

# Certificate

MPS-ECAS awards this certificate in accordance with the certification scheme MPS ABC version 15 080217, to:

**Ziway Roses PLC**  
**P.O. Box 386**  
**ZIWAY**  
**Ethiopia**  
**MPS-number: 802575**

Applicable to environmental clusters:  
ROSE

Validity: **13-8-2018 until 4-11-2018**  
Total points: **103,6**  
Qualification: **A**

Kind regards,  
MPS-ECAS

Signature:

Date of issue:  
17-7-2018



Ing. C. Maas

*N.B.: This certificate is only valid for the period specified above.*

**MPS-ECAS**  
Certification



# QUALIFICATION AND PERIOD GRAPHS

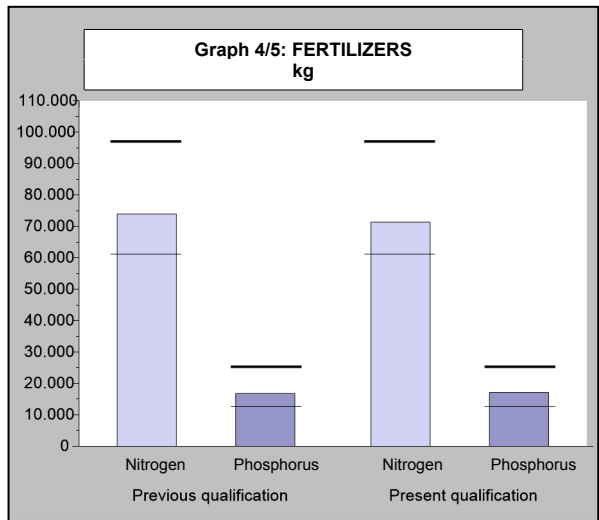
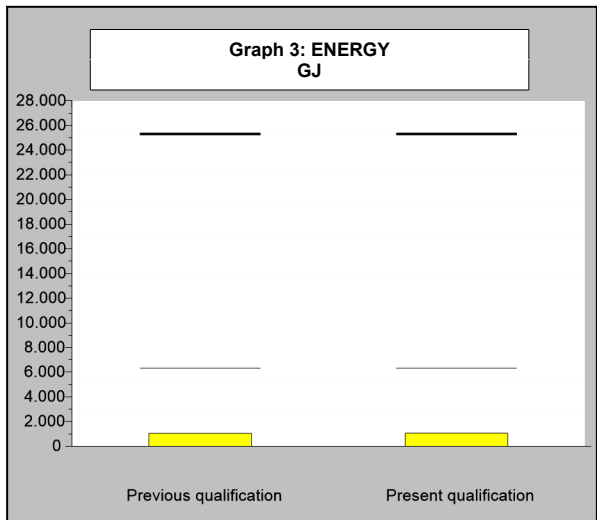
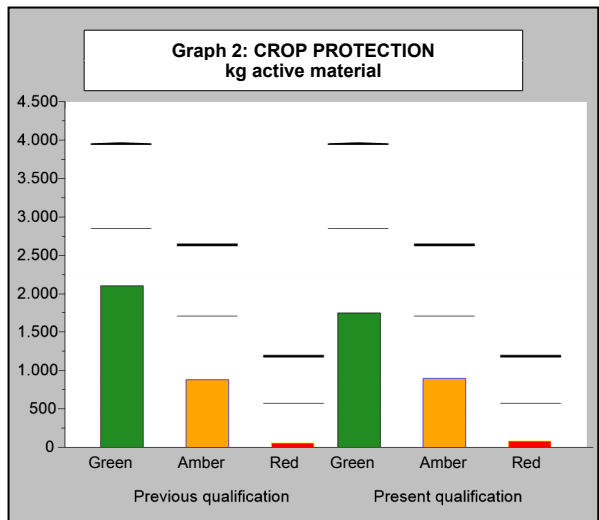
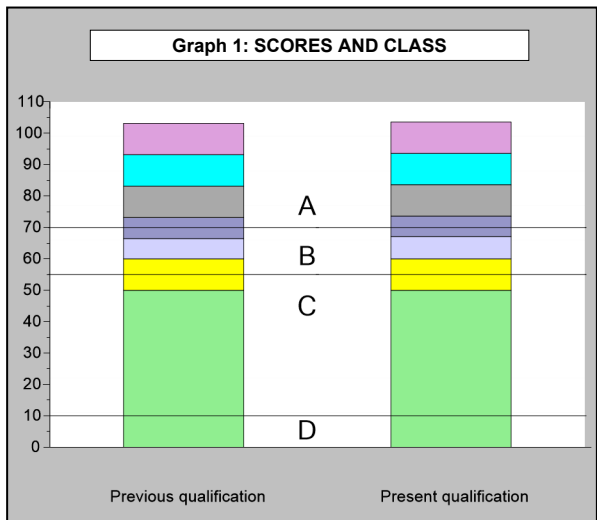
MPS company number: **802575/01**  
 Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

