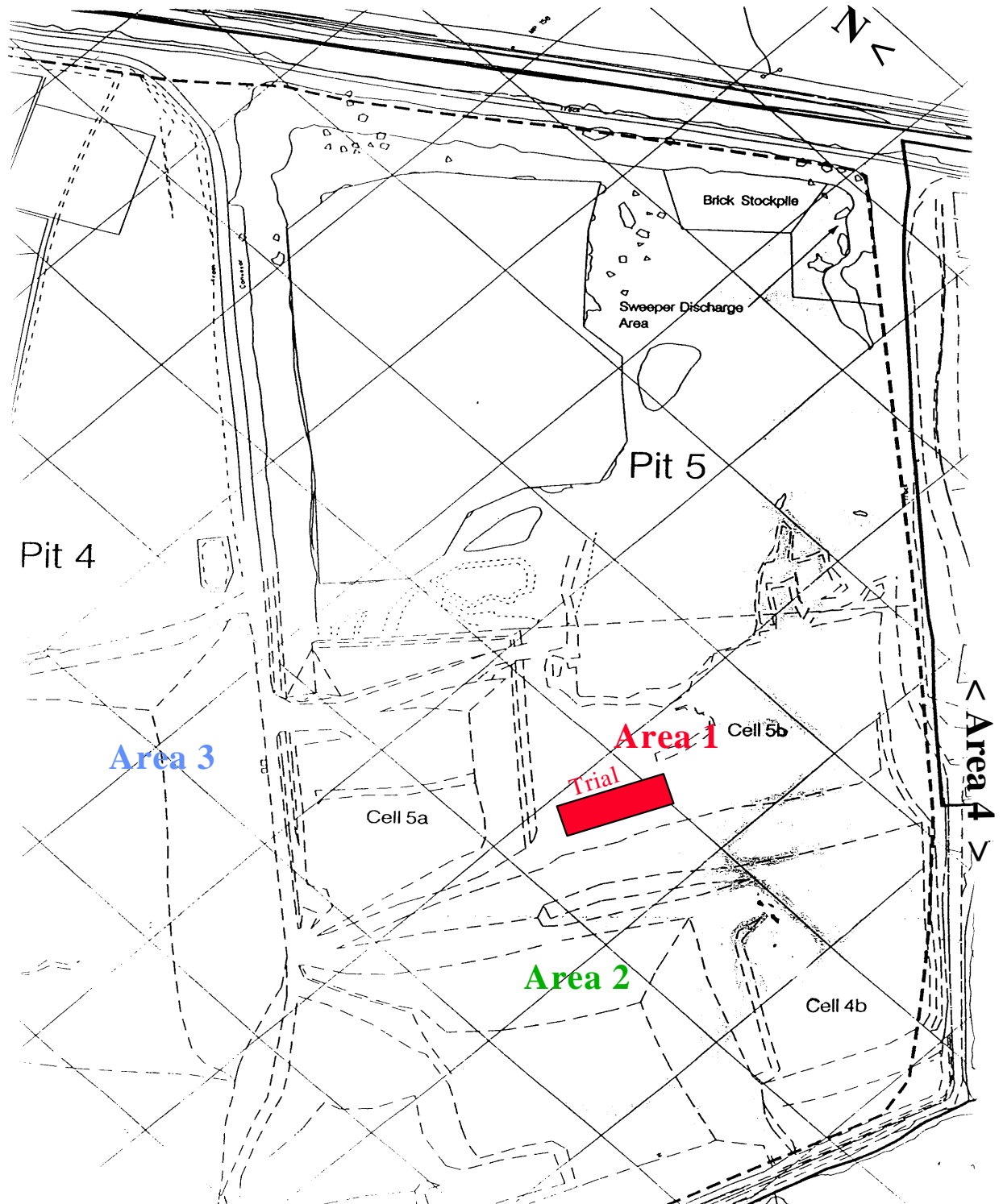


Appendix 1

Map of Site showing position of trial and the four areas used for the Scudder grill assessments



Key to Areas : 1 - Current Working Face 2 - Previous Working Face, freshly capped
3 - Area of previous laid waste, capped 3 years ago 4 - Proposed new site for future

Appendix 2

Scudder grid fly monitoring technique for monitoring flies on waste handling and disposal sites

This method of counting flies is the recommended technique for landfill sites.

