



Department
for Environment
Food & Rural Affairs

Exercise
Blackthorn 

National Foot and Mouth Disease Exercise Evaluation and Lessons Identified Report

9 October 2018



Animal &
Plant Health
Agency



Llywodraeth Cymru
Welsh Government



The Scottish
Government
Riaghaltas na h-Alba



Department of
Agriculture, Environment
and Rural Affairs



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1. Executive summary

- 1 This report contains the details of Exercise Blackthorn, the United Kingdom's national Foot and Mouth Disease (FMD) exercise, conducted over a period of ten months. Exercise Blackthorn was organised by Animal and Plant Health Agency's (APHA) Contingency Planning Division on behalf of the Department for Environment, Food and Rural Affairs (Defra), the Scottish Government (SG), Welsh Government (WG) and the Department of Agriculture, Environment and Rural Affairs (DAERA) for Northern Ireland. It evaluates the exercise and records the lessons identified for further action.
- 2 The purpose of Exercise Blackthorn was to test the four UK governments' contingency plans for a UK-wide, medium to large outbreak of FMD. It tested the new APHA outbreak model, response structures, disease confirmation and control processes, internal communications, cross-government collaboration, engagement with stakeholders, and outbreak recovery.
- 3 A number of field exercises, two tabletop exercises and multiple strategic response meetings were held prior to a two-day real-time (live) national exercise. The live exercise rehearsed the governments' response at days 7 and 8 of the simulated outbreak. The exercise concluded with a final tabletop exercise focusing on the recovery arrangements.
- 4 Over 400 participants took part with representatives from Cabinet Office, CVO's teams, senior officials from the UK Administrations, APHA, its operational partners and stakeholders. Feedback from participants and observers has been very encouraging with a consensus that it was a well-planned exercise and very successful in meeting its objectives.
- 5 However, there is always room for improvement and we need to ensure that lessons identified during the exercise are captured and acted on. The principal lessons identified during this exercise included APHA outbreak model, which was fully tested and shown to be robust in this specific scenario, but APHA did realise that there is a need for better internal communications and improved IT connectivity at local offices. Plans for resourcing a large scale outbreak need to be improved, specifically around cross government sharing of resources. In these areas it is identified that regular stress testing and exercising of plans take place
- 6 Lessons identified by Exercise Blackthorn will help government prepare for future outbreaks of exotic disease, and contribute to the ongoing continuous improvement cycle, which enhances governments' outbreak preparedness and capability, and ensures that robust and effective plans are in place.

2. Background and introduction

- 7 The United Kingdom's Foot and Mouth Disease (FMD) exercise undertaken in 2018 was called Exercise Blackthorn. It was a national exercise involving Defra (Departments of Environment, Food and Rural Affairs), Scottish Government, Welsh Government, DAERA (Department Agriculture, Environment and Rural Affairs), APHA (Animal and Plant Health Agency) and its operational partners and stakeholders.
- 8 The EU (European Union) FMD Directive 2003/85/EC requires Member States to undertake real-time exercises to assess their Foot and Mouth Disease contingency plans twice within a five year period or "two times during the five years period after an outbreak of a major epizootic disease has been effectively controlled and eradicated". The UK is committed to regularly rehearsing and testing its response to major outbreaks of exotic disease through such national exercises.
- 9 Exercise Blackthorn consisted of an integrated series of field operational exercises, two tabletop exercises, a two day real time exercise and concluded with a third tabletop exercise and debriefing. They were designed around a single scenario and planned such that the outputs of each element could be used as input to subsequent stages.
- 10 The dates of each element of the exercise were as follows and further details are provided in sections 8 to 14 of this report :
 - 15 on farm field operational exercises took place between November 2017 and February 2018.
 - The first tabletop exercise (TT1) took place on the 8th February 2018 in APHA Weybridge.
 - The second tabletop exercise (TT2) took place on 8th March 2018 in London.
 - Facilitated Animal Disease Policy Groups took place between TT2 & Live play.
 - The live play exercise took place on the 25th & 26th April 2018.
 - The third tabletop exercise (TT3) took place on 7th June 2018 in APHA Weybridge.

- Exercise debriefing sessions took place locally and nationally from 14 May 2018 to 13 July 2018.
- 11 In the exercise scenario disease was first identified at a farm in Shropshire, England before spreading through a livestock market in Wales to Scotland, Northern Ireland and other areas of England and Wales. It is important to note that the scenario was specifically designed to generate a challenging, UK-wide outbreak that would rigorously test government's outbreak response procedures. Given the robust prevention and control measures already in place across the UK, an outbreak of FMD on this scale is considered to be a rare event.
 - 12 A National Disease Control Centre (NDCC), Central Disease Control Centre (CDCC) and three Forward Operating Bases (FOBs) were setup testing all of the APHA operational response structure.
 - 13 The three command and control levels, as outlined in Defra's Contingency Plan for Exotic Diseases Animals (strategic, tactical and operational), were all exercised, as were the response plans of the other UK Administrations. Scottish Government, Welsh Government and Northern Ireland officials were fully involved in the exercise and were based in Edinburgh, Cardiff and Coleraine, Co Derry/Londonderry. Although all levels of the response were tested, at the strategic level, Ministerial participation and also COBR (Cabinet Office Briefing Room) and SGoRR (Scottish Government Resilience Room) involvement was simulated.
 - 14 At Strategic Level there was simulated COBR and SGoR response. The exercise was a Tier 2 exercise and thus not designed to test the strategic top levels of government although elements were simulated through exercise control (EXCON).
 - 15 At the tactical level the Outbreak Co-ordination Group (OCG) and the NDCC were established in Defra's Nobel House in London, Welsh Government's (WG's) Emergency Coordination Centre Wales (ECC(W)) in Cardiff, the Scottish Government's Disease Strategy Group (DSG) response structure in Saughton House, Edinburgh and Northern Ireland's Central Epizootic Disease Control Centre (CEDCC) in Coleraine.
 - 16 The APHA response model at the tactical level included a CDCC which incorporated the outbreak functions of the Customer Service Centres (CSCs) (Tracings in Cardiff, Surveillance in Exeter and Licensing in Worcester) along with the corporate functions of Finance, Estates, Communications, Human Resources (HR), Information Management team (IMT) and Safety, Health & Wellbeing (SHaW) which were located at various APHA sites. Business Support functions of data entry, field operations finance and procurement were located at Preston.

- 17 Operational level FOBs were established in three APHA Field services offices. These were at APHA Starcross, South West, APHA Carmarthen, Wales and APHA Perth, Scotland.
- 18 The exercise provided the opportunity for key operational partners and stakeholders at strategic, tactical and operational levels to test their emergency response plans. They were kept informed throughout the project and their expertise and advice sought on the scenario as it developed. Industry stakeholders attended the exercise both as observers and participants.
- 19 The exercise programme created considerable interest from stakeholders and organisations responsible for controlling exotic disease outbreaks in other countries and a number of representatives attended the live exercise. The European Commission (EC) and The World Organisation for Animal Health (OIE) were both formally notified of the exercise, with the OIE sending a delegation to observe.

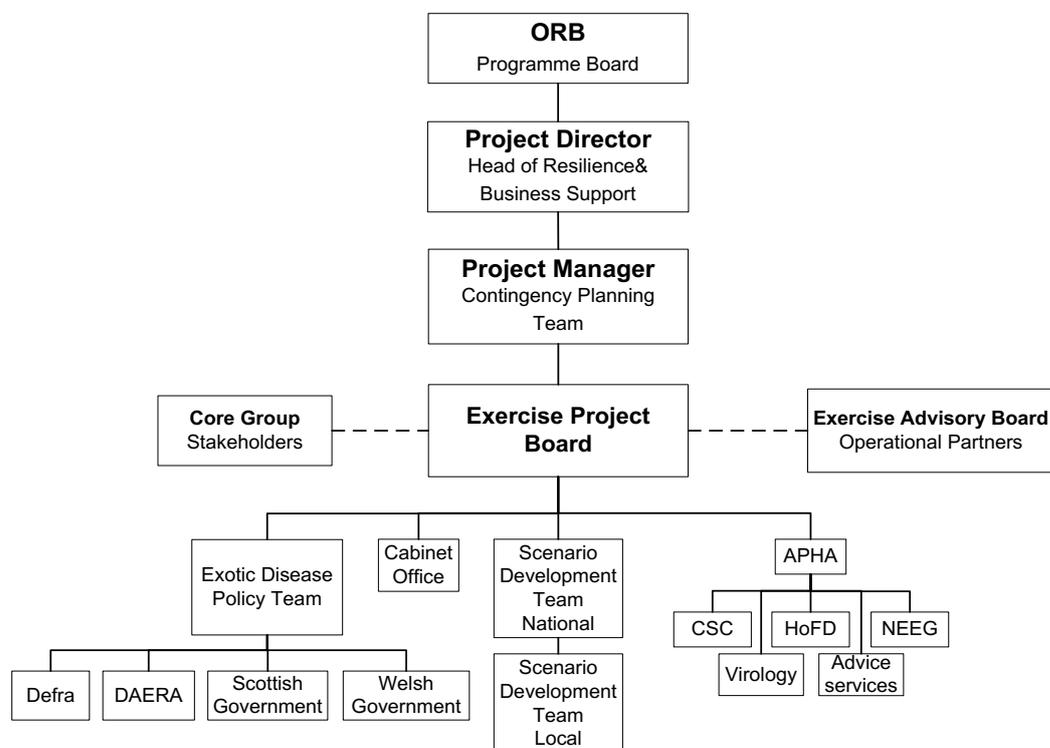
3. Evaluation and lessons identified process

- 20 This report follows APHA's exercise evaluation process and is produced by collating inputs from the following:
 - Post Exercise Wash-Up at NDCC, CDCC and FOB – a structured post exercise wash-up was held at the end of the exercise in London, Edinburgh Cardiff, Coleraine and all FOB locations, to gauge and record initial reactions to the exercise;
 - Individual Evaluation – individual electronic evaluation forms were sent to all participants and the feedback collated. The analysis included statistical information against each exercise objective;
 - Local Cold Wash-Up – a structured debriefing session took place at locations where FOBs were established;
 - National Cold Wash-Up – a structured debriefing session took place with key CDCC and NDCC participants;
 - Operational partners who completed their own independent evaluation;
 - Stakeholders who completed their own independent evaluation following discussion at Core Group.

4. Exercise governance

- 21 The exercise was the product of a project spanning a period of 15 months in planning and delivery. The project was managed by APHA's Contingency Planning Division, who established a project board comprising representatives from Defra, SG, WG, DAERA NI, Cabinet Office and APHA (Corporate, Laboratory and Service Delivery teams). The project board managed and controlled the planning of the exercise and met on a monthly basis. The exercise project board was answerable to the Outbreak Readiness Board (ORB), which is responsible for the strategic oversight of policy and operational preparedness for outbreaks of exotic notifiable diseases of animals in the UK.
- 22 An exercise Advisory Board comprising representatives from Operational Partners was setup. These included the Environment Agency, Association of Chief Police Officers, Ministry of Housing, Communities and Local Government (MHCLG), Cabinet Office, Health Authorities and Food Standards Agencies and their devolved equivalents. The Board was chaired by APHA and met to provide guidance to the Project Director and Project Board on the role and involvement of the key exercise partners from other government departments.

Governance Map



Note: The Project Board was comprised of representatives from within the Defra Group and Devolved Governments and directly control the project, whilst Stakeholders and Operational Partners give guidance to the Project Board as needed.

5. Exercise aim

23 The aim of Exercise Blackthorn was to exercise governments' contingency plans for a UK wide outbreak of FMD and thereby establish the current state of readiness for such an outbreak whilst identifying issues and improvements in policies, plans, instructions, structures and recovery procedures employed in managing an outbreak.

6. Exercise objectives

24 The objectives of Exercise Blackthorn were:

- To demonstrate that the current UK and devolved contingency plans and policies provide an effective response to a national outbreak of FMD.
- To exercise outbreak response structures and processes including operational resourcing.
- To exercise the UK cross-governmental strategic response to a notifiable exotic animal disease outbreak.
- To exercise the interface between National, Central and Local response structures including operational partners and stakeholders.
- To exercise recovery arrangements in the event of an outbreak of FMD.
- To exercise the real-time use of the different GB animal movement systems to demonstrate the effectiveness during an outbreak of FMD

7. Exercise strategic themes

25 The project team used a mixture of traditional Master Events List (MEL) directed activity (Injects) supported by thematic developmental play. A series of key strategic themes were identified for development and testing in order to meet the exercise objectives. These themes also provided the basis for the scenario detail and the supporting injects to create the conditions for the thematic play to develop. The themes used in the tabletop, strategic meetings and throughout the live play exercise were as follows:

- Access to Countryside

- Cabinet Office Briefing Rooms (COBR)
- Communication
- Licensing
- Meat Controls
- Movement Controls
- Stakeholder engagement
- Transport of animals
- Vaccination
- Valuation
- Wildlife

26 Although these were the key themes, other elements were also tested and rehearsed throughout the exercise. Within these key themes various aspects were identified as lessons. Further details can be found later in the report.

