

Renewable Energy Generation Projections

for

Christchurch

East Dorset

North Dorset

Purbeck

West Dorset

Weymouth and Portland

The Christchurch and East Dorset Partnership

The North Dorset, West Dorset and Weymouth & Portland Partnership

Dorset County

Bournemouth

Poole

Greater Dorset



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The Campaign to Protect Rural England exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land and other natural resources in town and country.

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EXECUTIVE SUMMARY

The purposes of this report are to provide up-to-date information on current and projected renewable energy generation and to report progress towards 2020 renewable energy targets for the constituent authorities of Greater Dorset. It can be used as an evidence-base for informing and updating renewable energy policy and for assisting the determination of planning applications for renewable energy installations.

The renewable energy projections in the summary table below follow Government projection methodology and take into account renewable energy installations that are either operational (15,908), under construction (7) or awaiting construction (9).

The installations that are either operational or under construction are generating or expected to generate an annual 819.4 GWh of renewable energy. The 9 installations awaiting construction are projected to generate 103.4 GWh. The combined output of 922.9 GWh is equivalent to 100.1% of a nominal 2020 renewable energy target of 921.7 GWh. This target is 7.5% of estimated 2020 total energy consumption for the Greater Dorset area.

It should be emphasised that projections provide only a current snap-shot. They will change every time a planning decision is made to either approve a proposal awaiting a decision or abandon an approved proposal awaiting construction (for lack of funding, for example).

Local Authority	2020 Energy Consumption GWh	2020 RE Target GWh	CURRENT ANNUAL RENEWABLE ENERGY PROJECTION			
			Heat GWh	Electricity GWh	Total GWh	% of 2020 Target
Christchurch	791.0	59.3	5.1	118.8	123.8	208.7
East Dorset	1,521.9	114.1	19.1	95.2	114.2	100.1
Christchurch and East Dorset Partnership	2,312.9	173.5	24.1	213.9	238.1	137.2
North Dorset	1,236.0	92.7	57.7	69.9	127.6	137.6
West Dorset	2,020.8	151.6	53.1	117.3	170.4	112.4
Weymouth & Portland	829.2	62.2	10.4	53.9	64.4	103.5
North Dorset, West Dorset and Weymouth & Portland Partnership	4,086.1	306.5	121.2	241.1	362.3	118.2
Purbeck	1,098.2	82.4	20.2	128.63	148.8	180.7
Dorset County	7,497.2	562.3	165.5	583.67	749.2	133.2
Bournemouth	2,380.4	178.5	22.3	7.07	29.4	16.5
Poole	2,411.7	180.9	27.8	116.47	144.3	79.8
Greater Dorset	12,289.3	921.7	215.7	707.2	922.9	100.1

The last column of the table shows that 10 of the 12 authorities listed have either just reached or exceeded their target, some by a large margin. The range is wide, from 100.1% for East Dorset and Greater Dorset to 209% for Christchurch. Of the remaining 2, Poole at 80% is doing very well but Bournemouth at 16% is, exceptionally, failing to make headway.

For Greater Dorset, renewable electricity technologies constitute the majority of the projection, 707 GWh (77%), with renewable heat technologies providing the balance, 216 GWh (23%). Of the electricity technologies, the largest contribution to the projection is from solar PV, 420 GWh (45%), the majority from 47 ground-mounted installations with an installed capacity of 0.5 MW or above. These contribute 362 GWh (39%). The second largest contribution is from biomass (including a small amount of Micro CHP) which amounts to 137 GWh (15%).

This report provides evidence that, on the whole, Dorset's record of and prospects for renewable energy generation and progress towards targets are impressive. With acknowledgement that targets are not ceilings, the fact that three years remain before the final year run-up to the target date of 31 December 2020, suggests that planning authorities, from now on, should ensure that no more than minimal damage is caused by renewable energy installations to Dorset's highly valued landscape, heritage, agricultural and amenity assets.

Chart 1 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION COMPARED WITH A 7.5% 2020 RENEWABLE ENERGY TARGET

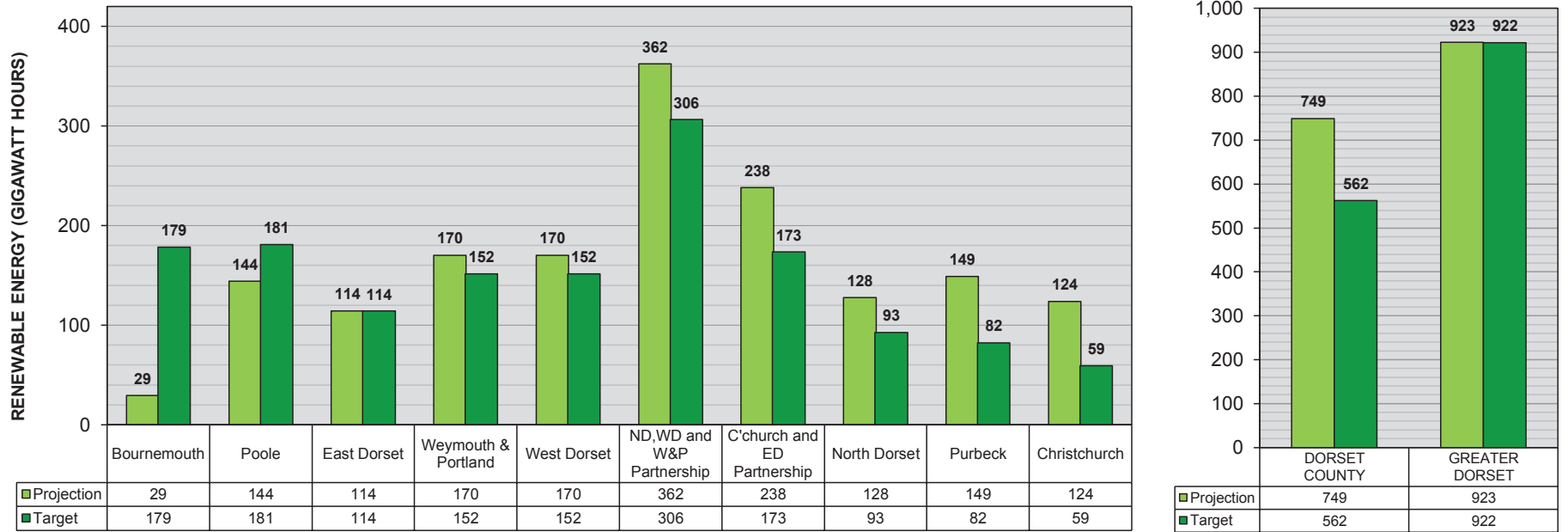


Chart 2 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION COMPARED WITH A 7.5% 2020 RENEWABLE ENERGY TARGET

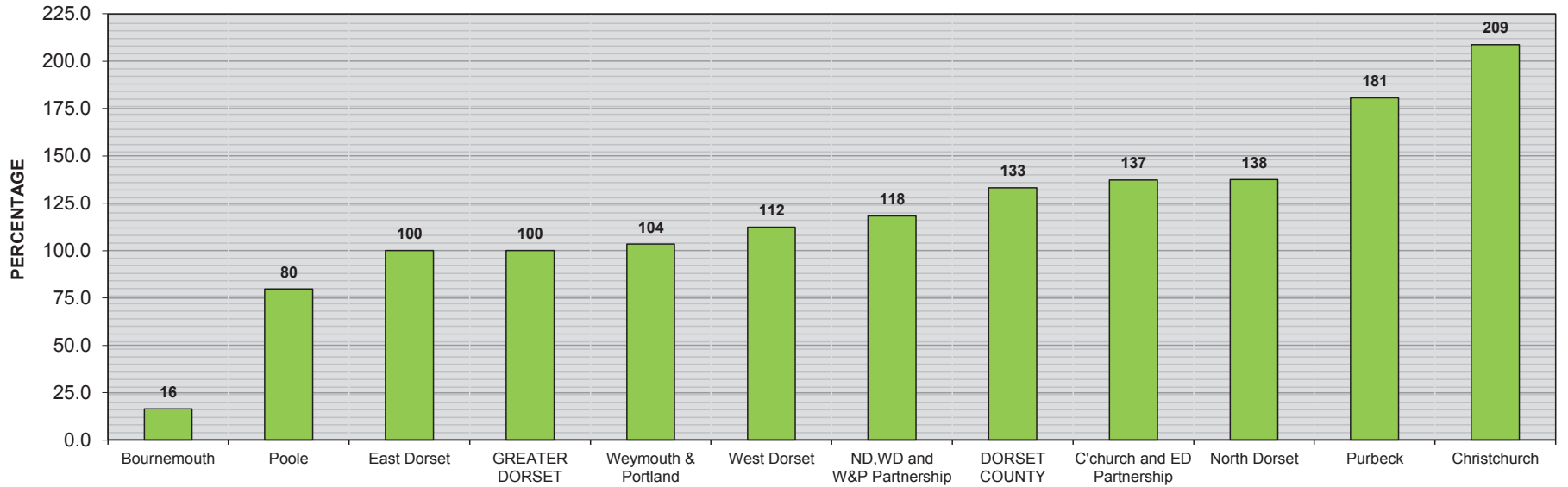


Chart 3 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION
 CONTRIBUTION FROM (1): OPERATIONAL INSTALLATIONS & THOSE UNDER CONSTRUCTION AND (2): THOSE AWAITING CONSTRUCTION

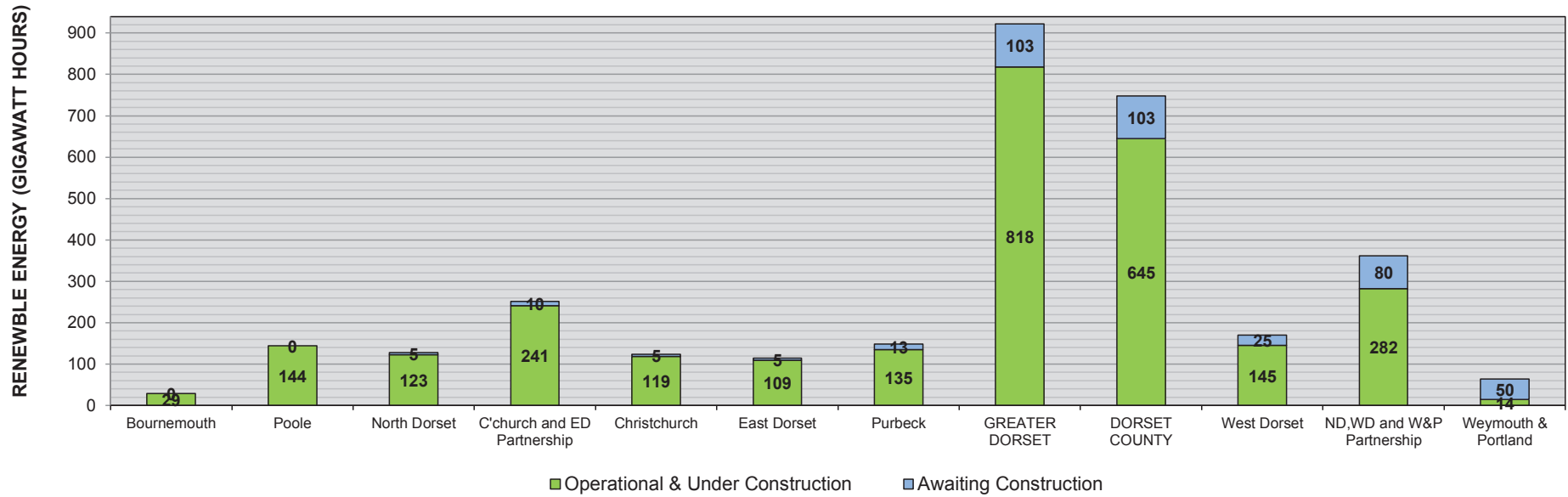
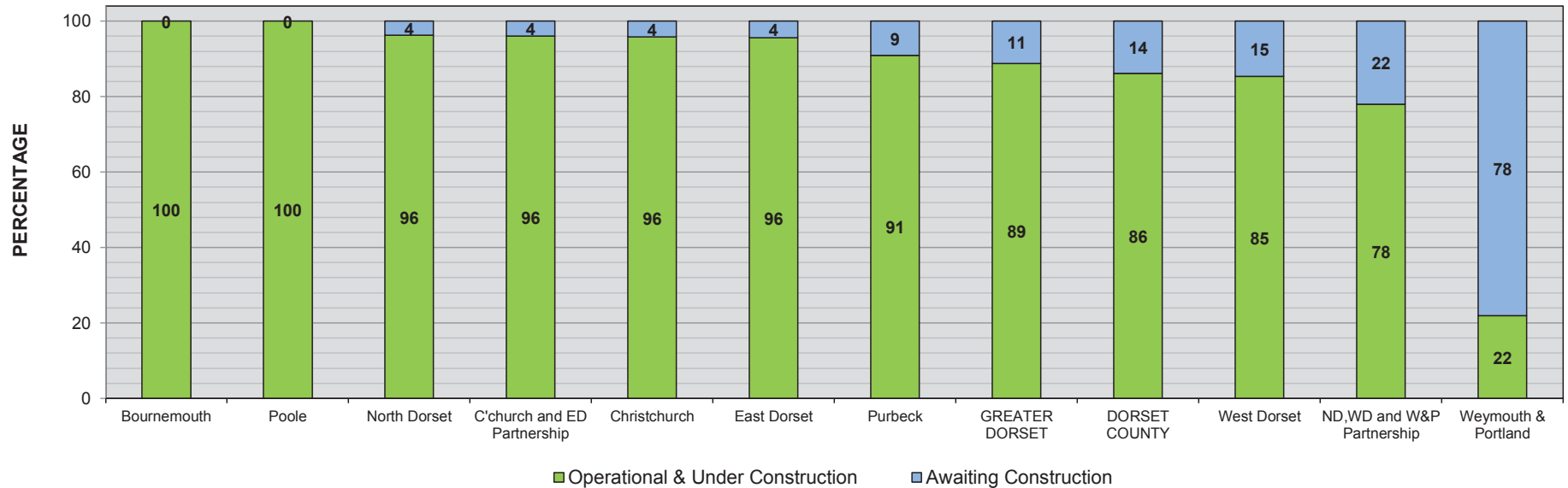


