

Proposed Additions to Chapter 3 How the Code fits with other guidance (Section 3.2 Relationship to Other Accounting Guidance and Requirements)

1. How the calculation of DRC Links to the Code of Practice on Local Authority Accounting

1.1. Typically when assets are valued for reporting purposes their fair value is based on market information. For infrastructure assets there is no market and it is not usually possible to sell them. The fair value is therefore estimated using the cost of replacing the asset with a modern equivalent asset, known as the Gross Replacement Cost (GRC), less deductions for physical deterioration and impairment (where relevant). This resultant value is known as the Depreciated Replacement Cost (DRC). It is unlikely that this will change under the adoption of IFRS 13 *Fair Value Measurement* (please see consultation on the Code of Practice on Local Authority Accounting).

$$\text{DRC} = \text{GRC} - \text{accumulated depreciation} - \text{impairment}$$

1.2. The calculations for GRC are based on a combination of centrally provided rates with adjustment factors and locally derived rates (see Chapter Six), dependent on asset type. For example, for carriageways central rates are provided for each type of road and then further split between urban and rural. Inventory data for the area of carriageway is multiplied by the default rates and a regional adjustment factor to give the cost of calculating a modern equivalent asset.

GRC = road length x width x default rates x regional factor (the latter two provided by HAMFIG, and indexed each year)

1.3. Continuing with the carriageways example, carriageways are made up of a number of components which have different asset lives giving rise to materially different allocations of depreciation. This means that depreciation should be calculated for the separate components in order to estimate the DRC. The simplest breakdown of components is between "surface" and "underlying" layers (see paragraph 8.3.1). The surface layers are treated as finite life, depreciable components and the underlying layers as having an infinite life as they would not normally form part of the life cycle plan for most roads. The underlying layers are therefore treated as non-depreciable in a similar way that the Code of Practice on Local Authority Accounting treats land (paragraph 4.1.2.37):

"... Depreciation applies to all property, plant and equipment, whether held at historical cost or re-valued amount, with two exceptions: land where it can be demonstrated that the asset has an unlimited useful life (excluding land subject to depletion, ie quarries and landfill sites), and heritage and community assets that have an indefinite life."

1.4. For infrastructure assets, a local authority's approach to the grouping of components should also consider those groupings which are most useful from an asset management perspective. It may be the case that a more detailed breakdown of components is required for asset management purposes, due to the inter-relationships between the components, than would normally be required for financial reporting purposes.

- 1.5. The GRC rates are not split over these components and therefore it is not possible to calculate the depreciation for each component by using GRC as a starting point. When it is not practicable to determine the carrying amount of a replaced part, the Code of Practice on Local Authority Accounting (paragraph 4.1.2.48) allows for the cost of a new component to be used as an indication of the cost of the replaced part, at the time it was acquired or constructed (adjusted for depreciation and impairment, if required). The Code therefore provides a methodology to calculate the estimated accumulated depreciation, for example, for surface layers alone based on replacement cost in order to establish the contribution that carriageway surface assets made to DRC.
- 1.6. For certain types of infrastructure assets, in order to estimate the accumulated depreciation, it is necessary to establish the age of the asset compared to its life, the size of the network and the current cost of renewal. For example, for carriageways, given that age information is sparse, condition is used as a proxy for age, which enables an estimate to be made of the accumulated depreciation % to date. The methodology in this Code has established a deterioration curve which plots the deterioration of surface layers over time using historical data gathered for asset management purposes. This deterioration curve is used to estimate age using condition. This is translated into an accumulated depreciation line as shown in Figure 8.1. More details can be found in Technical Note 46 on the PCIS website.
- 1.7. The accumulated depreciation % can then be multiplied by the network area and renewal rate in order to estimate the amount the asset has deteriorated and thus been consumed, by using the costs of replacement as an estimation for the value of the accumulated depreciation.
- Accumulated depreciation %** = Carriageway Condition Index converted via deterioration curve and depreciation line into an accumulated depreciation %
- Accumulated depreciation** = **Accumulated depreciation %** x network length x average width x authority's own renewal rates
- 1.8. The resulting accumulated depreciation is the total estimated for the finite life components. This, along with impairment, is then taken from the GRC total to provide the DRC for carriageways.
- 1.9. This methodology of using the current replacement cost for the depreciable components in order to estimate the amount of an asset's value which has been consumed is repeated for structures.

