



Government Actuary's Department

Health and Social Care Pension Scheme 2015

Early retirement reduction buy-out (ERRBO)

Factors and guidance

Version 1.0

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1 Introduction

- 1.1 This Note is addressed to HSC as administrator of the Health and Social Care Pension Scheme 2015 ('HSCPS 2015'). It sets out the factors required to determine the scope for payment of contributions, and the amount payable by a member, to secure early retirement reduction buy-out on early retirement.
- 1.2 A member who has a Normal Pension Age (NPA) over age 65 may elect to pay contributions to buy out up to three years' actuarial reduction. This 'buy-out agreement' is referred to as an early retirement reduction buy-out (ERRBO) in this Note.
- 1.3 The effective date for this guidance is 1 April 2015. The version number for this guidance is 1.0.
- 1.4 ERRBO may be secured for all pension earned in any scheme year. Members have limited options to increase the amount of contributions paid for this purpose and all contributions are deemed payable under a single ERRBO agreement. There is no option to reduce ERRBO contributions though members may suspend and recommence such contributions in limited circumstances. The limitations on increasing, suspending and recommencing ERRBO contributions are also covered in this Note.
- 1.5 The facility to pay ERRBO contributions is only offered to contributing members of the HSCPS 2015. It is not applicable to contributing members of either section of the Health and Social Care Pension Scheme ('HSCPS').
- 1.6 This guidance is limited to the scope outlined above. The scope for securing ERRBO is related to any other voluntary contributions being paid to the 2015 scheme. Other guidance covers the factors and limitations applicable to other forms of voluntary contributions.
- 1.7 For scheme years where an ERRBO agreement is in place the member is effectively treated as having a reduced NPA for the purposes of determining benefits payable. The effective NPA is equal to the member's actual NPA at the time of retirement (equal to a member's State Pension Age as specified in legislation at that date) less the 'early retirement reduction buy out' secured. When determining amounts payable under ERRBO agreements the cost is linked to NPA as set out in stated Government policy.
- 1.8 Section 4 briefly outlines the calculation of such benefit entitlement in circumstances where no actuarial factors are required to determine those benefits. Where actuarial factors are required for determining benefits payable to members who have ERRBO agreements, factors and instructions on their application in the calculation of benefits is dealt with within the relevant GAD guidance. Guidance for early and late retirements are particularly relevant.
- 1.9 The factors provided in this Note have been prepared in light of our advice to the DHSSPS dated 27 March 2015 and its instructions following that advice.



- 1.10 The Regulations to which this document relate, and the corresponding factors provided, are as follows:

Factor Table Number and description of factor table	Statutory Reference
ERRBO1 <ul style="list-style-type: none">Factors to determine rate of contribution payable to secure required level of early retirement reduction buy out	SR 2015/120 42-49

Implementation and review

- 1.11 This guidance should be used for all requests for ERRBO agreements. The earliest date for commencement of an agreement is 1 April 2015. Subsequent agreements may only commence on any 1 April, or otherwise with effect from the first day of pensionable service in any scheme year. Requests for ERRBO agreements must be received within 3 months of the date of commencement and contributions will be backdated to this date. Any requests received outside of this 3-month period will apply from the start of the following scheme year.
- 1.12 Increases in the rate of ERRBO contributions (which are treated as payable under a single ERRBO agreement) may only take effect from any 1 April, or otherwise from the first day of pensionable service in any scheme year (for example following a break in service).
- 1.13 An ERRBO agreement may only cease or be suspended with effect from any 31 March or otherwise from the last day of pensionable service in any scheme year. On earlier cessation within a scheme year any ERRBO contributions paid in that scheme year should be refunded to the member and the early retirement reduction buy-out agreement will not apply for any pension earned in that scheme year.
- 1.14 The restrictions on commencement and cessation of an ERRBO agreement means all benefits earned during the period ERRBO contributions are paid will be subject to a specified effective "reduced retirement age" (RRA). This is the age from which retirement benefits earned in any year will be available with no actuarial reduction for early payment. A member may have more than one RRA if additional ERRBO agreements are made.
- 1.15 The additional contribution rate payable under an ERRBO agreement is determined based on a member's age (in complete years) at the start of the ERRBO agreement. The additional rate payable at subsequent agreement to increase ERRBO contributions is determined based on the member's age (in complete years) at the increase date. All rates are reassessed regularly and the revised rates following each revision of factors should be based on the member's age (in complete years) at the date of the initial election and increase date(s) if applicable.
- 1.16 Any additional contributions payable under an ERRBO agreement will cease at NPA. Where the ERRBO contributions continue beyond selected RRA, all pension accrued during ERRBO payment will be subject to late retirement increases as described in the early and late retirement guidance.



