Watson Wyatt Partners
Actuaries & Consultants
Watson House
London Road
Reigate
SURREY RH2 9PQ

MAIN FUND

Nottinghamshire County Council Pension Fund

Actuarial Valuation as at 31 March 1998

NOTES DOUG'S COPY

Grant Maintained Schools	3.11	(page 7)
Nottm City Council (Unitary)	3.10	(page 6)
Minimum Funding Requirement MFR	1.60	(page 2) & 5.11 (page 15)
Reg changes (implications on costs)	1.50	(page 2)
98/99 Ers cont rates		(page 23) & 24)
Costs of Early Retirements	5.5	(page 14)
Ill health retirement allowance	5.6	(page 14) & page 38, 39)

Prepared by:

Watson Wyatt Partners
March 1999

Andrew Wilson 01737 241144
(Fax 01737 241496)

Watson Wyatt Worldwide

Nottinghamshire County Council Pension Fund
Actuarial valuation as at 31 March 1998

To County Treasurer
Nottinghamshire County Council Pension Fund

Following your instructions, and in accordance with Regulation 77(1) of The Local Government Pension Scheme Regulations 1997 (SI 1997 No 1612), we have completed our actuarial valuation of the assets and liabilities of the Nottinghamshire County Council Pension Fund. We now have pleasure in submitting our report on the results of the valuation. The content of the report, which has been prepared in accordance with the Guidelines GN9: Retirement Benefit Schemes - Actuarial Reports published by the Institute of Actuaries and the Faculty of Actuaries to the extent they apply to the Fund, is as follows:

Watson Wyatt Worldwide

1 Background

1.1 The main purposes of the valuation are, first, to ascertain the financial position of the Fund and, secondly, to establish appropriate contribution arrangements for each participating employer which are to be implemented with effect from 1 April 1999.

1.2 The previous actuarial valuation of the Fund was undertaken as at 31 March 1995 under The Local Government Pension Scheme Regulations 1995 (SI 1995 No 1019). The results of that valuation may be summarised as:

- for the Fund as a whole (and for Nottinghamshire County Council), the level of funding of the past-service liabilities was found to be 83%;
- the rate of contribution shown to be required for the administering authority from 1 April 1996 was as set out in the table below:

	Percentage of members' pensionable pay
Cost of the year-by-year accrual of benefits less the cost met by members	8.1
Contribution needed to amortise the past-service deficiency over a period of 12 years	4.2
Total rate of contribution	**12.3**

It was decided to implement this rate of contribution in three yearly steps.

The contributions to be paid in 1998/99 are shown in Appendix F. The contributions payable during the whole of the intervaluation period were set out in our Report on the 1995 valuation dated March 1996.

Main events since the 1995 valuation

1.3 The Pensions Act 1995 changed the terms whereby members of the Fund are contracted out of SERPS so that, with effect from 6 April 1997, the Fund has borne the full cost of pension increases on the benefits earned by service thereafter, whereas previously part of the cost of pension increases was borne by the State Scheme.

1.4 The July 1997 Budget removed the ability of UK pension funds to reclaim ACT credits. Further, the complete abolition of ACT is due to take place this year. The effect of the loss of the ACT credits and the overall effects on the prospective returns on Fund investments have been taken into account in the current valuation and are discussed in paragraph 5.8 of this Report.

1.5 The Local Government Pension Scheme is governed by The 1997 LGPS Regulations which operated as from 1 April 1998 and have been taken into account in the valuation. The changes introduced by those Regulations have a relatively small effect on costs and include:

- removal of the re-marriage condition on spouses' pensions;
- the granting of cover for pensions for spouses for membership between 1972 and 1988 for eligible female members;
- the 85-year rule for qualifying for retirement on unreduced pension;
- the introduction of a five-year guarantee of pension following retirement for those in active membership on 1 April 1998.

In addition, employers were given a number of discretions to enhance benefits or reduce contributions. Methods of costing the effects of these discretions have been discussed with the Administering Authority.

1.6 The Scheme is contracted out of the State Earnings Related Pension Scheme and is not subject to the Minimum Funding Requirements of the 1995 Pensions Act.

1.7 As from 1 April 1998, Nottingham City Council became a Unitary Authority. The reorganisation was dealt with as described in paragraph 3.10.

2 Membership and financial data

2.1 In order to undertake the valuation, we have been provided with full particulars of all individuals who have been members of the Fund over the intervaluation period. The membership particulars as at the valuation date are summarised in Appendix A to this Report, corresponding figures as at 31 March 1995 are shown in Appendix B, while Appendix C summarises membership numbers by category and employer. The number of active members ascribed to the County has increased since 1995 largely because of the automatic inclusion of part-timers in May 1995, unless they opted out. Some problems emerged with the data for part-time employees which delayed completion of the valuation, and meant that their liabilities could only be approximated. However, I consider that the impact of any error involved with the approximations will be very small and can safely be left to emerge in later valuations. Otherwise, the data reconciled very well with the accounts, and the few queries were speedily answered.

2.2 We have been provided with the accounts of the Fund for each year of the three year intervaluation period and these indicate that the market value of the assets of the Fund increased from £730.9 million as at 31 March 1995 to £1,204.0 million as at 31 March 1998. A consolidated revenue account for the three years to 31 March 1998 is shown in Appendix D. The investment return secured on the assets of the Fund over the intervaluation period, when measured with reference to market value, was about 17.7% per annum which compares with a median return of about 19.1% per annum secured by Local Government Funds over this period (these figures are based upon information produced by the WM Company).

2.3 The following table summarises in broad categories the breakdown of the market value of the investments at the valuation date, according to the information supplied:

	Market Value	
	£m	%
Fixed interest		
UK	68.9	5.7
Overseas	71.2	5.9
Index-Linked	52.3	4.3
Unit Trusts		
UK	50.0	4.2
Overseas	38.4	3.2
Equities		
UK	559.9	46.5
Overseas	156.5	13.0
Unquoted investments	0.7	0.0
Property	83.6	7.0
Cash	120.5	10.0
Net Current Assets	2.0	0.2
Totals	**1,204.0**	**100.0**

2.4 The above analysis shows that approximately 74% of the assets are in equities and properties, a composition which is similar in equity type investments to the average large occupational pension scheme. Such an asset mix, which does not wholly match the liabilities, is held in the expectation that better returns will be achieved in the long run and reflects the need to keep the cost of the Fund at reasonable levels, even at the risk of possible adverse and volatile returns from time to time. Such a strategy may need to be restrained if the proportion of liabilities in respect of pensioners is unusually large, or the cash flow of the Fund negative. The relatively high proportion of assets in index-linked stock limits the volatility of returns, albeit in the expectation of slightly lowered investment returns over the long-term.

2.5 We expect the cashflow in the fund to remain positive for the foreseeable future: there is no immediate prospect of the Fund needing to sell investments to meet benefit payments. However, if there were to be a significant reduction in the active membership, the need to realise investments, perhaps at disadvantageous times, to meet benefit payments may arise.

3 Valuation methodology

General

3.1 The results of an actuarial valuation can be summarised in three parts:

a. the accrued position, comparing liabilities for non-active members and for active members in respect of their service up to the valuation date with the value placed on the assets held;

b. the rate of contribution needed to support accruing benefits - in this valuation, we have used the 'projected unit' method (see next paragraph); and

c. any adjustment needed to **b.** to allow for surpluses or deficiencies revealed at **a.**

3.2 The determination of the contributions required in **b.** above involves first the calculation of the cost of the benefits which will accrue over the year after the review date to members then in service (allowing for all expected future pay increases until their membership of the Fund terminates), and secondly expressing this cost as a percentage of pensionable pay. This method of determining the contribution is known as the "projected unit" method and leads to a stable level of contribution if the profile of the membership by age, sex, status and pay remains constant. This implies a continued flow of new entrants. If, however, the average age of the membership were to increase, perhaps as a result of a reduction in the flow of new entrants, the projected unit contribution rate would tend to rise because the cost of a member's benefits tends to increase with age. The rates derived also include an allowance for expenses of administering the Fund based on the level of 1995/98.

