



Animal &  
Plant Health  
Agency

## NBU North East Region 2019 season overview

### **NBU Changes 2019**

Mike Brown, Head of the National Bee Unit for many years retired. His calm and collected manner has not only been missed by those of us in the Bee Unit who worked with him and benefitted greatly from his years of experience but also those further afield. Mike made contributions to Bee health around the world and was admired and respected by those who had the good fortune to work with him.

Julian Parker, formerly NBI, has now taken on the responsibilities of Head of the Unit with Sandra Gray formerly RBI of South East Region taking on the NBI role.

Jenna Cook, NBU Support Staff, left us this Summer and moved on to join The Health and Safety Executive based in York. Jenna was a foundation stone within the NBU, her knowledge of Beebase, iPads and virtually everything else on the admin side of things was exceptional, she provided essential back up to inspectors (if you could handle the acidic wit) and Beebase advice to beekeepers over the phone as well as keeping on top of the paperwork generated by 60 inspectors.

Jason Learner, NBU Technical Support, decided to make his bee keeping a full time profession in Spring 2019, leaving us just prior to the start of the inspection season. Jason Provided articles for BBKA News, Bee Craft etc. Jason also provided technical assistance to beekeepers and bee inspectors as well as helping with the admin in the office.

Good luck Jason in your venture.

Neither Jenna nor Jason have been replaced, if any of you have had trouble getting in touch with the NBU office the lack of staff could be the reason. To negate the lack of office staff, all bee related enquiries should be directed to your local SBI or myself, contact details are further down this report.

### **NE team news**

The 2019 season started well for us with a full contingent of inspectors in the North East region. The new recruits Phil and David eager to get started with their training and the “old hands” Tim, Adrian and Nick refreshed and ready for action after the winter break.

Nick, David and Myself attended the Yorkshire BKA Spring conference where we met lots of you and discussed bee health and the possibilities around the Asian Hornet invasion.

Meteorologically speaking the season started well too, I recall getting out to my bees from Mid-March to start making preparations for something no bee keeper should do....ever, go on Holiday in the season! This was one of the key pieces of advice I received from Bob when learning the “Craft”.

My own colonies had survived the winter well with only 6 lost to drone layers/failed queens out of 55 colonies, reports from my inspectors suggested this was a trend for this year.

I had 4 colonies die from JCB. Don't worry this isn't a new Virus or pest, the farmer who owns the land where I had an apiary was doing some reorganising of access roads for a new riding stable and the contractors accidentally hit the apiary with the digger bucket when removing trees, knocking 2 stands with 4 colonies across the apiary, the hives were put back together and moved to another site but unfortunately they didn't survive.

The OSR across the region was variable, without the protection of seed dressing insecticides many of the fields were subject to infestation of flea beetle which retarded its growth and flowering potential leading to varied reports on Spring crop yield. In my own apiaries that had OSR close by, I observed a longer than normal flowering period with a reduced crop, which, due to the weather turning poor again was left on the colonies. Those of you that removed the Spring crop reported heavy feeding was necessary to keep large colonies viable as the June gap hit harder than usual in the region.

Whilst removing what remained of the OSR/Spring crop at the end of June and during the transfer from van to honey shed I missed the bottom step going down the garden and fell whilst carrying a full super fracturing my left lateral malleolus (again) and tore the ligaments in my ankle joint. The super survived, it landed on top of me.

Around Mid-June Nick Mitchell, SBI for East Yorkshire, decided to leave the Bee Unit to follow his other interests, Nick worked to the end of the month and said farewell to us over a lunch at one of his favourite pubs in Beverley. We sent him on his way with a very nice bottle of single malt to say thank you for the input and dedication he had shown during his time as an inspector. Losing Nick was a blow to North East team, his meticulous nature had been invaluable in teaching the new recruits the I.T. systems and the inspection processes.

When the summer flow kicked in and the weather settled the bees were quick to exploit the abundance of nectar available and most competent beekeepers experienced an average to good harvest with the lime trees adding their distinct flavour to the crop.

The Heather from all accounts was not what the beekeepers hoped for with the early August weather turning poor again. Inspections on the Moors revealed that supers were empty and bees were consuming stores, reports from the Bee Farmer sector informed me that colonies were being fed on the moors or removed and taken home. Information provided by beekeepers in areas with Himalayan Balsam was more positive with many reporting that colonies have done well, providing a surplus and packing plenty of winter stores into the brood chambers.

