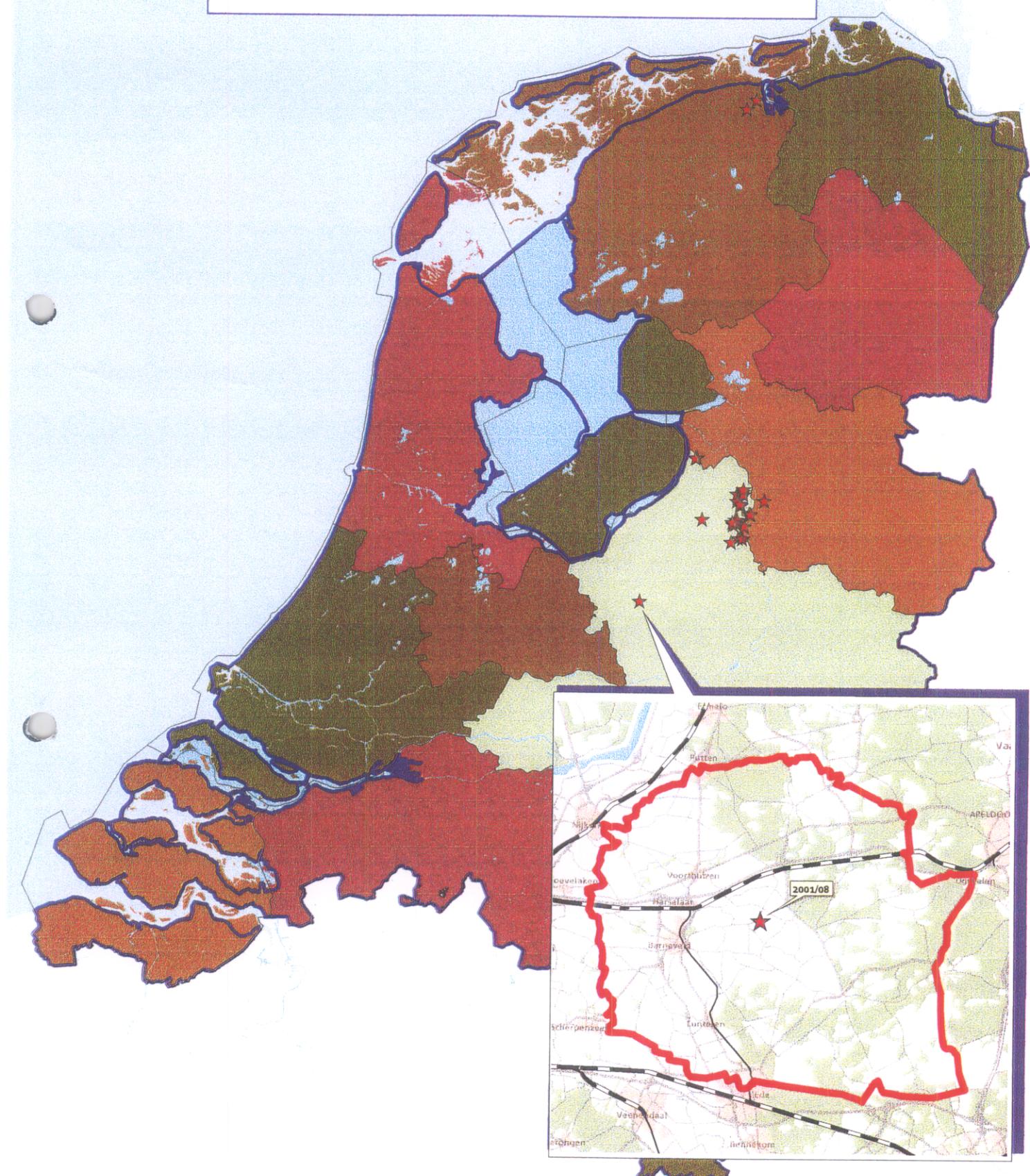


The Netherlands Foot and Mouth Disease 2001

Final Report Kootwijkerbroek



The Netherlands
Final Report on FMD outbreak
2001/08
Kootwijkbroek

1. Introduction

The FMD epidemic in the Netherlands started with the introduction of the virus on 24 February 2001 with the import of infected calves from Ireland via France. The calves caused an outbreak of FMD on a mixed farm in Oene (2001/03), confirmed on 22 March 2001. This farm consisted of goats and calves. Clinical signs of FMD on this farm were found on 15 March 2001.