3.3 This process has been carried out for each employer participating in the Fund, though some smaller employers have been grouped together.

3.4 The valuation process attributes to each employer, or group of employers, the main elements of the experience of the Fund in 1995/98 including:

- salary increases;
- ill-health retirement costs above those allowed for in the 1995 valuation;
- extra costs imposed by other early retirements;
- contributions paid by the employer, including any extra payments in respect of early retirement costs and any lump sum payments;
- the effects of any large outsourcing exercise.

3.5 Other experience items, such as mortality and investment returns, are taken into account across all participating employers.

3.6 In the 1995 and previous valuations we assumed a spread of normal age retirements between 60 and 65 giving average ages at normal retirement of nearly 63 (men) and nearly 62 (women). For the present valuation, we have assumed that each individual member would retire on reaching age 60 or on later satisfaction of the 85-year rule. This has the advantage both of being prudent and of consistency with the method of calculating the cost of non ill-health early retirements. The effect is for most (but not all employers) to reduce the effective assumed average age at retirement, thus increasing the liabilities for active members but the effect may be masked where large numbers of part-timers were admitted to the Fund in 1995. To the extent that members retire later than this assumption, a surplus will emerge at subsequent valuations.

3.7 Allowance has been made in the valuation for future ill-health retirements by applying the same rates of ill-health retirement (see Appendix E) to the active membership of each employer. Any mis-match between the expected costs of ill-health retirements in the period 1998-2001 will be picked up in the 2001 valuation. Where costs exceed the expected level for any employer or group of employers by an appropriate and statistically significant margin as discussed with us in any one year, the total excess should be amortised by additional contributions over the balance of the amortisation period adopted as set out in our letter of 4 September 1998 (reproduced in Appendix I).

3.8 No allowance has been made in the valuation for non ill-health retirements before age 60. Extra costs arising from any such retirements should be amortised by way of additional contributions as set out in our letter of 9 April 1998 (reproduced in Appendix I).

3.9 Subject to the separate provisions for early retirements described above, surpluses or deficiencies have been amortised as a percentage of employee contributions over a period equal to the average expected future membership period of the active members pertaining to each employer. This period starts on 1 April 1999, ie one year after the valuation.

3.10 The reorganisation to make Nottingham City Council a unitary authority as from the valuation date has been taken into account in the following way:

- All non actives of the County as at the date of reorganisation have been separated into a closed group, which has been regarded as fully funded at the date of reorganisation. The liabilities and backing assets have been regarded as divided between the County and the City in the proportions set out below. To the extent that the assets prove insufficient or more than sufficient to meet the liabilities, the resulting deficiency or surplus will be debited or credited between the two authorities in the same proportions.

- A deficiency calculated as at the date of reorganisation in respect of the County has been divided between the County and the City in the proportions set out below; the deficiency attributed to the City at the valuation date has remained the responsibility of the City;
- The contribution rates have been set to meet the current accruing benefits of employees according to the distribution after the reorganisation, and taking into account the deficiencies calculated as above.
- The division between the County and the City in these calculations has been made in the following proportions:

Nottingham County	Nottingham City
70.7%	29.3%

3.11 The status of Grant Maintained Schools is due to change from 1 April 1999 and their funding reverts to the control of the Local Education Authority (LEA). In the 1995 valuation, we treated these schools as a separate group. From 1 April 1999, this appears to be no longer appropriate and, in consultation with the Administering Authority, we have given them the same contribution rates as their LEA.

Valuation of assets

3.12 It is vital that both assets and liabilities should be valued consistently with each other. This is achieved by discounting the future flow of income and capital expected from the investments at the same valuation rate of interest as is used to discount the future flow of benefit payments when determining the value of the liabilities. For those assets such as ordinary shares, which are purchased on the basis of a low initial yield with a view to future growth, it is necessary to assume a rate of growth of such income. This approach, known as the assessed value approach, was used in the 1995 valuation and has also been used on this occasion.

Asset model

3.13 The 1995 valuation was conducted on the approach outlined above using a long-term rate of interest of 4½% per annum over price increases. In order for the valuation process not to be influenced by short-term investment decisions, a notional fund was valued rather than the actual investments held. The notional fund used was of the same market value as the total assets of the Fund, but invested 85% in the FT-SE Actuaries All-Share Index and 15% in the equivalent index for British Government fixed interest securities.

3.14 This approach focuses on the asset mix of the average fund, and since 1995, most pension funds have increased proportionately their holding of Government Securities. Continuing this approach would lead to an asset model of 75% linked to equities and 25% in Government Securities. In order to match the profile of the liabilities (ie pensions linked to increases in the General Index of Retail Prices), and to be compatible with market expectations of future rates of inflation, these securities are assumed to be index-linked (even though most holdings are actually of the fixed-interest variety).

3.15 An alternative approach which is gaining in popularity for many reasons is to value the assets having regard to the liability profile of the Fund, thus separating from the valuation process all strategic and tactical investment decisions. Assuming that pension liabilities for pensioners should be regarded as matched by index-linked securities and the balance of liabilities by equities, gives an asset model of approximately 50% linked to equities and 50% to index-linked investment securities, and, following discussion with the Administering Authority, is the model we have used for the current valuation.

4 The assumptions used in the valuation

4.1 The assumptions underlying the valuation of the Fund can be regarded as falling into two groups as follows:

- the "statistical" assumptions which cover such matters as future rates of withdrawal and retirement from service, rates of mortality, the proportion of members married and the progression of pensionable pay from age to age attributable to increasing responsibility and promotion;
- the "economic" assumptions which cover the valuation rate of interest, future increases in general pay levels, the advance provision to be made for future pension increases and dividend growth.

These two groups of assumptions are considered separately in the following paragraphs.

Statistical assumptions

4.2 The main assumptions include the following:

- the rates of mortality, ill-health retirement, withdrawal from membership and retirement in normal health which will be experienced by active members in the future;
- the rates of mortality which will be experienced by members after they have retired and by their spouses;
- the future progression of pensionable pay as a result of promotion etc ie not as a result of inflationary pressure.

For many of the assumptions, past experience has been found to be a good guide to the future. These assumptions may therefore be derived from past experience adjusted to provide for trends such as a continuation of the reduction in rates of mortality.

4.3 The assumptions adopted for the 1998 valuation are mainly based on our analysis of the experience of all the local government pension funds we advise. For most of the assumptions, we have found no reason to make any changes and have therefore retained the assumptions used in 1995. The following are the main changes we have made to the statistical assumptions for the present valuation:

- we have assumed that pensioners will live a little longer than we assumed in 1995;
- we have used the same rates of withdrawal for all active members by reducing the rates used for females to the level used in 1995 for males;
- we have adopted lower death-in-service rates for manual work members to align them with officer members (but retaining a distinction by sex);

- we have assumed that all members would retire at age 60 or on later satisfaction of the 85-year rule, but not later than age 65.

Specimen rates of decrement, etc, are given in Appendix E.

Economic assumptions

4.4 The economic assumptions are of more financial significance than the statistical assumptions - small changes to the assumptions may have a significant effect on the financial position disclosed by the valuation - and represent our view of the likely average economic conditions applying over the long-term future lifetime of the Fund.

Assumptions used in the 1995 valuation

4.5 The assumptions adopted for the 1995 valuation both in nominal and in real terms, ie relative to price inflation, were as follows:

Assumptions for 1995 valuation	Annual rate Nominal %	Real %
Rate of price inflation	4	n/a
The valuation rate of interest, ie the long-term rate of accumulation, taking income and capital together, which will be obtained on new investments made over the long-term future of the Fund	8½	(+)4½
Future escalation of pensionable pay arising as a result of general economic conditions	6	(+)2
*Allowance for future pension increases - such increases are in line with price inflation	4	-
The increase to be expected from time to time in the flow of dividend income from ordinary shares and similar investments	4	-

* The assumption covers all pensions other than Guaranteed Minimum Pensions (GMPs); post-5 April 1988 GMPs have been assumed to increase by 3% per annum and GMPs accrued prior to that date are assumed not to increase.

