COMMUTED SUMS PROCEDURE

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Contents

Document Information

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Document History

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Introduction

Commuted sums are financial payments made by third parties, typically developers and landowners, to Highway Authorities as a contribution towards the future maintenance costs of newly created assets associated with their developments. A commuted sum is a single payment invested over an agreed period and from this amount the cost of maintenance is drawn down. These payments help offset the increasing burden on the Local Authorities revenue budget in support of future asset maintenance needs.

The Highway Authority has a statutory duty and responsibility for the maintenance and management of adopted highways at the public expense and this duty extends beyond the surface and includes the structure and fabric of the highway.

These assets may be divided into four broad categories:

1. The cost of maintaining areas and construction which under normal industry design guidance are not required for the safe and satisfactory functioning of the highway. Examples are additional areas of carriageway such as a 'square' surrounding a turning head, hard landscaping, grass verges, and so on.
2. The cost of maintaining some features of the adoptable works which can be considered as extra over. Examples include highway structures, public transport infrastructure, landscaping, trees and shrubs, additional or non-usual street furniture and noise fencing. These costs represent an increase in the future maintenance liability which will be more than the anticipated normal funding generated by the development.
3. The additional cost of maintaining permitted alternative materials and features which are extra over. Examples include surfacing materials and street lighting equipment. These additional costs are in excess of what would have been incurred if the materials and features used had been to the industry standard specification.
4. Sustainable drainage systems (SUDS), for example, flow-attenuation devices, swales, soakaways and other water storage areas.

Highways related commuted sums are usually secured through legal agreements with the developers and landowners under the Highways Act 1980: Section 38 (for new developments) and Section 278 (for changes to the existing highways infrastructure, e.g., new junctions or roundabouts providing access to new developments).

Section 38 is a power allowing highway authorities to adopt newly constructed roads by agreement with landowners and developers.

Section 38(6): “An agreement under this section may contain such provisions as to the dedication as a highway of any road or way to which the agreement relates, the bearing of the expenses of the

construction, maintenance or improvement of any highway, road, bridge or viaduct to which the agreement relates and other relevant matters as the authority making the agreement think fit".

Section 278 is a power allowing Highway Authorities to secure improvements to existing roads by agreement with landowners and developers.

Section 278(3): "The agreement may also provide for the making to the highway authority of payments in respect of the maintenance of the works to which the agreement relates and may contain such incidental and consequential provisions as appear to the Highway Authority to be necessary or expedient for the purposes of the agreement".

The value of the commuted sum may be determined through individual agreement with the developer or landowner, however sound guidance and approach to this process is provided by the former County Surveyors Society (CSS) in their Guidance Document 'Commuted Sums for Maintaining Infrastructure Assets', which is endorsed by the Association of Directors of Environment, Economy, Planning and Transport (ADEPT) and referenced in 'Well-Managed Highway Infrastructure: A Code of Practice' October 2016.

A discussion and agreement need to be had with the Authorities Finance Department to ensure any commuted sums secured are held solely for the purpose of future infrastructure maintenance over the term of the agreed maintenance period.

An ancillary practice adopted by some Authorities is the charging commuted sums to their own schemes and taking a margin as a whole life cost. This practice enables funding to be moved from capital into revenue in order to set up a pot of cash that can be used for the future maintenance of the scheme. This transfer of maintenance spending from capital to revenue may be an interesting avenue to explore with the Finance Department providing the Local Authority can make the case that it will enhance the life of the asset thus satisfying the public accountancy rules.

The ADEPT Bridges Group has also published guidance for the calculation of commuted maintenance sums for structures to be adopted or transferred…this is given in ADEPT National Bridges Group – 'Commuted Sums for the Relief of Maintenance and Reconstruction of Bridges' – Guidance Notes (Jan 2016). This document is also referenced in 'Well-Managed Highway Infrastructure: A Code of Practice' October 2016: Part C – Structures.

1. Rationale

Local Authorities are advised to develop in-house Corporate Policy and Guidance in order to incorporate their application of commuted sums into their respective Infrastructure Asset Management Strategy and to reflect and adopt national best practice.

