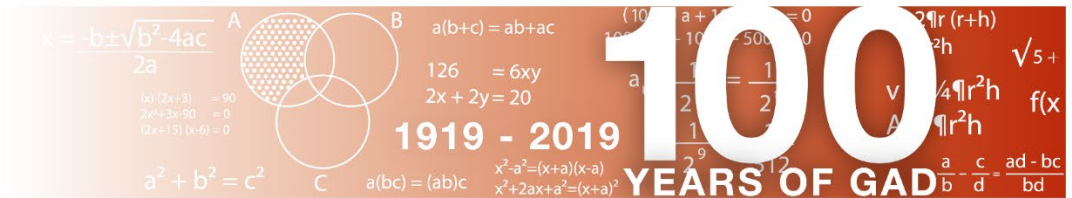




Government
Actuary's
Department



New Firefighters' Pension Scheme (Scotland) 2007 Scheme

Purchase of Increased Benefits

Factors and Guidance

Date: 26 November 2019





Contents

1	Introduction	1
2	Purchase of Increased Benefits – Payment by Lump sum	3
3	Purchase of Increased Benefits – Payment by periodic contributions	4
4	Examples	5
	Appendix A: Tables of factors	7
	Appendix B: Assumptions underlying factors	9
	Appendix C: Limitations	10



1 Introduction

- 1.1 This note is provided for the Scottish Public Pension Authority ("SPPA") as the scheme manager of the Firefighters' Pension Schemes in Scotland and sets out the actuarial guidance on the additional service due where a member elects to purchase increased benefits under the New Firefighters' Pension Scheme (Scotland) ("NFPS").
- 1.2 The purpose of this note is to set out, for scheme administrators, the calculation of increased benefits (added years) factors referred to in the following rules:
- Rule 5 of Part 11 of Schedule 1 to the Firefighters' Pension Scheme (Scotland) Order 2007 (SSI 2007 No. 199)
- 1.3 This guidance relates only to benefits accrued under the 2007 Scheme Regulations.
- 1.4 The factors provided in this note have been prepared in light of the advice on assumptions in our letter to the SPPA dated 30 October 2018.
- 1.5 This guidance is intended to supersede any factors or advice previously issued, for the purposes of purchasing increased benefits under the scheme, carried out from 29 October 2018. No advice or factors issued in the past should be used for cases after this date. In particular, this guidance supersedes:
- "New Firefighters' Pension Scheme 2006, New Firefighters' Pension Scheme (Scotland) 2007, New Firefighters' Pension Scheme (Wales) 2007, New Firefighters' Pension Scheme (Northern Ireland) 2007: Purchase of Increased Benefits" dated 8 March 2013.
- 1.6 The remainder of this introduction contains:
- details of the implementation and future review of this guidance,
 - statements about third party reliance and liability
- 1.7 In the remainder of this note:
- the second and third sections describe the calculation applicable where a member elects to purchase increased benefits under the scheme
 - the fourth section provides example calculations
 - Appendix A contains the relevant factors
 - Appendix B sets out the assumptions underlying the factors contained in this guidance note
 - Appendix C sets out some important limitations



Exclusions and Scope

- 1.8 This note should not be used for any purpose other than to determine the factor that should be used to calculate the cost of purchasing additional service in the NFPS.
- 1.9 This note only covers the actuarial principles around the calculation and application of added years factors. Any legal or tax advice in this area should be sought from an appropriately qualified person or source.
- 1.10 This note does not provide advice on whether or not to purchase additional service.

Implementation and review

- 1.11 The factors and guidance contained in this note should be followed with effect from 29 October 2018.
- 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 NFPS. Any questions concerning the application of the guidance should, in the first instance, be referred to SPPA. SPPA will seek input from the Scheme Actuary if necessary.
- 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 SPPA as the scheme administrators for the purposes of demonstrating the application of the factors covered by this guidance only. This guidance may be published on the SPPA'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 SPPA as 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 Purchase of Increased Benefits – Payment by Lump sum

General information

- 2.1 Lump sum contributions can be made on application within 12 months of last becoming a firefighter. The rules specify other requirements for a member to be eligible to purchase additional service.
- 2.2 The factors for calculating the lump sum payment are given in Table A. The lump sum payment required can be calculated using the following formula:

$$\text{AYLS} \times \text{N} \times \text{PAY}$$

Where:

AYLS Added Years Lump Sum factor – Table A

N Number of added years to be purchased, expressed in years

PAY Percentage of pay as described in point 2.3

- 2.3 The factors are intended to be used to identify the cost of one added year of additional service. The factors are expressed as a percentage of pensionable pay as follows:
- For full-time regular firefighters, member's pensionable pay in NFPS expressed as an annual rate (i.e. as would be used in the calculation of lump sum death grant) as at the date of payment;
 - For part-time regular firefighters, member's full-time equivalent pensionable pay as an annual rate as at the date of payment is used;
 - For retained firefighters, member's reference pay at the date of payment is used.
- 2.4 The appropriate factor is based on the member's age last birthday as at the date the member is making the payment and whether the member is a standard or special member.
- 2.5 Example 1 in section 4 sets out an example of a calculation involving the purchase of increased benefits by lump sum.



