Nottinghamshire Admission Agreement Etc Pension Fund

Actuarial Valuation as at 31 March 1995

R Watson & Sons (Actuaries & Consultants) March 1996



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Actuarial Valuation as at 31 March 1996

To the County Treasurer

Nottinghamshire County Council

As instructed, and in compliance with Regulation L10 of the Local Government Pension Scheme Regulations 1995, we have undertaken an actuarial valuation of the Nottinghamshire Admission Agreement Etc Pension Fund (the Fund) as at 31 March 1995. 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 Benefits 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:

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Appended to the report are a summary of the rates of contribution payable by all the participating bodies over the year 1 April 1995 to 31 March 1996 and the membership of the Fund at the valuation date, together with the certificate required under Regulation L11 covering the future contribution arrangements and the certificate required under the Income and Corporation Taxes Act 1988 regarding overfunding.



1 Background

The Previous Valuation

- 1.1 The previous actuarial valuation of the Fund was undertaken as at 31 March 1992 under the Local Government Superannuation Regulations 1986 as subsequently amended.
- The 1992 valuation showed that the contribution rate required to meet the year-by-year accrual of benefits (in addition to the cost met by members) was 128% of members' contributions. The assets of the Fund were sufficient to provide 108% of liabilities arising from past service, including pensions and deferred pensions.
- 1.3 The ongoing contribution rate was abated by 23% of members' contributions to remove the past-service surplus over a period equal to the average future service lifetime of the membership of the Fund. The last valuation therefore showed a need for a participating employers' rate of contribution of 105% of members' contributions.
- The rates of contribution paid by all the participating bodies over the year 1 April 1995 to 31 March 1996 are set out in Appendix A to this report.

The Present Valuation

- The main purpose of the present valuation is to ascertain the financial position of the Fund in order to establish appropriate contribution arrangements for each participating employer with effect from 1 April 1996, in accordance with the Regulations.
- The pension costs arising under SSAP24 also need to be established. In effect, these are the pension costs which would arise on the basis of past-service surplus or deficiency rectified over a period equal to the expected average future service working lifetime of the membership.



Inter-valuation Events

- 1.7 The following matters have impinged on the Fund during the three years under review.
 - The rate of Advance Corporation Tax which could be recovered on UK dividends was reduced from 25% to 20% in April 1993. This had the effect of reducing the value of UK shares by 61/4%, thus reducing the funding level of the Fund by about 4%.
 - The East Midlands Airport was sold.
 - Since the valuation date the Careers Service were transferred to the Fund. The valuation has taken into account both the assets and the liabilities transferred.

Benefits valued

- The valuation has been based upon the benefits set out in the Local Government Pension Scheme Regulations 1995 (SI 1995 No.1019) which came into force on 2nd May 1995. The main change to the benefits of the Fund since the date of the previous valuation has been an increase to the lump sum death grant to two years' pensionable remuneration.
- The Pensions Act 1995 includes a number of provisions which will fundamentally affect all aspects of running of occupational pension schemes, but particularly their financing. However the Local Government Pension Scheme, (together with other public service schemes) are to be specifically excluded from most of the provisions. The most important aspect affecting the financing of the Scheme are changes to contracting out which will result in the Fund having to bear the full cost of pension increases on the benefits earned by service after April 1997; currently part of the cost is borne by the State Scheme.
- 1.10 No account has been taken in the valuation of the effect of:
 - any increase in membership following the introduction of automatic entry to the Fund with effect from 2 May 1995;
 - any changes arising from the proposed partial deregulation of the Scheme;
 - costs arising from future early retirements on grounds of efficiency or redundancy (but see paragraph 4.10).



2.1 The membership particulars which were provided for the valuation are summarised in the table below for the Fund as a whole, together with the corresponding particulars for the previous valuation. A more detailed summary of the data provided for the current valuation is shown in Appendices B and C. The amounts of pension and deferred pension shown include the increases due in April following the relevant valuation; the annual pensionable pay shown includes the full-time equivalent pay for part-time employees.

