ASIAN HORNET CONTINGENCY PLAN FOR HAMPSHIRE

1.0 EXECUTIVE SUMMARY

1.1 The Asian Hornet is a reportable, highly invasive ecosystem disruptor that poses a serious threat to pollinators, to the ecological system, to humans and to the econony.

1.2 Experience in Europe has shown that due to its strong fertility and lack of natural predators the pest will spread exponentially at an alarming rate.

1.3 Despite earlier attempts at preventive measures, 71 Asian Hornet nests have been found and destroyed this year so far in 55 locations in Kent, Dorset, Devon, Cornwall, Hampshire, Yorkshire and Northumberland.

1.4 It could be considered that the UK has now passed Phase 2, or Eradication Phase of the invasion, and is now in Phase 3 or Containment Phase.

1.5 Urgent action is required to slow down the spread and to minimise its impact.

1.6 This contingency plan describes an organisation designed to respond to the threat and help to reduce its impact.

2.0. BACKGROUND

2.1 Asian Hornets, Vespa velutina nigrathorax (AH) are thought to have been accidentally introduced into the port of Marseille in a consignment of garden pots from China in 2004. They have since proliferated in southern, western and northern European countries and have made some incursions onto UK shores, with 23 confirmed sightings, and 13 nests between 2016 and 2022.

2.2 So far this year 60 confirmed sightings of individual insects or nests in 47 locations have so far been recorded (Defra 29/09/2023)

2.3 Climate change is happening fast. The Channel Coasts of France, Belgium, the Netherlands, Germany and the island of Jersey have seen a dramatic rise in nest numbers; heavy predation on beehives started a month early. Unusually warm spring weather meant that the nests are bigger and therefore will produce more mated queens this autumn.

2.4 There have been many more incursions in 2023 in the South, South-East and South-West of England. This is likely to have been linked to climate change plus the increased likelihood of both wind-borne insects from Nord Pas-de-Calais and transport-borne insects via entry points such as ferry ports and the Channel Tunnel.

2.5 By luck and actions by Government agencies, it seemed that, until now, the AH had failed to gain a foothold on the UK mainland, although the possibility of a hidden population could not have been ruled out. Now it must be assumed that there is an established native population.

2.6 AH is a highly successful invasive species, scientific research indicates that the millions of Asian Hornets now spreading right across Western Europe started after just one mated Queen (same as above) which arrived in a shipment of garden supplies into France in 2004.

2.7 The latest research shows that AH will spread exponentially throughout Britain over the next few years and now is the time for UK agencies and Beekeepers to take action against this vicious predator.
2.8 It will take time, money, detailed planning and cross-boundary cooperation.

2.9 This is the last opportunity to be fully prepared, which it would be foolish to waste.

3.0 AIM

3.1 The aim of this plan is to set out the actions needed to minimise the impact of AH should they seek to establish themselves in the county of Hampshire.

4.0 INTRODUCTION.

4.1 While the establishment of this species has been limited so far, thanks to the timely interventions of the Animal and Plant Health Agency (APHA), the National Bee Unit (NBU), and the Non-Native Species Secretariat we now have to assume there is an established population in England.

4.2 Evidence from other European countries, especially France, Belgium, Spain, Portugal and the Island of Jersey, reveals both an exponential increase in the insect numbers, significant risk to members of the public and attrition of pollinating insects as well as potential consequences for agriculture, horticulture, tourism and biodiversity.