The wet weather from September has not been beneficial with reports of colonies being washed away down rivers and flooded apiaries being inaccessible by vehicles hampering feeding. Colonies have also been consuming stores rapidly due to their confinement. Please keep hefting and apply fondant if necessary.

### **Colony losses by County**

This information is gathered by inspectors during their inspections of your apiaries. The figures show that there was a considerable fall in colony losses from 2018 to 2019 in most parts of the region with a small increase in West Yorkshire.

<b>County</b>	<b>2018</b>	<b>2019</b>
West Yorkshire	4.6%	5.5%
South Yorkshire	13.5%	3.3%
East Yorkshire	3.5%	1.3%
Nottinghamshire	14.3%	5.8%
Derbyshire	7.6%	0.9%
North Yorkshire	1.9%	0.9%

### **Foulbrood**

Due to manufacturing problem with the infield diagnostic kits (Lateral Flow Devices), we started the 2019 season with limited supplies and this caused delays in confirming the presence of EFB and AFB in some circumstances.

Frame and larval samples had to be sent to the laboratories at Sand Hutton by Royal Mail or courier and our laboratory team were required to confirm the presence of bacteria the old fashioned way, with a microscope. With 60 inspectors sending in samples, Victoria Tomkies (laboratory Manager) and her team were under pressure to keep things moving, which they managed to do in the most part with minimal delay. We now have a full supply of LFD's and hope to resume normal service next season.

EFB was found early season in South Yorkshire, the beekeepers found something that concerned them and called out the inspector who confirmed their suspicion and dealt with it by destruction after consultation with the beekeepers. This early discovery was probably due to colonies building quickly, by the end of April we'd had our first case in the region.

This was soon followed by EFB finds in North and East Yorkshire by the seasoned members of the team and by the middle of May even the new inspectors were dealing with EFB finds.

By the end of May we had found or had reported 9 cases and had 9 apiaries under standstill restrictions across North, West, South Yorkshire and Derbyshire. A further 12 Apiaries were placed under standstill across the region during June, mainly in the South Yorkshire/North Derbyshire areas bringing the total to 21.

Just before the end of June a report from a bee keeper in South Yorkshire informed us that he had discovered what he believed to be EFB in one of his colonies. Tim and I went along to confirm the find and steadily found more cases as we systematically inspected the apiaries. This report led to

one of the largest surveillance sweeps I've been involved in during my time with the NBU, and some very interesting posts on Social Media from what I'm told.

Mid July, Phil had to take some time off and NE team was down to 3 inspectors, 1, a new recruit in his first season and myself, desk bound with a leg brace on unable to drive. We now had 34 apiaries with EFB in the region spread across the various counties.

The situation around Sheffield, due to the high number of beekeepers in the area, warranted drafting in inspectors from around the region and eventually from across the border in North Region. Thanks to North team SBis, John Zamorski, Julia Hoggard and Caroline Coughlin for their assistance and to Mark Mcloughlin RBI North, for loaning them to us.

The situation in Sheffield and surrounding area is still ongoing and I would urge anyone not registered on Beebase [www.nationalbeeunit.com](http://www.nationalbeeunit.com), to do so over the winter period. I would also advise a thorough inspection of your bees at the beginning of next season when the colonies start to build up and make sure you have a smartphone or camera available to photograph anything that causes you concern. You can send Photographs via email or text message to Tim Roper, Phil Khorassandjian or myself, we will triage them and contact you to arrange an inspection if we think it's necessary.

August/September is usually when disease finds tail off but this season we found or had reported a further 13 cases of EFB, mainly in South Yorkshire/North Derbyshire but also a new outbreak in the Selby area and 1 case of AFB in North Yorkshire.

By the end of the inspection season NE team had dealt with 49 infected apiaries, 48 EFB and 1 AFB which may sound like a lot but to put it into perspective, we inspected, 588 apiaries on a targeted basis (where we are most likely to find disease). This is equivalent to 8.33% of apiary inspections resulting in a disease find. Overall we diagnosed 76 individual colonies out of 3576 inspections equivalent to 2.12% of colonies inspected.