2. Recognition and Measurement

- 2.1 Local authorities account for infrastructure assets which are included within tangible fixed assets in accordance with International Accounting Standard 16 Property, Plant and Equipment (IAS 16), except where interpretations or adaptations to fit the public sector are detailed in the Code of Practice on Local Authority Accounting. There are several stages to the reporting process described below.

2.1. Recognition

2.1.1. The Code of Practice on Local Authority Accounting states in paragraph 4.1.2.16 that the cost of an item of property, plant and equipment falling under this section of the Code shall be recognised (and hence capitalised) as an asset on a local authority Balance Sheet if, and only if:

- it is probable that the future economic benefits or service potential associated with the item will flow to the authority, and
- the cost of the item can be measured reliably.

2.2. Additions – Initial Measurement

2.2.1. Paragraph 4.1.2.20 of the Code of Practice on Local Authority Accounting requires items of plant, property and equipment that qualify for recognition as an asset to be measured at cost and capitalised on an accruals basis. For assets that have been purchased, cost is defined in paragraph 4.1.2.22 of the Code as:

- purchase price
- any costs attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management
- the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

2.2.2. IAS 16 Property, Plant and Equipment specifies the costs that are required to be classified as attributable are those costs that are required to bring an asset to the location and condition necessary for it to be capable of operating in the manner intended by management (the authority).

2.2.3. Paragraph 16 to 19 in IAS 16 gives examples of typical costs, attributable costs and those costs which should not be included. The Guidance Notes to the Code of Practice on Local Accounting (*Code of Practice on Local Authority Accounting in the United Kingdom Guidance Notes for Practitioners 2012/13 Accounts* (CIPFA 2012)) explores these in more detail and provides examples.

