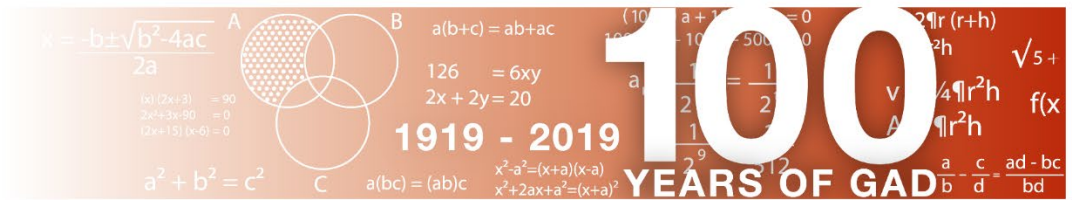




Government  
Actuary's  
Department



## Teachers' Pension Scheme

Career average section

Election to buy out the standard reduction

Factors and guidance

Date: 11 September 2019





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## 1 Introduction

- 1.1 This note is provided for the Department for Education (DfE) as scheme manager of the Teachers' Pension Scheme (TPS).
- 1.2 A member in the career average section who has a Normal Pension Age (NPA) over 65 may elect to pay contributions to buy out the standard reduction ("buy-out election") for a period of up to 3 years.
- 1.3 The purpose of the note is to provide the factors for determining the contributions required if a member makes a buy-out election.
- 1.4 This note relates to Part 4 of Schedule 2 to The Teachers' Pension Scheme Regulations 2014 (SI 2014/512).
- 1.5 The factors provided in this note have been prepared in light of our advice to DfE dated 30 October 2018 and its instructions following that advice.
- 1.6 This guidance is intended to supersede any previously issued by GAD for the purposes of election to buy out the standard reduction calculations, carried out from a date to be determined by DfE. No advice or factors issued in the past should be used for such cases after this date. In particular, this guidance supersedes:  
  
"Teachers' Pension Scheme – Career Average section: Election to buy out the standard reduction: Factors and guidance" dated 7 November 2014.
- 1.7 The factors in this note have been updated but the calculation methodology remains unchanged.
- 1.8 The assumptions underlying the factors provided in this guidance note can be found in Appendix D. Some important limitations are set out in Appendix E.
- 1.9 Details on the member contributions required for buy-out elections can be found in Section 2. The factors are set out in Appendix A. Illustrative example calculations of the monthly contributions required to buy out the standard reduction can be found in Section 4.
- 1.10 There is a limit on how much extra pension a member can purchase in the career average section. Section 3 sets out how to determine the value of the buy-out election for the purpose of the extra pension limit. The required factors are set out in Appendices B & C. Illustrative examples of the buy-out value calculations can be found in Section 4 also.

### **Implementation and Review**

- 1.11 The factors contained in this guidance will apply from a date to be determined by DfE. This guidance will apply with immediate effect from the date this note is issued.



- 1.12 This guidance has been written for pension administrators and assumes some knowledge of general pension terminology, and some familiarity with retirement calculations for the Teachers' Pension Scheme. Any questions concerning the application of the guidance should, in the first instance, be referred to DfE.
- 1.13 In line with best practice and in order to make sure that factors are being used as intended and the instructions are fit for purpose, we suggest that some example calculations are sent to GAD for review.
- 1.14 The factors contained in this guidance will be subject to review periodically. This will depend on external circumstances, for example whenever there is a change in the SCAPE basis; when changes in the actuarial assumptions adopted for other scheme factors take place; or following each future actuarial valuation where mortality and other relevant experience is reviewed or if other credible and material information comes to light.

### **Third party reliance**

- 1.15 This guidance has been prepared for the use of DfE and the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on DfE and the scheme administrator's website but must not otherwise be reproduced, distributed or communicated in whole or in part to any other person without GAD's prior written permission.
- 1.16 Other than DfE and the scheme administrators, no person or third party is entitled to place any reliance on the contents of this guidance, except to any extent explicitly stated herein. GAD has no liability to any person or third party for any action taken or for any failure to act, either in whole or in part, on the basis of this guidance, whether or not GAD has agreed to the disclosure of its advice to the third party.



