

Appendix 3 - Forecasting Technical Report

Introduction

- 1.1 For the electoral review of Rochdale there is a requirement for the Council to understand the future electoral balance of the borough. The submission requires a projected six year electoral forecast from 2020 to 2026.
- 1.2 The Local Government Boundary Commission for England have a statutory duty to ensure that all of its reviews are based on robust forecasts of future electorates.
- 1.3 Calculating the future population and understanding electorate change allows the Council to direct services within the borough and ensure a balance in the number and distribution of electors within the wards of Rochdale.
- 1.4 This technical report explains how the forecasted electorate has been calculated and in particular explains the methodology and supporting data that was utilised.

Methodology

- 1.5 To understand the future electorate of the borough a methodology was used to calculate the forecasted changes and ensure a robust result which is reflective of the known future housing planning and historic patterns of population change within the borough.
- 1.6 The LGBCE provide electoral forecasting guidance which was used as the foundation of the methodology adopted in Rochdale. Unlike other authorities Rochdale Borough Council does not invest in software that tracks population change between census years.
- 1.7 Published data from the Office of National Statistics were considered for the methodology process such as sub-national population projections as well as the mid-year population estimates for Rochdale. Census data was considered but due to the last published date of 2011 couldn't be used effectively.
- 1.8 Unfortunately the mid-year estimates (MYE) appeared to be too low for Rochdale. This was proved as the cleansed internal electoral register showed more people aged 18+ and eligible to vote in some wards than there were actual people in the ward according to the MYE. Manchester City Council experienced a similar issue when conducting their review.

- 1.9 The formula below, provided by LGBCE, was utilised as part of the forecasting methodology. This was developed at polling district level and then up scaled to ward level.

††)

**Initial future electorate forecast =
current electorate + change in electorate in the last six years.**

Now consider the effect of additional new housing:

**New housing addition =
net new dwellings expected in the next six years – net new dwellings created
in the last six years.**

(This may produce a negative number)

Convert this new housing addition to electors:

**Additional electors from new housing =
Number of new dwellings x electors per dwelling**

Complete the area forecast:

Initial future electorate forecast + Additional electors from new housing

- 1.10 There are two main elements to the formula
- Change in electorate over time
 - Change in relation to new housing
- 1.11 In order to capture the trend in natural demographic change; the difference in electorate from 2014 to 2020 was added on to the current published electorate 2020. This is based on the fact that the rate of electoral registrations over the next six years will continue in the same pattern as it has done in the last six years.
- 1.12 New housing development was then considered. The expected housing growth in an area minus any expected demolitions was added to the forecast. This figure was then subtracted from the number of net dwellings developed in the past six years. The reason for the subtraction was to account for additional housing growth in the area on top of what would have been developed anyway. All housing information was provided by the Council's planning department.
- 1.13 The additional new houses forecasted in an area was then multiplied against the ratio of electors to housing in an area. This essentially provides the future number of electors likely to live in the new housing.
- 1.14 To make the elector ratio more robust the difference between the

elector ratios in 2020 to 2014 was then added to the elector ratio in 2020. This captured the change in elector ratio in the last six years and applied it to the next six years. Elector ratio formulas have been applied at polling district level.

- 1.15 Finally the additional electors through demographic change were added to the additional electors from housing planning change providing a viable number of forecasted electors in 2026.
- 1.16 A combination of other methodologies were also considered in regards to forecasting; the one that was adopted for the submission was deemed the most resilient in particular when validating the overall figures produced against the electoral registration trend over the last six years (see table below).

2014		2020		2026 (forecast)	
Electorate	% diff	Electorate	% diff	Electorate	% diff
160410	N/A	167097	4.2%	175323	4.9%

Summary

- 1.17 The methodology used provides estimates regarding the forecasted future electorate that are timely and robust that should improve on those that are available nationally.
- 1.18 The future distribution of electors at ward and polling district level are highlighted in Appendix A and Appendix B respectively.
- 1.19 All formulas and working has been approved and validated by the cross party member steering group.

