21 November 2011

Communities and Local Government

Commentary on the calculations used in the baseline model for the draft housing revenue account self financing determination 2012

Background

1 The baseline model calculations underpinning the draft HRA Self-Financing Determination ("the Determination") are based upon data completed and submitted by local housing authorities in the Base Data Forms (2012B1 and 2012B2) over the summer of 2011.

2 The information is provided in a similar format to that presented in earlier years to support HRA Subsidy Determinations and the formulae used in the calculations follow the principles used in the formation of those Determinations. This is intended to allow local housing authorities the opportunity to make a clear and direct comparison using consistent information in a familiar format.

3 The baseline model calculations themselves, do not constitute the Self-Financing Determination, but illustrate some of the assumptions upon which the Determination itself is based. The intention is to provide a clear and direct read-across from previous years' subsidy settlements.

4 In order to provide greater certainty, the Department for Communities and Local Government does not intend that any changes or corrections made to an individual authority's data as a result of the consultation will not affect the settlements of other local authorities. From the point of issuing the draft determinations we regard each local authority's settlement as independent and do not intend to recalculate them to take account of any minor adjustments to other councils settlement payments.

5 The baseline model calculates the year one rents and non up-rated allowances which are then fed into the self-financing model. It uses the latest base data returns to do this. It is very similar to previous years' subsidy determination spreadsheets.

General Formula

4. The general formula for calculating the baseline model is based on that used for the Housing Revenue Account Subsidy Determination 2011-2012 and earlier years, except where there are agreed annual updates to the data.

Data

5. The proposed specified amounts included in the baseline model Schedules are calculated in all but one case using auditor-certified data received by the Department for Communities and Local Government in **October 2011.**

6. **The figures used in the calculations of the specified amounts for your authority are based on the information provided by your authority on the advance base data return for 2012 (form 12B1) and, if submitted, that certified by your auditor on the auditor-certified return for 2012 (form 12B2). The data on rents that you have supplied, will be used in specifying the weekly limit rent in the Subsidy Order to be made by the Department for Work and Pensions (DWP).**

8. DCLG proposes to calculate the final baseline model specified amounts for 2012 (and DWP proposes to specify limit rents for 2012-2013) on the basis of such auditor-certified data as received, but may decide not to use data which is subject to comment by the auditor raising substantive concerns. DCLG (and DWP) may make assumptions which protect the Exchequer about the information to be used in the self-financing determinations if acceptable auditor-certified data is not available to it by the due date. Where those assumptions relate to pre-set specified amounts, those amounts will only be changed in very limited circumstances. This is explained further below.

9. In some circumstances the Department for Communities and Local Government has made assumptions as a result of audit qualifications. The Department has written to all authorities in this situation explaining the results of audit qualifications and any assumptions that have been made. These assumptions supersede the entries in the base data return on Logasnet. You should be able to agree any assumptions that have been made to the letter received from the Department. Should you wish to provide additional evidence to support the originally submitted data, such as survey data, you may do so.

Specified Amounts

9. In completing form 12B2, or otherwise, some authorities may have discovered that data in forms 04B2, 05B2 06B2, 07B2, 08B2, 09B2, 10B2 or 11B2 used to calculate specified amounts for earlier years require amendment. Specified amounts are amounts that are pre-calculated by the Department and which, once agreed during the consultation period are preset in the final subsidy determination and not generally subject to change during the year for which they have effect.

The Department's policy is that once pre-set for a year, i.e. the determination for that year has been made, the specified amounts for that particular year will not be recalculated, except as provided for in the relevant Determination or in other exceptional circumstances.

Assumptions for Management and Maintenance

12. Expenditure on management and maintenance is a key expenditure assumption within the baseline data calculations. The calculation of each authority's baseline management and maintenance cost assumption is described in worksheets ‘Man Com’ and ‘Mnt Com’ respectively. These baseline assumptions feed into the self-financing model where they are up-rated and used to calculate the valuation of the authorities housing stock for self-financing. The following text summarises the formulae for 2012-2013.