- 1.17 The factors provided in this Note should be reconsidered whenever there is a change in the SCAPE basis, following each actuarial valuation where mortality and other relevant experience is reviewed or if other credible and material information comes to light.



2 Determination of rate of ERRBO contributions payable

Determining the periods for which ERRBO terms apply

- 2.1 For all members, RRA¹ is subject to a minimum of age 65 or the member's normal pension age (NPA) less 3 years if later (RRA minimum or "RRAM").
- 2.2 For the purposes of determining the rate of ERRBO contributions payable, NPA means a member's State Pension Age (SPA) in accordance with stated Government policy at the time the contribution rate is determined (subject to a minimum of 65 and as set out in the valuation directions²). Any change in a member's NPA (as defined in this paragraph) automatically changes the member's RRA (and RRAM). For example if a member sees an increase in NPA from 68 to 69, RRA will also increase by one year.
- 2.3 Further limits on the amount of ERRBO contributions may also apply, in which case a limited RRA (referred to as "RRAL") will apply, which may be later than RRAM as in the table in paragraph 2.5. See section 3 for more detail.
- 2.4 ERRBO agreements may only provide for a member's NPA to be reduced by a whole number of years, except for members with non-integral NPAs in which case integral RRAs may be selected.
- 2.5 Examples of RRA:

NPA	65 years 3 months	65 years 11 months	66	66 years 5 months	67	67 years 7 months	68	69	70
RRAM	65	65	65	65	65	65	65	66	67
Other RRA options	n/a	n/a	n/a	66	66	66 67	66 67	67 68	68 69

- 2.6 A member entering an ERRBO agreement to target an RRA after their RRAM may later increase the rate of ERRBO payments (subject to satisfying any other criteria as below) to secure an earlier RRA for service after the date of commencement of revised contributions. Thus a member may have up to 3 different RRAs applying to different periods during which ERRBO contributions are paid. In this case, early or late retirement factors will apply for some buy-out periods (see paragraph 2.7) at retirement (see early and late retirement guidance).

¹ "Reduced retirement age" (RRA). For the purposes of setting the ERRBO contributions RRA means the age from which retirement benefits earned during the period ERRBO contributions are paid are expected to be available with no actuarial reduction for early payment.

² The Public Service Pensions (Valuations and Employer Cost Cap) Directions (Northern Ireland) 2014.



- 2.7 The buy-out period is the period starting from the date from which the buy-out agreement takes effect and ending with the date on which it ceases for whatever reason.

Application of factors

- 2.8 Factors for determining the rate of ERRBO contributions payable for integral periods between NPA and RRA are set out in Appendix B of this Note. Factors for non-integral periods (i.e. for non-integral NPAs) should be determined by interpolation between the factors in the columns either side of the required fractional period.
- 2.9 At the initial application for an ERRBO agreement, the contributions payable should be determined from the table based on age attained in complete years as at the 31 March immediately prior to the commencement of the buy-out period. Payment of contributions will normally commence on 1 April in any year, though may commence later provided the contributions are applied for all pensionable service in that scheme year.
- 2.10 Any subsequent increase in the ERRBO agreement may be made subject to the restriction on RRAL as in Section 3. The initial rate of contributions for a second and third ERRBO agreement should be determined from the table based on age attained as at the 31 March immediately prior to the increase of the buyout period.
- 2.11 ERRBO contributions will be subject to regular review in accordance with paragraph 1.17. Revised factors will only take effect from a 1 April. From such 1 April the age-related rate payable for all ERRBO paying members should be re-determined based on the age of the member at the date of the original election and increase date(s) if applicable.