**Table 1: DATA QUALIFICATIONS**

SUBJECT		Company standard		use	points	max. points	A+ standard	A+ score	Obtained
		Lower	Upper limit						
Crop protection	Green	2848,5	3956,2 kg	1751,3	15	15			
	Amber	1709,1	2637,5 kg	896	20	20			
	Red	569,7	1186,9 kg	81,7	15	15			
total					50	50	85 %	100 %	yes
Energy total		6330	25320 GJ	1070,6	10	10	75 %	100 %	yes
Fertilizers	Nitrogen	61190	97060 kg	71387,8	7,2	10			
	Phosphorus	12660	25320 kg	17148	6,5	10			
total					13,6	20	75 %	68 %	no
Waste		0	130	130	10	10			
Water		0	130	130	10	10			
Certified parental material					10	10			
Total score (points)					103,6	110	90	103,6	yes
COMPANY QUALIFICATION					A				

**COMPANY USAGE PER 13 PERIODS**  
 <-----> = Upper limit <.....> = Lower limit

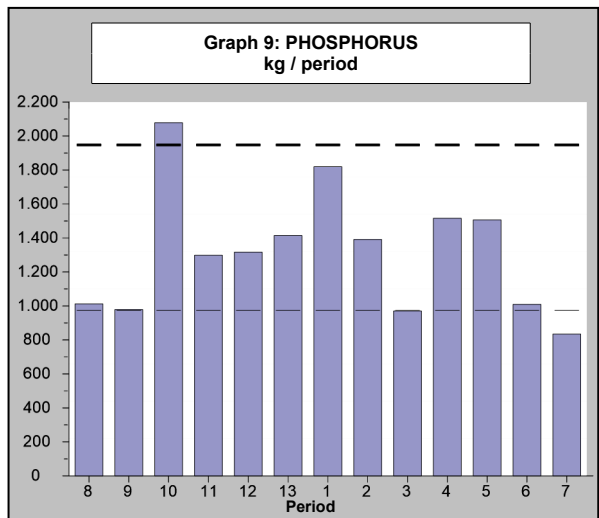
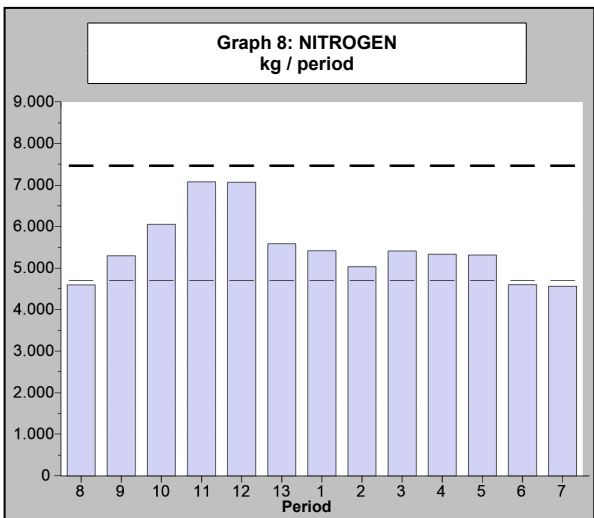
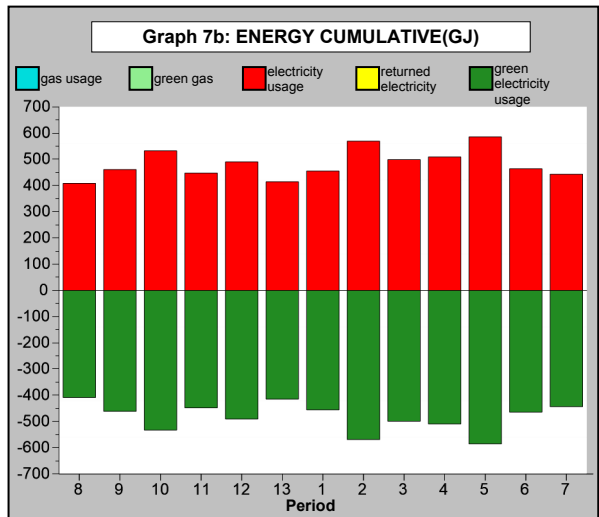
