- 1.2 This document is produced on behalf of the developer, namely Clwyd Alyn Housing Association Limited, to ensure an adequate maintenance regime is established for all no-adoptable apparatus.
- 1.3 The Highway drainage will not be adopted; however, the foul sewer network will be adopted under a section 104 agreement with Dwr Cymru/Welsh water. See Appendix B. All surface water plot drainage is to remain private and will require regular maintenance as discussed within the main body of this report. Soakaways will not be offered for adoption; thus, this document sets out recommendations for the ongoing servicing of the constructed drainage by Clwyd Alyn Housing Association or any future cooperative Private Management Company, administered by the home-owners should they be sold to individuals in the future.
- 1.4 Part of the highway will be adopted and maintained by the local Highway Authority; reference is made to the attached Section 38 layout (Appendix C) for extent of Highway adoption. All other non-adopted tarmacadam, paved areas will be utilised in the car park and estate road. This document will highlight the extent of future maintenance required in association with these non-adoptable hardstanding surfaces within communal areas.
- 1.5 The aim of the document is to assist in preserving and maintaining all non-adopted apparatus within the design including the surface water drainage and the tarmacadam paving to its original condition as constructed and perform as designed. This is to ensure the adequate drainage of the highway and site itself over its intended design life.

2. Maintenance Type

- 2.1. Different maintenance types contribute in varying degrees to the core objectives of safety, serviceability and sustainability. In each case therefore, standards and delivery arrangements should preferably be established having regard to these objectives, focused on outcomes, rather than on inputs mainly related to maintenance type.

The main types of maintenance are as follows:

- **Reactive** – responding to inspections, complaints or emergencies;
- **Routine** – regular consistent schedule, generally for cleaning, grass cutting and landscape maintenance;
- **Programmed** – flexibly planned schemes primarily of reconditioning or reconstruction;
- **Winter service;**
- **Weather and other emergencies.**

3. Maintenance Category

- 3.1 Within each of the above types there are various categories of maintenance as follows, each of which should be considered in terms of their output contribution towards the core objectives of safety, serviceability and sustainability:

3.1.1 **Reactive**

- All assets – provide initial temporary repair for safety purposes.
- All assets – provide permanent repair for safety purposes.

3.1.2 **Routine**

- Drainage systems – emptying catchpits and repair;
- Contoured trough – grass cutting, void left clear of debris;

3.1.3 **Programmed**

- Pipework – cleansing

3.1.4 **Winter Service**

- Pre – treatment;
- Post – treatment;

3.1.5 **Weather and other Emergencies**

- Flooding;
- Other emergencies.

4. Maintenance of the Non-Adoptable Apparatus

- 4.0.1 Each aspect of the maintenance regime needs to be founded on the core objectives of:

Safety

- Meeting users' needs for safety.

Serviceability

- Ensuring availability
- Maintaining reliability

Sustainability

- Minimising cost over time
- Maximising value to the community

4.1 Surface Water Drainage

- 4.1.1 The frequency of emptying catch pits will depend upon the location, extent of tree cover, level of rainfall, the extent of kerbing and the frequency of road sweeping. In lower risk situations, by default, all gullies should be cleaned annually and arrangements made for non-functioning gullies to be recorded for more frequent or detailed attention.
- 4.1.2 Conventional drainage is traditionally maintained by contractors using specialist machinery to clear gullies, pipework and storage zones of trash and sediment accumulation. Most conventional drainage infrastructure is out of sight; so, the frequency of routine maintenance is generally determined by routine rather than need and irregular maintenance activities tend to be triggered by system performance failure.
- 4.1.3 It is important that a new subsurface drainage system be carefully inspected and maintained for the first two or three years. Any weak spots that have developed in the laterals and main drains and any backfilled areas that have settled can be remedied and filled in. The ideal time to inspect the system is in the spring, late fall and after a significant rainfall event – when the soil is wet and the drains are running. Prompt repair of any noted issues will ensure that the system is always in good working order and will prevent a more serious issue from developing.
- 4.1.4 Records should be kept of any maintenance/repairs and changed to the system on the drainage plan. This will ensure that there is always an accurate plan of the system for future inspection and maintenance.

4.2 Tarmacadam Paving

4.2.1 The four main routine maintenance categories with permeable paving can be found below:

- | | |
|-----------------------|------------------------|
| 1 - Cosmetic Cleaning | 3 - Winter Maintenance |
| 2 - Visual Inspection | 4 - Weed Control |

4.2.2 Cosmetic cleaning consists of non-aggressive brushing of the whole surface either manually or mechanically. Measures should be taken to ensure no disruption of the jointing material.

4.2.3 Visual inspections should be carried out and the condition and performance of the surface recorded during maintenance visits of the private surface water network.

4.2.4 Winter maintenance includes controlled use of standard road de-icing techniques including rock salts and de-icing chlorides

4.2.5 Weed control consists of treatment of excessive weed growth, typically where vehicles do not pass over, can be managed by localised spot-treatments with approved weed killer.