During the laboratory investigations, a second farm reported clinical signs of FMD. This farm in Olst, Overijssel, was declared FMD virus positive on 21 March 2001 (outbreak 2001/01). The official date of the FMD epidemic in the Netherlands was therefore 21 March 2001.

On 20 March 2001, a veal calf farm in Kootwijkbroek reported clinical signs of FMD. The symptoms were seen in a stable with 14 calves of 4 weeks of age. The farm was visited the same day. On 21 March 2001, the severeness of the symptoms increased. Samples were sent to the laboratory. The symptoms denoted were fever, excessive salivation and small blisters in the mouth. The virus was isolated on 28 March 2001 in heparinsed blood-samples of one calf, taken on two consecutive days (21 and 22 March 2001). The herd has been culled on 27 March 2001. During the depopulation serum samples were taken from 14 calves. All these samples turned out to be negative for FMD-antibodies. The farm was declared FMD-positive, outbreak 2001/08 on 28 March 2001.

The owner has another veal calf farm in Ede (within the surveillance zone Kootwijkbroek), and visited this farm every day for feeding. On 27 March 2001, the farm was visited by the RVV. No clinical signs of FMD were seen. On 28 March 2001, the farm was culled pre-emptively, due to this human-contact. At that time, some calves had fever and small lesions. However no FMD virus was detected on this farm.

Several rumours were spread in the following days about the possible route of introduction of the virus. Several times it was suggested that a person contact caused the infection of the farm. The AID checked all these rumours. None of the persons that were assumed to have caused the infection, has visited an infected farm in the region Oene in the weeks before the possible introduction of the virus however.

EU measurements were implemented, restriction zones were established, clinical inspections were carried out, pre-emptive culling or suppressive vaccinations followed by pre-emptive culling took place, and the final screening in the restriction zones was carried out.

The measures taken were met with unexpected resistance of the local farmers. Culling teams were stopped and even taken hostage. Only with constant and special police protection could the measures carried out. This process has continued till the last farm and caused serious delay of the whole operation.

In this report, facts and figures of this area will be given. First, the outbreak will be described, followed by a description of the implementation of vaccination, the culling of all animals within the 2 km area, the screening of the herds in the restriction zones, and a map of the area.

2. Outbreak

Outbreak 2001/08

1. Location

Village: Kootwijkerbroek
Province: Gelderland

Municipality: RVV-Region:
Barneveld East

2. Type and size of farm

No. of cattle: 457 (veal calves)
No. of pigs: 0
No. of sheep: 3
No. of goats: 1
No. of other animals: 0

3. Suspicion

3.1 Date of suspicion: 20-03-2001
3.2 Visits of screening teams on: 20-03-2001
3.3 No. of cases with symptoms: 14 calves
3.4 Symptoms: Fever, excessive salivation, small blisters in the mouth
3.5 Deaths: 0

4. Method of diagnosis

4.1 Investigation centre: ID-Lelystad, Division WDT
4.2 Method of diagnosis:

- Detection of virus:
 IDAS ELISA virus isolation RT-PCR
- Detection of antibodies:
 ELISA Virus neutralisation test

5. Date of confirmation: 28-03-2001

6. Date of depopulation: 27-03-2001

7. Date of preliminary disinfection: 27-03-2001

8. Epidemiology

8.1 Presumed infection date: 13-03-2001 – 20-03-2001
8.2 Links: ??
8.3 Type of contact: human??

3. Restriction zones

Vaccination zone

A vaccination zone was established in an area 2 kilometres around outbreak 2001/08 on 28 March 2001. Within this area, FMD-susceptible animals were vaccinated according to Decision 2001/246/EC (suppressive vaccination). All farms within this area were pre-emptively culled later on.

