Measure	Nothing to declare	Nothing new to declare
A, part I		
A, part 2 (i)		
A, part 2 (ii)		
A, part 2 (iii)		
B (i)		
B (ii)		
C		√
D		
E		
F		√
G		

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 13 April 2007

State Party to the Convention: UNITED KINGDOM

Form A Part 1

Exchange of data on research centres and laboratories[1]

1.	Names(s) of facility[2]	*Defence Science and Technology Laboratory (Dstl), Porton Down.*
2.	Responsible public or private organisation or company	*Ministry of Defence*
3.	Location and postal address	*Dstl* *Porton Down* *Salisbury* *Wiltshire, SP4 0JQ* *England*

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   Largely financed by the MOD.

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   2 BL4 labs, 176m^2 total

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Research and development into protective measures as defence against the hostile use of micro-organisms and toxins.

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1 The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2 For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, Part 2(iii)".

3 In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A Part 1

Exchange of data on research centres and laboratories[1]

1. Name(s) of facility[2] — *Health Protection Agency, Colindale*

2. Responsible public or private organisation or company — *Health Protection Agency (a non-departmental public body of the UK Department of Health)*

3. Location and postal address — *61 Colindale Avenue*
London
NW9 5HT
England

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   The Department of Health funds this activity as part of its finance of the Health Protection Agency's Centre for Infections at Colindale, London NW9

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   1 high containment unit: 30m^2

6. If no maximum containment unit, indicate highest level of protection

   Not Applicable

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Laboratory is used to provide diagnostic services for Herpes B; viral haemorrhagic fever infections: Lassa fever, Ebola, Marburg, Congo-Crimean haemorrhagic fever; avian influenza and SARS. To support diagnostic services a programme of applied diagnostic research and development is conducted.

[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 1

Exchange of data on research centres and laboratories[1]

1. Name(s) of facility[2] — *Health Protection Agency, Centre for Emergency Preparedness and Response, Porton Down*

2. Responsible public or private organisation or company — *Health Protection Agency (a non-departmental public body of the UK Department of Health*)

3. Location and postal address — *Porton Down*
Salisbury
Wiltshire
SP4 0JG
England

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

The Department of Health funds this activity as part of its finance of the Health Protection Agency's Centre for Emergency Preparedness and Response at Porton Down.

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

2 units: 59m^2; 46m^2

6. If no maximum containment unit, indicate highest level of protection

Not Applicable- the site has CL4 laboratories as in Q5

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Diagnosis and research into various containment level 4 viruses including Lassa, Ebola, Marburg and other haemorrhagic fever viruses.

[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 1

Exchange of data on research centres and laboratories[1]

1.	Name(s) of facility[2]	*National Institute for Biological Standards and Control (NIBSC)*
2.	Responsible public or private organisation or company	*NIBSC (a non-departmental public body of the UK Department of Health*
3.	Location and postal address	*Blanche Lane* *South Mimms* *Potters Bar* *Hertfordshire EN6 3QG* *England*

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   UK Government (Department of Health and the Home Office)

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   Two Containment level 4 units, each of 59 m^2

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Highly pathogenic influenza virus – reagent development
   Smallpox vaccine – developing and testing reagents
   Bacillus anthracis – vaccine testing, reagent development, development of in vitro assays to detect anthrax toxin neutralising antibodies
   Yersinia Pestis – molecular structural work
   Botulinum toxin- testing of anti-toxins
   In general, the activities are related to development and testing of reagents

[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 1

Exchange of data on research centres and laboratories[1]

1.	Name(s) of facility[2]	*NIMR Containment 4 Building C*
2.	Responsible public or private organisation or company	*National Institute for Medical Research*
3.	Location and postal address	*The Ridgeway* *Mill Hill* *London* *NW7 1AA* *England*

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   Medical Research Council

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   1 BL4 containment unit of 208.76 m^2

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Research and diagnostics on highly pathogenic avian influenza virus

[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 1

Exchange of data on research centres and laboratories[1]

1.	Name(s) of facility[2]	*Veterinary Laboratories Agency (VLA)*
2.	Responsible public or private organisation or company	*Department for Environment, Food and Rural Affairs (Defra)*
3.	Location and postal address	*Woodham Lane* *Addlestone* *Surrey, KT15 3NB* *England*

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   Most funding is through Defra. None is funded by the Ministry of Defence.

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   SAPO Level 4 (Defra)*
   3 x Avian Flu laboratories 1 = each 50 m^2
   1 x Clasical swine fever laboratory = 15 m^2
   1 x Newcastle diseases virus laboratory = 50 m^2
   1 x Rabies virus laboratory = 45 m^2

   ** Specified Animal Pathogens Order*

6. If no maximum containment unit, indicate highest level of protection

   [29 CL3 laboratories totalling 2,129 m^2]
   *ACDP** level 3. These laboratories cannot be operated at the higher level of containment.*

   *** Advisory Committee on Dangerous Pathogens*

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Diagnosis and applied research on the epidemiology and pathology of the disease of farmed, domesticated livestock (cattle, sheep, pigs and poultry) and wild animal reservoirs.
   Brucella spp, Bacillus anthracis, BSE & scrapie, Newcastle disease virus,
   Avian influenza, Chlamydophila, Myobacterium bovia and M avium, Swine fever virus

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[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 1

Exchange of data on research centres and laboratories[1]

1. Name(s) of facility[2] — *Institute for Animal Health, Pirbright Laboratory*

2. Responsible public or private organisation or company — *Biotechnology and Biological Sciences Research Council (BBSRC)*

3. Location and postal address — *Institute for Animal Health*
Pirbright
Woking
Surrey, GU24 ONF
England

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

   BBSRC, EU, Department for Environment, Food and Rural Affairs (Defra). (Not funded by the Ministry of Defence).

5. Number of maximum containment units[3] within the research centre and/or laboratory, with an indication of their respective size (m^2)

   No ACDP Level 4* containment*
   No ACDP Level 3 containment
   *2,585 m^2 of SAPO** Level 4 ACDP2 Laboratory space*
   3,232 m^2 of SAPO4 ACDP2 Animal accommodation

   ** Advisory Committee on Dangerous Pathogens*
   *** Specified Animal Pathogens Order*

6. If no maximum containment unit, indicate highest level of protection

   SAPO4 ACDP2 containment

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

   Work on exotic animal virus disease: Foot and mouth disease, bluetongue, swine vesicular disease, African Horse Sickness, Capripox, African Swine Fever, PPR and rinderpest.

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[1]The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
[2]For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
[3]In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent

Form A Part 2(i)

National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A Part 2(ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

The Home Office programme is aimed at enhancing the UK's capability to minimise the impact of a CBRN terrorist incident.

2. State the total funding for the programme and its source.

£6.7M – Home Office funding

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

88%

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

The work is aimed at:
Detection of biological materials
Medical countermeasures to biological agents
Decontamination of biological material
Hazard assessment of biological agents

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

Contractors report through controlling Government departments to the HO-led CBRN Delivery Board

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

The only facility that falls into this category is Dstl, for which a declaration is made on Form A Part 2 (iii).