Chart 4 CURRENT ANNUAL RENEWABLE ENERGY PROJECTION
 CONTRIBUTION FROM (1): OPERATIONAL INSTALLATIONS & THOSE UNDER CONSTRUCTION AND (2): THOSE AWAITING CONSTRUCTION



INTRODUCTION

The Dorset Campaign to Protect Rural England is fully supportive of renewable energy - but not at any price. It objects to planning proposals that would be unacceptably damaging to Dorset's highly valued landscape, heritage, agricultural and amenity assets.

The purposes of this report are to provide up-to-date information on renewable energy generation and to report progress towards a notional 7.5% 2020 renewable energy target for the constituent authorities of the Greater Dorset area. It can be used as an evidence-base for informing and updating renewable energy policies and for assisting the determination of planning applications for renewable energy installations.

Government methodology has been followed in the preparation of this report. Renewable energy installations that are either operational, under construction or awaiting construction have been taken into account.

DATA SOURCES

Two Government sources of data for renewable energy generation from electricity technologies have been accessed for this report: The Renewable Energy Planning Database (REPD) Extract, published monthly by the Department for Business, Energy & Industrial Strategy (BEIS) and the Feed-in Tariff (FIT) Installation Report, published quarterly by the Office of Gas and Electricity Markets (Ofgem).

The Extract provides detailed information on every installation with an installed capacity of 1 megawatt (MW) or more that has entered the planning process. It is important to note that the planning status of every installation is checked regularly and that the date of the most recent check is reported in the Extract. The FIT Report contains only installations that have been commissioned and hence provides information for operational installations only. Accreditation by the FIT Scheme is limited to installations with an installed capacity of no more than 5 MW.

Government does not publish data on renewable heat generation at the planning authority level. Information provided in this report, all for operational schemes, has been taken from the Green Alliance/RegenSW Report, published 10 October 2016. Information for domestic wood stoves, not recorded by the Green Alliance/RegenSW, has been taken from the Dorset Energy Partnership's (DEP's) Annual Review 2015/2016, published 8 July 2016.

Local planning authority web sites have also been used as a source of information.

DATA REPORTED

Data are presented in tabular and graphical format. They are accompanied by notes and data sources and are designed to be self-explanatory.

For all technologies other than solar photovoltaic, every renewable electricity generation installation in Greater Dorset is reported individually, in Tables 1 - 8. These total 63. Solar photovoltaic installations with an installed capacity (IC) of 0.5 MW and above are also reported individually. All these are ground-mounted and total 47. To this total can be added one other ground-mounted installation (Table 8, entry 27) which has an IC of 0.2484 MW. All other solar photovoltaic installations with an IC below 0.5 MW, predominantly roof-mounted, are reported as a total number for each local authority. The total for Greater Dorset is 13,943.

Data for six heat technologies: anaerobic digestion, biomass, heat pumps, sewage gas, solar thermal and domestic wood stoves are presented in Tables 9 & 10. The total number of installations, all operational, is 1,870. For presentation purposes, this number is divided by technology and subdivided by local authority.

It is notable (Table 11) that ground-mounted photovoltaic (PV) technology makes by some margin the largest contribution, 39%, to the current projection for renewable energy generation in Greater Dorset. The contribution from the 6 heat technologies ranks second with 23% and electricity from biomass third with 15%. Although there has been significant objection to larger installations proposed for inappropriate locations, it has become clear that, on the whole, ground-mounted solar installations, particularly those with an IC below 5 MW, can be accommodated successfully within Dorset's countryside.

RENEWABLE ENERGY TARGETS

Although it is only the UK Government that has a legal requirement to meet a 15% 2020 renewable energy target, Dorset's local authorities have a related commitment. Through their membership of the Local Government Association (LGA), the four Districts and two Boroughs of Dorset County, the County itself and the Unitary Authorities of Bournemouth and Poole, endorsed a Memorandum of Understanding (MOU) between DECC and the Local Government Group (LGG) - a partnership the principal member of which is the LGA. The MOU sets out a DECC - LGG partnership approach to help meet climate change mitigation and related objectives, notably including: "The target to supply 15% of the UK's energy consumption from renewable energy by 2020 as set out in the 2009 Renewable Energy Directive" (European Commission Directive 2009/28/EU).

The MOU (published 9 March 2011) makes it clear that "This Memorandum is a statement of intent and should not be interpreted as a binding agreement". Subsequently, DECC's UK Renewable Energy Roadmap (published 12 July 2011) suggested that half the UK's 15% target could come from sources of "national significance". These are defined by DECC as installations with an installed capacity of more than 50 MW onshore and 100 MW offshore and are the direct responsibility of the Secretary of State for Energy and Climate Change. This suggestion effectively reduced a local authority's agreement to generate 15% of its 2020 energy consumption from its own renewable energy sources down to a figure of 7.5%.

This commitment to DECC by Dorset's local authorities to a "local" 7.5% target was not universally repeated when they were requested by the DEP to similarly commit to a 7.5% target for the Greater Dorset area. East Dorset, North Dorset and Purbeck decided the commitment was too close to home. They had twin concerns: that Bournemouth and Poole would be unable to meet a 7.5% target with the resources available to them and that to meet the area target they would be put under pressure to deploy a larger number of wind turbines than they would wish - together they were assessed as having a wind resource equivalent to 214 2.5 MW turbines. To add to their concerns, an assurance by the DEP that the resource assessment was not a planning material consideration turned out to be incorrect.

CONCLUSIONS

This report provides evidence that, on the whole, Dorset's record of and prospects for renewable energy generation and progress towards targets are impressive. The progress that has already been achieved and the fact that 3 years remain before the final year run-up to the target date of 31 December 2020, suggest that now is an opportune time for local authorities to review and adjust, if necessary, their renewable energy policies. If they do not already do so, and accepting that targets are not ceilings, policies should from now on ensure that no more than minimal damage is caused by renewable energy installations to Dorset's exceptional and highly valued landscape, heritage, agricultural and amenity assets.

Table 1 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN CHRISTCHURCH

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B0511	287	DCC PL/1363/12	8/13/0354	23/08/2012	25/09/2013		Awaiting Construction	20/05/2016	Anaerobic Digestion	1.0000	1.0000	0.5892	5.1616
2	B0849	2105		8/13/0332	16/07/2013	26/09/2013	29/08/2014	Operational		Photovoltaic (Ground)	36.0000	37.2600	0.1227	40.0545
3	IF1114	2282		8/12/0512	28/11/2012	28/03/2013	31/03/2014	Operational		Photovoltaic (Ground)	20.0000	24.2000	0.1227	26.0150
4	C3027	2308		8/14/0226	21/05/2014	29/08/2014	27/03/2015	Operational		Photovoltaic (Ground)	18.0000	14.4000	0.1210	15.2640
5		5315		8/15/0284	21/05/2015	24/06/2015	31/03/2016	Operational		Photovoltaic (Ground)	18.0000	3.6000	0.1210	3.8160
6		4727		8/14/0520	28/10/2014	23/09/2015	26/02/2016	Operational		Photovoltaic (Ground)	8.0000	3.5990	0.1227	3.8689
7	C3340	2234		8/14/0412	28/08/2014	30/01/2015	01/09/2015	Operational		Photovoltaic (Ground)	4.0000	3.0360	0.1227	3.2637
8			638 FIT Refs.		various	various		Operational		Photovoltaic (Roof)	2.4459	2.4459	0.1200	2.5712
9	EN00247	139		8/11/0268	26/05/2011	26/07/2011		Under Construction	01/11/2016	Plant Biomass	3.2000	3.2000	0.6691	18.7555
10			FIT00018460		01/04/2010		25/01/2008	Operational		Wind Onshore	0.0010	0.0010	0.2532	0.0022
TOTAL											110.6469	92.7419	0.1462	118.7727

Table 2 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN EAST DORSET

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	IF1311		FIT00597205	3/13/0074/FUL	28/01/2013	28/05/2013	06/11/2014	Operational		Anaerobic Digestion	0.1640	0.1640	0.5892	0.8465
2			FIT00700851		18/12/2013		25/11/2014	Operational		Anaerobic Digestion	0.1250	0.1250	0.5892	0.6452
3	N00018L	723			28/12/2001	05/07/2002	01/12/2004	Operational		Landfill Gas	3.0000	3.0000	0.5656	14.8634
4			FIT00300187		05/12/2011		12/10/2011	Operational		Micro CHP	0.0010	0.0010	0.1249	0.0011
5	B1350	2109		3/14/0457/FUL	15/04/2014	31/07/2014	25/02/2015	Operational		Photovoltaic (Ground)	20.4000	20.3500	0.1176	20.9605
6	C1376	1761		3/13/0470/FUL	28/05/2013	08/10/2013	01/03/2014	Operational		Photovoltaic (Ground)	13.2000	13.2000	0.1176	13.5960
7	C1807	2086		3/13/0669/FUL	22/07/2013	17/01/2014	30/01/2015	Operational		Photovoltaic (Ground)	13.0000	13.0000	0.1176	13.3900
8	B1430	2114		3/14/0790/FUL	14/08/2014	03/11/2014	26/02/2016	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1210	7.4200
9	C3357	2248		3/14/0774/FUL	19/08/2014	04/11/2014	30/06/2015	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1142	5.0000
10		5987		3/15/1020/FUL	21/09/2015	17/12/2015		Awaiting Construction	21/11/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1142	5.0000
11	C2169	2139	FIT00675660	3/13/0948/FUL	20/09/2013	28/05/2014	31/03/2015	Operational		Photovoltaic (Ground)	3.9200	3.6840	0.1176	3.7945
12		4761		3/14/0956/FUL	24/10/2014	14/10/2015	23/12/2015	Operational		Photovoltaic (Ground)	3.8200	2.7190	0.1227	2.9229
13			1,654 FIT Refs.		various	various	various	Operational		Photovoltaic (Roof)	6.4034	6.4034	0.1200	6.7313
TOTAL											81.0334	79.6464	0.1364	95.1714

