COMMUTED SUMS FOR MAINTAINING INFRASTRUCTURE ASSETS

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The use of commuted sums for future maintenance is not new, but there is considerable variation in their use and practice by highway authorities in relation to new developments. Historically commuted sum payments have been limited mainly to sums in respect of the future maintenance of bridges, tunnels or unusual items. More recently, for a variety of reasons, there has been a trend for the scope of commuted sums to be widened.

The style, location and expectation of developments has changed over the last 10 to 15 years with more emphasis being placed on providing Better Places to Live, delivering a ‘quality’ environment with enhanced materials and street design. Coming at the same time as moves to develop the more constrained and challenging sites, this has raised questions over the adoption and, in particular, the safety, maintainability and future funding of road layouts which vary from the ‘normal’ standard of highways authorities, and on which their funding levels are based.

These challenges often lead to the introduction of higher levels of maintenance and may also involve additional features such as retaining walls, and soakaways, which place additional burdens on future maintenance, but are often the only way to allow the practical development of the site.

Local authorities and other public/community bodies have increasing pressures on their budgets, which would normally preclude these enhanced developments from being maintained to the appropriate standard unless payment is sought from the developer for the ‘extra over’ costs involved. Often these enhancements improve both the developer’s development prospects, and their sales opportunities, and it is unreasonable that the extra costs involved are borne by public and community organisations, and ultimately the council tax payer. On the other hand, it is not in the original spirit of commuted sums for an authority to ask for sums in excess of reasonable additional future costs.

This guidance aligns with the fundamental asset management principle of understanding ‘whole life costs’. Its use should help to develop design concepts and material specifications, which are of benefit to all parties, and which should move towards providing durable infrastructure without any need for commuted sum payments for their future maintenance.

It is intended that both highway authorities, and developers, use this guidance in the spirit in which it is meant, and that innovation is not stifled. The aim is to enhance flexibility for highway authorities to adopt ‘non-standard’ layouts and materials, without placing undue burdens either on its maintenance budget, or the public purse, through constructive negotiation with developers, aimed at reaching a fair and amicable funding agreement and avoiding unnecessary conflict and litigation.

The guidance provides a transparent and consistent approach both to the seeking of and to the calculation of commuted sums. The clarity of approach should help remove the uncertainty and risk for developers at an early stage in the process. It will also provide security to the overstretched highway budgets, enabling developments to progress with much more certainty about their overall requirements and commitment, by both parties.

The guidance in not fully developed in all areas and the CSS proposes to keep the issue under review, with a national working group to undertake further work.
Section One

SUMMARY OF ‘BEST PRACTICE’ GUIDANCE

The guidance contained in this document is provided within the context of current practices regarding commuted sums and, as such, it also raises issues for further discussion, as well as seeking feedback on its application.

It is recommended that highway authorities review their current strategies for the calculation of commuted sums for future maintenance, and ensure that they have ‘clear’ local standards, for design and maintenance, within their Design Guide (Section 4.3).

The specific guidance recommendations are summarised as follows:

- Highway authorities should look more flexibly at what assets they are prepared to adopt, and review the circumstances for which commuted sums will be sought (Sections 4.2 & 5.3).
- The work of existing highway valuation groups should be extended to develop standardised unit rates for the maintenance of the various highway asset elements (Section 4.2).
- Highway authorities should set up materials databases and look to share information (both regionally and nationally) on new materials and methods (Section 4.3).
- Highway authorities should develop their own standard construction definitions, and accepted materials list (Section 5.1) with due consideration of risk (Section 5.9).
- Commuted sums should generally be applied for the ‘extra over’ costs to be met by the highway authority (Sections 5.2, 5.3 and Appendix 4).
- Commuted sums may well be appropriate for any new works carried out to facilitate new development as part of a Section 38 Agreement, without any requirement for calculating ‘departure of benefit’ to the highway authority (Section 5.2).
- The final commuted sum figure paid should be calculated immediately before the development infrastructure is adopted, and the figures should be adjusted periodically during design and construction to accommodate any price fluctuations (Section 5.5).
- Any commuted sums should be included in the Bond required from the developer (Section 5.6) and be payable before issue of the Final Certificate (Section 5.7).
- Within its calculation formula, the highway authority should use a discount rate of 2.2% and a time period of 60 years for maintenance calculation purposes (Appendix 5). If a highway authority considers that a different rate or time period should be used (e.g., transfer of a bridge which will be required in perpetuity) the reasons for doing so and the calculations used must be made explicit.

There should not be any retrospective application of this guidance, which should be applied to new agreements only (Sections 5.2 & 5.8).

INTRODUCTION

1.1 BACKGROUND & SCOPE

In July 2003 the ODPM (now Department for Communities and Local Government) published the report Better Streets, Better Places: Delivering Sustainable Residential Environments. This followed a research project to establish whether there were substantive problems over the adoption of new highways meeting the requirements of Planning Policy Statement Note 3: Housing (PPS3) and Planning Policy Wales. The object of the study was to identify the underlying causes of any such problems, and to recommend how they should be addressed.

The report identified the reluctance of many highway authorities to adopt materials or designs that were considered to require higher levels of maintenance than their ‘normal’ standard. In order to cover any resulting increased maintenance costs, highway authorities were increasingly seeking commuted sums for these ‘extra over’ costs.

The report recommended ‘that government takes steps to regularise the system for authorities seeking payments from developers for future maintenance, so that it is seen to be equitable and transparent’. It was proposed that Manual for Streets (MfS) should include clear guidance as to what should normally be regarded as acceptable, without any payment for exceptional future maintenance. Payments for future maintenance should then only be charged for items falling into these categories, with clear rules to determine their calculation; and with obligations for the adopting authority to maintain the infrastructure to an agreed standard – a ‘quality contract’. However, due to difficulties in reaching any agreement, this did not happen at the time of publication of MfS.

This Guidance Document is seen as the first step to achieving the government’s objectives and aims to provide a transparent and consistent approach to the determination of relevant commuted sums payments for future maintenance aspects of adopted, or otherwise transferred, assets in England and Wales. It is intended to be used in relation to the general ‘public realm’ aspects of new developments and is, therefore, not solely for the use of highway authorities but also by district/city, town or parish councils.

Local authorities, will need to approach this subject with full regard to their local circumstances, needs and budgets. This guidance is offered in the hope of assisting all authorities to formulate their approach to commuted sum payments, being based on current ‘best practice’, and allowing for flexibility of approach and ability to stimulate improvements. It advocates early advice to the developer as to the specific requirements of the authority such that the developer is aware of all likely costs at the outset, and the likelihood of adoption by the local authority is maximised.

The document attempts to treat all assets in an equal manner, and outlines when a commuted sum will normally apply, how the sum is calculated, and how these should be managed in future years for the on-going maintenance of the relevant assets. The overall intent is not to stifle innovation, but rather to give the highway authority greater flexibility to adopt ‘non-standard’ layouts and materials without placing undue burdens either on its maintenance budget or its Council Tax payers.

For highway infrastructure, typically, but not invariably, commuted sums are secured by way of agreements made under the Highways Act 1980, using Section 38 for new roads provided on private land, and Section 278 for alterations made to existing publicly maintained highways. As part of these agreements, many local highway authorities have long required applicants to make commuted payments towards the future maintenance of the new or improved highways provided. The statutory authority for these payments appears in Sections 38(1) and 278(3) of the 1980 Act. Such commuted payments are considered lawful, but are not to be considered as a ‘pioneering income’ in either case, and must be seen to be fair to all parties. In the interests of both highway authorities and developers alike, and to achieve ‘shared’ local and national objectives, the payment of commuted sums for future maintenance should be tempered with ‘reasonableness’ of use, be in the spirit of the 1980 Highways Act, and be applied along similar lines across the country. The guidance advocates a way forward that, irrespective of the legal issues involved, should be fair to all parts and aims to achieve the required outcome of desirable and sustainable developments.

The government is committed to encouraging a major house building programme over the next 10 years and beyond. The Barker Review of housing supply has also stressed the benefits to the country of economic activity and development. It is vital that both new housing and new commercial and other development be supported by suitable infrastructure. Developers, local authorities, and other stakeholders all need to be engaged at an early stage.