Management Cost Assumptions

Calculation of management costs assumed per dwelling

13. There are seven steps in the calculation of baseline management cost assumptions per dwelling.

Step 1: Initial estimate of costs

15. Initial estimate of costs for a local authority (LA) is:

    (i) if dwellings (including shared ownership and including PFI dwellings) are <= 1,400 then fixed costs = £11,268 + £247 x dwellings;

    (ii) if dwellings (including shared ownership and including PFI dwellings) are > 1,400 then fixed costs = £357,000 + (£233 x (dwellings – 1400)).

16. Dwellings include:

    (i) the authority’s share of dwellings in shared ownership;

    (ii) the dwellings equivalent of bed-spaces in hostels and houses in multiple occupation; and

    (iii) PFI dwellings.

17. This formula provides a good explanation of the relationship between the number of dwellings of an authority and its relative need to spend on management assuming that:

    (i) its proportion of flats is the stock-weighted average for all authorities with stock;

    (ii) its proportion of houses is the stock-weighted average for all authorities with stock;

(iii) it has the level of rent arrears and tenant management costs which would arise if all its stock were either houses or low rise flats;

(iv) the level of crime in its area is at the national average for all authorities whether or not with HRAs;

(v) its level of re-let and termination costs is at the stock-weighted average for all authorities with stock;

(vi) it has no pro-active management costs to tackle deprivation; and

(vii) costs per unit of management are the same in each geographical area.

18. Steps 2 to 6 allow for the fact that the above features do of course vary between authorities.

Step 2: Increase or decrease initial estimate of costs according to proportions of flats and houses

19. The estimated proportion of an authority's stock with common facilities is calculated as:

(89% of its flats + 13% of its houses) / stock

20. An authority with an average proportion of flats and an average proportion of houses would spend 14.2% of its initial costs on the management of dwellings with common facilities. This part of Step 1 costs is either increased or decreased.

21. Each authority's Step 2 costs =

85.8% of Step 1 costs

plus

14.2% of Step 1 costs x (estimated proportion of individual LA's dwellings with common facilities) / (average estimated proportion of all LAs' dwellings with common facilities).

The average estimated proportion of all LAs' dwellings with common facilities is the stock weighted average of the estimated proportion of individual LAs' dwellings with common facilities. This is 49.2%.

Step 3: Increase Step 2 costs according to proportion of medium and high rise flats

22. Step 2 costs assume that each authority has the level of rent arrears and tenant management costs which would arise if all its stock were either houses or low-rise flats. Step 3 corrects this assumption and **adds** to the Step 2 costs of each authority. The greater is an authority's proportion of medium and high rise flats, the greater is the addition to its costs.

23. An authority with an average proportion of medium and high rise flats would spend 20.0% of management costs on such rent arrears and tenancy management activities. Therefore, each authority's Step 2 costs are partitioned as follows:

(i) 80.0% of Step 2 costs is not related to medium and high rise flats and is unchanged; and

(ii) 20.0% of Step 2 costs is related to medium and high rise flats and is increased.

24. Each authority's Step 3 costs =

80.0% of its Step 2 costs

plus

20.0% of its Step 2 costs x (factor for medium rise and high rise flats)

Where

factor for medium and high rise flats =

individual LA's proportion of houses, bungalows and low rise flats x 1.0

plus

individual LA's proportion of medium and high rise flats x 2.3

Step 4: Increase or decrease Step 3 costs according to crime factor and re-lets and terminations percentage

25. An authority with an average level of crime and re-lets and terminations would spend 22.8% of management costs on crime-driven activities, and 9.6% of costs on re-lets and terminations-driven activities. Therefore, each authority's Step 3 costs are partitioned as follows:

(i) 67.6% of its Step 3 costs are related neither to crime nor to re-lets and terminations - these are unchanged;

(ii) 22.8% of its Step 3 costs are increased or decreased according to its *crime factor*; and

(iii) 9.6% of its Step 3 costs are increased or decreased according to its *re-lets and terminations percentage***.**

Crime Factor

26. This is based on violence against the person per 1,000 population - average rate for 2008-2009, 2009-2010 and 2010-2011. These series have been obtained from the Home Office and can be seen for all authorities in row 91 of the 'Man Com' worksheet in the baseline model. The violence against the person data for the City of London continues to be adjusted to take account of bias caused by the proportionally large number of non-residents who work there. Without this adjustment, the reported crime rate would overstate the incidence of violence against the person affecting local residents. A population weighted average of Camden, Westminster and the City of London is used instead for each of 2008-2009, 2009-2010 and 2010-2011.