The Scudder grid consists of a square grid 60 x 60 cm², made from wooden slats.

Fly counting procedure

- If possible, the observer selects a cluster of flies within the monitoring area and the grid is dropped by hand into the cluster, which causes the flies to take off and then land again on the slats of the grid.
- A standard period (e.g. 5 seconds) after having placed the grid on the surface, the flies resting on the grid are quickly counted.
- The grid is then picked up, the observer moves on to the next cluster of flies, and repeats the operation until the specified number of counts have been done.
- Ideally the counts should be carried out at approximately the same time of day on each occasion.
- Counting very early or late in the day should be avoided as this may give misleading figures.
- Also it is advisable to avoid counting flies during weather which restricts the flies activity.

Appendix 3

Trial 1 Covers Number of flies per trap

		03/08/98	07/08/98	10/08/98	14/08/98	17/08/98	21/08/98	24/08/98	
Treatment	Cage No	Total	Total	Total	Total	Total	Total	Total	
No cover	1-1	0	0	11	98	36	47	0	
	1-2	1	13	25	77	39	81	10	
Inert	2-1	0	0	0	0	1	0	0	
	2-2	0	0	2	5	1	2	0	
	2-3	0	0	0	4	1	2	2	*
Enviromesh	3-1	0	1	0	0	4	0	2	
	3-2	0	0	0	1	1	0	3	*
	3-3	0	0	0	0	0	0	0	
GeoHess	4-1	0	0	0	2	1	3	0	
	4-2	0	0	0	0	0	7	0	
	4-3	0	1	0	1	0	2	1	*
GeoHess	5-1	0	0	2	0	2	3	0	
	5-2	0	0	1	F	3	4	0	*
	5-3	0	0	0	F	5	0	0	
Inert	6-1	0	0	0	0	0	1	0	
	6-2	0	0	0	0	1	3	0	
	# 6-3	0	1	0	5	11	12	0	*
No cover	7-1	0	3	6	49	68	104	5	
	7-2	2	4	16	91	17	40	6	
Enviromesh	8-1	0	1	0	F	2	7	0	
	8-2	0	0	0	3	0	2	0	
	8-3	0	1	1	1	3	1	0	*
Inert	9-1	0	0	0	5	0	0	0	
	9-2	0	0	0	F	0	3	0	*
	9-3	0	0	0	4	0	2	0	
No cover	10-1	2	22	4	7	28	20	3	
	10-2	0	7	18	31	47	49	6	
GeoHess	11-1	0	0	0	2	0	1	0	
	11-2	0	0	1	1	0	2	0	*
	11-3	2	0	1	6	8	9	0	
Enviromesh	12-1	0	0	0	21	3	14	1	
	12-2	0	1	2	0	2	2	0	
	12-3	0	0	2	1	2	0	2	*
Enviromesh	13-1	0	0	0	0	1	2	0	
	13-2	0	0	0	0	2	4	0	*
	13-3	0	0	0	0	0	0	0	
No cover	14-1	1	1	5	19	40	17	10	
	14-2	0	0	2	8	11	45	17	
GeoHess	15-1	0	0	0	4	2	2	0	
	15-2	0	0	1	0	4	2	0	*
	15-3	0	0	1	8	2	1	0	
Inert	16-1	0	0	0	2	0	0	0	
	16-2	0	0	0	2	1	1	1	
#	16-3	1	2	3	8	31	47	3	*