Protection zone

A protection zone with a radius of at least 4 kilometres was established around outbreak 2001/08 on 28 March 2001, according to the Decision 2001/246/EC. All farms within this zone have been clinically inspected. Final screening has taken place according to the protocol described later.

Surveillance zone

On 29 March 2001 a surveillance zone with a radius of at least 12 kilometres, according to Decision 2001/246/EC was established around outbreak 2001/08. A census has been made of all categories of animals of susceptible species on the holdings. The final screening of this area has taken place according to the protocol described later.

All zones are shown on the map included in the annex.

4. Vaccination and culling

In this section facts about vaccination and culling are reported. Suppressive vaccination, in compliance with Decision 2001/246/EC, has been carried out around outbreak 2001/08. All vaccinated animals have been marked by mutilation. All vaccinated animals have been culled pre-emptively. Culling started around the infected farm, vaccinations were carried out from the outside of the vaccination area to the inside.

The process of vaccination and culling has been hampered because of farmers starting a row of lawsuits against the Ministry of Agriculture, Nature Management and Fisheries and because of rebellion by local farmers.

4.1 Protocol

Before vaccination, all animals to be vaccinated were inspected clinically and serum samples were taken. The serum sample size was based on the protocol to detect a disease prevalence of 5% with a confidence of 95%. Official veterinarians carried out the vaccinations. After vaccination, the vaccinated animals were marked by an ear punch. Two varieties of punch-shapes were used.

4.2 Vaccine

The vaccine was an inactivated vaccine based on subtype O-Menissa.

4.3 Number of farms/animals vaccinated

Dates of vaccination: Number of farms vaccinated:

| | |
|---------------|----|
| 30 March 2001 | 1 |
| 31 March 2001 | 36 |
| 2 April 2001 | 48 |
| 3 April 2001 | 17 |
| 4 April 2001 | 13 |
| 5 April 2001 | 7 |
| 6 April 2001 | 4 |
| 7 April 2001 | 4 |
| 17 April 2001 | 9 |
| 18 April 2001 | 2 |
| 20 April 2001 | 1 |
| 21 April 2001 | 4 |
| 22 April 2001 | 1 |

In total on 147 farms 45,082 animals have been vaccinated: 16,675 bovine animals, 27,471 porcine animals, 634 ovine animals and 302 caprine animals. All these animals have been culled later on, dates of culling are as follows.

Dates of culling: Number of vaccinated farms culled:

| | |
|---------------|----|
| 4 April 2001 | 1 |
| 7 April 2001 | 2 |
| 9 April 2001 | 2 |
| 10 April 2001 | 6 |
| 11 April 2001 | 2 |
| 12 April 2001 | 3 |
| 13 April 2001 | 4 |
| 17 April 2001 | 4 |
| 18 April 2001 | 5 |
| 19 April 2001 | 10 |
| 20 April 2001 | 7 |
| 21 April 2001 | 3 |
| 23 April 2001 | 5 |
| 24 April 2001 | 4 |
| 25 April 2001 | 3 |
| 26 April 2001 | 1 |
| 1 May 2001 | 9 |
| 2 May 2001 | 1 |
| 3 May 2001 | 6 |

| | |
|-------------|----|
| 4 May 2001 | 5 |
| 5 May 2001 | 11 |
| 7 May 2001 | 14 |
| 8 May 2001 | 12 |
| 9 May 2001 | 13 |
| 11 May 2001 | 13 |
| 14 May 2001 | 1 |

4.4 Number of farms/animals culled

In total (included the earlier mentioned vaccinated farms) on 207 farms (thus 147 vaccinated and 60 not-vaccinated) 55,314 animals have been culled: 19,796 bovine animals, 32,020 porcine animals, 1,050 ovine animals, 305 caprine animals and 2,143 other biungulates.

The culled but not-vaccinated farms, are farms that are culled pre-emptively straight away or are small back-yard flocks not registered, keeping sheep or goats as pets.

