Actuarial valuation at 31 March 2019

Cheshire & Derbyshire Section of the Nationwide Pension Fund

Prepared for	Nationwide Pension Fund Trustee Limited
Prepared by	Keith Poulson FIA
Date	23 January 2020
Signed	

Keith Poulson FIA
Scheme Actuary

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Executive Summary

The key results of the valuation at 31 March 2019 are set out below.

There was a surplus of £17M relative to the technical provisions
(i.e. the level of assets agreed by the Trustee and the Society as being appropriate to meet member benefits, assuming the Fund continues as a going concern).

There was an estimated deficit of £52M relative to the solvency liabilities
(i.e. the estimated level of assets needed to buy insurance policies for benefits earned to the valuation date).

There was a surplus of £85M on the s179 basis (ie the deficit calculated in accordance with section 179 of the Pensions Act 2004, as used in calculating the Pension Protection Fund (PPF) levy).

The C&D section closed to future accrual with effect from 1 April 2011; as a result there are no regular contributions payable to the C&D section.

As the C&D Section is in surplus, it has been agreed that the Society will continue to pay no contributions, other than the cost of any augmentations. It has also been agreed, expenses of running the Section (including PPF and other levies) will be met from the assets of the C&D Section.

Contents

Introduction

This report has been prepared for the Trustee to meet the requirements of Section 224(2)(a) of the Pensions Act 2004. It sets out the results and conclusions of the actuarial valuation of the Fund at 31 March 2019. It also includes the results of the section 179 valuation at the same date.

This is a scheme funding report, it summarises the key aspects of the valuation process, including:

- The funding objective and background details;
- The technical provisions;
- The results on the solvency basis;
- Further information required for compliance purposes, including:
  - The legal framework within which the valuation has been completed
  - A summary of the membership and asset data, the benefits valued and details of the assumptions used for the valuation
  - My statutory certification of the technical provisions
  - A glossary of some technical pensions terms

Throughout the body of this report, defined contribution (DC) benefits (including DC AVCs) have been excluded from the valuation results because in my view this provides a clearer picture.

Shorthand

Society
Nationwide Building Society

Fund
Nationwide Pension Fund

C&D Section
The Cheshire & Derbyshire Section of the Fund.

Trustee
Nationwide Pension Fund Trustee Limited

Rules
The consolidated Trust Deed and Rules dated 30 March 2012 for the Fund

Important Note: The report concentrates on the C&D Section's financial position at the valuation date. As time moves on, the C&D Section's finances will fluctuate. If you are reading this report some time after it was produced, the C&D Section's financial position could have changed significantly.

Previous valuation results

A summary of the results and agreed contributions following the previous valuation is set out below.

The key results from the previous valuation at 31 March 2016 were:

- There was a surplus of £3M relative to the technical provisions, which corresponded to a funding level of 101%.
- There was an estimated deficit of £133M relative to the solvency liabilities.

The Trustee and the Society agreed that a recovery plan was not required as the C&D Section was in surplus (relative to the technical provisions).

Given the surplus shown at the last valuation, it was also agreed that the Society would continue to make no contributions to the C&D Section. For the avoidance of doubt, expenses of running the C&D Section (including the PPF and other levies) are met from the assets of the C&D section.

Developments since the last valuation

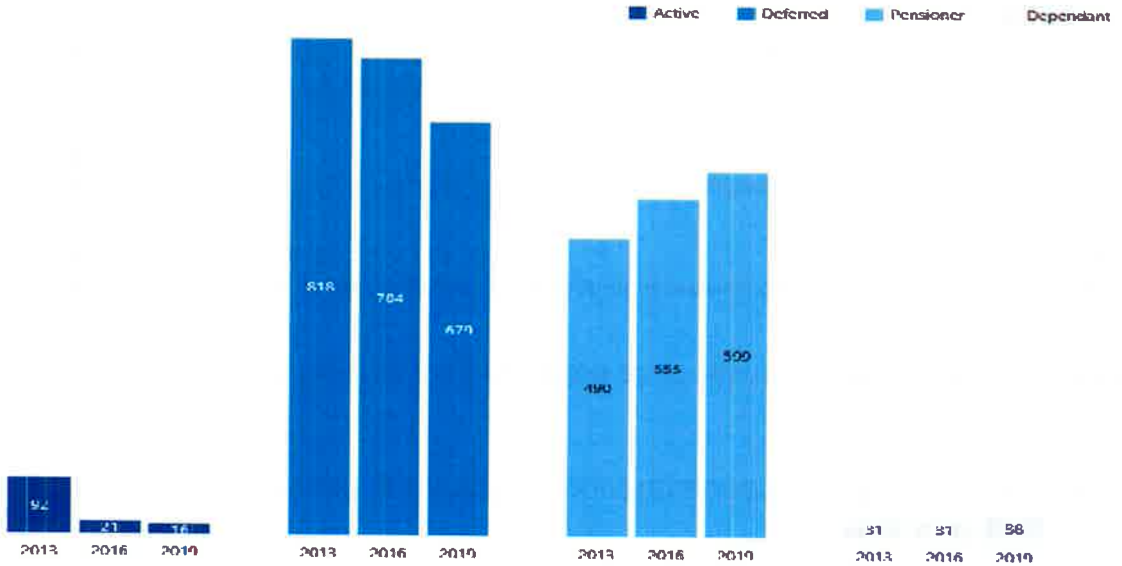
The key development since the last valuation has been further de-risking of the C&D Section investment strategy. The current portfolio of assets targets an expected return of around gilts plus 0.5% p.a.

Data and benefits valued

Key information on the membership data used and the benefits valued in the valuation are summarised here.

The C&D Section has continued to become increasingly mature with the proportion of pensioners increasing.

The membership numbers are shown graphically below. Further details can be found in Appendix B.



- **Discretionary benefits**
  Under the provisions of the Rules, there are certain discretionary powers to provide or increase benefits for, or in respect of, all or any of the members of the C&D Section.

  In particular, under Rule 6.9, the Trustee (with the Society's consent) may provide or increase a member's benefit at a rate higher than provided under the standard rules, subject to certain conditions. No allowance is made in the technical provisions for such benefits.

- **GMP equalisation**
  An approximate allowance for equalising GMPs is made by increasing the C&D Section technical provisions by 1%. This includes an approximate allowance for both past and future benefit payments. This is a change in approach from that adopted at the previous valuation.