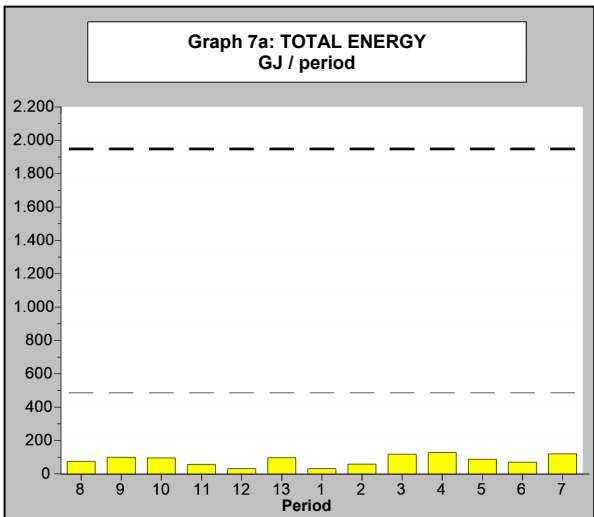
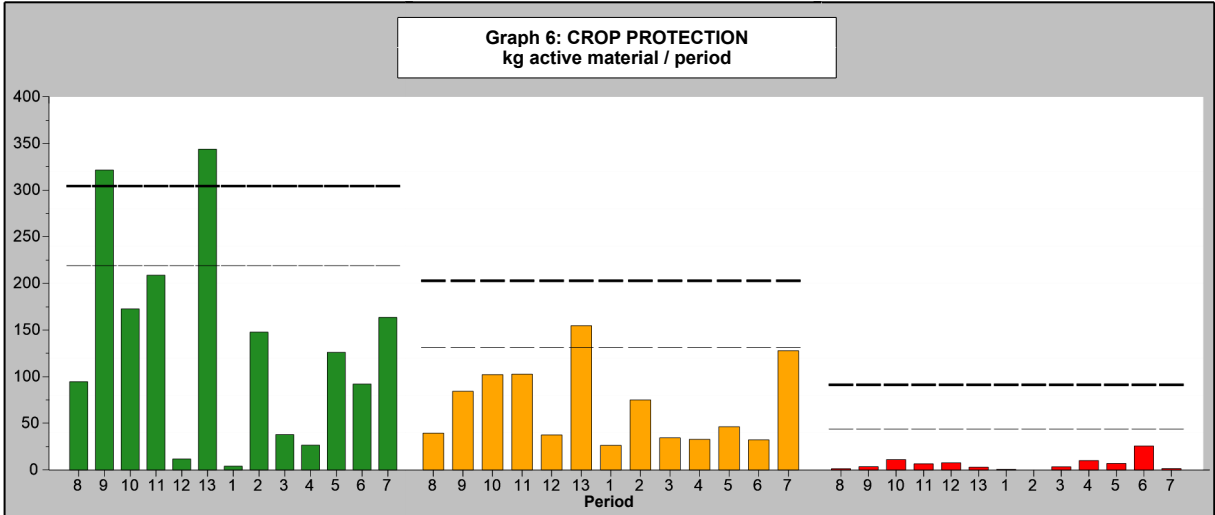


# QUALIFICATION AND PERIOD GRAPHS

MPS company number: **802575/01**  
 Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

<-----> = Upperlimit    <.....> = Lowerlimit



# MPS-Overview Composition of Qualification

MPS company number: **802575/01**  
 Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

## Composition of points MPS environmentally certified parental material

Certified parental material	(Average) area	Your Points	Max points
Total cultivated area 1)	422000 m2		
Area certified parental material MPS-ABC	422000 m2	10	10
Area certified parental material GLOBALGAP	0 m2	0	5
Total points for Certified parental material		10	10

1) Total means: the total area covered and uncovered cultivation and the second crop layer. Not included is the uncultivated area.