2.2.4. For infrastructure assets additions include:

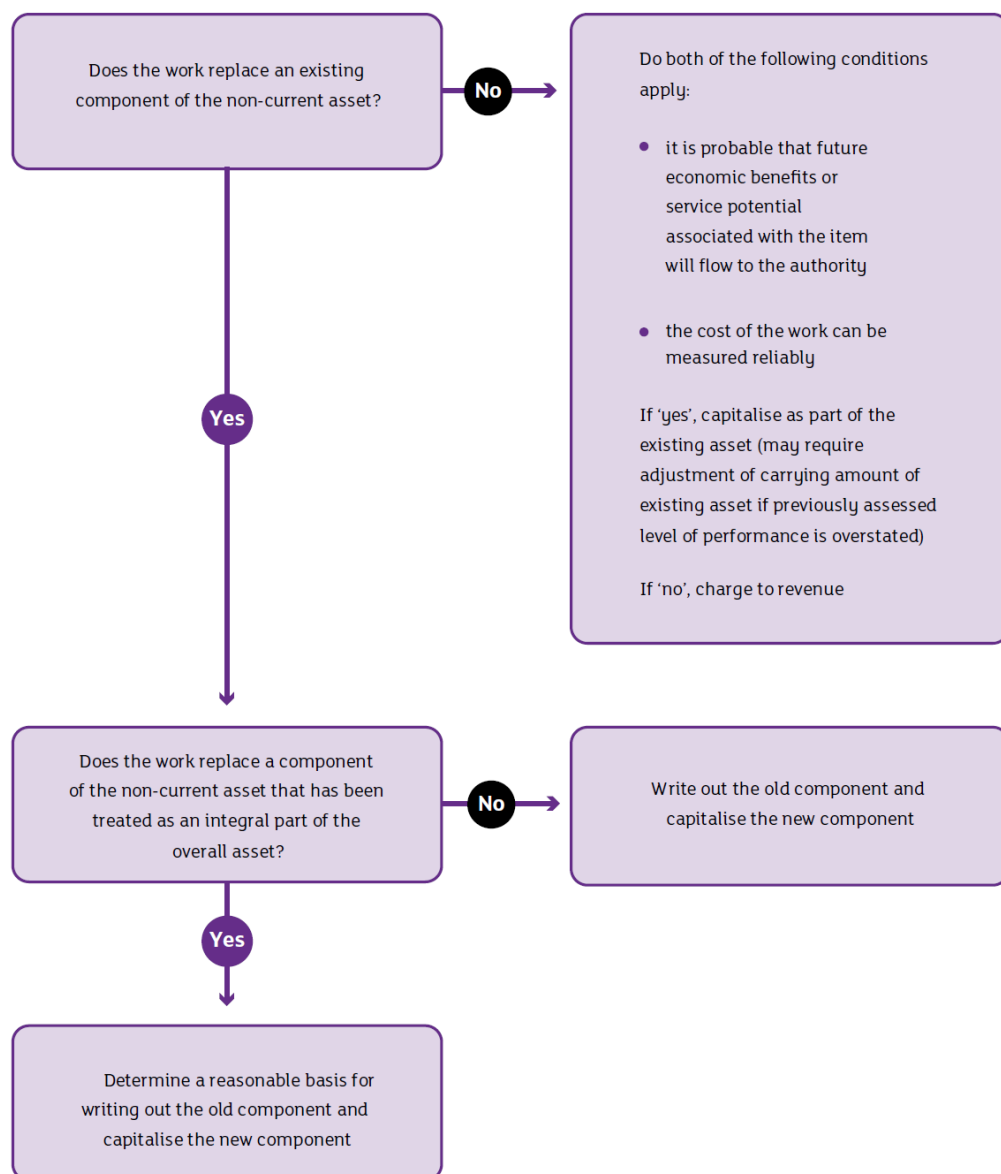
- new assets recognised when brought into use, for example a new road and
- costs that meet the recognition criteria of an asset that are subsequent to or add to assets already recognised, for example the replacements of the surface layer of a carriageway.

2.2.5. Authorities should have existing processes for recording capital expenditure within their financial systems. They will need to ensure that the level of detail that this is held is consistent with the categories in the Code and the level of componentisation which is decided upon.

2.3. Subsequent Expenditure

2.3.1. Where there is subsequent expenditure on an existing asset paragraph 4.1.2.17 of the Code of Practice on Local Authority Accounting requires that subsequent costs should be capitalised only if they result in items with physical substance and meet the recognition principle set out in paragraph 2.1.1

2.3.2. Where subsequent expenditure on an existing asset is capitalised it is important to consider whether the subsequent expenditure is replacing an existing component. This is considered in more detail in the derecognition section below. The following flowchart from the Code of Practice on Local Authority Accounting Guidance Notes summarises the considerations that an authority might make in determining whether subsequent expenditure on an existing asset represents additions to property, plant and equipment within which infrastructure assets fall.



2.4. Movements in the Value of the Asset

- 2.4.1. Infrastructure assets are valued on a DRC basis. The movements in value from year to year will include; additions, de-recognitions, depreciation, impairment and revaluation changes (including changes due to changes price and in the condition of the asset). It is the changes due to the change in the condition of the asset which are important in identifying the movements relating to revaluation.
- 2.4.2. Given that infrastructure assets have been valued at historical cost, the move to full financial reporting requires the creation of revaluation reserve entries for any increase in value from historical cost. The revaluation reserve is a balance sheet reserve which records the gains arising from the revaluation of non-current assets until they are consumed by the authority or realised in a sale
- 2.4.3. When accounting for a revaluation, it is important to calculate the revaluation gain or loss by including all relevant transactions that have taken place up to the date of the valuation. For example, if an asset had a value of £1,000,000 at 1 April 201x but was revalued to £1,100,000 at 31 March 201y, the revaluation gain would not necessarily be £100,000. Taking into account depreciation of £200,000 and subsequent expenditure of £250,000, the revaluation gain would be £50,000 – the £100,000 difference in valuations, plus the £200,000 downward movement for depreciation, less the £250,000 upward movement attributable to the subsequent expenditure. The table below shows the movement in the value of the asset during a year, separately identifying revaluation gains and losses from other movements such as additions and depreciation.