A transparent and robust audit process should be provided by which commuted sum decisions are determined and applied, ensuring the additional costs of maintaining enhanced materials and layouts are adequately provided for in the long-term, using asset management lifecycle principles.

The highway maintenance burden should be reduced by promoting resilient material specifications and adopting highway designs and layouts which provide for the needs of highway users. In addition, sensible infrastructure maintenance solutions should be promoted which will minimise whole life costs for the Highway Authority and help to limit non-essential highway infrastructure.

The Highway Authority is advised to enter into early discussions with the Planning Authority in order to negotiate and agree on the development of their Commuted Sum Policy and Guidance document. Engagement with Developer representatives should also be encouraged to ensure all appropriate viewpoints are considered.

2. Methodology for the calculation of commuted sums

The following standard methodology for calculating infrastructure commuted sums is provided from the ADEPT/CSS Guidance Document.

The commuted sum needs to be discounted to allow that it will be earning interest that will make up part of the maintenance payment when it is required, and this must be offset against the inflation rate which reduces the value of the commuted sum payment over the maintenance period. It is therefore necessary to determine the 'Net Present Value' of the future maintenance expense.

The following formula is used to calculate the commuted sum maintenance obligation:

Net Present Value Commuted Sum = $\sum Mp / 1+(D/100)T(x-y)$

Mp = Annual Asset Maintenance Cost estimated over the period of maintenance T(x-y)

This is calculated using current contract rates.

The maintenance regime is based on a 'whole life costing' approach with frequency of treatment and/or the intervals of replacement, based on planned frequencies through 'life cycle planning' and historic information. The maintenance cost may include a sum for design and supervision e.g. 8%-10%.

D = Effective Annual Discount Rate =2.20% = [(Interest Rate/Inflation Rate) -1]x100

The interest rate is taken as 4.5% (1.045)

The inflation rate is taken as 2.25% (1.0225) (excluding RPI mortgage payments)

Therefore D = [(1.045/1.0225) -1]x100 = 2.20%

(as recommended in the ADEPT/CSS Guidance Document).

T(x-y) = Time Period for the commuted sum (starting in year x and finishing in year y, e.g. 1-60).

A period of 60 years is conventionally used as the life of highway and housing assets.

The period of 60 years represents a reasonable compromise between covering future costs and the uncertainties over how far into the future the assets will be required. A time period of 60 years is typically advised to be applied for most Section 38 infrastructure assets.

Where commuted sums for maintenance of assets adopted under Section 278 cover a period of say 15 or 30 years until major repair/refurbishment, this period should continue to be used.

The commuted sum time period for Section 38 highway structures is 120 years as recommended by the Bridge Management Code produced by the ADEPT National Bridges Group.

2.1. Example calculation

The following example is for the calculation of a commuted sum which relates to an asset that requires annual maintenance costing £100 over a 60yr period with replacement every 20yrs costing £500.

Example - Commuted Sum Calculation

CS Calculation Formula @ Net Present Value

$CS = \sum Mp / 1+(D/100)T_{(1-60)}$

(Mp) = Annual asset maintenance cost = £100
Design asset life for replacement = 20yrs
(Mp_{20}) = Asset replacement cost at 20yr intervals = £500
(T) = Time Period for the commuted sum calculation = 1 to 60yrs
(D) = Annual Discount Rate = 2.2% (D/100=0.022)