27. We have adopted a rolling average of three years in order to smooth changes.

28. For each authority, 22.8% of its Step 3 costs is multiplied by its crime factor.

29. Crime factor for each authority =

$$\frac{\text{(crime rate for that authority)}}{\text{(national average crime rate per 1,000 population for all authorities in England, whether or not with HRAs).}}$$

30. An authority with a crime rate greater (less) than the national average will have an increase (decrease) in 22.8% of its Step 3 costs.

Re-lets and terminations percentage

31. For each authority, 9.6% of its Step 3 costs is multiplied by its re-lets and terminations percentage, relative to the stock-weighted average re-lets and terminations percentage for all authorities with stock.

32. The re-lets and terminations percentage is calculated as

$$\frac{\text{(average of re-lets and terminations)}}{\text{stock.}}$$

33. An authority with a re-lets and terminations percentage greater (less) than the stock-weighted average will have an increase (decrease) in 9.6% of its Step 3 costs.

34. The HRA housing management costs to which the re-lets and terminations percentage is applied are costs associated with re-letting and terminations activities.

Step 5: Increase Step 4 costs of some authorities to allow for extra management costs for tacking deprivation

35. Authorities with housing stock have been divided into five categories.

These categories are based on the ranks of all LAs (whether or not with HRAs) on the following six measures of deprivation listed in Annex L of *The English Indices of Deprivation 2007*(ODPM June 2007), ID2007:

- Average score

- Average rank
- Extent
- Local concentration
- Income scale
- Employment scale

The Chart in **Annex 1** describes how Step 5 adds to the relative need to spend of some LAs, according to their categorisation. No changes have been made to the figures included in the 2011-12 determination.

Step 6: Geographical cost adjustment

36. The total costs from Step 5 for each authority are multiplied by its Area Cost Adjustment (ACA) for Personal Social Services for Older People used for the calculation of Revenue Support Grant. ACA Values can be found in a table included in the worksheet 'BCIS-ACA' in the baseline model.

Step 7: Adjust all Step 6 costs so that their aggregate equals the amount of management cost assumptions made available by the Spending Review

37. Step 7 allowance per dwelling before transitional arrangements =

Step 6 costs x national scaling factor

where, national scaling factor = Y / Z

Y = the sum over all authorities in the 2012-2013 Baseline Calculations Model of (each authority's dwellings in the Baseline Calculations Model) x (its management allowance per dwelling in the 2011-2012 HRA Subsidy Determination) x *uplift*

uplift = (1 + *real increase* + *re-basing* + *inflation*)

real increase = 0.00

inflation (OBR forecast of GDP deflator) is 0.0250

Hence, *uplift* is 1.025 that is a cash increase of 2.50% per dwelling.

Z = the sum over all authorities in the 2011-2012 HRA Subsidy Determination of their Step 6 costs.

38. Step 7 produces the final baseline management cost assumptions.

39. The national scaling factor is given in row 172 of the 'Man Com' worksheet in the baseline model.

Maintenance Cost Assumptions

Calculation of baseline maintenance costs assumed per dwelling

40. There are seven steps in the calculation of maintenance cost assumed per dwelling.

Step 1: Calculate each authority's relative need to spend on responsive repairs for all archetypes

41. Each archetype's responsive repair base weight (see Table after Step 7 below) is multiplied by its relevant backlog factor and then rounded to an integer to give adjusted responsive repairs per dwelling.

42. Adjusted responsive repairs per dwelling for each archetype are multiplied by an authority's stock of that archetype and then summed across all archetypes. For each part of the maintenance calculations, stock excludes the authority's share of dwellings in shared ownership but includes:

    (i) the dwellings equivalent of bed-spaces in hostels and houses in multiple occupation; and

    (ii) PFI dwellings.

43. This total of adjusted responsive repairs for each authority excludes any expenditure related to crime. To allow for expenditure related to crime, the total of adjusted responsive repairs for each authority is increased by multiplying by crime factor #1 to give an authority's final relative need to spend on adjusted responsive repairs.

44. Crime factor #1 is based on:
    - criminal damage per 1,000 households - average rate for 2008-09, 2009-10 and 2010-11; and,
    - burglary per 1,000 households - average rate for 2008-09, 2009-10 and 2010-11.