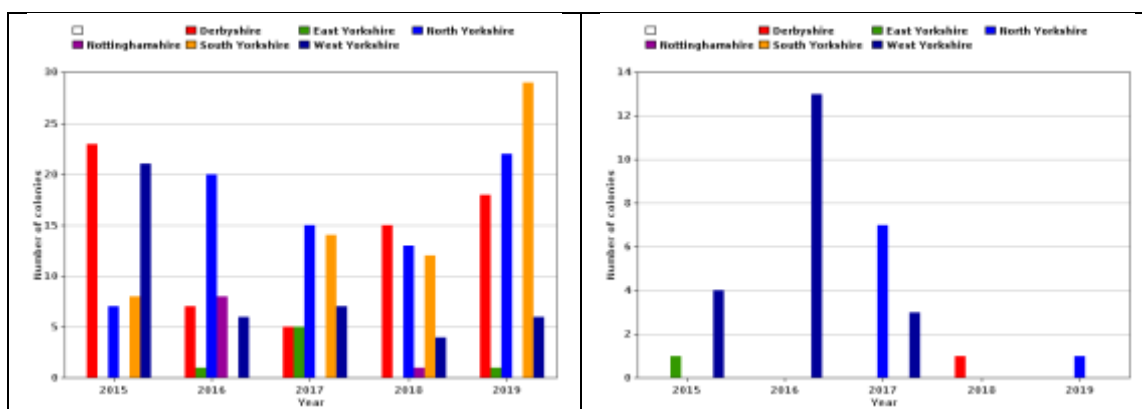
Inspection numbers overall for 2019 are comparable with inspection figures in 2017 after a dip last year due to lack of resources.

Region	Apiaries	Colonies	Year
<b>North East England</b>	633	3187	2017
<b>North East England</b>	435	2172	2018
<b>North East England</b>	588	<b>3576</b>	2019

#### Diseased colonies by County

County	EFB	AFB
Derbyshire	18	0
Nottinghamshire	0	0
South Yorkshire	29	0
West Yorkshire	6	0
North Yorkshire	22	1
East Yorkshire	1	0

### Trends of EFB and AFB by colony in North East region over the last 5 seasons.



### Imports

One of our main priorities over the summer is to ensure any imported nuclei, packages or queens are checked in accordance with DEFRA policy to safeguard the regions stocks:

Table below shows all imported queens, nuclei and packages for the U.K.

Queen Bees or nucleus colonies imported from the EU into England, Scotland and Wales in 2019						Report for year 2019
Country of origin	Number of consignments imported	Batched number of queens	Batched number of nucleus	Batched number of packages	Batched number of Colonies	Number of consignments inspected
Bulgaria	1	3	0	0	0	1
Cyprus	18	318	0	0	0	10
Czech Republic	7	159	0	175	0	1
Denmark	43	2574	0	0	0	20
France	1	0	0	0	15	1
Germany	25	203	0	20	1	11
Greece	88	4928	0	0	0	18
Italy	85	3304	0	2428	0	57
Malta	36	3529	0	0	0	26
Netherlands	4	12	0	0	0	3
Poland	3	40	30	0	20	1
Romania	37	2806	0	0	0	11
Slovenia	65	2205	0	0	0	21
Spain	1	0	0	0	100	1
<b>TOTALS:</b>	<b>414</b>	<b>20081</b>	<b>30</b>	<b>2623</b>	<b>136</b>	<b>182</b>

This summer NE region received directly:

1624 queens imported from various EU states mainly by commercial suppliers and bee farmers.

137 packages from Italy.

### **IMPORTERS/EXPORTERS PLEASE NOTE**

Import or export of bees, (including queens, packages and colonies) is permitted only if accompanied by an Official European Union (EU) or Third Country health certificate issued by the competent authority where the bees originated. It is a **legal** requirement that you notify the **National Bee Unit** of imports of bees from outside the UK. You can do this by completing the [Importer Notification Form](#) and posting, faxing or emailing it to the NBU office. Alternatively, if self-registered, you can log in to the Beekeeper pages of BeeBase and click the 'Import Notifications' link from the left hand index. It is of course illegal to import bees, queens or any bee-related products from within the SHB exclusion zone around the affected areas in southern Italy. Further details can be found on the Imports/Exports pages of BeeBase at <http://www.nationalbeeunit.com/index.cfm?sectionid=47>

\*This advice is correct at the time of writing but may be subject to changes due to E.U. Exit.