Appendix A - Ward Level Forecast

Ward	Published Electorate (Feb 2020)	Published Electorate (Dec 2014)	Change in Electorate in last six years	Initial Future electorate forecast	Current Dwellings 2019	Net new dwellings expected in the next 6 years	Net new dwellings created in the last 6 years	New housing additions	Additional Electors from new housing	Initial future electorate	Total Electors	Forecasted Electoral Imbalance
Balderstone & Kirkholt	8,167	7,539	628	8,795	4,816	488	159	254	520	9,315	9315	6%
Bamford	7,998	7,798	200	8,198	4,212	71	-1	69	144	8,342	8342	-5%
Castleton	8,106	7,906	200	8,306	4,706	200	148	52	68	8,374	8374	-4%
Central Rochdale	7,834	7,460	374	8,208	4,518	-455	79	-634	-758	7,450	7450	-15%
East Middleton	8,238	8,025	213	8,451	4,931	244	123	121	226	8,677	8677	-1%
Healey	8,206	8,084	122	8,328	4,447	34	23	11	21	8,349	8349	-5%
Hopwood Hall	8,712	8,511	201	8,913	5,126	418	127	290	514	9,427	9427	8%
Kingsway	9,422	8,589	833	10,255	5,004	40	234	-194	-431	9,824	9824	12%
Littleborough Lakeside	8,090	7,823	267	8,357	4,686	183	141	40	59	8,416	8416	-4%
Milkstone & Deeplish	8,253	7,789	464	8,717	4,031	316	50	266	660	9,377	9377	7%
Milnrow & Newhey	8,136	7,982	154	8,290	4,551	137	82	47	102	8,392	8392	-4%
Norden	7,969	7,838	131	8,100	4,089	34	53	-20	-40	8,060	8060	-8%
North Heywood	8,138	7,664	474	8,612	5,164	268	168	-58	-82	8,530	8530	-3%
North Middleton	7,877	7,903	-26	7,851	4,684	79	47	32	42	7,893	7893	-10%
Smallbridge & Firgrove	8,288	8,151	137	8,425	4,889	191	5	166	376	8,801	8801	0%
South Middleton	7,999	8,101	-102	7,897	4,446	31	3	27	47	7,944	7944	-9%
Spotland & Falinge	8,616	8,118	498	9,114	4,648	73	102	-29	-55	9,059	9059	3%
Wardle & West Littleborough	8,247	7,602	645	8,892	4,482	147	378	-231	-549	8,343	8343	-5%
West Heywood	9,153	8,817	336	9,489	5,416	46	364	-318	-575	8,914	8914	2%
West Middleton	9,648	8,710	938	10,586	5,769	987	283	703	1,251	11,837	11837	35%
Rochdale	167,097	160,410	6,687	173,784	94,615	3,532	2,568	594	1,539	175,323	175323	

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Appendix B - Polling District Level Forecast

Ward	Electoral District	Published Electorate (Feb 2020)	Published Electorate (Dec 2014)	Change in Electorate in last six years	Initial Future electorate forecast	Current Dwellings 2019	Net new dwellings expected in the next 6 years	Net new dwellings created in the last 6 years	New housing additions	Electors per dwelling	Electors per dwelling 2014	New Forecast	Additional Electors from new housing	Initial future electorate
Balderstone & Kirkholt 1	DA	1,091	1,048	43	1,134	635	14	0	14	1.72	1.44	2.00	27	1,161
Balderstone & Kirkholt 2	DB	1,113	1,090	23	1,136	784	0	16	-16	1.42	1.19	1.65	-26	1,110
Balderstone & Kirkholt 3	DC	1,389	1,269	120	1,509	729	147	22	125	1.91	1.56	2.25	282	1,791
Balderstone & Kirkholt 4	DD	2,400	2,045	355	2,755	1,366	74	194	-120	1.76	1.56	1.96	-235	2,520
Balderstone & Kirkholt 5	DE	652	654	-2	650	330	6	0	6	1.98	1.86	2.09	13	663
Balderstone & Kirkholt 6	DF	1,522	1,433	89	1,611	972	247	-73	245	1.57	1.26	1.87	460	2,071
Balderstone & Kirkholt		8,167	7,539	628	8,795	4,816	488	159	254				520	9,315
Bamford 1	HA	2,311	2,138	173	2,484	1,283	8	0	7	1.80	1.48	2.12	14	2,498
Bamford 2	HB	691	665	26	717	382	14	0	14	1.81	1.54	2.08	29	746
Bamford 3	HC	3,094	3,102	-8	3,086	1,585	40	-1	39	1.95	1.81	2.09	82	3,168
Bamford 4	HD	1,902	1,893	9	1,911	962	9	0	9	1.98	1.81	2.15	19	1,930
Bamford		7,998	7,798	200	8,198	4,212	71	-1	69				144	8,342
Castleton 1	EA	2,172	2,174	-2	2,170	1,390	102	26	76	1.56	1.35	1.77	134	2,304
Castleton 2	EB	2,060	2,067	-7	2,053	1,103	6	122	-116	1.87	1.67	2.07	-240	1,813
Castleton 3	EC	2,061	1,878	183	2,244	1,249	58	0	58	1.65	1.50	1.80	103	2,347
Castleton 4	ED	913	914	-1	912	483	5	0	5	1.89	1.67	2.11	10	922
Castleton 5	EE	448	426	22	470	234	0	0	0	1.91	1.70	2.13	0	470
Castleton 6	EF	452	447	5	457	247	30	0	30	1.83	1.64	2.02	60	517
Castleton		8,106	7,906	200	8,306	4,706	200	148	52				68	8,374
Central Rochdale 1	GA	1,019	1,224	-205	814	1,039	-587	-100	-587	0.98	0.87	1.09	-643	171
Central Rochdale 2	GB	1,681	1,499	182	1,863	1,031	52	45	7	1.63	1.19	2.07	14	1,877
Central Rochdale 3	GC	1,029	1,035	-6	1,023	627	5	10	-5	1.64	1.45	1.83	-10	1,013
Central Rochdale 4	GD	2,098	1,893	205	2,303	968	55	59	-4	2.17	1.77	2.56	-10	2,293
Central Rochdale 5	GE	850	734	116	966	359	16	61	-45	2.37	2.29	2.44	-110	856
Central Rochdale 6	GF	1,157	1,075	82	1,239	494	4	4	0	2.34	1.93	2.76	1	1,240
Central Rochdale		7,834	7,460	374	8,208	4,518	-455	79	-634				-758	7,450
East Middleton 1	NA	2,220	2,151	69	2,289	1,221	56	8	48	1.82	1.58	2.06	98	2,387
East Middleton 2	NB	2,290	2,389	-99	2,191	1,387	14	5	9	1.65	1.56	1.75	16	2,207
East Middleton 3	NC	1,937	1,853	84	2,021	1,202	8	0	8	1.61	1.36	1.86	14	2,035
East Middleton 4	ND	1,791	1,632	159	1,950	1,121	166	110	56	1.60	1.47	1.73	97	2,047
East Middleton		8,238	8,025	213	8,451	4,931	244	123	121				226	8,677