Funding objectives and investment strategy

The Trustee's funding objective is to hold assets which are at least equal to the technical provisions (i.e. to meet the statutory funding objective).

A key factor in setting the funding objective is the Trustee's assessment of the employer covenant. The Trustee has carried out a review of the employer covenant and concluded that the employer covenant was strong. The covenant strength rating is similar to when assessed for the previous valuation and this has been taken into account in setting the assumptions to be adopted for the technical provisions.

The current assets are described in Appendix D.

The Trustee's investment strategy is set out in its statement of investment principles. In summary, the Trustee's strategy is to invest 5-10% of the C&D Section's assets in growth assets to generate investment returns. The remaining 90-95% is invested in liability driven investments ('LDI'), the purpose of which is to reduce the risk of movements in market expectations of future interest rates and inflation having an adverse impact on the C&D Section's funding position. In order to calculate the technical provisions and the cost to the Society of future benefit accrual, the benefits paid out by the C&D Section are estimated for each year into the future. The estimated benefits payments are then 'discounted back' to the valuation date using an agreed rate of interest known as the discount rate.

Summary of assumptions

The Trustee has agreed with the Society the assumptions used to calculate the technical provisions. The table below summarises the key assumptions, together with those used for the previous valuation, and the reasons for any change. Further details of all of the assumptions are set out in Appendix E.

Assumption	Previous valuation	This valuation	Rationale for change
Pre-retirement discount rate	Gilt Curve plus 1.0% p.a.	Gilt Curve plus 0.35% p.a.	To reflect de-risked investment strategy
Post-retirement discount rate	Gilt Curve plus 0.5% p.a.	Gilt Curve plus 0.35% p.a.	To reflect de-risked investment strategy
RPI inflation	The Bank of England RPI curve	The Bank of England RPI curve	No change
CPI inflation	RPI inflation less 0.9% p.a.	RPI inflation less 0.9% p.a.	No change
Salary inflation	RPI inflation plus 0.75% p.a.	RPI inflation	To reflect recent experience
Post-retirement mortality assumption - base table	SAPS S2 'Light' tables with a scaling factor of 108% for males and 102% for females (future pensioners) and a scaling factor of 100% for males and 98% for females (current pensioners)	SAPS S3 series 'all' tables for males and SAPS S3 series 'mid' tables for females with scaling factors as set out below: Non-pensioners: 95% for males and their female dependants and 101% for females and their male dependants Pensioners: 90% for men and their female dependants and 96% for women and their male dependants Current dependants: 96% for men and 90% for women	To reflect updated mortality analysis
Post-retirement mortality assumption - projection	CMI 2014 core projections with long term improvement rate of 1.5% p.a. for men and women	CMI 2018 core projections with Sk=7 and A=0.5 with long-term improvement rate of 1.50% p.a. for men and women	To adopt more up to date longevity projections

As for the previous valuation, the technical provisions have been calculated using the projected unit method.

Past service results and Recovery Plan

The Trustee's technical provisions and resulting funding position are shown below. As the C&D Section remains in surplus (relative to the technical provisions), a recovery plan is not required.

	Technical Provisions (£M)
Value of past service benefits for:	
Actives	3
Deferreds	143
Pensioners	173
Value of liabilities	**319**
Value of assets	**336**
Past service surplus/(deficit)	**17**
Funding Level	**105%**

The key assumptions are the discount and the inflation assumption. The sensitivity of the technical provisions to these key assumptions is as follows:

- A 0.25% p.a. decrease in the discount rate increases the technical provisions by £15M, reducing the funding level to 101%.
- A 0.25% p.a. increase in the RPI inflation assumption (also allowing for the consequent impact on the assumptions derived directly from that assumption) increases the technical provisions by £5M, reducing the funding level to 104%.

Reasons for change in past service funding position

The past service results show that the surplus of £3M in the Fund at the previous valuation has increased to £17M at this valuation. The table below sets out the key reasons for this change:

	£M
Surplus/(Deficit) at previous valuation	**3**
Interest on surplus	**0**
Employer contributions less accrual	**0**
Investment returns above discount rate	**73**
Changes in financial conditions	**(54)**
Other experience gains (losses) including inflation experience	**(3)**
Allowance for GMP equalisation impact	**(3)**
Changes to assumptions	**1**
Surplus/(Deficit) at this valuation	**17**

The analysis shows that the main factors affecting the funding position since the previous valuation have been:

- The investment return on the C&D Section assets has been significantly higher than assumed.
- The investment return has been offset by a fall in gilt yields, resulting in an increase in liabilities.

Solvency position

The statutory estimate of the C&D Section's solvency position is set out below.

	Solvency (£M)
Value of past service benefits for:	
Actives	4
Deferreds	195
Pensioners	183
Expenses	6
Value of liabilities	**388**
Value of assets	**336**
Past service surplus/(deficit)	**(52)**
Funding Level	**87 %**

This solvency estimate represents the estimated cost of purchasing annuities at the valuation date from an insurance company to meet the C&D Section's benefits. The assumptions include an allowance for the expenses of winding-up the C&D Section. Further details and the assumptions used in the solvency estimate are summarised in Appendix E.

The solvency estimate is higher than the technical provisions, the broad reasons for which are set out below:

- Insurers will typically hold less risky assets which provide lower investment returns than are expected to be achieved on the C&D Section's assets;
- Insurers typically hold larger margins, for example by assuming that members will live longer than is assumed in calculating the technical provisions; and
- Insurers need to cover costs, including administering the benefits, and also make a profit.
- Allowance is made for the cost of winding up the C&D Section.

In practice, if the C&D Section were to be discontinued with no solvent employer then the assets are unlikely to be sufficient to provide the benefits in full. If this were the case then:

- Benefits corresponding to those covered by the PPF would be met first (either through the PPF or, if there were sufficient funds, by securing these benefits with an insurance company).
- Any remaining assets would be used to secure part of the remaining benefits with an insurance company
- The proportion of full benefits provided will vary from member to member and may be higher or lower than the statutory estimate of solvency ratio quoted above.

Section 179 valuation

I have carried out a section 179 valuation of the C&D Section as at 31 March 2019, the results of which are summarised below.

	PPF (£M)
Total PPF protected liabilities	251
Total assets	336
PPF surplus/(deficit)	85
PPF funding ratio	134%

The purpose of this valuation is to provide the Pension Protection Fund ("PPF") with information to calculate the Pension Protection Levy.