Changes to the financial assumptions

4.6 After due consideration it has been decided to make the following changes to the assumptions.

Rate of price inflation

4.7 It has been decided to assume that the rate of price inflation will be 3½% per annum, ie a reduction of ½% per annum, on the basis of the expected long-term trends for price inflation. Whilst Government policy is for inflation to average 2½% per annum there are some doubts as to whether this will be achieved.

Rate of general pay escalation

4.8 Historically the rate of general pay escalation relative to price inflation has been fairly consistently between 1½% per annum and 2% per annum over long periods of time and we have hitherto assumed increases of 2% per annum. For this valuation we have reduced the real rate of pay escalation assumed by ¼% to 1¾% per annum, which is consistent with the rate found nationally over the last 20 years. Together with the reduction in price inflation, this gives a nominal rate of pay escalation for the 1998 valuation of 5¼% per annum

Rate of dividend growth

4.9 In the 1995 valuation we assumed that dividends would grow in line with price inflation. We believe that a higher rate of dividend growth can now be justified on the grounds that there has been a considerable change in the methods of financing companies in the 1990s. The 1970s and 1980s were characterised by a dilution of equities through rights issues with the result that the rate of increase in dividend of an average share could be expected to increase more slowly than the economy generally. The change in recent years is towards concentration of equities through buying back of shares, with the implication that the rate of increase in dividend of an average share may be expected, all other things being equal, to increase by more than in the past. Consequently we have increased our assumption regarding the rate of dividend growth to 1% per annum more than the rate of price inflation. This increase could also be taken as a proxy for the income received from share buybacks and other methods of returning value to shareholders.

Valuation rate of interest

4.10 If the abolition of the ACT credit on UK equity dividends in the July 1997 Budget had not happened, then we would see little need to change our assumption for the valuation rate of interest from the 1995 assumption of 4½% per annum relative to price inflation. The Budget change however reduced the return on UK equities by 20% of income. A typical proportion of assets in UK equities of 50% and an expected gross running yield of around 3.6%, in the long term, gives an expected reduction in the rate of return on the Fund's assets of about 0.36%. Allowing for some mitigating effects, such as the reduction in the rate of corporation tax, an appropriate reduction in the rate of return might be $^1/_3$% per annum. However 'risk-free' returns, such as those on index-linked gilts, are now under 3% and there is a general expectation of lower returns (relative to prices) than in the recent past. We have, therefore, taken a real return of 4% per annum, giving a nominal total return of 7½% per annum.

Summary of 1998 economic assumptions

4.11 To summarise, the assumptions adopted for the 1998 valuation, both in nominal and in real terms, ie relative to price inflation are as follows:

Assumptions for 1998 valuation	Annual rate	
	Nominal %	Real %
Rate of price inflation	3½	n/a
The valuation rate of interest, ie the long-term rate of accumulation, taking income and capital together, which will be obtained on new investments made over the long-term future of the Fund	7½	(+)4
Future escalation of pensionable pay arising as a result of general economic conditions	5¼	(+)1¾
*Allowance for future pension increases - such increases are in line with price inflation	3½	-
The increase to be expected from time to time in the flow of dividend income from ordinary shares and similar investments	4½	(+)1

* The assumption covers all pensions other than Guaranteed Minimum Pensions (GMPs); post-5 April 1988 GMPs have been assumed to increase by 2½% per annum; pre-6 April 1988 GMPs have no increases.

5 Results of the valuation

5.1 Using the methods set out in Section 3, and the assumptions described in Section 4 and Appendix E, we carried out the valuation calculations and our findings are summarised below.

Past service

5.2 The results of the valuation for the Fund as a whole are set out in the following statement :

		Assessed Value
Pensioners, spouses and other beneficiaries	£m	518.8
Deferred pensioners	£m	75.5
Active members (fund membership to 31 March 1998)	£m	610.5
Total past-service liabilities	£m	1,204.8
Value placed on the assets	£m	1,048.7
Past-service shortfall	£m	156.1
Funding Level	%	87.0

The valuation has shown a past service deficiency of £156.1 million and a funding level of 87%.

5.3 On the occasion of the 1995 valuation the level of funding of the past service liabilities was 83%. The main reasons for the level increasing by 4% are as follows:

- the favourable performance of the assets over the intervaluation period relative to our assumptions (+ 13%)
- the payment of contributions in excess of those needed to fund accruing benefits (+ 3%)
- lower than assumed increases in salaries relative to price inflation (+ 1%)

The effect of the above factors was partly offset by the following:

- changes in the actuarial basis underlying the valuation (see Section 4) (- 2%)
- improvements in the benefits arising form changes in the regulations (- 1%)
- the loss of ACT credits (- 8%)
- large numbers of retirements on the grounds of redundancy (- 2%)

The effect of these items differs from employer to employer.

Future service

5.4 The cost for the Fund as a whole of providing the current benefits of the LGPS in respect of service after the valuation date has been assessed as 9.5% of members' pensionable pay using the 'projected unit' method of assessment (this rate includes an appropriate allowance to cover a share of the administrative costs borne by the Fund each year). The corresponding rate disclosed by the previous valuation was 8.1% of members' pensionable pay; the main reasons for the net increase are:

- the contracting-out changes from 6 April 1997: + 0.2%
- the changes in actuarial basis underlying the valuation (see Section 4) and the change in the treatment of retirement (see paragraphs 3.6 to 3.8 above): - 0.3%
- the loss of ACT credits : + 1.1%
- the change in the composition of the active membership: + 0.1%
- the improvements in the benefits arising from changes in the Regulations: + 0.3%

The Contribution arrangements

5.5 The derivation of the rate of contribution for the Administering Authority with effect from April 1999 is set out below:

	Percentage of members' pensionable pay
Cost of the year-by-year accrual of benefits less the cost met by members	9.4
Contribution required to meet the past-service deficiency over a period of 13* years	2.6
Total rate of contribution	**12.0**

* The period equal to the average expected working lifetime of the Authority's employees in the Fund.

Contribution rates for all employers in the Fund are set out in the Rates and Adjustments Certificate shown in Appendix G. The rates do not include the cost of early retirements for small scheduled bodies which should be paid by the authorities concerned.

5.6 One of the recommendations of the Audit Commission was that authorities should monitor early retirement costs. Clearly, one part of this is to record the costs incurred and the tables and instructions we have issued in 1998 provide a means of doing this. An allowance is made in the valuation for ill-health retirements and a

suitable budget yardstick is included in Appendix G for each employer. As no allowance is made in the valuation for non ill-health early retirements, there is no budget yardstick against which actual costs can be measured.

5.7 As the wording of Regulation 77 of the 1997 Regulations is essentially the same as its predecessors, the contribution increase (compared to the rates in payment in 1998/99) shown to be needed for employers has been phased-in. As the rates of contributions now in payment exceed the cost of year-by-year accrual of benefits, such a phasing-in does not reduce the funding level over the next year or two as happened in some cases in the 1992/95 and 1995/98 periods. However, it should be noted that the phasing-in of increases will increase the rate of contributions needed in future years.

The effect of the loss of ACT credits

5.8 Had the ability to reclaim ACT credits arising from the payment of dividends on UK equities not been withdrawn (see paragraph 1.4), it would have been reasonable to carry out the valuation on a higher rate of return. This would have shown a rather better position as at 31 March 1998 and led to lower future contributions. For the Fund as a whole, using a rate of return 1/3% per annum higher, we calculate that the funding level would have been 8% higher at 95%. This would have decreased the contribution needed to maintain the deficiency by some 2.4% of pensionable pay and the future service rate by some 1.1%. Thus the overall cost to the Fund of the loss of ACT credits has been some 3.5% of payroll. The cost will vary slightly from employer to employer.

Legislative requirements

5.9 Under the terms of the Income and Corporation Taxes Act 1988 supplementary investigations must be completed in conjunction with the present review in order to ascertain whether the Inland Revenue regards the Fund as excessively over-funded when assessed by reference to a "prescribed basis". The results of these investigations indicate no such excessive over-funding . The appropriate certificate to this effect has been prepared and is shown at Appendix H.

5.10 As there are no provisions in the Local Government Pension Scheme Regulations to discontinue or to wind up the Fund, it is not necessary to consider what would happen in such an event.