3 Purchase of Increased Benefits – Payment by periodic contributions

- 3.1 An election to pay periodical contributions can be made at any time up to 2 years before normal retirement age (i.e. age 60). The rules specify other requirements for a member to be eligible to purchase additional service.
- 3.2 Contributions commence on the birthday following the election. The contributions are deducted by the fire authority from the pay of the member concerned.
- 3.3 The periodic contributions will cease either on normal retirement age, or earlier if the firefighter retires, ceases to serve as a firefighter, opts out of the NFPS or otherwise discontinues payment in accordance with the Order.
- 3.4 GAD's understanding is that when a firefighter leaves service, retires on normal or ill health grounds or dies in service while making periodic contributions to purchase added years of service, the resulting benefits arising from the added years contract will be calculated by pro-rating the amount of service being purchased based on the period of time contributions were actually made and the period of time that they would have been made.
- 3.5 The factors for calculating the periodic contributions are given in Table B of Appendix A.
- 3.6 The percentage to be deducted from the member's pay can be calculated using the following formula:

AYPC × N

AYPC Added Years Periodic Contribution factor – Table B

N Number of added years to be purchased, expressed in years

- 3.7 The factors are intended to be used to identify the cost of one added year of additional service. The factors are expressed as a percentage of pensionable pay as follows:
- For full-time regular firefighters, member's pensionable pay in NFPS expressed as an annual rate (i.e. as would be used in the calculation of lump sum death grant) as at the date of payment;
 - For part-time regular firefighters, member's full-time equivalent pensionable pay as an annual rate as at the date of payment is used;
 - For retained firefighters, member's reference pay at the date of payment is used.
- 3.8 The appropriate factor is based on the member's age at the contract start date (i.e. their next birthday) and whether the member is a standard or special member.
- 3.9 Example 2 in section 4 sets out an example of a calculation involving the purchase of increased benefits by periodic contributions.



4 Examples

- 4.1 This Section sets out worked examples to help illustrate how the factors should be applied.
- 4.2 The conditions for purchasing increased benefits and restrictions on the amount of increased benefits that can be purchased are not considered within these examples.
- 4.3 These examples are for illustration only and may not represent realistic scenarios.

Example 1: Lump sum payment – non-special member

Number of added years purchased	120 days
Date of birth	6 January 1982
Date of payment	29 August 2019
Pay at date of payment *	£23,454 pa
Age last birthday on making payment	37

AYLS	60.0%
N	$120 \div 365$
PAY	£23,454

$$\begin{aligned} \text{Lump sum payment required} &= 60.0\% \times (120 \div 365) \times £23,454.00 \\ &= £4,626.54 \end{aligned}$$

***Note:**

For a full-time regular firefighter, the member's pensionable pay should be used;

For a part-time regular firefighter, the member's full-time equivalent pensionable pay should be used;

For a retained firefighter, the member's reference pay should be used.



Example 2: Payment by periodic contributions – special member

Number of added years purchased	2 years
Date of birth	6 January 1979
Date of election	29 November 2019
Age at which contributions commence	41

AYPC	3.59%
N	2
Percentage deduction from pay	$= 3.59\% \times 2 = 7.18\%$

For a full-time regular firefighter, the contributions to be deducted are 7.18% of the member's pensionable pay at the time of the deduction. For example if a member is paying monthly contributions and their pensionable pay is currently £36,000 a year (£3,000 a month) they would currently be paying periodic added years contributions of $£3,000.00 \times 7.18\% = £215.40$ a month.

For a part-time regular firefighter, the contributions to be deducted are 7.18% of the member's full-time equivalent pensionable pay over the contribution period at the time of the deduction. For example if a member is paying monthly contributions and their full-time equivalent pensionable pay is currently £36,000 a year (£3,000 a month) they would currently be paying periodic added years contributions of $£3,000.00 \times 7.18\% = £215.40$ a month.

For a retained firefighter, the contributions are to be deducted are 7.18% of the member's reference pay at the time of the deduction. For example if a member is paying monthly contributions and their reference pay is currently £36,000 a year (£3,000 a month) they would currently be paying periodic added years contributions of $£3,000.00 \times 7.18\% = £215.40$ a month.