## Overview Environmental zones

Period	8	9	10	11	12	13	1	2	3	4	5	6	7
Environmental	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4	Zone 4

## Company usage of MPS-MIND

Pesticide	Indicator color	active ingredient	Annual company use of active substance		
			Green	Amber	Red
Acrobat MZ	●	dimethomorph		77,293	
	●	mancozeb	515,288		
Aliette 80 WP	●	fosetyl-aluminium	723,314		
Amino Gold	○	siliconen			
Avirmec 1.8 EC	●	abamectin		2,358	
Bluecop DF	●	copper ii hydroxide		3,500	
Chess 50 WG	●	pymetrozine		93,100	
Coragen 20 SC	●	chloantraniliprole		0,920	
Delegate 250 WG	●	spinetoram	18,674		
Equation Pro DF	●	cymoxanil	4,560		
	●	famoxadone		3,420	
Evisect S	●	thiocyclam hydrogen oxalate		206,645	
Fostail 80 WP	●	fosetyl-aluminium	16,800		
Golan (liquid)	●	acetamiprid		67,210	
Impulse	●	spiroxamine		160,550	
Kelpak	○	seaweed extract			
Match 50 EC	●	lufenuron			28,355
Mytech WP	○	paecilomyces lilacinus			
Nimbidine	●	azadirachtin	0,046		
Nissorun 10 EC	●	hexythiazox	3,000		
Nomolt	●	teflubenzuron	53,100		
Orvego 525 SC	●	ametoctradin	152,865		
	●	dimethomorph		114,649	
Prev-Am	●	borax		4,142	
	○	vegetable oil			
Previcur N	●	propamocarb hydrochloride	101,080		
Prove 1.9 EC	●	emamectin benzoate		13,099	
Pullit	○	attractant			
Revus	●	mandipropamid	84,160		
Rovral	●	iprodione			33,185
Rovral 250 flow	●	iprodione			20,125
Runner	●	methoxyfenozide	1,200		
Saf-T-Side 800EL	●	paraffin oil		44,880	
Scala 40 SC	●	pyrimethanil		34,300	
Selecron 720 EC	●	profenofos		67,320	
Sulphur Gold 80 WP	○	sulfur/sulphur			
Supramino Terra	○	amino and nucleic acids			

# MPS-Overview Composition of Qualification

MPS company number: **802575/01**  
 Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

## Company usage of MPS-MIND

Pesticide	Indicator color	active ingredient	Annual company use of active substance		
			Green	Amber	Red
	○	humic acids			
Switch 62.5 WG	●	cyprodinil		1,850	
	●	fludioxonil	1,250		
Teldor 500 SC	●	fenhexamid	40,000		
Teldor WG 50	●	fenhexamid	23,500		
Velum SC500	●	fluopyram	0,500		
Verita	●	fenamidone		0,799	
	●	fosetyl-aluminium	12,006		
<b>Annual company use of active substance</b>			<b>1751,343</b>	<b>896,035</b>	<b>81,665</b>