Form A Part 2(ii)

National biological defence research and development programme

Influenza

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

To develop candidate pandemic reference viruses and associated reagents for vaccine standardisation to provide to vaccine manufacturers. This project is performed to meet WHO targets on pandemic preparedness.

2. State the total funding for the programme and its source.

Approximately £100.000 core funding.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC ↔ *WHO*

↓

Laboratory

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A Part 2(ii)

National biological defence research and development programme

Yersinia pestis

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Characterisation of molecular structure in association with the recombinant Yersinia Pestis antigen in the development of a DSTL vaccine.
Better understanding of the vaccine antigens in the preclinical evaluation phase

2. State the total funding for the programme and its source.

Approx. £4,000

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC
↓
Head of Division
↓
Laboratory

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (ii)

National biological defence research and development programme

Anthrax 1

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

The project will develop functional in vitro tests to evaluate the potency and safety of recombinant anthrax vaccines and the potency and stability of anti-toxin antibody preparations used for treatment of individuals exposed to anthrax toxins.

2. State the total funding for the programme and its source.

£325,218 under contract with HO

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

NIBSC will produce assays to determine the potency and biological activity of anthrax vaccines and anti-anthrax toxin antibody preparations

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC ← Department of Health ← Home Office

↓

Laboratory

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A Part (ii)

National biological defence research and development programme

Anthrax 2

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Characterisation of molecular structure in association with the recombinant Protective antigen (rPA) of Bacillus anthracis produced in E. coli *as part of the development of a DSTL vaccine.*

Better understanding of the vaccine antigens in the preclinical evaluation phase.

2. State the total funding for the programme and its source.

Approx. £4,000

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC
↓
Head of Division
↓
Laboratory

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (ii)

National biological defence research and development programme

Botulinum toxins

Description

1. State the objectives and funding of the programme and summarise the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Testing of Botulinum toxins and anti-toxins serotypes (A-G), for use in developing of new prophylactic measures and in developing new assay methods. Testing of anti-toxins for Department of Health.

3. State the total funding for the programme and its source.

NIBSC approximately £40,000 over 2 years and Department of Health £334,000 (from 2006)

4. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

5. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

6. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

Testing as specified in contract

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC

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Laboratories

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A Part (ii)

National biological defence research and development programme

Smallpox vaccine

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Development and validation of reagents for control and release of smallpox vaccines. This work is on behalf of the Department of Health.

2. State the total funding for the programme and its source.

Approximately £70,000 per year for 5 years

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarise the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organisational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

NIBSC

↓

Laboratory

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A Part 2(ii)

National biological defence research and development programme

Description

1. State the objectives and funding of the program and summarise the principal research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

The objectives of the UK national biological defence research and development programme which is funded largely by the Ministry of Defence are:

a. To assess the hazard to the UK and its Armed Forces from biological and toxin warfare (BTW) agents that might be used by an aggressor.

b. To establish effective means and procedures for the detection, warning, identification, diagnosis and monitoring of BTW agents.

c. To provide protective measures to defend against BTW agents.

d. To provide medical countermeasures for prophylaxis, therapy, and treatment against BTW agents.

The Home Office also funds a programme aimed at enhancing the UK's capability to minimise the impact of a CBRN terrorist incident. Details are given on a separate Form A part 2(ii).

The scope of the programmes is to provide effective protective measures against the range of potential biological and toxin agents which may be used aggressively by terrorists or in times of conflict.

The maintenance of effective protective measures is permitted by the Convention and is seen as complementary to the disarmament obligations contained within the Convention. Effective protective measures diminish the military utility of biological weapons (BW) to a potential aggressor, and hence reduce the likelihood of their use.

The principal areas of work are as follows:

Hazard Assessment

The assessment of the potential hazard to the UK and its Armed Forces requires the evaluation of the range of potential chemical, biological and toxin agents that might be utilised by a potential aggressor. Such studies necessarily involve activities such as consideration of the agents' potency and dissemination characteristics, their aerobiology and the way in which they might be utilised by an aggressor in military and terrorist scenarios. This includes the potential impacts of genomics and proteomics. Such work is essential to determine the challenge levels against which detectors and protective equipment must be effective. Current work has included

studying the inhalation toxicity of a wide range of materials and the aerosol survival of pathogenic bacteria and viruses. Operational analysis is also being conducted to examine the effects of BW and CW attack on UK forces and to assess those countermeasures that might be adopted to minimise these effects.

Detection and diagnostics

Provision of an efficient and rapid detection of the presence of a BTW challenge is of the highest importance in assuring that appropriate postures are achieved without military personnel having continuously to wear individual protection. Current work includes the detection of particulate aerosol cloud containing BTW agents using a range of complementary detection technologies: non-specific (to detect particulate material), generic (to distinguish between biological and non-biological materials) and specific (to identify the material).

The application of laser light scattering techniques to interrogate aerosol particles is used as a method to detect the physical presence of BTW agents. The results of the research in this area have enabled Dstl at Porton Down to develop and patent a novel aerosol particle detector. This system is being marketed commercially in the UK. In addition a system based on bioluminescence has been developed that allows the real-time detection of airborne bacteria. This work has also been patented.

Techniques utilising antibody and gene probe technologies are also being employed and show the value of molecular biology and biotechnology to BTW defence. The first, applicable both to toxins and living organisms makes use of binding of specific antibodies - recombinant, mono- or polyclonal - to potential BTW agents. The binding of the BTW agent to a, generally immobilised, antibody can be monitored either through a linked colour change (e.g. Dipsticks) or electronically (biosensors). Gene probes are applicable to many native or genetically manipulated infectious BTW agents like bacteria and viruses. Their effect depends upon the binding of homologous strands of DNA. Work is continuing in order to accelerate and simplify the methodology thus rendering it suitable for military use. Rapid PCR systems have been developed so that this technology can be used in field situations. In addition, similar technologies are also being investigated for use in medical diagnostic systems.

A biological mass spectrometry programme is aiming to produce a highly capable point detector for BW. The detector will offer unambiguous detection and identification of BW agents, significant reduction in whole life costs and the added advantage that it can identify CW agents with the same technology. Work is continuing towards further development of this technology.

An Integrated Biological Detection System (IBDS) has recently come into service for land environments while the Maritime Biological Detector System (MBDS) is in the latter stages of the assessment phase. Supplementary detection is to be provided by the Integrated Sensor Management System (ISMS) and Light Role Team (LRT) capability.

The Rapid Diagnostic System (RDS) is planned to replace the Biological Agent Rapid Diagnostics System (BARDS). RDS will be complemented by the Rapid Monitoring System (RMS) which will provide diagnosis based on signs and symptoms.

Dstl also possesses a laboratory-based capability at Porton Down for the unequivocal identification of biological and toxin weapons.

Protection and contamination control

The dissemination of BTW agents by an aggressor is likely to result in the production of particulate aerosols. Effective individual and collective protection requires the prevention of the inhalation of this particulate challenge or its contact with the skin of personnel. Individual Protective Equipment (IPE) consists primarily of a respirator and suit which have been designed and developed from research carried out at Porton Down. Collective protection (COLPRO) systems provide isolation from a BW agent challenge in the form of whole buildings, rooms, ships or vehicles.