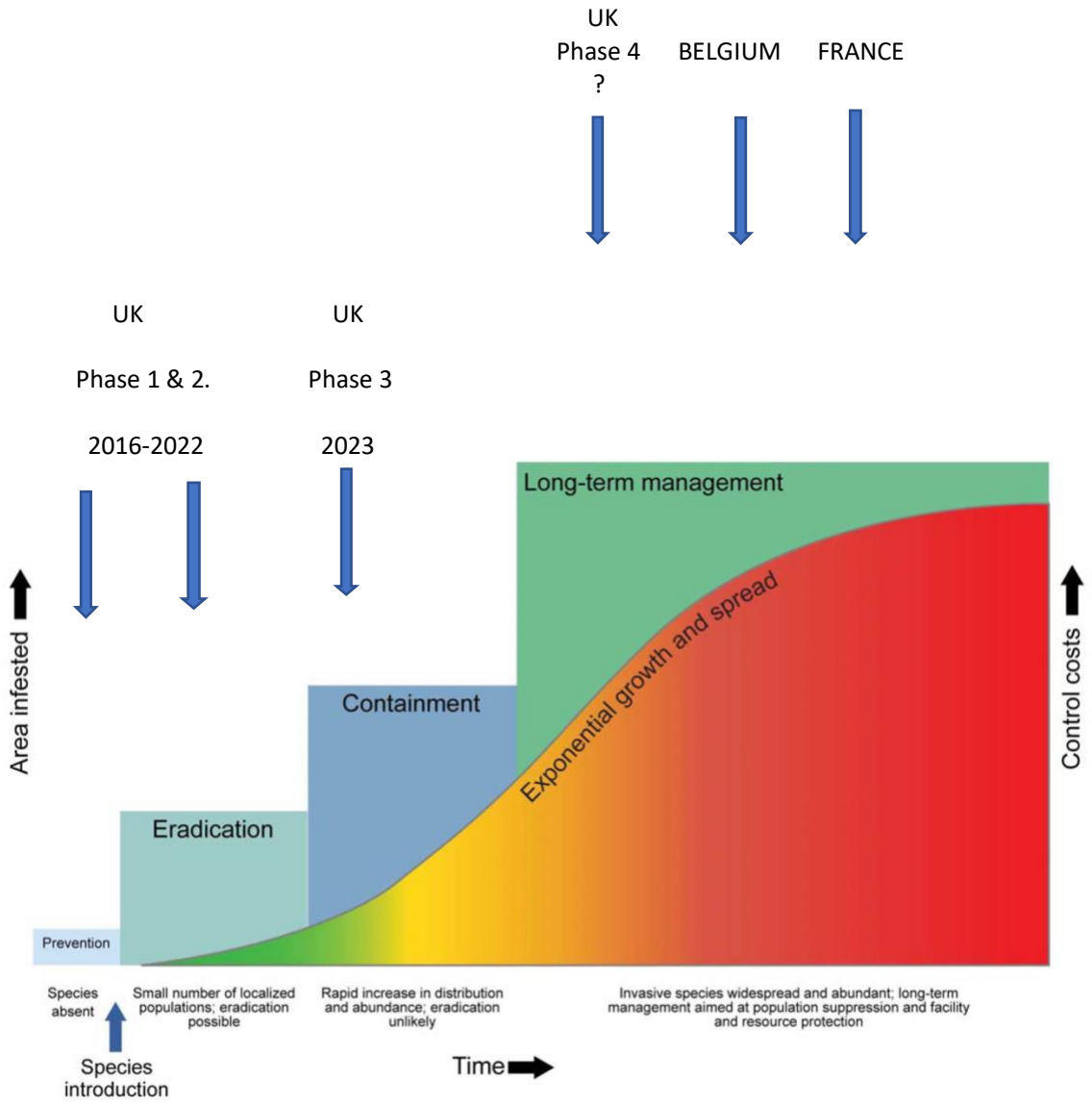
4.3 The plan describes a structure of effective management across the public, private and voluntary sectors plus increased professional and public awareness to reduce the potential risks and adverse consequences. Hampshire is used as an example, but the principles might be more widely applicable. And most importantly public awareness. … experience in France and Jersey has proved that public engagement in spotting and reporting are vital.

5.0 RATE OF SPREAD

5.1 The introduction of an Invasive species can be described as progressing in 4 phases:

- Phase 1 - Prevention
- Phase 2 - Eradication
- Phase 3 - Containment
- Phase 4 - Long-term management

5.2 The graph below shows the progression and an indication of where Britain is projected to be in Phases 1-4 on the curve:



6.0 EFFECT OF DOING NOTHING

6.1 This graph shows where Britain would have been without the intervention of APHA, NBU and other agencies:

Animal & Plant Health Agency
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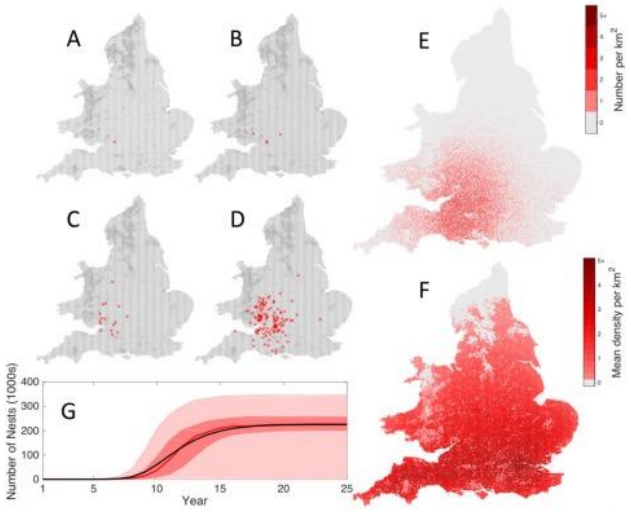
Asian hornet UK

If we had done nothing

Predicting the spread of the Asian hornet following its incursion into Great Britain. Keeling et al, 2017

A=1, B=2, C=3, D=5 E=10, F=20 years



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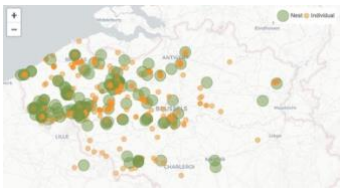
7.0 SITUATION IN ENGLAND AT 03 NOVEMBER 2023

7.1 There have been 71 Asian Hornet nests found in 55 locations.

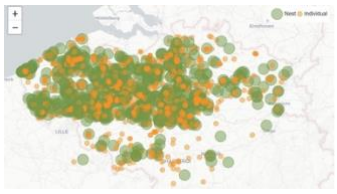
7.2 Compare this with the progress of the invasion in Belgium:

8.0 RATE OF INCURSION IN BELGIUM

2020



2021



2022

9.0 RISK

9.1 The risk is fourfold:

9.2 To humans – delivering painful and potentially life-threatening stings when nests are disturbed. The sting is longer, more venomous than that of a wasp (approx. 6 times due to volume of toxin) and each insect can sting multiple times. The nest defenders will attack in large numbers.

9.3 Given the scope of the effects of the Asian hornet, it has a much wider impact than just for honeybees and their keepers. Due to its habits, abundance, and broader distribution, the risk that Vespa velutina poses to human health is unmatched by other native species.

9.4 In Normandy in 2022, 4 cyclists were attacked each receiving 15-20 stings one was critically ill in Intensive Care. Whilst in another incident in Normandy 20 runners were attacked with 6 of them requiring emergency medical treatment.

9.5 In Pas de Calais in October 2022 a beekeeper died after being attacked by Asian Hornets from a nest near her apiary.

9.6 To honeybees and other pollinators – Asian Hornets are voracious, highly-efficient hunters.

9.7 They are having a significant impact on the viability of beekeeping and honey production in mainland Europe and pose a significant threat to both wild and managed pollinators. This could jeopardise the essential pollination service these species provide to crops and wildflowers.

9.8 To agriculture and horticulture – loss of pollinators leads to lower levels of production of vital foods. Recent research at Harvard University published in the Journal of Environmental Health Perspectives https://bit.ly/3XnUjgx concluded that the global loss of pollinators is causing about 500,000 early deaths a year by reducing the supply of healthy foods.

9.9 To biodiversity – reducing numbers of native species populations, dominating the food chain and reducing foraging opportunities and habitat.

10.0 PHASE 1 - PREVENTION 2018-2023

10.1 Measures in place included:

- Volunteer Asian Hornet Teams (AHTs) have been set up by Beekeeping Associations (BKAs) nationwide and Volunteer Area Asian Hornet Coordinators appointed at County/Area level.
- National Bee Unit (NBU) assisted by local AH Teams handle the prevention operations.