Table 3 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN PURBECK

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1			FIT00051766		22/11/2010		22/11/2010	Operational		Hydro	0.0148	0.0148	0.3930	0.0510
2	Refer to Green Alliance/ RegenSW Annual Report October 2016							Operational		Landfill Gas	6.2370	6.2370	0.5656	30.9009
3		5659		6/2015/0516	19/08/2015	28/10/2015		Awaiting Construction	26/10/2016	Photovoltaic (Ground)	15.0000	12.0000	0.1279	13.4400
4	C1773	1973		6/2013/0443	02/08/2013	01/11/2013	04/12/2014	Operational		Photovoltaic (Ground)	10.0000	10.0000	0.1244	10.9000
5	IF1442	2058		6/2013/0134-0574	06/03/2013	28/06/2013	19/03/2014	Operational		Photovoltaic (Ground)	8.2700	8.1000	0.1233	8.7480
6	AA832	1060		6/2012/0415	05/07/2012	28/11/2012	08/03/2013	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1279	7.8400
7	IF1364	2016		6/2013/0132-0572	06/03/2013	28/06/2013	21/03/2014	Operational		Photovoltaic (Ground)	6.1000	6.2000	0.1233	6.6960
8	C3222	2052		6/2014/0338	30/06/2014	07/11/2014	26/02/2016	Operational		Photovoltaic (Ground)	5.8000	5.8000	0.1279	6.4960
9	C1772	1902	FIT00552898	6/2013/0446	05/08/2013	10/12/2013	17/06/2014	Operational		Photovoltaic (Ground)	5.0000	4.9961	0.1279	5.5956
10	AA751	1589		6/2013/0246	29/04/2013	19/07/2013	03/01/2014	Operational		Photovoltaic (Ground)	4.9900	4.9900	0.1244	5.4391
11	IF1443	2047		6/2013/0133-0573	06/03/2013	28/06/2013	19/03/2014	Operational		Photovoltaic (Ground)	2.9900	3.3000	0.1256	3.6300
12	B0869		FIT00070326 (x2)	6/2011/0086/0385	21/06/2011	08/08/2011	31/08/2011	Operational		Photovoltaic (Ground)	0.4984	0.4984	0.1244	0.5433
13			1,057 FIT Refs.		various		various	Operational		Photovoltaic (Roof)	4.8406	4.8406	0.1200	5.0885
14	A0395	4333		6/2010/0082	20/11/2009	06/07/2012		Under Construction	18/11/2016	Wind	9.2000	9.2000	0.2730	21.9994
15			FIT00377507		18/06/2012		14/11/2012	Operational		Wind	0.5000	0.5000	0.2532	1.1091
16			FIT00574126		24/03/2014		24/03/2014	Operational		Wind	0.0530	0.0530	0.2532	0.1176
17			FIT00459583		03/02/2014		19/01/2014	Operational		Wind	0.0150	0.0150	0.2532	0.0333
18			FIT00140543		07/12/2011		02/12/2011	Operational		Wind	0.0019	0.0019	0.2532	0.0042
TOTAL											86.5107	83.7468	0.1753	128.6317

Table 4 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN NORTH DORSET

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	AA045/214	214		?	27/05/2009	28/07/2009	05/01/2011	Operational		Anaerobic Digestion	1.5390	1.5390	0.5892	7.9437
2	EN00085/235	235		2/2006/0363	12/04/2006	06/06/2006	26/06/2006	Operational		Anaerobic Digestion	1.3360	1.3360	0.5892	6.8959
3			FIT00326847		26/10/2011		01/01/2011	Operational		Anaerobic Digestion	0.1900	0.1900	0.5892	0.9807
4			FIT00408759		10/04/2013		18/03/2013	Operational		Hydro	0.0520	0.0520	0.3930	0.1790
5			FIT00494732		24/01/2013		18/12/2012	Operational		Hydro	0.0055	0.0055	0.3930	0.0189
6			FIT00522048		20/01/2013		26/10/2012	Operational		Hydro	0.0037	0.0037	0.3930	0.0127
7	C3404	4840		2/2014/1066/FUL	23/09/2014	09/12/2014	23/03/2015	Operational		Photovoltaic (Ground)	12.1400	12.1400	0.1132	12.0429
8	IF1320	1874		2/2013/0770/PLNG	08/07/2013	10/03/2014	03/02/2015	Operational		Photovoltaic (Ground)	8.7000	8.7000	0.1132	8.6304
9	C3339	2233		2/2014/0825/FUL	13/08/2014	12/11/2014	30/03/2015	Operational		Photovoltaic (Ground)	7.0000	7.0000	0.1164	7.1400
10		5429		2/2015/0898/FUL	16/06/2015	13/10/2015		Awaiting Construction	18/11/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1095	4.7950
11	C1841	1904		2/2013/0791/PLNG	05/08/2013	08/11/2013	09/06/2014	Operational		Photovoltaic (Ground)	5.0000	5.0000	0.1089	4.7700
12	IF1168	1453		2/2011/0304/PLNG				Operational		Photovoltaic (Ground)	4.0100	4.0100	0.1112	3.9057
13	AA930	1439		2/2012/1042/PLNG				Operational		Photovoltaic (Ground)	1.8100	1.8100	0.1096	1.7376
14	IF1079	1723		2/2012/0253/PLNG				Operational		Photovoltaic (Ground)	1.5000	1.5000	0.1097	1.4415
15			1,541 FIT Refs.		various		various	Operational		Photovoltaic (Roof)	8.4272	8.4272	0.1200	8.8586
16			FIT00465021		28/09/2012		13/09/2013	Operational		Wind	0.1000	0.1000	0.2532	0.2218
17			FIT00465021		28/09/2012		28/09/2012	Operational		Wind	0.0600	0.0600	0.2532	0.1331
18			FIT00055427		25/07/2011		18/06/2011	Operational		Wind	0.0200	0.0200	0.2532	0.0444
19			FIT00056951		22/06/2011		21/06/2011	Operational		Wind	0.0150	0.0150	0.2532	0.0333
20			FIT00471511		20/12/2013		19/12/2013	Operational		Wind	0.0150	0.0150	0.2532	0.0333
21			FIT00348079		16/08/2012		16/08/2012	Operational		Wind	0.0110	0.0110	0.2532	0.0244
23		OFF-GRID	FIT00010226		01/04/2010		01/08/2005	Operational		Wind	0.0060	0.0060	0.2532	0.0133
22			FIT00004339		01/04/2010		01/07/2007	Operational		Wind	0.0060	0.0060	0.2532	0.0133
24			FIT00705121		15/10/2015		18/09/2015	Operational		Wind	0.0060	0.0060	0.2532	0.0133
TOTAL											56.9523	56.9523	0.1401	69.8829

Table 5 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN WEYMOUTH & PORTLAND

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1			FIT00009581		01/04/2010		30/05/2008	Operational		Hydro	0.0150	0.0150	0.3690	0.0485
2			FIT00193082		23/09/2011		20/09/2011	Operational		Hydro	0.0070	0.0070	0.3690	0.0226
3			FIT00019400		22/07/2010		22/07/2010	Operational		Micro CHP	0.0011	0.0011	0.1249	0.0012
4		5021		WP/15/00039/FUL	16/02/2015	02/09/2015		Awaiting Construction	28/07/2016	Photovoltaic (Ground)	3.0000	3.0000	0.1256	3.3000
5			950 FIT Refs.		various		various	Operational		Photovoltaic (Roof)	3.3734	3.3734	0.1200	3.5461
6	AA032	184		09/00648/LBC	23/10/2009	24/01/2010		Awaiting Construction	02/09/2016	Advanced Conversion	8.0000	8.0000	0.6691	46.8889
7	B0661			11/00607/FUL	13/07/2011	07/09/2011	01/11/2012	Operational		Wind	0.0600	0.0600	0.2532	0.1331
8			FIT00012755		01/04/2010		06/10/2007	Operational		Wind	0.0015	0.0015	0.2532	0.0033
TOTAL											14.4580	14.4580	0.4259	53.9437

Table 6 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN BOURNEMOUTH

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
2			2,113 FIT Refs		various		various	Operational		Photovoltaic (Roof)	6.7287	6.7287	0.1200	7.0733
TOTAL											6.7287	6.7287	0.1200	7.0733

Table 7 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN POOLE

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B1030	956		APP/12/01559/F	21/11/2012	01/07/2013		Under Construction	20/12/2016	Advanced Conversion	10.0000	10.0000	0.8200	71.8320
2	09008L3	586*			28/01/1993	13/05/1993	01/05/1996	Operational		Landfill Gas	6.9160	6.9160	0.5656	34.2650
3			3,328 FIT Refs		various		various	Operational		Photovoltaic (Roof)	9.8692	9.8692	0.1200	10.3745
TOTAL											26.7852	26.7852	0.4964	116.4716