### **Varroa**



Due to mild winter conditions 2018-19 many colonies in sheltered areas managed to raise brood through the winter. This made Oxalic acid treatments less effective than normal as shown here by the removal of the first drone brood of the season. Varroa mites prefer drone brood and seek to get into the cells when they appear. Bio-mechanical controls reduce the need for chemical intervention and if done at the right time can reduce the mite population considerably. When using the short frame method always remember to remove drone brood once its sealed and destroy it along with the varroa it contains, otherwise you could be helping them along. *Photo Dhonn Atkinson*

The NBU suggests and promotes Integrated Pest Management. Most beekeepers follow this practice to a degree, whether by design or not, using bio-mechanical controls such as drone culling, splitting, induced brood breaks, and open mesh floors.

When it comes to treatments it's important to use products **AUTHORISED** by the Veterinary Medicines Directorate (VMD), administered as directed in the instructions, and not to apply the same Varroa treatment several times in a row. Since my last annual report there have been no new Varroa treatments authorised for use in the UK, however there are a number of highly effective products on the market containing more natural active ingredients including thymol, formic acid and oxalic acid as well as the chemical miticides containing synthetic pyrethroids or amitraz. Beekeepers

the world over have demonstrated how easy it is to breed Varroa for resistance to miticides, simply by using effective products without rotation or other bio-mechanical methods.

Reports from around the region from the inspectors have given me reason for concern, many of you are using Sugar dusting as your main or only form of Varroa control. David Bough has reported on numerous occasions this season that the colonies he's inspected have been on the verge of collapse with mites running on the comb, bees with deformed wings (DWV) and emerging bees dying with their tongues out Parasitic mite syndrome (PMS). When the emerging bees are removed with tweezers and examined they are seriously parasitised. As a Yorkshireman myself, I understand the genetic need within us to save (or just not spend) money but if a colony dies due to ineffective "treatments" It's a false saving.

There is also a risk during the season that icing sugar will find its way into the honey and so part of the composition of any honey being sold, won't be from a pure nectar sources. I know the quantity is very small, but if icing sugar is used weekly as advised then the total honey crop is likely to be small and the amount of icing sugar "supporting" the bees becomes more significant. Icing sugar is not pure sugar it also contains Tricalcium Phosphate which is a calcium salt of Phosphoric acid. We increasingly hear of trading standards testing honey and beekeepers having issues because they have introduced sugar to the colony as a "treatment" or have provided a support feed that has ended up stored in supers, mixed with foraged nectar/honey.

Another Problem we see regularly is the lack of attention paid to the manufacturer's instructions on Vet Meds. The most common one is still not sealing up mesh floors and reducing entrances when applying Thymol based products. Apiguard appears to be the most popular of these products in the region. This product needs to build up vapours within the hive in order to be effective, this doesn't happen with an open mesh floor unless the entrance is reduced, the inspection board is in situ and the gap at the back is blocked up with something (foam strips work well).

**Please read the instructions!**

There's a legal requirement that the use of any treatments are recorded, and these records must be kept for a minimum of 5 years. Full details can be found on this link -

<http://www.nationalbeeunit.com/index.cfm?sectionid=110>

The Beebase website has pdf links to numerous free fact sheets including the 'Managing Varroa' booklet. <http://www.nationalbeeunit.com/index.cfm?pageid=167>

### **Exotic Pest Surveillance**

In North East region we carried out 207 inspections specific to exotic pests in 2019, targeting a combination of identified risk points and random sites. It is natural, after recent high profile incidents, for the beekeeping community to focus on the threat from Asian hornet, but we must not drop our guard in relation to the other pests. SHB can be transported into the United Kingdom unintentionally through international trade via bee imports, food products and even in soil when they are in the pupation stage. Although bee imports are prevented from areas where SHB are known to be present, other trade and movement continues.

We have Sentinel Apiaries and Enhanced Sentinel Apiaries (ESA) across the region. Sentinel apiaries are situated within areas considered 'at risk'. A volunteer beekeeper at that location agrees to monitor their colonies specifically for exotic pests. As well as a visual inspection, floor debris from the designated hives are sampled twice a year and tested for any trace of SHB and Tropilaelaps mites. All postage costs, equipment and paperwork is supplied free of charge to the beekeeper who then collects and sends samples for analysis at the NBU laboratory in York.

ESA apiaries are located near to high risk points eg freight ports. They are visited by their appointed SBI in April, June and September. The colonies are inspected in detail, and samples sent for analysis. SHB traps are also provided for placement in colonies at both sentinel and enhanced sentinel apiaries.