# OVERVIEW RECORDED DATA

MPS company number: **802575/01**

Company name: **Ziway Roses PLC (total)**

Valid: Period 8-2017 until Period 7-2018

Version: 17-7-2018

Code	Description	Unit	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Subtotal	Year total
<b>FORM RECEIVED</b>			yes	yes	yes	yes	yes	yes	yes		
<b>CROP PROTECTION AGENTS</b>											
3065	Acrobat MZ	gram		223200	13200	34400	113000	86000	109800	579600	858813
3108	Aliette 80 WP	gram		5000	25000					30000	904142
3302	Amino Gold	ml	533250	627800	690200	710500	683500	593800	694200	4533250	7431936
3285	Avirmec 1.8 EC	ml	8500	10000	19000	21000	12500	6000	5000	82000	131000
3377	Bluecop DF	gram									25000
3340	Chess 50 WG	gram	7500	4500	28250	18000	6000		112700	176950	186200
3992	Coragen 20 SC	ml									4600
4089	Delegate 250 WG	gram		17250	4350	1950	4125	8550	600	36825	74695
3093	Equation Pro DF	gram			400					400	15200
3206	Evisect S	gram									413290
3398	Fostail 80 WP	gram					21000			21000	21000
3198	Golan (liquid)	ml	19500	16150	4200	26000	11100	15750	19900	112600	305500
3174	Impulse	ml	20650	56950	29800	20000	40600	15400	18200	201600	321100
3345	Kelpak	ml	200000	240000	470000		30000			940000	1550000
3014	Match 50 EC	ml	3000		24000	100500	114000	69500	29000	340000	567100
4237	Mytech WP	gram					2000	3000	4000	9000	9000
3978	Nimbecidine	ml									4600
3009	Nissorun 10 EC	ml							30000	30000	30000
3249	Nomolt	ml	500		40500	23000	55000	21000	65000	205000	354000
3968	Orvego 525 SC	ml	2500	8000	6000	250	25000	50700	118100	210550	509550
3997	Prev-Am	ml	16200	18200	34400	32100	11800	28250	113350	254300	414200
3120	Previcur N	ml	3000				3000	12000		18000	140000
3382	Prove 1.9 EC	ml	61250	36650	59700	28750	46750	39000	22000	294100	682220
4209	Pullit	ml	19200	3000				13050	1600	36850	114650
3348	Revus	ml		12000	3000	8500	45100	29400	110700	208700	361200
3204	Rovral	gram					2500	44500		47000	66370
3030	Rovral 250 flow	ml	2000		9000	20500				31500	80500
3271	Runner	ml									5000
4002	Saf-T-Side 800EL	ml									56100
3056	Scala 40 SC	ml	15000			9250	6250	2000	14750	47250	85750
3131	Selecron 720 EC	ml		24750					19500	44250	93500
3392	Sulphur Gold 80 WP	gram	422100	470400	537000	598200	590300	517600	557400	3693000	5893350
4223	Supramino Terra	ml			10000	34000	24000		10000	78000	78000
3127	Switch 62.5 WG	gram					500			500	5000
3185	Teldor 500 SC	ml						9000	47000	56000	80000
3186	Teldor WG 50	gram	2000							2000	47000
4027	Velum SC500	ml		500	500					1000	1000

# OVERVIEW RECORDED DATA (Continued)

MPS company number: **802575/01**

Company name: Ziwi Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018

Version: 17-7-2018

Code	Description	Unit	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Subtotal	Year total
<b>CROP PROTECTION AGENTS (Continued)</b>											
3246	Verita	ml					18000			18000	18000
<b>WATER</b>											
21	Total irrigation	m3	67316	68875	67768	57447	71390	55177	55863	443836	844648
<b>ENERGY</b>											
4	Electricity usage (Total)	kWh	50610	63218	55446	56586	65062	51592	49284	391798	697822
54	Diesel oil/fuel	litre	870	1656	3330	3590	1945	1597	3010	15998	28837
6	Green Electricity Usage	kWh	50610	63218	55446	56586	65062	51592	49284	391798	697822
71	Petrol/Benzine	litre					570	423	426	1419	1419
<b>FERTILIZERS</b>											
624	Alexin	litre				11,5	40,2	24,6	32,1	108,4	108,4
572	Ammonium Sulphate (21%)	kg	2587,5	2937,5	2700	2737,5	2775	2325	2175	18237,5	39125,5
573	Bonemill	kg	7000	5000			4100			16100	32550
524	Borax (Boric Acid)	kg	73	68	72	73	74,2	62	58	480,2	1034,2
503	Calcium nitrate (nitrate of Lime)	kg	12775	12000	12600	12875	13000	12175	11625	87050	166250
506	Copper sulphate	kg	21,9	20,4	21,6	21,9	22,2	18,6	17,4	144	310,1
544	Eddha iron 6%	kg	365	377	401	384	370	325	337	2559	5387
525	Fe DTPA 6%	kg	547,5	510	540	547,5	555	465	435	3600	7755,5
597	Kaliumfosfiet	litre							210	210	210
605	LinaFert Bac-M	litre									5,5
606	LinaFert-P	litre									2
523	Magnesium nitrate	kg	4562,5	4250	4500	4562,5	4625	3212,5	2900	28612,5	65988
521	Magnesium sulphate	kg	9125	8112,5	9000	9125	10250	12275	9400	67287,5	129712,5
513	Manganese sulphate	kg	91,25	85	90	91,25	92,5	117,25	116	683,25	1375,7
529	Mono-Ammonium Phosphate (MAP) 12+61+0	kg	1825	1700	1800	1825	1800	1525	1450	11925	22817,5
514	Mono-potassium phosphate 0+52.29+33.98	kg	2600	1750	1975	4175	2350	2475	1800	17125	31125
534	Natriummolybdaat	kg	14,6	13,6	14	15	14,8	12,4	11,6	96	206,8
551	Nitric Acid 68%	litre	7275	6500	7125	7225	7050	5425	5975	46575	91125
575	Plantprod 27+15+12	kg	15							15	15
533	Potassium Nitrate 13+0+46	kg	3075	2550	4450	3212,5	2812,5	3650	3625	23375	49700
626	Potassium Phosphite 0+30+20	litre	210	210	224	428	440	216		1728	3685
537	Urea 46%	kg	145	101						246	246
501	Zinc sulphate	litre	63,95	59,55	63,06	63,92	64,79	54,29	50,78	420,34	905,66