N.B. These were the only cages placed over inert cover with refuse showing

F - trap fallen into cage

* 1m² hole cut on 21/08/98

Appendix 4

Meteorological Data for the period of the covering trial

Date	Rain mm	Wind mean m/s	Wind max. m/s	%RH mean	%RH max.	Ground min. @ 1m deg C	Ground max. @ 1m deg C	Soil surface min. deg C	Soil surface max. deg C	Air min. deg C	Air max. deg C
30/07/98	6.8	4.8	8.1	77.6	100.0						
31/07/98	0	2.3	4.5	86.4	103.3	46.16	46.24	14.15	21.76	11.75	19.72
01/08/98	0.4	2.5	5.6	91.2	100.7	45.76	46.16	14.58	22.66	12.12	18.95
02/08/98	0	1.8	3.3	79.3	98.4	45.36	45.84	12.73	26.42	10.28	18.66
03/08/98	3.0	2.6	5.6	96.1	102.5	44.88	45.36	14.48	22.56	10.26	18.71
04/08/98	0	3.9	7.4	76.5	103.0	44.40	44.88	13.09	23.41	11.55	20.8
05/08/98	0	2.6	5.5	72.2	103.6	43.92	44.4	13.40	30.45	10.56	24.54
06/08/98	0	2.9	5.5	82.6	106.6	43.44	43.92	13.62	28.74	8.54	24.51
07/08/98	0	2.0	5.5	80.0	106.6	42.88	43.2	13.8	32.68	10.6	23.56
08/08/98	0	1.6	4.9	79.0	107.9	42.40	42.88	15.18	37.69	10.44	27.91
09/08/98	0	2.9	4.9	81.7	107.9	42.00	42.4	16.98	35.09	14.36	28.26
10/08/98	0	2.1	4.0	79.8	106.9	41.52	42.00	16.14	36.99	13.03	28.04
11/08/98	0	1.7	3.4	72.2	98.0	41.12	41.52	17.40	37.15	13.62	29
12/08/98	0	3.5	7.1	76.7	105.1	40.81	41.12	16.93	31.73	12.23	28.34
13/08/98	0	3.1	6.4	78.2	101.5	40.47	40.82	12.05	25.57	9.06	20.7
14/08/98	0	3.0	6.4	83.4	101.5	40.14	40.48	16.93	30.84	14.95	25.53
15/08/98	2.8	2.3	6.4	79.6	104.3	39.85	40.15	15.97	28.96	13.05	25.14
16/08/98	0	2.2	5.4	78.6	103.3	39.56	39.86	12.87	29.57	8.29	22.16
17/08/98	0	3.2	5.6	83.9	97.1	39.28	39.57	15.39	27.01	13.26	22.04
18/08/98	0	2.1	4.4	72.2	96.3	39.00	39.29	15.04	30.55	12.04	21.25
19/08/98	0	1.6	3.6	73.8	100.7	38.73	39.01	11.98	33.39	7.39	23.69
20/08/98	0	3.7	7.2	84.2	101.5	38.46	38.74	14.2	27.6	10.76	23.72
21/08/98	0.4	5.2	8.7	76.7	102.5	-	-	-	-	15.11	22.87
22/08/98	0	3.1	6.9	75.6	96.2	-	-	-	-	10.51	19.74
23/08/98	5.0	3.0	6.2	96.7	104.3	-	-	-	-	7.22	18.55

- Values not available

Appendix 5

Trial 2 Insecticide Numbers of flies per trap or per cage together with the 'Refuse' score