## 2 Buy-out election

- 2.1 A member who has a NPA over 65 may elect to pay contributions to buy out the standard reduction for a period of up to 3 years.
- 2.2 This note sets out the factors to be used to determine the monthly contributions payable by a member who has made a buy-out election, in line with paragraph 33 of Schedule 2 to The Teachers' Pension Scheme Regulations 2014 (SI 2014/512).
- 2.3 The cost of the buy-out election should be calculated with reference to:
- the member's age (last birthday) at the time of entering pensionable service under the career average section; and
  - the number of years in respect of which the standard reduction is to be bought out.
- 2.4 The factors are set out in Appendix A. These show the percentage of a member's pensionable earnings that need to be paid for the duration of the contributions payment period to buy out the standard reduction for 1 year.
- 2.5 The contribution rate that a member is required to pay should be calculated using the formula below:

$$\text{Contribution rate} = F^{BO} \times N$$

where:

$$\begin{aligned} F^{BO} &= \text{buy-out factor from Table BO1 relating to the member's age} \\ N &= \text{number of years to be bought out} \end{aligned}$$

- 2.6 Members with non-integer NPAs are able to buy-out the full non-integer period between age 65 and NPA, provided this period is less than 3 years. The formula above should also be used in this instance, where  $N$  should be the full non-integer period between age 65 and NPA.
- 2.7 Example calculations for members are set out in Section 4.



### **Payments after a gap in service**

- 2.8 A member who has a gap in service of less than 5 years may choose to resume paying contributions on re-entering pensionable service. The calculation of the contribution rate payable is not revisited in this instance, unless there has been a change in the guidance, in which case the member's contribution rate may be re-determined in the same way as for those members who did not have a gap in service.
- 2.9 A member is taken to revoke a buy-out election if their gap in service exceeds 5 years.

### **Interaction with faster accrual**

- 2.10 The buy-out election may also apply to a faster accrual election. The contribution factors set out in Appendix A only apply to the accrual of a member's normal scheme pension. The cost of the buy-out election applying to any additional accrual gained through a faster accrual election will be included in the faster accrual factors.



### 3 Limit on extra pension

- 3.1 There is a maximum overall amount of extra pension a member can purchase in the career average section. The maximum overall amount was £6,800 per annum in the 2018-19 financial year, and is £7,000 per annum in the 2019-20 financial year.
- 3.2 This limit does not apply to the buy-out election. However, the value of the extra pension purchased through a buy-out election (the 'buy-out value') does count against the extra pension limit if the member wishes to make a subsequent faster accrual or additional pension election.
- 3.3 The buy-out value should be calculated using the formula below:

$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

where:

- $PE$  = the member's actual rate of pensionable earnings at the time of making the buy-out election.
- $F^S$  = buy-out value factor from Table BO2 relating to the number of years between the member's age (in complete years and months) at the time of entering service under the career average section and their 'buy-out retirement age' (see paragraph 3.5).
- $N$  = the number of years for which the standard reduction has been bought out.
- $F^M$  = multiplier factor from Table BO3

The relevant factors are set out in Appendix B & C.

- 3.4 For a member who is in part-time employment,  $PE$  is the rate of pensionable earnings the member is receiving at the time of making the buy-out election, not the full-time equivalent rate.
- 3.5 A member's buy-out retirement age is equal to the member's expected NPA<sup>1</sup> less the number of years for which the standard reduction has been bought out. The buy-out value should be calculated at the time of the election.
- 3.6 If a member subsequently makes a faster accrual election or an additional pension election, the buy-out value needs to be compared with the extra pension limit, to determine the remaining headroom available to the member. The buy-out value needs to be increased in line with inflation between the date the member entered pensionable service under the career average section and the date of any faster accrual or additional pension election.

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<sup>1</sup> NPA is defined as a member's state pension age as defined in legislation (or 65, if that is higher) in the career average section.



- 3.7 The examples in Section 4 show how the buy-out value should be calculated.
- 3.8 It will be necessary to revisit the original buy-out value calculation when a buy-out election is revoked. In this instance, the original buy-out value should be revised in a proportional manner based on:
- the actual number of years for which a member made contributions; and
  - the number of years a member was expected to make contributions for, i.e. the number of years between the member's age (in complete years and months) at the time of entering service under the career average section and their buy-out retirement age.

**Interaction with faster accrual**

- 3.9 The buy-out election may also apply to a faster accrual election. The buy-out value factors set out in Appendices B & C only apply to the accrual of a member's normal scheme pension. The extra pension purchased through a buy-out election applying to any additional accrual gained through a faster accrual election will be included in the extra pension check carried out for the faster accrual election.