*Refer to Green Alliance/ RegenSW Annual Report October 2016

Table 8 RENEWABLE ELECTRICITY GENERATION INSTALLATIONS IN WEST DORSET

	Old REPD Ref.	New REPD Ref.	Ofgem Ref.	PA Ref.	Submitted	Approved	Operational	Status	Last Update by DECC	Technology Type	REPD IC MW	Developer IC MW	Load Factor	Annual Output GWh
1	B1521	366	FIT00365833	PL0698/08	21/05/2008	08/06/2010	25/09/2012	Operational		Anaerobic Digestion	1.1000	1.1000	0.5892	5.6778
2	C2632			WD/D/14/000011	15/01/2014	20/05/2014		Awaiting Construction	19/09/2016 (CPRE update)	Anaerobic Digestion	0.5000	0.5000	0.5892	2.5808
3	AA779		FIT00017703	1/D/08/000549	18/04/2008	19/09/2008	01/07/2010	Operational		Anaerobic Digestion	0.5000	0.5000	0.5892	2.5808
4	IF1208		FIT00497169	1/D/12/001514	31/10/2012	26/04/2013	17/11/2013	Operational		Anaerobic Digestion	0.4990	0.4990	0.5892	2.5757
5	B0488		FIT00365833	1/D/2008/0989	21/05/2008	08/06/2010	21/09/2012	Operational		Anaerobic Digestion	0.4980	0.4980	0.5892	2.5705
6	AA846		FIT00327038	1/D/10/001372	16/08/2010	21/04/2011	21/11/2012	Operational		Anaerobic Digestion	0.4000	0.4000	0.5892	2.0647
7			FIT00497169		17/11/2013		26/11/2015	Operational		Anaerobic Digestion	0.2500	0.2500	0.5892	1.2904
8			FIT00537806		27/11/2013		25/06/2014	Operational		Anaerobic Digestion	0.2490	0.2490	0.5892	1.2852
9			FIT00011931		01/04/2010		01/03/2007	Operational		Hydro	0.0070	0.0070	0.3690	0.0226
10	Refer to Green Alliance/RegenSW Annual Report October 2016													
11			FIT00050154		31/05/2011		21/04/2011	Operational		Micro CHP	0.0010	0.0010	0.1249	0.0011
12			FIT00019094		31/12/2010		01/11/2010	Operational		Micro CHP	0.0010	0.0010	0.1249	0.0011
13			FIT00048865		14/06/2011		14/06/2011	Operational		Micro CHP	0.0010	0.0010	0.1249	0.0011
14		4897		WD/D/14/002974	19/11/2014	22/12/2016		Awaiting Construction	22/12/2016	Photovoltaic (Ground)	17.3000	17.3000	0.1153	17.4730
15	C1103	1898		1/D/13/000242	08/03/2013	13/12/2013	23/03/2016	Operational		Photovoltaic (Ground)	6.7000	6.7000	0.1090	6.3985
16	C1942	2361		1/D/13/001116	09/08/2013	30/10/2013	19/03/2015	Operational		Photovoltaic (Ground)	4.9900	5.0000	0.1233	5.4000
17		5512		WD/D/15/001708	14/07/2015	07/09/2016		Under Construction	18/11/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
18		5632		WD/D/15/001856	29/07/2015	18/12/2015		Under Construction	18/11/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
19		5650		WD/D/15/001858	29/07/2015	06/09/2016		Under Construction	04/10/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1279	5.6000
20		5662		WD/D/15/001841	07/09/2015	18/01/2016		Awaiting Construction	24/10/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1096	4.8000
21		5891		WD/D/15/001862	08/09/2015	08/01/2016		Under Construction	18/11/2016	Photovoltaic (Ground)	5.0000	5.0000	0.1164	5.1000
22	AA315	1567	FIT00377467(?)	1/D/11/000168	24/02/2011	23/08/2011	31/07/2012	Operational		Photovoltaic (Ground)	5.0000	4.9970	0.1279	5.5966
23	C0230	1090	FIT00395161(?)	1/D/12/000858	31/05/2012	20/09/2012	12/03/2013	Operational		Photovoltaic (Ground)	5.0000	4.8384	0.1301	5.5158
24	C3463	4703		WD/D/14/002675	13/10/2014	17/12/2014	14/04/2016	Operational		Photovoltaic (Ground)	4.9900	4.4000	0.1301	5.0160
25	AA360	1574	FIT00096497(x2)	1/D/11/000453	13/04/2011	13/07/2011	01/04/2012	Operational		Photovoltaic (Ground)	2.9000	3.9261	0.1187	4.0831
26	C1785	6062	FIT00576454	1/D/13/001044	01/08/2013	14/10/2013	07/11/2014	Operational	Field B8 Bourne Park	Photovoltaic (Ground)	2.4000	2.3997	0.1233	2.5917
27	AA653		FIT00276991	1/D/11/002085	14/12/2011	07/02/2012	01/03/2012	Operational		Photovoltaic (Ground)	0.2484	0.2484	0.1233	0.2683
28	none		FIT00029999(x3)		18/03/2011		22/09/2011	Operational		Photovoltaic (Ground)	1.5853	1.5853	0.1200	1.6664
29			2,662 FIT Refs.	various	various			Operational		Photovoltaic (Roof)	12.6385	12.6385	0.1200	13.2855
30			FIT00279895		26/03/2012		26/03/2012	Operational		Wind	0.0800	0.0800	0.2532	0.1774
31			FIT00007667		01/04/2010		09/05/2009	Operational		Wind	0.0150	0.0150	0.2532	0.0333
32			FIT00036791		05/05/2011		14/03/2011	Operational		Wind	0.0150	0.0150	0.2532	0.0333
33			FIT00360906		16/11/2012		15/11/2012	Operational		Wind	0.0150	0.0150	0.2532	0.0333
34			FIT00331092		01/10/2012		16/07/2012	Operational		Wind	0.0100	0.0100	0.2532	0.0222
35			FIT00010350		01/04/2010		01/04/2006	Operational		Wind	0.0060	0.0060	0.2532	0.0133
36			FIT00011986		01/04/2010		24/03/2009	Operational		Wind	0.0060	0.0060	0.2532	0.0133
37			FIT00010335		01/04/2010		26/08/2009	Operational		Wind	0.0060	0.0060	0.2532	0.0133
38			FIT00275317		27/03/2012		22/03/2012	Operational		Wind	0.0060	0.0060	0.2532	0.0133
39			FIT00286247		01/04/2010		20/12/2008	Operational		Wind	0.0060	0.0060	0.2532	0.0133
40			FIT00009650		01/04/2010		09/05/2007	Operational		Wind	0.0050	0.0050	0.2532	0.0111
41			FIT00013459		01/04/2010		01/07/2007	Operational		Wind	0.0050	0.0050	0.2532	0.0111
42			FIT00015625		01/04/2010		26/06/2008	Operational		Wind	0.0025	0.0025	0.2532	0.0055
TOTAL											93.3856	93.6668	0.1429	117.2699

NOTE



Indicates a ground-mounted solar PV installation with an installed capacity of 0.5 MW or above.

Indicates solar PV installations with an installed capacity below 0.5 MW, all roof-mounted except for West Dorset's No.26.

DATA SOURCES

1. DECC's Monthly Renewable Energy Planning Database Extract for October 2014, for installations with an installed capacity (IC) of less than 1 MW, published 15 November 2014.
2. DECC's Monthly Renewable Energy Planning Database Extract for December 2016, for installations with an installed capacity (IC) of 1 MW or greater, published 16 January 2017.
3. Ofgem's Feed-in Tariff Quarterly Installation Report for 1 April 2010 to 31 December 2016, published 11 January 2017. All installations recorded in this document are operational.
4. Local Planning Authority web sites.
5. See Table 15, page 11 of this report for Load Factor sources.

Table 9 RENEWABLE HEAT GENERATION BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	RENEWABLE HEAT TECHNOLOGY											
	ANAEROBIC DIGESTION				BIOMASS				HEAT PUMPS			
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
Christchurch												
East Dorset					28	2.036	0.35	6.243	121	1.495	0.23	2.990
North Dorset	3	2.210	0.70	13.552	96	9.740	0.35	29.863	284	3.147	0.23	6.293
Purbeck					17	1.747	0.35	5.356	84	0.937	0.23	1.873
West Dorset	5	2.560	0.70	15.698	133	8.375	0.35	25.677	301	3.057	0.23	6.114
Weymouth & Portland					8	0.835	0.35	2.560	44	0.424	0.23	0.848
Dorset County	8	4.770	0.70	29.250	282	22.733	0.35	69.698	834	9.060	0.23	18.118
Bournemouth					3	0.350	0.35	1.074	26	0.233	0.23	0.466
Poole					3	0.680	0.35	2.085	91	0.832	0.23	1.665
Greater Dorset	8	4.770	0.70	29.250	288	23.763	0.35	72.857	951	10.126	0.23	20.249

Table 9 (continued)

Local Authority	RENEWABLE HEAT TECHNOLOGY										
	SEWAGE GAS				SOLAR THERMAL				DOMESTIC WOOD STOVES		
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
Christchurch					22	0.063	0.07	0.038	5.731	0.10	5.021
East Dorset					101	0.302	0.07	0.185	11.027	0.10	9.659
North Dorset					81	0.242	0.07	0.149	8.956	0.10	7.845
Purbeck					61	0.195	0.07	0.120	14.642	0.10	12.826
West Dorset					169	0.537	0.07	0.329	6.008	0.10	5.263
Weymouth & Portland					26	0.074	0.07	0.045	7.957	0.10	6.970
Dorset County					460	1.413	0.07	0.866	54.320	0.10	47.584
Bournemouth	1	0.900	0.70	5.519	67	0.213	0.07	0.130	17.247	0.10	15.108
Poole	1	1.400	0.70	8.585	94	0.339	0.07	0.208	17.474	0.10	15.307
Greater Dorset	2	2.300	0.70	14.104	621	1.965	0.07	1.205	89.041	0.10	78.000

Table 10 SUMMARY OF RENEWABLE HEAT GENERATION BY LOCAL AUTHORITY

Local Authority	ALL RENEWABLE HEAT TECHNOLOGIES			
	Number of Installations	Thermal Capacity MW	Load Factor	Annual Heat Generation GWh
Christchurch	22	5.794	0.10	5.059
East Dorset	250	14.860	0.15	19.077
North Dorset	464	24.295	0.27	57.701
Purbeck	162	17.521	0.13	20.176
West Dorset	608	20.537	0.30	53.081
Weymouth & Portland	78	9.290	0.13	10.423
Dorset County	1,584	92.295	0.20	165.517
Bournemouth	97	18.943	0.13	22.298
Poole	189	20.726	0.15	27.850
Greater Dorset	1,870	131.964	0.19	215.664

NOTE

All the information in Table 9, apart from that for domestic wood stoves, has been made available by Green Alliance/RegenSW¹. The information on stoves has been provided by the Dorset Energy Partnership² which has estimated that as at 31 March 2016 domestic wood stoves were generating an annual 78 GWh of renewable heat energy in the area covered by Dorset County Council and the Bournemouth and Poole Unitary Authorities. Stove locations are not specified and for the purpose of this report the 78 GWh have been distributed amongst the authorities according to estimates of 2020 energy consumption (Table 19, p.15). All installations recorded are operational.

DATA SOURCES

1 Renewable Heat Installations Operational on 31 March 2016, Green Alliance/RegenSW Report, published 10 October 2016.

<http://renewablelocator.green-alliance.org.uk/about>

2 Dorset Energy Partnership's Annual Review 2015/2016, p.6, published 8 July 2016.

Table 11 PROJECTED ANNUAL RENEWABLE ENERGY GENERATION BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	PROJECTED RENEWABLE ENERGY GENERATION										A 7.5% 2020 TARGET GWh	PROGRESS TOWARDS TARGET %
	RENEWABLE ELECTRICITY GWh								RENEWABLE HEAT GWh	HEAT & ELECTRICITY GWh		
	Hydro	Landfill Gas	Anaerobic Digestion	Wind	Biomass & Micro CHP	Photovoltaic		TOTAL ELECTRICITY				
					Ground	Roof						
Christchurch			5.16	0.00	18.76	92.28	2.57	118.77	5.06	123.83	59.33	208.7
East Dorset		14.86	1.49		0.00	72.08	6.73	95.17	19.08	114.25	114.14	100.1
North Dorset	0.21		15.82	0.53		44.46	8.86	69.88	57.70	127.58	92.70	137.6
Purbeck	0.05	30.90		23.26		69.33	5.09	128.63	20.18	148.81	82.37	180.7
West Dorset	0.02	2.23	20.63	0.39	0.00	80.71	13.29	117.27	53.08	170.35	151.56	112.4
Weymouth & Portland	0.07			0.14	46.89	3.30	3.55	53.94	10.42	64.37	62.19	103.5
Dorset County	0.36	47.99	43.10	24.33	65.65	362.17	40.08	583.67	165.52	749.19	562.29	133.2
Bournemouth							7.07	7.07	22.30	29.37	178.53	16.5
Poole		34.27			71.83		10.37	116.47	27.85	144.32	180.88	79.8
Greater Dorset	0.36	82.26	43.10	24.33	137.48	362.17	57.53	707.22	215.66	922.88	921.70	100.1
% Contribution to Total	0.04	8.91	4.67	2.64	14.90	39.24	6.23	76.63	23.37	100.00		
						% of all PV	86.3	13.7				

Table 12 NUMBERS OF RENEWABLE ENERGY INSTALLATIONS BY TECHNOLOGY AND LOCAL AUTHORITY

Local Authority	NUMBERS OF RENEWABLE ENERGY INSTALLATIONS									
	ELECTRICITY								RENEWABLE HEAT	HEAT & ELECTRICITY
	Hydro	Landfill Gas	Anaerobic Digestion	Wind	Biomass & Micro CHP	Photovoltaic		TOTAL ELECTRICITY		
					Ground	Roof				
Christchurch			1	1	1	6	638	647	22	669
East Dorset		1	2		1	8	1,654	1,666	250	1,916
North Dorset	3		3	9		8	1,541	1,564	464	2,028
Purbeck	1	1		5		10	1,057	1,074	162	1,236
West Dorset	1	1	8	13	3	15	2,662	2,703	608	3,311
Weymouth & Portland	2			2	2	1	950	957	78	1,035
Dorset County	7	3	14	30	7	48	8,502	8,611	1,584	10,195
Bournemouth							2,113	2,113	97	2,210
Poole		1			1		3,328	3,330	189	3,519
Greater Dorset	7	4	14	30	8	48	13,943	14,054	1,870	15,924
% Contribution to Total	0.04	0.03	0.09	0.19	0.05	0.30	87.56	88.26	11.74	100.00
						% of all PV	0.3	99.7		