Healey 1	AA	2,999	2,893	106	3,105	1,590	9	7	2	1.89	1.68	2.09	4	3,109
Healey 2	AB	2,312	2,294	18	2,330	1,282	3	0	3	1.80	1.60	2.01	6	2,336
Healey 3	AC	1,263	1,224	39	1,302	644	0	5	-5	1.96	1.73	2.19	-11	1,291
Healey 4	AD	1,632	1,673	-41	1,591	931	22	11	11	1.75	1.64	1.87	21	1,612
Healey		8,206	8,084	122	8,328	4,447	34	23	11				21	8,349
Hopwood 1	MA	862	840	22	884	570	0	0	0	1.51	1.25	1.78	0	884
Hopwood 2	MB	2,046	2,045	1	2,047	1,026	0	0	0	1.99	1.76	2.23	0	2,047
Hopwood 3	MC	2,752	2,813	-61	2,691	1,514	108	-1	108	1.82	1.68	1.96	212	2,903
Hopwood 4	ME	2,163	1,993	170	2,333	1,417	310	88	222	1.53	1.39	1.66	370	2,703
Hopwood 5	MF	889	820	69	958	599	0	40	-40	1.48	1.28	1.69	-67	891
Hopwood		8,712	8,511	201	8,913	5,126	418	127	290				514	9,427
Kingsway 1	BA	2,208	2,077	131	2,339	1,190	9	38	-29	1.86	1.44	2.27	-66	2,273
Kingsway 2	BB	1,419	1,359	60	1,479	769	5	6	-1	1.85	1.52	2.17	-2	1,477
Kingsway 3	BC	1,586	1,137	449	2,035	801	15	181	-166	1.98	1.74	2.22	-368	1,667
Kingsway 4	BD	1,401	1,278	123	1,524	717	4	0	4	1.95	1.54	2.37	9	1,533
Kingsway 5	BE	1,354	1,377	-23	1,331	742	1	0	1	1.82	1.64	2.01	2	1,333
Kingsway 6	BF	1,454	1,361	93	1,547	785	6	9	-3	1.85	1.55	2.15	-6	1,541
Kingsway		9,422	8,589	833	10,255	5,004	40	234	-194				-431	9,824
Littleborough Lakeside 1	RA	780	788	-8	772	500	46	1	45	1.56	1.36	1.76	80	852
Littleborough Lakeside 2	RB	1,316	1,209	107	1,423	764	4	104	-100	1.72	1.50	1.94	-195	1,228
Littleborough Lakeside 3	RC	1,411	1,258	153	1,564	776	6	0	6	1.82	1.56	2.08	12	1,576
Littleborough Lakeside 4	RD	1,912	1,865	47	1,959	1,203	121	35	85	1.59	1.37	1.80	153	2,112
Littleborough Lakeside 5	RE	2,671	2,703	-32	2,639	1,443	6	1	4	1.85	1.71	1.99	9	2,648
Littleborough Lakeside		8,090	7,823	267	8,357	4,686	183	141	40				59	8,416
Milkstone & Deeplish 1	CA	849	789	60	909	351	115	0	115	2.42	2.00	2.84	325	1,234
Milkstone & Deeplish 2	CB	1,905	1,831	74	1,979	922	10	0	10	2.07	1.72	2.41	23	2,002
Milkstone & Deeplish 3	CC	1,872	1,820	52	1,924	781	1	9	-8	2.40	2.20	2.60	-21	1,903
Milkstone & Deeplish 4	CD	683	628	55	738	391	7	1	6	1.75	1.44	2.06	12	750
Milkstone & Deeplish 5	CE	2,944	2,721	223	3,167	1,586	184	40	144	1.86	1.48	2.23	320	3,487
Milkstone & Deeplish		8,253	7,789	464	8,717	4,031	316	50	266				660	9,377
Milnrow & Newhey 1	SA	1,017	1,007	10	1,027	505	1	12	-11	2.01	1.86	2.16	-24	1,003
Milnrow & Newhey 2	SB	1,229	1,197	32	1,261	654	38	7	31	1.88	1.70	2.06	64	1,325
Milnrow & Newhey 3	SC	3,363	3,331	32	3,395	1,916	86	2	84	1.76	1.52	1.99	167	3,562
Milnrow & Newhey 4	SD	2,527	2,447	80	2,607	1,476	12	61	-57	1.71	1.58	1.85	-105	2,502
Milnrow & Newhey		8,136	7,982	154	8,290	4,551	137	82	47				102	8,392
Norden 1	JA	2,298	2,230	68	2,366	1,081	1	0	1	2.13	1.85	2.40	2	2,368
Norden 2	JB	2,294	2,290	4	2,298	1,128	0	0	-1	2.03	1.85	2.22	-2	2,296
Norden 3	JC	2,801	2,803	-2	2,799	1,550	17	53	-36	1.81	1.64	1.97	-71	2,728
Norden 4	JD	576	515	61	637	330	16	0	16	1.75	1.55	1.94	31	668