## 4 Buy-out election examples

### Example 1: Member with integer NPA

#### Determining cost of the buy-out election

##### Member Details

Date of Birth	1 May 1981
Sex	Male
Date joined career average section	1 April 2020
Normal Pension Date	1 May 2049
Normal Pension Age	68

##### Buy-out election

Date of election	1 July 2020
Number of years bought out	3
Age (last birthday) at date joined career average section	38
Factor $F^{BO}$ – age 38	0.86

$$\text{Contribution rate} = F^{BO} \times N$$

where:

$F^{BO}$	=	buy-out factor relating to the member's age = 0.86
$N$	=	number of years to be bought out = 3

$$\text{Contribution rate} = 0.86 \times 3 = 2.58$$

The member is required to pay regular contributions of 2.58% of his pensionable earnings.

#### Determining the buy-out value

Actual rate of pensionable earnings at time of making the buy-out election	£35,000
Age (complete months and years) at date joined career average section	38 years 11 months
Buy-out retirement age (NPA – number of years bought out)	= 68 – 3 = 65
Number of years between age joined career average section and buy-out retirement age	= 65 – 38 <sup>11/12</sup> = 26 <sup>1/12</sup>
Factor $F^S$ – 26 years	0.741
Factor $F^S$ – 27 years	0.785



$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

where:

- $PE$  = the member's actual rate of pensionable earnings at the time of making the buy-out election (£35,000)
- $F^S$  = buy-out value factor relating to the number of years between the member's age (in complete years and months) at the time of the election and the member's buy-out retirement age ( $F^S - 26^{1/12}$  years)
- $N$  = the number of years for which the standard reduction is to be bought out (3 years)
- $F^M$  = multiplier factor ( $F^M = 0.036$ )

Since the number of years between the member's age and the buy-out age is not a whole number of years, the factor  $F^S$  must be interpolated.

$$\text{Interpolated } F^S = F^- + [Y^E - Y^-] \times [F^+ - F^-]$$

where:

- $Y^E$  = actual number of years between member's age and buy-out retirement age ( $26^{1/12}$ ),
- $Y^-$  =  $Y^E$  **rounded down** to nearest whole year (26),
- $Y^+$  =  $Y^E$  **rounded up** to nearest whole year (27),
- $F^-$  = factor  $F^S$  for  $Y^-$  (0.741),
- $F^+$  = factor  $F^S$  rate for  $Y^+$  (0.785).

$$\begin{aligned} \text{Interpolated } F^S &= 0.741 + [26^{1/12} - 26] \times [0.785 - 0.741] \\ &= 0.745 \end{aligned}$$

$$\begin{aligned} \text{Buy-out value} &= F^M \times PE \times F^S \times N \\ &= 0.036 \times £35,000.00 \times 0.745 \times 3 \\ &= £2,816.10 \end{aligned}$$



## Example 2: Member with non-integer NPA

### Determining cost of the buy-out election

#### Member Details

Date of Birth	6 June 1960
Sex	Female
Date joined career average section	1 April 2020
Normal Pension Date	6 September 2026
Normal Pension Age	66 years 3 months

#### Buy-out election

Date of election	1 June 2020
Number of years bought out	1 year and 3 months
Age (last birthday) at date joined career average section	59
Factor – age 59	0.93

$$\text{Contribution rate} = F^{BO} \times N$$

where:

$$F^{BO} = \text{buy-out factor relating to the member's age} = 0.93$$

$$N = \text{number of years to be bought out} = 1\frac{3}{12}$$

$$\text{Contribution rate} = 0.93 \times 1\frac{3}{12} = 1.16$$

The member is required to pay regular contributions of 1.16% of her pensionable earnings.