8. Exercise approach and methodology

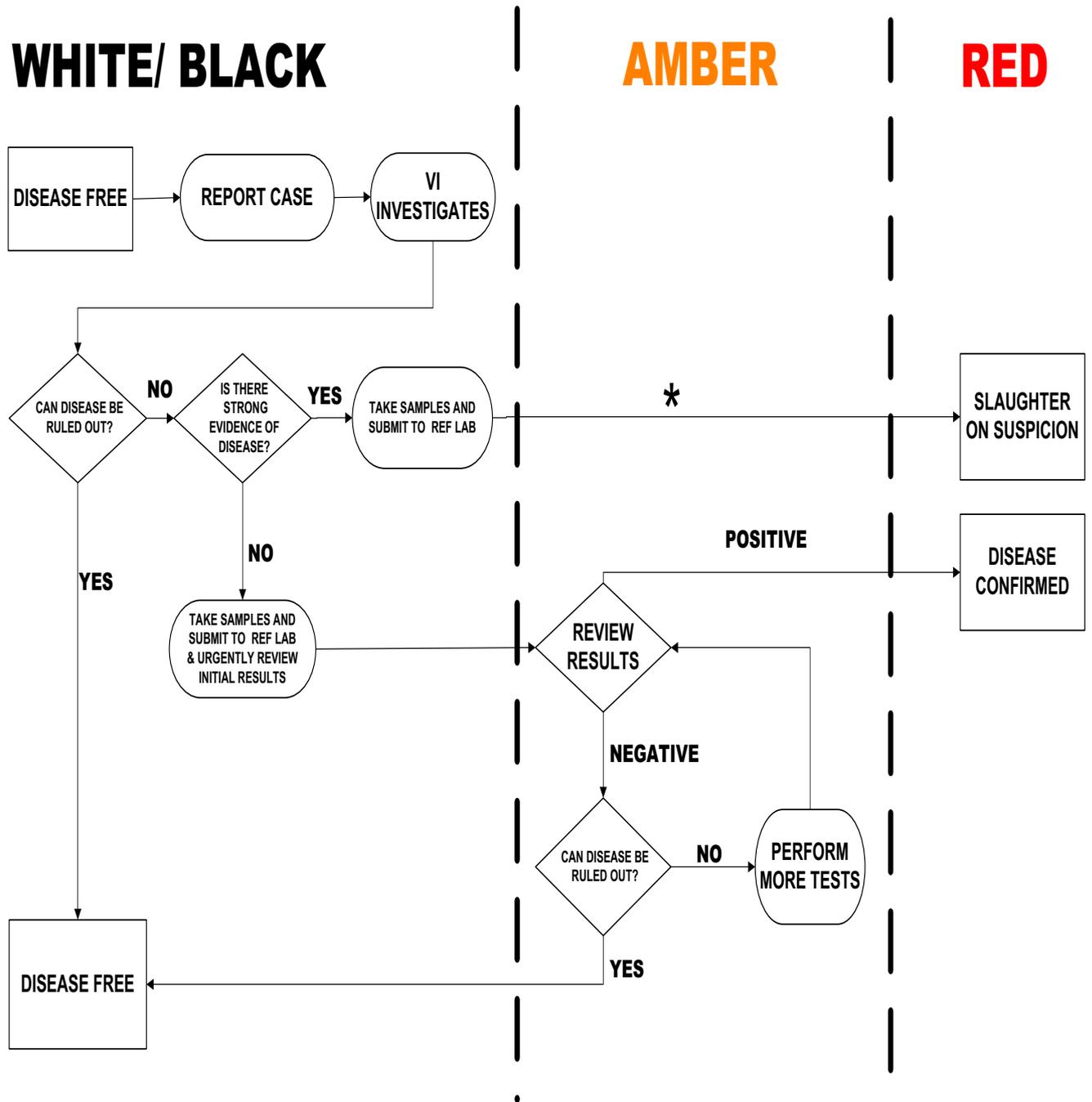
27 The exercise was conducted in a series of phases to ensure that planning and development maximised the input from participants while aiming to minimise the effect on business areas. Details are provided below.

9. Field exercises

28 The field exercises took place on multiple premises across GB between November 2017 and February 2018. 15 exercises took place in total. They exercised APHA's response to a report case of notifiable disease. They also tested on farm plans and procedures for dealing with the initial report case of disease to a confirmed case of Foot and Mouth Disease including, on farm bio-security, culling, disposal, cleansing and disinfection and health and safety guidance. Ninety field staff from APHA took part in the exercises and outputs were used in the exercise scenario. A table of Field exercise location can be found in Appendix B.

10. Tabletop 1

29 The first tabletop exercise took place on 8th February 2018. This tabletop included specific strategic meetings as outlined in the Defra Contingency Plan, with all required participants exercising their roles. The tabletop took the participants through several stages of the disease alert system (see fig 2 below).



* Would only normally be effected where disease has already been confirmed in the country

31 The tabletop exercise started at report of suspicion (day -1) and ended with disease being confirmed (day 0). The meetings that took place included:

Day –1 of Scenario

- **CVO case conference:** On suspicion of disease there may be a series of case conferences to discuss emerging issues. The four Chief Veterinary Officers from the UK, key policy and veterinary officials from each administration would normally attend. This meeting will consider whether circumstances warrant triggering an Amber teleconference.
- **Amber teleconference:** If suspicion of disease is strong because of emerging laboratory results or a deteriorating clinical picture, an Amber teleconference is held. Its purpose is to inform the attendees of the situation, to assess the risk and to agree on next steps.
- **Core stakeholder group:** to inform stakeholders and for discussing and influencing policy developments and to help steer the strategic direction.

Day 0 of Scenario

- **Amber teleconference:** to further apprise participants of the situation, samples results, risk assessments and to plan future actions and communications accordingly. When disease is confirmed the Amber teleconferences changes to become a Red teleconference with relevant cascade actions take place and disease control structures being setup.

32 The tabletop commenced with a simulated text alert followed by a Case Conference using a report case scenario from a simulated veterinary investigation. This was then followed by discussion and further meetings as outlined in the NDCC battle rhythm. Scenario information at each meeting was delivered by exercise control staff or controlled players, who facilitated the running of the meeting in real time and to the agenda as defined in the contingency plan. Information, actions and decisions from these meetings were subsequently used by the scenario development team to inform further scenario development.

11. Tabletop 2

33 The second tabletop exercise took place on 8th March 2018 and continued the scenario from the end of the first tabletop to the end of day 6.

34 The tabletop presented the scenario and provided a stopping point for discussion at each day of the outbreak until the end of day 6. The tabletop commenced with a 08:30 NDCC birdtable on Day 1 and concluded with an 18:00 NDCC Birdtable on Day 6 of the outbreak. Scenario information at each NDCC Birdtable was delivered by exercise control staff or controlled players, who facilitated the running of the meeting in real time and to the agenda as defined in the contingency plan. Information, actions and decisions from the exercise were subsequently used by the scenario development team to inform further scenario development.

12. Live exercise

35 The main Live Exercise took place on the 25th and 26th April 2018 and exercised days 7 & 8 of the simulated outbreak. Players had limited visibility of the developing scenario and had to respond as they received or gathered information in real time. The live play was driven from a Master Events List (MEL) by exercise control (EXCON) and controlled players, who ensured that relevant information was inputted at the appropriate time and location to maintain exercise pace and feeling of reality for the participants.

36 The information and data used during the exercise was generated by using animal holding datasets for England, Scotland Wales and Northern Ireland. The datasets were used to undertake epidemiological research and modelling before and during the exercise.

13. Tabletop 3

37 The third tabletop continued the scenario following the two day live exercise to the point of eradication of disease and subsequently disease freedom status. The exercise considered the events during each of four phases:

Day 9 to day 22

- This section focused on the decisions and challenges that occurred during the period following the live exercise to the point of peak number of diseases confirmed per day.

Day 23 to day 73

- This section focused on the decisions and challenges that occurred during the period following peak number of disease confirmed per day to the point where numbers of confirmed cases drop to one per day.

Day 74 to day 210

- This section focused on the decisions and challenges that occurred during the remainder of the outbreak until 2 months after last case of FMD.

Day 211 to day 507

- This section focused on the decisions and challenges that occurred during the period of 2 months clear of disease to twelve months following last confirmed case.

14. Participating organisations and locations

38 Over 400 participants took part in Exercise Blackthorn and included CVOs and senior officials from the four UK Administrations, APHA and Operational Partners. The live exercise involved participants located throughout the United Kingdom (although a number of participants worked remotely or from home) in the following main locations:

- London Nobel House – NDCC (Defra Policy)
- Edinburgh – Scottish Government – NDCC (DSG)
- Cardiff – Welsh Government – NDCC (ECC(W))
- Coleraine – DAERA, Northern Ireland - (CEDCC)
- Worcester – APHA Corporate Office
- Carmarthen –Wales FOB
- Starcross – England FOB
- Perth – Scotland FOB
- Llanishen, Cardiff – Tracings CSC
- Worcester – Licensing CSC
- Exeter – Surveillance CSC
- Preston – Finance & Business support

39 Participants included NDCC teams, FOB teams, policy teams from Defra, Scottish Government, Welsh Government, The Department of Agriculture, Environment and Rural Affairs, Northern Ireland, APHA, Operational Partners and key industry stakeholders (such as the National Farmers Union (NFU) and British Veterinary Association (BVA)) and other bodies with interests in the management of a Foot and Mouth Disease outbreak.

40 A full list of participating organisations is at Appendix C.

15. International observer delegation

41 A delegation of international observers attended the live exercise in Defra London Nobel House. This group consisted of 27 international delegates representing 16 Countries, the World Organisation for Animal Health (OIE) and Royal College of Veterinary Surgeons (RCVS). A full list of represented countries is available in Appendix C.

16. Exercise scenario

42 The exercise scenario was divided into three parts, each part was designed to dovetail into the next we also held simulated meetings and team sessions between the tabletops and live play to enable policy and operational issues to be considered. The pre-live scenario (day -1 to day 6) was developed by the project team and released to participants before the live exercise. The second part comprised the live exercise scenario which was outlined in the Master Events List, of which participants had no prior knowledge and had to take appropriate actions to the information received during the live exercise. The third part was produced from a FMD modeling tool which progressed the scenario from the end of the live exercise to the conclusion of the simulated outbreak. The full exercise scenario is at Appendix D.

17. Lessons identified

43 In line with the current APHA process, the lessons identified were grouped together to aid analysis and identification of owners for each lesson. They cover the lessons identified from the field, tabletop and live exercises. Details of the lessons are provided below and a summary is included in the recommendations log at Appendix F.

17.1 Suspicion

17.1.1 Veterinary inquiry

44 During 15 field exercises, APHA tested the on-farm aspects of responding to a suspect case of FMD. This included; completing a veterinary inquiry and its necessary paperwork, debriefing field staff, obtaining tracing information, completing the field operations log and completing risk assessments for implementing culling and disposal arrangements. Cleansing and disinfection and on farm bio-security arrangements were also exercised.

45 The importance of regular training in on-farm activities was recognised by the

veterinary and technical staff that took part. They were also able to provide feedback relating to on-farm guidance and the effectiveness of current operational instructions. Some participating technical staff attended the field exercises had not undertaken Case Officer training.

Recommendation 1: APHA should continue to undertake training for Case Officers, and the materials generated in the Field exercises should be utilised for further report case training.

Recommendation 2: All field vets should undergo report case training before participating in exercises and attending real time report cases.

17.1.2 Temporary control zones (TCZ)

- 46 Domestic legislation goes beyond EU law and OIE requirements and requires that when samples are taken for FMD, a Temporary Control Zone (TCZ) is declared around the suspect premises, with current policy stating that this will be a radius of 10km. A number of issues were identified with declaring a 10km TCZ. Firstly, it can cause concern in the rest of the country and might encourage keepers outside of the zone to move animals in expectation of a forthcoming national movement ban. Secondly the rapid changes in control measures and terminology often causes confusion among keepers. There is a familiarity with PZs, SZs and RZs. This policy was put in place following FMD 2001 and was based on the testing methods used at that time which meant results could take several days. Modern diagnostic techniques such as PCR mean results are rapid, usually with half a day or samples being taken therefore a TCZ will usually only be in place for a couple of hours before either disease is negated and restrictions are lifted or disease is confirmed and the TCZ replaced by the familiar PZ and related zones.
- 47 The same legislation requires that a TCZ is declared every time suspicion of disease is reported, even within control zones (PZ, SZ, RZ) similar conditions apply.
- 48 These issues were considered in real-time by the UK Animal Disease Policy Group during the exercise and they concluded that under the Exercise scenario the automatic imposition of TCZ was found to be unjustified and that a decision should be left to the relevant CVO, taking account of the specific circumstances.

Recommendation 3: Formal review of the policy regarding the automatic imposition of TCZ restrictions during a disease outbreak.

17.1.3 Signage at suspect premises

Legislation demands that when samples are taken, appropriate signage should be placed at the gate of the suspect premises. This was not exercised because there were no field exercises during live play, however the issue was raised during the first tabletop. It is unlikely a farmer will post such a notice on his premises prior to notifying APHA of a suspect disease animal. Concern was raised that someone could put a sign at the entrance to a suspect premises before partner agencies have been notified (as Schedule 1 - England and Schedule 2 in Wales and Scotland) of the legislation states that a suspect FMD holding needs to be signposted.) If samples are

taken because suspicion of disease cannot be ruled out on clinical grounds, APHA would need to be ready to provide official restriction notices for placing at appropriate entrances to the premises.

Recommendation 4: Review process of issuing official signage to animal keepers when their holding is under suspicion of disease and samples have been taken.

17.1.4 Sample transport from Northern Ireland (NI)

During the exercise, the Department of Agriculture, Environment and Rural Affairs (DAERA) explored the complexities of transporting samples to Pirbright for testing. Issues considered were around sourcing couriers that would transport samples and where transport by air was necessary that this was at discretion of the pilot. NI were concerned that these issues could lead to delay in confirming and negating disease.

Recommendation 5: DAERA to investigate further the sourcing of suitable couriers to transport samples.

Recommendation 6: DAERA to investigate further the options for transporting the samples by air through discussions with the British Airline Pilots Association. Additionally investigate the possibility of using military assistance through Military Aid to the Civil Authorities (MACA) arrangements.