Cessation or suspension of ERRBO agreement

- 2.12 An ERRBO agreement is due to be in force from the commencement date until the selected RRA. On continuation in service after RRA a member may elect for contributions to an ERRBO agreement to continue to NPA or to cease at any 31 March between RRA and NPA. Normal rules on refund of ERRBO contributions apply for cessations between RRA and NPA on any other date. Actuarial adjustments will be applied to benefits earned during ERRBO payment on retirement before or after RRA. The adjustments are set out in the early and late retirement guidance.
- 2.13 A member has limited options to suspend and recommence an ERRBO agreement, and can do so on hardship grounds only (see Regulation 48). An ERRBO agreement can be suspended for up to one scheme year. If the member fails to resume payment of contributions at the start of the scheme year following the year of suspension the agreement is deemed to have been revoked. Only one period of suspension is permitted in the buy-out period. No further ERRBO agreements will be permitted.



- 2.14 A member may revoke an ERRBO agreement (see Regulation 49). Any suspension of contributions (except on hardship grounds) will be effective from the 31 March immediately preceding cessation of payment. There is no option to reduce the level of ERRBO contributions. Any ERRBO contributions paid since the preceding 31 March will be refunded. The benefits earned over any period over which ERRBO contributions have been paid will remain subject to the RRA agreed. For service following cessation of ERRBO contributions the member's normal NPA will apply.
- 2.15 On breaks in pensionable service ERRBO agreements will automatically recommence on the same basis as that on which they were agreed at latest exit (subject to any revision of contributions in accordance with paragraph 2.11).



3 Calculation of limits on ERRBO agreements

- 3.1 An overall limit for an ERRBO agreement is set at first commencement of the contract. The principle of the limit is that the aggregate of Additional Pension (AP) and an ERRBO agreement should result in a total member funded pension of no more than £6,500 per annum (set for 2015/16 and expected to be indexed in line with PI increases). The only exception to this limit is at the outset of the ERRBO agreement if at that time the member has no existing AP contract (any AP or AY contracts in the HSCPS are ignored for this purpose). In this case a higher expected value of pension may be provided for through ERRBO. On application for an ERRBO agreement a limited Reduced Retirement Age ("RRAL") should be determined.
- 3.2 Members may only enter into an ERRBO agreement if the selected Reduced Retirement Age (RRA) is greater than or equal to the RRAL. There is no requirement to reassess RRAL if the member subsequently elects to buy AP (or additional AP), although there may be restrictions on the amount of AP which may be secured. The application of those limits are set out in 'HSCPS 2015: Purchase of Additional Pension: Factors and guidance'.

Calculation of RRAL at ERRBO application

- 3.3 The formulae required to calculate the RRAL at outset of an ERRBO agreement are given below:

a) No existing AP contracts (any AP or AY contracts relating to the HSCPS are disregarded for this purpose)

RRAL (=RRAM) = higher of 65, NPA – 3 (integral values only).

b) Existing AP contract(s)

Calculate:

$B - A$, and

$L - A$

Where:

B = the maximum potential value of an ERRBO contract for the member

= future service x pay x $1.015^{\text{future service}}$ x (1 - ERF)/54

A = value (at calculation date i.e. including PI to April preceding date of calculation) of existing AP purchased (assuming any regular contribution contracts will be completed (unless already lapsed))

L = overall limit on extra pension as specified in Regulation 60 (£6,500 pa for 2015/16 and expected to be adjusted annually by DFP).

And:



future service = service in years and days from ERRBO commencement date to RRAM

ERF = that applicable for the period NPA to RRAM

Pay = whole time equivalent pensionable pay at calculation date

If $(B - A) \leq (L - A)$: **RRAL = RRAM**

Otherwise (i.e. if $(B - A) > (L - A)$) calculate:

B1 – A

Where:

B1 = the potential value of an ERRBO contract for the member with (RRAM + 1 year) (if (RRAM + 1 year) > PNPA there is no scope for ERRBO contributions)
= future service1 x pay x $1.015^{\text{future service1}}$ x $(1 - \text{ERF1})/54$

A = as above

And:

future service1 = service in years and days from ERRBO commencement date to (RRAM + 1 year)

ERF = that applicable for the period NPA to (RRAM + 1 year)