- Sentinel traps and enhanced surveillance operations carried out by NBU Regional and Seasonal Bee Inspectors (RBI and SBI) assisted by local AH Teams.
- Beekeepers encouraged to put out monitoring traps.
- BBKA have run Asian Hornet Awareness campaigns.
- County/Area and local BKAs have been active in preparing beekeepers through lectures, workshops and practical sessions.
- Individual AH Coordinators or AH Team members have undertaken field study trips to Jersey.
- The Hampshire AH Coordinator makes annual visits to beekeepers in France.
- AH information displays have been mounted at beekeeping and non-beekeeping events around the country.
- Local contacts in press and other media outlets identified and pre-briefed.
- Communications improved through dedicated social media and WhatsApp Groups

11.0 SITUATION IN SEPTEMBER 2023

11.1 PHASE 2 - ERADICATION

11.2 As predicted, Britain has reached the point where the tight window of opportunity for prevention has passed and has entered the eradication phase.

- An established population of Asian Hornets has been confirmed by the presence of a number of nests in Kent, Dorset, Devon, Cornwall and Hampshire.

- The NBU is already at full stretch and has abandoned many of its other important duties including health inspections, monitoring for foulbrood, small hive beetle and Tropilaelaps.

- The NBU has limited resources of manpower and without a significant boost in numbers, is rapidly becoming overwhelmed with multiple incidents at the same time in different locations. Regional Bee Inspectors (RBIs) and Seasonal Bee Inspectors (SBIs) are already firefighting in different areas of the country from their own territories.

- Evidence from European countries indicates that the Asian hornet will spread very quickly, and that the eradication phase will be short.

11.3 There is therefore an urgent need to establish a multi-agency/pan sector structure at national and local level to deal with the problem. This is likely to extend from Government Departments (e.g. Defra) to small community organisations to manage the response to the incursion, coordinate action and increase awareness and responsiveness as follows:

Formation of an AH Steering Committee comprising representatives from:

- County Council
- Local Borough, District and Parish Councils
- NBU
- Environmental Health Officers
- HBA AH Coordinator
- Emergency Services - Police, Ambulance, Fire
- Pest Controllers
- Experts in managing public health and safety risks.
- Other significant interested organisations (see Annex A)

A model for this already exists in the form of the Hampshire County Council Local Resilience Forum https://www.hants.gov.uk/community/localresilienceforum

11.4 The Asian Hornet incursion will only increase in pace, meaning it is imperative that work begins now. Action required includes:

11.5 Developing a vigorous communications plan to encourage the wider community to be engaged in looking out for and accurately reporting the presence of individual insects and nests.

11.6. Establishing a legal framework for the activities of AHTs and local volunteer groups.

11.7 Issuing licences under Section 14(1) of the Wildlife and Countryside Act 1981 to enable AHTs to carry out track and trace operations. AHT members trained and exercised regularly in response to reports.

11.8 Continuing to train beekeepers and other volunteers in observation and preparation for attacks in their apiaries and to act as ambassadors in their local communities to raise awareness of the threat, accurate identification and prompt reporting of suspected insects or nests.

11.9 Running national awareness campaigns in addition to each organisation developing their own targeting social media and National TV – programmes like Country File, Gardeners' World, other Wildlife programmes, Breakfast TV, Morning Live, local TV Channels and Radio Stations…..

11.10 NBU, Non-Native Species Secretariat (NNSS), Animal and Plant Health Agency (APHA) and Defra continue lead in responding to and monitoring incidents.

11.11 When the outbreak builds to the Eradication level, the following response structures are activated.

11.11 AH Steering Committee

See above.

11.12 Asian Hornet Coordinator (AH Coord)

Key role, presently occupied by a part-time volunteer beekeeper but may need to be replaced by a salaried or contract post, possibly employed by or attached to the County Council, as the incursion develops. Post could be made more cost-effective by combining it with the fight against other invasive species e.g. Japanese Knotweed.

Terms of reference agreed.

See list of tasks at Annex B

11.13 Asian Hornet Teams (AHTs)

- Headed by an AH Team Leader (AHT Lead)
- Volunteer teams are already in place in local Beekeeping Associations.
- Their current role of spotting/verifying and reporting the presence of Asian Hornets may require expansion as required by the NBU.
- The membership of these Teams may require extension across local communities with the recruitment of other potential non-beekeeper observers, those most likely to be "first responders", other volunteers and more.
- Potential risks assessed

- System of training, validating, and issuing licences to team members to be established. See training syllabus at Annex D.
- Appropriate insurance arranged in view of the potential risks.
- ID badges to be issued to licenced personnel.
- List of current/potential tasks at Annex C.