### Determining the buy-out value

Actual rate of pensionable earnings at the time of making the buy-out election	£20,000
Age (complete months and years) at date joined career average section	59 years 9 months
Buy-out retirement age (NPA – number of years bought out)	$= 66\frac{3}{12} - 1\frac{3}{12}$ $= 65$
Number of years between age joined career average section and buy-out retirement age	$= 65 - 59\frac{9}{12} = 5\frac{3}{12}$
Factor $F^S$ – 5 years	0.096
Factor $F^S$ – 6 years	0.117



$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

where:

- $PE$  = the member's actual rate of pensionable earnings at the time of making the buy-out election (£20,000)
- $F^S$  = buy-out value factor relating to the number of years between the member's age (in complete years and months) at the time of the election and the member's buy-out retirement age ( $F^S - 5^{3/12}$  years)
- $N$  = the number of years for which the standard reduction is to be bought out ( $1^{3/12}$  years)
- $F^M$  = multiplier factor ( $F^M = 0.036$ )

Since the number of years between the member's age and the buy-out age is not a whole number of years, the factor  $F^S$  must be interpolated.

$$\text{Interpolated } F^S = F^- + [Y^E - Y^-] \times [F^+ - F^-]$$

where:

- $Y^E$  = actual number of years between member's age and buy-out retirement age ( $5^{3/12}$ ),
- $Y^-$  =  $Y^E$  **rounded down** to nearest whole year (5),
- $Y^+$  =  $Y^E$  **rounded up** to nearest whole year (6),
- $F^-$  = factor  $F^S$  for  $Y^-$  (0.096),
- $F^+$  = factor  $F^S$  rate for  $Y^+$  (0.117).

$$\begin{aligned} \text{Interpolated } F^S &= 0.096 + [5^{3/12} - 5] \times [0.117 - 0.096] \\ &= 0.101 \end{aligned}$$

$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

$$\begin{aligned} &= 0.036 \times £20,000.00 \times 0.101 \times 1^{3/12} \\ &= £90.90 \end{aligned}$$



### Example 3: Member with non-integer NPA

#### Determining cost of the buy-out election

##### Member Details

Date of Birth	6 May 1977
Sex	Female
Date joined career average section	1 April 2020
Normal Pension Date	6 July 2044
Normal Pension Age	67 years 2 months

##### Buy-out election

Date of election	1 April 2020
Number of years bought out	2 years 2 months
Age (last birthday) at date joined career average section	42
Factor – age 42	0.87

$$\text{Contribution rate} = F^{BO} \times N$$

where:

$$F^{BO} = \text{buy-out factor relating to the member's age} = 0.87$$

$$N = \text{number of years to be bought out} = 2^{2/12}$$

$$\text{Contribution rate} = 0.87 \times 2^{2/12} = 1.89$$

The member is required to pay regular contributions of 1.89% of her pensionable earnings.

#### Determining the buy-out value

Actual rate of pensionable earnings at the time of making the buy-out election	£40,000
Age (complete months and years) at date joined career average section	42 years 10 months
Buy-out retirement age (NPA – number of years bought out)	$= 67^{2/12} - 2^{2/12}$ $= 65$
Number of years between age joined career average section and buy-out retirement age	$= 65 - 42^{10/12} = 22^{2/12}$
Factor $F^S$ – 22 years	0.582
Factor $F^S$ – 23 years	0.620



$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

where:

- $PE$  = the member's actual rate of pensionable earnings at the time of making the buy-out election (£40,000)
- $F^S$  = buy-out value factor relating to the number of years between the member's age (in complete years and months) at the time of the election and the member's buy-out retirement age ( $F^S - 22^{2/12}$  years)
- $N$  = the number of years for which the standard reduction is to be bought out ( $2^{2/12}$  years)
- $F^M$  = multiplier factor ( $F^M = 0.036$ )

Since the number of years between the member's age and the buy-out age is not a whole number of years, the factor  $F^S$  must be interpolated.

$$\text{Interpolated } F^S = F^- + [Y^E - Y^-] \times [F^+ - F^-]$$

where:

- $Y^E$  = actual number of years between member's age and buy-out retirement age ( $22^{2/12}$ ),
- $Y^-$  =  $Y^E$  **rounded down** to nearest whole year (22),
- $Y^+$  =  $Y^E$  **rounded up** to nearest whole year (23),
- $F^-$  = factor  $F^S$  for  $Y^-$  (0.582),
- $F^+$  = factor  $F^S$  rate for  $Y^+$  (0.620).

$$\begin{aligned} \text{Interpolated } F^S &= 0.582 + [22^{2/12} - 22] \times [0.620 - 0.582] \\ &= 0.588 \end{aligned}$$

$$\text{Buy-out value} = F^M \times PE \times F^S \times N$$

$$\begin{aligned} &= 0.036 \times £40,000.00 \times 0.588 \times 2^{2/12} \\ &= £1,834.56 \end{aligned}$$