Closing Value at 31 March 2014	1,100,000
Less Additions	(250,000)
Plus De-recognitions	0
Plus Depreciation	200,000
Plus Impairment	0
Less Closing value at 1 April 2013 ie DRC Measurement and carrying value	(1,000,000)
Equals Revaluation gain, including price and condition changes	50,000

- 2.4.4. The Code of Practice on Local Authority Accounting expects that accumulated depreciation and impairment will be eliminated when an asset is revalued. This is because these measures are accounting estimates of changes in value relating to the consumption of assets whose cumulative effect is confirmed or contested by a formal valuation reflecting the actual

condition of the property at the valuation date. The depreciation and impairment estimates are therefore made redundant by the valuation.

- 2.4.5. Where infrastructure assets are revalued each year, for example for carriageways via UKPMS, there will be no accumulated depreciation within the financial statements relating to prior years, only depreciation relating to the current financial year.

2.5. Accounting Entries

2.5.1. The accounting entries for infrastructure assets which are part of property, plant and equipment, are detailed in the Code of Practice on Local Authority Accounting Guidance Notes. It is important for accountants to note that the revaluation reserve cannot have a negative balance for individual components. This means that revaluation losses can only be posted to the revaluation reserve up to the value of any previous gains posted for that component. The disclosures require revaluation gains and losses to be reported separately for those recognised in the revaluation reserve and those recognised in the Surplus or Deficit on the Provision of Services in the Comprehensive Income and Expenditure Statement.

2.5.2. The transactions in the Revaluation Reserve can be summarised as follows:

- credits when assets are revalued upwards (net of any gains posted to the Surplus or Deficit on the Provision of Services to reverse previous losses)
- debits when assets are revalued downwards (up to the amount carried in the reserve for the particular asset)
- debited with transfers to the Capital Adjustment Account for the difference between fair value depreciation charged to the Surplus or Deficit on the Provision of Services and the depreciation that would have been charged if assets had been accounted at depreciated historical cost
- debits with transfers to the Capital Adjustment Account for balances of revaluation gains outstanding when an asset is decommissioned or disposed of (not credited to the Surplus or Deficit on the Provision of Services, as the gains will already have been recognised in the Comprehensive Income and Expenditure Statement (Other Comprehensive Income and Expenditure) before they were realised).

2.6. Depreciation

2.6.1. Depreciation is the process by which the consumption of the economic benefits or service potential inherent in an item of property, plant or equipment is recognised in the cost of services and is a formal requirement of the *Code of Practice on Local Authority Accounting*. Depreciation is calculated by assessing the amounts that will be consumed over the period the asset is expected to be of use to the authority and allocating the amounts systematically over that period. Chapter Seven provides more detail on the basis for calculating depreciation and impairment and considers some of the practical issues.

2.6.2. Where an asset is increasing in value depreciation should still be charged. It may simply be that the value of subsequent expenditure on the asset is more than outweighing the consumption of the asset.

- 2.6.3. For carriageways and structures the amount consumed is estimated using the current cost of replacing the components, given that the GRC is not broken down to the correct level of detail. The cost of replacement allows the depreciable amount to be estimated. This is then combined with the estimated age of the asset based on its condition to give the amount of the component already consumed. For carriageways depreciation is allocated on a straight-line basis over the total useful life.
- 2.6.4. The accounting entries for depreciation required by the Code of Practice on Local Authority accounting are detailed in the Code of Practice on Local Authority Accounting Guidance notes. Depreciation is included as part of the total cost of services in accordance with the Service Reporting Code of Practice, but is reversed out and replaced with minimum revenue provision, which is the statutory charge for capital financing.
- 2.6.5. Where assets are derecognised and written out of the balance sheet the associated depreciation is also written out. The disclosures require that depreciation written out to the revaluation reserve is reported separately from that written out to the surplus or deficit on the provision of services.