As new threats emerge the continued effectiveness of individual protection is monitored by laboratory testing and evaluation of potential hazards. Recent research has focused on providing IPE with excellent levels of protection but with potentially reduced physiological loading compared with in-service equipment. This has resulted in the forthcoming introduction of the Mk4a protective suit and the General Service Respirator, replacing the Mk4 and S10 respectively. Non-pathogenic micro-organisms have been used to assess the performance of protective suit ensembles for a Technology Demonstrator Programme to identify integrated ways of protecting aircrew personnel. Similar tests have been used to assess protective suits used by emergency services and laboratory staff working at BCL-4.

COLPRO research aims to design systems that provide the required levels of protection but pose a low logistical burden on the user. The Porton Down range provides facilities for testing the effectiveness of larger protective equipments. Low logistic burden capabilities for biodecontamination are also being developed, with particular interest in aircrew/aircraft survive to operate and other high value assets. The techniques underpinning these capabilities encompass liquid formulations, strippable coatings, reactive gases and test and validation methods for determining the efficacy of biodecontamination processes.

Medical Countermeasures

The medical countermeasures programme seeks to determine the efficacy of vaccines, antibiotics, antivirals and antitoxins for the prevention of disease caused by BW agents. Projects to identify how animal models of disease can be replaced with in vitro assays, cell or organ culture systems are continuing. Second generation genetically engineered vaccines against plague, anthrax and botulinum toxins have now been devised and these vaccines have transitioned to the development phase. The plague and anthrax vaccines will enter phase 2 trials in 2007. These vaccines can be produced in a harmless strain of the bacterium Escherichia coli, and can therefore be produced without culturing dangerous pathogens. The components of these new vaccines are also more defined than is the case in current vaccines and therefore much less likely to cause transient side effects. In support of these projects, work is underway to identify the exact nature of the protective immune response.

A programme to evaluate an adenovirus vector for vaccine delivery of Venezuelan equine encephalitis virus (VEEV) antigens has continued. Programmes have also continued to devise improved vaccines against tularemia (caused by Francisella tularensis) and melioidosis/glanders (caused by Burkholderia pseudomallei / mallei). In the case of Francisella tularensis the focus of the programme is to devise a rationally attenuated mutant, as a replacement for the LVS vaccine. At the present time a range of mutants are being constructed and tested in the mouse animal model. For Burkholderia pseudomallei / mallei the focus is to devise a sub-unit vaccine. Polysaccharides and proteins are currently being evaluated to test the

optimal combination. Attenuated mutants of Burkholderia pseudomallei are not considered to be good vaccine candidates but are valuable for investigating the nature of the protective immune response. These vaccines will be tested using inhalation challenge models of disease. The programme to investigate whether a sub-unit vaccine which protects against poxvirus is feasible has proved the potential for this approach but has been terminated. Similarly, although several ricin vaccine candidates have been shown to have potential as vaccines, this programme has been terminated. The focus of work is now on the development of a ricin antitoxin.

A programme has also been initiated to explore the possibility that broad-spectrum (generic) BW countermeasures can be devised. It has three broad elements: to investigate the up-regulation of the innate immune system, for example through immunomodulator stimulation; to determine whether there are cross-protective antigens or common mechanisms of virulence shared by different BW agents; and, to identify broad spectrum antimicrobials. Antibiotics which are newly emerging from industry are being tested to investigate whether they are effective against a wide range of candidate bacterial BW agents. Programmes to investigate whether antibodies can be used to provide protection against virus and toxin BW agents are ongoing. As part of this programme, technologies for delivering protective antibodies to the lung are being investigated.

Arms Control

Dstl staff at Porton Down provide technical advice on CBW non-proliferation to the Ministry of Defence and the Foreign and Commonwealth Office as well as to other Government Departments involved in formulating and implementing UK policy on non-proliferation matters. This has included working towards and participating in: the Review Conferences of the BTWC; the Ad Hoc Group of Governmental experts tasked with identifying and examining potential verification measures; the Special Conference of States Parties held in September 1994; the BTWC Ad Hoc Group; and, the annual Meetings of Technical Experts and of States Party during the 2003 – 2005 intersessional programme of work following the 5th Review Conference.

Dstl staff assist in collating data for the UK Confidence Building Measures returns and provide technical advice towards the formulation and execution of policy on export control legislation, covering items related to biological weapons proliferation in foreign countries.

Dstl staff also assist the Department of Trade and Industry in its role as the UK National Authority for the Chemical Weapons Convention, providing technical support over declarations, licensing, and inspections. Dstl operates the UK's Single Small Scale Facility at Porton Down, which has been declared under the CWC.

Dstl staff are also involved in the Ministry of Defence Counter-Proliferation and Arms Control Directorate's non-proliferation programme which seeks to redirect foreign former weapons scientists into civil, commercial, and sustainable employment. The first of these projects is a plant health project in Georgia.

2. State the total funding for the program and its source.

The UK national biological defence research and development programme is concerned with the provision of effective measures for the UK and its Armed Forces against the threat that chemical and biological weapons may be used against them. The total UK expenditure on research and development on biological defence for the protection of the UK and its armed forces against micro-organisms and toxins in the fiscal year, April 1st 2006 - March 31st 2007, is forecast to be £43.5M. This included £5.4M for work as project support to the procurement of armed forces biological defence equipment. About £16.9M of the total will come from commercial sources. Work performed at Dstl, Porton Down on research and development including project support accounts for £26.2M of the total. The thrust of the programme is to provide measures effective against the CBW spectrum (see Figure 1).

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes.

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

During the fiscal year April 1st 2006 to March 31st 2007, 35 extramural contracts on research and development aspects relating to biological defence were in place with universities and other academic institutions, and 45 extramural contracts with other bodies, which are either government funded or industrial companies. Funding for these extramural contracts during the fiscal year totalled approximately £17.3M. This represents 39.8% of the total UK expenditure in the fiscal year on research and development on biological defence. The duration of individual contracts varies from a few months to three or four years, and in a few cases they include periods of work at Dstl. The precise institutions and companies are constantly varying as they are selected according to the needs of the defence programme and the availability of the necessary specialist skills.

5. Summarise the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para 4.

Contracts are let on specific research topics in support of the main research programme carried out at Dstl.

6. Provide a diagram of the organisational structure of the program and the reporting relationships (include individual facilities participating in the program).

The Chief Executive of the Defence Science and Technology Laboratory (CE/Dstl) reports to the Secretary of State for Defence. In the senior management structure, Programme Director/Science and Technology, who is responsible for the work at Porton Down, reports directly to CE/Dstl. Policy for biological and chemical defence is determined by the Ministry of Defence with the Director of Chemical, Biological, Radiological and Nuclear Policy (CBRN Pol) as the focus. The objectives of the research programme are determined by the Ministry of Defence (MOD), with the Research Director Nuclear, Chemical and Biological Defence (RD

NBC) and the Director Equipment Capability Chemical, Biological, Radiological and Nuclear (DEC CBRN) as the customer focus. Acquisition of triservice NBC protective equipment is carried out by the Chemical, Biological, Radiological and Nuclear Protection Integrated Project Team (CBRN IPT) and the MSA Medical Countermeasures IPT. The Counter-Proliferation and Arms Control (CPAC) directorate determines policy on CB arms control. Research at Dstl, Porton Down, is determined by these parts of the MOD, and Dstl provides technical and policy advice as appropriate. The organisational structures of Dstl and of Dstl Sciences at the Porton Down site are shown in the attached Figures 2 and 3.