    The weight given to criminal damage is twice that given to burglary.

45. Both criminal damage and burglary are expressed per 1,000 households rather than per 1,000 population. The former is a better indicator of the likelihood of a dwelling requiring maintenance expenditure because of actual or potential crime.

46. We have adopted a rolling average of three years' series in order to smooth changes.

47. The formula for Crime factor #1 is shown at row 45 of the 'Mnt Com' worksheet in the annexes. Its theoretical minimum value is 1.00. In practice its value for each authority is greater than 1.00, thus serving to increase its relative need to spend on responsive repairs. The greater is its weighted crime rate and the greater is the proportion of medium and high rise dwellings in its stock, then the greater is its Crime factor #1.

Step 2: Calculate each authority's relative need to spend on planned works for all archetypes

48. Each archetype's planned works base weight (see table after Step 7 below) is multiplied by an authority's stock of that archetype and then summed across all archetypes.

Step 3: Calculate each authority's relative need to spend on basic works for re-lets and terminations for all archetypes

49. Each archetype's base weight for basic works for re-lets and terminations (see Table after 7 below) is multiplied by an authority's stock of that archetype and then summed across all archetypes.

50. This total of basic works for re-lets and terminations for each authority is then multiplied by that authority's re-lets and terminations percentage. This percentage is a proxy for dwellings whose tenancy is either re-let or terminated during the year.

51. The re-lets and terminations percentage is calculated as (average of re-lets and terminations) / stock. The HRA maintenance costs to which the re-lets and terminations percentage is applied are costs associated with re-letting and terminations activities.

Step 4: Calculate each authority's relative need to spend on crime related works to voids for all archetypes

52. Each archetype's base weight for crime related works to voids (see Table after Step 7 below) is multiplied by an authority's stock of that archetype and then summed across all archetypes.

53. This total of crime related works to voids for each authority is then multiplied by that authority's 2011-2012 voids percentage. This has been approximated as:

$$\frac{\text{(rent loss on void dwellings in the period 1 April 2011 to 31 March 2012)}}{\text{(total value of rent roll in the period 1 April 2011 to 31 March 2012).}}$$

54. This measure of average voids percentage throughout the year is considered more relevant than an end year voids percentage.

55. There is then a further multiplication by crime factor #2, based on the same weighted crime series as for responsive repairs. This ensures that an authority's relative need to spend on crime related works to voids reflects the relative incidence of crime in that authority.

56. Crime factor #2 (see row 134 in the 'Mnt Com' worksheet) ranges from zero for a hypothetical authority with no crime to 1.00 for the authority with the highest crime rate.

Step 5: Total relative need to spend, prior to consideration of geographical variation in the cost of maintenance activities

57. Step 5 is the sum of the relative needs to spend calculated in Steps 1 to 4.

Step 6: Total relative need to spend, after consideration of geographical variation in the cost of maintenance activities

58. The location adjustment factor for the BCIS All-in Tender Price Index is available by county. It is published quarterly by BCIS in *Surveys of Tender Prices*. The location adjustment factor for each county has been calculated as a three-year average from the, May 2009, August 2010 and May 2001 issues of *Surveys of Tender Prices*. The UK value is 1.00.

59. Each authority's relative need to spend on maintenance from Step 5 is multiplied by the location adjustment factor for its county. The table in worksheet (BCIS-ACA) gives these factors.

Step 7: Adjust all Step 6 totals of relative need to spend so that their aggregate equals the amount of baseline maintenance cost assumptions after taking into account the relevant uplift factors

60. Step 7 assumption =

Step 6 total x national scaling factor

where:

national scaling factor = Y / Z

Y = the sum over all authorities in the baseline data model of (each authority's dwellings in the draft baseline data model) x (its maintenance allowance per dwelling in the 2011-2012 HRA Subsidy Determination) x *uplift*

uplift = (1 + *real increase* + *re-basing* + *inflation*)

real increase = 0.00

inflation assumption (OBR forecast of GDP deflator) is 0.0250

Hence, *uplift* is 1.0250, that is a cash increase of 2.5% per dwelling.

Z = the sum over all authorities in the draft baseline data model of their Step 6 totals.