	1992	1995
	valuation	valuation
Active Members		
Number of active members	571	183
Total annual pensionable pay £m	8.98	2.59
Average annual pensionable pay £	15,730	14,178
Deferred Pensioners		
Number of deferred pensioners	126	362
Total annual deferred pensions £m	0.17	0.84
Average annual pension £	1,325	2,322
Pensioners		
Number of Pensioners	58	112
Total annual pensions £m	0.25	0.53
Average annual pension £	4,241	4,770
Widow(er)s		
Number of widow(er)s	9	14
Total annual widow(er)'s pensions £m	0.02	0.03
Average annual widow(er)'s pension £	2,333	2,143

The significant change in many of the figures from 1992 reflects the sale of East Midland Airport.



Financial

We have been provided with signed and audited accounts of the Fund for each of the three intervaluation years. These show that the market value of the assets of the fund increased from £15.764 million as at 31 March 1992 to £19.539 million at 31 March 1995. The financial transactions of the Fund over the three year period are summarised in the following consolidated revenue account.

	£m	£m
Market value of Fund as at 1 April 1992		15.764
Income:		
Employees' contributions	0.767	
Employers' contributions	1.004	
Transfer payments received	0.569	
Investment income	2.444	
Change in market value of investments both realised and unrealised	5.793	
Total income		10.577
Outgo:		
Pensions	1.304	
Lump sums on retirement	0.991	
Lump sums on death	0.018	
Transfer payments made	4.254	
Other payments in respect of leavers	0.006	
Investment Expenses	0.136	
Administrative expenses	0.093	
Total outgo		6.803
Market value of Fund as at 31 March 1995		19.539

2.3 The investment return of the Fund over the three year intervaluation period, when measured by reference to market value, was about 15.2% pa, compared with a median return of about 14.0% pa secured by Local Government pension funds over this period. These figures are based on information produced by CAPS and the WM Company.



2.4 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	1.342	6.9
Overseas	1.210	6.2
Equities		
UK	10.376	53.1
Overseas	1.874	9.6
Unit Trusts		
UK	1.056	5.4
Overseas	2.941	15.0
UK Property	0.663	3.4
Cash	(0.656)	(3.4)
Net Current Assets	0.733	3.8
Net Guitent / Edets		
Totals	19.539	100.0

- 2.5 The above analysis shows that 87% of assets are in equities, unit trusts and properties, a composition which is similar to the average large occupational pension scheme. Such assets, which do not match the liabilities, are held in the expectation that better returns will be achieved in the long run and reflect 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.
- It can be seen from the consolidated revenue account that the payments made are less than the income of the Fund (excluding capital movements in investments and the exceptional transfer values following the sale of East Midlands Airport). We expect the cash flow 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 further reduction in the active membership the need to realise investments to make benefit payments may arise.
- 2.7 Neither the liability profile nor the cash flow of the fund are such as to require a review of the investment policy. Furthermore, only a very substantial change in the number of active members is likely to cause a restraint on investment policy until well after the next valuation, when the position would be reviewed.



Valuation Basis

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

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

Economic Assumptions

3.2 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. After due consideration, it has been decided to assume that the rate of inflation will be less than previously assumed, and we have accordingly reduced the assumed rate of inflation from 41/2% pa to 4% pa., although assumptions adopted for the purposes of the 1989 and 1992 valuations relative to inflation continue to be appropriate. These assumptions both in absolute and in real terms, ie relative to price inflation, are as follows:

Assumption	Annual	rate
	Absolute	Real
	%	%
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	81/2	41/2
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	0
The increase to be expected from time to time in the flow of income from ordinary shares and similar investments	4	0

^{*} The assumption covers all pensions other than Guaranteed Minimum Pensions.



Statistical Assumptions

- 3.3 The main assumptions are as follows:
 - 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 proportion of members and pensioners who are married at their death;
 - the future progression of pensionable pay as a result of promotion etc. i.e. not as a result of inflationary pressures.

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.

Our assumptions are based mainly on our analysis of the experience of all the local government pension funds we advise. With the exception of those set out below, we have found no reason to change the assumptions used in 1992, which have therefore been retained. The following assumptions were revised, for the reasons given:

Ill-health Retirement

In general, the number of cases of ill-health retirement has continued to be well in excess of the number expected and the rates previously assumed have been increased by approximately 20% to reflect this.

Mortality

Rates of mortality of members of the Fund and the population in general continue to improve. We have reflected this by reducing the rates of mortality assumed in the valuation (in effect by assuming that members will live 6 months longer). This change in the valuation assumptions has led to an increase in the liabilities of the Fund as a result of pensions being assumed to be payable for a longer period.