7. Provide a declaration in accordance with Form A Part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

The only UK facility which has a substantial proportion of its resources devoted to the national biological defence research and development programme is Dstl, for which a declaration is made on Form A Part 2(iii).

Form A Part 2 (iii)

National biological defence research and development programme

Facilities

Complete on form for each facility declared in accordance with paragraph 7 in Form A Part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Defence Science and Technology Laboratory, Porton Down.

2. Where is it located (include both address and geographical location**).**

Dstl,
Porton Down,
Salisbury,
Wiltshire,
SP4 0JQ
England

The geographical location is shown in the attached map (Figure 4). G13 Access Road, centre of south boundary, Latitude 50° 07-N, Longitude 01° 40-W.

3. Floor area of laboratory areas by containment level:

BL2 1459 m^2)
) Biological defence research and development
BL3 842 m^2) element
)
BL4 176 m^2)

4. The organisational structure of each facility:

The organisational structure for Dstl is shown in Figure 3. The programme is concerned with effective protective measures against the CBW spectrum. The total number of Dstl staff at Porton Down on 16th February 2007 was 966 civilians and 11 military (plus 2 military officers who are on attached duty to specific projects). The staff fall into the following categories:

Scientists and Engineers	*508*
Science support staff	*261*
Administration staff	*127*
Administration support staff	*70*
TOTAL	*966*
Military personnel	*11*
Military personnel (attached duty)	*2*

For the biological defence research and development element, the numbers are as follows:

I.	*Total number of personnel*	*217*
II.	*Division of personnel*	
	Civilian	*207*
	Military	*10*
III.	*Division of civilian personnel by category:*	
	Scientists and Engineers	*171*
	Science support staff	*17*
	Administration staff	*14*
	Administration support staff	*5*

IV. List the scientific disciplines represented in the scientific/engineering staff.

Aerobiology, aerosol physics, mathematics, chemistry, chemical engineering, physics, bacteriology, biology, biophysics, virology, genetics, immunology, medicine, veterinary science, microbiology, biochemistry, molecular biology, physiology, pharmacology, neuropharmacology, psychology, toxicology, electron microscopy, engineering, electronics, ergonomics, forensic science, hydrodynamics, information science, materials science, operational analysis, operational research, computer science, CB defence science.

V. Are contractor staff working in the facility? If so, provide an approximate number.

A small number of contractors work on the programme from time to time. Other contractor staff carry out building and maintenance work and some administrative functions.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Porton Down is one of the sites of the Defence Science and Technology Laboratory (Dstl), which is part of the Ministry of Defence. Some work, approximately 39%, is carried out for other governmental and commercial customers.

VII. What are the funding levels for the following programme areas:

Research	*£6.4M*
Development	*£37.1M*

Test and Evaluation	*This is carried out as required to support research and development. Not separately funded in UK.*

VIII. Briefly describe the publication policy of the facility:

Staff at Dstl are encouraged to publish their work in the scientific literature.

IX. Provide a list of publicly available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references).

Attached as Annex.

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms including viruses and prions and/or toxins studied, as well as outdoor studies of biological aerosols.

The work of Dstl, Porton Down has been reported under Question 1 of Form A Part 2 (ii). Projects currently underway include:

a. The assessment of the hazard posed by micro-organisma and toxins when used by an aggressor as a BW.

b. Research into systems to facilitate collection, detection, warning, and identification of BW agents. This work includes the evaluation of collection and detection systems in outdoor studies using microbiological simulants and research into the composition of naturally occurring biological aerosols.

c. *Research to establish the protection afforded by materials and CBRN defence equipment against BW agents. This work includes the evaluation of military equipment both in the laboratory and in outdoor studies using microbiological simulants.*

d. Research into formulations and techniques for decontaminating microbiologically contaminated equipment using suitable simulants.

e. Rapid identification of micro-organisms and toxins by the use of monoclonal antibodies and gene probes.

f. Studies on the mechanism of action and treatment of toxins.

g. Therapies for bacterial and viral infections.

h. Studies on the mechanisms of pathogenicity of viruses and bacteria and the development of improved vaccines.

ANNEX TO
Form A Part 2 (iii)

BIOLOGICAL DEFENCE RESEARCH PUBLICATIONS FOR Dstl PORTON DOWN 2006

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HARRISON B, RAJU D, GARMORY H S, BRETT M M, TITBALL RW AND SARKER M R. Molecular characterisation of Clostridium perfringens isolates from humans with sporadic diarrhea: Evidence for transcriptional regulation of the Beta2-Toxin-Encoding Gene. Applied and Environmental Microbiology 2005 71 (12) 8362-8370

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THE CBW THREAT

The CBW spectrum illustrates the range of materials that could be used as CBW agents

Toxic industrial chemicals (TICS)	Major CW agents	Emerging CW agents	Mid spectrum agents	BW agents	Genetically modified BW agents
HCN Phosgene chlorine ammonia	**vesicants** **nerve agents** psycho-chemicals	developments from pharmaceutical & pesticide research	**toxins** bioregulators	**bacteria** **rickettsia** **viruses**	**bacteria** **rickettsia** **viruses**

synthetic chemicals | **agents of biological origin**

self-replicating

increasing potency (up to ~10^{12})