# OVERVIEW RECORDED DATA (Continued)

MPS company number: **802575/01**

Company name: **Ziway Roses PLC (total)**

Valid: Period 8-2017 until Period 7-2018

Version: 17-7-2018

Code	Description	Unit	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Subtotal	Year total
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## ENVIRONMENTAL CLUSTERS

	Indoor crops										
2014	ROSE	m2	422000	422000	422000	422000	422000	422000	422000		
	Subtotal		422000	422000	422000	422000	422000	422000	422000		
	Certified parental material										
661	MPS-ABC certif.parental mat. indoor	m2	422000	422000	422000	422000	422000	422000	422000		

## GENERAL INFORMATION FORM

### MPS-Mind

#### Surface water

3900 What is the minimum distance of these fields to the nearest surface water? 250 - 2500 metres / 820 - 8200 feet

#### Cover

3910 Does the surface of covered crops exceed 95% of this part registration? Yes

#### Slope

3902 What is the maximum slope of a field in this part registration? > 10%

#### Leaching to groundwater

3903 Do you grow more than 95% of your crops in a closed (recirculation) system, achieving less than 3% loss of drainwater? No

3904 What is the minimum depth of the groundwater, taken over all your fields? 3 - 15 metres / 9,8 - 49,2 feet

3905 What is the lowest percentage of organic matter of your soil, taken over all your fields of this part registration? 1,5 - 3%

3906 What is the average precipitation per annum? (if unknown, please leave blank) 600 - 1500 mm annually / 23 - 59 inch

3907 How many months per year may be regarded as exceptionally dry (less than 2% of the annual precipitation)? 2 - 6 months

3908 What is the average day and night temperature over a whole year? (if unknown, please leave blank) < 20 degrees C / 68 degrees F

#### Water management

45 Is rainwater being collected? Yes

47 Do you collect leaking water while working with chemicals? Yes

49 Do you record water use? Yes

50 Do you use drip irrigation or recirculation? Yes

#### Waste management

41 Is organic waste being processed in a responsible way? Yes

42 Is paper being processed in a responsible way? Yes



# OVERVIEW RECORDED DATA (Continued)

MPS company number: **802575/01**  
Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
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## GENERAL INFORMATION FORM