The previous section 179 valuation had an effective date of 31 March 2016, as set out in my report dated 14 July 2017.

Details

This section 179 valuation only assesses the value of those parts of the benefits which correspond to those protected by the PPF (described in Appendix G).

This section 179 valuation should not be used for other purposes, such as determining future contribution levels, assessing the overall solvency position or deriving pension costs for company accounting.

The valuation date of 31 March 2019 reflects the date of the latest audited Trustee Report & Accounts of the C&D Section.

Liabilities

I am not aware of any external liabilities of the C&D Section.

Assets

I have used the same value of the assets as in the rest of this report.

The value of assets as at 31 March 2019 is £336M. Further details are set out in Appendix D.

This asset value does not reflect any reduction to allow for potential sale costs of assets on discontinuance.

Assumptions

The assumptions adopted for a section 179 valuation are prescribed by the PPF, in accordance with legislation (which requires the liabilities to be valued as the estimated cost of securing the benefits by means of an annuity purchased at the market rate at the valuation date).

Appendix G details the assumptions used for this valuation.

The key assumptions used are the assumed discount rates (which are derived based on prevailing gilt yields) and the assumed mortality rates.

Benefit structure and approximations

The benefits that are protected under the PPF are restricted below the full benefit levels, and the section 179 valuation requires a proxy of the PPF benefits to be valued. In order to simplify the work needed and reduce the time spent, and hence cost of our calculations, we also made approximations. The details are described in Appendix G.

Please note that the PPF require that any approximations should be expected to *over*state the liabilities. Accordingly, the PPF levies based on the results of this valuation are likely to be higher than if no approximations were made.

These assumptions do not prevent me from certifying the valuation results for the PPF, as I am only required to confirm that the PPF liabilities have not in my opinion been understated.

Trustee action

- The Trustee should ensure that the details on the certificate in Appendix G are submitted to the PPF via the Pensions Regulator's 'Exchange' website within 15 months of the valuation date, i.e. by 30 June 2020.

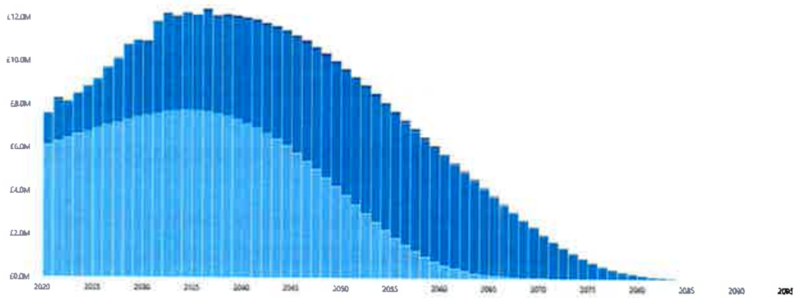
- Provided the results of this section 179 valuation are submitted by midnight on 31 March 2020 the PPF will use these results in the calculation of levies payable from 2020/21 onwards (until the next section 179 valuation is submitted and recognised by the PPF).

The next section 179 valuation must be carried out no later than 31 March 2022 (i.e. three years after the effective date of this valuation)

Funding and investment risks

The C&D Section faces a number of key risk which could affect its funding position.

The benefit payments from the C&D Section are expected to be made for a very long period – the chart below shows the projected cashflows on the technical provisions basis for the C&D Section.



The Fund faces a number of key risks which could affect its future cashflows and funding position, including:

- Funding risk – the risk that the technical provisions are set too low and prove insufficient to meet the liabilities (e.g. in the event of unexpected discontinuance).
- Investment risks – the risk that investment returns are lower than assumed in the valuation, and also that the assets are volatile and move out of line with the liabilities, so the funding position is volatile.
- Liquidity risk – the risk that cashflows are higher than expected as member's commute more than is assumed or take transfer values, possibly leading to the sale of assets at inopportune times.
- Longevity risk – the risk that Fund members live for longer than assumed and that pensions would therefore need to be paid for longer.
- Inflation risk – the risk that inflation is higher than assumed, increasing the pensions that need to be paid.
- Sponsor risk - this is the risk that the Society is no longer willing or able to support the Fund to fund any future losses that arise.

Other risks – issues relating to climate change and other environmental risks as well as long-term uncertainty around geopolitical, societal and technological shifts may also impact on the funding, investments and sponsor covenant of the Fund.

Given the high level of interest rate and inflation hedging provided by the assets, and low level of growth seeking assets the risks to C&D Section are greatly mitigated. Aside from the covenant risk one of the most significant residual risks is that the members live longer than expected. To put this into context, if members lived 3 years longer than assumed the technical provisions would increase by around 10%.

Agreed contributions and projections

The contributions agreed as a result of this valuation and the projected position at the next triennial valuation are summarised below.

Contributions

The Trustee has the power to set the contribution rate as per Rule 3.5(2).

Each Participating Employer shall from time to time make such contributions to the Cheshire & Derbyshire Section as the Trustees determine, to enable the Trustees to provide the benefits of the Cheshire & Derbyshire Section. The Trustees shall, as soon as practicable, inform the Participating Employers of any such determination made by them.

Following discussions, it has been agreed that the Society will continue to make no contributions to the C&D Section.

The following expenses will continue to be met directly from the assets of the C&D Section:

- the costs of administering the C&D Section; and
- The Pension Protection Fund and other levies collected by the Pensions Regulator; and

The Society will meet the cost of any augmentations to benefits (if any).

Projections

I estimate that at the next valuation the technical provisions funding level will remain around 105% and the solvency funding level will improve to around 90%.

These estimates assume that:

- the experience of the C&D Section between the two valuation dates is in line with the assumptions underlying the technical provisions;
- the C&D Section assets achieve a return equal to the best estimate return on the portfolio; and
- the assumptions underlying the technical provisions and solvency bases remain unchanged.

Next steps

Actions required to finalise the valuation process are summarised below.

The next steps are:

- For the Trustee to provide a copy of this report to the Society within 7 days.
- To submit the valuation summary to the Pensions Regulator via Exchange.
- To provide a summary funding statement to members by 30 September 2020 i.e. within 18 months of the valuation date.

Checklist

The valuation process is complete when all of the following have been agreed and are in place:

- This scheme funding report, including my certification of the technical provisions
- Schedule of contributions, including my actuarial certification of the adequacy of the schedule of contributions

The statutory deadline for completing the valuation process is 30 June 2020, i.e. 15 months after the valuation date.