Figure 1

Dstl Organisational Structure

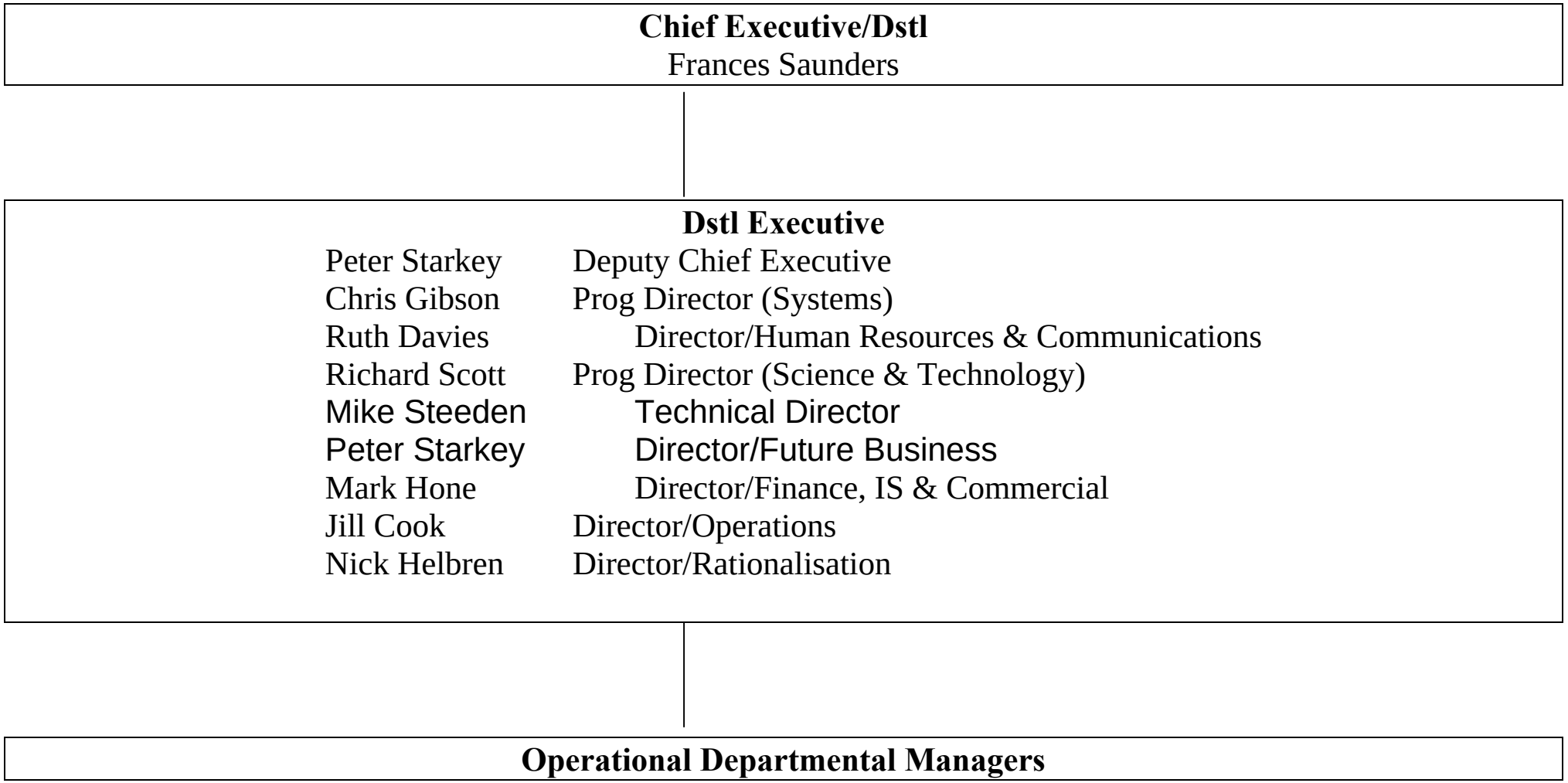


Figure 2

Dstl Sciences – Porton Down Site

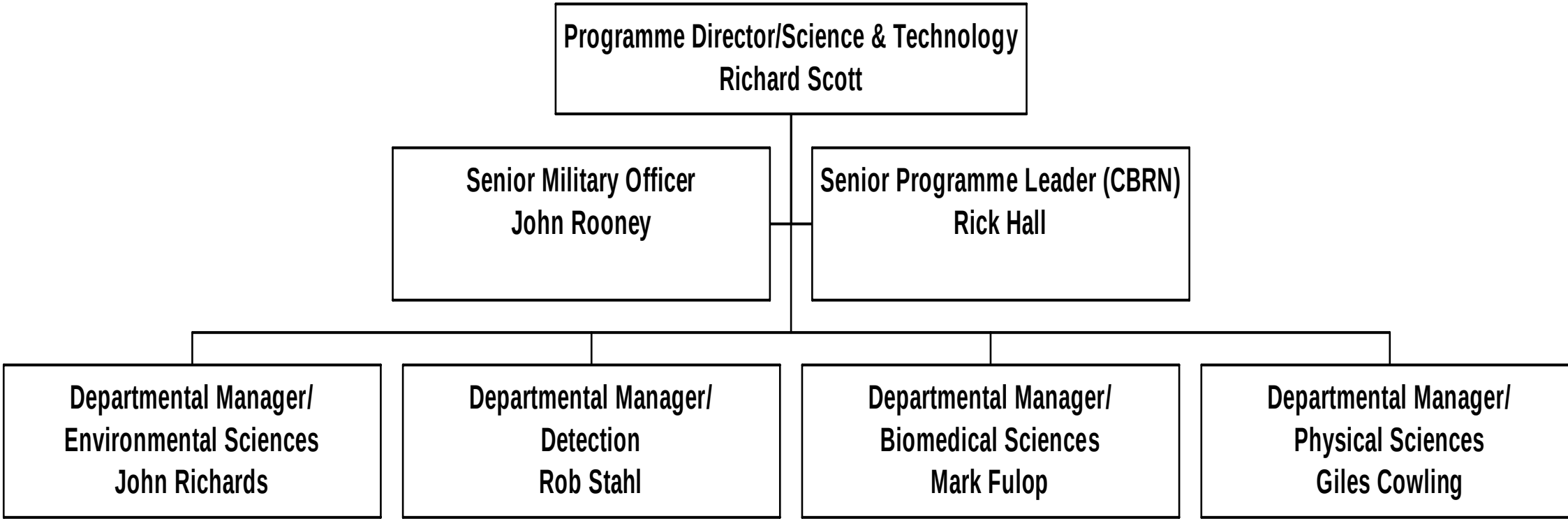
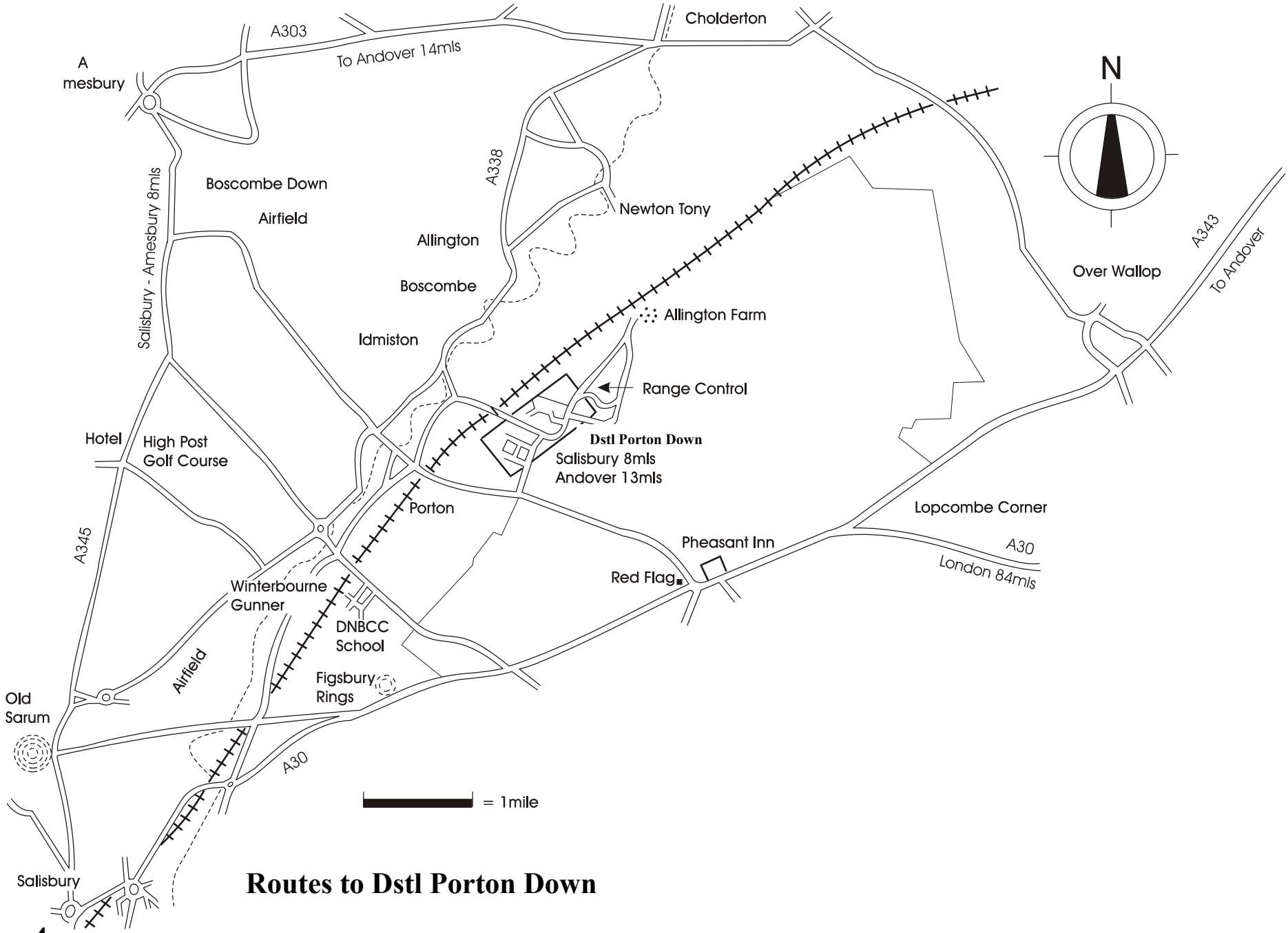


