

Commuted Sums for Highway Drainage Assets Policy

If SuDS systems are to be used (e.g.: Soakaways, permeable paving) to discharge the surface water run-off from a highway which is proposed to be adopted by the highway authority under a Section 38 or 278 agreement, it is expected that a commuted sum will apply to cover future costs relating to the inspection, maintenance and repair of that asset adopted by Doncaster MBC. Commuted sums will be calculated on a site specific basis, dependant of what type of drainage infrastructure Doncaster MBC will be adopting.

Typical commuted sum costs for the 5 types of drainage infrastructure we would consider adopting are as follows.

1. Soakaway

£7,800 per soakaway. This is based upon a conventional pre-cast concrete ring soakaway, and this sum is subject to change for other types of soakaway (geo-cellular crates).

Below are the maintenance activities to be undertaken when adopting soakaways under a Section 38 agreement. Also included is a worked example of how to calculate the commuted sum.

Based on a standard soakaway with a capacity of 10m³

Maintenance required (30 years)

Annual de-silting work (every year)

£260 x 30 = **£7,800**

£780 extra will be added for each additional cubic metre of storage.

2. Permeable Paving

Doncaster MBC will consider adoption of permeable paving on a site specific basis, dependant on the topology and extent of the housing development associated with the highway to be adopted.

The commuted sum for permeable paving is based upon a maintenance period of 30yrs and calculated using the standard formula for calculating commuted sums.

Typical sum for a 300m² area of permeable paving would be in the region of £9,000.

(Please see notes below on how the commuted sum is to be calculated. This figure may be subject to review once there is more certainty as to the definitive long-term maintenance requirements for permeable paving).

Notes:

Below are the maintenance activities to be undertaken when adopting permeable paving under a Section 38 or 278 agreement. Also included is a worked example of how to calculate the commuted sum.

Maintenance required (30 years)

- 1) Weed kill (every 5 years)
- 2) Annual Sweep
- 3) 20% of paving taken up and re-laid
- 4) Re-gritting

Worked example (based upon an area of 300m²);

1) Weed kill (every 5 years) : 6 x £370	£2220
2) Annual Sweep - £36.60 x 30	£1098
3) Assume 20% of paving has to be taken up and re-laid £80.25 x 60	£4815
4) Re-gritting @ £3.00 per m ² x 300	£ 900
	Total= £9,033

Infiltration Testing Guidance

One of the key criteria in selecting a pavement system is subgrade permeability, which is established from appropriate tests on site. Infiltration tests for traditional soakaways are usually carried out at depths greater than 1m below ground level. Permeable pavements infiltrate water into the ground at much shallower depths than traditional soakaways and therefore infiltration tests should be carried out close to the final formation level of the pavement. This usually means that the tests are much shallower (less than 1m depth) and use a lower head of water to replicate the performance of the permeable pavement. Table 1 of the Interpave Guidance recommends appropriate pavement systems for a range of subgrade conditions, including permeability derived from infiltration tests, while Table 2 gives guidance on soil classification.

Further information can be obtained in “Interpave’s Guide to the Design, Construction and Maintenance of Concrete Block Permeable Pavements” (refer to Section 5 – Selection of a pavement system)

<http://www.paving.org.uk/commercial/index.php>

3. By-Pass Separators (Oil/Petrol Interceptors)

These may be a requirement for some highway drainage systems, to protect the water quality and potential contamination of watercourses, aquifers etc.

Typically a figure of £15,150 per separator would be required.

Based on a typical by-pass separator with a capacity of 10m³

Maintenance required (30 years)

Annual cleansing work (every year)

£65 per hour Jet Vac

£75 per tonne contaminated material

2 hours x £65 = £130

5 tonne x £75 = £375

£505 x 30 = **£15,150**

£1,515 extra will be added for each additional cubic metre of storage.

4. Where a developer intends to discharge surface water run-off from their development into an existing highway drain, the developer will:

Note: Where SuDS systems are not a viable option, then discharging highway run-off into a positive highway drainage system will attract a commuted sum, to offset the additional costs required to maintain this asset to an acceptable standard.

- a) In addition to assessing the structural integrity and capacity of the existing highway drain, also determine that the highway drain does not outfall into a combined sewer.
- b) Be responsible for determining the extent of the existing highway drainage network, (where reasonably practicable and where existing records are not available) and assessing the hydraulic capacity and structural integrity of the

existing highway drainage to accommodate the net additional flow up to its discharge point.

- c) Be required to pay a commuted sum for the annual inspection and increased maintenance necessary, as a result of the net increase in flow discharged into the system for a period of 30 years. This is based on the additional impermeable area to be drained and is determined, as follows:

d)

Development Size	Number of Properties	De-silting	Total Cost
Small	1-5	Once every 5 years	£2,340
Medium	6-19	Once every 2 years	£5,850
Large	20+	Once every year	£11,700

Worked Example:

Based on a small development,

Maintenance required (30 years)

Annual de-silting work (Once every 5 year)

£130 per hour for a Jet Vac

3 hrs x £130 = £390

£390 x 6 = £2,340

Note:-

Doncaster MBC will only allow connection to the existing highway drain if all other options have been exhausted or alternative surface water discharge points are deemed unfeasible (includes discharging into existing watercourses).

5. Linear Drainage

Linear Drainage is used to discharge the surface water run-off from a highway. These are generally found in pedestrianised areas i.e. Town Centres, Shopping

areas. There are also various types of Aco Drain kerbs used in areas to assist with the drainage of surface water.

10m of Linear Drainage will take 1 Hour to cleanse, 2 hours if full to top.

Linear Drainage is on a cycle to cleanse once every 3 years and would require the jet vac to undertake the cleansing.

£130 per hour for the Jet Vac

£130 per 10m section

30 year maintenance period. Based on cleansed once every 3 years as per current program.

= 10hours * £130 = £1300 per 10m

Traffic management cost £300 / 7.24h day.

= £41.43 / per hour. * 10 = £414.30

Total cost = £1300 + £414.30 = £1714.30 per 10m.