Appendix A – Legal framework and alternative presentation

This report is produced in compliance with:

- Rule 12.2 of the Fund's rules.
- Rule 3.5(2) of the Fund's Rules
- Section 224 of the Pensions Act 2004.
- The terms of the most recent Scheme Actuary Agreement between the Trustee and me, on the understanding that it is solely for the benefit of the addressee.

The section 179 valuation has been conducted in line with:

- The Pension Protection Fund (Valuation) Regulations 2005;
- Section 179 of the Pensions Act 2004; and
- Section 179 guidance issued by the Board of the Pension Protection Fund.

For this valuation I have used:

- Version number G8 of the section 179 guidance; and
- Version number A9 of the section 179 assumptions.

This report builds on and draws together the documents listed in Appendix J.

Appendix B – Membership data

The results in this report are based on membership data which is summarised below.

'Active' members	Number	Unweighted Average age*	Total pensionable salaries (£000 p.a.)	Average pensionable salaries (£ p.a.)	Average pension (£ p.a.)
2016	21	46.7	535	25,454	15.7
2019	16	50.4	410	25,605	16.3

Note: These members are no longer accruing benefits in the C&D Section, but their pre-11 entitlements under the C&D Section continue to be linked to their subsequent salary levels. The average pensionable service quoted is based on service to 31 March 2011 only.

Deferred members	Number	Unweighted Average age*	Total pension (£000 p.a.)	Average pension (£ p.a.)
2016	784	48.6	3,792	4,850
2019	679	50.1	3,313	4,879

Note: The deferred pension amounts shown above are at the valuation date.

Pensioners	Number	Unweighted Average age*	Total pension (£000 p.a.)	Average pension (£ p.a.)
2016	555	67.0	4,833	8,708
2019	599	68.8	5,724	9,555

Dependants	Number	Unweighted Average age*	Total pension (£000 p.a.)	Average pension (£ p.a.)
2016	31	70.3	222	7,150
2019	38	72.2	282	7,414

The pension amounts shown include the increase awarded in April 2019.

I have conducted high level checks on the membership data provided and I am satisfied with its adequacy for the purpose of this actuarial valuation.

Appendix C – Benefits Valued

A summary of the key details of the Fund benefits considered in this valuation is set out below.

Introduction
The C&D Section closed to future accrual after 31 March 2011. Benefits summarised in this Appendix cover service up to 31 March 2011 only. Future benefit accrual after 31 March 2011 is provided in the Nationwide Section.

Normal Retirement Age
For Cheshire members – Age 60
For Derbyshire members – Age 60 for pre-1 February 2006 service and Age 65 for post-1 February 2006 service

Early Retirement Pension
A pension is provided on retirement after the age of 55 with Society consent. This is calculated using completed service and is reduced to allow for early payment.

Lump Sum
A member may exchange some of their pension for a lump sum on retirement.
If a member dies after retiring, the following benefits may be paid:
- A lump sum equal to the balance of five years' pension, if the member dies within five years of drawing their pension.
- A dependant's pension of 50% of the member's pension.
- Children's benefits.

Incapacity and Ill Health Pensions
In the event of premature retirement due to serious ill health or incapacity, an immediate pension may be paid at the Society's discretion.

Pension Increases
For Cheshire members:
The majority of Cheshire members receive pension increases at the fixed rate of 5% per annum.
Some members have pension increases in line with RPI inflation increases with a minimum of 0% and a maximum of 5% or 2.5% each year.

For Derbyshire members:
- RPI increases with a minimum of 3% and a maximum of 5% each year (for benefits accrued before 1 July 1997)
- RPI increases with a minimum of 0% and a maximum of 5% each year (for benefits accrued from 1 July 1997 to 1 February 2006)
- RPI increases with a minimum of 0% and a maximum of 2.5% each year (for benefits accrued from 1 February 2006).

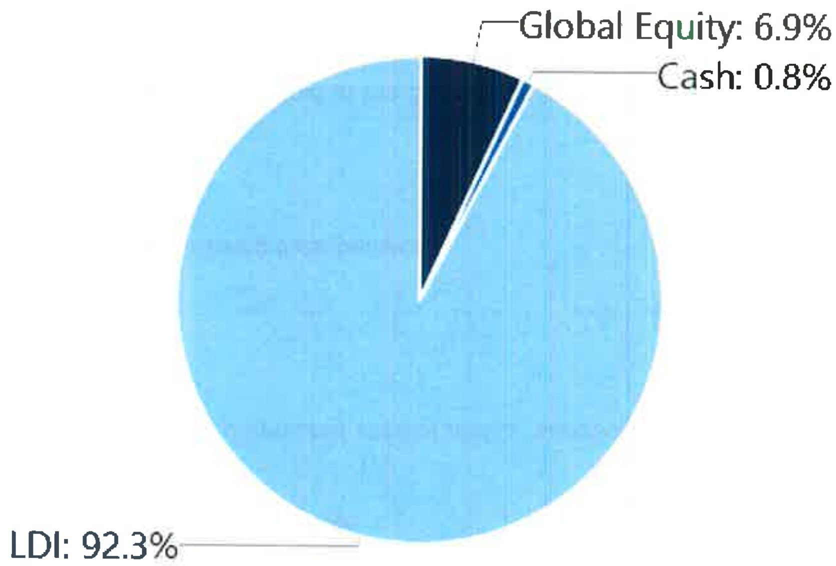
Appendix D – Assets

Information on the assets used in this valuation is covered here.

The audited accounts for the Fund for the year ended 31 March 2019 show the assets were £336M.

The chart shows how the balance of the assets of £336M is broadly invested.

The Trustee's strategy is to diversify investments where possible and ultimately match investment returns with the C&D Section's liabilities as they fall due over the long term.