Figure 3



Routes to Dstl Porton Down

Figure 4

Form B (i)

Background information on outbreaks of reportable infectious diseases in humans - England and Wales

**Data from Statutory Notifications of Infectious Diseases (England and Wales)*

Disease	Number of cases per year*				
	2002	2003	2004	2005	2006†
Measles	3187	2488	2356	2089	3739
Dysentery	1087	1047	1203	**1237	1113
Whooping cough	883	409	504	594	553
Scarlet fever	2159	2553	2201	1678	2157
Viral hepatitis	3859	4004	3932	4109	4007
Hepatitis A	1381	1194	784	513	434
Hepatitis B	1073	1151	1215	1325	1161
Hepatitis C	1340	1574	1851	2120	2196
other	65	85	82	151	216
Malaria	847	791	609	**679	614
Ophthalmia neonatorum	91	102	85	87	99
Tetanus	4	8	12	3	1
Leptospirosis	24	24	14	31	23
Mumps	1997	4204	16367	**56256	12916
Rubella	1660	1361	1287	1155	1232
Meningococcal septicaemia (without meningitis)	842	732	691	**721	663
Typhoid fever	91	176	146	179	200
Paratyphiod fever	84	99	134	119	175
Food poisoning	72649	70895	70311	**70407	70931
Tuberculosis (excluding chemoprophylaxis) *Categories overlap*	6753	6518	6723	7628	7686
Respiratory	4802	4585	4555	5077	5172
Pulmonary	4160	3972	3923	4347	4498
Meningitis	140	150	140	228	259
Other	1981	1926	2190	2571	2490

Disease	Number of cases per year				
	2002	2003	2004	2005	2006†
Meningitis	1545	1472	1267	1381	1497
Meningococcal	706	646	554	579	621
Pneumococcal	166	205	177	220	199
Haemophilus influenzae	62	63	45	44	58
Viral	250	235	197	223	298
Other specified	148	115	114	110	107
Unspecified	213	208	180	205	214
Acute poliomyelitis	0	0	0	0	0
Acute encephalitis	18	15	20	19	20
Cholera	17	26	31	34	49
Plague	0	0	0	0	0
Anthrax	1	0	0	0	2
Diphtheria	20	13	10	**9	10
Smallpox	0	0	0	0	0
Yellow fever	0	0	0	2	0
Typhus fever	0	2	1	1	6
Relapsing fever	0	0	0	0	0
Rabies	0	0	0	0	0
Viral haemorrhagic fever	3	1	0	0	5

† *Note: these are provisional figures*
** *Note: these are corrected figures for 2005*

Form B (i)

Background information on outbreaks of reportable infectious diseases in humans - Northern Ireland

** Data from statutory Notifications of Infectious Diseases (Northern Ireland)*

Diseases	Number of cases per year*				
	2002	2003	2004	2005	2006
Acute Encephalitis/Meningitis:Bacterial**	75	69	59	48	46
Acute Encephalitis/Meningitis:Viral**	23	9	5	18	12
Anthrax	0	0	0	0	0
Chickenpox **	4931	4459	3768	3227	3034
Cholera	1	0	0	1	1
Diphtheria	0	0	0	0	0
Dysentery	7	14	8	7	7
Food Poisoning	1220	1268	1666	1409	1469
Gastro-enteritis (persons under 2)	882	867	697	736	718
Hepatitis A**	1	4	12	4	4
Hepatitis B**	8	21	45	41	39
Hepatitis Unspecified:Viral**	2	15	2	29	2
Legionnaires Disease**	3	4	4	6	5
Leptospirosis**	1	0	0	1	1
Malaria**	2	1	5	2	6
Measles	89	57	90	56	52
Meningococcal Septicaemia**	98	76	82	66	75
Mumps***	77	180	780	4556	205
Paratyphoid Fever	1	0	0	0	0
Plague	0	0	0	0	0
Polio (paralytic)	0	0	0	0	0
Polio (acute)	0	0	0	0	0
Rabies	0	0	0	0	0
Relapsing Fever	0	0	0	0	0
Rubella***	50	34	39	31	33
Scarlet Fever	214	304	228	186	213
Smallpox	0	0	0	0	0
Tetanus	0	0	0	0	0
Tuberculosis (Pulmonary)	58	26	59	37	34
Tuberculosis (Non Pulmonary)	10	12	14	31	14
Typhoid	3	0	0	1	1
Typhus	0	0	0	0	0
Viral Haemorrhagic Fever	0	0	0	0	0
Whooping Cough	69	40	28	28	28
Yellow Fever	0	0	0	0	0

*** only notifiable from 16 April 1990*
**** only notifiable from October 1988*

Form B(i)

Background information on outbreaks of reportable infectious diseases in humans - Scotland

**Statistics are taken from the national database managed by IDS Scotland on behalf of the Scottish National Health Service.*