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Section One

The main objectives of this document are:

- To encourage more clarity and consistency of practices in relation to the use of commuted sums for future maintenance.
- To encourage creativity and innovation in line with the ‘Manual for Streets’ philosophy, by the potential adoption of higher quality features and materials without the application of commuted sums.
- To find a negotiated solution in adopting ‘non-standard’ layouts and materials without placing undue burdens either on its maintenance budget or its Council Tax payers.
- To ensure that developers are aware of any local authority requirements at an early stage, and provide more transparency in the commuted sum calculations.
- To provide some basic guidance to be followed for the calculation and application of commuted sums.
- To keep the guidance simple, thus enabling the adoption process to become as straightforward as possible.
- As far as possible, to increase the likelihood of developments being adopted and avoid the creation of new private streets, and
- To raise the national profile of commuted sums, the issues still to be resolved, and engender further debate.

The guidance follows established good practice and is largely based around the Leicester County Council documentation, developed on behalf of the Midlands Service Improvement Group (MSIG). In order to avoid duplication, all material sources are acknowledged and appropriate references are provided.

A number of documents have been issued in recent years that recognise payments for future maintenance by developers. These are listed in the bibliography at Appendix 8.
1.2 STATUS OF DOCUMENT
This is not national Government guidance or advice. Although it is hoped that this guidance will be referred to and followed by all interested parties, it is not mandatory. It attempts to reflect reasonable practice and the intentions of current legislation. It does not represent a definitive statement or advice and, as such, any party using this document should seek their own legal advice about its use in any specific, and especially unusual, situations.

It is expected that this guidance will promote further debate and additional related work, and, as such, will need to be regularly reviewed – potentially by a new national forum. It has been developed in consultation with as many interested stakeholders as possible.

1.3 ACKNOWLEDGEMENTS
The development of the Guidance was guided by a Steering group, which comprised:
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A special acknowledgement should also be made to Leicestershire County Council, and particularly Frank Bedford, for their considerable contribution to the project, and for providing detailed information on the Midlands Service Improvement Group (MSIG) initiative, which forms the “backbone” of this document.

Section Two

LEGAL & PLANNING ISSUES

2.1 CURRENT SITUATION
There remains a diversity of opinion as to the legality of Section 38 commuted sum payments in relation to the future maintenance of highway assets when adopted from private developers. Although no case law exists, this document has been prepared on the basis that commuted sum payments are lawful under both Sections 38 and 278 of the 1980 Highways Act. It identifies a way forward that is in the spirit of the 1980 Act. However, local authorities should also take appropriate legal advice.

The Midlands Service Improvement Group (MSIG) approach has developer support, and is seen as a reasonable and acceptable way forward to achieve layouts and features that create the environment that all parties seek for future desirable and sustainable developments. It is not just seen as a source of income generation for LHAs.

2.2 COMMUTED SUM DEFINITION
The following legal definition is suggested for the term ‘commuted sum’ in relation to the adoption of new infrastructure:

“Commuted Sum: A payment of a capital sum by an individual, authority or company to the highway authority, local authority, or other body, as a contribution towards the future maintenance of the asset to be adopted, or transferred.”

Such payment need not be a single payment and can, by agreement, be a series of payments and may include issues beyond maintenance, such as inspection, repair and relocation of the asset.

Commuted sums are expected, in the main, to relate to payment made by developers as a contribution towards the future capital maintenance of ‘non-standard’ and ‘extra over’ features in developments. Section 4 outlines the specific asset types that are applicable to commuted sums, and Section 5, the suggested categories and criteria for payment.

The payment of a commuted sum by a developer will discharge them of any future maintenance responsibility for the adopted assets after issue of the final certificate. The payment of an appropriate commuted sum by an owner of an asset will discharge the owner of the obligation to maintain the asset. The obligation, and associated risk, then lies with the adopting party to maintain the asset.
Section Two

2.3 STATUTORY AGREEMENTS AND THE PLANNING CONSENT

The former ODPM Circular 05/2005: Planning Obligations refers to the securing of financial contributions towards the provision of infrastructure by way of Section 106 Agreements.

The situation in Wales is covered by Planning Policy for Wales together with associated Welsh Technical Advice Note (TAN) documents.

A Section 106 (S106) Agreement (under the Town and Country Planning Act 1990) is entered into by an individual to obtain planning permission for a development proposal. Once executed a S106 Agreement remains connected to the land and binds all future owners of the land in question unless expressly excluded by the Agreement. It is discretionary, and enables the local authority to seek payments, from developers, as financial contributions towards infrastructure assets (including future maintenance costs). This generally relates to ‘non-highway’ assets and can include such items as open spaces, other green areas and public art.

The aim of this guidance is to help avoid both the creation of new private streets, and the use of S37 (Highways Act, 1980) by developers for the dedication of parts of the highway (e.g. cul de sacs). Where practical and sensible, all new highways should be adopted by the highway authority regardless of perceived ‘public utility’ value – and without any uncertainties about the need, or otherwise, for commuted sum payments.

A further relevant statutory agreement in respect of commuted sums is Section 104 (S104) of the Water Industry Act 1991. A S104 Agreement relates to construction of sewers, pumps and drains on developer’s own land to be adopted and maintained by the water company following successful construction of the works and after the requisite maintenance period.

2.3.1 COMMUTED SUMS IN RELATION TO SECTION 38 AGREEMENTS

Section 38 (S38) or Section 278 (S278) of the Highways Act 1980, which are discretionary powers for the highway authority to enter into an agreement with a developer to adopt new highways or improve the highway. S38 Agreements relate to the adoption of private internal estate roads built on the developer’s own land and which the developer, upon completion, wishes to be adopted by the highway authority as highway maintainable at the public expense.

S278 Agreements provide developers with a mechanism to either fund works, or undertake works themselves, to the existing public highway. The works are often termed ‘off site works’ as they are usually separate from the developer’s site and the works are necessary to provide improved access to, or mitigate the effects of, the new development. Considerable statutes and legislation exist that cover ‘non-highway’ situations and that would be more appropriately used by district/borough, town or parish councils. These include provisions within the Local Government (Miscellaneous Provisions) Act 1982 and the Local Governments Acts 2000/2001.

2.3.2 COMMUTED SUMS IN RELATION TO SECTION 278 AGREEMENTS

S278 provides that if a highway authority is satisfied that it would be of benefit to the public for them to enter into an agreement under this section with any person then they may do so. The agreement would be for carrying out, on the existing public highway, works that would be of benefit to the public, and the cost of those works are to be borne by the developer. The majority of the time, the work to be undertaken is carried out by the developer as they will usually have some effect on his development.

There is an express provision in Section 278 (3) for payments for the maintenance of the works, and this may be applied by the highway authority if it chooses to do so:

“An agreement under this section may provide for the making to the highway authority by the other party to the agreement of payments in respect of the maintenance of 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.”

2.4 EARLY ADVICE TO DEVELOPERS

It is acknowledged that many of the current problems experienced by developers in respect of commuted sums, and other procedures, are as a result of inadequate knowledge as to the requirements of the highway authority. Consequently developers could be being burdened with additional costs at a very late stage.

It is recommended good practice for the developers to establish a dialogue with both the highway and planning authorities (which may be different authorities within the existing ‘two tier’ local government structure) at the earliest possible stage. This should preferably be prior to the land being purchased, and certainly before any planning application is submitted. The onus falls mainly on the developer to initiate this process. Although commuted sums relate to the final scheme, and the detailed design may not be decided on until after the land has been purchased, early dialogue can remove many of the uncertainties. The need for continuous dialogue ensures that, as schemes evolve, the financial implications are understood, rather than waiting until the end of the process.

The national guidance should provide developers with a degree of confidence as to the highway authority requirements, a consistency of approach, and more certainty as to what they will be expected to contribute.

2.5. USE OF S37 OF THE HIGHWAYS ACT

If a highway authority and developer are unable to agree on the conditions relating to a Section 38 Agreement, the developer can build the road and give notice to the LHA that he intends to dedicate the road as a highway. If the LHA refuses to adopt the road as highway, the developer can apply to a magistrate court for an order that the proposed highway “will not be of sufficient utility to the public to justify it being maintained at public expense” (Section 37).

The aim of this guidance is to help avoid both the creation of new private streets, and the use of S37 (Highways Act, 1980) by developers for the dedication of parts of the highway (e.g. cul de sacs). Where practical and sensible, all new highways should be adopted by the highway authority regardless of perceived ‘public utility’ value – and without any uncertainties about the need, or otherwise, for commuted sum payments. As such, it is recommended that the use of S37 be avoided whenever possible, and that S37 should remain as the preferred method for highway adoption.