Table 13 SUMMARY OF ANNUAL RENEWABLE ENERGY GENERATION BY PLANNING STATUS

Development Status	GENERATION		INSTALLATIONS	
	GWh	%	Number	%
Operational - Electricity	469.3	50.8	14,038	88.16
Operational - Heat	215.7	23.4	1,870	11.74
Under Construction	134.5	14.6	7	0.04
Awaiting Construction	103.4	11.2	9	0.06
TOTAL	922.9	100.0	15,924	100.00

Table 14 SUMMARY OF ANNUAL RENEWABLE ENERGY GENERATION BY LOCAL AUTHORITY

Local Authority	RENEWABLE ENERGY							INSTALLATIONS		
	Operational and Under Construction		Awaiting Construction		TOTAL	7.5% Target	% of 2020 Target	Operational and Under Construction	Awaiting Construction	TOTAL
	GWh	% of Total	GWh	% of Total	GWh	GWh		Number	Number	Number
Christchurch	118.7	95.8	5.2	4.2	123.8	59.3	208.73	668	1	669
East Dorset	109.25	95.62	5.00	4.38	114.25	114.14	100.10	1,915	1	1,916
North Dorset	122.8	96.2	4.8	3.8	127.6	92.7	137.63	2,027	1	2,028
Purbeck	135.4	91.0	13.4	9.0	148.8	82.4	180.66	1,235	1	1,236
West Dorset	145.5	85.4	24.9	14.6	170.4	151.6	112.40	3,308	3	3,311
Weymouth & Portland	14.2	22.0	50.2	78.0	64.4	62.2	103.50	1,033	2	1,035
Dorset County	645.7	86.2	103.4	13.8	749.2	562.3	133.24	10,186	9	10,195
Bournemouth	29.3	100.0	0.0	0.0	29.3	178.5	16.44	2,210	0	2,210
Poole	144.3	100.0	0.0	0.0	144.3	180.9	79.79	3,519	0	3,519
Greater Dorset	819.42	88.79	103.44	11.21	922.86	921.70	100.13	15,915	9	15,924

Table 15 ESTIMATED LOAD FACTORS

Renewable Electricity Technology	Load Factor	Source
Onshore wind	0.2730	Average for the 5 years 2011 - 2015 for schemes operating on an unchanged configuration basis : DUKES, Chapter 6, Table 6.5, p.193, DECC, 28 July 2016.
Small Scale Hydro	0.3930	
Landfill gas	0.5656	
Sewage Gas	0.4947	
Anaerobic Digestion	0.5892	
Plant Biomass	0.6691	
FIT Micro CHP	0.1249	Weighted mean for the 4 years 2011/2012 - 2014/2015 : Ellen Migo and James Hemingway, Quarterly and Annual Load Factors, Energy Trends, p.69, DECC, 22 December 2015.
FIT Onshore wind	0.2532	
Advanced conversion	0.8200	Scott Edmondson, Technical Director, Syngas Products: Poole PA APP/12/01559/F, installation forecast to be fully operational by January 2018.
Solar Photovoltaic	0.1200	0.1200 (12%) is suggested as an appropriate average load factor for Dorset. This conclusion is based on an analysis of recorded outputs for several ground-mounted (G-M) installations in Dorset County and estimated outputs from the EU Joint Research Centre PV Estimation Facility. For this report a load factor has been calculated for each G-M installation but 12% has been assumed for all roof-mounted installations. More details of the methodology used to arrive at this conclusion are provided in the Notes to Appendix 2 of this report (p.17).

Table 16 APPROVED DORSET COUNTY GROUND-MOUNTED PV INSTALLATIONS listed by Planning Authority and Decreasing Magnitude of Installed Capacity

	Planning Authority	Planning Application Reference	Registration Date	Decision Date	Ordnance Survey Grid Reference	Site			Approx. % Covered by Panels	Number of Panels	Panel Rating W	Annual Energy Generation MWh	Load Factor	Power Rating (Installed Capacity) MW
						Size								
						Hectares	Acres	Soccer Pitches ¹						
1	Christchurch BC	8/13/0332	16/07/2013	26/09/2013	410222/099598	76.70	189.53	119.8	27	149,040	250	40,055	0.1227	37.2600
2	Christchurch BC	8/12/0512	28/11/2012	03/05/2013	410016/099547	48.50	119.85	75.8	28	96,800	250	26,015	0.1227	24.2000
3	Christchurch BC	8/14/0226	21/05/2014	29/08/2014	417714/095129	35.50	87.72	55.5	22	57,600	250	15,264	0.1210	14.4000
4	Christchurch BC	8/15/0284	21/05/2015	24/06/2015	41783/095661	9.50	23.47	14.8	21	14,400	250	3,816	0.1210	3.6000
5	Christchurch BC	8/14/0520	28/10/2014	23/09/2015	409499/097070	18.07	44.65	28.2	11	14,396	250	3,869	0.1227	3.5990
6	Christchurch BC	8/14/0412	28/08/2014	30/01/2015	409506/100357	7.20	17.79	11.3	23	12,144	250	3,264	0.1227	3.0360
7	East Dorset DC	3/14/0457/FUL	15/04/2014	31/07/2014	408332/107310	45.73	113.00	71.5	25	81,400	250	20,961	0.1176	20.3500
8	East Dorset DC	3/13/0470/FUL	28/05/2013	08/10/2013	409618/105289	28.10	69.44	43.9	26	52,800	250	13,596	0.1176	13.2000
9	East Dorset DC	3/13/0669/FUL	19/07/2013	17/01/2014	407075/106873	27.83	68.77	43.5	26	52,000	250	13,390	0.1176	13.0000
10	East Dorset DC	3/14/0790/FUL	14/08/2014	03/11/2014	406125/101700	12.50	30.89	19.5	31	28,000	250	7,420	0.1210	7.0000
11	East Dorset DC	3/14/0774/FUL	19/08/2014	04/11/2014	411300/111800	12.72	31.43	19.9	22	20,000	250	5,000	0.1142	5.0000
12	East Dorset DC	3/15/1020/FUL	21/09/2015	17/12/2015	411500/111020	10.12	25.01	15.8	27	20,000	250	5,000	0.1142	5.0000
13	East Dorset DC	3/13/0948/FUL	20/09/2013	28/05/2014	396675/097198	12.90	31.88	20.2	16	14,736	250	3,795	0.1176	3.6840
14	East Dorset DC	3/14/0956/FUL	07/10/2014	07/10/2015	409137/097513	7.46	18.43	11.7	20	10,876	250	2,923	0.1227	2.7190
15	North Dorset DC	2/2014/1066/FUL	23/09/2014	12/11/2014	388332/105051	21.40	52.88	33.4	31	48,560	250	12,043	0.1132	12.1400
16	North Dorset DC	2/2013/0770/PLNG	08/07/2013	10/03/2014	385425/105000	15.30	37.81	23.9	32	34,800	250	8,630	0.1132	8.7000
17	North Dorset DC	2/2014/0825/FUL	13/08/2014	12/11/2014	388136/102088	14.50	35.83	22.7	27	28,000	250	7,140	0.1164	7.0000
18	North Dorset DC	2/2013/0791/PLNG	05/08/2013	08/11/2013	377815/128359	16.00	39.54	25.0	17	20,000	250	4,770	0.1089	5.0000
19	North Dorset DC	2/2015/0898/FUL	03/07/2015	13/10/2015	371997/118399	11.92	29.45	18.6	22	19,231	260	4,795	0.1095	5.0000
20	North Dorset DC	2/2011/0304/PLNG	22/03/2011	04/05/2011	385726/113717	9.70	23.97	15.2	23	16,040	250	3,906	0.1112	4.0100
21	North Dorset DC	2/2012/1042/PLNG	31/08/2012	06/11/2012	378233/127441	4.36	10.77	6.8	23	7,240	250	1,738	0.1096	1.8100
22	North Dorset DC	2/2012/0253/PLNG	20/03/2012	20/02/2013	378118/112656	2.80	6.92	4.4	30	6,000	250	1,442	0.1097	1.5000
23	Purbeck DC	6/2015/0516	19/08/2015	28/10/2015	387124/087619	48.00	118.61	75.0	14	48,000	250	13,440	0.1279	12.0000
24	Purbeck DC	6/2013/0443	02/08/2013	01/11/2013	388420/090356	15.70	38.80	24.5	35	40,000	250	10,900	0.1244	10.0000
25	Purbeck DC	6/2013/0134-0574	18/10/2013	15/11/2013	395767/094301	16.70	41.27	26.1	27	32,400	250	8,748	0.1233	8.1000
26	Purbeck DC	6/2012/0415	05/07/2012	28/11/2012	387802/090076	18.00	44.48	28.1	22	28,000	250	7,840	0.1279	7.0000
27	Purbeck DC	6/2013/0132-0572	18/10/2013	15/11/2013	395767/094301	14.50	35.83	22.7	24	24,800	250	6,696	0.1233	6.2000
28	Purbeck DC	6/2014/0338	30/06/2014	07/11/2014	389957/089555	20.00	49.42	31.3	16	23,200	250	6,496	0.1279	5.8000
29	Purbeck DC	6/2013/0446	05/08/2013	10/12/2013	384311/087689	10.60	26.19	16.6	26	19,984	250	5,596	0.1279	4.9961
30	Purbeck DC	6/2013/0246	29/04/2013	19/07/2013	392824/094634	7.00	17.30	10.9	40	19,960	250	5,439	0.1244	4.9900
31	Purbeck DC	6/2013/0133-0573	18/10/2013	15/11/2013	393388/093923	13.70	33.85	21.4	13	13,200	250	3,630	0.1256	3.3000
32	Purbeck DC	6/2011/0086-0385	21/06/2011	08/08/2011	392223/093019	2.83	7.00	4.4	9	1,780	280	543	0.1244	0.4984
33	West Dorset DC	WD/D/14/002974	19/11/2014	22/12/2016	355019/101303	37.84	93.50	59.1	25	69,200	250	17,473	0.1153	17.3000
34	West Dorset DC	1/D/13/000242	08/03/2013	13/12/2013	358160/109979	19.18	47.39	30.0	19	26,800	250	6,399	0.1090	6.7000
35	West Dorset DC	1/D/13/001116	09/08/2013	30/10/2013	372299/097660	9.30	22.98	14.5	30	20,000	250	5,400	0.1233	5.0000
36	West Dorset DC	WD/D/15/001708	14/07/2015	07/09/2016	378479/085698	9.90	24.46	15.5	28	20,000	250	5,600	0.1279	5.0000
37	West Dorset DC	WD/D/15/001841	07/09/2015	14/01/2016	360912/110027	6.35	15.69	9.9	44	20,000	250	4,800	0.1096	5.0000
38	West Dorset DC	WD/D/15/001856	29/07/2015	18/12/2015	376969/086897	9.26	22.88	14.5	30	20,000	250	5,600	0.1279	5.0000
39	West Dorset DC	WD/D/15/001858	29/07/2015	06/09/2016	377318/086227	15.33	37.88	24.0	18	20,000	250	5,600	0.1279	5.0000
40	West Dorset DC	WD/D/15/001862	08/09/2015	08/01/2016	360954/102552	5.45	13.47	8.5	51	20,000	250	5,100	0.1164	5.0000
41	West Dorset DC	1/D/11/000168	24/02/2011	23/08/2011	377872/088264	14.92	36.87	23.3	20	21,726	230	5,597	0.1279	4.9970
42	West Dorset DC	1/D/12/000858	31/05/2012	20/09/2012	364747/082848	16.90	41.76	26.4	17	20,160	240	5,516	0.1301	4.8384
43	West Dorset DC	WD/D/14/002675	13/10/2014	17/12/2014	364490/081305	7.38	18.24	11.5	33	17,600	250	5,016	0.1301	4.4000
44	West Dorset DC	1/D/11/000453	13/04/2011	13/07/2011	333898/097856	8.56	21.15	13.4	25	15,704	250	4,083	0.1187	3.9261
45	West Dorset DC	1/D/13/001044	01/08/2013	14/10/2013	372985/097311	4.88	12.07	7.6	27	9,599	250	2,592	0.1233	2.3997
46	West Dorset DC	1/D/11/002085	14/12/2011	07/02/2012	372302/097662	1.02	2.52	1.6	14	994	250	268	0.1233	0.2484
47	Weymouth & Portland BC	WP/15/00039/FUL	16/02/2015	02/09/2015	369351/072408	7.40	18.29	11.6	22	12,000	250	3,300	0.1256	3.0000
TOTAL						789.5	1,951	1,234		1,369,170		360,500		341.9
AVERAGE						16.8	25.7	26.2	24	29,131	250	7,670	0.1204	7.3