	Confirmed notifications* of number of cases per year				
Disease	2002	2003	2004	2005	2006
Anthrax	0	0	0	0	1
Bacillary dysentry	73	83	90	102	109
Chickenpox	28407	19875	21333	15991	16959
Cholera	2	1	1	4	3
Continued Fever	0	0	0	0	0
Diphtheria	0	0	0	0	0
Erysipelas	41	28	28	17	26
Food poisoning	7693	6892	6804	7143	6986
Legionellosis	34	25	27	31	37
Leptospirosis	2	4	1	5	2
Lyme disease	40	42	57	63	130
Malaria	17	28	20	19	18
Measles	399	181	257	181	259
Meningococcal infection	175	117	147	149	136
Mumps	259	181	3595	5729	2821
Paratyphoid fever	0	0	0	0	0
Plague	0	0	0	0	0
Poliomyelitis	0	0	0	0	0
Puerperal fever	3	2	2	2	0
Rabies	1	0	0	0	0
Relapsing fever	0	2	0	0	0
Rubella	292	130	222	141	149
Scarlet fever	376	395	213	211	269
Tetanus	1	1	1	0	0
Toxoplasmosis		3	4	2	1
Tuberculosis: pulmonary	304	296	351	214	235
Tuberculosis: non-pulmonary	114	126	112	107	115
Typhoid fever	4	2	2	1	3
Typhus fever	0	0	1	0	0
Viral haemorrhagic fevers	0	0	0	0	0
Viral hepatitis	1165	1159	1063	1063	982
Whooping cough	99	60	87	57	61

*Figures up to and including 2005 are *confirmed notifications;* figures for 2006 are provisional notifications derived from statutory weekly returns provided by the Scottish National Health Service Boards to IDS Scotland and are subject to amendment (usually in the Spring of each year). *Confirmed notifications* do not necessarily indicate the presence of the infection itself. True confirmation of infections can only be made by laboratory investigation but whether this has taken place is not recorded in the ISD figures. *Confirmed notifications* remain a clinical suspicion of infection and counts may differ from those of laboratory confirmed cases.

Form B(i)

Background information on outbreaks of reportable infectious diseases in animals - United Kingdom

Disease	Number of confirmed cases per year				
	2002*	2003*	2004	2005	2006
African Horse Sickness					
African Swine Fever					
Anthrax					1
Aujeszky's Disease					
Avian Influenza (Bird flu)					3
Bat Rabies			1		
Bovine Spongiform Encephalopathy					
Blue Tongue					
Brucellosis (Brucella abortus)					
Brucellosis (Brucella melitensis)					
Classical Swine Fever					
Contagious agalactia					
Contagious Bovine Pleuro-pneumonia					
Contagious Epididymitis (Brucella ovis)					
Contagious Equine Metritis Organism (CEMO)				1	1
Dourine					
Enzootic Bovine Leukosis					
Epizootic Haemorrhagic Virus Disease					
Eipzootic Lymphangitis					
Equine Viral Arteritis			1		
Equine Viral Encephalomyelitis					
Equine Infectious Anaemia					
Foot and Mouth Disease					
Glanders and Farcy					
Goat Pox					
Lumpy Skin Disease					
Newcastle Disease				1	1
Paramyxovirus of pigeons					
Pest des Petits Ruminants					
Rabies					1
Rift Valley Fever					
Rinderpest (Cattle plague)					
Scrapie					
Sheep pox					
Swine Vesicular Disease					
Teschen Disease (Porcine enterovirus encephalomyelitis)					
Tuberculosis (Bovine TB)					
Vesicular Stomatitis					
Warble Fly					
West Nile Virus					

** statistics not available*

Form B (i)

Background information on outbreaks of reportable infectious diseases in plants – United Kingdom

Disease		Number of cases per year			
	2002	2003	2004	2005	2006
Ciborinia camelliae (Camelia flower blight	10	5			
Clavibacter michiganesis subsp. *sepedonicus* (Ring rot in seed potatoes)		1	2		
Colletotrichum acutatum (Strawberry black spot) in propagating crops	6	2			
Erwinia amylovora (Fireblight)	17	23			
Pepino mosaic virus in tomato crops	2	6			8
Phytophthora kernoviae			16	19	7
Phytophthora ramorum (Sudden Oak Death)	155	209	141	163	74
Plasmopara obducens (Downy mildew) of Impatiens		13			
Potato spindle tuber viroid on tomato crops		1			
Puccinia horiana (Chrysanthemum white rust)	1	0			
Ralstonia solanacearum (potato brown rot)		1		1	
Ralstonia solanacearum (potato brown rot) in river surveys	12	22	6	4	1

Disease		Number of cases per year			
	2002	2003	2004	2005	2006
Xanthomonas fragariae			3	2	

The serious diseases above were all investigated but occurrence could be explained by normal introduction means and there was no evidence of deliberate malicious introduction. There were also a number of findings of less serious routine notifiable diseases but these can also be explained by natural means of spread or by trade pathways.

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern - Scotland

1. Time of cognisance of the outbreak	*August 2006*
2. Location and approximate area affected	*Borders Region, Scotland.*
3. Type of disease/intoxication	*Anthrax (inhalation form)*
4. Suspected source of disease/intoxication	*Imported Djembe drums from Guinea, West Africa, using goat skins*
5. Possible causative agent(s)	*Bacillus anthracis*
6. Main characteristics of systems	.....
7. Detailed symptoms, when applicable	
- respiratory	*Respiratory Failure*
- *circulatory*	*Disseminated Intravascular Coagulation*
- neurological/behavioural	*Meningitis*
- intestinal	.....
- dermatological	.....
- nephrological	.....
- other	*Fatal*
8. Deviation(s) from the normal pattern as regards	
- type	*Atypical presentation of respiratory anthrax due to a previously unidentified strain of Bacillus anthracis*
- development	
- place of occurrence	
- time of occurrence	
- symptoms	.....
- virulence pattern	.....
- drug resistance pattern	.....
- agent(s) difficult to diagnose	*Identified by blood culture*
- presence of unusual vectors	.....
- other	.....
9. Approximate number of primary cases	*1*
10. Approximate number of total cases	*1*
11. Number of deaths	*1*
12. Development of the outbreak	*No further cases*

13. Measures taken	*Approximately 90 contacts received antibiotic prophylaxis for 60 days. Contaminated properties identified in Scotland being decontaminated using gaseous chlorine dioxide. Decision pending on decontamination of a contaminated property in England linked to contaminated West African drums and goat skins.*