Year (T)	Mp	1+(D/100)T	CS = ∑Mp / 1+(D/100)T	Year (T)	Mp	1+(D/100)T	CS = ∑Mp / 1+(D/100)T
1	100	1.02	97.85	31	100	1.68	59.45
2	100	1.04	95.79	32	100	1.70	58.69
3	100	1.07	93.81	33	100	1.73	57.94
4	100	1.09	91.91	34	100	1.75	57.21
5	100	1.11	90.09	35	100	1.77	56.50
6	100	1.13	88.34	36	100	1.79	55.80
7	100	1.15	86.66	37	100	1.81	55.13
8	100	1.18	85.03	38	100	1.84	54.47
9	100	1.20	83.47	39	100	1.86	53.82
10	100	1.22	81.97	40	500	1.88	265.96
11	100	1.24	80.52	41	100	1.90	52.58
12	100	1.26	79.11	42	100	1.92	51.98
13	100	1.29	77.76	43	100	1.95	51.39
14	100	1.31	76.45	44	100	1.97	50.81
15	100	1.33	75.19	45	100	1.99	50.25
16	100	1.35	73.96	46	100	2.01	49.70
17	100	1.37	72.78	47	100	2.03	49.16
18	100	1.40	71.63	48	100	2.06	48.64
19	100	1.42	70.52	49	100	2.08	48.12
20	500	1.44	347.22	50	100	2.10	47.62
21	100	1.46	68.40	51	100	2.12	47.13
22	100	1.48	67.39	52	100	2.14	46.64
23	100	1.51	66.40	53	100	2.17	46.17
24	100	1.53	65.45	54	100	2.19	45.70
25	100	1.55	64.52	55	100	2.21	45.25
26	100	1.57	63.61	56	100	2.23	44.80
27	100	1.59	62.74	57	100	2.25	44.37
28	100	1.62	61.88	58	100	2.28	43.94
29	100	1.64	61.05	59	100	2.30	43.52
30	100	1.66	60.24	60	500	2.32	215.52
					Commuted Sum ∑CS =		**4459.96**

The total 60 year NPV Commuted Sum to be paid is calculated to be £4,459.96

Appendix A – Reference Documents

Note: This briefing note is intended to provide an overview of the commuted sums process and associated operational considerations and direct the user to engage with industry developed documents and procedures in order to secure agreement between the Developer and the Local Authority as to the context and content of a commuted sum application.

County Surveyor Society: 'Commuted Sums for Maintaining Infrastructure Assets' - Guidance Document

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi95NbAsr75AhUZh1wKHWucBMcQFnoECAUQAw&url=https%3A%2F%2Fwww.norfolk.gov.uk%2F-%2Fmedia%2Fnorfolk%2Fdownloads%2Frubbish-recycling-planning%2Fplanning%2Fcommuted-sums-for-maintaining-infrastructure-assets.pdf&usg=AOvVaw3Ux1xgp9RnpEoojCfg6vYH

Appendix One: Identifies the specific asset types and components for which commuted sums may be sought.

Appendix Two: Provides a typical indicative procedure for the application of commuted sums from a Developer for S.38 and S.278 works and assets from conception to adoption.

Link: Commuted sums for the relief of maintenance and reconstruction of bridges" produced by the ADEPT Bridges Group.

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwir6MX4rr75AhUKT8AKHbYcCDMQFnoECAYQAQ&url=http%3A%2F%2Fadeptnet.org.uk%2Fsites%2Fdefault%2Ffiles%2FADEPT%2520Bridges%2520Group%2520Commuted%2520Sums%2520guidance%25202016.pdf&usg=AOvVaw3UFqzZojoACCr3Oct3WTQu

Bridges Commuted Sums: Calculator:

Download Link: ADEPT Commuted Sums Calculator 2018

commuted sums tool

ADEPT Category: Briefing Notes

Date: 29 May 2018

Updated version of excel spreadsheet which can be used in conjunction with Commuted Sums Guidance document

Cautionary Note:

This commuted sum calculator was prepared by Chris Mundell of Atkins, it has not been checked or verified by Atkins; it should therefore be used it at your own risk.

It is designed to be used in conjunction with the guidance document "Commuted sums for the relief of maintenance and reconstruction of bridges" produced by the ADEPT Bridges Group.

To use the spreadsheet, it will need to fill in all of the "orange" coloured fields, in line with section 4 of the guidance document. The spreadsheet will then complete the calculations.

This spreadsheet was amended in August 2017 to correct some errors in the discount factor tables. It was further amended in May 2018 to correct an error in table A5.