Table 16 (continued)

	Planning Authority	Planning Application Reference	Site Type	Site Location	Developer
1	Christchurch BC	8/13/0332	Green Belt	Parley Solar Farm 2, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	Eco Sustainable Solutions Limited
2	Christchurch BC	8/12/0512	Green Belt	Parley Solar Farm 1, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	British Solar Renewables Limited
3	Christchurch BC	8/14/0226	Green Belt	Waterditch Farm, Lower Waterditch, CHRISTCHURCH BH23 7AA	Canada Solar
4	Christchurch BC	8/15/0284	Green Belt	Pratt's Field, Waterditch Farm, Lower Waterditch, CHRISTCHURCH BH23 7AA	New Forest Energy
5	Christchurch BC	8/14/0520	Green Belt	Hale Farm, Chapel Lane, Parley, CHRISTCHURCH BH22 6BG	Alliance Planning
6	Christchurch BC	8/14/0412	Green Belt	Parley Solar Farm 3, Chapel Lane, Parley, CHRISTCHURCH BH23 6BG	Eco Sustainable Solutions Limited
7	East Dorset DC	3/14/0457/FUL	Greenfield Grades 4 & 3	Manor Farm, St Michaels Road, VERWOOD BH31 6JA	Solstice Renewables Limited
8	East Dorset DC	3/13/0470/FUL	Greenfield	Homeland Farm, Ringwood Road, Three Legged Cross, WIMBORNE BH21 6QZ	Good Energy Generation Limited
9	East Dorset DC	3/13/0669/FUL	Green Belt Grade 5	Wedgehill Farm, Woodlands, WIMBORNE BH21 8LX	Ortar Solar
10	East Dorset DC	3/14/0790/FUL	Green Belt	Bedborough Farm, Uddens Drive, WIMBORNE BH21 7BQ	Solstice Renewables Limited
11	East Dorset DC	3/14/0774/FUL	Greenfield	Cross Roads Plantation, Ringwood Road, Alderholt, FORDINGBRIDGE SP6 3AD	Good Energy Generation Limited
12	East Dorset DC	3/2015/1020/FUL	Greenfield	Warren Park Farm, Ringwood Road, Alderholt, FORDINGBRIDGE SP6 3DE	Good Energy Generation Limited
13	East Dorset DC	3/13/0948/FUL	Green Belt Grades 3 & 4	Henbury Quarry, Henbury Plantation, Old Market Road, Corfe Mullen, WIMBORNE BH21 3QZ	Lightsource Renewable Energy Limited
14	East Dorset DC	3/14/0956/FUL	Green Belt	Woodtown Farm, 390 Christchurch Road, West Parley, FERNDOWN BH22 8SW	Alliance Planning
15	North Dorset DC	2/2014/1066/FUL	Greenfield Grade 3b	Littleton Farm Limited, Littleton Lodge, Blandford St Mary, BLANDFORD FORUM DT11 9NB	Lightsource Renewable Energy Limited
16	North Dorset DC	2/2013/0770/PLNG	AONB	Canada Farm, Winterborne Stickland, BLANDFORD FORUM DT11 9AD	British Solar Renewables Limited
17	North Dorset DC	2/2014/0825/PLNG	Greenfield	North Farm, Spetisbury, BLANDFORD FORUM DT11 9DH3	Northern Pine Solar Park Limited
18	North Dorset DC	2/2013/0791/PLNG	Greenfield	Manor Farm, Church Road, Silton, GILLINGHAM SP8 5PR	INRG Solar Limited
19	North Dorset DC	2/2015/0898/FUL	Greenfield	Stalbridge Park Estate, Landshire Lane, STURMINSTER NEWTON DT10 2SB	British Solar Renewables Limited
20	North Dorset DC	2/2011/0304/PLNG	Greenfield	Park Farm, Iwerne Minster, BLANDFORD FORUM DT11 8TP	Low Carbon Solar Limited
21	North Dorset DC	2/2012/1042/PLNG	Greenfield	Slaughtergate Farm, Wavering Lane West, GILLINGHAM SP8 4NR	Lightsource Renewable Energy Limited
22	North Dorset DC	2/2012/0253/PLNG	Greenfield	Rudge Hill Farm, Rivers Corner, STURMINSTER NEWTON DT10 2AB	Lightsource Renewable Energy Limited
23	Purbeck DC	6/2015/0516	Greenfield	Stokeford Farm, East Stoke, WAREHAM BH20 6AN	JumpStart Sustainability Limited
24	Purbeck DC	6/2013/0443	Greenfield Grade 4	Land at Bottom Plain, Bere Road, Trigon, WAREHAM BH20 7PA	Inazin Power Limited
25	Purbeck DC	6/2013/0134-0574	Green Belt Grade 3a	Newton Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Camborne Energy Investments Limited
26	Purbeck DC	6/2012/0415	Green Belt	Trigon House, WAREHAM BH20 7PD	Inazin Power Limited
27	Purbeck DC	6/2013/0132-0572	Green Belt Grade 3a	Race Farm, Huntick Road, Lytchett Matravers, POOLE BH16 6BB	Camborne Energy Investments Limited
28	Purbeck DC	6/2014/0338	Greenfield Grade 5	Oaklands Plantation, Bere Road, Coldharbour, WAREHAM BH20 7PA	Good Energy Generation Limited
29	Purbeck DC	6/2013/0446	Greenfield Grade 3b	Tout Hill, Woolbridge, WAREHAM BH20 6HH	Good Energy Generation Limited
30	Purbeck DC	6/2013/0246	Green Belt Grade 3b	Redbridge Farm, Dolmans Hill, Lytchett Matravers, POOLE BH16 6HP (Variation)	Emotion Energy Limited
31	Purbeck DC	6/2013/0133-0573	Green Belt	Newton Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Camborne Energy Investments Limited
32	Purbeck DC	6/2011/0385	Greenfield Grade 3b	Slepe Farm, Dorchester Road, Lytchett Minster, POOLE BH16 6HS	Farm Power Generation Limited
33	West Dorset DC	WD/D/14/002974	AONB	Rampisham Down, Rampisham, DORCHESTER DT2 0HS (South of A356)	British Solar Renewables Limited
34	West Dorset DC	1/D/13/000242	Greenfield	Caswell Farm, Common Lane, Ryme Intrinseca, SHERBORNE DT9 6JP	juwi Renewable Energies Limited
35	West Dorset DC	1/D/13/001116	Greenfield	Field B11, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Sovereign Energy Partners LLP
36	West Dorset DC	WD/D/15/001708	Greenfield	Galton Manor Farm, Owermoigne, DORCHESTER DT2 8HY	British Solar Renewables Limited
37	West Dorset DC	WD/D/15/001841	Greenfield	Mallows Farm, Alton Mead Lane, Yetminster, SHERBORNE DT9 6BN	Aardvark EM Limited
38	West Dorset DC	WD/D/15/001856	Greenfield	Holly Farm, Moreton Road, Owermoigne, DORCHESTER DT2 8HZ	British Solar Renewables Limited
39	West Dorset DC	WD/D/15/001858	Greenfield	East Farm, Moreton Road, Owermoigne, DORCHESTER DT2 8XP	British Solar Renewables Limited
40	West Dorset DC	WD/D/15/001862	AONB	Southern Counties Shooting Ground, Wardon Hill, DORCHESTER DT2 9PW	British Solar Renewables Limited
41	West Dorset DC	1/D/11/000168	Greenfield	Crossways Pit, Heath Farm, Redbidge Road, Crossways, DORCHESTER DT2 8DX	Vogt Solar
42	West Dorset DC	1/D/12/000858	Greenfield	North Farm, Nottingham Lane, Buckland Ripers, WEYMOUTH DT3 4BU	PS Renewables
43	West Dorset DC	WD/D/14/002974	Greenfield Grade 3b	Newlands Farm, Coldharbour, Chickerell, WEYMOUTH DT3 4BG	British Solar Renewables Limited
44	West Dorset DC	1/D/11/000453	AONB	Wyld Meadow Farm, Pound Lane, Monkton Wyld, BRIDPORT DT6 6DD	Low Carbon Solar Limited
45	West Dorset DC	1/D/13/001044	Greenfield	Field B8, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Farm Power Apollo
46	West Dorset DC	1/D/11/002085	Greenfield	Field B8, Bourne Farm, Piddlehinton, DORCHESTER DT2 7TU	Farm Power Apollo
47	Weymouth & Portland BC	WP/15/00039/FUL	Brownfield	Independent Quarries, Easton Lane, PORTLAND DT5 1BW	Wardell Armstrong

NOTE

1 1 hectare = 10,000 square metres = 2.47105 acres

2 1 acre = 4,047 square metres or a square of side 63.61 metres

3 The size of a standard FA football pitch is 100 metres x 64 metre or 1.581 acres.

4 All installations shown have an installed capacity of 0.5 MW or more (except for No.45) and are assumed to be ground-mounted.

5 The 1.2623 MW FIT registered installation recorded for West Dorset in Table 8 does not have a known planning application reference and is not listed above.

Table 17 RENEWABLE ENERGY GENERATION INSTALLATIONS AWAITING A FINAL PLANNING DECISION IN DORSET COUNTY AT 30 SEPTEMBER 2016

	Planning Authority	Renewable Energy Technology	DECC ID Reference	Planning Application Reference	Date Registered	Date Permitted (also, see last column below)	Development Site			Approx. % Covered by Panels	Number of Panels	Rating of Panel (W) or Turbine (MW)	Annual Energy Generation GWh	Load Factor	Power Rating (Installed Capacity) MW
							Size								
							Hectares	Acres	Soccer Pitches						
1	East Dorset DC	Solar PV	C2019/1334	3/13/0681/FUL	25/07/2013	22/07/2015	42.90	106.00	67.0	29	89,630	270	24.9260	0.1176	24.20
2	West Dorset DC	Solar PV	IF1161/1866	1/D/12/001664	03/12/2012	15/01/2015	40.50	100.08	63.3	41	119,280	200	24.09	0.1153	23.86
TOTAL							83.40	206.08	130.31		208,910		49.02		48.06
AVERAGE							41.70	103.04	65.15	35	104,455	230	24.51	0.1164	24.03

Site Type	Site Location	Developer	Current Planning Status
1	AGLV ¹	Mapperton Farm, Mapperton, BLANDFORD FORUM DT11 9ER	Good Energy Generation Ltd
2	AONB SSSI	Rampisham Down, Rampisham, DORCHESTER DT2 0HS (South of A356)	British Solar Renewables

Ordnance Survey Grid Reference		INPUT to EU Joint Research Centre PV Estimation Programme					OUTPUT from EU Joint Research Centre PV Estimation Programme					Load Factor		
		Latitude Degrees	Longitude Degrees	PV Panel Slope	PV Panel Azimuth	Inverter and cable losses, etc. (%)	Optimum Slope Degrees	Optimum Azimuth Degrees	% Losses Due to		Combined Sytem Losses (%)		Elevation metres a.s.l.	Annual Yield Factor (kWh/kW _p)
Temperature and Low Irradiance	Angular Reflectance								Yield Factor (kWh/kW _p /8,760)					
1	389660 99160	50.791913	-2.148065	Optimum	Optimum	16.0	38	-1	7.5	2.9	24.5	60	1,030	0.1176
2	354818 101222	50.808778	-2.642616	Optimum	Optimum	16.0	38	-1	7.0	2.9	24.2	219	1,010	0.1153

NOTE

- 1 AGLV = Area of Great Landscape Value: East Dorset District Council designation.
- 2 Secretary of State agreed to call-in on 30/06/2015, reference APP/F1230/V/15/3129159. Appeal Inquiry in abeyance (was due on 8/6/2016 (pre-inquiry) and 13/9/2016).