17.2 Confirmation

17.2.1 Disease confirmation in the different UK administrations

49 The exercise tested confirmation of the first case of FMD in the UK. All administrations attend a case conference which subsequently became the Amber Teleconference where all facts are considered and the CVO of the relevant administration confirms disease if they are satisfied all the criteria are met. Subsequent cases are confirmed by the relevant CVO however in Exercise Blackthorn we tested a new process of confirming the first case in any administration in a Disease Confirmation Telecom. When a large number of cases being reported daily, it is impractical to confirm each case through a UK wide teleconference. The CVO of each administration can order the culling on an affected premises without consultation with the other administrations whilst ensuring APHA VENDU are involved.

Recommendation 7: Ensure that the updated process is detailed in Contingency Plans and operational instructions.

17.2.2 Confidence in framework providers

50 APHA Operations, in an outbreak, have a dependency on provision of services by a range of contractors and suppliers, some of whom have entered into government framework agreements. These services are varied and diverse, and were not directly tested in Exercise Blackthorn.

Recommendation 8: APHA contract management team to consider testing/exercising of service providers to provide greater assurance of contractor capability and capacity, whilst considering the cost and value of any such exercise.

17.3 Licensing

17.3.1 General licences

51 All Administrations have expressed some concern over the process of risk assessment for licensing purposes, and notwithstanding the need to ensure a flexible approach to allowing industry to operate as best as possible, some concern has been expressed over the early release of general licences. Concerns were also raised about deviation among the UK administrations. An example of this is the implementation of the General Licence for the movement of mammals during the 2016 Avian Influenza outbreak, in which Wales did not allow their general licence to permit the movement of pigs, in comparison to Defra who did in their comparable licence.

Recommendation 9: Establish a working group to consider licensing arrangements in an outbreak, and where possible define a common approach across all Administrations for the release of general licences and the process of associated risk assessment. It is accepted that general licences may only apply to those scenarios where the veterinary risk is considered acceptable when the implementation of appropriate safeguard measures are introduced. Whilst a whole of UK approach to general licences, it is accepted that there is the potential for differences across administrations within general licences themselves, in particular where a devolved administration may at a point in time be free from disease.

17.4 Tracings

17.4.1 Animal movement data & tracings

52 There remain significant issues with the various animal movement recording systems. During the exercise there was some confusion around traceability of sheep that have moved through markets and how movement information can be obtained. The tracing team also found that data collected from current livestock movement systems did not provide all of the required movement information in a timely manner. As the Livestock Information Programme in England is unlikely to provide a solution with regard to sheep data until 2020, an interim process needs to be scoped and put in place to provide assurance that sheep movement data can be obtained as quickly as possible in a format that can be easily assessed and appropriate action taken. The issues identified within Scotland will be raised at the Scottish Industry Market Liaison Group to discuss these findings. There is also a need to improve interoperability between UK IRM (Identification, Registration and Movement) systems to ensure that UK traceability is timely and robust. This process should be exercised during the APHA exercise programme to ensure a robust process exists until the Livestock Information Programme delivers.

Recommendations 10: APHA to look at contingency options in England for obtaining sheep traceability information and put in place an interim process for tracing of sheep, specifically through markets. This process to be exercised during the 2018/19 exercise programme as a cross border exercise with Scotland.

Recommendations 11: APHA Tracing CSC, the NEEG and all UK administrations to work with the Livestock Programme to provide system requirements and interoperability between UK IRM (Identification, Registration and Movement) systems and relevant projects regarding traceability and movement of animals during outbreaks of exotic disease.

Recommendations 12: APHA to consider the findings from the field exercise on sheep traceability with the Scottish Industry Market Liaison Group.

17.5 Sampling

17.5.1 Epidemiological sampling

53 Epidemiological sampling at Infected Premises, and other premises where culling takes place informs the disease control strategy, and could lead to refinements that may improve the efficiency of that strategy; and it also seeks to identify the root of the disease as well as identifying the reasons for the spread of disease in any given area. Exercise Blackthorn saw a large number of Infected Premises being identified. In large scale outbreaks of disease it would not be feasible to produce premises specific epidemiological sampling plans for every affected premises – to do so would likely cause delays in issuing sampling instructions, that could adversely affect operations.

Recommendation 13: National Emergency Epidemiology Group (NEEG) should consider the epidemiological sampling needs in a fast paced developing outbreak. Consideration should be given to the production of generic sampling plans for specific types of animal holdings (therefore negating the need for bespoke plans for every premises)

Recommendation 14: NEEG should consider devolving decision making and ratifying through ADPG on actions required on individual premises to an appropriate level. A trigger point for invoking the use of generic epidemiological sample plans should be part of any pre outbreak planning and instruction design.

17.5.2 Laboratory

54 During all exercise tabletops and also live play it was clear that surveillance strategy for sampling would mean that maximum laboratory capacity could be reached at a number of stages and specifically during zone clearance. APHA should ensure that the NEEG liaise with laboratories to understand sample capacity when setting the surveillance sampling regime. The NEEG, laboratories and OCG forward planning

team also need better communication links to ensure the expertise is shared and teams are fully aware of sampling issues and capacity.

Recommendation 15: NEEG to review its surveillance strategy for FMD outbreaks and prepare a strategy for how to deal with zone clearance but remains in accordance with international expectations and requirements for regaining disease freedom.

Recommendation 16: NEEG, the contingency planning team and APHA & TPI laboratories to put plans in place to ensure there is better awareness of laboratory capacity.

17.5.3 Portable lateral flow test kits

55 Lateral Flow devices were discussed during the exercise, and although FMD cannot legally be confirmed through this test, they can give an early indication of a positive result. The use of these devices were considered in the CVO Stocktake meetings that took place. These devices might be useful in remoter areas of the UK far from the reference laboratory eg the Scottish Islands or Northern Ireland to give an indication of a result while official samples are in transit or to inform if additional TCZ restrictions should be imposed around the IP within a RZ (Restricted Zone). Further consideration needs to be given to how a positive result would be communicated from field staff to the NDCC.

56 **Recommendation 17:** UK policy teams to determine the use and deployment of Lateral Flow devices where appropriate

17.6 Plans, policy and procedure

17.6.1 Ten / Five mile rule

57 A single livestock holding and its CPH can cover the land and buildings within a certain distance (10 miles in England and Wales, 5 miles in Scotland) of its main livestock handling area. Issues arose around treatment of satellite holdings with the same CPH number as an IP.

58 There is an operational and policy need to clarify how such holdings should be treated in an outbreak. Concerns include how zones are affected by satellite holdings, and how operational tasks are recorded against satellite holdings.

Recommendation 18: Operational and policy teams to consider how best to address concerns over handling of satellite premises under the same CPH as an affected premises. Clear processes to be defined and written into operational instructions

17.6.2 Access to the countryside

59 During tabletop 3 and when discussing the peak of the outbreak, a number of issues were raised regarding enforcement of policies relating to access to the countryside.

60 **Recommendations 19:** All UK administrations to work with National Police Chief Council (NPCC) and local authorities to ensure that effective and enforceable strategy for managing access to the countryside is prepared and noted in its disease recovery plans and exercised with police and local authorities.

17.6.3 Operations manual

61 APHA have well developed operational guidance and desk instructions that are used by staff involved in the response to an outbreak of exotic notifiable disease of animals. They provide direction and guidance on the tasks involved in the outbreak response, ensuring that there is a consistent approach taken.

62 Operational instructions are reviewed regularly and updated as necessary. They reflect current best practice in relation to dealing with a disease investigation and disease outbreak response.

63 The APHA operations manual was used extensively during the two day live exercise. There were a number of issues with some areas where corrections and updates are required. There were additional updates for the instructions highlighted during the exercise for corporate functions such as HR, finance and communications.

Recommendation 20: Review and enhance the current instructions to ensure that they align to the outbreak model and are up to date with recent changes in corporate functions and teams. APHA Advice Services and other leads should take responsibility for owning their relevant work areas within the Operations Manual and utilising operational expertise effectively.

17.6.4 Battle rhythm

64 The battle rhythm is established to allow all participants to be aware of the activities and meetings so they can better plan their involvement. Participant feedback around the battle rhythm has been extensive. Principally the belief is that attendees at several meetings are the same and thus have insufficient time between meetings to report back to their teams. Industry were concerned that there was a clash between the GB core group meeting and the stakeholders meetings of the Devolved Administrations. These meetings are not currently built in the formal battle rhythm.

Recommendation 21: Review the Battle rhythm. Ensure that staff, operational partners and stakeholders aware of the timings of battle rhythm meetings. Also relevant participants at battle rhythm meetings should ensure their teams are back-briefed from these meetings to ensure that they are aware of current situation and any actions that need to be taken.

17.7 Communication

17.7.1 Birdtable

65 Overall it was felt that the communications across the response structures during the live exercise went well. However there were some issues highlighted. These

included that the NDCC Birdtables representation seemed England-centric. This might have been as a result of exercise artifice.

66 Attendance at Birdtables was also questioned in respect of the role of Industry and stakeholders.

67 During live play some external Defra communications were produced which were not checked or approved by EDPRT comms cell.

Recommendation 22: Review NDCC birdtable attendance to ensure that operational partners from each administration are represented when appropriate.

Recommendation 23: Policy Teams to ensure that approval process for communications during an outbreak is agreed and understood

17.7.2 Comms between administrations

68 During the live exercise there were occasions where DEFRA Communications team didn't link in with devolved communication teams regarding unified communication messages. This however did improve as the exercise continued. It was also highlighted that many communication staff had limited outbreak response, industry knowledge or farming experience. To overcome this staff were paired up with more experienced people to share knowledge.

Recommendation 24: Defra communications team to review internal plans and procedures of interacting and working alongside devolved communication teams during disease outbreaks.

Recommendation 25: Review APHA Communications outbreak response plan and ensure that regular training is delivered and made available to new or less experience staff. Investigate fast track training packages for the deployment during outbreak induction.

17.7.3 Outbreak mailboxes

69 APHA and many UK Administrations use shared team Mailboxes during disease outbreaks. This is done to provide easier access to teams and individuals across government to ensure that emails are received by the correct teams and will be actioned. There were some issues with emails being sent to individuals instead of the team mailboxes. Northern Ireland DAERA CEDCC staff experienced this as information was missed on several occasions when emails were sent from GB teams to NI DAERA staff email addresses. This meant information and teleconference emails were not received by NI staff during the exercise. New APHA outbreak mailboxes and protocols were also established during the weeks before the exercise and lead to some issues with individuals being unaware of the changes to shared mailboxes.

Recommendation 26: Ensure staff are briefed at the start of their outbreak duties of the importance of using the correct mailboxes and the impacts of not following the set protocols. Welsh Government staff in the ECC(W) also experienced this issue, despite all briefing packs highlighting the need for e-mails to be sent to mailboxes rather than individuals (or at least to have mailboxes copied in to the correspondence). This resulted in many delayed updates from the Logging and SitRep cells. It should be strongly emphasised for future exercises that participating players read and understand their briefing packs fully. This particular practice could be raised at the opening presentations.

17.8 Data management and reporting

17.8.1 Reporting affected premises in Northern Ireland

70 Affected premises in Northern Ireland were reported separately in the management information report. Despite Northern Ireland being a separate epidemiological unit, it is part of the UK and for disease reporting (especially to international bodies where the UK reports as one body) therefore a consistent approach is required.

Recommendation 27: The process for reporting and numbering affected premises in Northern Ireland should be reviewed to determine if a single UK-wide picture could be presented.

17.8.2 Management information requirements

71 Accurate data is needed both to enable analysis which can then inform disease control strategy development, epidemiological investigations, enable modelling to predict the likely emerging disease picture and which in turn can inform forecasting resource needs to mount the response. During the exercise the management information reports were reviewed with policy customers to ensure that they met their requirements.

Recommendation 28: Continually review management information and reports to ensure that they are suitable and relevant.

17.9 Human resources

17.9.1 APHA resourcing

72 Several issues have been identified around the theme of resourcing. Sourcing additional staff is particularly difficult for (CDCC/NDCC) teams requiring specialist skill (Geographical Information Systems (GIS), NEEG, Field Epi). It was also noted that one Resilience and Technical Adviser per FOB was insufficient to meet all defined tasks. There was insufficient administrative staff to support back office FOB functions, and the lack of a CSC Liaison Officer at FOBs was noticeable in causing

some inefficiencies in information and data flow.

- 73 There is some confusion amongst local managers regarding the hierarchy of supply of additional (non APHA) staff. Concerns were also expressed over the resilience of some teams and functions that have a key role in securing outbreak infrastructure.

Recommendation 29: Thoroughly review the HR outbreak strategy, and establish a working group to update and share the strategy.

Recommendation 30: APHA to establish a pool of deployable Administrative (AO/EO) staff to support FOB functions, including that of FOB/CSC liaison Officer.

Recommendation 31: APHA to consider how skills are identified (and recorded) across all of its staff – noting that FSM holds records for Field Staff.

Recommendation 32: Raise awareness across APHA Field Services managers of the process for supply of additional staff.

17.10 Facilities, estates & IT

17.10.1 IT infrastructure printers in London & other sites

- 74 During the exercise IT infrastructure generally worked well but there were printer issues at several sites. This is a transitional problem during a change of printer supplier. There was also IT connectivity issues at one of the FOBs.

Recommendation 33: Engage with Defra's new printer supplier to ascertain their ramp up capabilities.

Recommendation 34: Ensure staff with outbreak management roles are aware of the existing Business Continuity Management (BCM) policy and plans.

17.10.2 Mobile signal & WI-FI access

- 75 The lack of IT connectivity at two FOB locations affected the effectiveness of the response of Operational Partners and Stakeholders. Partner organisations need to be able to communicate with the NDCC/FOBs and be able to access their own organisations systems and databases. At some FOBs there was limited or no mobile and Wi-Fi access, which affected the communications between the agencies and organisations involved.