Norden		7,969	7,838	131	8,100	4,089	34	53	-20				-40	8,060
North Heywood 1	LA	2,020	1,723	297	2,317	1,114	9	4	5	1.81	1.48	2.14	11	2,328
North Heywood 2	LB	2,102	2,057	45	2,147	1,417	15	198	-183	1.48	1.32	1.65	-301	1,846
North Heywood 3	LC	894	903	-9	885	589	80	3	77	1.52	1.32	1.72	132	1,017
North Heywood 4	LD	2,489	2,301	188	2,677	1,600	108	56	52	1.56	1.33	1.79	94	2,771
North Heywood 5	LF	633	680	-47	586	444	55	-93	-10	1.43	1.05	1.81	-18	568
North Heywood		8,138	7,664	474	8,612	5,164	268	168	-58				-82	8,530
North Middleton 1	QA	566	554	12	578	291	0	1	-1	1.95	1.79	2.10	-2	576
North Middleton 2	QB	1,100	1,114	-14	1,086	752	13	6	7	1.46	1.28	1.65	12	1,098
North Middleton 3	QC	860	851	9	869	528	0	2	-2	1.63	1.38	1.88	-4	865
North Middleton 4	QD	3,521	3,518	3	3,524	1,877	24	38	-14	1.88	1.65	2.10	-29	3,495
North Middleton 5	QE	1,576	1,600	-24	1,552	1,048	29	0	29	1.50	1.35	1.66	47	1,599
North Middleton 6	QF	254	266	-12	242	188	13	0	13	1.35	1.29	1.41	18	260
North Middleton		7,877	7,903	-26	7,851	4,684	79	47	32				42	7,893
Smallbridge & Firgrove 1	IA	1,059	1,048	11	1,070	684	6	0	6	1.55	1.33	1.77	11	1,081
Smallbridge & Firgrove 2	IB	1,797	1,775	22	1,819	1,065	4	1	3	1.69	1.46	1.92	6	1,825
Smallbridge & Firgrove 3	IC	920	834	86	1,006	468	11	8	3	1.97	1.56	2.37	6	1,012
Smallbridge & Firgrove 4	ID	1,465	1,364	101	1,566	699	123	16	107	2.10	1.72	2.47	265	1,831
Smallbridge & Firgrove 5	IE	1,197	1,223	-26	1,171	745	39	-20	39	1.61	1.29	1.92	75	1,246
Smallbridge & Firgrove 6	IF	1,850	1,907	-57	1,793	1,228	8	0	8	1.51	1.33	1.68	13	1,806
Smallbridge & Firgrove		8,288	8,151	137	8,425	4,889	191	5	166				376	8,801
South Middleton 1	OA	1,956	2,014	-58	1,898	1,238	25	2	23	1.58	1.44	1.72	39	1,937
South Middleton 2	OB	1,293	1,283	10	1,303	809	4	0	4	1.60	1.42	1.78	8	1,311
South Middleton 3	OC	1,793	1,785	8	1,801	851	2	1	0	2.11	1.94	2.28	0	1,801
South Middleton 4	OD	1,672	1,707	-35	1,637	878	0	0	0	1.90	1.81	1.99	0	1,637
South Middleton 5	OE	1,285	1,312	-27	1,258	670	0	0	0	1.92	1.79	2.04	0	1,258
South Middleton		7,999	8,101	-102	7,897	4,446	31	3	27				47	7,944
Spotland & Falinge 1	FA	472	451	21	493	213	0	0	0	2.22	1.95	2.48	0	493
Spotland & Falinge 2	FB	1,219	1,225	-6	1,213	701	0	0	0	1.74	1.56	1.92	0	1,213
Spotland & Falinge 3	FC	1,403	898	505	1,908	829	4	0	4	1.69	1.40	1.98	8	1,916
Spotland & Falinge 4	FD	1,623	1,976	-353	1,270	973	4	36	-32	1.67	1.48	1.86	-59	1,211
Spotland & Falinge 5	FE	1,567	1,417	150	1,717	829	24	19	5	1.89	1.45	2.33	11	1,728
Spotland & Falinge 6	FF	2,332	2,151	181	2,513	1,103	41	47	-6	2.11	1.69	2.54	-15	2,498
Spotland & Falinge		8,616	8,118	498	9,114	4,648	73	102	-29				-55	9,059
Wardle & West Littleborough 1	TA	999	941	58	1,057	526	0	0	0	1.90	1.64	2.16	0	1,057
Wardle & West Littleborough 2	TB	1,365	1,336	29	1,394	749	95	0	95	1.82	1.63	2.01	191	1,585
Wardle & West Littleborough 3	TC	2,058	2,085	-27	2,031	1,142	11	0	11	1.80	1.62	1.99	22	2,053
Wardle & West Littleborough 4	TD	2,358	1,759	599	2,957	1,223	20	378	-358	1.93	1.61	2.24	-803	2,154
Wardle & West Littleborough 5	TE	1,467	1,481	-14	1,453	842	21	0	21	1.74	1.58	1.90	40	1,493