2.7. Derecognition

2.7.1. Items of property, plant and equipment are required to be derecognised in accordance with paragraph 4.1.2.45 of the Accounting Code. Assets are written out of the Balance Sheet:

- on disposal (e.g. through sale, granting of a finance lease, donation, transfer, abandonment, theft, etc)
- when no future economic benefits or service potential are expected from the asset's use or disposal – i.e. when the economic benefits or service potential inherent in the asset have been used up.

2.7.2. For many categories of infrastructure assets disposals from sales are unlikely to be a common occurrence. For example, complete carriageways are rarely disposed of. However, it is more likely that an individual component is replaced and then consideration needs to be given to the value of the component which is being replaced or disposed of.

2.7.3. When an asset is derecognised any gain or loss on its disposal has to be charged to the surplus or deficit on the cost of services. The gain or loss is to be calculated as:

- the carrying amount of the asset, less
- the net disposal proceeds (if any).

2.7.4. The fact that there might be no disposal proceeds does not exempt an asset from this calculation. It should therefore be applied in all circumstances where an asset has been derecognised for reasons other than a sale, e.g. where a component is being replaced. The loss would simply be the written-off carrying amount of the asset.

2.7.5. For example, if a new surface layer is replacing an existing surface layer then the existing surface layer should be derecognised from the value of the asset. If that carrying amount of the replaced part or component cannot be identified, it is usually acceptable under paragraph 4.1.2.48 of the Code of Practice on Local Authority Accounting to use the cost of the replacement as a proxy for the deemed carrying amount of the replaced part and adjust this for depreciation and impairment. It will probably be the case that the surface layer was at the end of its useful life and hence would have been fully depreciated and therefore there would be no carrying value to transfer to the surplus or deficit on the cost of services. In this instance there would also be no disposal proceeds or carrying value.

2.8. Impairment

2.8.1. Section 4.7 of the Code of Practice on Local Authority Accounting adopts IAS 36 Impairment of Assets, as adapted for local government circumstances the objective of which is to ensure that assets are not carried in the Balance Sheet at more than their recoverable amount. The Code of Practice on Local Authority Accounting contains an interpretation of IAS 36 that has a significant effect on impairment accounting in local government. As per paragraph 4.7.1.5 of the Code, the recoverable amount is not to be assessed solely in relation to the cash flows that will be derived from the use of an asset, but also in relation to the service potential that the asset provides for the authority.

- 2.8.2. The basic principle that assets may not be carried in the Balance Sheet at more than their recoverable amounts is satisfied by charging impairment losses against assets whose recoverable amounts are less than their carrying amounts. The impairment loss is equal to the difference between the recoverable amount and the carrying amount. The requirement to recognise an impairment loss is based wholly on this Balance Sheet arithmetic – when a material difference exists, it will be adjusted for. An impairment loss cannot be avoided even if there is confidence that a diminution in value will only be temporary
- 2.8.3. Paragraph 4.7.2.9 of the Code of Practice on Local Authority Accounting requires an assessment for impairment to be made at each year-end only if there is indication that any assets within the scope of the impairment provisions might be impaired.
- 2.8.4. Examples of events and changes in circumstances that indicate an impairment may have occurred are included in paragraph 4.7.2.11 of the Accounting Code:
- significant decline (i.e. more than expected as a result of the passage of time or normal use) in an asset's carrying amount during the period that is specific to the asset
 - evidence of obsolescence or physical damage of an asset
 - a commitment by the authority to undertake a significant reorganisation
 - a significant adverse change in the statutory or other regulatory environment in which the authority operates.
- 2.8.5. Other events that might be relevant include:
- a significant decline in the market value of assets that is significantly greater than would be expected as a result of the passage of time or normal use (including assets not carried at market value)
 - significant adverse changes in the way that an asset is used or expected to be used by the authority
 - deterioration in the expected level of an asset's performance
 - for cash-generating assets, adverse movements in the cash forecasts on which they are based or changes in rates of return that affect the discount rate used in calculations of value in use.
- 2.8.6. These events do not confirm or otherwise that an impairment has actually taken place. They provide evidence that an asset might be impaired, which will only be confirmed with further work, with three potential stages:
- considering the evidence from the assessment, along with evidence from other observations and experience, to determine the probability that current carrying amounts may be materially greater than recoverable value – where there is no evidence this is the case, no further work is needed
 - carrying out initial impairment tests by estimating the recoverable amount to confirm whether:
 - there is no remaining probability that the recoverable amount is less than the carrying amount – no further work needed
 - there is a probability that the recoverable amount is less than the carrying amount, and that the estimate is a reliable basis for calculating the impairment loss
 - there is a probability that the recoverable amount is less than the carrying amount, but that a more reliable figure than the estimate needs to be established