Proportion Married

The proportion of members who are married has shown a steady decline for many years. The assumptions have been brought in line with the 1991 census statistics.



Results of the Valuation

The Ongoing Position

- The results of our investigations into the ongoing financial position of the Fund, completed by reference to the actuarial basis described in section 3 above, are considered in the following paragraphs. The results are considered in two parts, as follows:
 - the relationship between the assessed value of the assets of the Fund and the value of the liabilities accrued in respect of pensionable service rendered up to 31 March 1995; and
 - the level of contribution required to meet the cost of the year by year accrual of benefits in the future.

The rate of contribution required may then be derived from a joint consideration of the results of these two sets of investigations.

Past Service

- For the purposes of the valuation, the value placed upon the assets has to be 4.2 derived in a manner consistent with that placed upon the liabilities. 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 and this is the reason for the inclusion of the final element in the economic basis (see paragraph 3.2 above). In order for the valuation process not to be influenced by day to day investment decisions, a notional fund is valued rather than the actual investments held. The notional fund used is of the same market value as the total assets of the Fund, but invested 85% in the FT Actuaries All-Share Index and 15% in the equivalent index for British Government fixed interest This leads to a value of £19.32 million being placed on the assets, including the transfer payments received in respect of the Careers Service.
- The relationship between the values placed on the assets held by the Fund on 31 March 1995 and the liabilities accrued in respect of pensionable service rendered up to 31 March 1995 is set out in the following statement:



Valuation Statement as at 31 March 1995	£m
Liabilities in respect of: Retired members and widows Deferred pensioners Members in service	6.63 7.68 5.07
Total past-service liabilities	19.38
Value placed on the assets of the Fund	19.32
Excess of liabilities over assets accrued up to 31 March 1995	0.06

The valuation has thus revealed a past-service deficiency of £0.06 million and a level of funding of the liabilities of 100%.

- On the occasion of the 1992 valuation the level of funding of the past-service liabilities was 108%. The main reasons for the level reducing by 8% are as follows:
 - the contributions paid over the three year intervaluation period being less than those required to maintain the funding level
 - retirements on the grounds of ill-health being in excess of those assumed
 - changes in the statistical assumptions underlying the valuation (see paragraph 3.4)
 - the costs of retirements on the grounds of redundancy or efficiency
 - greater than assumed increases in salaries relative to price inflation.

Future Service

The determination of the contributions required in respect of future service 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 the contributions payable by members' under Regulation C4. 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 results of our investigations, based upon the membership of the Fund as at 31 March 1995 (apart from the Careers Service), indicate that the cost to the Fund as a whole of the year by year accrual is equal to 114% of the members' contributions in 1996/7 and 118% thereafter. This rate includes an appropriate allowance for administration expenses. The rate found in 1992 was 128% of the members' contributions. The main reasons for the reduction is the change in the composition of the active membership but this has been offset to some extent by:
 - changes in the statistical basis underlying the valuation (see paragraph 3.4)
 - improvements in benefits
 - increasing costs of administration
 - change in contracting out terms (see paragraph 1.9).

The Contribution Rates required

- 4.7 The natural period over which to liquidate the past-service deficiency is the average expected future service lifetime of the membership of the Fund and this has been adopted for each participating employer. (The adoption of this period aims to charge pension costs over the working lifetime of the members and under SSAP24 is the mandatory period.) We find that annual contributions from April 1996 of 1% of members' contributions would be required for the Fund as a whole to meet the past-service deficiency over this period, after taking into account the contributions being paid in 1995/6.
- The result for the Fund as a whole, except the Careers Service, is thus to show the following derivation of the rate of contribution:

	Percentage of members' contributions
Cost of the year-by-year accrual of benefits less the cost met by members	114%
Contribution required to meet the past-service deficiency over a period of 13* years, after taking into account amounts payable in 1995/6	1%
Total rate of contribution	115%

^{*} The period equal to the average expected future working lifetime of the employees of the Fund.