Appendix E – Assumptions for technical provisions – method and financial assumptions

Method	The actuarial method to be used in the calculation of the technical provisions is the Projected Unit Method.
Financial assumptions for technical provisions - approach	The approach to be used in determining each of the financial assumptions for calculating the technical provisions and the employer contributions is set out below. The assumptions vary depending on when the expected payment is made, i.e. they are "term dependent".
RPI inflation	The has been set as a yield curve structure derived from UK Government gilt yields appropriate to the date of each of the C&D Section's expected future cashflows (extrapolated for cashflows beyond the longest available gilts).
CPI inflation	In the absence of market data, the CPI inflation assumption is constructed relative to the RPI inflation assumption. The difference will vary based on market conditions and future outlook for both indices. As at 31 March 2019, CPI inflation was assumed to be 0.9% lower than RPI inflation at all terms.
Discount rate	This has been set as a yield curve structure derived from the yield on UK Government gilt yields appropriate to the date of each of the C&D Section's expected future cashflows (extrapolated for cashflows beyond the longest available gilts). The yield curve has been adjusted to make a prudent allowance for the expected out-performance (above gilt returns) on the C&D Section's assets by setting it equal to gilt curve plus 0.35% p.a.
Salary increases	Each member's salary is assumed to increase in line with the assumed rate of RPI inflation. (The C&D Section ceased to have any active members on 1 April 2011 but this assumption is still required as some members have earlier benefits that continue to be linked to their salary beyond 1 April 2011).
Increases in pensions in payment	Inflation-linked pension increase assumptions are derived from the RPI inflation assumption allowing for the maximum and minimum annual increase that applies, and the fact that inflation varies from year to year.
Revaluations of deferred pensions in excess of GMP	Increases to deferred pensions in excess of GMP for former Derbyshire members are assumed to be in line with the CPI inflation assumption (see above). Increases to deferred pensions in excess of GMP for former Cheshire members are fixed 5% p.a.

Financial assumptions for technical provisions summary

The table below shows the forward rates for the financial assumptions used as at 31 March 2019.

Term	Discount rate (%)	Salary increases (%)	RPI inflation (%)	CPI inflation (%)	LRPI pension increases* (%)
1	1.00%	3.41%	3.41%	2.51%	3.39%
2	0.94%	3.42%	3.42%	2.52%	3.39%
3	1.01%	3.41%	3.41%	2.51%	3.37%
4	1.12%	3.34%	3.34%	2.44%	3.29%
5	1.24%	3.17%	3.17%	2.27%	3.12%
6	1.38%	3.26%	3.26%	2.36%	3.18%
7	1.54%	3.37%	3.37%	2.47%	3.26%
8	1.71%	3.48%	3.48%	2.58%	3.34%
9	1.89%	3.61%	3.61%	2.71%	3.42%
10	2.08%	3.72%	3.72%	2.82%	3.49%
11	2.24%	3.83%	3.83%	2.93%	3.55%
12	2.39%	3.91%	3.91%	3.01%	3.60%
13	2.50%	3.97%	3.97%	3.07%	3.63%
14	2.58%	3.99%	3.99%	3.09%	3.64%
15	2.63%	3.99%	3.99%	3.09%	3.63%
16	2.65%	3.96%	3.96%	3.06%	3.61%
17	2.64%	3.91%	3.91%	3.01%	3.56%
18	2.60%	3.84%	3.84%	2.94%	3.51%
19	2.55%	3.76%	3.76%	2.86%	3.44%
20	2.48%	3.67%	3.67%	2.77%	3.36%
21	2.40%	3.57%	3.57%	2.67%	3.28%
22	2.31%	3.47%	3.47%	2.57%	3.18%
23	2.21%	3.36%	3.36%	2.46%	3.08%
24	2.11%	3.25%	3.25%	2.35%	2.98%
25	1.99%	3.13%	3.13%	2.23%	2.88%
26	1.88%	3.03%	3.03%	2.13%	2.78%
27	1.77%	2.92%	2.92%	2.02%	2.69%
28	1.66%	2.83%	2.83%	1.93%	2.60%
29	1.56%	2.75%	2.75%	1.85%	2.52%
30	1.48%	2.68%	2.68%	1.78%	2.45%

** pension increase curve provided is LRPI5, there are other increases in the Section not detailed above*

Additional assumptions for employer contributions

In determining employer contributions the same assumptions will be used as those for calculating the technical provisions together with the additional financial assumptions described below.

Expected return on assets

A prudent allowance may be made for part of the expected out-performance of the C&D Section's assets compared to the discount rate.

No allowance was necessary for the valuation 31 March 2019 as there was no deficit at the valuation date. An appropriate allowance may be made at future valuations where a deficit is revealed.

Expenses

In determining the contributions an estimate of the future expenses of running the C&D Section is made (which includes an allowance for PPF and other levies collected by the Pensions Regulator).

If it is clear that there is sufficient surplus in the C&D Section to cover future expenses then these will be met from the assets of the Section without the need for future contributions.

Appendix E – Assumptions for technical provisions – demographic assumptions

Post-retirement mortality	The post retirement mortality assumptions used are: • The SAPS 'S3 series, all pensioners, all amounts' table for males (S3PMA) and 'S3 series, all pensioners, mid amounts' table for females (S3PFA_M) With scaling factors for: - non-pensioners of 95% for males and their future female dependants and 101% for females and their future male dependants; - pensioners of 90% for males and their future female dependants and 96% for females and their future male dependants; - current dependants of 96% for males and 90% for females; and • An allowance for future improvements in line with the CMI_2018 Core Projections assuming S_k=7.0 and A=0.50 and long-term annual rate of improvement in mortality rates of 1.5% for men and women.
Pre-retirement mortality	*Males:* 70% of Standard table AM92 Ultimate. *Females:* 70% of Standard table AF92 Ultimate. Sample rates are shown below.
Early retirements (normal health)	An allowance has been made for members to retire within 5 years of their normal retirement date (i.e. an allowance between ages 55 and 60). An early retirement factor is applied where appropriate.
Early retirements (ill-health)	Allowance has been made for members to ill-health retire and these members are assumed to have the same mortality as a non-ill-health retiree who is 10 years older.
Withdrawals	Allowance made for withdrawals from service (see sample rates below).

Family Details

- A male is assumed to be three years older than his dependant.
- A female is assumed to be one year younger than her dependant.
- 90% of males and 75% of females are assumed to be married (or, if not, have a dependant) at retirement/on death before retirement respectively.

Commutation

Each member assumed to commute 20% of their pension on retirement, based on commutation factors 15% higher than those in force at the valuation date.

Sample rates

The tables below illustrate the allowances made for withdrawals, deaths before retirement and retirements from service at various ages. Also shown is the allowance included for promotional pay increases, shown as the percentage increase over the next year.