11.14 Pest Controllers (PCs)

- There is a requirement for the licensing of agencies, companies and/or individuals to eradicate the Asian Hornets and their nests cost-effectively, rapidly and using methods that are not detrimental to the local environment (plants, other insects, wildlife etc).
- Agreed scale of charges to be negotiated.
- Standard Operating Procedures (SOPs) and quality control mechanisms established.
- Policy agreement required about who will pay for PC interventions - property owner/occupier, local authority…and contingency budgets identified.

11.15 INCREASING AWARENESS

A vigorous publicity campaign to be launched and maintained throughout, targeting and tailored to different audiences (e.g., the general public, landowners, policymakers and more). Non-exhaustive list of target organisations is at Annex A

12.0 REPORTED SIGHTINGS

12.11 Reporting system to consist of the following sequence:

Report of suspected sightingVia Asian Hornet Watch App
By email to alertnonnative@ceh.ac.uk
Via website

CEH validates report
NBU informed
Alerts sent from BeeBase nationwide
NBU alerts nearest local AHT copy to AH Coord
AHT attends site:
Investigates the report
Advises NBU/AH Coordinator that
Tracking needs to be instigated to locate nest and begins tracking operations
Nest identified and requires removal
False alarm
Collects data including photos and enters information on database
Obtains permission from land/home/business owner to enter property
Stands by to attend intervention by NBU/Pest Controller
On completion signs off PC report and forwards invoice for payment

AH Coordinator
Calls out Agreed Pest Controller with information about location, access etc.
Liaises with land/home/business owner for intervention.

Pest Controller Team

Minimum two-man team
Evaluates situation
Assembles required equipment
Removes nest
Completes report

AHT

Confirms nest removed.
Quality controls the intervention and reports to AH Coord on completion
Completes report and updates database
See flow diagram at Annex E

13.0 PHASE 3 - CONTAINMENT

13.1 The incursion is established despite the efforts at slowing it down. It will soon exceed the capacity of the existing structures, and responsibility for locating and destroying nests will devolve to local pan-sector structures including Local Authorities, Emergency Services, pest controllers and the beekeeping community as outlined above.

13.2. The NBU and beekeepers continue to have a central role in the fight against the incursion. However, the NBU will quickly be overwhelmed as it moves into this phase, and voluntary groups of beekeepers and other volunteers will need to increase their numbers, resources and capacity.

14.0 PROJECTED TIMINGS

YEAR	PHASE	ACTION	RESPONSIBLE
Y-1	Prevention	Increased vigilance by NBU, AHTs and beekeepers. Sentinel traps at key points. Enhanced surveillance near sightings. Continue to recruit and Train AHTs	NBU, AH Coord, AHTs.
Y	Eradication	Continue to train AHTs	HBA/AH Coord
		Train beekeepers	HBA/AH Coord
		Inform public	All
		Set up County Steering Committee to create Action Plan, TORs, Identify costs.	HBA HCC
Y+1	Containment	County Committee starts work. NBU directs responses Allocate budgets	HCC NBU

		Agree Pest controllers Train & licence AHTs Train beekeepers Maintain PR	HCC AH Coord/HCC AH Coord/NBU HBA/local BKAs All
Y+2	Containment	Maintain PR Train Beekeepers NBU directs responses Continue training AHATs	All HCC/local BKAs NBU AHATs HBA
Y+3	Long term management	Responsibility for local actions pass to Borough/Parish Councils. Allocate budgets. NBU continues to advise AH Coordinator becomes full-time role. Maintain PR	HCC/Local Councils NBU HCC AH Coord All

15.0 COSTS TO BE IDENTIFIED

15.1 Nest removal

SOPs, prices and standard contracts for nest removal to be negotiated by HCC with pest controllers and agreed across the County.

15.2 AH Coordinator

Grade and remuneration to be commensurate with level of responsibilities. Cf AH Coordinator in Jersey

Budget to be established for salary/rates, equipment, transport, communication, and administrative costs.