- The above calculations relate to the Fund as a whole. Separate consideration has been given to each of the employing authorities, with individual attribution of the main elements of experience affecting funding levels. The cost of accrual from April 1997 has been taken into account. The contributions for the participating employers are shown in the contribution rate certificate appended to this report. The contribution rates shown also represent the SSAP24 costs for each employer.
- 4.10 The above contribution arrangements make no allowance for meeting the costs of early retirements. It is generally regarded as good practice for this cost to be estimated at the time of retirement, and met over a relatively short period. This is particularly desirable in the case of authorities whose continuation in the Fund is uncertain. We have provided tables for such costs to be calculated, and the contribution rate certificate also provides for additional contributions to be made up to the level of those costs.

Legislative Requirements

- 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 and an appropriate certificate to this effect is appended to the report.
- 4.12 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 Conclusion

We have undertaken a valuation of the Fund as at 31 March 1995 in compliance with Regulation L10. The valuation shows the assets held at the valuation were sufficient to cover 100% of the accrued liabilities assessed on an ongoing basis. The revised contribution arrangements which are effective from 1 April 1996 are set out in the contribution rate certificate required by Regulation L11 appended to this report.

Andrew Wilson Partner R Watson & Sons

21 March 1996

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Contribution Rates in payment during 1995/96

The following rates are expressed as a percentage of members' normal contributions.

Employer	Rate in payment 1995/96
Employer	
Careers Service	150
Nottingham Development Enterprise Corporation	125
Cresswell Crags	130
Greater Nottingham Groundwork Trust	130
Institute for the Deaf	108
Age Concern	108
Stonham Housing Association	108
East Midlands Regional Exam Board	108
East Midlands Arts	108
Catholic Children's Society	108
Southwell Recreation Centre	108
Nottingham Citizens Advice Bureau	108
MIND	108
Nottingham Trent University Students'	
Union	108
East Midlands Area Museum Service	108
EMFEC	108
Alcohol Problems Advisory Service	108
Abbey & Kilton Boys' Club	108
Monty Hind Boys' Club	108
Hyson Green Boys' Club	108
Nottingham Scout Association	108
Mansfield Citizens Advice Bureau	108
Nottingham ITEC	108
Mansfield ITEC	108
Russell Youth Club	108
N&D Racial Equality Council	108
Society for Autistic C/A	108
Bestwood Advice Centre	120
Eastwood Citizens Advice Bureau	120
Cresswell Groundwork Trust	120
Meadows Advice Group	120
Ollerton & District Citizens Advice Bureau	120
Ashfield Citizens Advice Bureau	120
Health Information for Nottingham Teenagers	120
WasteNotts (Reclamation) Ltd	155
WasteNotts Limited	177



Employer	Rate in payment 1995/96
outhwell Diocesan Council for Family Care	120
ottingham Rural Community Council	108
useum of Law Trust Company	120
Cechnical Aid for Nottingham Communities	120

Mary Ward College is assumed to reimburse the Fund for pension increases on a pound-for-pound basis.



B Distribution of Membership as at 31 March 1995 by Sex and Status

a) Actives	Male Officers	Female Officers	Male Manual Workers	Female Manua Workers	l` Total
Number	42	123	17	1	183
Pensionable remuneration (£000s) Average reckonable	756.9	1,611.4	218.1	8.2	2594.6
service by remuneration (yrs)	12.0	6.2	11.2	1.4	8.3
Average age by remuneration (yrs)	39.7	39.3	43.1	27.0	39.7
(b) Deferred Pensione	rs				
			Males	Females	Tota
Number			223	139	369
Amount of deferred pen pensions increase to Api	ision (includ il 1995) (£0	ling (00s)	613.9	226.8	840.
Average age by deferred	l pension (y	rs)	46.0	43.0	45.
(c) Pensioners					
			Males	Females	Tota
Number			73	39	. 11
Amount of pension (inclinerase to April 1995) (luding pens (£000s)	ions	432.1	102.1	534.
Average age by pension	(yrs)		63.2	63.1	63.
(d) Widow(er)s					
			Widows	Widowers	Tot
Number			13	1	1
Amount of pension (incincrease to April 1995)	luding pens	sions	28.1	1.9	. 30.