5.11 As a statutory public service scheme, the Local Government Pension Scheme is not subject to the Minimum Funding Requirements of the 1995 Pensions Act.

6 Summary

6.1 We have undertaken a valuation of the Fund as at 31 March 1998 in compliance with Regulation 77. The valuation shows the assets held at the valuation were sufficient to cover 87% of the accrued liabilities assessed on an ongoing basis, an increase of 4% compared to the level found in 1995.

6.2 The revised contribution arrangements which are effective from 1 April 1999 are set out in the Rates and Adjustments Certificate required by Regulation 77 which is appended to this Report as Appendix G. The level of rates now needed are generally lower than those found to be required in the 1995 valuation.

6.3 It should be noted that contribution rates are subject to review under Regulation 78(3)(b) if the need arises and, in any case, rates for years from 2002/03 onwards will be reviewed at the next valuation.

6.4 In the normal course of events, it would be expected that the funding level would increase by the time of the next valuation at 31 March 2001, largely because the rates of contribution to be paid contain an element to liquidate the deficiency found at this valuation. The residual deficiency would then be respread at the next valuation. Amortising early retirement costs as they arise mean that future redundancies should have no great effect on the position of the Fund. However, this is dependent on the assumptions made being borne out in practice, the main areas where variations might be expected being increases in pay and investment returns.

6.5 Since the valuation date, yields on gilts, particularly index-linked gilts, have reduced and the outlook for equity investment is uncertain. It is quite possible that the real return gained on investments in the period to 31 March 2001 will be lower than the long-term average of 4% assumed in this valuation, so acting to reduce the funding level.

A F Wilson
Partner
(Retirement Practice)
Watson Wyatt Partners

March 1999

Watson Wyatt Partners
Watson House
London Road
Reigate
Surrey
RH2 9PQ

A Distribution of membership by sex and status as at 31 March 1998

(a) Actives

	Male Officers	Female Officers	Male Manual Workers	Female Manual Workers	Total
Number	6,694	13,231	4,535	7,781	32,241
Pensionable[1] pay (£m)	122.5	156.1	53.9	42.4	374.9
Average reckonable service by pay (yrs)	14.7	9.6	11.0	5.4	11.0
Average age by pay (yrs)	43.9	41.3	43.6	44.8	42.9

(b) Deferred Pensioners

	Males	Females	Total
Number	2,674	4,114	6,788
Amount of deferred pension (including pensions increase to April 1998) (£m)	4.0	4.0	8.0
Average age by deferred pension (yrs)	45.2	42.6	43.9

(c) Pensioners

	Males	Females	Total
Number	7,199	6,232	13,431
Amount of pension (including pensions increase to April 1998) (£m)	29.6	12.8	42.4
Average age by pension (yrs)	67.0	65.8	66.6

(d) Widow(er)s

	Widows	Widowers	Total
Number	2,498	120	2,618
Amount of pension (including pensions increase to April 1998) (£m)	4.5	0.1	4.6
Average age by pension (yrs)	74.1	62.0	73.9

1 The pensionable pay received over the year to 31 March 1998 with new entrants during the year rated-up to the whole year equivalent; pay of part-timers is at the part-time level.

B Distribution of membership by sex and status as at 31 March 1995

(a) Actives

	Male Officers	Female Officers	Male Manual Workers	Female Manual Workers	Total
Number	6,209	9,749	4,046	3,170	23,174
Pensionable[1] pay (£m)	109.7	116.1	45.8	18.5	290.1
Average reckonable service by pay (yrs)	14.5	9.7	12.1	7.3	11.7
Average age by pay (yrs)	43.2	40.3	44.6	46.5	42.4

(b) Deferred Pensioners

	Males	Females	Total
Number	2,258	3,395	5,653
Amount of deferred pension (including pensions increase to April 1995) (£m)	3.0	3.0	6.0
Average age by deferred pension (yrs)	44.5	41.6	43.1

(c) Pensioners

	Males	Females	Total
Number	6,682	5,126	11,808
Amount of pension (including pensions increase to April 1995) (£m)	23.9	9.3	33.2
Average age by pension (yrs)	67.4	66.1	67.0

(d) Widow(er)s

	Widows	Widowers	Total
Number	2,374	59	2,433
Amount of pension (including pensions increase to April 1995) (£m)	3.8	0.1	3.9
Average age by pension (yrs)	72.8	63.0	72.7

1 The pensionable pay received over the year to 31 March 1995 with new entrants during the year rated-up to the whole year equivalent; pay of part-timers is at the part-time level.

Watson Wyatt Worldwide

C Distribution of membership by employer as at 31 March 1998

Authority	Actives	Deferred Pensioners	Pensioners	Widow(er)s
Scheduled Bodies				
Nottinghamshire County Council	14,776	3,655	7,537	1,399
Nottingham City Council	8,322	1,001	2,185	562
Bassetlaw District Council	740	186	460	82
Mansfield District Council	958	192	582	127
Newark & Sherwood District Council	576	169	292	51
Ashfield District Council	760	162	383	92
Broxtowe Borough Council	530	170	325	65
Gedling Borough Council	514	144	253	59
Rushcliffe Borough Council	449	165	282	52
Probation Committee	375	94	127	12
Police Authority	984	49	49	3
Magistrates Courts Committee	221	91	68	10
Transport Company Deemed Employees	491	69	410	49
Nottingham Trent University	1,244	328	266	14
Colleges				
Arnold and Carlton College	70	13	14	1
Bilborough College	11	1	1	0
Brackenhurst College	51	8	8	0
Broxtowe College	119	17	13	0
High Pavement College	25	2	3	0
New College, Nottingham	282	33	26	1
Newark & Sherwood College	82	10	6	0
North Nottinghamshire College	103	17	19	2
Peoples College	86	20	12	1
South Nottinghamshire College	108	18	6	0
West Nottinghamshire College	179	14	26	0
Non-participating Bodies	0	120	37	23
Small* scheduled bodies (31)	185	40	41	13
Total	32,241	6,788	13,431	2,618

* ie under 50 members in total

D Consolidated revenue account for the period 1 April 1995 to 31 March 1998

	£m	£m
Market value of Fund as at 1 April 1995		**730.9**
Income		
Employees' contributions	58.0	
Employers' contributions	107.0	
Transfer payments received	17.0	
Investment income	115.7	
Other income	0.1	
Change in market value of investments both realised and unrealised	349.4	
Total income		**647.2**
Outgo		
Pensions	121.9	
Lump sums	28.9	
Transfer payments made	14.1	
Other payments in respect of leavers	1.0	
Investment expenses	5.0	
Administrative expenses	3.2	
Total outgo		**174.1**
Market value of Fund as at 31 March 1998		**1,204.0**

Watson Wyatt Worldwide

E Description of demographic assumptions

Specimen rates of decrement etc for active membership
(ie probability of leaving for the reason stated within a year of the given age)

Age	Withdrawal	Mortality in Service		Ill-health retirements			
	All Groups	Males	Females	MO	FO	MM	FM
20	0.1000	0.0005	0.0002	0.0001	0.0000	0.0002	0.0000
30	0.0660	0.0003	0.0003	0.0004	0.0012	0.0058	0.0032
40	0.0270	0.0009	0.0006	0.0020	0.0030	0.0132	0.0065
50	0.0000	0.0025	0.0014	0.0065	0.0087	0.0241	0.0162
60	0.0000	0.0069	0.0031	0.0295	0.0339	0.0575	0.0489

Age	Progression of Salaries with Age				Proportions Married	
	MO	FO	MM	FM	Males	Females
20	388	561	721	910	0.035	0.127
30	676	816	819	868	0.580	0.691
40	821	828	827	828	0.768	0.798
50	790	790	790	790	0.809	0.803
60	754	754	754	754	0.817	0.723

Watson Wyatt Worldwide

Mortality Tables adopted

	Age and deferred pensioners	Ill health pensioners	Widow(er)s
Male Officers	PMA80BAS rated down 2 years	PMA80BAS rated up 2 years, subject to a minimum of 1.5%	PFA80BAS rated down 2 years
Female Officers	PFA80BAS rated down 2.5 years	PFA80BAS rated up 1.5 years, subject to a minimum of 1%	PMA80BAS rated down 2.5 years
Male Manuals	PMA80BAS not rated	PMA80BAS rated up 4 years, subject to a minimum of 1.5%	PFA80BAS not rated
Female Manuals	PFA80BAS rated down 0.5 years	PFA80BAS rated up 3.5 years, subject to a minimum of 1%	PMA80BAS rated down 0.5 years

F Contribution rates in payment during the year 1 April 1998 to 31 March 1999

The following rates are expressed as a percentage of members' pensionable pay.