Men			Percentage leaving the scheme in the next year as a result of			
Current	Withdrawal from service	Death before retirement - male	Death before retirement - female	Ill health retirement - male	Ill health retirement - female	Early retirement
20	7	0.041	0.014	0.050	0.039	-
25	7	0.040	0.017	0.038	0.047	-
30	6	0.041	0.024	0.033	0.063	-
35	5	0.048	0.034	0.037	0.090	-
40	4	0.066	0.052	0.058	0.135	-
45	3	0.103	0.082	0.104	0.210	-
50	2	0.176	0.132	0.189	0.335	-
55	-	0.313	0.215	0.338	0.539	15
60	-	-	-	-	-	100

Appendix F – Assumptions for solvency estimate

The key assumptions used in calculating the solvency estimate are summarised below.

The solvency estimate has been calculated in line with statutory requirements. I have taken into account the investment strategies that a life assurance company is likely to use to back its annuity business and the resulting pricing we would expect to see under the market conditions at the valuation date, taking into account the size of the Fund.

However, this estimate is only a guide. The true position can only be established by conducting a competitive buy-out auction and fully defining the scope and likely cost of a wind-up process for the Fund.

The basis used is described on the next page.

Solvency estimate

This considers the position if:

- The Fund were discontinued on the valuation date.
- Member benefits were crystallised and, for active members, were based on their Pensionable Service and Salary at the valuation date.
- Discretionary benefits were suspended permanently.
- The assets were used to buy immediate and deferred annuities from an insurer.

The solvency estimate is a regulatory requirement and also provides a useful benchmark against which the Trustee and others can assess the prudence of other funding measures.

Assumption	Solvency
Pre-retirement discount rate	Aon Hewitt Bulk Annuity Market Monitor yield curve for non-pensioners, which is constructed from swap and UK corporate bond market curves
Post-retirement discount rate	Aon Hewitt Bulk Annuity Market Monitor yield curve for pensioners, which is constructed from swap and UK corporate bond market curves
RPI inflation	Term-dependent rates derived from the RPI swap markets
CPI inflation	RPI inflation less 0.6% p.a.
Salary inflation	CPI inflation
Post-retirement mortality assumption - base table	As per Technical Provisions
Post-retirement mortality assumption - projection	CMI 2017 core projections with Sk=8.0 with long-term improvement rate of 1.75% p.a. for men and women
Withdrawals	All members assumed to immediately withdraw from service with entitlement to deferred pension
Commutation	No allowance made
GMP equalisation	An approximate allowance for the impact of GMP equalisation has been allowed for through a loading of 1% to the liabilities
Expenses	The reserve for expenses allows for the expenses associated with winding up and an estimate of the per member charges expected to be levied by an insurance company on buy-out. Please note that it does not include any allowance for the cost of forced sales of assets. The expense allowance is presented as additions to the liabilities as the regulations require the assets to be shown at audited market value.

Appendix G – Section 179 valuation: Benefit structure and assumptions

Benefit structure

The C&D Section benefit structure is summarised in Appendix C. As described later in this appendix, the benefits that are protected under the PPF are restricted below the full fund benefit levels, and the section 179 valuation requires a proxy of the PPF benefits to be valued.

Normal Pension Age

Normal Pension Age (NPA) for section 179 purposes is determined as prescribed in paragraph 34 of Schedule 7 to the Pensions Act 2004, and is broadly the earliest age at which the pension normally becomes payable without actuarial reduction. Different NPAs may apply to different parts of a member's pension.

The NPA is 60 for Cheshire members. For Derbyshire members, it is 65 for post 1 February 2006 service and 60 for pre 1 February 2006 service.

Normal Retirement Pension

For members who:

- have reached the C&D Section's NPA for section 179 purposes (as described above);

or

- are receiving a dependant's pension; or
- retired due to ill-health

I have valued 100% of their pension.

For other members, I have valued 90% of the pension payable, subject to an overall 'compensation cap' on the benefit payable. The standard cap applied in these calculations £35,106 p.a. at age 65. The figure is then actuarially adjusted for other retirement ages (and current age for those pensioners subject to the cap).

In line with the guidance on section 179 valuations published by the PPF, I have made implicit allowance for future increases to this cap to be in line with the rate of revaluation in deferment set out below.

Death after retirement

I have allowed for contingent spouses' pensions on death in retirement based on 50% of the pension in payment for current pensioners, rather than the level of spouses' pensions that would actually be payable under the C&D Section, which are based on the member's pre-commutation pension.

Death after leaving but before retirement

I have allowed for contingent spouses' pensions on death before retirement based on 50% of the pension revalued with inflation from 31 March 2019 to the member's date of death, rather than the level of spouses' pensions that would actually be payable under the C&D Section.

Pension increases in payment

I have only allowed for future increases in payment on benefits accrued after 5 April 1997. The allowance reflects increases in line with CPI inflation capped at 2.5% pa. Actual past pension increases for pensioners have been allowed for in the benefits valued.

Pension increases in deferment

For members who have not yet retired, I have implicitly allowed for revaluation of benefits between the valuation date and NPA in line with price inflation capped at 5% pa for service prior to 6 April 2009 and capped at 2.5% pa for service after that date. Past revaluation (up until the valuation date) has been allowed for at the levels that apply under the provisions of the Nationwide Section, which differ in the treatment of GMP and non-GMP pension.

GMP equalisation

I have approximately allowed for equalisation of GMP benefits in the calculation of the Fund's section 179 liabilities as part of this valuation by applying a prudent 5% loading to the liabilities.

The PPF requires schemes to equalise GMP benefits if they are transferred to the PPF (i.e. following sponsor insolvency).

Benefit Approximations

In carrying out the section 179 valuation I made the following approximations:

- Members under the PPF pension age at the date of valuation have their pension under the PPF capped (other than ill-health retirees).

- The standard cap is £35,105 per annum at retirement age 65 and 29,790 per annum at retirement age 60 (after the application of the 90% compensation adjustment). For valuations with an effective date on or after 6 April 2017, this figure is increased 3% for each complete year of pensionable service over 20 years the member has accrued in the Fund.
  This figure is then actuarially adjusted for other retirement ages (and current age for pensioners).

- The allowance for GMP equalisation is a prudent 5% loading to the liabilities.

- The C&D Section has some benefits secured by annuities. Data for these benefits was unavailable at the effective date of this valuation. Therefore, it was necessary to estimate the current value of these insured liabilities and assets. I have applied a prudent measure to allow for these insured liabilities and allowed for £6M in the liabilities with no corresponding addition to the assets.