51.0

58.6

58.1

Average age by pension (yrs)

Distribution of membership by Authority as at 31 March 1995

Authority	Actives	Deferred Pensioners	Pensioners	Widow(er)s
East Midlands International Airport	-	270	67	8
Small* admitted bodies	183	92	45	6
Total	183	362	112	14

^{*}ie under 50 members in total



Nottinghamshire Admission Agreement Etc Pension Fund

Certificate of the Actuary regarding contributions payable by the Participating Bodies

Nottinghamshire County Council

Dear Sir

- In accordance with your instructions, I have made an actuarial valuation of the NOTTINGHAMSHIRE ADMISSION AGREEMENT ETC Pension Fund as at 31 March 1995.
- In accordance with Regulation L11(1) of the Local Government Pension Scheme Regulations 1995, I have made an assessment of the contributions which should be paid to the Pension fund by the participating bodies.
- I set out in the attached Statement the contributions which, on the above basis, should in my view be payable to the Pension Fund by the participating bodies.

Yours faithfully

A F Wilson

Fellow of the Institute of Actuaries Partner in the Firm of R Watson & Sons

∠ March 1996



Nottinghamshire Admission Agreement Etc Pension Fund

Common Contribution Rate payable by each participating body under Regulation L11(1)(a): 114% of members' contributions.

Individual Adjustments payable by the respective authorities under Regulation L11(1)(b): the percentage of the respective members' contributions.

	Contributions as a percentage of members' contributions		
Postana	1996/97	1997/98 onward	
Employer			
Guidance Careers Service Ltd	1	5	
Nottingham Development Enterprise Corporation	11	11	
Cresswell Crags Heritage Trust	11	11	
Greater Nottingham Groundwork Trust	11	11	
Nottinghamshire Deaf Society	1	5	
	1	5	
Age Concern Stonham Housing Association	1	5	
East Midlands Regional Exam Board	1	5	
East Midlands Arts	1	5	
Catholic Children's Society	1	5	
Southwell Leisure Centre	1	5	
	1	5	
Nottingham Citizens Advice Bureau	1	5	
MIND	1	5	
Nottingham Trent University Students' Union East Midlands Area Museum Service	ī	5	
	ī	5	
EMFEC	1	5	
Alcohol Problems Advisory Service	1	5	
Abbey & Kilton Boys' Club	î	5	
Monty Hind Boys' Club	i	5	
Hyson Green Boys' Club	i	5	
Nottingham Scout Association	î	5	
Mansfield Citizens Advice Bureau	1	5	
Nottingham ITEC	1	5	
Mansfield ITEC	1	5	
Russell Youth Club	1	5	
N&D Racial Equality Council	1	5	
Society for Autistic C/A	1	3	



Nottinghamshire Admission Agreement Etc Pension Fund

Common Contribution Rate payable by each participating body under Regulation L11(1)(a): 114% of members' contribitions.

Individual Adjustments payable by the respective authorities under Regulation L11(1)(b):the percentage of the respective members' contributions.

Employer	Contributions as a percentage of members' contributions	
	1995/96	1997/8 onwards
Bestwood Advice Centre	1	5
Eastwood Citizens Advice Bureau	1	5
Cresswell Groundwork Trust	1	5
Meadows Advice Group	1	5
Ollerton & District Citizens Advice Bureau	1	5
Ashfield Citizens Advice Bureau	1	5
Health Information for Nottingham Teenagers	1	5
WasteNotts (Reclamation) Ltd	85	85
WasteNotts Limited	105	105
Southwell Diocesan Council for Family Care	1	5
Nottingham Rural Community Council	1	5
Museum of Law Trust Company	1	5
Technical Aid for Nottingham Communities	1	5
Nottingham Council for Voluntary Service	1	5
Beeston Lads Club	1	5

Please see note below



Note:

- The application of the Individual Adjustments to the Common Contribution leads to the minimum level of contributions over the period 1 April 1996 to 31 March 1999:
 - Contributions may be paid towards the cost of early retirements arising after 31 March 1995 in accordance with the table of costs contained in our letter of 15 February 1996.
 - 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 1996 are a at least equal to the total minimum contributions since that date.



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.

Nottinghamshire Admission Agreement Etc Pension Fund

I hereby certify that:

- in my opinion as at 31 March 1995 the value of the assets of the Fund did not exceed 105% of the value of the liabilities of the Fund;
- 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.

Signature .

21 March 1996

Fellow of the Institute of Actuaries Partner in the Firm of R Watson & Sons

Watson House London Road Reigate Surrey RH2 9PQ