Highway authorities, under the “Advanced Payments Code”, ensure that roads constructed in connection with a development are built to a suitable standard for adoption. The developers should not commence development without having first lodged an appropriate Bond or Agreement under S37, as set out in Section 219 of the Highways Act.
FINANCIAL CONSIDERATIONS

Section Three

3.1 EXISTING FUNDING STREAMS

A general rule established in this guidance is that commuted sums will not be appropriate to be requested where existing funding streams are made available to the authority for the purposes of future maintenance of the specific assets.

The highway length maintained by LHAs is an input to the Relative Needs Formulae (RNF), which are designed to reflect the relative needs of individual authorities in providing services. However, they are not intended to measure the actual amount needed by any authority to provide local services, but to simply recognise the various factors which affect local authorities’ costs locally. The RNF does not relate to the actual monetary amount of grant that an authority needs for providing services for its residents. In reality, this means that a local authority’s Revenue Support Grant (RSG) allocation, whilst recognising increased highway length, does not necessarily translate into an increase in the overall allocation to the authority for that network, since many other factors come into play to produce the overall RSG figure. The grant allocation is not ‘ring fenced’ to highways, or indeed any specific service area.

Despite the foregoing, the premise of this guidance is that the RSG system recognises increased highway length in its grant allocation to LHAs and that, as such, commuted sums for ‘standard’ network adoptions are not appropriate to be charged regardless of the recognised increased liabilities that the LHA will incur, at least in the short term.

There is a further issue in that the highway lengths input into the formula are based on such lengths determined in the previous year. Whilst this inevitably means that there is a ‘time lag’ with RSG allocation, equally there should be very little maintenance in the early years of any development.

Note: The formula application by Government normally only accounts for a ‘simple’ road layout using ‘standard’ construction, for example:

- Carriageway, kerbs and associated footways
- verge areas for service strips and visibility splays
- low level earthworks i.e. very minor lifting, or cutting, of carriageway into ground profile, and
- Street lighting, drainage and signing

A local authority also receives income from the Council Tax or business rates, from all new properties within any development area, which may contribute towards the future maintenance of the overall highway network through normal revenue funding.

At this stage the impact of the new Community Infrastructure Levy (CIL), introduced in the Planning Act 2008, is uncertain. The Bill allows for regulations to empower local councils to apply a CIL on new developments in their areas, to support infrastructure delivery. Although the possibilities are negligible, LHAs must ensure that any monies collected by this mechanism are not duplicated by commuted sum requests.

3.2 “RING FENCING” OF COMMUTED SUM MONIES

All monies received in respect of commuted sums should ideally be spent on the purpose for which they were intended i.e. on the maintenance of the specific asset, but in reality this is considered impractical unless it is for a specific asset such as a bridge or public art. It is considered essential that, in general, commuted monies are re-invested into maintenance of the network, and ‘ring-fenced’ for that purpose.

The initial financial process should demonstrate the justification for the level of commuted sum set for each asset item. However, over such a long time period, there will be changes in maintenance practice and processes which will inevitably involve deviation from the original proposed maintenance regime. This should not be seen as an issue as highway authorities move to asset management practices, with the aim of ensuring that the general quality of the infrastructure is maintained to the appropriate standards.

It is recommended that highway authorities adopt a formal (“transparent”) approach to commuted sums, and establish a protocol to ensure that the ‘ring-fencing’ of monies is achieved, at least to the highway maintenance budget, and preferably to the specific asset categories.

The protocol should allow for annual ‘out-turn’ reports to be produced to provide financial control, and ensure that the correct funds are transferred to the respective highway (or other asset) maintenance budgets for future years. Arrangements for setting up and administering the budgeting protocol will vary between authorities, but should be agreed by the budget holder(s) and the Finance Department.

Any commuted sums monies should be treated by the highway authority as additional to any considerations in respect of normal maintenance budget allocations for the year.

3.3 HIGHWAYS PFI

The above premise is appropriate to the situation in most LHAs. However, in LHAs where there is a highways (and/or street lighting) PFI in place, the situation may be different, and the principles of this guidance may need to be adapted.

Under a PFI the LHA has a contractual payment requirement for a long period (normally 25 years) which makes the valuation, and paying for the cost of change, (such as the adoption of new infrastructure), a particular issue. It is important that local authorities, when contemplating PFI schemes, should fully consider the commuted sums issue and adequately provide for it. It may be appropriate for the commuted sum fund to pay part of the monthly PFI service charge.
Section Four

ASSET MANAGEMENT

4.1 RESPONSIBILITY FOR HIGHWAY MAINTENANCE

The highway authority has a statutory responsibility for the management and maintenance of the highway network which includes a need to keep the network safe for users. In order to do this, highway authorities should develop, implement and adhere to a carefully considered strategy. Traditionally, budgets for maintenance have been insufficient to meet the ‘real’ need of the network. As such, the maintenance of appropriate standards is a challenge for highway authorities, and which requires a formal and improved asset management approach.

4.2 ASSETS POTENTIALLY SUBJECT TO COMMUTED SUMS

Appendix 1 is based on current practice, and lists asset components for which commuted sums for future maintenance may potentially be sought, i.e. for which a developer may be liable to pay commuted sums in appropriate situations. This covers both ‘highway’ and ‘non-highway’ assets. For purposes of conformity, the table has been formatted in a similar way to that produced in the Guidance Document for Highway Infrastructure Asset Valuation. It is also anticipated that identifying the asset groups and components with similar issues, will, in this way, assist in the determination of associated maintenance regimes and appropriate unit rates. It should also help with future work to determine a single definitive list of assets subject to commuted sums (with associated criteria) and, equally, a list of assets which are not subject to commuted sums.

Transfer of bridge ownership between bodies/private owners will not normally be formalised with the payment of a commuted sum to reflect the maintenance liability which is transferred. The table in Appendix 1 is not intended to be exhaustive and should be used as a general framework. It is anticipated that the list will vary by authority and should be adapted as necessary to suit the local situation. The items listed could generally be attributed to both S38 and S278 works, and could form the basis of the local commuted sums calculation, using a locally agreed schedule of rates.

At this stage there has not been any attempt to determine standardised unit rates. This exercise is seen as aligning very closely to current highway authority asset valuation exercises as part of Transport Asset Management Plan (TAMP) developments. It is recommended that the work of existing valuation groups be extended to include this aspect.

The associated activities/functions that may also be included in the calculation of commuted sums may include:
- Inspections and surveys
- Routine and cyclic maintenance
- Winter maintenance
- Energy charges
- Design and supervision

It is assumed that the costs of any accident, and unpredicted damage (e.g. flood damage/vandalism), caused after adoption can be recovered by the highway authority from the perpetrator, and should generally be an accepted risk for the authority. However, some authorities may have difficulties with regard to cost recovery as a result of vandalism and, where the risk can be clearly demonstrated, LHAs may wish to make appropriate and reasonable allowance in their commuted sum calculations for such unrecoverable costs.

4.3 ASSET LIFECYCLES AND MAINTENANCE REGIMES

Much work has already been carried out nationally in respect of asset lifecycles and maintenance regimes, but more work is still needed in respect of understanding of modern materials and their maintenance requirements. These issues are fundamental to asset management, and should be considered by each highway authority as part of the development of their individual HAMPS. This could help, for example, to inform or adjust the time period for the calculation of commuted sums (see Appendix 5).

Highway authorities either individually, or in regional/national groups, are encouraged to set up materials databases; and this is especially useful where special materials are associated with commuted sums. Such databases should be used to monitor the performance of ‘non-standard’ materials, and street furniture, with a view to expanding their list of ‘standard’ materials that would not require commuted sum payments from developers.

The lifecycle, and maintenance regime, for an asset will be dependent on the initial design specification and local standards adopted. This is currently an area for negotiation between the developer and highway authority, but it is the aim of this guidance that the publication of clear local standards for asset design and maintenance will reduce the variations in the approach taken. A ‘whole life costing’ approach (looking at the most economic maintenance regime over the life of the asset) should be used for calculating commuted sums, involving the discounting of future maintenance costs based on the year they are expected to arise (see Appendix 5). Typical issues to be considered are:
- Hierarchy, network type and location
- Specification and materials
- Maintenance practices/frequencies of intervention

For the calculation of commuted sums to be transparent and equitable, having local standards published in the local HAMP, or Maintenance Plan, will ensure that the mechanisms for deciding upon eligible commuted sums are readily available and auditable.