Recommendation 35: APHA to engage with DDTS to investigate the IT connectivity requirements of Operational Partners and Stakeholders to ensure they are provided with access to mobile or Wi-Fi access to their required systems when located in a FOB. Outcomes should also be fed into the Defra Unity Project. ECC(W) also experienced WI-FI issues, as many external stakeholders were unable to connect to the WG WI-FI. A contingency plan was in place and alternative WI-FI routers were available for those unable to connect.

17.11 Operational partners

17.11.1 Engagement with operational partners

76 Engagement with Strategic and Tactical Coordinating Groups, established by Local Resilience Forums was raised as an area that needed further clarity, so that Defra, APHA and Operational Partners at national and particularly local level fully understand the roles, responsibilities and expected contributions that all participants are likely to have.

Recommendation 36: APHA to continue, through the Resilience and Technical Adviser network, to build upon engagement with Local Resilience Forums, and their respective animal disease sub groups to continue to raise awareness of APHA's outbreak response model, paying special regard to the infrastructure of the National Disease Control Centre (NDCC), Central Disease Control Centre (CDCC), and the responsibility of APHA's Head of Field Delivery (HoFD) to oversee engagement with any established Strategic Coordinating Groups as described in the Contingency Plan. Consideration should also be given to ensuring an appropriate level of engagement is in place with Resilience Forums in Scotland, Wales and Northern Ireland.

Recommendation 37: The Cross Government Working Group on Exotic Animal Disease should be asked to consider how the constituent bodies they represent could be better briefed on the expected workings of Strategic and Tactical Coordinating groups.

17.11.2 Biosecurity guidance for farm visitors

77 Some exercise participants found it difficult to assimilate available information on biosecure procedures to be employed when officials are visiting livestock holdings in the course of their, sometimes, unrelated agricultural business. Information is available via APHA, although we should look at promoting this more widely.

Recommendation 38: Undertake a thorough review of available online biosecurity guidance within relevant sections of each UK administration's and APHA website. Consider preparing print ready, easy to understand leaflets that detail biosecurity measures that encompass best practice for visiting Infected Premises and other premises within identified zones, and share these with interested parties and organisations. Commit to publish or signpost to biosecurity guidance within widely circulated outbreak documents, and FAQ sections of disease specific sections of Gov.uk/Gov.scot etc.

17.11.3 Enforcement priorities

78 Every outbreak presents different challenges, with potentially different priorities and

as such plans should reflect the need for such a discussion between enforcers and policy teams as to what their policy priorities are, how they will be promoted and at what point full practical enforcement can be considered in response. The RACE (Regulatory, Assurance, Compliance and Enforcement) team within APHA should work with GB Policy teams and LAs to prepare plans for enhanced engagement to ensure that effective prioritisation and a hierarchy of enforcement activity is considered. Also the APHA RACE team should work with LAs to ensure that consistent messaging takes place.

79 **Recommendation 39:** APHA Race team to put in processes to ensure that there is three way communication between RACE, GB Policy teams and LAs, as part of the outbreak battle rhythm.

80 **Recommendation 40:** RACE is to work with Policy to ensure that enforcement priorities are easily translatable to local authorities in a consistent format.

17.11.4 Military aid to the civil authorities (MACA)

81 During the exercise the process by which Military Aid to the Civil Authorities (MACA) is initiated created some confusion.

Recommendation 41: Confirm the process of escalating local requests and activating MACA through the Ministry of Defence (MOD) Operations Directorate.

Recommendation 42: Confirm who in the lead government department is responsible for requesting MACA.

17.12 Recovery

82 Recovery is defined as the process of rebuilding, restoring and rehabilitating the community following an emergency, but it is more than simply the replacement of what has been destroyed and the rehabilitation of those affected. It is a complex social and developmental process rather than just a remedial process. Roles and responsibilities in the response phase of emergencies are well defined, understood and rehearsed. However, the recovery phase and the structures, processes and relationships that underpin it are harder to get right. It can be costly in terms of resources and subject to close scrutiny. It is essential for the process to be based on well thought out and tested structures and procedures for it to work in an efficient and orderly manner. The recovery phase should begin at the earliest opportunity following the onset of an emergency, running in tandem with the response to the emergency. It continues until the disruption has been rectified, demands on services have returned to normal levels and the needs of those affected (directly and indirectly) have been met.

83 While the response phase to an emergency can be relatively short, the recovery phase may last for months, years or even decades. Responsibilities for recovery from an Exotic Animal Disease Outbreak sits with Lead Government Department

(LGD) from the relevant UK administration.

- 84 The key aspects of recovery from a major FMD outbreak include minimising the impact on rural communities, ensuring the economic health of the livestock and dairy sectors, managing the impact on tourism and facilitating a quick resumption of international trade. The relatively small outbreaks of Avian Influenza detected in Great Britain since 2014 have had a comparatively minor impact on rural communities, meaning that a full recovery operation has not been necessary.
- 85 Responsibility for the various parts of the recovery is split between several Defra teams and all Devolved Governments. When exercising the recovery phase, it was evident that a coordination process for managing recovery across the UK is essential. This should take the form of a central board and be formally stood up in the early stages of an outbreak, initially to consider and plan, and then to manage the recovery.

Recommendation 43: A recovery "board" comprising of the affected teams, departments and stakeholders across GB should be set up at the beginning of the outbreak to ensure that the impacts and consequences of disease control are understood and recovery measures planned and put in place as early as possible.

Recommendation 44: The Exotic Disease Contingency Plans of all UK administrations should be updated to reflect the establishment of such a board.

Recommendation 45: Procedures for dealing with recovery from an animal disease outbreak should be agreed across the UK administrations. This plan should contain details of roles and responsibilities.

17.13 General

17.13.1 Use of resilience direct

- 86 Resilience Direct (RD) is a secure government communications tool used to share information across government and partner organisations involved in emergency response. NDCC and OCG have not used RD extensively in outbreaks but it has been used in Exercise Blackthorn and other exercise events and planning forums. In particular, the NDCC OCG used RD to share the OCG Report and the minutes of certain NDCC Meetings. Most participants found the use of RD to be very helpful, however some government agencies experienced difficulties as they had not registered to use RD.

Recommendation 46: Further explore the merits of using Resilience Direct as a communications tool, so that protected and other information can be shared or signposted to, thus resolving some of the difficulties associated with maintaining up to date email distributions lists and perhaps alleviating some issues with the security

of personal or organisational email accounts.

Recommendation 47: Encourage other agencies and governmental department to obtain access to Resilience Direct. Encourage the use and benefits of the system through day to day use and familiarisation.

17.13.2 Size, scale and urgency of response

87 Exercise Blackthorn was a fast spreading Foot and Mouth Disease scenario. Although the UK has experienced outbreaks of exotic disease, none have been of similar scale and nature to this exercise apart from FMD in 2001. Most cases since then have been small in comparison and in recent year we have had isolated cases of AI (Avian Influenza), often contained within one premises, other than the winter AI outbreak of 2016/17. It was noted how fast pace an FMD outbreak is in compared to AI. There was also realisation at the speed at which the response had to be scaled up as the disease spread. From a perspective of Exercise Blackthorn objectives, this was a positive reinforcement of the need to remain prepared and resilient for larger and scalable responses to disease incursions.

Recommendation 48: APHA and UK administrations to use appropriate opportunities to inform incoming staff and changing personnel in partner organisations of the need to be prepared for a range of outbreak responses that may vary greatly in size and scope. APHA and UK administrations to maintain disease response plans that are scalable and flexible to the needs to respond to of different types of outbreaks.

17.14 Exercise planning

17.14.1 Project management

88 Project management principles were followed when planning and delivering Exercise Blackthorn. An Exercise Project Board oversaw the management and delivery of the entire project. The Board comprised representatives from Defra, Welsh Government, Scottish Government, DAERA NI, APHA and the Cabinet Office. They met every 4 weeks, discussing and resolving issues, reviewing risks and costs associated with the project. This worked reasonably well, however it was felt that the interval between meetings were too close together and meetings could be scheduled 6 weeks apart. Despite this it was felt that applying project management principles to exercise planning should be promoted as best practice.

Recommendation 49: Review the schedule of project board meetings for future national exercises.

17.14.2 Ops partners

89 An Advisory Board was established to ensure that the scope of the exercise was understood by our operational partners. This group met bi-monthly in the 6 months leading into the exercise where they were updated with project, guidance and scenario development. It was felt that this forum worked well.

17.14.3 Scenario development

90 The scenario development team comprised of a national team and three local teams. These developed the scenario for the national and local elements of the exercises. These teams worked well on their scenario, sharing injects and issues which resulted in a challenging but realistic scenario of a medium to large scale outbreak spread across England, Scotland, Wales and Northern Ireland. It was felt that there could be better interactions between the national planning team and the local teams. This had resulted in the delay of amalgamation of the scenario leading up to the live play exercise.

91 To produce such a demanding scenario the planners needed to create a set of assumptions in which to base decisions and steer development. Due to the need to create a back story of 6 days and manage veterinary and epidemiological input it was felt that the project would have benefited from a veterinary lead to be seconded full time to the project.

Recommendation 50: Include representatives from the local scenario team in the national scenario planning team to relay their inputs.

Recommendation 51: Consider a full time veterinary lead to be seconded to future exercise planning team.

17.14.4 The master events list

92 During the live exercise, a Master Events List was used to create a storyboard of issues, queries and actions (called injects) to drive forward the scenario. Production of the MEL was completed separately by the national team and the local teams. A month before the exercise the MEL was planned to be amalgamated to produce the completed Exercise MEL which gave exercise control (EXCON) and evaluators the opportunity to review before the live exercise. However due to an unforeseen issues the MEL was not able to be amalgamated until the days leading to the exercise.

Recommendation 52: Consideration to implement a MEL planning team consisting of representatives from the local and national teams that would meet on a monthly basis and would report to the project board on progress.

17.14.5 Exercise control

93 Exercise controllers had to ensure that each inject was delivered at a specific time though on a few occasion injects were sent to the wrong contact or mailbox. This

was partly due to incorrect mailboxes being submitted to the exercise communications directory due to new mailboxes being made available a week before the exercise. Another issue was the distribution of pre-made paperwork such as NDI1 and EXD40s. Local and national ExCon members were responsible to send them at the appropriate times. This led to confusion during the exercise with new forms being produced during the exercise.

Recommendation 53: Consider that a central repository to be set up to hold and manage the paperwork saved with time, date and inject number referenced. ExCon should identify a member to manage the process and ensure documents are sent at the correct time in accordance to the MEL.

17.14.6 The EXODIS model

94 The Exodis modelling tool was used to create a scenario that followed the two day live play exercise. The model was required to facilitate the third national tabletop that concentrated on the recovery aspects of the simulated disease outbreak. It provided a realistic scenario based on the scale required for the exercise. However, there were some limitations and constraints to Exodis modelling system. These included issues surrounding the resource information that it could provide. It was unable to provide a breakdown of resources to the devolved areas and the algorithms were based on outdated outbreak response structures and procedure.

Recommendation 54: Investigate the feasibility and cost of updating the Exodis model to enable it to provide accurate resourcing information based on current outbreak response structure and procedure.

17.14.7 Evaluation

95 The evaluation process involved several forms of feedback. It included a debriefing session at all locations after the exercise had concluded. This has the advantage of capturing lessons as they are fresh in the participants' minds. Electronic feedback forms were sent out following the exercise to all internal and external participants and the returns collated. This was a quick and constructive way to gather feedback and statistical information about the exercise. Electronic feedback forms should be used to capture future lessons at both national and local exercises. This was followed by a structured debriefing session held a month after the exercise, to record issues which come to light on reflection.

Recommendation 55: Continue to offer several methods via which participants can contribute feedback, and update exercise evaluation instructions to reflect this.

18. Conclusions

96 Exercise Blackthorn enabled the UK administrations to test their contingency plans in

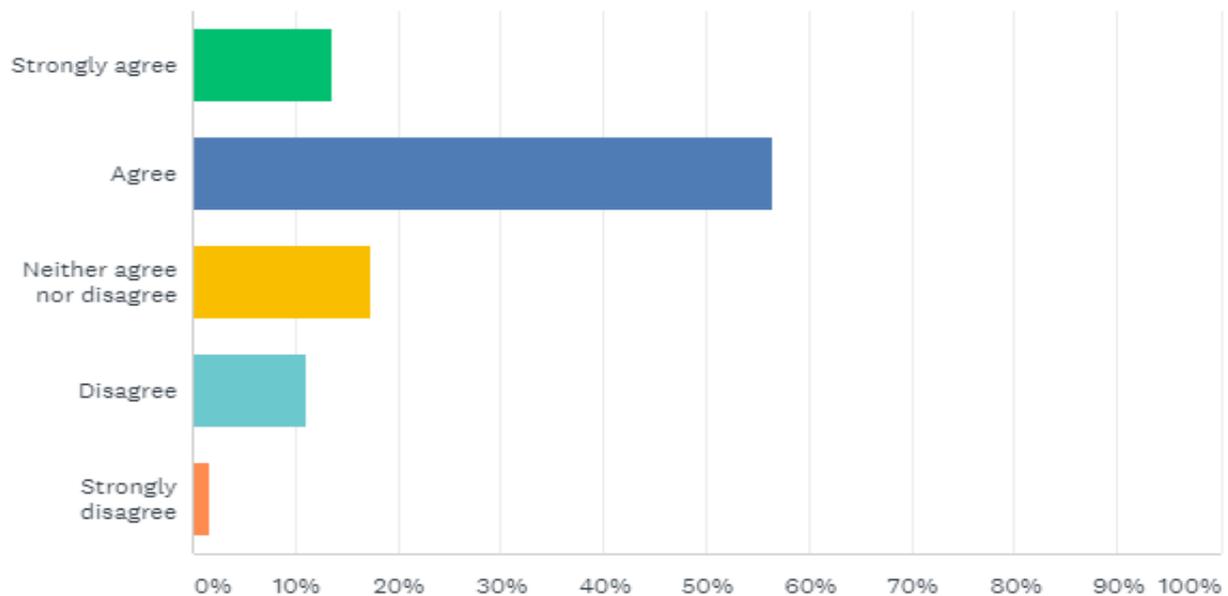
the event of an outbreak of Foot and Mouth Disease and identify valuable lessons. Feedback from participants and observers of the exercise has been very encouraging. There is a consensus that it was a well-planned exercise and very successful in meeting its objectives. Encouraging aspects from the exercise include how UK Administrations work together as a joined up function, how the changes in operational structures have provided clearer response at FOB level and the constructive engagement government has with Operational Partners and Stakeholders.