		10/09/98		23/09/98		01/10/98	05/10/98	01/10/98	05/10/98	01/10/98
Treatment	Cage No	Total flies / trap	Total flies / trap	Gap around base of cage	Total flies / trap	Total flies / trap	No. flies / cage	No. flies / cage	Refuse score "	
Smite	1-1	0	5	!!	2	0	0	0	2	
	1-2	0	1	!	0	0	1	0	2	
	1-3	0	3	x	48	0	1	0	1	
Inert	2-1	0	2	!	1	0	3	0	1	
	2-2	1	2	x	2	0	2	0	0	
	2-3	0	1	x	3	0	0	0	1	
AquaPy + GeoHess	3-1	0	*(2)	!!	0	1	5	3	1	
	3-2	2	7	x	1	7	8	4	0	
	3-3	0	#		4	2	12	0	0	
Actellic	4-1	0	3	!!	0	0	1	0	1	
	4-2	0	1	!!!	0	0	2	0	2	
	4-3	0	1	!	2	0	2	0	1	
AquaPy + Inert	5-1	0	2	x	2	0	0	0	0	
	5-2	0	8	!	5	0	3	0	2	
	5-3	0	14	x	3	0	1	0	2	
Smite	6-1	0	#	x	0	1	0	0	0	
	6-2	0	7	!	3	0	5	0	4	
	6-3	0	#		2	0	1	0	2	
Inert	7-1	6	1	!	3	0	0	0	1	
	7-2	0	2	x	3	0	1	0	1	
	7-3	0	#		1	1	2	0	3	
AquaPy + GeoHess	8-1	0	6	!	7	0	21	1	0	
	8-2	0	*(41)	x	30	0	5	0	0	
	8-3	3	*(31)	!!	53	0	10	1	0	
Actellic	9-1	0	1	x	5	0	2	0	2	
	9-2	2	2	!!	5	0	1	0	2	
	9-3	0	0	!	8	0	1	0	1	
AquaPy + Inert	10-1	0	2	!!	2	1	1	0	0	
	10-2	0	3	!	0	0	1	0	1	
	10-3	0	2	!	2	1	2	0	1	
AquaPy + Inert	11-1	0	1	!	1	2	0	0	2	
	11-2	0	#		2	0	0	0	2	
	11-3	0	4	!	4	0	10	0	3	
Actellic	12-1	0	2	x	2	0	0	0	2	
	12-2	0	3	!	0	0	2	0	2	
	12-3	1	1	!	0	0	0	0	2	
AquaPy + GeoHess	13-1	0	*(20)	x	31	6	15	1	0	
	13-2	0	6	x	3	3	7	2	0	
	13-3	0	10	x	3	4	8	0	0	
Inert	14-1	0	9	!!!	61	2	30	0	3	
	14-2	1	1	!	1	0	2	0	2	
	14-3	0	2	!	8	0	10	0	2	
Smite	15-1	0	2	!!	3	0	1	0	1	
	15-2	0	0	!	7	0	1	0	1	
	15-3	0	0	x	0	0	1	0	2	

Appendix 5 (contin)

	10/09/98	23/09/98	23/09/98	01/10/98	05/10/98	01/10/98	05/10/98	01/10/98
Treatment Cage No	Total flies/ trap	Total flies/ trap	Gap around base of cage	Total flies/ trap	Total flies / trap	No. flies / cage	No. flies / cage	Refuse score "
Actellic 16-1	1	3	!	0	0	2	0	1
16-2	0	0	!	0	0	0	0	1
16-3	0	2	x	0	0	1	0	1
AquaPy + 17-1	0	#		2	0	1	0	0
Inert 17-2	0	#		0	0	0	0	1
17-3	0	1	x	19	0	0	0	0
Smite 18-1	0	0	!	1	2	3	0	1
18-2	0	2	!	0	0	1	0	0
18-3	0	1	!	0	0	3	0	0
Inert 19-1	0	1	!	2	0	1	0	0
19-2	2	0	x	0	0	3	0	0
19-3	0	1	x	1	0	0	0	0
AquaPy + 20-1	0	5	x	3	0	15	0	1
GeoHess 20-2	0	3	x	7	4	20	0	0
20-3	0	3	x	11	4	7	0	0
Untreated U-1	7	41		67	26	13	4	5
U-2	2	182		63	5	30	6	5
U-3	0	170		97	22	35	5	5

" Refuse score in cage:

0 = no refuse visible

1 = small amount visible

3 = at least 1/2 area with refuse

5 = total area covered in refuse

(For GeoHess plots, the numbers represent the number of holes under cage)

- cage blown away

* () bird droppings inside cage - would suggest that there were large gaps or tears