4.4 LEVELS OF SERVICE

In addition to the specific aspects required for its effective functioning, each asset should also be looked at in respect of its contribution to the overall service requirements of each highway authority. This is a complex issue which highway authorities will consider within their HAMP development and at some stage, may be developed further for commuted sum calculation considerations.

The aim of this guidance is to help improve standards across the whole of the ‘public realm’, but it is recognised that there is still a considerable ‘valuation’ exercise to be undertaken nationally with both the collation of existing information, and the sharing of good practice.

1 Guidance Document for Highway Infrastructure Asset Valuation; Roads Liaison Group, July 2005; TSO
Section Five

PROCESSES, PRACTICE AND PROCEDURES

5.1 STANDARD CONSTRUCTION

‘Standard’ construction definitions will typically include (as a minimum):
- Carriageway surfacing in flexible construction to the normal standard of the highway authority
- Footway surfacing in asphaltic materials and for any LHA (i.e. block paving to the normal standard of the highway authority)
- Gully drainage and connections (not associated with adoptable surface water sewers)
- Standard street lighting layouts, columns and lanterns included within the authority’s lighting policy
- Highway signing, or other features associated with safe design (traffic indicator bollards etc)
- Precast concrete and granite kerbing, and
- Pedestrian guard rails and road restraint systems

‘Non-standard’ is defined as all construction types or materials that are not included in the definition of ‘standard’ construction within the highway authority’s specification.

Although individual highway authorities will have flexibility to determine their own ‘standard’ specification and construction details based on local circumstances, the above definitions should normally apply.

With the national trend towards innovation, and higher quality design (as advocated by the MHS philosophy) as well as many planning authorities encouraging certain construction materials to be used (or even insisting in Conservation Areas and the like), the highway authority should be encouraged to be more flexible in its approach e.g. they may reduce, or waive, any commuted sums requirements, particularly on the basis of maintenance experience of particular types of asset, where robustness is proven.

At this stage, some highway authorities (particularly those with both planning and highway functions) may feel unable to adopt such a flexible approach, even though enhanced materials may be included within their design guide, and positive encouragement given to developers to use higher quality materials. In such situations, it is suggested that the above definitions be utilised for commuted sums purposes, but it is imperative that a developer is advised of this situation at the earliest possible time.

Many authorities the design guide could be used as the ‘standard’ (e.g. minimum requirement) for the purposes of determining commuted sums, and as setting out which designs can incorporate higher quality materials that are acceptable to the highway authority without attracting a commuted sum payment.

As part of the dialogue between the developer and the highway authority, consideration should be given to minimising the future maintenance liability as part of the design process. Again, this could include enhanced construction (i.e. to reduce any maintenance requirements) or for the provision of higher quality materials, which should then offset all or part of the need for any commuted sum requirement. The asset categories list should be verified locally and each asset category should create its own standard items list, which can be added to as additional items are added for adoption.

5.2 COMMUTED SUM PRINCIPLES

This guidance proposes several principles which are expanded in various sections. They are that:
- The guidance is equally applicable to both S278 and S38 dealings, albeit that they are different situations (see note below)
- For newly constructed infrastructure, commuted sums are not generally considered appropriate where there are other sources of funding to cover ongoing maintenance.

Note: For older existing infrastructure, adoption or transfer of ownership of any asset may require substantial pre-adoption remedial work, or for the impaired condition to be reflected in the commuted sum calculation (if appropriate). This will particularly apply to the taking over of old ‘under-maintained’ bridges etc. and will accord with the guidance in Management of Structures: A Code of Practice (Section 4.8).

As far as possible, all assets should be treated on the same basis for commuted sum calculation purposes.

The historic acceptance of the basis of application of commuted sums in respect of adoption of bridges and structures should remain.

All new works, including SUDS, carried out as part of a S278 Agreement, are appropriate for application of commuted sums.

There should be no requirement to calculate any ‘degree of benefit’ to the local authority in respect of commuted sums for S278 works, even where such works are considered to provide some benefit to the general public; e.g. an improved junction layout with enhanced pedestrian facilities being provided.

- Under S278, commuted sums are not applicable to additional works, required by the highway authority, which are merely for aesthetic rather than for design reasons (e.g. full width resurfacing where only part withs would be necessary to accommodate a new junction)
- Where S38 works are deemed as ‘standard’ construction, commuted sums are not generally applicable. However, they should be applied for the ‘extra over’ areas and ‘extra over’ costs of exceptional items and specialist materials etc.

Note: S38 relates to the creation of additional lengths and/or areas of highway to be adopted. Commuted sums are generally payable for ‘extra over’ costs which are deemed, by the highway authority, to be placing an extra burden on the maintenance budget. This guidance recommends 60 years as a default period to be covered by S38 works (see Appendix 5) so it is essential ‘extra over’ areas and costs are clearly defined so that developers are not burdened with unjustified costs.

Although there is no legal requirement to provide lighting, the provision of ‘standard’ street lighting within S38 works will not generally be subject to commuted sums.

There should be no any retrospective application of this guidance, and it should only apply to Agreements entered into after the publication date of this document. Where applicable, users should be given adequate time (as agreed by both parties) to modify their approach in time for the changes to take effect.

An overriding principle is that commuted sums should be calculated objectively and as fairly as possible to reflect the genuine present day value of predicted future costs which they are designed to service.

5.3 ELEMENTS OF HIGHWAY INFRASTRUCTURE FOR WHICH COMMUTED SUMS MAY BE PAYABLE BY DEVELOPERS

Commuted sums charged from developers for adoption, will generally cover the following circumstances:
- Additional areas of carriageway, footway, landscaping etc. over and above the minimum requirements (i.e. additional areas which are not required for the safe functioning of the highway)
- Any street furniture not required for road safety purposes (as would normally be the situation on residential streets)
- Any culvert, bridge, retaining wall or other structure
- Special features such as noise fencing and traffic signals

Continues overleaf...
A typical commuted sum procedure in connection with the adoption of a developer is indicated at Appendix 2.

For a LHA, the circumstances relating to the seeking of commuted sums for future maintenance, can generally be divided into four broad situations, namely:

(i) ‘Additional’ areas not required for normal highways purposes.
(ii) ‘Extra over’ items
(iii) Alternative materials, and
(iv) Sustainable Drainage Systems (SUDS).

These could equally apply to S38 and S278 works, and are expanded in Appendix 4.

5.5 CALCULATING THE ACTUAL COMMUTED SUMS TO BE PAID

The developer will be required by the relevant Agreement with the highway authority to pay a commuted sum. However, it is unlikely that the full cost implications of the site will be known over the authority’s ‘standard’ specification; any other ‘non-standard’ construction types or materials; unusual drainage systems including on-line storage, hydro breaks, pumping stations, open watercourses, sustainable drainage systems (SUDS); permeable paving, swales and seagrass, and non-highway assets such as street art and public open spaces.

The overall intent is to give the highway authority greater flexibility to adopt ‘non-standard’ layouts and materials without placing undue burdens either on its maintenance budget or its Council Tax payers.

Regardless of the potential offer of a commuted sum payment, the highway authority will retain discretion as to what it is prepared to adopt, particularly where a proposal may not be acceptable in principle e.g. on highway safety grounds or where it would be inappropriate for it to do so e.g. street art, play areas; or where materials are considered to be of an unacceptable or inappropriate specification.

Appendix 1 identifies the specific asset types, and components, for which commuted sums may be sought.

5.4 THE APPLICATION AND AGREEMENT PROCESS

A typical commuted sum procedure in connection with highway adoption from a developer is indicated at Appendix 2.

5.6 BONDING OF COMMUTED SUMS

Any commuted sums should be included in the Bond required under the S38 or S278 Agreement, unless payment is made prior to engrossment of the Agreement. This should be based on the ‘provisional’ commuted sums calculated when the Agreement is completed, and released following satisfactory completion of the maintenance period and payment of the commuted sum.