Pay = whole time equivalent pensionable pay at calculation date

If $(B1 - A) \leq (L - A)$: **RRAL = RRAM + 1 year**

Otherwise (i.e. if $(B1 - A) > (L - A)$) calculate:

B2 – A

Where:

B2 = the potential value of an ERRBO contract for the member with (RRAM + 2 years) (if (RRAM + 2 years) > PNPA there is no scope for ERRBO contributions)
= future service2 x pay x $1.015^{\text{future service2}}$ x $(1 - \text{ERF2})/54$

A = as above

And:



future service₂ = service in years and days from ERRBO commencement date to (RRAM + 2 years)

ERF = that applicable for the period NPA to (RRAM + 2 years)

Pay = whole time equivalent pensionable pay at calculation date

If $(B2 - A) \leq (L - A)$: **RRAL = RRAM + 2 years**

Otherwise (i.e. if $(B2 - A) > (L - A)$): **there is no scope for ERRBO contributions.**

3.4 RRAL as above should be determined on first application for an ERRBO agreement. Applications to increase ERRBO contributions (in accordance with Regulation 43(6)) beyond the RRA initially selected may be taken up to a minimum of RRAL, regardless of any subsequent AP contracts (although restrictions may apply to such AP applications (see 3.2)). The earlier RRA will apply only in respect of benefits earned during the period(s) over which increased ERRBO contributions are paid.

3.5 Section 5 sets out worked examples of RRAL calculations.



4 Calculation of benefits for periods during which ERRBO contributions have been paid

- 4.1 For each period in which ERRBO contributions are paid a member is treated as having a reduced NPA for the purposes of determining benefits payable. At the point of a member's retirement the reduced NPA (RRA) is determined by reference to the member's SPA (State Pension Age as specified in legislation at that date) less the period of early retirement reduction buy-out secured by their ERRBO agreement. This is different to when determining contributions payable under ERRBO contracts where the cost is linked to SPA as set out in stated Government policy. Similarly at other non-retirement events RRA is defined by reference to stated Government policy at the time.
- 4.2 This section briefly outlines the calculation of such benefit entitlement in circumstances where no actuarial factors are required to determine those benefits. Where actuarial factors are required for determining benefits payable to members who have an ERRBO agreement, factors and instructions on their application in the calculation of benefits is dealt with within the relevant GAD guidance as below

Early retirement	HSCPS 2015 – Early or late retirement in normal health: Factors and Guidance
Late retirement	HSCPS 2015 – Early or late retirement in normal health: Factors and Guidance
Retirement due to redundancy or on the grounds of efficiency	HSCPS 2015 – Compulsory early retirement: Factors and guidance
Non-Club transfers out	HSCPS 2015 – Non-Club Transfers out (CETVs): Factors and guidance

Retirement benefits at RRA (in normal health)

- 4.3 On retirement at RRA the accrued benefit entitlement is payable without adjustment. Where benefits accrued over different periods are subject to different RRAs, or where ERRBO agreements are not in place for all pensionable service it will be necessary to calculate benefits for each period with differing NPA or RRA separately. Early or late retirement adjustments should be applied to benefits with differing NPA/RRA in accordance with other GAD guidance.
- 4.4 Each member may potentially have accrued pension with any or each of the following effective retirement ages: NPA, NPA - 1, NPA - 2 and NPA - 3 where the member has an integral SPA, or NPA, 67, 66 and 65 where member has a non-integral SPA. Depending on age at retirement date each 'slice' of benefit will be determined separately.



- 4.5 The process outlined above applies equally for voluntary withdrawals, with appropriate increases to deferred entitlements being awarded during the period prior to retirement and adjustments applied to relevant 'slices' of benefit depending on actual date of retirement. In these cases the RRA will be determined at the point of retirement and linked to SPA specified in legislation at that time. Prior to then any required calculations (e.g. CETVs) will be based on RRA linked to SPA in accordance with stated Government policy at the date of calculation.

Retirement on ill-health grounds or death before retirement

- 4.6 An ERRBO agreement has no 'value' if a member retires on ill health grounds or dies before retirement. Benefits should be determined ignoring any ERRBO agreement. Any benefits based on prospective service should take account of service to NPA (as RRA is irrelevant to these calculations). NPA is that based on stated Government policy for the purposes of ill-health retirement and death before retirement.