61. The national scaling factor is given in row 154 of the 'Mnt Com' worksheet.

70. The baseline Management allowance assumption per dwelling is shown in cell I183.

Table 1 - Maintenance: base weights by archetype

Archetype	Base weights				
	Responsive repairs	Backlog Factor	Planned repairs	Basic works for re-lets	Crime related works to

	£		£	and terminations £	voids £
Traditional dwellings					
Pre-1945 small terrace houses	168	1.14	1,014	1,545	530
Pre-1945 semi-detached houses	190	1.64	1,042	1,606	530
All other pre-1956 houses	214	1.15	1,255	1,655	530
1945-64 small terrace houses	155	1.16	917	1,545	530
1945-64 large terrace, semi-detached and detached houses	186	1.28	970	1,632	530
1965-1974 houses	141	1.21	968	1,621	530
Post 1974 houses	207	1.23	995	1,621	530
Non-traditional dwellings					
All houses	173	1.30	1,190	1,606	530
Traditional and non-traditional dwellings					
Pre-1945 low rise (1-2 storey) flats	82	1.44	692	1,127	530
Post 1944 low rise (1-2 storey) flats	89	1.44	1,002	1,125	530
Medium rise (3-5 storey) flats	111	1.72	1,386	1,186	530
High rise (6 or more storey) flats	84	1.72	1,296	1,414	530
Bungalows	135	1.71	898	1,078	530
Multi-occupied dwellings					
Pre 1945 multi-occ dwellings	82	1.44	692	1,127	530
Post 1944 multi-occ dwellings	89	1.44	1,002	1,125	530

Major Repairs Allowance Assumptions

62. The baseline Major Repairs Allowance (MRA) represents the assumption of estimated long-term average amount of capital spending required to maintain a local authority's housing stock in its current condition. This feeds into the self-financing model where it is then up-rated to take account of the BRE report on the Major Repairs Allowance in the process of calculating an authority's valuation.

63. The 2012-2013 baseline MRA is based on a set of national average unit costs for each of 13 property types (or 'archetypes'). These are given in the 'MRA Com' worksheet.

64. These national unit costs were calculated by estimating the annual cost of replacing individual building elements (e.g. windows, kitchen, bathroom and roofs) as they reach the end of their useful life. Data from the English House Condition Survey and the Valuation Office Agency were then used to establish, at the national level, the likely timings and costs of replacement of building elements for each archetype. These amounts were summed to estimate the total expenditure needed for each archetype to replace these building elements over the next 30 years. Finally, these totals were converted into annual average MRA costs per archetype.

65. The 2012-2013 baseline MRA per dwelling for each authority is calculated as follows:

(i) Multiply the number of dwellings at 1 April 2011 (including non-permanent dwellings, but excluding shared ownership dwellings and excluding PFI dwellings) in each of the 13 MRA archetypes by the national average MRA per dwelling appropriate to each archetype;

(ii) Summing across all archetypes, the resulting total is the *unadjusted MRA* for an authority;

(iii) An authority's baseline MRA equals its *unadjusted baseline MRA* times its *geographical cost factor* times the *geographical adjustmen*t;

(a) The *geographical cost factor* for an authority is the same three-year average BCIS measure as described above at maintenance Step 6. It is listed in **the 'BCIS-ACA' worksheet**.

(b) The *geographical adjustment* is given in row 49 of the 'MRA Com' worksheet. It is the *sum over all authorities of their unadjusted MRAs* divided by the *sum over all authorities of their unadjusted MRAs times their geographical cost factors*. The geographical *adjustment* ensures that application of the geographical cost factors does ***not*** change the total spending on MRA. The *geographical adjustment* is less than one because the *geographical cost factor* is centred on UK = 1.00 and, on

average, English HRAs have a *geographical cost factor* greater than one.

(iv) An authority's MRA is divided by its total number of relevant dwellings as at 1 April 2011 to produce its baseline MRA per dwelling. This is shown in Schedule 6 of the draft Baseline data model.