- 97 Although the outcome of the exercise has been positive, the government still needs to ensure that the lessons identified in this report are incorporated and that preparedness is further improved. The principal lessons identified include improving internal communications processes, IT connectivity, testing current framework agreements and further test the plans for resourcing a large scale outbreak.
- 98 The contingency plans and control strategies for each administration will continue to be refined as knowledge of the disease increases, technology improves and the corresponding contingency structures evolve. Lessons and issues identified by Exercise Blackthorn will help government prepare for future outbreaks, and contribute to the ongoing process of testing our emergency preparedness and capability; ensuring robust and effective plans are in place.
- 99 The overall impression from the exercise observers was that the exercise players understood the complexity of the issues and that they were able to work within the response structure to manage these effectively against a demanding scenario.

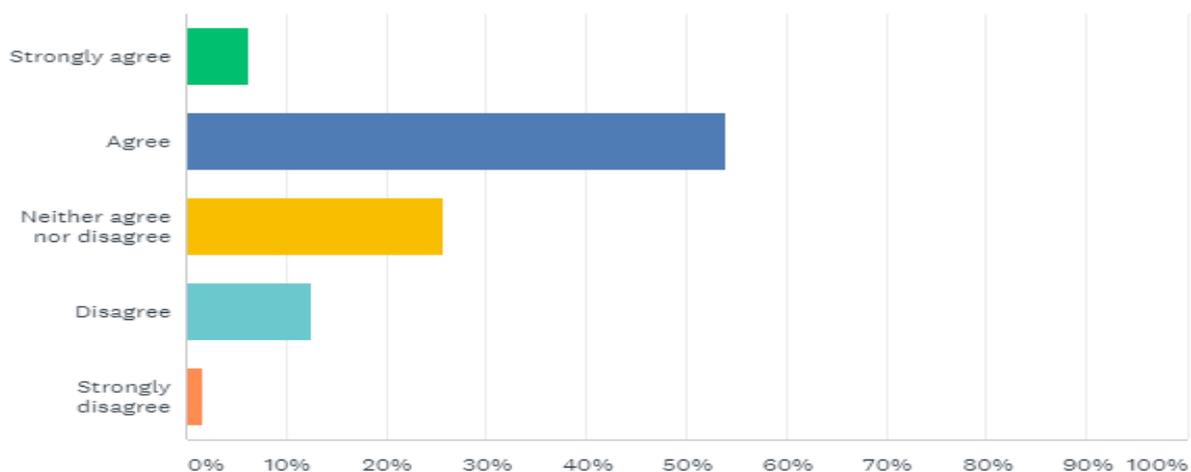
Appendix A: Statistical returns from electronic feedback

All participants were asked to complete an electronic feedback form. From this form exercise evaluators were able to collate statistical returns based on questions relating to how effective the exercise was in meeting its objectives. The following responses were received from 194 returns:

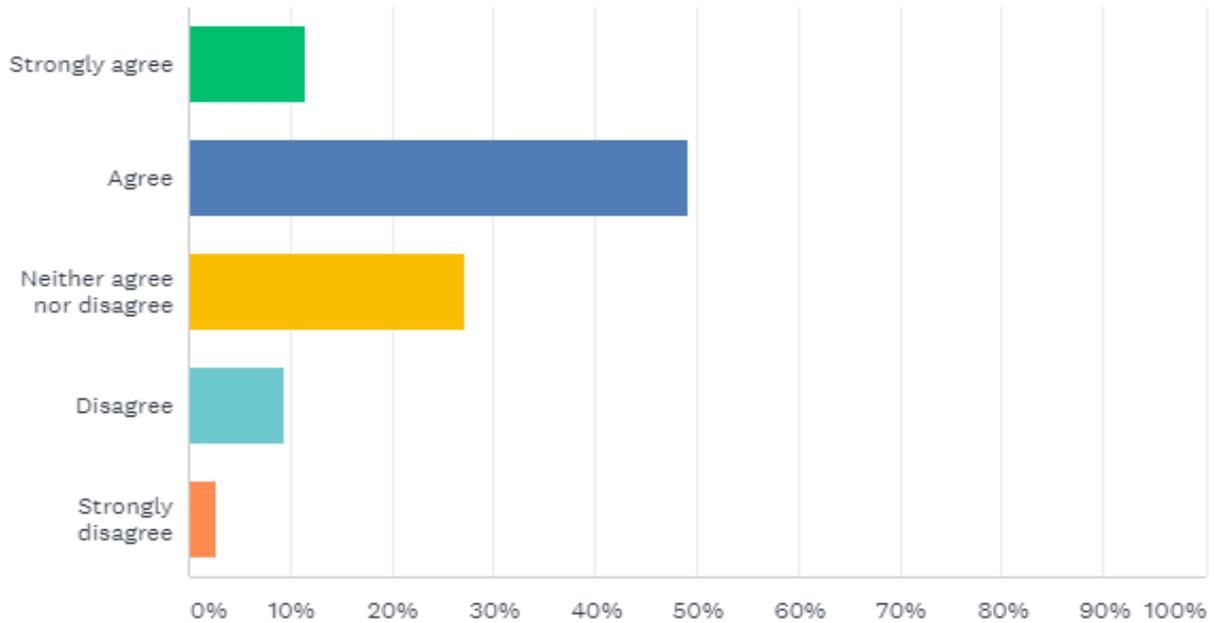
Q1 The exercise has improved my understanding of interaction between the strategic and tactical levels between Defra, the Devolved Administrations and APHA in an FMD outbreak.



Q2 The exercise has improved my understanding of our operational partners, locally and nationally, in an FMD outbreak.



Q3 The exercise has improved my knowledge and understanding of APHA's operational model and in particular the role of the Central Disease Control Centre and Forward Operational Bases?



Appendix B: Field exercise location and date

Area/Country	Date
Perth - Scotland	2 November 2017
Bury St Edmunds - England south	2 November 2017
Carmarthen - Wales	8 November 2017
Horley – England south	9 November 2017
Perth - Scotland	10 November 2017
Crewe - England north	14 November 2017
Itchen Abbas - England south	15 November 2017
Newcastle - England north	21 November 2017

Caernarfon - Wales	23 November 2017
Stafford - England north	28 November 2017
Stafford - England north	29 November 2017
Polwhele - England west	29 November 2017
Carmarthen - Wales	30 November 2017
Huntly - Scotland	8 February 2018
Inverurie - Scotland	19 February 2018

Appendix C: Organisations participating in the exercise

This section lists the organisations and their location participating in Exercise Blackthorn

London nobel house

Defra

APHA

Plus representatives from Scottish Government, Welsh Government & DAERA NI

Saughton house, Edinburgh

Scottish Government

APHA

Cathays park, Cardiff

Welsh Government

APHA

Coleraine, Co Derry/Londonderry

Department of Agriculture, Environment and Rural Affairs, Northern Ireland

Plus a representative from Department of Agriculture, Food and the Marine, Republic of Ireland

APHA – Field delivery offices/CSCs/business support/laboratory/HQ:

Starcross - FOB

Perth - FOB

Carmarthen - FOB

Cardiff - Customer Service Centre

Worcester - Customer Service Centre

Exeter - Customer Service Centre

Preston – Business Support & Operational Finance

Worcester HQ Units - IMT, HR, Finance, Communications

Weybridge – Laboratory

Operational partners – England, Scotland and Wales

The Pirbright Institute

Environment Agency

Scottish Environment Protection Agency

Natural Resources Wales

Food Standards Agency

Food Standards Scotland

National Police Chiefs' Council

Ministry of Housing, Communities and Local Government

Welsh Local Government Association

Local Authorities
Civil Contingencies Secretariat
Public Health England

Stakeholders (UK)

Agri-Food Biosciences Institute
Animal, health and Welfare Strategy Group (but not in live play)
Association of Show & Agricultural Organisations
British Horse Society
British Veterinary Association
British Veterinary Association
Country Land & Business Association
Daera (FOB)
EPIC – Epidemiology, Population health and infectious disease control.
Farmers Community Network
Farmers Union Wales
Fire and Rescue service (FOB)
Food Standards Agency
Food Standards Scotland
Health Protection Scotland
Hybu Cig Cymru – Meat Promotion Wales
Iechyd Da
Institute of Auctioneers and Appraisers Scotland
Livestock and Meat Commission for NI
Local Authority Fife Council (FOB)
Local Authority Perth and Kinross council (FOB)
Local Authority Stirling Council (FOB)
Menter a Busnes
Ministry of Defence
Moredun Research Institute
Moy Park
National Beef Association
National Farmers Union
National Farmers Union Scotland
National Sheep Association
National Sheep Association Scotland
National Trust
Natural Resources Wales
NI Meat Exporters Association
NI Retail Association
Parklands Veterinary Group
Police Scotland (FOB)
Public Health Wales
Quality Meat Scotland
Road Haulage Association
RSPCA – Royal Society for the prevention of cruelty to animals
Scotland's Rural College
Scottish Association of Meat Wholesalers
Scottish Beef Association
Scottish Dairy Association
Scottish Pig Producers
SEPA - Scottish Environment Protection Agency (but not in the live play)

SNIY - Scottish and North Irish Yeomanry (FOB)
South Wales Police
Ulster Farmers Union
Visit Wales
Wales Animal Health and Welfare Framework Group
Welsh Association of National Park Authorities
Welsh Livestock Auctioneers Association
Welsh Local Government Association

Countries represented as part of international observers delegation

Australia
Canada
China
Denmark
Estonia
Finland
Guernsey
Isle of Man
Japan
Jersey
New Zealand
Norway
Republic of Ireland
Slovenia
Sweden
USA

Appendix D: Full exercise scenario ahead of live play exercise

Day minus two – 16th Apr 2018

- 1 On the evening of Sunday 16th April 2018, Mr Adams a dairy farmer who also has a sheep flock at The Beeches Farm, near Shrewsbury, Shropshire, noticed that three of his cows are slow to come in for milking and seem lame. He occasionally has lame cows so is not too worried but these three cows don't eat all their cake in the milking parlour. Mr Adams decided to look at them again in the morning when they will be milked again. Mr Adams has a milking herd of approximately 150 cows and a similar number of younger cattle including 80 homebred heifers. He also has 250 sheep which were recently moved to neighbouring fields.

Day minus one – 17th Apr 2018

- 2 At early morning milking (6am) Mr Adams noticed that several other animals within the group were also lame and that several of them are drooling saliva and appear to be "off colour". As they were also reluctant to come into the milking parlour, standing back and hanging their heads he called his local vet who visited at 7:30am.
- 3 The vet found that the cows had a fever and there were ruptured blisters on the feet of three animals she examined. She saw that 10 other cattle in the same group were lame and salivating. The vet stopped her examination and called APHA at 8.35am to report suspicion of possible Foot and Mouth Disease (FMD). This was reported to VENDU who issued an initial NDI1 for this Report Case assigning the premises reference number VDR 101.
- 4 An APHA Veterinary Inspector arrived on the farm at 9.30am to undertake a veterinary inquiry. At 10.15am the APHA vet concluded their initial investigation and made a telephone report to VENDU.
- 5 At 10.45am VENDU and the APHA Vet Inspector agreed that FMD could not be ruled out so samples were taken and sent for testing at the National Reference Laboratory (Pirbright). Samples were taken, packaged and collected from the farm by courier at 11.30am. VENDU updated senior staff by text message of the decision to sample and issued a "Samples Submitted" NDI1. The decision to take samples triggered the implementation of a Temporary Control Zone (TCZ). At a CVO Case Conference it was decided that the TCZ should include all of mainland GB and the Isle of Skye.

- 6 At 5pm the samples arrived at The Pirbright Institute and were immediately processed, with testing commencing at 5.30pm.
- 7 Initial (positive) results from the tests on samples were received by VENDU at 11.30pm and reported to the CVO (UK) and policy teams. The CVO (UK) arranged an Amber teleconference to discuss these positive laboratory results (11.30pm).

Day zero – 18th Apr 2018

- 8 At 00:05, The CVO confirmed disease and the Amber Teleconference changed to Red. The National Disease Control Centre (NDCC) and APHA Outbreak Response were instructed to set up. As a consequence of confirmation VDR101 becomes FMD101 (IP1 for this outbreak).
- 9 When the decision to cull was made and the appropriate authority given, a Protection Zone (PZ) and Surveillance Zone (SZ) were put in place. The TCZ became a GB wide Restricted Zone and a national movement ban was implemented.
- 10 Once valuation was completed on IP1, culling was able to commence, and was completed by close of play. The affected animals are culled first followed by other cattle on the farm. All animals were examined and a statistical sample by EPI group were sampled post mortem for evidence of FMD.
- 11 APHA undertook an epidemiological investigation to determine how long disease had been present, where it may have come from and where it may have spread to. The vet did not arrive in the area until later that day and did not attend the farm itself until the next morning.
- 12 The general biosecurity on the farm is considered to be good and typical for a commercial dairy farm, but there are the usual regular visitors and daily milk tanker collections.
- 13 APHA identified that Mr Adams is frequently helped at milking by a neighbouring farmer who has sheep (120 pedigree ewes and lambs) and pigs (20 sows and 140 growing pigs plus 3 boars). An APHA vet inspected the neighbour's farm and could not rule out disease, so this also became a report case (VDR102) and samples were submitted. There was lameness in the younger pigs and suspicious lesions on their noses, but the boars and sows did not appear to be affected. The sheep were homebred.