5.7 TIMING OF PAYMENTS

The issue of when any commuted sum payment is to be made will depend on the individual highway authority, and may be on the execution of the Agreement or prior to the Final Certificate being issued, or soon after. It is recommended that, as normal practice, the commuted sum be payable before issue of the Final Certificate, and following satisfactory completion of the maintenance period by the developer, i.e. immediately before formal adoption.

The time period between the Agreement and completion of the development can be quite long. As such, recalculation of the sum calculated at the time of the Agreement will be necessary to arrive at the commuted sum payable prior to issue of the Final Certificate. See Appendix 7, which illustrates relevant clauses from a typical council’s standard S278 and S38 Agreements.

5.8 SCOPE FOR VARIATION

As already discussed, this guidance is advisory, but it is recommended that the principles be adopted by all authorities and developers. The guidance allows for flexibility of approach to stimulate any mutually agreed amendments. This guidance is not retrospective, and should only be applied to those schemes where funding negotiations have not been completed, and on all new negotiations; it being important to allow sufficient time to introduce the new procedures.

It is accepted that ‘standard’ construction types, and materials, will vary from one authority to another but the principles of this document should remain.

As mentioned in Section 4.2, this document does not propose any unit rates for maintenance costs to be used within the commuted sum calculations. It is not considered that these can be standardised on a national basis at the moment, as it is inevitable that these will vary, at least by region.

5.9 RISK

Risk is acknowledged as a primary consideration in the calculation of the scale of commuted sum requirements, and it is incumbent on the adopting authority to understand such risk by making use of the available data/experience both locally and nationally.

Whilst it is accepted that there is a certain element of risk, to all parties, with regard to such issues as the use of new materials and SUDS, it is expected that such issues can be minimised by the use of the standard procedures advocated in this document.

Risk transfer to the highway authority taking over the asset is effected once any commuted sum payment is received, and the asset adopted (or as otherwise set out in the Agreement).

It is important that a degree of flexibility, and scope for innovation, is maintained within the process. It is expected that the adoption of this guidance should not hinder this situation.

5.10 THE WAY FORWARD

This guidance provides a basis for negotiation that can be followed by all parties. It attempts to take a fair and balanced view, but it will be for the parties in each particular case to flesh out the framework it provides. The aim is to create a consistent and transparent approach, and a ‘base’ position from which to move forward.

It is important that the guidance should not be used for any form of retrospective consideration. It should only be used for future agreements, with sufficient time being allowed to introduce the new procedures.
### Appendix One

**ASSET CATEGORIES FOR WHICH COMMUTED SUMS MAY POTENTIALLY BE SOUGHT**

<table>
<thead>
<tr>
<th>LEVEL 1 ASSET TYPE</th>
<th>LEVEL 2 ASSET GROUP</th>
<th>LEVEL 3 ASSET COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carriageway Surfacing</strong></td>
<td>Hot Rolled Asphalt Negative Texture Surfacing</td>
<td>Road area Hard shoulder/kerb/shoulder Lay-by/parking bay Central reserve Roundabout (incl. mini) Dedicated turning lane Hammerhead/turning area Traffic island</td>
</tr>
<tr>
<td></td>
<td>Asphalt Concrete (Bituminous macadam) Surface dressing High friction surfacing Pigmented Black paving Modular paving</td>
<td>Balladeath/ball-butt batter Guano Safety kerb Bus stop kerbs Drop in kerbs Line marking/halflamanal etc. Cured Asphaltic Barriers</td>
</tr>
<tr>
<td></td>
<td><strong>Carriageway Ancillaries</strong></td>
<td>Kerbs Road markings Road studs</td>
</tr>
<tr>
<td><strong>Footways, cycleways &amp; paved verges (incl. PROW)</strong></td>
<td>Asphalt Concrete (Bituminous macadam) Pigmented (render, aggregates or chippings) Black paving Modular paving Tactile paving Unbound surfacing</td>
<td>Road area – attached to carriageway Road area – separate from carriageway Footpaths and Briddles Off road cycle routes Road visibility spays</td>
</tr>
<tr>
<td><strong>Footway ancillaries</strong></td>
<td>Vehicle crossings Kerbs Markings Edgings Stiles and gates</td>
<td></td>
</tr>
<tr>
<td><strong>Fences &amp; barriers</strong></td>
<td>Safety barriers</td>
<td>Metal safety barriers Concrete safety barriers Pedestrian guardrail Parapets</td>
</tr>
<tr>
<td><strong>Dedicated turning lane</strong></td>
<td>Kneel-down fencing Boundary fencing Noise fencing</td>
<td></td>
</tr>
<tr>
<td><strong>Structures</strong></td>
<td>Bridges Major Structures</td>
<td>Subways Cairns Retaining walls Head walls Signified gantries and carriageway road signs Foul &amp; Careways Cable grids</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous Structures</td>
<td>Columns Foundation Lanterns Control gear, switching, cabling, lower pillars etc.</td>
</tr>
<tr>
<td><strong>Tunnels</strong></td>
<td>Standard Architectural High mast Well mounted lighting Decorative light fittings Subway/bridge lighting</td>
<td>Earthworks Embankments Structural embankments Cuttings Reinforced earths</td>
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<tr>
<td><strong>Traffic / pedestrian management</strong></td>
<td>Traffic signals Pedestrian signals Illuminated traffic signs Non-illuminated traffic signs Illuminated pedestrian signs Non-illuminated pedestrian signs Illuminated hollards Heritage pedestrian signs Finger posts Gateway signs Information signs Variable message signs Rotating plank signs Traffic calming</td>
<td>Speed bumps/humps Bollards road entry channel/tables Chicanes Speed cameras Traffic island Pedestrian refuge Rumble strips</td>
</tr>
<tr>
<td><strong>Verges and landscaped areas</strong></td>
<td>Earthworks Vegetation</td>
<td>Grass Trees Plants Shrubs Hedges</td>
</tr>
<tr>
<td><strong>Amenity Fencing</strong></td>
<td>Knee-rail fencing Boundary fencing Noise fencing</td>
<td></td>
</tr>
<tr>
<td><strong>Fences &amp; barriers</strong></td>
<td>Safety barriers</td>
<td>Metal safety barriers Concrete safety barriers Pedestrian guardrail Parapets</td>
</tr>
<tr>
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<td></td>
</tr>
</tbody>
</table>

Continued overleaf...
Appendix Two

**TYPICAL COMMUTED SUM (CS) PROCEDURE FOR S38 & S278 ADOPTIONS**

**LEVEL 1**

**LEVEL 2**

**LEVEL 3**

---

**Initial Discussions**

Developer/Planning & Highway Authorities

**Developer confirms land purchase**

**Consult Highway Authority**

---

Issues identified by Planning & Highway Authorities including any CS requirements in principle

**Application Processed**

Highway Authority calculates 'provisional' CS requirements eg. “non-standard” and “extra over” items etc to be included in Bond

**Consultations on more specialist inventory items eg. Bridges where site evaluation may be required**

Draft section38/278 Agreement prepared by Legal Department

**Consultation & final Agreement incl. CS requirement within Bond figure**

---

**Works completed**

CS recalculated including indexation

---

After maintenance period

Developer invoiced for CS payment & Commuted Sum paid by Developer

**Final certificate issued**

Road Network adopted & Maintenance carried out to agreed frequency & funding allocation

---

**Bond Released**

**Budget holders informed accordingly**

Continued from overleaf...
Appendix Three

EXAMPLES OF SITUATIONS THAT MAY INCUR COMMUTED SUMS IN RELATION TO SECTION 38

(Source: Leicestershire County Council – www.leics.gov.uk/htd)

The following examples show some types of layout or features that may incur commuted sums. Additional areas such as “squares” as shown in Figures A3.1 and A3.3 are not necessary for highway purposes and will result in an additional maintenance liability for the highway authority.

Both examples also show trees within the adoptable area which may also need to be covered by a commuted sum. Structures such as retaining walls (Figure A3.2) which support the highway will also become the responsibility of the highway authority to maintain and may incur a commuted sum. The last example (Figure A3.4) shows bollards around the inside radius of a bend to prevent over-run and parking, and trees, both of which are beyond the typical features the highway authority would expect to maintain. Both features may incur a commuted sum.