Dates of culling: Number of farms culled:

| | |
|---------------|----|
| 27 March 2001 | 1 |
| 28 March 2001 | 1 |
| 4 April 2001 | 7 |
| 5 April 2001 | 1 |
| 7 April 2001 | 3 |
| 9 April 2001 | 3 |
| 10 April 2001 | 6 |
| 11 April 2001 | 5 |
| 12 April 2001 | 4 |
| 13 April 2001 | 6 |
| 17 April 2001 | 4 |
| 18 April 2001 | 6 |
| 19 April 2001 | 10 |
| 20 April 2001 | 10 |
| 21 April 2001 | 3 |
| 23 April 2001 | 5 |
| 24 April 2001 | 4 |
| 25 April 2001 | 3 |
| 26 April 2001 | 1 |
| 1 May 2001 | 14 |
| 2 May 2001 | 1 |
| 3 May 2001 | 8 |
| 4 May 2001 | 5 |
| 5 May 2001 | 11 |
| 7 May 2001 | 30 |
| 8 May 2001 | 13 |
| 9 May 2001 | 13 |
| 11 May 2001 | 25 |
| 14 May 2001 | 4 |

5. Screening

Clinical examinations have been carried out on all farms in the protection zone.

21 days after culling and after the preliminary disinfection of the infected farm, outbreak 2001/08, the final screening of the susceptible animals in the protection and surveillance zone has been carried out according to Decision 2001/295/EC.

Final screening

5.1 Protocol

Protection zone

For the protection zone, the protocol was:

- Visit of all farms: clinical inspection and administrative control. For the administrative control, information is gathered about herd management in a certain time period before screening (e.g. number and type of sick or dead animals, use of medicine).
- Farms with sheep, goats and young dairy cattle (up to 2 years of age): clinical inspection and serological screening. Sampling was done based on a sample size to detect a within-herd prevalence of 5% (Confidence Index (CI) 95%).
- Farms with fattening cattle or pigs: clinical inspection.

Surveillance zone

For the protection zone, the protocol was:

- Visit of all farms: clinical inspection and administrative control.
- Visit of 150 randomly chosen farms for serological sampling. The number of 150 farms was based on a protocol to detect a between-herd prevalence of 2% (CI 95%). Sampling per herd was done based on a sample size to detect a within-herd prevalence of 5% (CI 95%).

All tests have been carried out and no signs of FMD were found on farms, neither in the protection nor in the surveillance zone.

5.2 Number of farms/animals

Protection zone

In total, 707 farms have been screened.

330 farms with a clinical inspection / administrative control and

377 farms with a clinical inspection / administrative control and a serological screening

Surveillance zone

In total, 1,748 farms have been screened.

1,582 farms with a clinical inspection / administrative control and

166 farms with a clinical inspection / administrative control and a serological screening

In total, 8,889 serum samples have been taken, 8,888 proved to be negative. 1 serum sample (from a farm in the surveillance zone) was found positive.

On one sheep-farm one seropositive sheep was found. Here upon a re-examination was carried out. From all mature sheep a serum sample was taken. All serum samples were proved to be negative and thus the seropositive sample was considered to be false positive.

6. Conclusion

With the above mentioned results and according to Decision 2001/246/EC and Decision 2001/295/EC, we will decide to lift the protection zone Kootwijkerbroek and the surveillance zone Kootwijkerbroek on 13 June 2001, subject to unexpected situations.