Day one – 19th Apr 2018

- 14 The results from the neighbouring farm samples are positive. VDR102 became FMD102 (IP2).
- 15 The Epi investigation continued on IP1 and the initial view was that the oldest lesions might be at least 5 days old.
- 16 The final set of epidemiological samples taken from the animals at culling were

sent to the National Reference Laboratory (Pirbright) for testing. No lesions were seen in any of the sheep on IP1 at culling.

- 17 Preliminary cleansing and disinfection was completed.
- 18 Suspected disease in cattle in Cheshire was notified (VDR103) and samples were taken. This was also a dairy herd with 400 milking cows and a similar number of followers.
- 19 Update from the reference laboratory: reported that the strain of virus is the O/ME-SA/Ind-2001d lineage. This strain is currently quite widespread in a number of different countries, and usually causes clinical disease in cattle, pigs and small ruminants.

Day two – 20th Apr 2018

- 20 The report case in Cheshire was confirmed so VDR103 becomes FMD103 (IP3), while there were two further local report cases close to IP1 including one which is in Shropshire (VDR104) but with land in Wales (approximately 300 ewes and 120 beef cows and calves with illness reported in the calves and a few cows) and one in Herefordshire (VDR107) where 400 ewes and early lambs with suspected disease in ewes and lambs).
- 21 Two further report cases in Huntly, Aberdeenshire (VDR105) and Blackburn, Lancashire (VDR 106) were notified and investigated by APHA. VDR 106 was negated on clinical grounds but at VDR 105 disease could not be ruled out so samples were taken.
- 22 The CVO (UK) was asked to consider Slaughter on Suspicion (SOS) at VDR 107 which is in England. The CVO (UK) and CVO Wales were asked to consider Slaughter on Suspicion (SOS) at the premises in England with land in Wales (VDR 104). Slaughter on Suspicion was authorised in both cases and culling began on both premises that afternoon.

Day three – 21st Apr 2018

- 23 The serology results from the epidemiology samples taken at IP1 showed that 8 sheep - replacement hoggets on the farm were seropositive, but virology results for them were still pending but prioritised as urgent. Protection zone visits continued around both infected farms.
- 24 The replacement sheep were bought at a sale (Welshpool Market) on 8th April 2018. The farm of origin for the sheep to the market was traced and visited (mixed cattle and sheep farm, with a few pigs) but no clinical suspicion of disease was seen, with last known contact with sold sheep now 13 days ago. Animals from all EPI groups on the tracing farm were sampled with the samples submitted for urgent testing.
- 25 VDR105 (Huntly) was negated following initial negative sample results. Virus isolation results to follow.
- 26 The two premises in Shropshire (VDR 104) & Herefordshire (VDR 107) where

Slaughter on Suspicion had commenced were confirmed positive for FMD and become FMD 104 (IP4) and FMD 105 (IP5) respectively. Culling was completed on both premises.

- 27 Four further report cases in Northallerton (VDR 108), Chester (VDR 109), Doncaster (VDR 110) & Devon (VDR 111) were investigated by APHA. VDR 108, VDR109, VDR111 were negated on clinical grounds but VDR110 (Doncaster) could not be negated so samples were submitted.
- 28 One further suspicion was reported (VDR 112) close to the Cheshire IP (another dairy herd with 366 cows and followers). The CVO (UK) authorised Slaughter on Suspicion and samples were taken.

Day four – 22nd Apr 2018

- 29 Results for the traced premises (VDR113) of stock at IP1 were positive in sheep and pigs but negative in cattle which are managed separately by different staff at a different premises. No clinical evidence of FMD was seen in either cattle, sheep or pigs. This suggested that the sheep possibly became infected before leaving farm and arriving at IP1 or infected by IP2 which may implicate Welshpool Market or the hauliers involved. This premises became FMD 106 (IP6).
- 30 The complete, final epidemiological sampling results from IP1 were received (both virology and serology); and supported the theory that Welshpool market could be a potential contact during the high risk period.
- 31 Initial review of the market tracings for the premises in question showed a discrepancy between the number of sheep that were taken to the market to be sold and those that were taken from the market. APHA cross referenced data against the available market records to produce an initial list of tracings for farms that supplied and bought sheep at the market along with details of potential livestock hauliers. Additional manual checks will take at least several days to complete.
- 32 The samples from the Slaughter on Suspicion in Cheshire (VDR112) were confirmed positive for FMD and it became FMD107. The oldest lesions were estimated to be 3 days old. Culling was completed on that day.
- 33 One more local report case in Cheshire (VDR114) in a 200 ewe pedigree sheep flock associated with IP3 (shared staff and equipment but different owner and different CPH) was notified to the Disease Report Team and investigated. The CVO (UK) authorised Slaughter on Suspicion and samples were submitted. Tracings suggested possible links with Welshpool market or Shrewsbury market.
- 34 DAERA Northern Ireland informed the NDCC that they conducted a report case investigation due to suspicion of FMD on a farm in County Tyrone. Following investigation, disease could not be ruled out, so samples were taken and arrangements were made for transfer of samples to Pirbright.
- 35 VDR 110 was negated following initial negative sample results with virus

isolation results to follow. Two further report cases in Preston (VDR115) and Leeds (VDR116) were reported to the Disease Report Team. No clinical evidence of FMD was seen by the APHA vet at these investigations and they were both negated on clinical grounds.

Day five – 23rd Apr 2018

- 36 In Shropshire the PZ visits initiated around IP1 and IP2 continued but no further cases were reported.
- 37 The Slaughter on Suspicion in Cheshire is confirmed positive for FMD; VDR114 becomes FMD108 (IP8). Culling was completed with preliminary C&D expected to be completed the following day. The oldest lesion date was estimated to be 4 days old.
- 38 Suspicion of clinical disease on a mixed sheep and beef cattle farm in Devon (near Tiverton) was reported (VDR 117) and tracings to Welshpool market identified. Samples were taken.
- 39 Clinical signs of a possible vesicular disease in cattle are reported from (VDR 118) at a mixed livestock holding in Carmarthenshire (180 beef cows, 360 cross ewes and lambs). The APHA vet on farm was unable to rule out disease and samples were submitted due to arrive at the National Reference Laboratory late evening. The farm regularly uses both the Shrewsbury and Welshpool markets. The CVO Wales did not authorise Slaughter on Suspicion immediately for VDR 118 as the samples will be given highest priority at the lab with results expected the next day.
- 40 Two further reported cases in Cheshire were investigated (VDR 119 and VDR 120). VDR 119 was negated on clinical grounds but VDR 120 could not be ruled out so samples were submitted.
- 41 Suspicion of disease is reported in Cumbria (VDR 121) with young cattle salivating in in a dairy herd of 130 cows with 300 mule ewes also on the premises. Disease could not be ruled out so samples were submitted.

Day six – 24th Apr 2018

- 42 PZ visits in Shropshire and Cheshire are ongoing but no further cases were reported. Initial negative results for VDR 120 and VDR121 were received
- 43 DAERA Northern Ireland received notification that the report case in County Tyrone has tested positive and disease was confirmed by CVO Northern Ireland.
- 44 A farmer in Stirlingshire, Scotland suspected FMD in a group of 40 sheep which he recently purchased at market. 400 pedigree beef cattle are also present. This was reported to APHA Scotland (VDR 122) and disease could not be ruled out so samples were submitted for prioritised overnight testing at Pirbright laboratory. The farmer also has approximately 6700 other sheep on various nearby premises. He has links with a family business also with cattle and sheep which operates a commercial haulage company which regularly moves sheep

and cattle between Scotland and Northern Ireland.

- 45 Further report cases were notified and investigated, but negated on clinical grounds (VDR 123, 124, 125).
- 46 In Wales a clinical assessment of remainder of stock on the holding in Carmarthenshire conducted (VDR 118). Samples were reported as positive for FMD at 7.45am so VDR 118 became FMD 109 (IP9). The lesions were estimated to be at least 2 days old. Initial visits were made to contiguous premises.
- 47 Another suspicion of disease was reported (VDR126) from a 600 sheep farm near Tiverton. The farm is located next door to VDR117. Disease could not be ruled out and samples were taken.
- 48 DAERA Northern Ireland was notified by APHA that some sheep movements from Welshpool market may have destinations including dealers who regularly trade with farmers in Northern Ireland.
- 49 Lab test results for the Tiverton report case in Devon were positive so VDR 117 becomes FMD 110 (IP 10).

Live exercise scenario – Day 7 and Day 8

- 43 The live exercise scenario commenced with the continuation of spread of foot & mouth disease across the UK. The CVO (Scotland) confirmed disease on a farm near Sterling following positive laboratory results. This followed with a confirmed case in neighboring holding to the first IP in Devon on Day 7. There were a further seven report cases across GB during Day 7.
- 44 Day 8 commenced with two early confirmation of disease in Wales and Cheshire following positive laboratory results. There were in total six further report cases that were negated by sample results or clinical grounds on day 8. Northern Ireland confirmed a further two IPs in Co Antrim

Post live exercise scenario – Days 9 to 144

- 45 At day 9 there were seven FOB's in Operation across GB. The scenario progressed and disease reports and confirmations escalated on day 22 to 31 new confirmed IP's and 20 Dangerous Contacts (DC). This took the cumulative total for Day 22 over 200 IP's.
- 46 The Scenario continues to day 73 as the outbreak started to slow with the number of IPs confirmed at only 2 IP and 7 DCs declared on that day. At the end of day 73 there were in total over 600 IP's.
- 47 The last infected premises was reported in the 9th of September, day 144. The recovery part of the outbreak was now in full operation.

Appendix E: Exercise scenario maps



EXERCISE BLACKTHORN - DAY 3



EXERCISE

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EXERCISE BLACKTHORN - DAY 4



EXERCISE

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EXERCISE BLACKTHORN - DAY 5



EXERCISE

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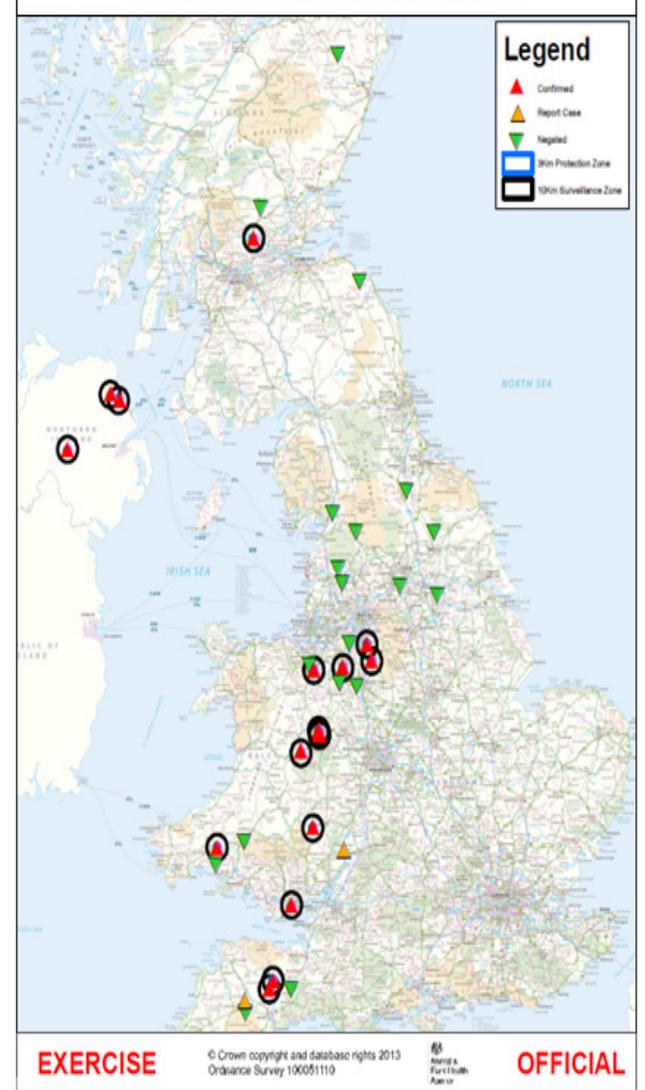
EXERCISE BLACKTHORN - DAY 6