15.3 AHTs

- Equipment
- Training
- Insurance
- DBS checks
- Expenses

ANNEX A TO F ASIAN HORNET CONTINGENCY PLAN FOR HAMPSHIRE BEEKEEPERS ASSOCIATION

A-0 Other significant interested organisations (not exhaustive)

- Sport Clubs, Rambling Clubs, Gardening Clubs, Cycling Clubs, Youth groups, Twitchers,
- Shipping companies, Ferry operators, Container depots, Transport and Logistic Companies
- Scouts, Sea, Army and Air Cadet units.
- Wildlife Trusts
- The Crown Estate(s)
- Zoos, Wildlife Parks, Safari parks
- Farmers (NFU) and Market Gardeners
- Fish farms

- Southern County Councils (initially)/ Borough Councils / Parish Councils
- Arborists / Foresters & Tree Surgeons,
- Golf Clubs
- Fishermen/angling clubs
- National Trust properties
- RHS
- Allotment holders
- Schools, nurseries, creches

ANNEX B TO ASIAN HORNET CONTINGENCY PLAN FOR HAMPSHIRE BEEKEEPERS ASSOCIATION

ROLE OF AH COORDINATOR

1.1 Establishing communications and liaising with all Authorities and others in Annex A
1.2 Working in close collaboration with APHA /NBU
1.3 Liaising with APHA and the Incident Commanders on the ground for all operations
1.4 Tasking AH Teams as requested by APHA/NBU
1.5 Monitoring the location and surveillance of bait stations to avoid repetition and confusion
1.6 Coordinating track and trace operations as agreed with the APHA/NBU
1.7 Recruiting and maintaining AHTs in the 14 Hampshire BKAs
1.8 Assessing and managing risk for the health and safety of the AH Teams
1.9 Establishing reliable communication systems with AHTs using WhatsApp
1.10 Coordinating initial and continuation training of AHTs. See Annex E
1.11 Validating PCs and negotiating terms of business
1.12 Organising publicity throughout the County
1.13 Maintaining recording and mapping systems and database
1.14 Managing budgets and controlling expenditure
1.15 Managing the incident reporting procedure (see Annex E).

ANNEX C TO ASIAN HORNET CONTINGENCY PLAN FOR HAMPSHIRE BEEKEEPERS ASSOCIATION - AH TEAMS

C.0 ROLE OF LICENCED AHTs

1.1 Receiving and logging local reports of sightings.
1.2 Triaging reported sightings as requested by the NBU/AH Coord.
1.3 Carrying out enhanced surveillance operations as requested by the NBU/AH Coord
1.4 Briefing land/business/homeowner on procedure and obtain permission to proceed if required.
1.5 Carrying out trap, release, track and trace to locate nests as agreed with the NBU/AH Coord
1.6 Being familiar with the Wildlife and Countryside Act with regard to property access.
1.7 Assisting RBIs/ PCs during nest investigation and/or destruction.
1.8 Quality controlling the intervention.
1.9 Carrying out trapping operations as directed by the NBU/AH Coord.
1.10 Establishing sentinel/monitoring stations as directed by NBU/AH Coord.
1.11 Training beekeepers in measures to protect their apiaries and in the use of traps.
1.12 Giving talks to local organisations.

ANNEX D - TO ASIAN HORNET CONTINGENCY PLAN FOR HAMPSHIRE BEEKEEPERS

AHT TRAINING

1.1 Trapping, Catch, Mark & Release and Tracking

- The purpose of this document is to describe a standardised process to training those who have no prior experience of Asian Hornets in the theoretical basics of trapping them, the catch mark and release process and tracking Asian Hornets.

This training course can be delivered by a sufficiently experienced Asian Hornet Volunteer.

1.2. Site:

- Ideally the training is conducted outdoors at a location where Hornets are likely to present and visiting a pre prepared bait station.

1.3. Timing & Logistics:

- The training takes approximately 3 to 3 1/2 hours. There should be parking available nearby, and the site be reasonably level ground. The numbers of attendees should be limited to 8.

1.4. Set up:

- Before trainees arrive at the site, there should be a bait set up which will hopefully have enough hornets to mark, and ideally not too many wasps. Too many wasps are likely to put people off.