Employer	Rate in payment 1998/1999 %
Scheduled Bodies	
Nottinghamshire County Council	12.9
Nottingham City Council	~~14.0~~ 13.4
Bassetlaw District Council	13.9
Mansfield District Council	14.5
Newark & Sherwood District Council	14.1
Ashfield District Council	13.4
Broxtowe Borough Council	15.3
Gedling Borough Council	13.0
Rushcliffe Borough Council	13.2
Probation Committee	12.1
Nottinghamshire Fire Authority	12.9
Nottinghamshire Police Authority	10.9
Magistrates Courts Committee	7.7
Transport Company Deemed Employees	14.8
Nottingham Trent University	8.5
Balderton Parish Council	10.1
Calverton Parish Council	10.1
Cotgrave Parish Council	10.1
Greasley Parish Council	10.1
Harworth and Bircots Parish Council	10.1
Keyworth Parish Council	10.1
Newark Town Council	10.1
Nuthall Parish Council	10.1
Ruddington Parish Council	10.1
Selston Parish Council	10.1
Southwell Parish Council	10.1
Stapleford Town Council	10.1

F Contribution rates in payment during the year 1 April 1998 to 31 March 1999

The following rates are expressed as a percentage of members' pensionable pay.

Employer	Rate in payment 1998/1999 %
Scheduled Bodies	
Nottinghamshire County Council	12.9
Nottingham City Council	13.4
Bassetlaw District Council	13.9
Mansfield District Council	14.5
Newark & Sherwood District Council	14.1
Ashfield District Council	13.4
Broxtowe Borough Council	15.3
Gedling Borough Council	13.0
Rushcliffe Borough Council	13.2
Probation Committee	12.1
Nottinghamshire Fire Authority	12.9
Nottinghamshire Police Authority	10.9
Magistrates Courts Committee	7.7
Transport Company Deemed Employees	14.8
Nottingham Trent University	8.5
Balderton Parish Council	10.1
Calverton Parish Council	10.1
Cotgrave Parish Council	10.1
Greasley Parish Council	10.1
Harworth and Bircots Parish Council	10.1
Keyworth Parish Council	10.1
Newark Town Council	10.1
Nuthall Parish Council	10.1
Ruddington Parish Council	10.1
Selston Parish Council	10.1
Southwell Parish Council	10.1
Stapleford Town Council	10.1

The following rates are expressed as a percentage of members' pensionable pay.

Employer	Rate in payment 1998/1999 %
Scheduled Bodies (continued)	
Grant Maintained Schools and Colleges	12.9
Laneham Internal Drainage Board	10.1
Newark Internal Drainage Board	10.1
Bramcote Crematorium Joint Committee	10.1
Leics, Northants & Notts Local Valuation & Community Charge Panel	10.1
Arnold and Carlton College	9.1
Basford Hall College	9.2
Bilborough College	12.8
Brackenhurst College	6.8
Broxtowe College	10.1
Clarendon College	7.8
High Pavement College	12.8
Newark and Sherwood College	10.9
North Nottinghamshire College	10.1
Peoples College	8.6
South Nottingham College	9.9
West Nottinghamshire College	11.4
~~Clifton Advice Centre~~	~~10.1~~
Ravensdale Grant Maintained School	10.1
Greenwood Dale Grant Maintained School	10.1
George Spencer Grant Maintained School	10.1
Radcliffe on Trent Parish Council	10.1
Trowell Parish Council	10.1
Edwinstowe Parish Council	10.1
Foxwood Grant Maintained School	10.1
Bestwood Community School	10.1

The following rates are expressed as a percentage of members' pensionable pay.

Employer	Rate in payment 1998/1999 %
Scheduled Bodies (continued)	
Grant Maintained Schools and Colleges	12.9
Laneham Internal Drainage Board	10.1
Newark Internal Drainage Board	10.1
Bramcote Crematorium Joint Committee	10.1
Leics, Northants & Notts Local Valuation & Community Charge Panel	10.1
Arnold and Carlton College	9.1
Basford Hall College	9.2
Bilborough College	12.8
Brackenhurst College	6.8
Broxtowe College	10.1
Clarendon College	7.8
High Pavement College	12.8
Newark and Sherwood College	10.9
North Nottinghamshire College	10.1
Peoples College	8.6
South Nottingham College	9.9
West Nottinghamshire College	11.4
~~Groundwork Ashfield & Mansfield~~	~~10.1~~
~~Clifton Advice Centre~~	~~10.1~~
Ravensdale Grant Maintained School	10.1
Greenwood Dale Grant Maintained School	10.1
George Spencer Grant Maintained School	10.1
Radcliffe on Trent Parish Council	10.1
Trowell Parish Council	10.1
Edwinstowe Parish Council	10.1
Foxwood Grant Maintained School	10.1
Bestwood Community School	10.1

* Admitted Bodies

G Certificate required under Regulation 77 covering the future contribution arrangements

Nottinghamshire County Council Pension Fund

Certificate of the Actuary as to the contributions payable by the Participating Employers for the period 1 April 1999 to 31 March 2002

Mr R Latham
County Treasurer
Nottinghamshire County Council

Dear Sir

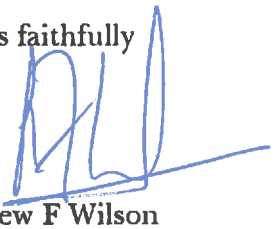
1 In accordance with your instructions, I have made an actuarial valuation of the assets and liabilities of the Nottinghamshire County Council Pension Fund as at 31 March 1998.

2 In accordance with Regulation 77 of the Local Government Pension Scheme Regulations 1997, I have made an assessment of the contributions which should be paid to the Pension Fund by each participating employer.

3 I set out in the attached Statement the contributions which, on the basis set out in my Report of March 1999, should in my view be payable to the Pension Fund by the participating employers.

4 The rates set out in the Statement should be varied in accordance with the notes appended to the Statement.

Yours faithfully



Andrew F Wilson
Fellow of the Institute of Actuaries
Partner in the Firm Watson Wyatt Partners

March 1999

Nottinghamshire County Council Pension Fund
(Statement of contributions to be paid by participating employers)

Common Contribution Rate payable by each participating body under Regulation 77(3)(a): 9.4% of members' pensionable pay.

Individual Adjustments payable by the respective authorities under Regulation 77(3)(b): the percentage of the respective members' contributions set out below as appropriate should be added to the common rate (subtracted where figure shown in brackets).