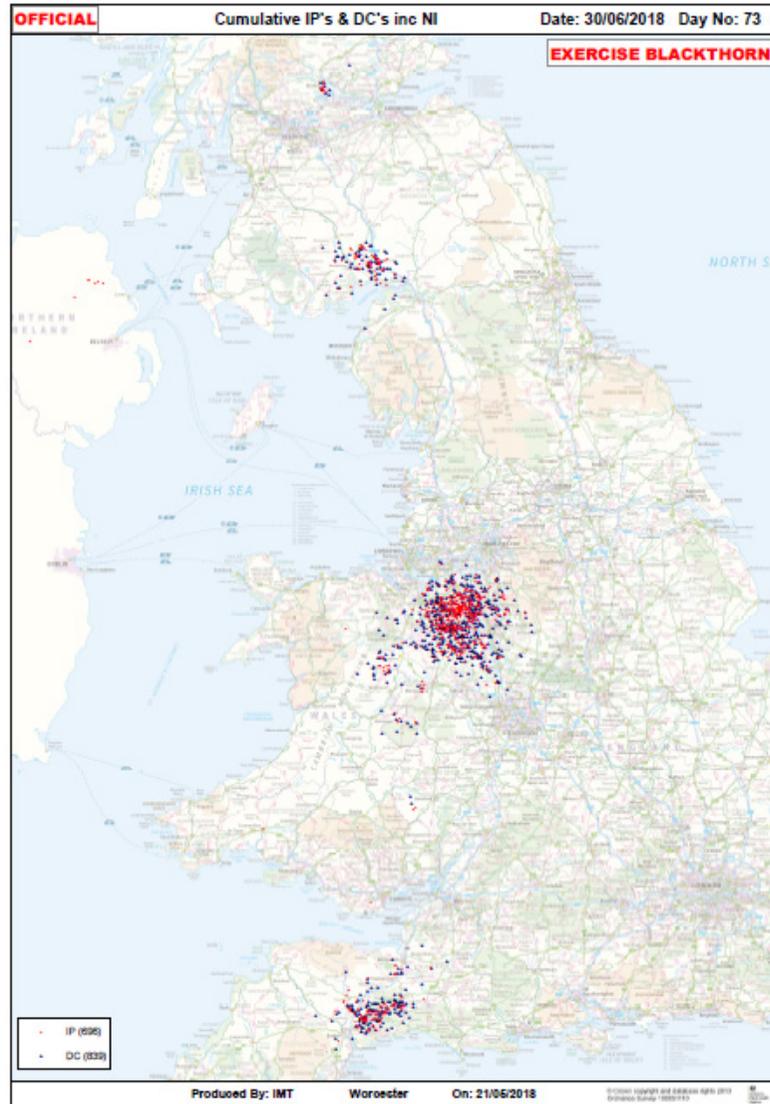
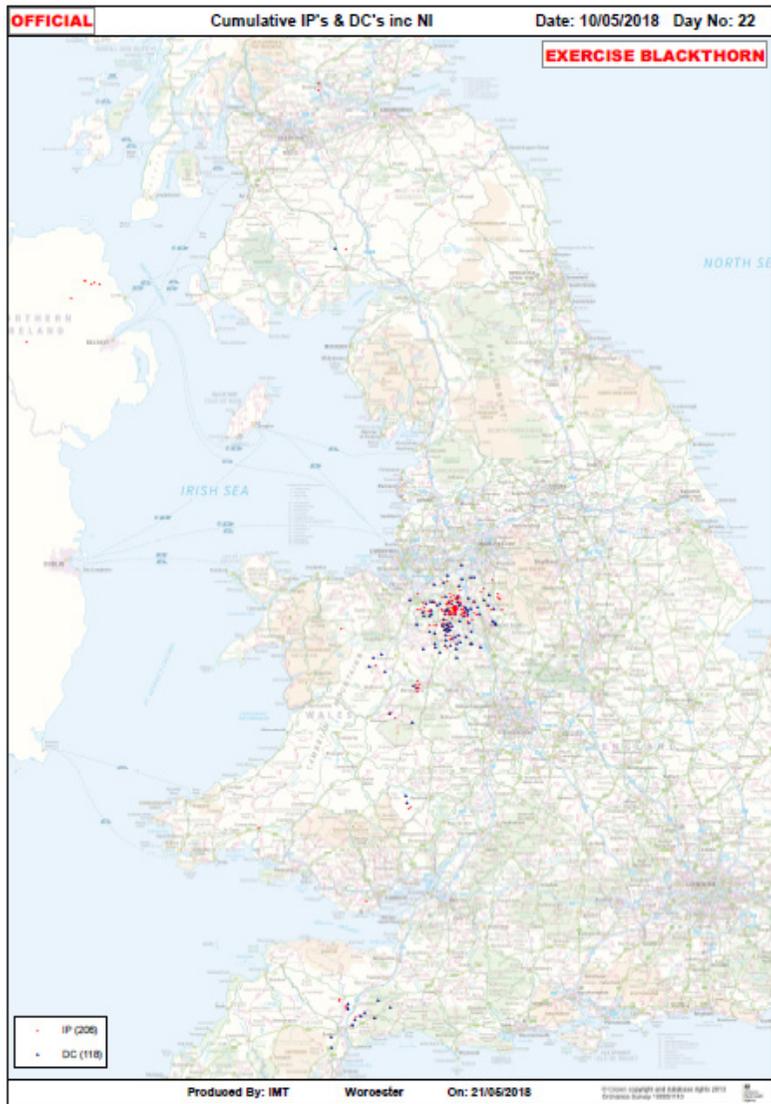


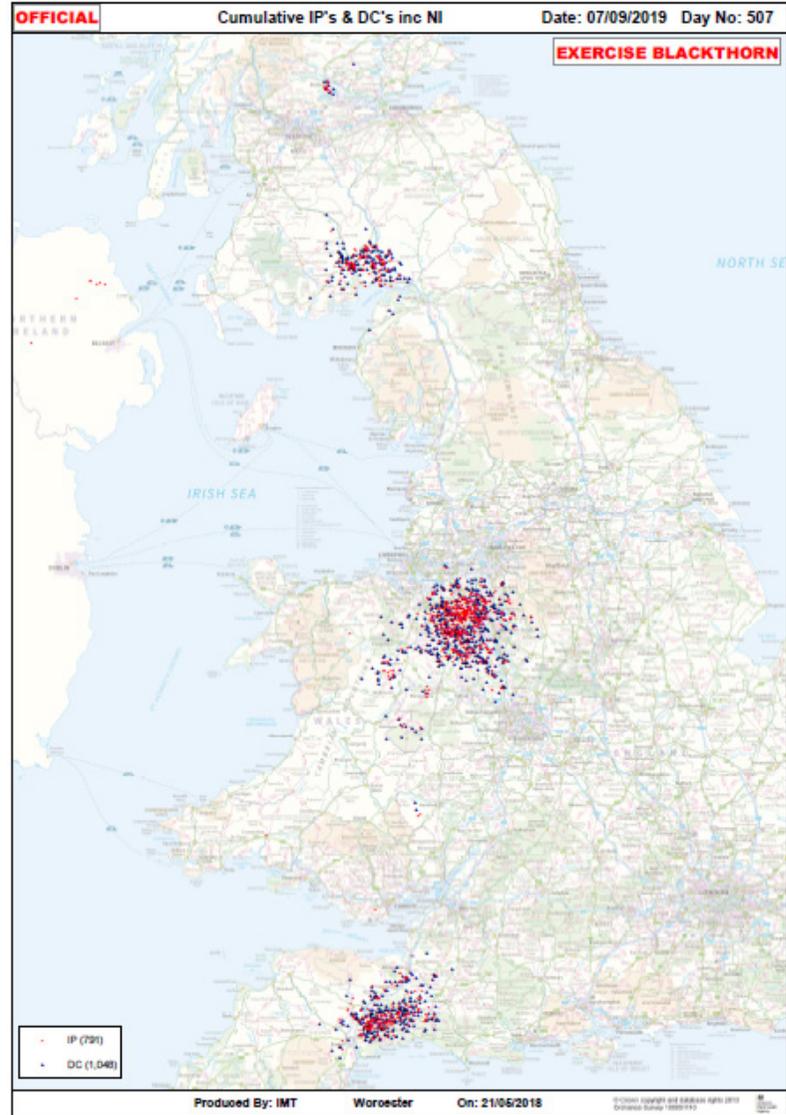
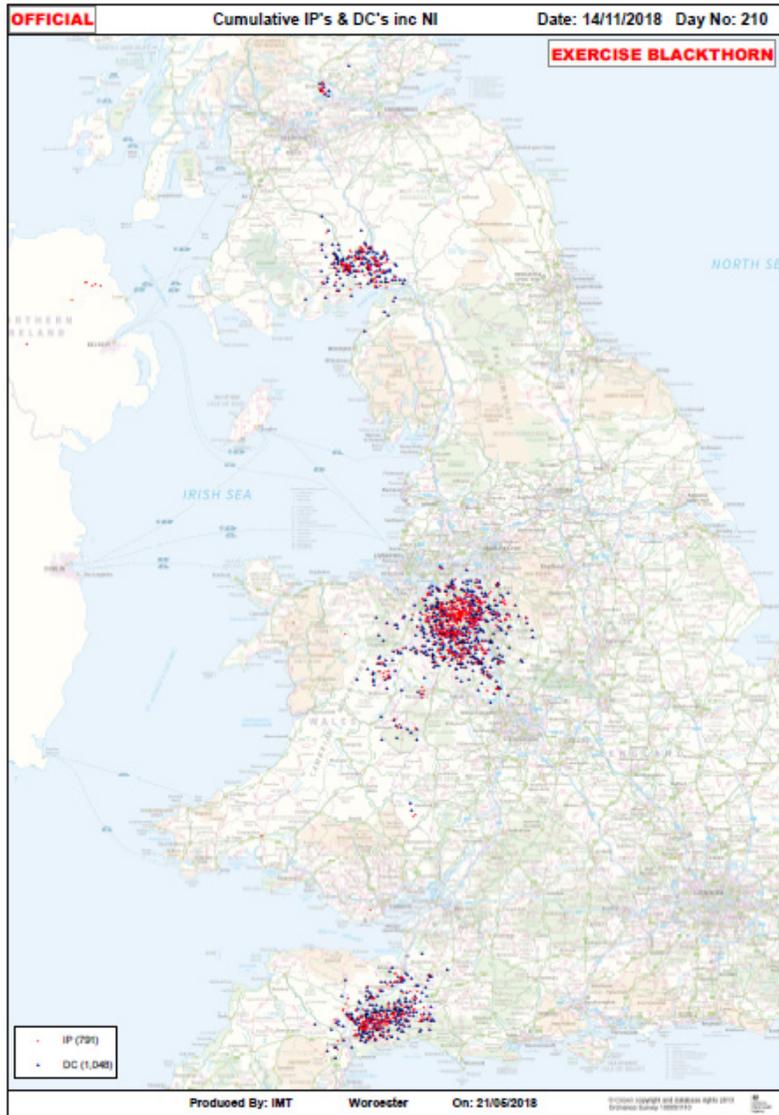
EXERCISE BLACKTHORN - DAY 7



EXERCISE BLACKTHORN - DAY 8







Appendix F: Lessons identified log and action plan

Recommendation	Lesson Identified	Description	Owner
1	Veterinary Inquiry	APHA should continue to undertake training for Case Officers, and the materials generated in the Field exercises should be utilised for further report case training.	APHA
2	Veterinary Inquiry	All field vets should undergo report case training before participating in exercises and attending real time report cases.	APHA
3	Temporary Control Zones (TCZ)	Formal review of the policy regarding the automatic imposition of TCZ restrictions during a disease outbreak.	APHA
4	Signage at Suspect Premises	Review process of issuing official signage to animal keepers when their holding is under suspicion of disease and samples have been taken.	APHA

5	Sample transport from Northern Ireland (NI)	DAERA to investigate further the sourcing of suitable couriers to transport samples.	DAERA NI
6	Sample transport from Northern Ireland (NI)	DAERA to investigate further the options for transporting the samples by air through discussions with the British Airline Pilots Association. Additionally investigate the possibility of using military assistance through Military Aid to the Civil Authorities (MACA) arrangements.	DAERA NI
7	Disease Confirmation in the different UK administrations	Ensure that the updated process is detailed in Contingency Plans and operational instructions.	UK Policy Teams
8	Confidence in Framework Providers	APHA contract management team to consider testing/exercising of service providers to provide greater assurance of contractor capability and capacity, whilst considering the cost and value of any such exercise.	APHA

9	General Licences	Establish a working group to consider licensing arrangements in an outbreak, and where possible define a common approach across all Administrations for the release of general licences and the process of associated risk assessment. It is accepted that general licences may only apply to those scenarios where the veterinary risk is considered acceptable when the implementation of appropriate safeguard measures are introduced. Whilst a whole of UK approach to general licences, it is accepted that there is the potential for differences across administrations within general licences themselves, in particular where a devolved administration may at a point in time be free from disease. An example of this is the implementation of the General Licence for the movement of mammals during the 2016 Avian Influenza outbreak, in which Wales did not allow their general licence to permit the movement of pigs, in comparison to Defra who did in their comparable	UK Policy Teams
10	Animal Movement Data & Tracings	APHA to look at contingency options in England for obtaining sheep traceability information and put in place an interim process for tracing of sheep, specifically through markets. This process to be exercised during the 2018/19 exercise programme as a cross border exercise with Scotland.	APHA
11	Animal Movement Data & Tracings	APHA Tracing CSC, the NEEG and all UK administrations to work with the Livestock Programme to provide system requirements and interoperability between UK IRM (Identification, Registration and Movement) systems and relevant projects regarding traceability and movement of animals during outbreaks of exotic disease.	APHA
12	Animal Movement Data & Tracings	APHA to consider the findings from the field exercise on sheep traceability with the Scottish Industry Market Liaison Group.	APHA

13	Epidemiological Sampling	National Emergency Epidemiology Group (NEEG) should consider the epidemiological sampling needs in a fast paced developing outbreak. Consideration should be given to the production of generic sampling plans for specific types of animal holdings (therefore negating the need for bespoke plans for every premises)	NEEG
14	Epidemiological Sampling	NEEG should consider devolving decision making and ratifying through ADPG on actions required on individual premises to an appropriate level. A trigger point for invoking the use of generic epidemiological sample plans should be part of any pre outbreak planning and instruction design.	NEEG
15	Laboratory	NEEG to review its surveillance strategy for FMD outbreaks and prepare a strategy for how to deal with zone clearance but remains in accordance with international expectations and requirements for regaining disease freedom.	NEEG
16	Laboratory	NEEG, the contingency planning team and APHA & TPI laboratories to put plans in place to ensure there is better awareness of laboratory capacity.	NEEG
17	Portable Lateral Flow Test Kits	UK policy teams to determine the use and deployment of Lateral Flow devices where appropriate	UK Policy Teams
18	Ten Mile Rule	Operational and policy teams to consider how best to address concerns over handling of satellite premises under the same CPH as an affected premises. Clear processes to be defined and written into operational instructions	UK Policy Teams