## Appendix A: Buy-out election contribution factors

**Table BO1**  
**(Table 722 in consolidated factors spreadsheet)**

Age entered pensionable service in career average section	Factor for buying out the standard reduction for 1 year (percentage of pensionable earnings) ( $F^{BO}$ )
16	0.83
17	0.83
18	0.84
19	0.84
20	0.84
21	0.84
22	0.84
23	0.84
24	0.84
25	0.84
26	0.84
27	0.84
28	0.84
29	0.84
30	0.84
31	0.85
32	0.85
33	0.85
34	0.85
35	0.85
36	0.85
37	0.86
38	0.86
39	0.86
40	0.86
41	0.86
42	0.87
43	0.87
44	0.87
45	0.87
46	0.88
47	0.88
48	0.88
49	0.89
50	0.89
51	0.89
52	0.90
53	0.90
54	0.90
55	0.91
56	0.91
57	0.92
58	0.92
59	0.93
60	0.93
61	0.94
62	0.94
63	0.96
64	0.98
65	Refer to GAD
66	Refer to GAD
67	Refer to GAD



## Appendix B: Buy-out value factors

Table BO2

(Table 723 in consolidated factors spreadsheet)

Number of years between age entered pensionable service in career average section and 'buy-out retirement age'	Factor to determine buy-out value ( $F^S$ )
0	0.000
1	0.018
2	0.036
3	0.056
4	0.075
5	0.096
6	0.117
7	0.140
8	0.163
9	0.186
10	0.211
11	0.237
12	0.263
13	0.290
14	0.319
15	0.348
16	0.378
17	0.409
18	0.442
19	0.475
20	0.509
21	0.545
22	0.582
23	0.620
24	0.659
25	0.700
26	0.741
27	0.785
28	0.829
29	0.875
30	0.922
31	0.971
32	1.022
33	1.074
34	1.127
35	1.183
36	1.240
37	1.298
38	1.359
39	1.421
40	1.485
41	1.551
42	1.620
43	1.690
44	1.762
45	1.836
46	1.913
47	1.992
48	2.073
49	2.157
50	2.243
51	2.331
52	2.422





## **Appendix C: Multiplier factor**

### **Table BO3**

**The multiplier factor is currently 0.036 for all scheme members.**



## Appendix D: Assumptions underlying factors

### Financial assumptions

Nominal discount rate	4.448% pa
CPI	2.00% pa
RPI	3.15% pa
Real discount rate (in excess of CPI)	2.40% pa
Real discount rate (in excess of RPI)	1.25% pa

### Mortality assumptions

Base mortality tables and adjustments:

	Males	Females
<b>Retirements in normal health</b>	106% of S2NMA_L	Age dependant adjustments to S1NFA_L: ≤79: 75% 80-84: 86% 85-89: 100% ≥90: 108%
<b>Retirements in ill-health</b>	100% of S2IMA	100% of S2IFA
<b>Dependants</b>	120% of S2NMA	95% of S2DFA

Future mortality improvements	Based on ONS principal UK population projections 2016
Year of Use	2020

### In-service decrement rates

Withdrawal	Nil
Age retirement	Nil before NPA, 100% at NPA
Ill health retirement	2016 valuation assumptions

### Other assumptions

Proportion of male members for unisex factors	30%
Proportion partnered	100% for members purchasing additional pension with attaching dependant's pension
Age difference between member and partner	Males assumed 3 years older than their partners and female members assumed 2 years younger than their partners
Allowance for commutation	Nil



## Appendix E: Limitations

- E.1 This note should not be used for any purpose other than those set out in this guidance note.
- E.2 The factors contained in this note are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.
- E.3 Advice provided by GAD must be taken in context and is intended to be considered in its entirety. Individual sections, if considered in isolation, may be misleading, and conclusions reached by a review of some sections on their own may be incorrect. GAD does not accept responsibility for advice that is altered or used selectively. Clarification should be sought if there is any doubt about the intention or scope of advice provided by GAD.
- E.4 This note only covers the actuarial principles around the calculation and application of election to buy out standard reduction factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- E.5 Scheme managers and administrators should satisfy themselves that election to buy out standard reduction calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- E.6 This guidance is based on the Regulations in force at the time of writing. It is possible that future changes to the Regulations might create inconsistencies between this guidance and the Regulations. If users of this guidance believe there to be any such inconsistencies, they should bring this to the attention of the DfE and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.