Employer	Percentage of members' pensionable pay			Budget for ill-health retirement costs
	1 April 1999 to 31 March 2000	1 April 2000 to 31 March 2001	1 April 2001 to 31 March 2002	
Nottinghamshire County Council	3.5	2.5	2.5	1.5
Bassetlaw District Council	4.5	5.9	5.9	1.9
Mansfield District Council	5.1	7.3	7.3	2.1
Newark & Sherwood District Council	4.7	6.1	6.1	1.6
Ashfield District Council	4.0	4.7	4.7	1.8
Broxtowe Borough Council	5.9	5.7	5.7	2.1
Gedling Borough Council	3.6	2.9	2.9	1.3
Rushcliffe Borough Council	3.8 13.2	5.2 14.6	5.2 14.6	1.6
Nottingham City Council	4.2 13.6	4.2 13.6	4.2 13.6	1.6
Probation Committee	3.5 12.9	~~4.4~~ 4.1 13.5	~~4.4~~ 4.1 13.5	1.5 *
Magistrates Court Committee	(1.7) 7.7	~~0.5~~ (0.3)	~~0.5~~ (0.3)	1.6
Nottinghamshire Fire Authority	0.6	0.6	0.6	1.3
Nottinghamshire Police Authority	1.5	1.0	1.0	1.3
Nottingham City Transport	5.4	12.4	12.4	3.8
Nottingham Trent University	(0.9)	0.2	0.2	1.1
Balderton Parish Council	0.7	0.4	0.4	1.6
Blidworth Parish Council	0.7	0.4	0.4	1.6
Calverton Parish Council	0.7	0.4	0.4	1.6
Colwick Parish Council	0.7	0.4	0.4	1.6
Cotgrave Town Council	0.7	0.4	0.4	1.6
Edwinstowe Parish Council	0.7	0.4	0.4	1.6
Greasley Parish Council	0.7	0.4	0.4	1.6
Harworth and Bircotes Parish Council	0.7	0.4	0.4	1.6
Keyworth Parish Council	0.7	0.4	0.4	1.6
Newark Town Council	0.7	0.4	0.4	1.6
Nuthall Parish Council	0.7	0.4	0.4	1.6
Ollerton & Boughton Town Council	0.7	0.4	0.4	1.6

See Notes below

* see Achurches letter dated May 99 on Probation file.

Nottinghamshire County Council Pension Fund
(Statement of contributions to be paid by participating employers)

Common Contribution Rate payable by each participating body under Regulation 77(3)(a): 9.4% of members' pensionable pay.

Individual Adjustments payable by the respective authorities under Regulation 77(3)(b): the percentage of the respective members' contributions set out below as appropriate should be added to the common rate (subtracted where figure shown in brackets).

Employer	Percentage of members' pensionable pay			Budget for ill-health retirement costs
	1 April 1999 to 31 March 2000	1 April 2000 to 31 March 2001	1 April 2001 to 31 March 2002	
Nottinghamshire County Council	3.5	2.5	2.5	1.5
Bassetlaw District Council	4.5	5.9	5.9	1.9
Mansfield District Council	5.1	7.3	7.3	2.1
Newark & Sherwood District Council	4.7	6.1	6.1	1.6
Ashfield District Council	4.0	4.7	4.7	1.8
Broxtowe Borough Council	5.9	5.7	5.7	2.1
Gedling Borough Council	3.6	2.9	2.9	1.3
Rushcliffe Borough Council	3.8	5.2	5.2	1.6
Nottingham City Council	~~4.6~~ 4-2	4.2	4.2	1.6
Probation Committee	3.5	4.4	4.4	1.5
Magistrates Court Committee	(1.7)	0.5	0.5	1.6
Nottinghamshire Fire Authority	0.6	0.6	0.6	1.3
Nottinghamshire Police Authority	1.5	1.0	1.0	1.3
Nottingham City Transport	5.4	12.4	12.4	3.8
Nottingham Trent University	(0.9)	0.2	0.2	1.1
Balderton Parish Council	0.7	0.4	0.4	1.6
Blidworth Parish Council	0.7	0.4	0.4	1.6
Calverton Parish Council	0.7	0.4	0.4	1.6
Colwick Parish Council	0.7	0.4	0.4	1.6
Cotgrave Town Council	0.7	0.4	0.4	1.6
Edwinstowe Parish Council	0.7	0.4	0.4	1.6
Greasley Parish Council	0.7	0.4	0.4	1.6
Harworth and Bircotes Parish Council	0.7	0.4	0.4	1.6
Keyworth Parish Council	0.7	0.4	0.4	1.6
Newark Town Council	0.7	0.4	0.4	1.6
Nuthall Parish Council	0.7	0.4	0.4	1.6
Ollerton & Boughton Town Council	0.7	0.4	0.4	1.6

See Notes below

Common Contribution Rate payable by each participating body under Regulation 77(3)(a): 9.4% of members' pensionable pay.

Individual Adjustments payable by the respective authorities under Regulation 77(3)(b): the percentage of the respective members' contributions set out below as appropriate should be added to the common rate (subtracted where figure shown in brackets).

Employer	Percentage of members' pensionable pay			Budget for ill-health retirement costs
	1 April 1999 to 31 March 2000	1 April 2000 to 31 March 2001	1 April 2001 to 31 March 2002	
Radcliffe on Trent Parish Council	0.7	0.4	0.4	1.6
Ruddington Parish Council	0.7	0.4	0.4	1.6
Selston Parish Council	0.7	0.4	0.4	1.6
Southwell Town Council	0.7	0.4	0.4	1.6
Stapleford Town Council	0.7	0.4	0.4	1.6
Tollerton Parish Council	0.7	0.4	0.4	1.6
Trowell Parish Council	0.7	0.4	0.4	1.6
Warsop Parish Council	0.7	0.4	0.4	1.6
Laneham Internal Drainage Board	0.7	0.4	0.4	1.6
Newark Internal Drainage Board	0.7	0.4	0.4	1.6
Bramcote Crematorium Joint Committee	0.7	0.4	0.4	1.6
Mansfield & District Crematorium Committee	0.7	0.4	0.4	1.6
Leics, Northants & Notts Local Valuation & Community Charge Panel	0.7	0.4	0.4	1.6
Arnold and Carlton College	(0.3)	~~1.0~~ (0.6)	~~1.0~~ (0.6)	1.1
Bilborough College	3.4	0.4	0.4	1.1
Brackenhurst College	(2.6)	(0.1)	(0.1)	1.4
Broxtowe College	0.7	(1.2)	(1.2)	0.4
New College, Nottingham	(1.5)	~~(0.9)~~ (0.6)	~~(0.9)~~ (0.6)	0.9
Newark and Sherwood College	1.5	0.1	0.1	1.3
North Nottingham College	0.7	0.9	0.9	1.2
Peoples College	(0.8)	0.3	0.3	1.2
South Nottingham College	0.5	(0.2)	(0.2)	1.2
West Nottingham College	2.0	(1.0)	(1.0)	0.8

See notes below

(A+C college merged with NEW COLL 1/9/99)

ACTUARY HAS DEEMED THAT RATES ARE AMALGAMATED TO A NEW RATE FROM 1/4/00. SEE NEW COLL + A+C FILE.

Common Contribution Rate payable by each participating body under Regulation 77(3)(a): 9.4% of members' pensionable pay.

Individual Adjustments payable by the respective authorities under Regulation 77(3)(b): the percentage of the respective members' contributions set out below as appropriate should be added to the common rate (subtracted where figure shown in brackets).

Employer	Percentage of members' pensionable pay			Budget for ill-health retirement costs
	1 April 1999 to 31 March 2000	1 April 2000 to 31 March 2001	1 April 2001 to 31 March 2002	
Radcliffe on Trent Parish Council	0.7	0.4	0.4	1.6
Ruddington Parish Council	0.7	0.4	0.4	1.6
Selston Parish Council	0.7	0.4	0.4	1.6
Southwell Town Council	0.7	0.4	0.4	1.6
Stapleford Town Council	0.7	0.4	0.4	1.6
Tollerton Parish Council	0.7	0.4	0.4	1.6
Trowell Parish Council	~~0.4~~ 0.7	0.4	0.4	1.6
Warsop Parish Council	0.7	0.4	0.4	1.6
Laneham Internal Drainage Board	0.7	0.4	0.4	1.6
Newark Internal Drainage Board	0.7	0.4	0.4	1.6
Bramcote Crematorium Joint Committee	0.7	0.4	0.4	1.6
Mansfield & District Crematorium Committee	0.7	0.4	0.4	1.6
Leics, Northants & Notts Local Valuation & Community Charge Panel	0.7	0.4	0.4	1.6
Arnold and Carlton College	(0.3)	9.1 1.0	1.0	1.1
Bilborough College	3.4	12.8 0.4	0.4	1.1
Brackenhurst College	(2.6)	6.8 (0.1)	(0.1)	1.4
Broxtowe College	0.7	10.1 (1.2)	(1.2)	0.4
New College, Nottingham	(1.5) NEW	(0.9)	(0.9)	0.9
Newark and Sherwood College	1.5	10.9 0.1	0.1	1.3
North Nottingham College	0.7	10.1 0.9	0.9	1.2
Peoples College	(0.8)	8.6 0.3	0.3	1.2
South Nottingham College	0.5	9.9 (0.2)	(0.2)	1.2
West Nottingham College	2.0	11.4 (1.0)	(1.0)	0.8

See notes below

Notes:

1 The application of the Individual Adjustments to the Common Contribution leads to the minimum level of contributions over the period 1 April 1999 to 31 March 2002.