I would like to thank those beekeepers who currently carry out this work, but do please contact me or your SBI if you would like to be involved in the future.

### **Asian Hornet**



*Photo J Zamorski*

In 2019 three Asian Hornet nests have been located and destroyed by the National Bee Unit, following sightings by members of the public. The first one was near Tamworth, Staffordshire on 6th September.

On 4th October a further nest was destroyed following the confirmed sighting of an Asian hornet near Christchurch, Dorset, and a second nest was destroyed nearby on 11th October. The latter is likely to have been a primary nest, related to the nest destroyed the previous week. Genetic analysis will be carried out to investigate relatedness between the nests.

In addition there have been two confirmed individual sightings of Asian Hornets. The first was on 3rd July of a female Asian hornet in New Milton, Hampshire, based upon visual examination, the hornet was likely to be a queen. A further sighting was reported by a member of the public to the south west of Ashford, Kent, on 9<sup>th</sup> September where a single hornet was captured, surveillance continues in both areas. The NBU have sent out an alert to encourage all beekeepers and members of the public to watch for Asian hornets in their apiaries, on fallen fruit and on flowering plants such as ivy.

We ask beekeepers and the general public to remain vigilant and report any suspect sightings using the iPhone and Android app 'Asian Hornet Watch', by filling out an online report form or by emailing [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk).



- The 'Asian Hornet Watch' app is available to download free from the Apple and Android app stores.
- Members of the public can also report sightings by email to [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk) . Please provide a photo along with where you found it and a contact number to reply to.
- Reports can be sent via the online submission form on the Non-native Species Secretariat website, again with a photo.
- Details on the identification of an Asian hornet can be found on the Bee Base guide or the NNSS Asian hornet ID sheet.

### **Asian Hornet track and trace training Jersey**

I was selected to go to Jersey in August to undergo Asian Hornet nest location track and trace training. John Zamorski of North Region and I, spent 5 days with Alastair Christie, the Jersey Government Asian Hornet coordinator and his team of volunteers.

John and I arrived in Jersey and before we had chance to get our bearings we were on our way to the first nest of the day. Alistair was keen to show us as many nests as possible to help us get our eye in and to show us the difficulties they face when tracking these little beasts. We were taken to three very different sites and told where to look, even with the experts there we struggled to see the nests initially. Continued observation gave the wind chance to move a few leaves and the nest appeared.

We attended a meeting of the Asian Hornet team that evening and met the volunteers who conduct the track and tracing of the hornets. During the meeting the volunteers and Alistair discussed their plan of attack and who would be taking the lead with ongoing sightings around the island. A scene reminiscent of the WW2 war rooms seen in old films like the Dam Busters.

After the meeting we attended a nest destruction/collection performed by the volunteers and pest control contractors.



*Pest Controllers preparing to remove a nest. Photo D Atkinson*



*Alistair Christie with the nest "bagged" no insecticide used as this nest was over a water course. Photo D Atkinson*



*All the nests collected on Jersey go to their laboratory for dissection and all the details are recorded.*

*Photo J Zamorski*



*All the individuals within the nest are examined and counted and the queen is identified to show the nest destruction is complete.*

*Photo J Zamorski*

Over the next couple of days we shadowed some of the volunteers who explained the techniques they use to determine the direction and approximate distance from the bait stations to the nest and how and why they mark the hornets with multiple coloured markings.

On the Thursday of our visit we were asked to man a bait station outside The Smugglers Inn, in an area known as Le Quaisne (pronounced Wainey by the locals) we'd been there the day before with a couple of volunteers who explained they had been making tracking observations for 3 weeks on and off, and had not got any further with finding the nest as the hornets were disappearing into the woods.

John and I set out our improvised bait station (a mussel shell containing *Suterra*) and waited, marked hornets appeared within a few minutes and we started timing their round trip. Within 2 1/2 hours we found the nest!



*We were meant to meet up with a couple of volunteers who had the kit we needed but they didn't show, so we used what we could find, hence the shell, it worked! Photo J Zamorski*



*This is the nest we found, hidden in the Ivy about 20ft up in a Sycamore tree. Photo D Atkinson*



*Hornet preparing a bee for transportation to the nest. Photo J Zamorski*



*Nest hidden in a crevice in the cliffs Photo J Zamorski*

More details can be found on the Asian Hornet action team page on Facebook. Also, volunteer John De Carteret has posted very good quality videos and photographs on his Facebook page of all the nests found.