Appendix A: Tables of factors

Table A: Cost of One Added Year: Lump Sum Payments (Table 703 in consolidated factors spreadsheet)

Males and Females

Age last birthday on making payment	Lump Sum Payment (% of pay) (Non-special Members)	Lump Sum Payment (% of pay) (Special Members)
20	68.2%	94.7%
21	68.2%	93.9%
22	68.1%	93.0%
23	68.0%	92.2%
24	67.8%	91.4%
25	67.5%	90.7%
26	67.1%	89.9%
27	66.6%	89.1%
28	66.1%	88.4%
29	65.6%	87.7%
30	64.8%	87.0%
31	63.8%	86.3%
32	63.1%	85.6%
33	62.4%	84.9%
34	61.8%	84.2%
35	61.2%	83.6%
36	60.6%	82.2%
37	60.0%	80.8%
38	59.4%	79.5%
39	58.8%	78.2%
40	58.2%	76.9%
41	57.1%	75.6%
42	56.0%	74.4%
43	54.9%	73.2%
44	53.9%	72.0%
45	52.8%	70.8%
46	51.8%	69.7%
47	50.9%	68.8%
48	50.1%	68.0%
49	49.3%	67.2%
50	48.6%	66.5%
51	47.8%	65.7%
52	47.1%	57.1%
53	46.4%	53.4%
54	45.7%	49.9%
55	44.8%	
56	43.2%	
57	40.1%	
58	37.1%	
59	34.0%	

¹ For full-time regular firefighters, factors are as a percentage of pensionable pay;

For part-time regular firefighters, factors are as a percentage of full-time equivalent pensionable pay;

For retained firefighters, factors are as a percentage of reference pay.



Table B: Cost of One Added Year: Payment by Periodical Contributions (Table 704 in consolidated factors spreadsheet)

Males and Females

Exact age at starting contract ²	Periodic Payment (% of pay) (Non-special Members)	Periodic Payment (% of pay) (Special Members)
20	1.05%	1.68%
21	1.08%	1.72%
22	1.11%	1.76%
23	1.14%	1.81%
24	1.17%	1.85%
25	1.21%	1.90%
26	1.24%	1.95%
27	1.27%	2.01%
28	1.31%	2.07%
29	1.35%	2.13%
30	1.38%	2.20%
31	1.41%	2.28%
32	1.44%	2.36%
33	1.48%	2.45%
34	1.53%	2.54%
35	1.58%	2.65%
36	1.63%	2.76%
37	1.68%	2.89%
38	1.74%	3.03%
39	1.81%	3.20%
40	1.88%	3.38%
41	1.96%	3.59%
42	2.05%	3.83%
43	2.15%	4.12%
44	2.26%	4.45%
45	2.38%	4.86%
46	2.52%	5.36%
47	2.69%	5.98%
48	2.88%	6.78%
49	3.12%	7.85%
50	3.41%	9.35%
51	3.77%	11.61%
52	4.21%	15.37%
53	4.80%	22.89%
54	5.58%	
55	6.69%	
56	8.33%	
57	10.93%	
58	16.03%	

² Under Rule 7(1) of Part 11 of Schedule 1 of the England Order contributions are payable from next birthday.

³ For full-time regular firefighters, factors are as a percentage of pensionable pay;

For part-time regular firefighters, factors are as a percentage of full-time equivalent pensionable pay;

For retained firefighters, factors are as a percentage of reference pay.



Appendix B: Assumptions underlying factors

Financial assumptions

Nominal discount rate	4.448%
Real discount rate (in excess of CPI)	2.40%

Mortality assumptions

Base mortality tables and adjustments	Member: 134% of S2NMA (M) and 134% of S2NFA (F) Dependant: 134% of S2NMA (M) and 118% of S2DFA (F) (as per 2016 valuation)
Future mortality improvement	Based on ONS principal UK population projections 2016
Year of use	2020

Other assumptions

Proportion of male members for unisex factors	95% for members and 5% for dependants
Proportion partnered	75% of members assumed married at retirement (80% assumed partnered).
Age difference between member and partner	Males assumed 3 years older than partner. Females assumed 3 years younger than partner.
Allowance for commutation	Nil
Salary scale	In line with long term assumptions proposed for the 2016 valuation
In-service decrements	In line with 2016 valuation proposals



Appendix C: Limitations

- C.1 This guidance should not be used for any purpose other than those set out in this guidance.
- C.2 The factors contained in this guidance are subject to regular review. Scheme managers and administrators need to ensure that they are using the latest factors, as relevant, when processing cases.
- C.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.
- C.4 This guidance only covers the actuarial principles around the calculation and application of added years factors. Any legal advice in this area should be sought from an appropriately qualified person or source.
- C.5 Scheme managers and administrators should satisfy themselves that added years calculations and benefit awards comply with all legislative requirements including, but not limited to, tax and contracting-out requirements.
- C.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 SPPA and GAD. Under no circumstances should this guidance take precedence over the Regulations. Administrators should ensure that they comply with all relevant Regulations.