19	Access to the Countryside	All UK administrations to work with National Police Chief Council (NPCC) and local authorities to ensure that effective and enforceable strategy for managing access to the countryside is prepared and noted in its disease recovery plans and exercised with police and local authorities.	UK Policy Teams
20	Operations Manual	Review and enhance the current instructions to ensure that they align to the outbreak model and are up to date with recent changes in corporate functions and teams. APHA Advice Services and other leads should take responsibility for owning their relevant work areas within the Operations Manual and utilising operational expertise effectively.	APHA
21	Battle Rhythm	Review the Battle rhythm. Ensure that staff, operational partners and stakeholders aware of the timings of battle rhythm meetings. Also relevant participants at battle rhythm meetings should ensure their teams are back-briefed from these meetings to ensure that they are aware of current situation and any actions that need to be taken.	APHA
22	Birdtable	Review NDCC birdtable attendance to ensure that operational partners from each administration are represented when appropriate.	APHA
23	Birdtable	Policy Teams to ensure that approval process for communications during an outbreak is agreed and understood	UK Policy Teams
24	Comms between Administrations	Defra communications team to review internal plans and procedures of interacting and working alongside devolved communication teams during disease outbreaks.	Defra Comms Team

25	Comms between Administrations	Review APHA Communications outbreak response plan and ensure that regular training is delivered and made available to new or less experience staff. Investigate fast track training packages for the deployment during outbreak induction.	Defra Comms Team
26	Exercise Mailboxes	Ensure staff are briefed at the start of their outbreak duties of the importance of using the correct mailboxes and the impacts of not following the set protocols. Welsh Government staff in the ECC(W) also experienced this issue, despite all briefing packs highlighting the need for e-mails to be sent to mailboxes rather than individuals (or at least to have mailboxes copied in to the correspondence). This resulted in many delayed updates from the Logging and SitRep cells. It should be strongly emphasised for future exercises that participating players read and understand their briefing packs fully. This particular practice could be raised at the opening presentations.	APHA
27	Reporting Affected Premises in Northern Ireland	The process for reporting and numbering affected premises in Northern Ireland should be reviewed to determine if a single UK-wide picture could be presented.	DAERA NI
28	Management Information Requirements	Continually review management information and reports to ensure that they are suitable and relevant.	APHA
29	APHA Resourcing	Thoroughly review the HR outbreak strategy, and establish a working group to update and share the strategy.	DEFRA HR
30	APHA Resourcing	APHA to establish a pool of deployable Administrative (AO/EO) staff to support FOB functions, including that of FOB/CSC liaison Officer.	APHA

31	APHA Resourcing	APHA to consider how skills are identified (and recorded) across all of its staff – noting that FSM holds records for Field Staff.	APHA
32	APHA Resourcing	Raise awareness across APHA Field Services managers of the process for supply of additional staff.	APHA
33	IT Infrastructure Printers in London & other sites	Engage with Defra’s new printer supplier to ascertain their ramp up capabilities.	APHA
34	IT Infrastructure Printers in London & other sites	Ensure staff with outbreak management roles are aware of the existing Business Continuity Management (BCM) policy and plans.	APHA
35	Mobile signal & WI-FI access	APHA to engage with DDTS to investigate the IT connectivity requirements of Operational Partners and Stakeholders to ensure they are provided with access to mobile or Wi-Fi access to their required systems when located in a FOB. Outcomes should also be fed into the Defra Unity Project. ECC(W) also experienced WI-FI issues, as many external stakeholders were unable to connect to the WG WI-FI. A contingency plan was in place and alternative WI-FI routers were available for those unable to connect.	APHA

36	Engagement with Operational Partners	<p>APHA to continue, through the Resilience and Technical Adviser network, to build upon engagement with Local Resilience Forums, and their respective animal disease sub groups to continue to raise awareness of APHA's outbreak response model, paying special regard to the infrastructure of the National Disease Control Centre (NDCC), Central Disease Control Centre(CDCC), and the responsibility of APHA's Head of Field Delivery (HoFD) to oversee engagement with any established Strategic Coordinating Groups as described in the Contingency Plan. Consideration should also be given to ensuring an appropriate level of engagement is in place with Resilience Forums in Scotland, Wales and Northern Ireland.</p>	APHA
37	Engagement with Operational Partners	<p>The Cross Government Working Group on Exotic Animal Disease should be asked to consider how the constituent bodies they represent could be better briefed on the expected workings of Strategic and Tactical Coordinating groups.</p>	APHA
38	Biosecurity Guidance for Farm Visitors	<p>Undertake a thorough review of available online biosecurity guidance within relevant sections of each UK administration's and APHA website. Consider preparing print ready, easy to understand leaflets that detail biosecurity measures that encompass best practice for visiting Infected Premises and other premises within identified zones, and share these with interested parties and organisations. Commit to publish or signpost to biosecurity guidance within widely circulated outbreak documents, and FAQ sections of disease specific sections of Gov.uk/Gov.scot etc.</p>	APHA & Defra
39	Enforcement Priorities	<p>APHA Race team to put in processes to ensure that there is three way communication between RACE, GB Policy teams and LAs, as part of the outbreak battle rhythm.</p>	APHA

40	Enforcement Priorities	RACE is to work with Policy to ensure that enforcement priorities are easily translatable to local authorities in a consistent format.	APHA
41	Military Aid to the Civil Authorities (MACA)	Confirm how the process of escalating and activating MACA through liaison with Ministry of Defence (MOD) and the Strategic Joint Command (SJC).	APHA
42	Military Aid to the Civil Authorities (MACA)	Confirm who is responsible for requesting MACA.	APHA
43	Recovery	A recovery "board" comprising of the affected teams, departments and stakeholders across GB should be set up at the beginning of the outbreak to ensure that the impacts and consequences of disease control are understood and recovery measures planned and put in place as early as possible.	UK Policy Teams
44	Recovery	The Exotic Disease Contingency Plans of all UK administrations should be updated to reflect the establishment of such a board.	APHA

45	Recovery	Procedures for dealing with recovery from an animal disease outbreak should be agreed across the UK administrations. This plan should contain details of roles and responsibilities.	UK policy Teams
46	Use of Resilience Direct	Further explore the merits of using Resilience Direct as a communications tool, so that protected and other information can be shared or signposted to, thus resolving some of the difficulties associated with maintaining up to date email distributions lists and perhaps alleviating some issues with the security of personal or organisational email accounts.	APHA
47	Use of Resilience Direct	Encourage other agencies and governmental department to obtain access to Resilience Direct. Encourage the use and benefits of the system through day to day use and familiarisation.	APHA
48	Size, Scale and Urgency of Response	APHA and UK administrations to use appropriate opportunities to inform incoming staff and changing personnel in partner organisations of the need to be prepared for a range of outbreak responses that may vary greatly in size and scope. APHA and UK administrations to maintain disease response plans that are scalable and flexible to the needs to respond to of different types of outbreaks.	APHA & Defra
49	Project Management	Review the schedule of project board meetings for future national exercises.	APHA
50	Scenario Development	Include representatives from the local scenario team in the national scenario planning team to relay their inputs.	APHA
51	Scenario Development	Consider a full time veterinary lead to be seconded to future exercise planning team.	APHA

52	The Master Events List	Consideration to implement a MEL planning team consisting of representatives from the local and national teams that would meet on a monthly basis and would report to the project board on progress.	APHA
53	Exercise Control	Consider that a central repository to be set up to hold and manage the paperwork saved with time, date and inject number referenced. ExCon should identify a member to manage the process and ensure documents are sent at the correct time in accordance to the MEL.	APHA
54	The EXODIS Model	Investigate the feasibility and cost of updating the Exodis model to enable it to provide accurate resourcing information based on current outbreak response structure and procedure.	APHA
55	Evaluation	Continue to offer several methods via which participants can contribute feedback, and update exercise evaluation instructions to reflect this.	APHA

Appendix G: Glossary of terms

ABPR	Animal By-Products Regulations
ACRE	Action with Communities in Rural England
ACTSO	Association of Chief Trading Standards Officers
ADDI	Animal Demography and Disease Informatics (APHA)
ADPG	Animal Disease Policy Group
ADR	International Carriage of Dangerous Goods by Road (UN Regulation) Animal Health Policy and Implementation (Defra)
AI	Avian Influenza
AHS	African Horse Sickness
AHWBE	Animal Health and Welfare Board for England
Animal Keeper	Anyone who keeps an animal/animals (birds are also covered by the term) for any purpose and includes livestock, pets, etc.
APHA	Animal and Plant Health Agency
ASF	African Swine Fever
AWEDC	Animal Welfare and Exotic Disease Control
BCM	Business Continuity Management
BVA	British Veterinary Association
C&D	Cleansing and Disinfection
CCS	Civil Contingencies Secretariat (Cabinet Office)
CDCC	Central Disease Control Centre
CEDCC	Central Epizootic Disease Control Centre (NI)
CGU	Containerised Gassing Unit
CLA	Country Land and Business Association
COBR	Cabinet Office Briefing Rooms
CPD	Contingency Planning (APHA)
CRIP	Commonly Recognised Information Picture (CCS)
CPRE	Campaign to Protect Rural England
CSA	Chief Scientific Adviser (Defra)
CSF	Classical Swine Fever

CVO	Chief Veterinary Officer
D2R2	Disease Briefing, Decision Support, Ranking and Risk Assessment Database
DC	Dangerous contact – these are animals of susceptible species where the risk of exposure to infection is considered to be very high.
DCVO	Deputy Chief Veterinary Officer, Director Vet Policy
DAERA	Department of Agriculture, Environment and Rural Affairs
Defra	Department for Environment, Food and Rural Affairs
DERC	Disease Emergency Response Committee
DfT	Department for Transport
DG	Director General
DHSC	Department of Health and Social Care
DRT	Disease Reporting Team
EA	Environment Agency
EC	European Commission
EDPRT	Exotic Disease Policy Response Team (Defra)
EFRA	Environment, Food and Rural Affairs (Parliamentary Select Committee)
ERMAS	Emergency Readiness Management Assurance Scheme
ESA	Environmental Services Association
EU	European Union
ExCo	Defra Executive Committee
FABRA	Food chain and Biomass Renewables Association
FAnGR	Farm Animal Genetic Resources Committee
FCD	Food Chain Directorate
FCELG	Food Chain Emergency Liaison Group
FCO	Foreign and Commonwealth Office
Final (Secondary) Cleansing and Disinfection	After preliminary disinfection, the cleansing (including disposal of manure, bedding etc.), degreasing, washing and disinfecting of premises to remove the infective agent, reduce the level of it, such that recrudescence will not occur on restocking.

FMD	Foot and Mouth Disease
FOB	Forward Operations Base
FSA	Food Standards Agency
GB	Great Britain
GCSA	Government's Chief Scientific Adviser
HoFD	Head of Field Delivery
HM	Her Majesty's
HR	Human Resources
IAHER	International Animal Health Emergency Reserve
IMT	Information Management and Technology
IP	Infected Premises
LAAHF	Local Authority Animal Health Function
LA	Local Authority
LEPs	Local Enterprise Partnerships
LGA	Local Government Association
LEADER	Liaison Entre Actions De Development de L'Economie Rurale (EU funding scheme for rural development)
Livestock	All animals (including poultry) susceptible to exotic notifiable disease
LRF	Local Resilience Forum
MHCLG	Ministry of Housing, Communities & Local Government
NAHWP	National Animal Health and Welfare Panel
NDCC	National Disease Control Centre
NE	Natural England
NEG	National Experts Group
NEEG	National Emergency Epidemiology Group
NFU	National Farmers Union
NPCC	National Police Chiefs' Council
NSC	National Security Council
NSC(THRC)	National Security Council (Threats, Hazards, Resilience and Contingencies)

NSC(THRC) (O)	National Security Council (Threats, Hazards, Resilience and Contingencies) (Officials)
ND	Newcastle Disease
OAG	Outbreak Advisory Group
OCG	Outbreak Coordination Group
OGD	Other Government Department
OIE	Office International des Epizooties (World Organisation for Animal Health)
PCR	Polymerase Chain reaction
PERT	Procurement Emergency Response Team
PHE	Public Health England
Preliminary Disinfection	Biosecurity procedures put in place during the depopulation and disposal of animals and the initial treatment of contaminated areas of a premises with disinfectant.
PZ	Protection Zone
RADAR	Rapid Analysis and Detection of Animal-Related Risk
RCC	Records Control Centre
RCVS	Royal College of Veterinary Surgeons
ResCG	Response Coordination Group
RMIIE	Risk Management, Imports and International Engagement Team
RSPB	Royal Society for the Protection of Birds
RSPCA	Royal Society for the Prevention of Cruelty to Animals
RPA	Rural Payments Agency
SAC-ED	Science Advisory Council – Exotic Disease sub committee
SAGE	Scientific Advisory Group for Emergencies
SCG	Strategic Co-ordinating Group
SCoPAFF	Standing Committee (of the European Commission) on Plants, Animals, Food and Feed (formerly SCoFCAH)
SG	Scottish Government
SIR	Security, Intelligence and Resilience Directorate (Cabinet Office)
SoS	Secretary of State
SVI	Senior Veterinary Inspector
SZ	Surveillance Zone

TCZ	Temporary Control Zone
UK	United Kingdom
UKRA	United Kingdom Renderers Association
UKREP	United Kingdom Permanent Representation to the EU
VA	Veterinary Adviser
VDP	Veterinary Delivery Partnership
VENDU	Veterinary Exotic Notifiable Diseases Unit (APHA)
VHoFD	Veterinary Head of Field Delivery
VI	Veterinary Inspector
WAHIS	World Animal Health Information System
WG	Welsh Government

Exercise Blackthorn



Animal &
Plant Health
Agency



Department
for Environment
Food & Rural Affairs



Llywodraeth Cymru
Welsh Government



The Scottish
Government
Riaghaltas na h-Alba



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<https://www.gov.uk/government/organisations/animal-and-plant-health-agency>