1.5. Paperwork:

- Risk Assessment
- What to do if stung
- Roles & Standard Procedures
- Printed tracking case maps that illustrate tracking down the line, back bearings and triangulation

1.6. Equipment required:

- Bait station – both tray and wick pot
- Bottle of attractant – Trappit
- Queen tube/plunger marker
- Coloured posca marking pens.
- Stopwatch
- Magnetic compass and, if possible, compass app to illustrate
- Notebook or means of recording.
- Binoculars
- Insect ID cards
- Traps – spring trap with holes and without, incl. mini-wick pot or sponge inside
- Phone with Google My Maps, WhatThreeWords
- Printed Google My Maps of the area
- Walkie-talkie radios in areas where mobile comms is poor.

1.7. Identification

- It's possible that trainees have never seen an AH before
- Talk about the key ID features, and how they move. Observe them on the bait station.
- What other insects are AH confused with? Show cards.
- Life cycle, nesting system, primary/secondary etc

1.8. Reports & Recording

- How we receive them – email, phone, app ..
- How handled:
- Final processing – No, unverifiable, plausible, confirmed yes.
- How volunteers might get involved in verifying a report
- Asked to ID a nest
- ID an insect
- How recorded.

1.9. Traps

- Purposes of a trap – spring queening, confirming presence of worker AHs and therefore a nest
- Show the trap, explain the adaptions we make for spring queening (6mm holes), how we set up and why with a) kitchen towelling, b) mini-wicks, c) a mesh separator.
- Attractant – what we use (Trappit. smell it), why, alternatives tried, protein.
- Positioning a trap, get trainee to align holes on lid, close up holder etc.
- How to empty a trap of other insects. Why? How often?
- An open trap – why, when?

1.10. Bait Stations

- Different types – takeaway tray, bowl, open trap, wick pot. Pros/cons
- Set up of each one – stones/twigs, cap reservoir on wicks.
- Managing bait stations – watch the hornet lift off, following it with pointed finger, stand opposite direction of flight. Stand still.
- What if have too many hornets? Kill some? How?
- Dos and don'ts around a bait station, wasps

1.11. Catch, Mark and Release (CMR)

- This could be done after the tracking section to allow more time for trainees to get used to the idea of the CMR task if they are nervous.
- Show trainees how CMR is done using the queen catcher. Invite them to try it. It doesn't matter if they don't want to.
- Using the catcher
- Marking pens
- Putting the AH back onto the bait
- Feathering – brief description, why might use.
- Relocating/moving a hornet technique for tracking down the line

1.12. Tracking

- There is unlikely to be time to DO tracking, and indeed that is not what this training session is about.
- The "doing" can be done when the trainee joins a tracking team or is sent out into the field.
- However, it is important that the trainee can take times/direction, record the results and has a general understanding of how the tracking process works.

- **Timing** – stopwatches etc. explain the 1 min = 100m guideline, how it was obtained, why it is useful and what its limitations are.
- **Direction** – following the flight, pointing, taking a compass bearing or recording direction on a map.
- How a tracking case develops – triangulation, tracking down the line, moving hornets, factors like terrain, trees, wind. How hornets fly.
- **Recording** the results in notebook. Some pass info on via WhatsApp to others who map it.
- **Mapping** the results. Why?
- **Paper** – limitations
- Google My Maps. UK has official NBU app.
- Why use – free, shareable, app
- **Standard symbology**. There is a doc that explains the symbols and what they mean. The main ones are of course bait stations and a flight direction line, sometimes drawn to length based on a flight time, and sometimes not.
- **Radio tracking** – very briefly how works etc