RECORDED 2005 AND PROJECTED 2020 TOTAL ENERGY CONSUMPTION

The UK's commitment to a 15% renewable energy target for 2020 is based on total energy consumption in 2020, as defined by European Commission Directive 2009/28/EU. The UK Government only publishes estimates of 2020 total energy consumption for the UK as a whole. However, it does publish actual annual total energy consumption at the local authority level as data become available. The most recent year for which data are available is 2013¹. For the purpose of calculating acceptable estimates of 2020 total energy consumption for Dorset's local authorities, this report has adopted a RegenSW working hypothesis for the South West Region which assumes a 1% year-on-year reduction in energy consumption, for all sectors, for the years 2014 to 2020². Below, Table 18 records energy consumption in 2013 and Table 19 records estimated energy consumption in 2020 based on the RegenSW hypothesis.

Table 18 RECORDED 2013 TOTAL ENERGY CONSUMPTION (Ref.1)

Local Authority	Heat		Electricity		Transport		TOTAL GWh
	GWh	%	GWh	%	GWh	%	
Christchurch	371.57	43.8	192.65	22.7	284.45	33.5	848.67
East Dorset	689.30	42.2	316.09	19.4	627.39	38.4	1,632.78
North Dorset	585.79	44.2	286.14	21.6	454.21	34.3	1,326.14
Purbeck	435.33	36.9	346.15	29.4	396.79	33.7	1,178.27
West Dorset	775.83	35.8	463.90	21.4	928.38	42.8	2,168.12
Weymouth and Portland	414.67	46.6	214.40	24.1	260.56	29.3	889.64
Dorset County	3,272.49	40.7	1,819.34	22.6	2,951.79	36.7	8,043.61
Bournemouth	1,220.33	47.8	718.07	28.1	615.47	24.1	2,553.86
Poole	1,259.10	48.7	690.48	26.7	637.95	24.7	2,587.53
Greater Dorset	5,751.91	43.6	3,227.88	24.5	4,205.21	31.9	13,185.00

Table 19 ESTIMATED 2020 TOTAL ENERGY CONSUMPTION (Ref.2)

Local Authority	Heat		Electricity		Transport		TOTAL GWh
	GWh	%	GWh	%	GWh	%	
Christchurch	346.33	43.8	179.57	22.7	265.12	33.5	791.02
East Dorset	642.47	42.2	294.62	19.4	584.77	38.4	1,521.86
North Dorset	545.99	44.2	266.70	21.6	423.36	34.3	1,236.05
Purbeck	405.75	36.9	322.63	29.4	369.84	33.7	1,098.22
West Dorset	723.13	35.8	432.39	21.4	865.31	42.8	2,020.83
Weymouth and Portland	386.50	46.6	199.84	24.1	242.86	29.3	829.20
Dorset County	3,050.17	40.7	1,695.74	22.6	2,751.26	36.7	7,497.17
Bournemouth	1,137.42	47.8	669.28	28.1	573.66	24.1	2,380.37
Poole	1,173.56	48.7	643.57	26.7	594.61	24.7	2,411.74
Greater Dorset	5,361.16	43.6	3,008.59	24.5	3,919.53	31.9	12,289.28

A NOTE ON 2020 RENEWABLE ENERGY TARGETS

Only the UK Government has a legal requirement to meet the 15% 2020 target. However, through their membership of the Local Government Association (LGA), the four Districts and two Boroughs of Dorset County, the County itself and the Unitary Authorities of Bournemouth and Poole, endorsed a Memorandum of Understanding (MOU) between the Department of Energy and Climate Change (DECC) and the Local Government Group (LGG) - a partnership the principal member of which is the LGA. The MOU sets out a DECC - LGG partnership approach to help meet climate change mitigation and related objectives, notably including: "The target to supply 15% of the UK's energy consumption from renewable energy by 2020 as set out in the 2009 Renewable Energy Directive" The MOU³ makes it clear that "This Memorandum is a statement of intent and should not be interpreted as a binding agreement". Subsequently, DECC's UK Renewable Energy Roadmap⁴, suggested that half the UK's 15% target, could come from sources of "national significance". These are defined by DECC as installations with a generating capacity of more than 50 MW onshore and 100 MW offshore and are the direct responsibility of the Secretary of State for Energy and Climate Change⁵. This suggestion effectively reduced a local authority's agreement to generate 15% of its 2020 energy consumption from its own resources down to a figure of 7.5%.

A 7.5% 2020 Target GWh
59.33
114.14
92.70
82.37
151.56
62.19
562.29
178.53
180.88
921.70

REFERENCES

- 1 Sub-national Total Final Energy Consumption in the UK 2005-2013, Publication URN: 15/D/450, DECC, November 2015.
Also, see Appendix 1 of this report (p.16).
- 2 Private communication, Joel Venn, Onshore Analyst and Technical Lead, RegenSW.
- 3 Memorandum of Understanding Between the Local Government Group and the Department of Energy and Climate Change, para.3.4.3, p.4, 9 March 2011.
- 4 UK Renewable Energy Roadmap, p.14, DECC, 12 July 2011.
- 5 Guidance: Consents and planning applications for national energy infrastructure projects, DECC, 24 July 2014.

Appendix 1 THE APPLICATION TO DORSET'S LOCAL AUTHORITIES OF RegenSW's METHODOLOGIES FOR CALCULATING 2020 ENERGY CONSUMPTION FOR THE SOUTH WEST REGION FROM RECORDED CONSUMPTION DATA FOR 2005 AND 2013

Local Authority	DECC's Published Energy Consumption Data for 2005 (Base Year) ¹						RegenSW 2020 Forecasts ²		
	Heat Sector		Electricity Sector		Transport Sector		TOTAL	Consumption	7.5% Target
	GWh	% of Total	GWh	% of Total	GWh	% of Total	GWh	GWh	GWh
Christchurch	495.4	47.6	225.0	21.6	319.6	30.7	1,040.1	995.5	74.7
East Dorset	1,001.4	49.2	352.7	17.3	683.0	33.5	2,037.1	1,962.9	147.2
North Dorset	668.3	45.4	308.1	20.9	496.9	33.7	1,473.4	1,419.3	106.4
Purbeck	598.1	41.7	363.5	25.3	473.7	33.0	1,435.3	1,379.3	103.4
West Dorset	991.0	38.9	519.5	20.4	1,040.2	40.8	2,550.7	2,493.3	187.0
Weymouth & Portland	571.2	51.1	251.1	22.5	295.2	26.4	1,117.6	1,059.8	79.5
Dorset County	4,325.5	44.8	2,020.0	20.9	3,308.7	34.3	9,654.2	9,310.1	698.3
Bournemouth	1,652.7	52.2	805.8	25.5	706.7	22.3	3,165.2	2,973.9	223.0
Poole	1,672.4	52.7	766.5	24.2	733.8	23.1	3,172.6	2,986.7	224.0
Greater Dorset	7,650.6	47.8	3,592.3	22.5	4,749.1	29.7	15,992.0	15,270.7	1,145.3

Local Authority	DECC's Published Energy Consumption Data for 2013 ¹						RegenSW 2020 Forecasts ³		
	Heat Sector		Electricity Sector		Transport Sector		TOTAL	Consumption	7.5% Target
	GWh	% of Total	GWh	% of Total	GWh	% of Total	GWh	GWh	GWh
Christchurch	371.6	43.8	192.7	22.7	284.4	33.5	848.7	791.0	59.3
East Dorset	689.3	42.2	316.1	19.4	627.4	38.4	1,632.8	1,521.9	114.1
North Dorset	585.8	44.2	286.1	21.6	454.2	34.3	1,326.1	1,236.0	92.7
Purbeck	435.3	36.9	346.1	29.4	396.8	33.7	1,178.3	1,098.2	82.4
West Dorset	775.8	35.8	463.9	21.4	928.4	42.8	2,168.1	2,020.8	151.6
Weymouth & Portland	414.7	46.6	214.4	24.1	260.6	29.3	889.6	829.2	62.2
Dorset County	3,272.5	40.7	1,819.3	22.6	2,951.8	36.7	8,043.6	7,497.2	562.3
Bournemouth	1,220.3	47.8	718.1	28.1	615.5	24.1	2,553.9	2,380.4	178.5
Poole	1,259.1	48.7	690.5	26.7	638.0	24.7	2,587.5	2,411.7	180.9
Greater Dorset	5,751.9	43.6	3,227.9	24.5	4,205.2	31.9	13,185.0	12,289.3	921.7

Local Authority	RegenSW's Forecast for 2020 Energy Consumption ³						TOTAL GWh	% Reduction on 2013 Consumption	2020 7.5% RE Target GWh
	Heat Sector		Electricity Sector		Transport Sector				
	GWh	% of Total	GWh	% of Total	GWh	% of Total			
Christchurch	346.3	43.8	179.6	22.7	265.1	33.5	791.0	6.8	59.3
East Dorset	642.5	42.2	294.6	19.4	584.8	38.4	1,521.9	6.8	114.1
North Dorset	546.0	44.2	266.7	21.6	423.4	34.3	1,236.0	6.8	92.7
Purbeck	405.8	36.9	322.6	29.4	369.8	33.7	1,098.2	6.8	82.4
West Dorset	723.1	35.8	432.4	21.4	865.3	42.8	2,020.8	6.8	151.6
Weymouth & Portland	386.5	46.6	199.8	24.1	242.9	29.3	829.2	6.8	62.2
Dorset County	3,050.2	40.7	1,695.7	22.6	2,751.3	36.7	7,497.2	6.8	562.3
Bournemouth	1,137.4	47.8	669.3	28.1	573.7	24.1	2,380.4	6.8	178.5
Poole	1,173.6	48.7	643.6	26.7	594.6	24.7	2,411.7	6.8	180.9
Greater Dorset	5,361.2	43.6	3,008.6	24.5	3,919.5	31.9	12,289.3	6.8	921.7

Local Authority	% Change in Consumption Between 2005 and 2013				RegenSW 2020 Consumption Forecasts			2020 7.5% Renewable Energy Targets		
	Heat Sector	Electricity Sector	Transport Sector	All Sectors	Published 2012 (GWh)	Adopted 2016 (GWh)	Difference %	Published 2012 (GWh)	Adopted 2016 (GWh)	Difference %
Christchurch	-25.0	-14.4	-11.0	-18.4	995.5	791.0	-20.5	74.7	59.3	-20.5
East Dorset	-31.2	-10.4	-8.1	-19.8	1,962.9	1,521.9	-22.5	147.2	114.1	-22.5
North Dorset	-12.4	-7.1	-8.6	-10.0	1,419.3	1,236.0	-12.9	106.4	92.7	-12.9
Purbeck	-27.2	-4.8	-16.2	-17.9	1,379.3	1,098.2	-20.4	103.4	82.4	-20.4
West Dorset	-21.7	-10.7	-10.7	-15.0	2,493.3	2,020.8	-18.9	187.0	151.6	-18.9
Weymouth & Portland	-27.4	-14.6	-11.7	-20.4	1,059.8	829.2	-21.8	79.5	62.2	-21.8
Dorset County	-24.3	-9.9	-10.8	-16.7	9,310.1	7,497.2	-19.5	698.3	562.3	-19.5
Bournemouth	-26.2	-10.9	-12.9	-19.3	2,973.9	2,380.4	-20.0	223.0	178.5	-20.0
Poole	-24.7	-9.9	-13.1	-18.4	2,986.7	2,411.7	-19.3	224.0	180.9	-19.3
Greater Dorset	-24.8	-10.1	-11.5	-17.6	15,270.7	12,289.3	-19.5	1,145.3	921.7	-19.5

NOTES AND REFERENCES

- Sub-national Total Final Energy Consumption in the UK 2005-2013, Publication URN: 15/D/450, DECC, November 2015. For Greater Dorset, the 17.6% reduction in total final consumption from 2005 to 2013 is equivalent to a year-on-year reduction of 2.4%.
- RegenSW's 2020 energy consumption forecasts published in 2012 were calculated by applying percentage changes of -10, -12 and +10 to DECC's published 2005 energy consumption data for heat, electricity and transport, respectively. (Reference: "Renewable Energy Resource Assessment for Bournemouth, Dorset & Poole", p.44, RegenSW, Amended March 2012).
- RegenSW's current 2020 energy consumption forecasts are calculated by applying a 1% year-on-year reduction to DECC's published 2013 energy consumption data, for all sectors, for each of the years 2014 to 2020. The 2020 consumption arrived at by this method is equivalent to applying a 6.8% reduction to the 2013 data. (Reference: Private communication, Joel Venn, RegenSW Onshore Analyst and Technical Lead, April 2016).