Appendix G – Section 179 valuation: Assumptions

The key assumptions used in the Section 179 valuation are summarised below.

Assumption	Section 179 valuation
Pre-retirement discount rate	-1.96% p.a. net of increases in deferment for benefits accrued before 6 April 2009 (this allows for increases in deferment in line with price inflation limited to 5% p.a.). -1.10% p.a. net of increases in deferment for benefits accrued after 5 April 2009 (this allows for increases in deferment in line with price inflation limited to 2.5% p.a.).
Post-retirement discount rate – Non-pensioners	1.35% p.a., for non- increasing pensions (this is the pension accrued before 6 April 1997). -1.05% p.a. net of increase, for increasing pensions (this is the pension accrued after 5 April 1997, and the assumption allows for increases in payment in line with price inflation limited to 2.5% p.a.)
Post-retirement discount rate – pensioners	1.36% p.a., for non- increasing pensions (this is the pension accrued before 6 April 1997). -0.44% p.a. net of increase, for increasing pensions (this is the pension accrued after 5 April 1997, and the assumption allows for increases in payment in line with price inflation limited to 2.5% p.a.).
Mortality before and after retirement	Standard tables S2PMA and S2PFA applicable for the member's year of birth with a scaling factor of 100%. An allowance for improvements in mortality from 2007 in line with the CMI 2016 projections with Sk=7.5 assuming a long term annual improvement in mortality rates of 1.5% for males and 1.25% for females.

Family details	Age difference between member and dependant: males are assumed to be three years older than females. 85% of male members and 75% of female members are assumed to be married at retirement or earlier death. Children's pensions in payment are assumed to cease at age 18, or age 23 if currently aged over 17.
Estimated wind-up expenses	3% of liabilities (excluding benefit installation /payment expenses) up to £50M; plus 2% of liabilities (excluding benefit installation /payment expenses) between £50M and £100M; plus 1% of liabilities (excluding benefit installation /payment expenses) in excess of £100M.
Benefit installation / payment expenses	Non-pensioners: An allowance of £1,000 per member. Pensioners: Expenses per member based on age as follows: Under age 60 £900 Age 60 – 70 £800 Age 70-80 £600 Over age 80 £500

Appendix G – Section 179 valuation certificate

Actuarial certificate required under Section 179 of the pension Act 2004 and the Pension Protection Fund's regulations and guidance.

Scheme / Section details

Full name of scheme:	Nationwide Pension Fund
Name of section, if applicable:	Cheshire & Derbyshire Section
Pension Scheme Registration Number:	19012902
Address of scheme (or section, where applicable)	Pensions Department, Nationwide Building Society Nationwide House, Pipers Way Swindon Wiltshire
Postcode:	SN38 2GN

Section 179 valuation

Effective date of this valuation (dd/mm/yyyy):	31 March 2019

Guidance and assumptions

s179 guidance used for this valuation:	G8
s179 assumptions used for this valuation:	A9

Assets

Total assets: (this figure should not be reduced by the amount of any external liabilities and should include the insurance policies referred to below)	£335,900,000
Date of relevant accounts (dd/mm/yyyy):	31 March 2019
Percentage of the assets shown above held in the form of a contract of insurance where this is not included in the asset value recorded in the relevant scheme accounts:	0%

Liabilities

Please show liabilities for:

Active members (excluding expenses):	£3,000,000
Deferred members (excluding expenses):	£118,000,000
Pensioner members (excluding expenses):	£125,000,000
Estimated expenses of winding up:	£4,000,000
Estimated expenses of benefit installation/payment:	£1,150,000
External liabilities:	£0
Total protected liabilities:	£251,150,000

Please provide the percentage of the liabilities shown above that are fully matched by insured annuity contracts for:

Active members:	0%
Deferred members:	0%
Pensioner members:	5%

Proportion of liabilities

Please show the percentage of liabilities which relate to each period of service for:

	Before 6 April 1997	6 April 1997 to 5 April 2009 (inclusive)	After 5 April 2009
Active members	14%	79%	7%
Deferred members	28%	70%	2%

	Before 6 April 1997	After 5 April 1997
Pensioner members	57%	43%

Number of members and average ages

For each member type, please show the number of members and the average age (weighted by protected liabilities) as at the effective date of this valuation. Average ages should be rounded to the nearest whole year.

	Number	Average age
Active members	16	50
Deferred members	679	51
Pensioner members	637	69

I certify that this valuation has been carried out in accordance with the Pension Protection Fund (Valuation) Regulations 2005 and with the appropriate section 179 guidance and assumptions issued by the Board of the Pension Protection Fund. I also certify that the calculated value of the protected liabilities is, in my opinion, unlikely to have been understated.

Signature: Keith Poulson

Date: 23 January 2020

Name: Keith Poulson FIA

Qualification: Fellow of the Institute and Faculty of Actuaries

Employer: Aon Hewitt Limited

Appendix H – Certificate of technical provisions

Actuarial certificate given for the purposes of Regulation 7(4)(a) of the Occupational Pension Schemes (Scheme Funding) Regulations 2005

Cheshire & Derbyshire Section

Calculation of technical provisions

I certify that, in my opinion, the calculation of the scheme's technical provisions as at 31 March 2019 is made in accordance with regulations under section 222 of the Pensions Act 2004. The calculation uses a method and assumptions determined by the Trustee and set out in the Statement of Funding Principles dated 23 January 2020.

Signature: Keith Poulson

Date: 23 January 2020

Name: Keith Poulson FIA
Qualification: Fellow of the Institute and Faculty of Actuaries

Aon
Verulam Point, Station Way
St Albans, Hertfordshire
AL 1 5HE

Appendix I – Glossary

Control period
This is the period of time from the valuation date that is considered when calculating the future service cost for schemes still open to accrual.

Deficit
This is the funding target less the value of assets. If the value of assets is greater than the funding target, then the difference is called the surplus.

Defined Accrued Benefits Method
One of the possible methods used by actuaries to calculate actuarial liabilities and contribution rates. This method assumes that the scheme will be discontinued at the effective valuation date when calculating liabilities or at the end of the control period when calculating contribution rates and so does not allow for any further projected future increases to pay or any other terms applicable to active members.

Discount rate
This is used to place a present value on a future payment. A 'risk-free' discount rate is usually derived from the investment return achievable by investing in government gilt-edged stock. A discount rate higher than the 'risk-free' rate is often used to allow for some of the extra investment return that is expected by investing in assets other than gilts.