Figure A3.1 Additional areas beyond typical highway requirements

Figure A3.2 H/w Retaining Structures

Figure A3.3 Additional areas beyond typical highway requirements

Figure A3.4 Additional areas beyond typical highway requirements
Appendix Four

TYPICAL SITUATIONS WHERE COMMUTED SUMS MAY BE SOUGHT ON ADOPTION OF DEVELOPMENTS

‘ADDITIONAL’ AREAS NOT REQUIRED FOR NORMAL HIGHWAY PURPOSES

(Source: Leicestershire County Council – www.leics.gov.uk/html)

The cost of maintaining areas and construction which, under the highway authority’s normal design guidance are not required for the safe and satisfactory functioning of the highway.

Examples are a “square” i.e. additional areas of carriageway, such as extended areas beyond the normal width of a turning head (see figure A4.1), hard landscaping, grass verges (see figure A4.2) and so on.

Continued from overleaf...

Figure A3.4 Highways Features – Billards

Figure A4.1 Example of turning head within extended areas beyond the normal width of a turning head

Figure A4.2 Example of additional area of grass verge adopted under a commuted sum
It is expected that, as LHAs embrace the design principles advocated in MfS, these types of examples may become less appropriate. The expectancy being that the more informal types of layout will be accepted by LHAs within their revised design standards.

Currently, within this heading a developer may be required to pay commuted sums for future maintenance in respect of:

- For new adoptable highways generally constructed under S38 Agreements – Any additional areas and construction which result from the overall development layout design, which are over and above that which the highway authority would normally require to satisfy safety and operational requirements; and
- Alterations carried out to existing highways under S278 Agreements. Some highway authorities may consider waiving any commuted sums where the alterations had already been programmed for construction by them.

**'EXTRA-OVER' ITEMS**

In relation to S38, the cost of maintaining some features of the adoptable works which can be considered as ‘extra over’ the normal design. Examples include highway structures, public transport infrastructure, landscaping, trees and shrubs, and special features such as noise fencing.

These costs represent an increase in the highway authority’s future maintenance liability which will be more than the anticipated normal funding generated by the development. Where commuted sums are appropriate, it is the difference in cost between the assets provided and the ‘standard’, that will be subject to a payment for future maintenance.

Note: Specialist items, such as traffic signals, are generally only provided in relation to S278 works where it is the full cost that should be used.

**ALTERNATIVE MATERIALS**

The additional cost of maintaining permitted alternative materials and features which are ‘non-standard’. Examples include proprietary surfacing materials, permeable paving and decorative street lighting equipment. These additional costs are in excess of that which the highway authority would have incurred if the materials and features used had been to the ‘standard’ specification. Again, where commuted sums are appropriate, it is the difference in cost between the assets provided and the ‘standard’, that will be subject to a payment for future maintenance.

**SUDS**

Sustainable drainage systems (SUDS) might include, for example, permeable paving, flow-attenuation devices, swales and storage areas. This is a relatively new area for highway authorities and, as such, current operating experience is limited, but use should be made of existing industry knowledge.

The adoption of SUDS, without the need for commuted sum payments, is encouraged whenever possible. Features such as swales of ‘run-off’ areas both pre-treat water that will eventually reach open water course and filter silt, reducing maintenance on underground pipework, minimising the risk of blockages and localised flooding which may result. Pre-treatment of surface water ‘run-off’ from the highway and parking areas is particularly beneficial as it restricts the amount of hydro-carbons which run into the storm system, improving water quality in the areas and minimising damage to wildlife and eco-systems.

Current Defra consultation on improving surface water drainage makes reference to commuted sums in relation to SUDS. Relevant extracts from the document (Improving Surface Water Drainage) are:

3.33 If capital works were needed on SUDS infrastructure, the expenditure by local authorities would be classed as public expenditure, and be subject to public sector borrowing controls. However, capital SUDS works would not normally need to be undertaken by the body responsible for their adoption and maintenance. Rather, it would rest with the adopting body to ensure that all SUDS provided by developers are properly designed and built. It would also be important to ensure that SUDS maintenance and renewal works be financed through an ongoing funding mechanism that enables appropriate service levels to be sustained.

3.34 If adoption of SUDS results in net additional costs to local authorities, the local authority will ensure that these are fully funded as required under the Government’s new burdens rules.

3.65 The maintenance of SUDS is sometimes funded through commuted sums made by developers to organisations that are currently accepting the responsibility of SUDS. This form of funding can be rather inflexible and can be both site specific and time limited. It can also be a cause of difficult negotiation between parties, may be inequitable, and is a disincentive to SUDS. The Government wishes to move the funding of the maintenance of SUDS and the charges on to a basis which meets the needs of the service provider, is equitable and does not disincentivise the uptake of SUDS.
THE CALCULATION METHODOLOGY

CALCULATING COMMUTED SUMS

There are a number of variations on the formulae that have been used for calculating commuted sums. The essential feature is that the commuted sum paid is discounted to allow for the fact that it will be earning interest which will make up part of the maintenance payment when it is required... It is therefore necessary to determine the net present value of a future expense, and the following formula is recommended to be used to calculate the maintenance obligation:

Net present value = \(\Sigma Mp/(1 + D/100)^T\), where

- \(Mp\) = Estimated future maintenance cost \(T\) years from now
- \(D\) = Discount rate (effective annual interest rate) (%)
- \(T\) = Time period before expenditure will be incurred (years)

Commuted sum = summation of all net present values for appropriate future costs

MAINTENANCE COST (MP)

This guidance does not provide any cost information. The normal method would be for the highway authority to use its current contract rates. The maintenance regime generally being based on a ‘whole life costing’ approach with the frequency of treatment, and/or the intervals of replacement, based on planned frequencies or historic information (see Section 4). It may also be appropriate to add an agreed percentage to the works costs to cover the highway authority design and supervision costs.

PERIODIC DISCOUNT RATE (D)

The recommended discount rate (effective annual interest rate) is 2.2%, and is worked out as follows:

\[D = (1.045/1.0225) - 1\times 100\]

where 1.045 is the interest rate (4.5% based on long-term neutral base rate), 1.0225 is the inflation rate (2.25% based on RPI-X that is RPI excluding mortgage payments). This formula ensures that both the interest earned on the commuted sum, and the effect of inflation in increasing the cash sums eventually required, are taken into account.

It is not recommended to use a discount rate of 3.5% for two reasons:
- It is the government’s rate for project appraisal, which is not the same process as calculating commuted sums
- It does not take account of inflation, and therefore tends to result in commuted sums which are too small.

Commuted sum calculations can be very sensitive to variations in the adopted discount rate.

Time period (T)

When the life of a development is 60 years or more, it is recommended that a period of 60 years be used as the default period for calculating commuted sums for future maintenance.

The period of 60 years is conventionally used as the life of housing and highways assets. 60 years for commuted sums represents a reasonable compromise between covering future costs and the uncertainties over whether they will be required in the future.

- Commuted sums will need to include for replacement of assets with a shorter life than that expected for the development.

The potential exceptions to the use of this time period are:
- Where assets have been constructed to serve a development that is intended to have less than 60 years life. In such situations it is reasonable to use the expected life of the development as the period for which commuted sums for future maintenance should be sought
- Where commuted sums for maintenance of assets adopted under S278 cover a period of say, 15 or 30 years until major repair/reconstruction, this period should continue to be used
- Where a highway authority or other body is adopting a substantial asset (e.g. a bridge) which forms part of a public network (particularly where it is part of the strategic network) rather than serving a development. Where the need for the asset is long-term, it is reasonable to seek commuted sums covering replacement of the asset, provided that there is a strong likelihood that it will be needed for a period longer than 60 years.

The Bridge Management Code (section 4.8.9) recommends taking a life of 120 years adjusted to reflect any ‘whole life cost’ analysis indication of a reduced economic remaining life. Calculations for such time periods will frequently include provision for complete replacement of a structure in addition to maintenance operations.

Note: If a highway authority considers that a different rate or time period should be used due to changing circumstances (e.g. transfer of a bridge which will be required in perpetuity), the reasons for doing so and the calculations used must be made explicit.
Appendix Six

TYPICAL COMMUTED SUM CALCULATION EXAMPLES

The following examples are amongst those sent as contributions towards identifying good practice in levying commuted sums. Each example is qualified by comment whether it is considered good practice, or otherwise.