5 Examples of calculation of scope for payment of ERRBO and determination of rate payable

5.1 The worked examples below cover the following scenarios:

- > Example A: Initial ERRBO limits, no AP contracts,
- > Example B: Initial ERRBO limits, AP contracts,
- > Example C: Initial ERRBO limits, AP contracts,
- > Example D: Revised ERRBO limits, AP contracts, ERRBO agreement in force,
- > Example E: Rates payable integer SPA,
- > Example F: Rates payable non-integer SPA.

Example A

Member details

NPA	67
Existing AP contracts	Nil
RRAM = 65	

No AP contracts so no limit on ERRBO contributions.
RRAL = RRAM = 65



Example B (calculation assumed in year 2015/16)

Member details

NPA	67
Existing AP contracts	£4,000 pa
Current WTE pay	£30,000 pa
Age at agreement	50
RRAM	65

Calculate:

B – A, and

L – A

Where:

$$\begin{aligned} B &= \text{future service} \times \text{pay} \times 1.015^{\text{future service}} \times (1 - \text{ERF})/54 \text{ (based on RRAM)} \\ &= 15 \times £30,000 \times 1.015^{15} \times (1 - 0.896)/54 = £1,084 \end{aligned}$$

$$A = £4,000$$

$$L = £6,500$$

$$B - A = -£2,916$$

$$L - A = £2,500$$

$$\text{As } (B - A) \leq (L - A): \mathbf{RRAL = RRAM = 65}$$



Example C (calculation assumed in year 2015/16)

Member details

NPA	68
Existing AP contracts	£2,000 pa
Current WTE pay	£70,000 pa
Age at agreement	35
RRAM	65

Calculate:

$B - A$, and

$L - A$

Where:

$$B = \text{future service} \times \text{pay} \times 1.015^{\text{future service}} \times (1 - \text{ERF})/54 \text{ (based on RRAM)}$$

$$= 30 \times £70,000 \times 1.015^{30} \times (1 - 0.849)/54 = £9,179$$

$$A = £2,000$$

$$L = £6,500 \text{ pa}$$

$$B - A = £7,179$$

$$L - A = £4,500$$

As $(B - A) > (L - A)$ calculate:

$$B1 - A$$

Where:

$$B1 = \text{future service1} \times \text{pay} \times 1.015^{\text{future service1}} \times (1 - \text{ERF1})/54 \text{ (Based on RRAM + 1 year)}$$

$$= 31 \times £70,000 \times 1.015^{31} \times (1 - 0.896)/54 = £6,631$$

$$A = £2,000$$

$$B1 - A = £4,631$$

$$L - A = £2,500$$

As $(B1 - A) > (L - A)$ calculate:

$$B2 - A$$



Where

$B2 = \text{future service}_2 \times \text{pay} \times 1.015^{\text{future service}_2} \times (1 - \text{ERF}_2)/54$ (Based on $\text{RRAM} + 2$ years)

$$= 32 \times £70,000 \times 1.015^{32} \times (1 - 0.946)/54 = £3,607$$

$A = £2,000$

$B2 - A = £1,607$

$L - A = £2,500$

As $(B2 - A) \leq (L - A)$: **$\text{RRAL} = \text{RRAM} + 2 \text{ years} = 67$**



Example D

Member from Example C chose to take out ERRBO agreement for RRA of 67 as at 1 April 2015. No existing AP contracts so $RRAM = RRAL = 65$.

5 years later member took further AP contract for £250 pa.

AP application would have been subject to limits as specified in 'HSCPS 2015: Purchase of Additional Pension: Factors and guidance'

Another 5 years later member requested increase in ERRBO agreement.

No further calculations required at this time. Top up to ERRBO agreement is allowable subject to RRA being no lower than age 65 (or $NPA - 3$ years if NPA has been amended in the interim).

Example E

Member details

NPA	67
Age	40
Existing AP contracts	Nil
$RRAM = 65$	

No AP contracts so no limit on ERRBO contributions.
 $RRAL = RRAM = 65$.

Member wishes to enter into ERRBO agreement to buy-out 2 years' early retirement reduction i.e. a RRA of 65

Member will need to pay 2.48% pa of pensionable salary.