4.2.6 Over the long-term, allowance should be made to deal with any permeability or structural issues. In this event, the affected areas should be jetted and the joints refilled with the correct clean material and vibrated.

Type of Maintenance	Apparatus	Maintenance Interval
Cosmetic Cleaning	Tarmacadam Paving	Annually
Visual Inspections	Tarmacadam Paving	6-12 months
Winter Maintenance	Tarmacadam Paving	Annually
Weed Control	Tarmacadam Paving	6-12 months
Visual inspections	SW Drainage	6-12 months
Winter Maintenance	SW Drainage	Annually
Visual Inspections	Soakaways	Annually
Intrusive Inspections	Soakaways	10 Years

5 Frequency of Inspection

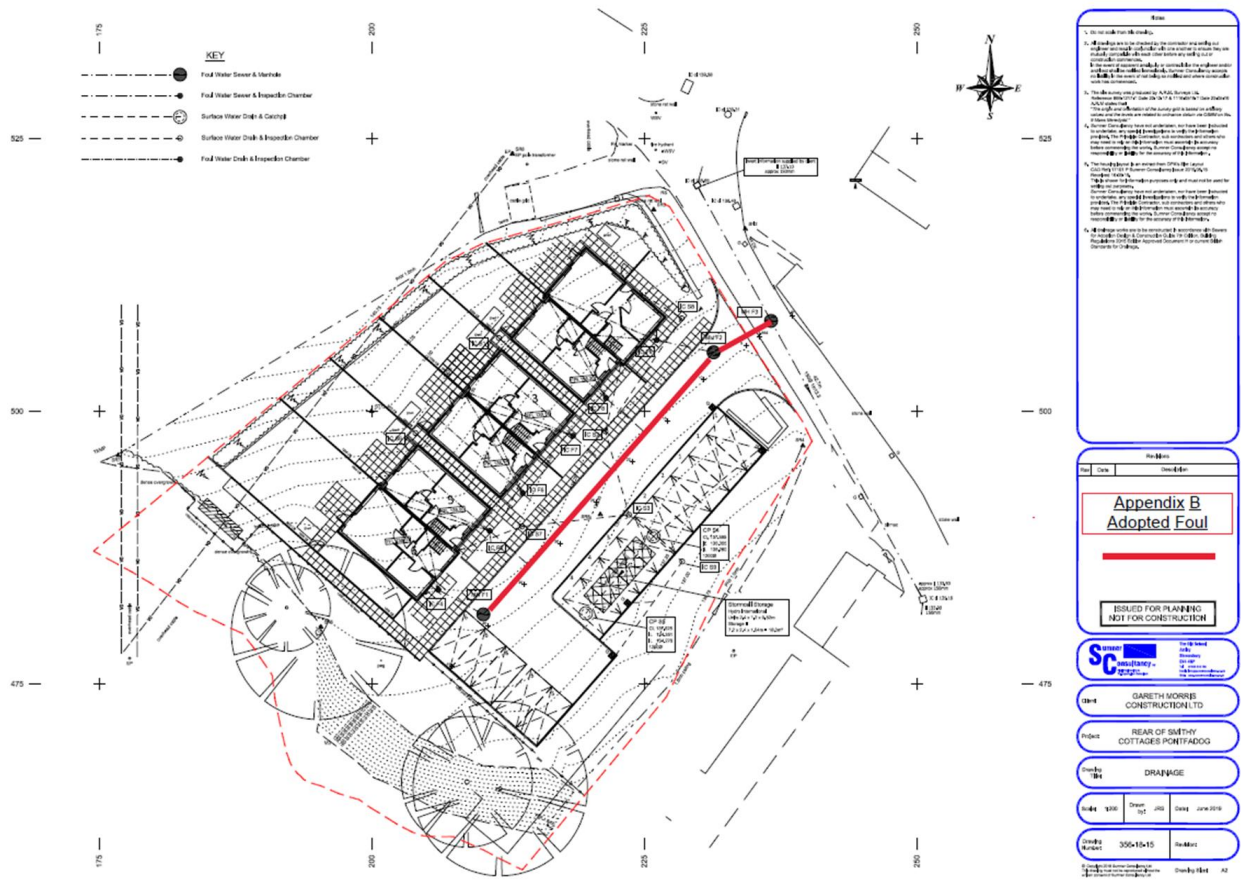
5.0.1 The below aspects are the responsibility of the Housing Authority:

- Drainage pipes should be inspected for the first two or three years.
- Silt traps need to be monitored quarterly in first year and silt accumulation rate noted. Empty based on accumulation rate or empty yearly or following large storms.
- Debris removal from catchment surface via sweeping should be undertaken by the Highway Authority although residents should avoid allowing plastics and debris from entering the drains.
- Cleansing the gutters and any filters on downpipes should be undertaken annually.
- The drainage system should be programmed to be jetted every 5 years to maintain an as-designed network.
- Soakaway- design life in excess of 50yrs where no settlement occurs and cover depth is maintained as designed. Should be checked annually to determine if functioning adequately.

Appendix A – Non adopted areas



Appendix B – Adopted Foul Surface





Appendix C – Adopted Highway