Wardle & West Littleborough		8,247	7,602	645	8,892	4,482	147	378	-231				-549	8,343
West Heywood 1	KA	339	339	0	339	189	12	150	-138	1.79	1.64	1.95	-268	71
West Heywood 2	KB	3,610	3,658	-48	3,562	2,017	8	27	-19	1.79	1.56	2.02	-38	3,524
West Heywood 3	KC	2,057	1,775	282	2,339	1,232	23	14	9	1.67	1.30	2.04	19	2,358
West Heywood 4	KD	1,171	990	181	1,352	702	0	1	-1	1.67	1.50	1.84	-2	1,350
West Heywood 5	KE	1,976	2,055	-79	1,897	1,276	3	172	-169	1.55	1.41	1.69	-285	1,612
West Heywood		9,153	8,817	336	9,489	5,416	46	364	-318				-575	8,914
West Middleton 1	PA	162	153	9	171	89	1	0	1	1.82	1.58	2.06	2	173
West Middleton 2	PB	651	625	26	677	335	15	0	15	1.94	1.69	2.20	33	710
West Middleton 3	PC	2,264	1,678	586	2,850	1,412	159	172	-13	1.60	1.37	1.84	-23	2,827
West Middleton 4	PD	946	968	-22	924	550	7	0	7	1.72	1.48	1.96	14	938
West Middleton 5	PE	1,941	1,804	137	2,078	1,161	0	46	-46	1.67	1.40	1.94	-89	1,989
West Middleton 6	PF	2,350	2,255	95	2,445	1,443	805	65	739	1.63	1.48	1.78	1314	3,759
West Middleton 7	PG	1,334	1,227	107	1,441	779	0	0	0	1.71	1.38	2.04	0	1,441
West Middleton		9,648	8,710	938	10,586	5,769	987	283	703				1251	11,837