Example F

Member details

NPA	66 5/12
Age	54
Existing AP contracts	Nil
$RRAM = 65$	

No AP contracts so no limit on ERRBO contributions.
 $RRAL = RRAM = 65$.

Member wishes to enter into ERRBO agreement to buy-out 5/12 years' early retirement reduction i.e. a RRA of 66



If the member wanted to buyout 1 years' early retirement reduction they would need to pay 1.40% pa pensionable salary. If they were not entering into an ERRBO agreement they would pay no additional contributions.

Interpolate $(1.40\% - 0\%)/12 = 0.117\%$ pa for each month early.

Therefore the member will need to pay $0.117\% \times 5 = 0.585\%$ pa of pensionable salary.

Interpolation by days may be applied for NPAs expressed other than in full months.



Appendix A: Assumptions underlying factors

Financial assumptions

Nominal discount rate	5.06% pa
Real discount rate (in excess of CPI)	3.00% pa
Real In service revaluation (in excess of CPI)	1.50% pa

Mortality assumptions

Base mortality tables	S1NMA and S1NFA
Base table adjustment	Adjustments applied so that 20% fewer deaths at each age are assumed for male members and 15% fewer deaths at each age are assumed for female members than implied by the standard tables. (As per 2012 valuation.)
Future mortality improvement	Based on ONS principal UK population projections 2012
Year of use	2016

In-service decrement rates

Withdrawal	Nil
Death in service	Rates used for 2012 valuation
Retirements in Ill health	Rates used for 2012 valuation
Age retirement	Nil before RRA, 100% at RRA

Other assumptions

Proportion of male members for unisex factors	33.3%
Allowance for commutation	Nil



Appendix B: Factors for determining ERRBO contributions

Age (Complete years at previous 31 March)	Contribution rate (% of pay) to secure RRA for service after commencement of ERRBO contributions equal to		
	NPA – 1	NPA – 2	NPA – 3
16	1.07%	2.14%	3.21%
17	1.08%	2.16%	3.24%
18	1.08%	2.16%	3.24%
19	1.09%	2.18%	3.27%
20	1.09%	2.18%	3.27%
21	1.10%	2.20%	3.30%
22	1.11%	2.22%	3.33%
23	1.11%	2.22%	3.33%
24	1.12%	2.24%	3.36%
25	1.13%	2.26%	3.39%
26	1.13%	2.26%	3.39%
27	1.14%	2.28%	3.42%
28	1.15%	2.30%	3.45%
29	1.15%	2.30%	3.45%
30	1.16%	2.32%	3.48%
31	1.17%	2.34%	3.51%
32	1.18%	2.36%	3.54%
33	1.18%	2.36%	3.54%
34	1.19%	2.38%	3.57%
35	1.20%	2.40%	3.60%
36	1.21%	2.42%	3.63%
37	1.22%	2.44%	3.66%
38	1.22%	2.44%	3.66%
39	1.23%	2.46%	3.69%
40	1.24%	2.48%	3.72%
41	1.25%	2.50%	3.75%
42	1.26%	2.52%	3.78%
43	1.27%	2.54%	3.81%
44	1.28%	2.56%	3.84%
45	1.29%	2.58%	3.87%
46	1.30%	2.60%	3.90%
47	1.31%	2.62%	3.93%
48	1.32%	2.64%	3.96%
49	1.33%	2.66%	3.99%
50	1.35%	2.70%	4.05%
51	1.36%	2.72%	4.08%
52	1.37%	2.74%	4.11%
53	1.39%	2.78%	4.17%
54	1.40%	2.80%	4.20%
55	1.42%	2.84%	4.26%
56	1.43%	2.86%	4.29%
57	1.45%	2.90%	4.35%
58	1.47%	2.94%	4.41%
59	1.48%	2.96%	4.44%
60	1.50%	3.00%	4.50%
61	1.52%	3.04%	4.56%
62	1.55%	3.10%	4.65%



63	1.57%	3.14%	4.71%
64	1.60%	3.20%	4.80%
65	1.63%	3.26%	
66	1.63%		
67			

Factors for non-integral buy-out reduction periods should be determined by interpolation.