2 As noted in our Report on the valuation, we have assumed rates of ill-health retirement as illustrated in Appendix E, but have made no allowance for other early retirements prior to achieving age 60 (or later satisfying the 85-year rule). Consequently contributions should be paid towards the cost of non ill-health early retirements arising after 31 March 1998 in accordance with the instructions contained in our letter of 9 April 1998.

3 Where the costs of ill-health retirements calculated in accordance with the instructions contained in our letter of 4 September 1998 exceed those shown in the table above by a significant margin, consideration should be given (in consultation with the Actuary) to increasing the contributions payable by the relevant employer.

4 Larger contributions may be paid in any year and if such additional contributions are paid, smaller contributions may be paid in subsequent years provided that at all times the total contributions paid since 1 April 1999 are at least equal to the total minimum contributions since that date.

5 Additional lump sum contributions may be made at any time to liquidate all or part of any deficiency in respect of the employer concerned. Where this is done, future periodic contributions may be reduced on a basis approved by the Actuary.

H Statutory Certificate covering the surplus position

Inland Revenue

Pension Schemes Office

Yorke House
PO Box 62
Castle Meadow Road
Nottingham
NG2 1BG

Pension Scheme Surpluses

The Certificate overleaf is in the form prescribed by Regulation 15 of the Pension Scheme Surpluses (Valuation) Regulations 1987 [SI 1987 No 412].

When you complete the certificate, please supply the following information:

1.	The rate of increase if provision has been made for increasing pensions at a rate higher than the average increase awarded by the scheme during the 3 years preceding the date given in paragraph 1 overleaf.	N/A
2	Details of any changes made in the actuarial assumptions for valuing liabilities from those used in the later of a) the previous certificate and b) the prescribed valuation. *(See note below)*	N/A
3	Any changes made to the method of valuing assets from valuing the portfolio held to an appropriate standardised portfolio, or vice versa.	N/A
4	Details of any changes made to the composition of the appropriate standardised portfolio.	N/A

NOTE ON COMPLETION

If there is no previous certificate or prescribed valuation for this scheme, please give the required changes with reference to the last valuation produced to the Board, if any.

PS 162 (4/96)

CERTIFICATE

This certificate is given to the Commissioners of Inland Revenue for the purposes of paragraph 2(3) of Schedule 22 to the Income and Corporation Taxes Act 1988

Name of scheme Nottinghamshire County Council Pension Fund

Inland Revenue Reference No

A I hereby certify that:

(1) in my opinion as at 31 March 1998 the value of the assets of the scheme ~~exceeded~~/did not exceed* 105 per cent of the value of the liabilities of the scheme;

(2) the assets and liabilities to which paragraph (1) refers have been determined in accordance with principles and requirements prescribed by the Pension Scheme Surpluses (Valuation) Regulations 1987.

B (To be completed if the value of the assets in paragraph A(1) above exceeds 105 per cent.)

	£	£
Actuarial Value of Assets		
Actuarial Value of Liabilities		
5 per cent of value of liabilities		
Surplus		

(* delete as necessary)

Signed .....

Andrew F Wilson
Fellow of the Institute of Actuaries
Partner in the firm of Watson Wyatt Partners

31 **March 1999**

Watson Wyatt Partners
Watson House
London Road
Reigate
Surrey
RH2 9PQ

Watson Wyatt Worldwide

I Appendix

1 The letters of 9 April 1998 and 4 September 1998 giving details of how to calculate the costs of early retirements, and referred to in Section 3.7 and 3.8, and Appendix G are attached.

Your reference:
Our reference: AFW

9 April 1998

Mr T V Needham
Assistant County Treasurer
Nottinghamshire County Council
County Hall
West Bridgford
Nottingham
NG2 7QP

Dear Terry

LGPS 1997 Regulations - Actuarial Tables

Many of the tables needed to operate the Regulations have been issued by the Government Actuary. A few are the province of Fund Actuaries and these have been discussed by the Local Government Committee of the Association of Consulting Actuaries. All firms have agreed the following:

Regulation 59 : Conversion of pension to lump sum

The GAD tables issued for Regulation 58 should be used in reverse for Regulation 59. The process is as follows:

- work out the scope for further lump sum within Inland Revenue limits
- divide by appropriate Regulation 58 factor allowing for marital status to give member pension to be given up
- the membership reduction is then:

$$\frac{\text{pension reduction} \times 80}{\text{final pay}}$$

Example

Suppose a married man aged 52 years 1 month has scope for a further lump sum of £4,000 and that his basic pay is £16,000 per annum.

The Regulation 58 factor is 5.58.

The member's pension reduction is then:

$$\frac{4{,}000}{100} \times 5.58 = £223.20$$

(The Regulation 58 factors are per £100 lump sum.)

The membership reduction is then:

$$\frac{223.20 \times 80}{16{,}000} = \textbf{1 year 42 days}$$

(The steps can be combined into $\frac{\text{extra lump sum}}{\text{final pay}}$ x factor x 0.8)

For ill-health retirements, follow the same procedures. Where the member is under age 50, use the factors given for age 50.

Early retirement costs - redundancy, etc, from age 50

The intention is that the system should be (relatively) easy to operate. It works as follows:

a. Calculate the date on which the member satisfies the 85-year rule, with a minimum of age 60 and maximum of age 65.

b. Calculate the period between the date of exit and the date in **a.** - period to the completed month or one decimal place of a year will suffice - call this period n.

c. Calculate the notional actuarial reduction factor as $1 - 0.955^n$ where n is the period found in **b.**

d. Find the appropriate factor for valuing a personal pension of £1 per annum from the GAD table appropriate for Regulation 52.

e. The cost of paying the pension early is then:
members' pension x factor **c.** x factor **d.**

f. The cost of paying the lump sum early is:
lump sum x factor **c.** ÷ 2

g. The total cost is then **e.** + **f.**

h. The cost may be spread as level cash payments over a five year period starting at exit by dividing by 4.312.

(This spreading assumes annual payments made at the beginning of each year. If other methods or periods of spreading costs are required, please discuss the matter with me.)

Mr T V Needham
9 April 1998

Examples

1 A man retires on redundancy three months before age 57. He would have satisfied the 85-year rule at age 62. His accrued pension (before any added years) is £10,000 per annum.

Period **b.**	= 5 years 3 months	
Reduction **c.**	$= 1 - 0.955^{5.25} = 1 - 0.785 = 0.215$	
Factor **d.**	= 14.36	
Cost **e.**	= £10,000 x 0.215 x 14.36	= £30,874
Cost **f.**	= 3 x £10,000 x 0.215 ÷ 2	= £3,225
Total cost **g.**	= £30,874 + £3,225	= £34,099
	rounded to nearest £100	= £34,100
Spread cost **h.**	= £34,099 ÷ 4.312	= £7,908

2 As in **1** except the man already satisfies the 85-year rule - take age 60.

Period **b.** = 3 years 3 months

Reduction **c.** $= 1 - 0.955^{3.25} = 1 - 0.861 = 0.139$

Then follow the method of Example **1.**

For convenience, a tabulation of $1 - 0.955^n$ for values of n from 0 to 15 is given in the Appendix - interpolate for fractions of n.

Early retirement from membership - voluntary (with Employer consent) - ages 50 and over

Where the person suffers an early retirement reduction, the GAD reduction factors remove any costs for the period to which they apply. Where, however, the 85-year rule is satisfied before age 60, there is a residual cost calculated as follows:

i. Calculate the date at which the 85-year rule is satisfied;

j. Calculate the period (in years and months or to one decimal place of a year) between **(i)** and age 60 - call this m;

k. Notional reduction $= 1 - 0.955^m$;

l. The rest of the calculation follows the redundancy case, applying the reduction to the accrued pension before GAD reduction.