EXAMPLE ONE

TYPICAL COMMUTED SUM FOR ADDITIONAL COST OF HERITAGE LIGHTING
(Lancashire CC) (from report of CSS Lighting Working Group 2003)

Method:
Calculate additional maintenance cost over life of the installation (30 years).

Additional cost is:
Lanterns – renew all after 15 years
Replace 10% of complete units due to damage during 30 years.
(in each case being extra cost over standard equipment)
Divide total additional cost by 30 to give annual cost.
Tire a sum, which will yield that annual amount on an interest rate of 3.5%.

Example Calculation:

<table>
<thead>
<tr>
<th>Standard (£)</th>
<th>Heritage (£)</th>
<th>Extra (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lantern 110</td>
<td>340</td>
<td>230</td>
</tr>
<tr>
<td>Column 35</td>
<td>510</td>
<td>135</td>
</tr>
<tr>
<td>Total 145</td>
<td>510</td>
<td>365</td>
</tr>
</tbody>
</table>

There are 18 no. units on the installation
10% – 2 units.

Additional cost of lanterns = 18 x £230 = £4,140
Additional cost of complete units = 2 x £365 = £730
Total = £4,870

Annual amount = 4870/30 = £162

Committed sum = 162/0.035 = £4,628

However, as the lanterns require replacement every 15 years, this example appears to understated the total amount required by £4,140 – the cost of replacing the lanterns in Year 30 as well as Year 15. This would give a total cost of £9,010 (£4870+£4,140) and an annual cost of £300 per year. The committed sum would be:

£300/0.035 = £8,571

Comments
This is a good example of identifying additional maintenance costs for which it is appropriate to seek commuted sums.

It is considered that a discount rate of 2.2%, which takes into account inflation, is better than 3.5% which is likely to result in the LHA finding the commuted sum insufficient as cash maintenance costs rise with inflation.

The calculation used above will result in the LHA still holding the £4,628 (or £8,571) committed sum figure at the end of 30 years, as this is the principal sum to provide the annual maintenance cost in perpetuity rather than for 30 years. This is not of major concern for the size of figures used in the example, but the sums involved for a LHA for adopting a real development could be large. It is recommended that the commuted sum be calculated by summing the present values (PVs) of the annual maintenance cost of £162 for £100 per annum at a discount rate of 2.2%, and sum them to give a commuted sum of £6,544.

Present Values of £100 per annum at a discount rate of 2.2% £

<table>
<thead>
<tr>
<th>Yr</th>
<th>1</th>
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<td>11</td>
<td>8.7</td>
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</tbody>
</table>

Commuted Sum 6,544

In line with the recommendation that the default period for commuted sums for adoptions under S38 should be 60 years, it is considered that there should be a justification for the use of 30 years as the time period. In practice, if there has been a policy decision on this, it would not be required with every calculation.

EXAMPLE TWO

Extract from CSS Guidance Notes on Commuted Sums for Bridges – 3rd Draft, CSS 2005

Sum To Provide Costs Of Reconstructions (SUM A)
All reconstructions up to and including 150 years from ownership transfer are taken into account.

\[ \text{SUM A} = \sum \text{cost of reconstruction at current prices} \times (1+d)^y \]
for each reconstruction, y years from now up to and including 150 years
Appendix Six

Example

A culvert has an expected life of 20 years and will then be replaced by a corrugated steel buried pipe at an estimated present day cost of £18,000 with a life of 120 years. Reconstructions will take place after 20 and 140 years at a present day cost of £18,000.

Reconstructions will take place after 20 and 140 years at a present day cost of £18,000. It is therefore necessary to add the net present values of £18000 calculated for these time periods. Our note: the discount rates shown below are 3.5% at 20 years and 2% at 140 years which appears to be in line with Treasury advice on reducing discount rates for appraisal.

Net Present Value of reconstructions

\[
\sum A = 18000 \times \frac{1}{1+0.035^{20}} + 18000 \times \frac{1}{1+0.02^{140}}
\]

(using discount rate of 3.5% for 20 years and 2.0% for 140 years (see comment))

\[
= 18000 \times (0.50257 + 0.06251)
\]

\[
= £10171.44
\]

The sum to provide costs of reconstructions of the culvert 20 and 140 years from now is £10,171.

Comments

This is a textbook example of the application of the preferred formula for calculating the commuted sum of future maintenance activities.

It is recommended that the use of a single discount rate of 2.2% for the reasons stated in Appendix 5.

It is considered that a very strong justification is required for levying a commuted sum for an event 140 years into the future. In this example the PV of £18,000 in 140 years is £1,125. Given the possible high degree of uncertainty that the work will be required, and uncertainty over the cost of replacement in the middle of the 22nd century, the justification for requiring a commuted sum of £10000 to meet replacement costs is questionable.

Nevertheless there are occasions when bridges on major highway routes transfer between authorities, and there is every reason to assume that these routes will exist in perpetuity. In those cases, depending on the discount rate being used, there is a point beyond which the present value of costs becomes insignificant. Calculations can therefore be curtailed accordingly.

Sum To Meet Costs Of Predictable Maintenance (SUM B)

CSS have prepared a table which lists average maintenance costs and anticipated intervals at which they are anticipated to occur, for a range of structural types and elements (these are set out in a table in the CSS guidance notes).

These figures were derived for a rural authority bridge stock in 1996. They may not be appropriate in some situations, and other figures may be substituted if available. Further guidance on periodic bridge maintenance costs for highway bridges is available in Departmental Standard BD 36.

The CSS costs can be used in conjunction with Table 3’s discount factors below to calculate the present sum of money required to meet the cost of all predictable maintenance of an asset throughout the next 150 years (SUM B). Where the cost figures provided in Table 4 are used, SUM B is adjusted from 1996 to current prices for incorporation in the commuted sum.

The CSS’s table of costs (updated from 1996 to current values) can be used in conjunction with their table of discount factors (below) to calculate the present sum of money required to meet the cost of all predictable maintenance of an asset throughout the next 150 years (SUM B).

Maintenance Discount Factors

For cyclical costs which are predicted to occur at fixed intervals over the entire life of the structure, (appropriate) values of:

\[
\frac{1}{(1+d)^y}
\]

(where d is the discount rate and y the year in which maintenance occurs) can be combined to give a maintenance discount factor for the relevant time interval. These factors are listed in Table 3 below.

For example, the discount factor for 15 yearly maintenance = 1.79976 (in bold above). This is made up of the sum of the individual 15 yearly discount factors: 0.59689 + 0.35628 + 0.26444 + 0.16973 + 0.10895 + 0.10836 + 0.07482 + 0 (reconstruction year) + 0.06902 + 0.05128

Calculation Example

From CSS table: replacement of a bridge joint every 15 years.

Cost for 25 metres @ £580 per metre = £14,500

Commuted sum for a maintenance period of 150 years is:

\[
\text{Cost every 15 years} \times \text{discount factor for 15 yearly maintenance from Table 3}
\]

\[
£14,500 \times 1.79976 = £26,097
\]

Maintenance Discount Factor tables can be drawn up for any asset maintenance period to speed up calculations.

Comment

The material above is a good example of systematising information on costs and discount factors for certainty of obligation and ease of calculation, although, as previously noted, it is recommended that a discount rate of 2.2% rather than the 3.5% be used.

Appendix Six
Appendix Six

EXAMPLE THREE

LSSP – STREET LIGHTING – TOTAL COMMUTED SUM CALCULATION

Commuted sum period 150 years
Life of column 40 years
Bulk lamping cycle 3 years
Lantern change cycle 15 years
Test & Inspect cycle 6 years
Night patrol cycles 26 years
Cost of replacement £900 per column
Cost of lamp change £15 per column
Cost of lantern change £110 per column
Cost of test & inspect £10 per column
Cost of night patrol £36 per 1000 columns

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<th>Columns</th>
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<th>Years at NPV</th>
<th>Years at NPV</th>
<th>Years at NPV</th>
<th>Years at NPV</th>
<th>Years at NPV</th>
<th>Years at NPV</th>
<th>SUM A</th>
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<td>85</td>
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</table>

Note: The replacement of all the columns at Year 5 reflects the variable condition of those taken

SUM B | SUM A | £4,589
---|---|---
£1,015 | For lamp change | £2,066
£1,015 | For lantern change | £6,655 TOTAL COMMUTED SUM
£231 | For test & inspect |
£239 | For night patrol |
£2,066 TOTAL SUM B | | |

NB: Spreadsheet for Sum B elements not shown

Comment
A good example of setting out a PV calculation for periodic replacement of assets.
As already stated, it is preferred to use a discount rate of 2.2% that takes account of inflation. With future values increasing with inflation a discount rate of 3.5% risks leaving the LHA out of pocket. It is considered that there would need to be a very strong justification for levying a commuted sum to cover projected expenditure in Years 85 and 125. 87% of Sum A is accounted for by replacement at Years 5 and 45.
EXAMPLE FOUR
From Leicestershire County Council

Commuted Sum Calculation
Tegula blockwork to carriageway
Take up and relay blocks £113.10/m2. Add cost of new blocks (10%) @ £21.25/m2 = £2.30/m2. Total £135.40/m2

15% of total treated in 10 years = £4.98
Estimated periodic maintenance cost (at present values)
Interval between periodic maintenance (years) Mp £ 4.98

COMMITTED SUM (£) 0.00

Time limit for commutation (years) 1 2 0.00

Present value of a future maintenance event = Mp / (1 + D/100)nT (where n is the number of the maintenance event - 1st, 2nd, 3rd etc., and T does not exceed Times.)