Gap around cage base :

x = no gap

! = slight gap

!! = moderate gap

!!! = large gap

Appendix 6

Meteorological Data for the period of the insecticide trial

Date	Rain mm	Wind mean m/s	Wind max. m/s	%RH mean	%RH max.	Ground min. @ 1m deg C	Ground max. @ 1m deg C	Soil surface min. deg C	Soil surface max. deg C	Air min. deg C	Air max. deg C
04/09/98	trace	-	-	-	-	46.5	46.5	21.0	-	11.7	18.2
05/09/98	3.4	-	-	-	-	46.4	46.7	20.6	-	13.7	18.7
06/09/98	0.0	1.9	4.4	-	-	-	46.7	13.8	-	13.2	18.1
07/09/98	0.6	3.7	5.0	-	-	42.8	43.4	11.9	-	10.7	20.3
08/09/98	0.0	4.9	6.7	-	-	41.8	43.0	14.4	-	14.3	21.7
09/09/98	1.8	5.0	7.8	-	-	35.3	41.8	14.2	-	14.5	21.5
10/09/98	1.8	5.0	7.8	-	-	-	-	-	-	13.1	21.0
11/09/98	0.0	-	-	-	-	38.0	38.6	9.6	23.2	10.0	16.8
12/09/98	0.0	-	-	-	-	37.2	37.8	5.8	19.0	5.6	12.8
13/09/98	0.0	-	-	-	-	36.2	37.2	5.8	19.0	6.2	14.2
14/09/98	0.0	5.4	9.0	-	-	35.6	36.2	5.8	18.4	6.2	16.6
15/09/98	0.8	3.6	7.1	-	-	34.6	35.6	7.6	18.6	8.2	18.8
16/09/98	0.0	5.5	8.6	69.0	75.9	33.2	34.6	7.5	19.8	8.2	16.6
17/09/98	0.0	0.9	2.8	78.1	94.5	32.3	33.1	6.2	22.0	7.6	16.3
18/09/98	0.0	2.3	4.2	92.0	101.5	31.6	32.3	9.1	28.2	9.4	17.6
19/09/98	0.0	1.1	2.1	89.6	98.1	30.9	31.6	15.1	26.5	14.7	20.5
20/09/98	0.0	2.1	3.6	81.2	98.9	30.3	30.9	10.7	27.3	10.8	21.0
21/09/98	0.0	3.0	4.5	81.5	99.0	29.8	30.3	11.6	31.5	12.7	21.9
22/09/98	0.0	3.3	4.7	83.0	92.9	29.4	29.8	10.8	29.4	11.8	20.2
23/09/98	0.0	2.8	4.1	75.8	98.7	29.1	29.4	11.1	22.8	11.7	16.9
24/09/98	0.0	2.2	3.6	80.9	89.2	28.8	29.1	11.2	26.9	11.7	20.7
25/09/98	0.0	2.5	3.8	87.7	93.9	28.4	28.8	10.6	26.4	11.2	19.4
26/09/98	0.6	1.4	3.0	96.0	104.3	28.1	28.4	12.6	27.5	12.4	19.9
27/09/98	0.6	2.6	3.4	103.5	106.6	25.3	28.1	13.9	25.8	13.4	20.2
28/09/98	0.2	1.7	3.6	94.4	103.0	26.3	27.4	13.8	17.1	13.9	15.6
29/09/98	0.4	2.4	3.6	93.3	100.7	27.2	27.4	10.8	21.1	11.0	17.0
30/09/98	0.0	3.2	4.2	84.3	96.0	26.2	27.2	13.0	21.0	11.6	15.8
01/10/98	0.0	2.2	3.8	91.2	103.0	26.5	26.8	12.3	22.9	12.8	17.1
02/10/98	0.0	1.3	2.4	92.0	100.5	26.5	26.7	10.9	22.7	11.1	16.7
03/10/98	0.2	1.1	1.8	95.5	102.5	26.2	26.5	5.6	16.4	4.8	13.4
04/10/98	0.8	1.9	2.9	96.8	101.8	25.8	26.2	6.9	15.1	7.4	11.9
05/10/98	0.2	1.6	2.8	101.2	102.5	25.5	25.8	6.8	19.5	7.1	12.1

- data not available 0 - data taken from Grendon Underwood, Buckinghamshire.