- making a reliable estimate of the recoverable amount.

2.8.7. Typically, where a valuation is based upon a survey of an assets condition, consideration should be given each year as to whether an impairment event may have taken place after the survey but prior to the balance sheet date.

2.8.8. The accounting for impairment exactly follows that detailed in the Code of Practice on Local Authority Accounting Guidance Notes for property, plant and equipment.

2.9. Disclosure requirements

2.9.1. Paragraph 4.1.4.3. of the Code of Practice on Local Authority Accounting requires the following disclosures in relation to property, plant and equipment, which includes infrastructure assets:

1) The financial statements shall disclose, for each class of property, plant and equipment:

a) the measurement bases used for determining the gross carrying amount

b) the depreciation methods used

c) the useful lives or the depreciation rates used

d) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period, and

e) a reconciliation of the carrying amount at the beginning and end of the period showing:

i) additions

ii) assets classified as held for sale or included in a disposal group classified as held for sale in accordance with section 4.9 of the Code and other disposals

iii) increases or decreases resulting from revaluations under section 4.1 of the Code and from impairment losses recognised or reversed in Other Comprehensive

Income and Expenditure and taken to the Revaluation Reserve in accordance with section 4.7 of the Code

iv) impairment losses recognised in Surplus or Deficit on the Provision of Services in

accordance with section 4.7 of the Code

v) impairment losses reversed in Surplus or Deficit on the Provision of Services in accordance with section 4.7 of the Code

vi) depreciation, and

vii) other changes.

3. A typical disclosure will take the following form:

TRANSPORT INFRASTRUCTURE ASSETS (EXTRACT OF ADDITIONAL COLUMNS TO BE INCLUDED IN THE PROPERTY PLANT AND EQUIPMENT NOTE OF LOCAL AUTHORITIES)¹

Movements on Balances

	20X0/20X1	20X1/20X2
Valuation		
at 1 April	x	x
additions	x	x
revaluation increases/(decreases) recognised in the Revaluation Reserve	x	x
revaluation increases/(decreases) recognised in the Surplus/Deficit on the Provision of Services	x	x
Derecognition	x	x
other movements in cost or valuation	x	x
At 31 March	x	x
Accumulated Depreciation and Impairment		
at 1 April	x	x
depreciation charge	x	x
depreciation written out to the	x	x

¹ Required by paragraphs 4.1.4.3(1)(d) and 4.1.4.3(1)(e) of the Code. The example has more lines than the minimum required by the Code in order that a comprehensive reconciliation of movements is achieved. Where any line has nil entries, it can be deleted from the table.

	20X0/20X1	20X1/20X2
Revaluation Reserve		
depreciation written out to the Surplus/Deficit on the Provision of Services*	x	x
impairment losses/(reversals) recognised in the Revaluation Reserve	x	x
impairment losses/(reversals) recognised in the Surplus/Deficit on the Provision of Services	x	x
Derecognition	x	x
other movements in depreciation and impairment	x	x
At 31 March	x	x
Net Book Value		
at 31 March 20X2	x	x
at 31 March 20X1	x	x

Note 1: The above is an extract of an additional classification/column that would need to be included in an authority's property, plant and equipment note for the measurement of transport infrastructure on the basis of Depreciated Replacement Cost.

Note 2: The shaded lines are not specifically required by the Code but provide more useful information and assist with reconciliations