## Surveillance of Small Hive Beetle (SHB) in Italy in 2019



*A. Tumida Larval Stage*



*SHB note club shaped antennae*

On the 18<sup>th</sup> June 2019, the presence of *A. tumida* (SHB) was again confirmed in eastern Sicily, in an apiary located in the municipality of Lentini in the province of Syracuse. Two adults of SHB were detected in two different colonies, this apiary had been under surveillance since May 2019 as on 2<sup>nd</sup> May, the authorities had intercepted a movement of 64 colonies from Sicily without any accompanying documents at the port of Villa San Giovanni on the Italian mainland.

The colonies were sent back to the apiary of origin in Sicily. Several inspections were subsequently carried out in this apiary to look for *A. tumida*. During one visit 13 colonies of unknown origin were discovered and SHB was detected in two of them. Epidemiological investigations showed that these 13 colonies had been stolen on 9<sup>th</sup> June in the protection zone of Reggio di Calabria located on the mainland.

*Aethina tumida* had only been detected once in Sicily prior to this outbreak, on 7<sup>th</sup> November 2014. SHB adults were detected in a migratory apiary in the municipality of Melilli, located approximately 35 km away from Lentini. At the time, the epidemiological investigation had shown that the colonies were present in Gioia Tauro between April and August 2014. Gioia Tauro is the municipality of the Calabria region where the first detection of SHB appeared. Following this outbreak, surveillance was subsequently carried out every year with inspections in selected apiaries and sentinel apiaries.

As no new case had been discovered in the two years following this positive find, a Commission Implementing decision of 1<sup>st</sup> March 2017 had removed Sicily from the list of areas subject to protective measures in relation to SHB in Italy. A phylogenetic analysis was carried out on the specimens detected in June 2019. The results showed that the genetic profile of the specimens was similar to the one of other specimens previously isolated in the Calabria region but different from the genetic profile of the specimens isolated in the previous outbreak confirmed in Sicily in November 2014. It confirms that the outbreak was due to an illegal movement of colonies from the protection zone of Reggio di Calabria and not a consequence of the spread of SHB in Sicily.

The infected apiary was destroyed on 23<sup>rd</sup> June 2019 and the soil was treated with a permethrin solution. A protection zone of 5 km radius around the site was set up and inspections are being carried out in the 54 apiaries registered in the zone.

No new outbreaks have been reported in the protection zone of Reggio di Calabria, the original outbreak site on the mainland, since November 2018 when the last detection occurred in a sentinel apiary. No new outbreaks have been reported in the province of Cosenza (situated in the North of Calabria) since September 2016. It has to be noted that surveillance is ongoing in Italy and not all the scheduled inspections have been carried out and reported, for the moment.

### **Training**

If any of the association secretaries/education secretaries would like to discuss holding a bee health day you can email me on the usual address. These will be limited to 2 in the region in the season due to staff availability and we will only be available during Week day office hours.

### **Finally**

I would like to thank my team Tim Roper, Adrian Wilford, Nick Mitchell, Phil Khorassandjian and David Bough for their flexibility and dedication to the work. I would also like to thank the support team at York, Kate Parker, Lesley Debenham, Jenna Cook, Sarah Chadwick and Rebekah Clarkson for the help they provide behind the scenes.

The Laboratory team Victoria Tomkies, Sally Ponting, Laura Curtis and Kirsty Stainton for the science back up and all the beekeepers who work with us to help maintain the health of our bees in North East region.

Please keep yourselves and your bees dry, warm and fed (and Varroa free) over the coming months and I hope to see you happy, healthy and ready to deal with all the honey that's coming next season.

### **Contact Details**

Between October and April the seasonal inspectors are either on leave or working in other parts of the agency, therefore I would appreciate it if you could direct any communications to myself.

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Website: [www.gov.uk/apha](http://www.gov.uk/apha) | Twitter: [@APHAgovuk](https://twitter.com/APHAgovuk) | Facebook: [aphagov](https://www.facebook.com/aphagov)

National Bee Unit Website (BeeBase): [www.nationalbeeunit.com](http://www.nationalbeeunit.com)

Address: National Bee Unit, Sand Hutton, York, YO41 1LZ



Note: We have dropped the GSI element in our email addresses and they have now changed to **Name.Name@apha.gov.uk**