DESCRIPTION PROTECTION ZONE KOOTWIJKERBROEK OUTBREAK 2001/08

1. Vanaf de kruising N334 met N310. De N310 volgend in zuidelijke richting tot Houtbeekweg.
2. De Houtbeekweg volgend in oostelijke richting tot Kootwijkerdijk. Kootdijkerweg volgend tot Boswachter van Emstweg.
3. De Boswachter van Emstweg volgend in zuidelijke richting tot Houtvester Van 't Hoffweg.
4. Houtvester Van 't Hoffweg volgend in zuidwestelijke richting tot Hoog Buurloseweg.
5. Hoog Buurloseweg volgend in zuidwestelijke richting tot N310 (Harderwijkerweg).
6. N310 volgend in zuidoostelijke richting overgaand in Dorpsstraat tot Edeseweg.
7. Edeseweg volgend in zuidwestelijke richting tot Vijfsprongweg.
8. Vijfsprongweg volgend in noordwestelijke richting tot Hammerdijk.
9. Hammerdijk volgend in noordwestelijke richting tot Lage Veldweg.
10. Lage Veldweg volgend in zuidwestelijke richting tot Meulunterseweg.
11. Vanaf Meulunterseweg Het Veldje volgend in westelijke richting tot Veldhuizerweg.
12. Veldhuizerweg volgend in noordelijke richting overgaand in Ruitenbeekweg volgend tot Kattenbroekerweg.
13. Kattenbroekerweg volgend in noordwestelijke richting tot Ruitenbeekweg.
14. Ruitenbeekweg volgend in noordwestelijke richting tot Valkseweg.
15. Valkseweg volgend in westelijke richting tot Doctor Willem Dreeslaan.
16. Doctor Willem Dreeslaan volgend in noordwestelijke richting overgaand in Van Zuilenweg overgaand in noordelijke richting in Stationsweg.
17. Stationsweg volgend in noordelijke overgaand Baron Van Nagellstraat volgend tot N334.
18. N334 volgend in noordoostelijke richting tot kruising N334 met N310.

DESCRIPTION SURVEILLANCE ZONE KOOTWIJKERBROEK

1. Vanaf De Garderenseweg (Speuld) de weg volgend in zuidwestelijke richting tot 'T Hof.
2. 'T Hof volgend in zuidoostelijke richting tot de Hofweg.
3. De Hofweg volgend in zuidoostelijke richting tot de Aardhuisweg.
4. De Aardhuisweg volgend In zuidelijke richting tot de N344.
5. De N344 volgend in oostelijke richting tot de Aardhuis.
6. De Aardhuis volgend in zuidelijke richting tot de Pomphulweg.
7. De Pomphulweg volgend in westelijke richting tot de Alverschotenseweg.
8. De Alverschotenseweg volgend in zuidelijke richting tot de Hoog Buurloseweg.
9. De Hoog Buurloseweg volgend in oostelijke richting tot de N304.
10. De N304 volgend in zuidwestelijke richting tot de Apeldoornseweg.
11. De Apeldoornseweg volgend in zuidelijke richting tot de Delenseweg.
12. De Delenseweg volgend in zuidelijke richting overgaand in de Leipzigerweg overgaand in de Hoenderloseweg tot de Koningsweg N311.
13. De Koningsweg N311 volgend in westelijke richting overgaand in de Otterloseweg overgaand in de Harderwijkerveld tot de Oud Reemsterlaan.
14. De Oud Reemsterlaan volgend in zuidwestelijke richting tot de N224.
15. De N224 volgend in noordwestelijke richting tot de Nieuwe Kazernelaan (Ede).
16. De Nieuwe Kazernelaan volgend in zuidelijke richting tot de Eikenlaan.
17. De Eikenlaan volgend in westelijke richting tot de Stationsweg.
18. De Stationsweg volgend in noordelijke richting tot de Beukenlaan.
19. De Beukenlaan volgend in westelijke richting tot de Schaapsweg.
20. De Schaapsweg volgend in westelijke richting tot de Kolkakkerweg.
21. De Kolkakkerweg volgend in westelijke richting tot de Proosdijerveldweg.
22. De Proosdijerveldweg volgend in noordelijke richting tot de Slotlaan.
23. De Slotlaan volgend in westelijke richting tot de Hogerhorst.
24. De Hogerhorst volgend in noordelijke richting tot het water.
25. Aan het eind van de Hogerhorst het water overstekend naar de N224.
26. De N224 volgend in westelijke richting tot de Oudendijk (Ederveen).
27. De Oudendijk volgend in noordelijke richting tot de Buurtweg.
28. De Buurtweg volgend in westelijke richting tot de Hoofdweg.
29. De Hoofdweg volgend in noordelijke richting tot de Schras.
30. De Schras volgend in westelijke richting tot de Munnikeweg.
31. De Munnuikeweg volgend in noordelijke richting tot Veenweg.
32. De Veenweg volgend in noordwestelijke richting tot de N224 (Renswoude).
33. De N224 volgend in noordwestelijke richting tot de Ruwinkleseweg (Scherpenzeel).
34. De Ruwinkelseweg volgend in noordelijke richting overgaand in de Heintjeskamperweg tot de Barneveldsestraat.
35. De Barneveldsestraat volgend in noordoostelijke richting tot de Veenschoterweg.
36. De Veenschoterweg volgend in westelijke richting overgaand in noordelijke richting tot de Huigenbosch.
37. De Huigenbosch volgend in zuidwestelijke richting tot de Kolfschoten.