Discretionary benefits
Benefits that are not guaranteed under a scheme's rules and which are only granted to members at the discretion of the trustees and/or the sponsor.

Funding level
This is the ratio of the value of assets to the funding target.

Funding target
An assessment of the present value of the benefits that will be paid from the scheme in the future, normally based on pensionable service prior to the valuation date. Often, the funding target is equal to the technical provisions.

Gilt yield curve
The term-dependent yields on gilts derived from fixed-interest gilts published by the Bank of England which is extended by Aon Hewitt for years beyond those published.

Guaranteed Minimum Pensions (GMPs)
Most schemes that were contracted out of the State Earnings Related Pension Scheme (SERPS) before April 1997 have to provide a pension for service before that date at least equal to the Guaranteed Minimum Pension (GMP). This is approximately equal to the SERPS pension that the member would have earned had the scheme not been contracted out. GMPs ceased to build up on 6 April 1997 when the legislation changed.

Hedging
A liability is said to be hedged if a scheme holds investments which respond in the same way as it does to changes in the risk being hedged (eg interest rates or inflation). Gilts and swaps are examples of investments which are commonly used to hedge liabilities.

Limited Price Indexation (LPI)
The Pensions Act 1995 required schemes to provide a minimum level of annual increase to pensions in payment. The minimum level is the smaller of 5% and the increase in inflation* and applies to the pension earned from 6 April 1997 to 5 April 2005. With effect from 6 April 2005, the cap for statutorily required LPI for future service was reduced from 5% to 2.5%.

*Until 2010, inflation for the purpose of this minimum was defined with reference to changes in the Retail Prices Index. From 2011, inflation was defined with reference to changes in the Consumer Prices Index.

Partly Projected Unit Method
One of the possible methods used by actuaries to calculate actuarial liabilities and contribution rates.

This method allows for some, but not full, projected future increases to pay between the valuation date and retirement or date of leaving service.

Pension Protection Fund (PPF)
The PPF was established with effect from 6 April 2005. The PPF will normally take over the assets of a pension scheme in the event of its employer becoming insolvent and the scheme having insufficient assets to provide the PPF benefits. The PPF will not provide the scheme benefits in full. The PPF is financed by a levy on most defined benefit pension schemes.

The PPF benefits are broadly 100% of benefits for pensioners over normal retirement age and 90% of benefits up to a cap for all other members. Pension increases granted on benefits are at lower levels than apply in many schemes, in particular, benefits earned before 6 April 1997 would not be given any pension increases within the PPF.

Present value
Actuarial valuations involve projections of pay, pensions and other benefits into the future. To express the value of the projected benefits in terms of a cash amount at the valuation date, the projected amounts are discounted back to the valuation date by a discount rate. This value is known as the present value. For example, if the discount rate was 6% a year and if we had to pay a lump sum of £1,060 in one year's time the present value would be £1,000.

Projected Unit Method
One of the common methods used by actuaries to calculate actuarial liabilities and contribution rates. This method allows for full projected future increases to pay through to retirement or withdrawal.

Prudent
Prudent assumptions are assumptions that, if a scheme continues on an ongoing basis, are more likely to overstate than understate the amount of money actually required to meet the cost of the benefits.

Recovery plan
Where a valuation shows a funding shortfall against the technical provisions, trustees must prepare a recovery plan setting out how they plan to meet the statutory funding objective.

RPI inflation curve
The term-dependent RPI inflation expectations derived from fixed-interest and index-linked gilts published by the Bank of England which is extended by Aon Hewitt for years beyond those published.

Schedule of contributions
Trustees of pension schemes must prepare and maintain a schedule of contributions. This shows the dates and amounts of contributions due from the employer and members. Under the Pensions Act 2004 the schedule must be put in place within 15 months of the valuation date.

Solvency ratio
This is the ratio of the market value of a scheme's assets to the estimated cost of securing a scheme's liabilities in the event of the discontinuance of the scheme.

The Statement of Funding Principles
The Pensions Act 2004 requires trustees to prepare (and from time to time review and if necessary revise) a written statement of their policy for securing that the statutory funding objective is met. This is referred to as a statement of funding principles.

Statutory estimate of solvency
This is the difference between the market value of a scheme's assets and the estimated cost of securing a scheme's liabilities in the event of the discontinuance of the scheme.

Statutory funding objective
Under the Pensions Act 2004, every scheme is subject to the statutory funding objective, which is to have sufficient and appropriate assets to cover its technical provisions.

Surplus
This is the value of assets less the funding target. If the funding target is greater than the value of assets, then the difference is called a deficit.

Technical provisions
This is the present value of the benefits members are entitled to based on pensionable service to the valuation date, assessed using the assumptions agreed between a scheme's trustees and the company. It generally allows for projected future increases to pay through to retirement or date of leaving service.

Transfer value
Members generally have a legal right to transfer their benefits to another pension arrangement before they retire. In taking a transfer, members give up their benefits in a scheme, and a sum of money (called the transfer value) is paid into another approved pension scheme; this is used to provide pension benefits on the terms offered in that scheme.

Appendix J - Report Framework

This report has been prepared in accordance with the framework below.

TAS compliant

This report, and the work relating to it, complies with 'Technical Actuarial Standard 100: Principles for Technical Actuarial Work' ('TAS 100') and 'Technical Actuarial Standard 300: Pensions' ('TAS 300').

The compliance is on the basis that Directors of Nationwide Pension Fund Trustee Limited are the addressees and the only users and that the report is only to be used as a summary of the outcome of the valuation. If you intend to make any other decisions after reviewing this report, please let me know and I will consider what further information I need to provide to help you make those decisions.

The report has been requested by the Trustee. It has been prepared under the terms of the most recent Scheme Actuary Agreement between the Trustee and me on the understanding that it is solely for the benefit of the addressees.

This report should be read in conjunction with:

- The paper titled 'Guidance on Actuarial Valuations' dated 11 April 2019
- The presentation titled '2019 Actuarial Valuations – Assumptions' dated 11 April 2019
- Initial results report for the C&D Section dated 23 January 2020
- The presentation titled '2019 Actuarial Valuations – July update' dated 11 July 2019
- The presentation titled '2019 Actuarial Valuations – December update' dated 5 December 2019
- Initial results report for the C&D Section dated 23 January 2020
- The statement of funding principles dated 23 January 2020