Example

Woman aged almost 55 would have satisfied the 85-year rule at age 58.

Pension £10,000 per annum before reduction

Period **j.** = age 60 - age 58 = 2 years

Notional reduction **k.** = $1 - 0.955^2 = 1 - 0.0912 = 0.088$

Cost of paying pension early = £10,000 x 0.088 x 15.32 = £13,482

Cost of paying lump sum early = 3 x £10,000 x 0.088 ÷ 2 = £1,320

Total cost = £14,802 rounded to £14,800

Note: In other words, the person is treated as though retiring at 58 with an unreduced pension.

Where the discretion to waive the early retirement reduction is used, there is a further cost equal to the extra pension multiplied by the appropriate Regulation 52 factor, plus the extra lump sum.

The steps are:

m. Calculate the period, *p*, from exit to satisfying the 85-year rule.

n. Ascertain the pension and lump sum reduction from the GAD Regulation 31 table.

o. Calculate the actual reductions in pension and lump sum.

p. Ascertain the cost of the additional member's pension from the GAD Regulation 52 table (ignore the contingent spouse's pension as this is not reduced).

q. Multiply up the pension cost and add in the lump sum.

In our example (and using the simpler version of the GAD tables):

Period **m.** = 58 - 55 = 3 years

Pension and lump sum reductions are 18% and 7% (step **n.**)

Actual pension reduction = 10,000 x 18% = £1,800 per annum

Actual lump sum reduction : 3 x 10,000 x 7% = £2,100

GAD Regulation 52 factor : 16.23

Cost of removing reductions = £1,800 x 16.23 + £2,100 = £31,314 rounded to £31,300.

Note the use of the factor for age 55 in this calculation compared to the age 58 factor in calculating the early retirement cost. These systems have been adopted for simplicity.

No market value adjustment is made in any of these cases. This, combined with the approximation naturally involved in a simplified method, does mean that there could be small residual profits and losses to emerge at the next valuation.

These factors and procedures replace those issued with our letter of 15 February 1996. The resulting costs are rather lower than obtained from those earlier tables because the new procedures are based on the earliest age (but not below age 60) at which unreduced benefits can be taken and do not use the market value adjustment. The 1998 valuations will take this age as the retirement age for every member.

Early retirement of deferred pensioners

The above methods would understate costs. For a few cases, a sufficiently accurate indication of cost may be obtained by using a notional reduction (step c. above) of $1 - 0.94^n$. If numerous cases occur we will review the method.

If factors are required for any other purpose, or if you have any queries, please do discuss the issue with me.

Yours sincerely

Andrew F Wilson

Calculation of Early Retirement Costs

Notional Early Retirement Reduction Factor

Value of n	Reduction factor $= 1 - 0.955^n$
0	0.000
1	0.045
2	0.088
3	0.129
4	0.168
5	0.205
6	0.241
7	0.275
8	0.308
9	0.339
10	0.369
11	0.397
12	0.424
13	0.450
14	0.475
15	0.499

Note : interpolate for fractions of a year.

Your reference:
Our reference: AFW

4 September 1998

Mr A Sumby
Assistant Treasurer
Nottinghamshire County Council
County Hall
West Bridgford
Nottingham
NG2 7QP

Dear Mr Sumby

Costs of ill-health retirements

In our letter of 3 July, we promised a further letter on the costing of ill-health retirements.

Two elements are needed:

a. the means of costing retirements as they occur; and

b. a yardstick against which these costs can be measured.

A table is enclosed to enable your administrators to carry out item **a.** - a note attached to the table shows how they are intended to be used. You will see that the tables are unisex and depend on the number of complete years to retirement and on the age next birthday.

We considered carefully whether we would recommend adopting the tables in the Audit Commission Handbook recently published. The tables accompanying this letter are not very different from the Commission's, but have been simplified by:

a. making the factor for the additional portion unisex, thereby applying to both males and females (and to officers and manuals);

b. using ages next birthday (as do the GAD in some of their tables) for consistency and to avoid any need to interpolate by age; and

c. using whole years to "normal" retirement to avoid further interpolation.

We intend to produce the yardstick at **b.** as part of the 1998 valuation process, though we could produce figures for use in the period before the valuation results are available if you need them. The "yardstick" will be in the form of a percentage of salary-roll for each employer participating in the fund. As part of the discussions on the valuation results, we will discuss with you whether these percentages should vary by valuation group (males/females/officers/manuals) or should be a single figure for each employer.

Mr A Sumby
4 September 1998

Both the LGPS Regulations and the Audit Commission envisage charging extra contributions where an employer's actual costs exceed the yardstick. In our view, because the number and cost of ill-health retirements can be expected to fluctuate considerably from year to year, this would be appropriate only where costs exceed the yardstick by an appreciable margin. We would be happy to discuss this question with you.

However, some caution is needed to ensure that ill-health retirement is accorded to all those members fulfilling the requirements of the Regulations; these requirements do not allow costs to be taken into account. We have colleagues experienced in occupational health matters and they would be delighted to discuss with you your procedures for granting ill-health retirements if this would be of interest to you.

Please do let me know if you have any queries.

Yours sincerely

Andrew F Wilson

Attachment to letter dated 4 September 1998

Nottinghamshire County Council Pension Fund

Costs of ill-health retirements

(i) **Factor A**

N = Number of complete years from exit to age 60 or later satisfaction of the 85-year rule.

N	Factor A	N	Factor A	N	Factor A
40 or more	15.8				
39	15.7	24	12.2	9	5.6
38	15.6	23	11.8	8	5.1
37	15.5	22	11.4	7	4.5
36	15.3	21	11.0	6	3.9
35	15.1	20	10.6	5	3.3
34	14.9	19	10.2	4	2.7
33	14.7	18	9.8	3	2.0
32	14.4	17	9.3	2	1.3
31	14.2	16	8.9	1	0.5
30	14.0	15	8.4	0	0.0
29	13.7	14	8.0		
28	13.4	13	7.6		
27	13.1	12	7.1		
26	12.8	11	6.6		
25	12.5	10	6.1		

(ii) **Factor B**

X = age next birthday on ill-health retirement

X	Factor B	X	Factor B	X	Factor B
Under 30	22.4				
30	22.4	45	20.7	60	16.9
31	22.4	46	20.5	61	16.5
32	22.3	47	20.3	62	16.2
33	22.2	48	20.1	63	15.8
34	22.1	49	19.9	64	15.5
35	22.0	50	19.7	65	15.1
36	21.9	51	19.4		
37	21.8	52	19.2		
38	21.7	53	18.9		
39	21.6	54	18.7		
40	21.5	55	18.4		
41	21.3	56	18.1		
42	21.2	57	17.8		
43	21.0	58	17.5		
44	20.9	59	17.2		

Attachment to letter dated
4 September 1998

Notes

1 Both factors A and B include a reversion to a spouse and the lump sum element.

2 Factor A measures the strain on the Fund from accrued benefits. Factor B measures the cost of the benefits from the enhancement of membership accorded on ill-health retirement.

3 First calculate the accrued pension at exit as though the member were taking a deferred pension and multiply this by Factor A.

4 Then calculate the pension from the enhancement of membership and multiply this by Factor B.

5 The total cost of the ill-health retirement is then the sum of the amount calculated in 3 and 4.

6 These costs should be accumulated over the year and compared to the yardstick (see letter).

Example

Member born	:	17 March 1942
Retires on health grounds	:	17 September 1998
Age next birthday at retirement	:	57
Membership	:	16 years 200 days
Final pay	:	£24,000
Rule of 85 is satisfied on	:	1 March 2005
Period from 17 September 1998 to 1 March 2005	=	6 complete years

Factor A = 3.9

Factor B = 17.8

Accrued Pension = $24{,}000 \times \frac{16\frac{200}{365}}{80}$ = £4,964 per annum

Enhancement = $24{,}000 \times \frac{6\frac{243}{365}}{80}$ = £2,000 per annum

Cost of granting the ill-health pension:

= 4,964 x 3.9 + 2,000 x 17.8 = 19,360 + 35,600 = **£54,960**

This could be rounded to **£55,000** (the nearer £100).