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern - Scotland

1. Time of cognisance of the outbreak	*July 2006*
2. Location and approximate area affected	*Meat processing plant, Bridge of Allan, Scotland*
3. Type of disease/intoxication	*Q Fever*
4. Suspected source of disease/intoxication	*Contaminated aerosol from sheep lairage*
5. Possible causative agent(s)	*Coxiella burnetii*
6. Main characteristics of systems	……
7. Detailed symptoms, when applicable	
- respiratory	*dry cough, fever, headache, myalgia, joint pain*
- circulatory	…….....
- neurological/behavioural	.....
- intestinal	.....
- dermatological	.....
- nephrological	.....
- other	.....
8. Deviation(s) from the normal pattern as regards	
- type	.....
- development	.....
- place of occurrence	.....
- time of occurrence	.....
- symptoms	.....
- virulence pattern	.....
- drug resistance pattern	.....
- agent(s) difficult to diagnose	.....
- presence of unusual vectors	.....
- other	.....
9. Approximate number of primary cases	.....
10. Approximate number of total cases	*110*
11. Number of deaths	*0*
12. Development of the outbreak	*At the beginning of July 2006, Forth Valley Public Health team were informed of higher*

	than usual levels of influenza-like illness among meat factory workers. By 14 August 49 of the 282 workforce were ill – a number seriously and required hospital treatment. Symptomatic workers were screened and Q- Fever was confirmed. All staff were then screened and 110 cases were identified. By Dec 13 2006 the outbreak was declared over.
13. Measures taken	*Enhanced surveillance in the local community.* *Plant cleaned and disinfected.* *Stopped using extractor fan.* *Long term follow-up of cases.*

Form D

Active promotion of contacts

Influenza

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

-	name of the conference, etc.	*Option for the Control of Influenza*
-	*arranging organisation(s), etc.*	*MTMC*/Options committee
-	time	*18-22 June 2007*
-	place	*Toronto, Canada*
-	main subject(s) for the conference, etc.	*Influenza Vaccines, antivirals, basic flu virus research*
-	conditions for participation	*None*
-	point of contact for further information, registration, etc.	http://www.optionsviconference.com/

-	name of the conference, etc.	*Novel and re-emerging respiratory viral diseases*
-	arranging organisation(s), etc.	*Novartis Foundation*
-	time	*23-26 April 2007*
-	place	*Singapore*
-	main subject(s) for the conference, etc.	*Pandemic influenza*
-	conditions for participation	*Invitation by Novartis*
-	point of contact for further information, registration, etc.	http://www.novartisfound.org.uk/ .

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2. Information regarding other opportunities

Several interviews by radio and television news networks on NIBSC role in pandemic vaccine development

Form D

Botulinum toxin

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

   For each such event, the following information should be provided:

-	name of the conference, etc.	*ETOX 13 Italy*
-	arranging organisation(s), etc.	*Chairperson:* *Maria Teresa De Magistris* *Director of Research* *Dept. of Infectious, Parasitic and Immune-mediated Diseases* *Istituto Superiore di Sanita* *Viale Regina Elena 299 - 00161 Roma*
-	time	*23- 28 June 2007*
-	place	*San Martino al Cimino*
-	main subject(s) for the conference, etc.	*Bacterial toxins*
-	conditions for participation	*Home Office security clearance of poster*
-	point of contact for further information, registration, etc.	http://www.etox.org/index.htm.

2. Information regarding other opportunities

   -

Form D

Anthrax

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

-	name of the conference, etc.	*Bacillus − ACT 2007*
-	arranging organisation(s), etc.	*University of Oslo*
-	time	*17 – 21 June 2007*
-	place	*Oslo, Norway*
-	main subject(s) for the conference, etc.	*International Conference on Bacillus anthracis, B. cereus, and B. thuringiensis – toxins, pathogenesis and vaccines*
-	conditions for participation	*Present data as poster or orally*
-	point of contact for further information, registration, etc.	http://bacillus-act07.uio.no/act07/

2. Information regarding other opportunities

European meeting on Bacterial toxins (ETOX) in San Martino al Cimino (Italy) from June 23 – 27. For more Info: See: http://www.etox.org/organization.htm. *Possibly an alternative to the Oslo meeting.*

Form D

Active promotion of contacts

1. Planned international conferences, symposia, seminars, and other similar forums for exchange

   For each such event, the following information should be provided:

-	name of the conference, etc.	*EBSA 10th Annual Conference*
-	arranging organisation(s), etc.	*European Biosafety Association*
-	time	*28 – 30 March 2007*
-	place	*Heidelberg, Germany*
-	main subject(s) for the conference, etc.	*General Biosafety including blood borne pathogens, industrial scale production issues and Biosecurity*
-	conditions for participation	*Fee payment (reduction for EBSA members)*
-	point of contact for further information, registration, etc.	*See EBSA website*: *www.ebsa.be/*

2. Information regarding other opportunities

   See EBSA website (www.ebsa.be/) *for further events*

Form E

Declaration of legislation, regulations and other measures

Relating to		Legislation	Regulations	Other measures	Amended since last year
(a)	Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES	YES	YES	NO

Link to text of the UK's Biological Weapons Act 1974:
http://www.statutelaw.gov.uk/

Link to the UK's Anti-Terrorism, Crime and Security Act 2001 (ATCSA):
http://www/security.homeoffice.gov.uk/legislation/current-legislation/

(b)	Exports of micro-organisms* and toxins	YES	YES	YES	YES

The EC Dual-use Council Regulation was amended in 2006 to revise a technical note on genetic elements and genetically modified organisms. Link:
http://www.dti.gov.uk/file26940.pdf

Link to UK export legislation:
http://www.dti.gov.uk/europeantrade/strategic-export-control/legislation/index.html

(c)	Imports of micro-organisms* and toxins	YES	YES	YES	YES

Links to UK import/export legislation for animal and plant pathogens:
http://www.defra.gov.uk/animalh/diseases/pathogens/index.htm
http://www.defra.gov.uk/planth/impexp.htm

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form G

Declaration of vaccine production facilities

1. Name of facility: *Health Protection Agency*
Centre for Emergency Preparedness and Response,
Porton Down

2: Location (mailing address): *Porton Down*
Salisbury
Wiltshire
SP4 0JG
England

3. General description of the types of diseases covered:

Manufacture of anthrax vaccine.

Form G

Declaration of vaccine production facilities

1. Name of facility: *MedImmune UK Ltd*

2. Location (mailing address): *Plot 6 Renaissance Way*
Boulevard Industry Park
Speke
Liverpool L24 9JW
England

3. General description of the types of diseases covered:

Influenza vaccine

Form G

Declaration of vaccine production facilities

1. Name of facility: *Novartis Vaccines and Diagnostics Limited*

2. Location (mailing address): *Gaskill Road*
Speke
Liverpool, L24 9GR
England

3. General description of the types of diseases covered:

During 2006, the only vaccines being manufactured at this facility are to protect against influenza. There are two distinct types:-

a) Influenza (Fluvirin Northern Hemisphere Influenza vaccine) - Cultivation of Influenza virus (attenuated by passage in hen's eggs and considered a Cat. 1 organism). Three strains incorporated within the vaccine.

b) Monovalent (single strain) Influenza H5N1 vaccine - Cultivation of H5N1 attenuated strains produced by 'Reverse Genetics'. Also uses egg based technology.
Containment category allocated Cat 2 (Enhanced). The enhancements refer to the requirement for additional personal protection (use of RPE) and vaccination of operators with current Northern Hemisphere Influenza vaccine.
This agent is designated as a GMO & an appropriate manufacturing licence (GM consent) has been granted from the UK Competent Authority. IAPO (the International Alliance of Patients' Organisations) does not apply to these strains due to attenuation.
Development work aimed at improving the currently available H5N1 candidate vaccines is underway.

Transition to a new purpose built influenza vaccine manufacturing facility is underway.