### Waste management

43	Is plastic being processed in a responsible way?	Yes
44	Is chemical waste being processed in a responsible way?	Yes

# OVERVIEW RECORDED DATA

MPS company number: **802575/01**

Company name: **Ziway Roses PLC (total)**

Valid: Period 8-2017 until Period 7-2018

Version: 17-7-2018

Code	Description	Unit	Period 8	Period 9	Period 10	Period 11	Period 12	Period 13	Subtotal
<b>FORM RECEIVED</b>			yes	yes	yes	yes	yes	yes	
<b>CROP PROTECTION AGENTS</b>									
3065	Acrobat MZ	gram	213	107000	172000				279213
3108	Aliette 80 WP	gram	242	222600	2500	223400	1800	423600	874142
3302	Amino Gold	ml	586	562200	609200	615000	512000	599700	2898686
3285	Avirmec 1.8 EC	ml	6000	18000	9000	10500		5500	49000
3377	Bluecop DF	gram		5500		19500			25000
3340	Chess 50 WG	gram	500	500		5250	3000		9250
3992	Coragen 20 SC	ml			2800	1800			4600
4089	Delegate 250 WG	gram			6220		31350	300	37870
3093	Equation Pro DF	gram	3600	6400	4800				14800
3206	Evisect S	gram		15750	67750	71400	10500	247890	413290
3398	Fostail 80 WP	gram							
3198	Golan (liquid)	ml	39100	32600	11800	49200	1500	58700	192900
3174	Impulse	ml	11900	26600	4200	16800	27400	32600	119500
3345	Kelpak	ml		50000	100000	50000		410000	610000
3014	Match 50 EC	ml	25500	48000	53500	71100	25000	4000	227100
4237	Mytech WP	gram							
3978	Nimbicidine	ml				4600			4600
3009	Nissorun 10 EC	ml							
3249	Nomolt	ml	41500	84500	22000			1000	149000
3968	Orvego 525 SC	ml	84500	100000	75500	36500	1000	1500	299000
3997	Prev-Am	ml	29600	24400	8800	51900	800	44400	159900
3120	Previcur N	ml	54000	21000	15000	23000	3000	6000	122000
3382	Prove 1.9 EC	ml	4000			54200	298520	31400	388120
4209	Pullit	ml					300	77500	77800
3348	Revus	ml	42500	18000	92000				152500
3204	Rovral	gram		2370	17000				19370
3030	Rovral 250 flow	ml				12000	26000	11000	49000
3271	Runner	ml			5000				5000
4002	Saf-T-Side 800EL	ml		4200	23200	28700			56100
3056	Scala 40 SC	ml	5500	17000	12000	4000			38500
3131	Selecron 720 EC	ml	1500	14000	8250	10500	15000		49250
3392	Sulphur Gold 80 WP	gram		624800	412400	461400	244700	457050	2200350
4223	Supramino Terra	ml							
3127	Switch 62.5 WG	gram	3000	1500					4500
3185	Teldor 500 SC	ml	24000						24000
3186	Teldor WG 50	gram		30000	10000	5000			45000
4027	Velum SC500	ml							

# OVERVIEW RECORDED DATA (Continued)

MPS company number: **802575/01**

Company name: **Ziway Roses PLC (total)**

Valid: Period 8-2017 until Period 7-2018

Version: 17-7-2018

Code	Description	Unit	Period 8	Period 9	Period 10	Period 11	Period 12	Period 13	Subtotal
<b>CROP PROTECTION AGENTS (Continued)</b>									
3246	Verita	ml							
<b>WATER</b>									
21	Total irrigation	m3	51539	59540	64681	82637	79934	62481	400812
<b>ENERGY</b>									
4	Electricity usage (Total)	kWh	45366	51242	59158	49736	54468	46054	306024
54	Diesel oil/fuel	litre	2087	2800	2690	1607	895	2760	12839
6	Green Electricity Usage	kWh	45366	51242	59158	49736	54468	46054	306024
71	Petrol/Benzine	litre							
<b>FERTILIZERS</b>									
624	Alexin	litre							
572	Ammonium Sulphate (21%)	kg	2775	3075	3562,5	4200	4013	3262,5	20888
573	Bonemill	kg	1850	300	10050	550	700	3000	16450
524	Borax (Boric Acid)	kg	74	83	95	112	107	83	554
503	Calcium nitrate (nitrate of Lime)	kg	9075	10200	11700	16400	17300	14525	79200
506	Copper sulphate	kg	22,2	24,9	28,5	33,6	32	24,9	166,1
544	Eddha iron 6%	kg	370	443	493	590	517	415	2828
525	Fe DTPA 6%	kg	555	622,5	712,5	840	803	622,5	4155,5
597	Kaliumfosfiet	litre							
605	LinaFert Bac-M	litre						5,5	5,5
606	LinaFert-P	litre						2	2
523	Magnesium nitrate	kg	5920	6640	7600	6050	5978	5187,5	37375,5
521	Magnesium sulphate	kg	7400	8150	9500	13625	13375	10375	62425
513	Manganese sulphate	kg	92,5	103,75	118,75	140	133,7	103,75	692,45
529	Mono-Ammonium Phosphate (MAP) 12+61+0	kg	1374,5	1505	1722,5	1967,5	2248	2075	10892,5
514	Mono-potassium phosphate 0+52.29+33.98	kg	1850	2175	2450	2575	2675	2275	14000
534	Natriummolybdaat	kg	14,8	16,6	19	22,4	21,4	16,6	110,8
551	Nitric Acid 68%	litre	5700	7150	7650	8975	8875	6200	44550
575	Plantprod 27+15+12	kg							
533	Potassium Nitrate 13+0+46	kg	3787,5	4237,5	4850	5612,5	4725	3112,5	26325
626	Potassium Phosphite 0+30+20	litre	215	285	292	720	210	235	1957
537	Urea 46%	kg							
501	Zinc sulphate	litre	64,75	72,67	83,19	98,07	93,7	72,94	485,32