Event no. n nT Present value
Event no. 1 10 4.01
Event no. 2 20 2.22
Event no. 3 30 2.95
Event no. 4 40 2.09
Event no. 5 50 1.68
Event no. 6 60 1.35
Event no. 7 n/a 0.00
Event no. 8 n/a 0.00
Event no. 9 n/a 0.00
Event no. 10 n/a 0.00
Event no. 11 n/a 0.00
Event no. 12 n/a 0.00
Event no. 13 n/a 0.00
Event no. 14 n/a 0.00
Event no. 15 n/a 0.00
Event no. 16 n/a 0.00
Event no. 17 n/a 0.00
Event no. 18 n/a 0.00
Event no. 19 n/a 0.00
Event no. 20 n/a 0.00

Commuted sum £14.98

TOTAL PRESENT VALUE OF FUTURE MAINTENANCE £14.98

TOTAL COMMUTED SUM £135.40

Including 10% design and supervision)

Note that the commuted sum for maintaining the same area of Tegula Blockwork for 10 years is £10.80, indicating the additional costs from increasing the CS period to 60 years.

Comment
A good example of setting out a PV calculation for periodic maintenance. It uses the preferred discount rate of 15% of total treated in 10 years - £4.98. This example illustrates the importance of restricting commuted sums, to additional 2.2% and recommends a default period of 60 years.

A good example of setting out a PV calculation for periodic maintenance. It uses the preferred discount rate of 15% of total treated in 10 years - £4.98. This example illustrates the importance of restricting commuted sums, to additional 2.2% and recommends a default period of 60 years.

TYPICAL REFERENCES TO COMMUTED SUMS IN S278 & S38 AGREEMENT CLAUSES

(Sums extracted from Leicestershire County Council documentation)

S278 AGREEMENT CLAUSES

Security
Upon the execution of this agreement the Developer shall secure the costs of the Highway Works by deposit with the highway authority of a sum equivalent to the Director’s reasonable estimate of the cost of the Highway Works (including any Statutory Undertakers works) together with any committed sums payable to the highway authority in accordance with Clause 26 in the sum of £ , 00.

Prior to the commencement of the Highway Works the Developer shall secure the cost thereof by deposit with the highway authority of a Bond in the manner and form incorporated in the Second Schedule hereto in a sum equivalent to the Director’s reasonable estimate of the cost of the Highway Works (including any Statutory Undertakers works) together with any committed sum payable to the highway authority in accordance with Clause 26.

Commuted Sum
Immediately prior to the issue of the Final Certificate of Completion the Developer shall pay to the County Council a commuted sum towards the cost of future maintenance of the said roads in the sum of TWENTY THOUSAND HUNDRED AND FORTY ( £20,400) adjusted in accordance with the Schedule to the Bond hereto to arrive at the Final Sum Payable or

If so required the Developers shall pay to the highway authority prior to the issue of the Final Certificate of Completion such reasonable commuted sum as may be agreed by the parties towards the cost of future maintenance of items such as street lighting, trees and their maintenance and special works in respect of preservation and any sustainable drainage.

Use of Sums Paid
The County Council shall use such sums as are payable in accordance with the terms of this agreement together with any interest which may accrue only for the purposes set out above.

SECOND SCHEDULE
BY THIS BOND WE (Name of Developer) whose registered office is situate at (insert Registered office of Developer) (hereinafter called “the Developer”)...
If any substitution for the said Index or any index previously substituted thereof shall occur pursuant to the provisions of Clause 3 of this Schedule, the parties hereto shall endeavour to agree the appropriate reconciliation between the Index substituted on the one hand and the ROCOS Index or any index previously substituted thereof on the other hand.

S38 AGREEMENT CLAUSES

Surety

You must provide us with the health and safety file, on CD, produced:

- You must provide us with ‘as built’ drawings, preferably in an electronic

- You must pay us any other charges that are required, for example to

- You must provide us with a copy of the provisional certificate of

- the equivalent sum of monies lodged with us.

and commuted sums (where applicable) and you must provide us with an
cost of the road works, including any highway structures, highway drainage

We must be protected against the risk of unforeseen expenditure if you

S38 AGREEMENT CLAUSES

between the Index substituted on the one hand and the ROCOS Index

the parties hereto shall endeavour to agree the appropriate reconciliation
thereof shall occur pursuant to the provisions of Clause 3 of this Schedule,

Payments to us

We make a charge for the work involved in

- preparing and managing the Section 38 agreement;

- checking the design of the road works, any associated structures and

- any highway drainage;

- inspecting the works on site.

The charge for administration, design checking and site inspection
is normally a fixed percentage, and currently this is normally 6%, of the
estimated cost of the total road works, as calculated by us, excluding any
associated structures (see below) and SLUDS and ‘non-standard’ drainage
systems. There is a minimum charge of £1000 for such agreement.

We will make additional charges for design checking and site inspection
of highway structures based on ‘actual’ costs. (Please see Part 4, Section MC15
for further details on structures.) We will also charge additional fees, based on ‘actual’ costs, for SLUDS and ‘non-standard’ drainage systems. (Please see
Part 4, Section MC15 for further details on drainage).

We will also charge a separate fee of 10% of any commuted sum towards
the costs of our additional administration and inspection work.

Commuted sums

For some time we have normally required commuted sums to cover mainte-

‘heritage’ street lighting where they are to be adopted as part of a publicly
maintained highway,. We have now broadened this requirement to give us
‘non-usual’ materials without placing undue burdens either on our budgets or on Council Tax
payers.

So, where in principle we are prepared to adopt them, you will normally also have to pay commuted sums on:

- additional areas exceeding usual highway design standards and which
are not required for the safe functioning of the highway;

- materials outside our usual Specification;

- non-usual or additional street furniture;

- landscaping within the proposed highway, including trees; and

- sustainable drainage systems (SLUDS), for example, flow-allocation

- devices, walls and storage areas.

Note: Where you are proposing SLUDS, you must hold discussions with
all relevant parties at an early stage (and certainly before you submit
your planning application to agree ownership and responsibility for the
facility.

GLOSSARY OF ABBREVIATIONS

CAA Comprehensive Area Assessment
CIL Community Infrastructure Levy
CIRIA Construction Industry Research and Information

CIRIA Construction Industry Research and Information

Association

Committed Sum

CSS County Surveyors Society
DC District Council
DCLG Department for Communities and Local Government
DfT Department for Transport
DMRR Design Manual for Roads and Bridges
HA Highways Agency
HA 1980 Highways Act 1980
HAMP Highway Asset Management Plan
HBF Home Builders Federation
LHA Local Highway Authority
LPA Local Planning Authority

BIBLIOGRAPHY AND REFERENCES

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- Waste Industry Act, 1991

Highways documents

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- Commuted sums for the relief of maintenance and reconstruction of bridges (Third draft), CSSS Group, January 2005.
- Investigation into the current and future application of commuted sum charges for street lighting, CSS Lighting Working Group, December 2003.

Planning and other documents

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- Planning Policy Guidance Note 3: Housing (Cancelled), Office of the Deputy Prime Minister (now Department for Communities and Local Government), 2005.
- CIRIA 697 Maintenance Standards

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Appendix Eight

Appendix Nine