Appendix 2 ASSESSMENT OF ANNUAL OUTPUT OF APPROVED DORSET COUNTY GROUND-MOUNTED SOLAR PV INSTALLATIONS USING THE EU JOINT RESEARCH CENTRE SOLAR PV ESTIMATION PROGRAMME

Planning Authority	Planning Application Reference	Installed Capacity MW	Ordnance Survey Grid Reference		INPUT to EU Joint Research Centre PV Estimation Programme						OUTPUT from EU Joint Research Centre PV Estimation Programme						Load Factor Yield Factor/8,670 (kWh/kWp/8,760)	Annual Electricity Generation GWh	
					Latitude Degrees	Longitude Degrees	PV Panel Slope	PV Panel Azimuth	Inverter and cable losses, etc. (%)	Optimum Slope Degrees	Optimum Azimuth Degrees	% Losses Due to		Combined Sytem Losses (%)	Elevation metres a.s.l.	Annual Yield Factor (kWh/kWp)			
												Temperature and Low Irradiance	Angular Reflectance						
1	North Dorset DC	2/2013/0791/PLNG	5.000	377815	128359	51.05414	-2.31790	Optimum	Optimum	16.0	37	-1	7.5	3.0	14.6	120	954	0.1089	4.770
2	North Dorset DC	2/2012/1042/PLNG	1.810	378233	127441	51.04590	-2.31188	Optimum	Optimum	16.0	37	-1	7.4	3.0	24.6	108	960	0.1096	1.738
3	North Dorset DC	2/2015/0898/FUL	5.000	371997	118399	50.96433	-2.40013	Optimum	Optimum	16.0	37	0	7.5	3.0	24.6	126	959	0.1095	4.795
4	North Dorset DC	2/2011/0304/PLNG	4.010	385726	113717	50.92273	-2.20445	Optimum	Optimum	16.0	37	-1	7.5	3.0	24.6	65	974	0.1112	3.906
5	North Dorset DC	2/2012/0253/PLNG	1.500	378118	112656	50.91295	-2.31262	Optimum	Optimum	16.0	38	0	7.5	3.0	24.6	76	961	0.1097	1.442
6	East Dorset DC	3/14/0774/FUL	5.000	411300	111800	50.90556	-1.84066	Optimum	Optimum	16.0	38	0	7.5	2.9	24.6	51	1,000	0.1142	5.000
7	East Dorset DC	3/15/1020/FUL	5.000	411500	111020	50.89855	-1.83784	Optimum	Optimum	16.0	38	-1	7.5	2.9	24.6	45	1,000	0.1142	5.000
8	West Dorset DC	WD/D/15/001841	5.000	360912	110027	50.88840	-2.55707	Optimum	Optimum	16.0	38	0	7.5	3.0	24.6	62	960	0.1096	4.800
9	West Dorset DC	1/D/13/000242	6.700	358160	109979	50.88777	-2.59619	Optimum	Optimum	16.0	37	0	7.5	3.0	24.6	76	955	0.1090	6.399
10	East Dorset DC	3/14/0457/FUL	20.350	408332	107310	50.86524	-1.88297	Optimum	Optimum	16.0	38	-1	7.3	2.9	24.4	28	1,030	0.1176	20.961
11	East Dorset DC	3/13/0669/FUL	13.000	407075	106873	50.86132	-1.90084	Optimum	Optimum	16.0	38	-1	7.3	2.9	24.4	49	1,030	0.1176	13.390
12	East Dorset DC	3/13/0470/FUL	13.200	409618	105289	50.84704	-1.86475	Optimum	Optimum	16.0	38	-1	7.2	2.9	24.3	19	1,030	0.1176	13.596
13	North Dorset DC	2/2014/1066/FUL	12.140	388332	105051	50.84486	-2.16709	Optimum	Optimum	16.0	38	-1	7.4	3.0	24.5	76	992	0.1132	12.043
14	North Dorset DC	2/2013/0770/PLNG	8.700	385425	105000	50.84434	-2.20838	Optimum	Optimum	16.0	38	-1	7.5	2.9	24.6	117	992	0.1132	8.630
15	West Dorset DC	WD/D/15/001862	5.000	360954	102552	50.82119	-2.55568	Optimum	Optimum	16.0	38	0	7.1	2.9	24.2	241	1,020	0.1164	5.100
16	North Dorset DC	2/2014/0825/FUL	7.000	388136	102088	50.81821	-2.16978	Optimum	Optimum	16.0	38	-1	7.5	2.9	24.5	71	1,020	0.1164	7.140
17	East Dorset DC	3/14/0790/FUL	7.000	406125	101700	50.81482	-1.91443	Optimum	Optimum	16.0	39	-1	7.3	2.9	24.4	18	1,060	0.1210	7.420
18	West Dorset DC	WD/D/14/002974	17.300	355019	101303	50.80952	-2.639774	Optimum	Optimum	16.0	38	-1	7.0	2.9	24.2	216	1,010	0.1153	17.473
19	Christchurch BC	8/14/0412	3.036	409506	100357	50.80270	-1.86647	Optimum	Optimum	16.0	39	-1	7.3	2.9	24.3	22	1,075	0.1227	3.264
20	Christchurch BC	8/13/0332	37.260	410222	99598	50.79586	-1.85633	Optimum	Optimum	15.5	39	-1	7.3	2.8	23.9	10	1,075	0.1227	40.055
21	Christchurch BC	8/12/0512	24.200	410016	99547	50.79540	-1.85926	Optimum	Optimum	15.5	39	-1	7.3	2.8	23.9	12	1,075	0.1227	26.015
22	West Dorset DC	1/D/11/002085	0.248	372302	97662	50.77787	-2.39421	Optimum	Optimum	16.0	39	-1	7.4	2.8	24.5	105	1,080	0.1233	0.268
23	West Dorset DC	1/D/13/001116	5.000	372299	97660	50.77785	-2.39425	Optimum	Optimum	16.0	39	-1	7.4	2.8	24.5	105	1,080	0.1233	5.400
24	East Dorset DC	3/14/0956/FUL	2.719	409137	97513	50.77713	-1.87178	Optimum	Optimum	16.0	39	-1	7.3	2.8	24.3	10	1,075	0.1227	2.923
25	West Dorset DC	1/D/11/000453	3.926	333898	97856	50.77650	-2.93888	Optimum	Optimum	16.0	38	-3	7.1	2.9	24.2	183	1,040	0.1187	4.083
26	West Dorset DC	1/D/13/001044	2.400	372985	97311	50.77475	-2.38450	Optimum	Optimum	16.0	39	-1	7.4	2.8	24.5	84	1,080	0.1233	2.592
27	East Dorset DC	3/13/0948/FUL	3.684	396675	97198	50.77435	-2.04852	Optimum	Optimum	16.0	39	-1	7.5	2.9	24.5	45	1,030	0.1176	3.795
28	Christchurch BC	8/14/0520	3.599	409499	97070	50.77314	-1.86665	Optimum	Optimum	16.0	39	-1	7.3	2.8	24.3	9	1,075	0.1227	3.869
29	Christchurch BC	8/15/0284	3.600	417813	95611	50.75982	-1.74882	Optimum	Optimum	16.0	38	-1	7.3	2.9	24.4	8	1,060	0.1210	3.816
30	Christchurch BC	8/14/0226	14.400	417714	95129	50.75549	-1.75024	Optimum	Optimum	16.0	38	0	7.3	2.9	24.4	8	1,060	0.1210	15.264
31	Purbeck DC	6/2013/0246	4.990	392824	94634	50.75126	-2.10309	Optimum	Optimum	16.0	39	-1	7.5	2.8	24.5	62	1,090	0.1244	5.439
32	Purbeck DC	6/2013/0132-0572	6.200	395767	94301	50.74830	-2.06136	Optimum	Optimum	16.0	38	0	7.0	2.9	24.2	38	1,080	0.1233	6.696
33	Purbeck DC	6/2013/0134-0574	8.100	395767	94301	50.74830	-2.06136	Optimum	Optimum	16.0	38	0	7.0	2.9	24.2	38	1,080	0.1233	8.748
34	Purbeck DC	6/2013/0133-0573	3.300	393388	93923	50.74487	-2.09508	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	23	1,100	0.1256	3.630
35	Purbeck DC	6/2011/0086-0385	0.498	392223	93019	50.73673	-2.11157	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	9	1,090	0.1244	0.543
36	Purbeck DC	6/2013/0443	10.000	388420	90356	50.71272	-2.16538	Optimum	Optimum	16.0	39	0	6.9	2.8	24.1	20	1,090	0.1244	10.900
37	Purbeck DC	6/2012/0415	7.000	387802	90076	50.71019	-2.17412	Optimum	Optimum	16.0	39	0	6.9	2.8	24.0	17	1,120	0.1279	7.840
38	Purbeck DC	6/2014/0338	5.800	389957	89555	50.70554	-2.14359	Optimum	Optimum	16.0	39	0	6.9	2.8	24.0	30	1,120	0.1279	6.496
39	West Dorset DC	1/D/11/000168	4.997	377872	88264	50.69360	-2.31465	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	55	1,120	0.1279	5.597
40	Purbeck DC	6/2013/0446	5.000	384311	87689	50.68864	-2.22346	Optimum	Optimum	16.0	39	0	6.9	2.8	24.0	19	1,120	0.1279	5.600
41	Purbeck DC	6/2015/0516	12.000	387124	87619	50.68808	-2.18364	Optimum	Optimum	16.0	39	0	6.9	2.8	24.0	21	1,120	0.1279	13.440
42	West Dorset DC	WD/D/15/001856	5.000	376969	86897	50.68127	-2.32734	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	30	1,120	0.1279	5.600
43	West Dorset DC	WD/D/15/001858	5.000	377318	86227	50.67526	-2.32236	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	34	1,120	0.1279	5.600
44	West Dorset DC	WD/D/15/001708	5.000	378479	85698	50.67055	-2.30590	Optimum	Optimum	16.0	39	0	7.0	2.8	24.1	37	1,120	0.1279	5.600
45	West Dorset DC	1/D/12/000858	4.838	364747	82848	50.64425	-2.49994	Optimum	Optimum	16.0	39	0	7.1	2.8	24.2	30	1,140	0.1301	5.516
46	West Dorset DC	WD/D/14/002675	4.400	364490	81305	50.63035	-2.50343	Optimum	Optimum	16.0	38	0	7.1	2.8	24.2	34	1,140	0.1301	5.016
47	Weymouth & Portland BC	WP/15/00039/FUL	3.000	369351	72408	50.55062	-2.43397	Optimum	Optimum	16.0	38	0	7.1	2.8	24.2	95	1,100	0.1256	3.300

TOTAL 341.906
AVERAGE 7.275

NOTE 1. Installations are listed in order of decreasing latitude of the development site.
2. Yield Factor estimates highlighted in yellow are based on on-site recordings.
For these, an input value of 15.5 or 16% for inverter and cable losses, etc., has been selected to provide a similar outcome. 16% has been used for all other installations.

TOTAL 360.505
AVERAGE 1,054.4 0.1204 7.670