# OVERVIEW RECORDED DATA (Continued)

MPS company number: **802575/01**  
 Company name: Ziway Roses PLC (total)

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

Code	Description	Unit	Period 8	Period 9	Period 10	Period 11	Period 12	Period 13	Subtotal
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## ENVIRONMENTAL CLUSTERS

	Indoor crops								
2014 ROSE	m2		422000	422000	422000	422000	422000	422000	
	Subtotal		422000	422000	422000	422000	422000	422000	
	Certified parental material								
661 MPS-ABC certif.parental mat. indoor	m2		422000	422000	422000	422000	422000	422000	

# CO2 Indicator

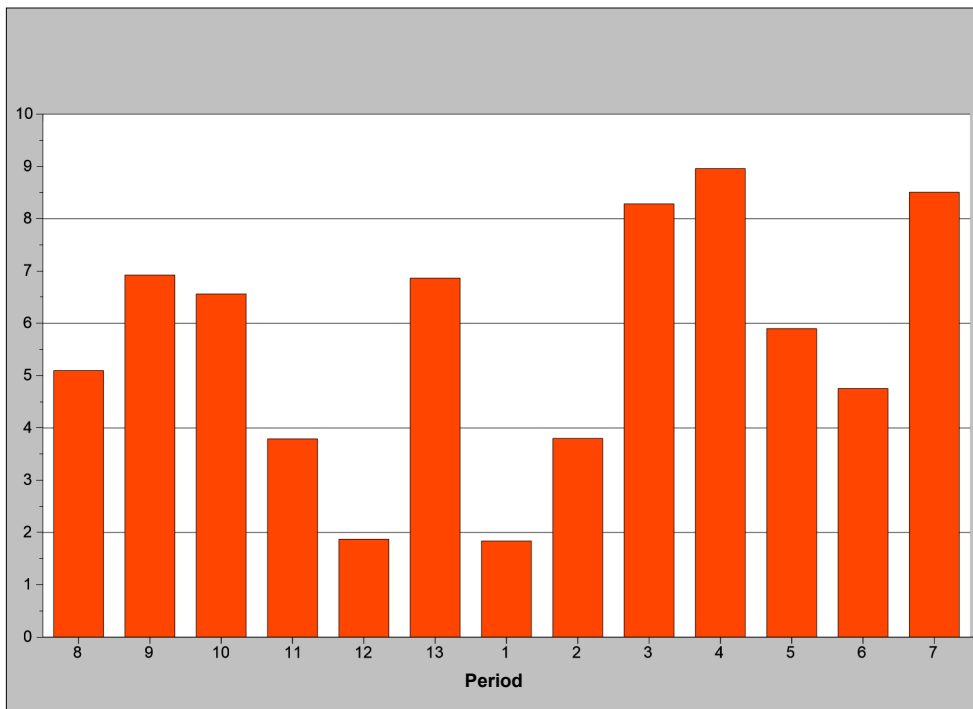
MPS company number: **802575/01**  
 Company name: Ziway Roses PLC

Valid: Period 8-2017 until Period 7-2018  
 Version: 17-7-2018

**Review CO2-emission per energy source per year (x 1000 kg)**

Code		CO2 production (x 1000)
54	Diesel oil/fuel	76
4	Electricity usage (Total)	4
71	Petrol/Benzine	3
6	Green Electricity Usage	-11
<b>Total</b>		<b>72</b>

**Review CO2-emission per period (x 1000 kg)**



Disclaimer: the purpose of the above mentioned table and graphics is to give an insight in the CO2-emission on company level. The CO2 emission has been based on the energy consumption in GJ and the internationally accepted arithmetic rules. The calculation of the quantity in GJ is based on the calculation system of MPS for the fuel used by the company and the electricity and heating that has been bought and sold. The review serves only as a management tool. No rights can be derived. It is not allowed to use this review for other purposes. In cooperation with (inter)national stakeholders and research organizations MPS is working on further developments concerning CO2. We mainly focus on CO2 emission in the transport chain and the CO2 emission per physical production.