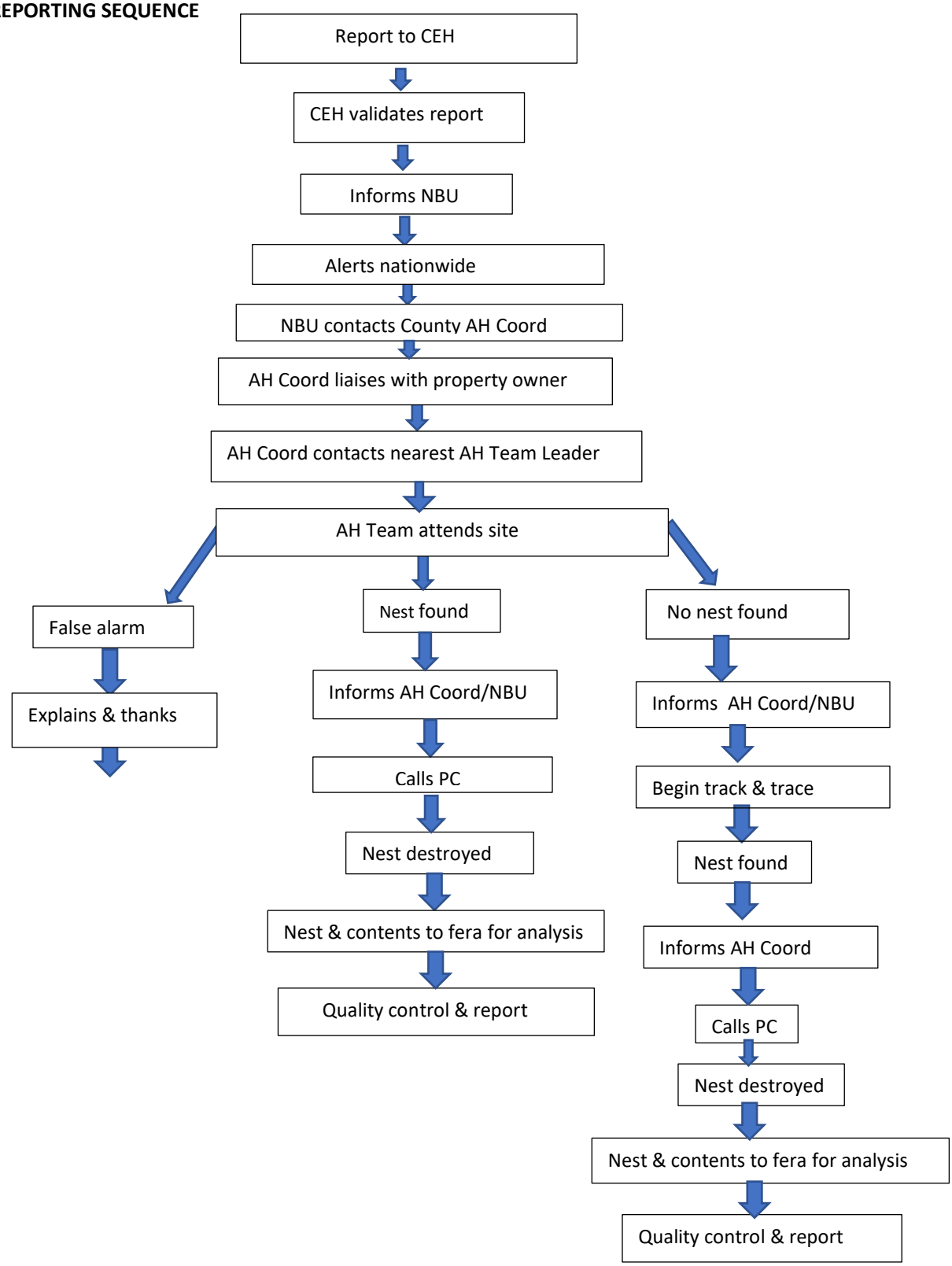
1.13. When Close to Nest

- Getting to 1min return flight time.
- **SAFETY**. Terrain? What do you need to do to be safe? Risks and consequences of disturbing.
- If find it do not approach.
- Call the AH Coord for advice.

On completion any trainee should be armed with the basic knowledge to contribute to a tracking case, particularly in setting up a bait, monitoring it and then recording the times/direction and reporting these onto the tracking director/team leader.

- *Adapted from training programme courtesy of Alistair Christie AH Coordinator States of Jersey*

ANNEX E REPORTING SEQUENCE



Alan Baxter
Asian Hornet Coordinator
Hampshire Beekeepers Association
Tel: 0747 896 1517
Email: ahat.hampshirebeekeepers.com@gmail.com

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