DESCRIPTION SURVEILLANCE ZONE KOOTWIJKERBROEK

38. De Kolschoten volgend in noordelijke richting overgaand in de Ringlaan tot de Schoonderbekerweg (De Glind).
39. De Schoonderbekerweg volgend in westelijke richting overgaand in noordelijke richting in de Ruurd Visserstraat (Achterveld) tot de Jan van Arkelweg.
40. De Jan van Arkelweg volgend in noordelijke richting overgaand in de Stoutenburgerweg tot de Vinselaarseweg.
41. De Vinselaarseweg volgend in westelijke richting tot de Vinkelaar.
42. De Vinkelaar volgend in noordelijke richting tot de A1 en het spoor overstekend naar de Korlaarseweg.
43. De Korlaarseweg volgend in noordelijke richting tot de Hoevelakenseweg.
44. De Hoevelakenseweg volgend in noordwestelijke richting overgaand in de Klaarwater tot de Platanenstraat.
45. De Platanenstraat volgend in oostelijke richting tot de Damweg (Zwartebroek).
46. De Damweg volgend in noordwestelijke richting tot de Blokhuizersteeg.
47. De Blokhuizersteeg volgend in noordoostelijke richting tot de Slichtenhorsterweg.
48. De Slichtenhorsterweg volgend in noordoostelijke richting tot de Barneveldseweg N301.
49. De Barneveldseweg N301 volgend in westelijke richting tot de Oude Barneveldseweg.
50. De Oude Barneveldseweg volgend in noordelijke richting tot de Beulen kamperweg.
51. De Beulen kamperweg volgend in oostelijke richting tot de Deuverdenseweg.
52. De Deuverdenseweg volgend in noordelijke richting tot de Donkeresteeg.
53. De Donkeresteeg volgend in noordoostelijke richting tot de Groot Hellerweg.
54. De Groot Hellerweg volgend in oost-noordoostelijke richting tot de Hellerweg.
55. De Hellerweg volgend in noordoostelijke richting tot de Hooiweg.
56. De hooiweg volgend in oostelijke richting tot de Roosendaalseweg.
57. De Roosendaalseweg volgend in noordelijke richting tot de Engweg.
58. De Engweg volgend in zuidoostelijke richting tot de N303.
59. De N303 volgend in noordelijke richting tot de Postweg.
60. De Postweg volgend in oostelijke richting overgaand in de Drieseweg overgaand in de Spijderweg tot de Garderenseweg.
61. De Garderenseweg volgend in zuidelijke richting tot de Buurtweg.
62. De Buurtweg volgend in noordwestelijke richting tot het Speulderveld.
63. Het Speulderveld volgend in zuidoostelijke richting tot het Hessenmeer
64. Het Hessenmeer volgend in noordelijke richting tot de Koningsweg.
65. De Koningsweg volgend in oostelijke richting tot de N302.
66. De N302 volgend zuidoostelijke richting tot De Beek.
67. De Beek volgend in oostelijke richting tot de Uddelermeerweg.
68. De Uddelermeerweg volgend in zuidelijke richting tot de Bleke Meer.
69. De Bleke Meer volgend in zuidoostelijke richting tot de Garderenseweg (Speuld).