

NR10 ANNEX B: MWM RESIDUAL WASTE TONNAGE PROJECTIONS FOR ENVIRECOVER

Base case : Household numbers increase according to RSS estimates* Household Waste recycling rate rises to 50% by 2020 (JMWS target) then flatlines																									
	Baseline	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Total increase in houses		2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712
Residual Household Waste in tonnes /hh/yr**	0.594	0.594	0.586	0.577	0.568	0.559	0.550	0.541	0.532	0.522	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
at % recycling rate	42.08	42.08	42.90	43.74	44.59	45.46	46.35	47.25	48.17	49.11	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07	50.07
Therefore residual % rate =		57.92	57.10	56.26	55.41	54.54	53.65	52.75	51.83	50.89	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93	49.93
Total additional residual waste			1588	1565	1541	1517	1492	1467	1442	1415	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389	1389
Cumulative residual waste growth element			1589	3156	4700	6222	7720	9194	10644	12069	13469	14870	16270	17670	19070	20470	21871	23271	24671	26071	27471	28871	30272	31672	33072
Residual Household Waste with no growth		198,981	196,162	193,288	190,358	187,371	184,326	181,221	178,055	174,828	171,538	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532	171,532
Total residual Household Waste with growth			197,751	196,444	195,059	193,593	192,045	190,415	188,699	186,898	185,008	183,401	182,202	181,202	180,401	179,802	179,402	179,202	179,202	179,202	179,202	179,202	179,202	179,202	179,202
Contribution from Commercial/Industrial Waste			2,249	3,556	4,941	6,407	7,955	9,585	11,301	13,102	14,992	13,599	12,198	10,798	9,398	7,998	6,598	5,198	3,797	2,397	997	N/A	N/A	N/A	N/A
Plant Capacity		200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000

* Annual build rates are taken from the WMRSS Phase 2 Revision, Spatial Options Report, Table 2, Option 2

** Base case tonnes per household per year from Wastedataflow Defra statistics for NI 191

Sensitivity 1: Household Waste recycling rate rises to 55% by 2020 then flatlines																									
	Baseline	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Total increase in houses		2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712
Residual Household Waste quantity in tonnes /hh/yr	0.594	0.594	0.581	0.567	0.553	0.539	0.524	0.509	0.493	0.477	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
at % recycling rate	42.08	42.08	43.36	44.69	46.05	47.45	48.90	50.39	51.93	53.51	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15	55.15
Therefore residual % rate =		57.92	56.64	55.31	53.95	52.55	51.10	49.61	48.07	46.49	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85	44.85
Total additional residual waste			1575	1538	1501	1461	1421	1380	1337	1293	1248	1247	1247	1247	1247	1247	1247	1247	1247	1247	1247	1247	1247	1247	1247
Cumulative residual waste growth element			1575	3114	4614	6076	7497	8877	10214	11507	12754	14002	15249	16496	17744	18991	20239	21486	22733	23981	25228	26476	27723	28970	30218
Residual Household Waste with no growth		198,981	194,572	190,028	185,346	180,521	175,549	170,425	165,145	159,703	154,096	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080	154,080
Total residual Household Waste with growth			196,147	193,142	189,960	186,597	183,046	179,301	175,358	171,210	166,850	168,081	169,329	170,576	171,824	173,071	174,318	175,566	176,813	178,061	179,308	180,555	181,803	183,050	184,298
Contribution from Commercial/Industrial Waste			3,853	6,858	10,040	13,403	16,954	20,699	24,642	28,790	33,150	31,919	30,671	29,424	28,176	26,929	25,682	24,434	23,187	21,939	20,692	19,445	18,197	16,950	15,702
Plant Capacity		200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000

Sensitivity 2: Household Waste Recycling rates rises to 50% by 2016, to 55% by 2023, and to 60% by 2028																									
	Baseline	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Total increase in houses		2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712	2712
Residual Household Waste quantity in tonnes /hh/yr	0.594	0.594	0.583	0.572	0.561	0.549	0.537	0.525	0.513	0.503	0.493	0.482	0.472	0.461	0.451	0.441	0.431	0.420	0.410	0.409	0.409	0.409	0.409	0.409	0.409
at % recycling rate	42.08	42.08	43.13	44.21	45.32	46.45	47.61	48.80	50.02	50.99	51.97	52.97	53.99	55.04	56.01	56.99	57.99	59.01	60.05	60.09	60.09	60.09	60.09	60.09	60.09
Therefore residual % rate =		57.92	56.87	55.79	54.68	53.55	52.39	51.20	49.98	49.01	47.03	46.01	44.96	44.96	43.99	43.01	42.01	40.99	39.95	39.91	39.91	39.91	39.91	39.91	39.91
Total additional residual waste			1582	1552	1521	1489	1457	1424	1390	1363	1336	1308	1280	1251	1224	1196	1168	1140	1111	1110	1110	1110	1110	1110	1110
Cumulative residual waste growth element			1589	3156	4700	6222	7720	9194	10644	12069	13469	14870	16270	17670	19070	20470	21871	23271	24671	26071	27471	28871	30272	31672	33072
Residual Household Waste with no growth		198,981	195,367	191,662	187,865	183,973	179,984	175,895	171,704	168,387	165,007	161,561	158,049	154,469	151,141	147,755	144,309	140,802	137,234	133,109	133,109	133,109	133,109	133,109	133,109
Total residual Household Waste with growth			196,956	194,819	192,651	190,451	188,219	185,951	183,648	181,310	178,941	176,541	174,110	171,659	169,188	166,677	164,126	161,535	158,904	156,233	153,522	150,771	148,000	145,209	142,398
Contribution from Commercial/Industrial Waste			3,044	5,181	7,295	9,385	11,449	13,488	15,492	17,451	19,365	21,234	23,058	24,837	26,571	28,260	29,904	31,503	33,057	34,566	36,030	37,449	38,823	40,152	41,436
Plant Capacity		200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000

Sensitivity 3: Base case with housing numbers revised according to information post-RSS

- Housing projections for South Worcs Districts (Malvern Hills, Worcester City, Wychavon) are taken from SWDP Preferred Options Consultation Document Policy 2 Table 4
- Housing projections for Wyre Forest are taken from the Adopted Core Strategy, December 2010 Schedule B. Completions in the period 2006 to 2010 are not considered
- Housing projections for Bromsgrove and Redditch taken from latest draft core strategies SHLAA and Monitoring report
- Housing projections for Herefordshire are provided by the Council based on work commissioned in July 2011. Estimates are less than those proposed in the last RSS revision. Completions for 2006 to 2010 are not considered
- Phasing is pro-rata unless stated in reference documents
- Housing projections are to 2030 or as stated in the reference documents, then extrapolated pro-rata to 2033/34 which is the end of the JMWS review period

Additional housing numbers																									
	To 2026	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
South Worcs Joint DP	check	16552	Actual	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection	projection
Wyre Forest		3456	326	326	326	326	326	196	196	196	196	196	94	94	94	94	94	94	94	94	94	94	94	94	94
Redditch/Bromsgrove Est only from RSS		11000	347	347	347	347	347	347	347	347	347	347	347	347	347	347	347	398	398	398	398	398	398	398	398
Herefordshire		16493	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773	773	825	825	825	825	825	825	825
Total increase in houses			2374	2374	2374	2374	2468	2338	2338	2338	2338	2089	1987	1987	1987	1987	1987	2038	2090	2090	2090	2144	2144	2144	2144
Residual Household Waste quantity in tonnes /hh/yr	0.594	0.594	0.586	0.577	0.568	0.559	0.550	0.541	0																