Subsidy Capital Financing Requirement

66. SCFR is calculated in the 'Debt Com' worksheet. In previous years draft HRA subsidy determinations the value of the HRA supported borrowing for the first year of the self-financing determination (2012-2013) was not yet available. For the purpose of undertaking self-financing we undertook to collect additional data on changes to the SCFR in 2010-11. Those entering a "Yes" response to either cell SF001SR or SF002SR on the B1 form received requests for further information relating to qualifying disposals and appropriations. This is information has been used to adjust the SCFR and is given in the 'Debt Com' worksheet of the baseline model.

Debt management expenses

67. For 2011-2012, the allowance was calculated on the basis of a fixed sum of £39,457 plus £476 for each £1 million of an authority's SCFR, where this was positive. For 2012-2013, the equivalent assumption will be calculated on the same basis, with the amounts in the formula up-rated to take account of inflation - a fixed sum of £40,444 plus £488 for each £1 million of SCFR where this is positive. The amounts at Schedule 9 will be calculated on this basis.

Other Items Of Reckonable Expenditure

69. It is proposed to make no changes from the arrangements that applied in 2011-2012, and the definitions in Heads 1-6 in paragraph 6.1 of the Housing Revenue Account Subsidy Determination 2011-2012 are unchanged. The specified amounts under these Heads (Schedules 13-18 in the baseline model) are based upon data provided by authorities in form 12B2 **(cells F001oe –F006oe)**.

Guideline Rents

Calculation of Formula Rent

70. There are no changes in the methodology for calculating formula rents.

71. The Table below gives weightings for the calculation of a dwelling's formula rent on the rent restructuring rules introduced following the three-year review of rent restructuring in 2004.

Calculate the formula rent at 2000-2001:
2000-2001 formula rent =
(70% x *bedroom weight* x *national average rent in April 2000* x *relative county manual earnings*)+
(30% x *national average rent in April 2000* x *property value relative to national average property value in January 1999*)

	Bed weights
1	0.90
2	1.00
3	1.10
4	1.20
5	1.30
6+	1.40
Bedsits	0.80
HMOs	1.00
National average property value, Jan 1999	
	£49,750
National average rent, April 2000	
	£54.62

Uplifts			
Uplifts to	infl (a)	real	Total
01-02	3.3%	1.0%	4.3%
02-03	1.7%	0.5%	2.2%
03-04	1.7%	0.5%	2.2%
04-05	2.8%	0.5%	3.3%
05-06	3.1%	0.5%	3.6%
06-07	2.7%	0.5%	3.2%
07-08	3.6%	0.5%	4.1%
08-09	3.9%	0.5%	4.4%
09-10	5.0%	0.5%	5.5%
10-11	-1.4%	0.5%	-0.9%
11-12	4.6%	0.5%	5.1%
12-13	5.6%	0.5%	6.1%

(a) RPI All Items at September of previous year.

72. The worksheet ‘Rent Com’ shows the calculation of an authority's 2012-13 average formula rent using the "new" rent restructuring rules:

- Rows 30 to 40 calculate the *average LA bedroom weighting* (Row 40).

- Rows 43 to 61 calculate *relative county manual earnings* (row 48) and *relative property value* (row 57).
- Lines 75 to 86 calculate the *2012-2013 formula rent per dwelling*.

Calculation of Guideline Rent

73. Row 138 shows the *2012-2013 pre-set annual Guideline Rent per dwelling*:
    - Row 123 is the pre-*set 2001-2002 Guideline Rent per dwelling per week*.
    - Row 123 to 136 calculate the *2012-2013 Guideline Rent per dwelling per week.*
    - Line 138 is the 2012-2013 pre-set weekly Guideline Rent per dwelling per week after Caps and Limits adjustment. Line 140 gives the annual equivalent. It is shown in Schedule 7 to the baseline model. The underlying data and calculations as set out above are also shown in the 'Rent Com' worksheet in the baseline model.

Calculation of Average Limit Rent

75. Although not part of the draft Determination, rows 173 to 184 calculate the *2012-2013 pre-set Average Limit Rent per dwelling per week*. The methodology is the same as that used for Guideline Rent.

Local Authority Housing Finance Division, DCLG
November 2011

Annex 1

MANAGEMENT COST ASSUMPTIONS
CALCULATION OF STEP 5 COSTS (DEPRIVATION ADD-ON)

[A] = £85 x 10% of stock
plus
£85 x 90% of stock x *extent* for individual LA / maximum *extent* for all LAs