National Bee Unit

2015 Western England Region Annual Report

Covering Gloucestershire, Herefordshire, Shropshire, Staffordshire, Warwickshire, West Midlands and Worcestershire

Animal & Plant Health Agency

All Change

Much has changed in the last 18 months; in March 2015 Charles Millar stepped down as Regional Bee Inspector in order to pursue new business ventures and I was delighted to take up the role in the middle of June. Since then I have really enjoyed learning the ropes and getting to grips with Western Region; parts of which are well-known to me from my four seasons as a Seasonal Inspector, the rest is quickly becoming very familiar.

Prior to all that excitement, in Oct 2014, a new agency was formed by the Department of Environment Food and Rural Affairs (Defra) called the Animal and Plant Health Agency (APHA); combining the former Animal Health and Veterinary Laboratories Agency (AHVLA) with some parts of the Food and Environment Agency (FERA), including the Bee Inspectorate, the Plant Health and Seed Inspectorate, the Plant Variety and Seeds Group and the Genetically Modified Organisms Inspectorate.

This meant that when the Seasonal Inspectors returned to work on 1st April 2015 they found nearly all of the back office systems, computer hardware and procedures had changed as an inevitability of this move. Consequently much of the 2015 season was a steep learning curve for our Inspectors as they coped with finding their way around the new agency and attending a steady round of induction and training sessions aimed at harmonising our ways of working. They did really well to cope with this distraction whilst still maintaining business as usual on the inspection side.

There are still further changes to come as APHA seeks closer integration between the Bee Inspectorate and APHA's wider field operations.

One other change was that at the end of this season we, sadly, said good bye to Justus Klaar who retired after 11 seasons as a Seasonal Bee Inspector covering parts of Staffordshire, Shropshire and the West Midlands.

Western Region Team Update

Justus's retirement and my promotion mean that there are now two vacant posts for Seasonal Bee Inspectors (SBIs) within the region; one in Staffordshire and the other in Shropshire. We hope to advertise for these imminently. If any of you, in either of these areas, have had thoughts of being a SBI and would like to have a chat to explore the role, then please feel free to give me a call. Vacancies will be advertised via the Civil Service Recruitment Website and also on BeeBase.

From April 2016, barring any unforeseen events, the region and inspector areas should look like this:

Regional Bee Inspector	Area	Contact
Jo Schup	North Shropshire	01948 710632/07979 119368 joanna.schup@apha.gsi.gov.uk
Seasonal Bee Inspectors	**Area**	**Contact**
Colin Pavey	Herefordshire	07775 119471 colin.pavey@apha.gsi.gov.uk
Elizabeth Gardner	Gloucestershire	07867351610 elizabeth.gardner@apha.gsi.gov.uk
Vacant	Shropshire	
Vacant	Staffordshire	
Julian Routh	West Midlands/ Warwickshire	07775 119477 julian.routh@apha.gsi.gov.uk
Keren Green	Worcestershire / Warwickshire	07901 517779 keren.green@apha.gsi.gov.uk

The Season

The year started with a mild winter followed by a spring with higher than average sunshine levels which resulted in the colonies building up well. Unfortunately, this didn't last as the summer months proved to be cool and often wet and the season's early promise rapidly disappeared with many beekeepers reporting a poor crop of honey.

Colonies that had built up well were then confined and overcrowded, and consequently, many inspectors and beekeepers reported high levels of viral infections; notably Sac Brood Virus (SBV) and Chronic Bee Paralysis Virus (CBPV). Both of these used to be an exception, but in 2015 there were very few colonies I inspected in which I did not see one or both being manifested to a greater or lesser extent.

Currently the best response when finding CBPV is to give the bees more space, minimise drifting between colonies and improve bee nutrition if possible. Re-queening from a less susceptible line can also help for both SBV and CBPV.

We now have an advisory factsheet offering the best advice we currently have, this may be downloaded from BeeBase here:
http://www.nationalbeeunit.com/downloadDocument.cfm?id=1158

Also the NBU Leaflet "Common Pests, Diseases and Disorders of the Adult Honey Bee" can be down loaded from BeeBase here:
http://www.nationalbeeunit.com/index.cfm?pageid=167

This particularly high incidence of CBPV was at times confused by beekeepers, on seeing high numbers of dead adult bees at the hive entrance and on the hive floor, with suspected poisoning. However, careful observation of the adult bees' symptoms and the pattern of steady ongoing daily losses usually allowed suspected poisoning to be ruled out quite readily.

Autumn saw many bees shutting down in Western England as the forage, particularly pollen (unless there was a local Himalayan Balsam crop) stopped almost completely. Quite a few beekeepers contacted me worried about why their queens had stopped laying and my answer was; ideal time to treat for varroa, make sure they have enough stores and leave them alone – if you have a mated queen they will come right once the ivy flowers.

Once the ivy flow did start it was one of the longest and heaviest flows I have seen. With the unseasonably warm end of the year the bees were out foraging right into the middle of December. This very late pollen supply and the warm weather have meant that many colonies have been raising brood for nearly all this winter and consequently varroa levels will be very high and stores have been consumed far faster than in a 'normal' winter. So please heft your hives and feed with fondant if they are light.

Winter varroa treatments have been a challenge due to the un-clustered bees and brood rearing. If there is brood present then using one of the registered thymol based products (Apilife-VAR, Thymovar or Apiguard) is probably your best option. If there is no brood then the recently registered Api-Bioxal oxalic acid treatment can be applied, ideally when the temperature is between 4-10^{o}C.
If you miss the window to treat your bees now then a thymol treatment in the spring, before the supers go on, will probably be required.

Honey Season
Whilst 2014 yielded a bumper honey crop and the start to 2015 looked so promising the poor summer meant that the crop reported was below expectations.

Western region average main crop yield was around 20-40lbs per honey producing colony. The heather crop was down too with averages of ~10lbs/colony being reported.

Honey prices appear to have remained relatively static with flower honey direct sales retailing at £5/lb and heather direct sales at £7 -£7.50/lb.

Beekeeper Numbers
There are currently 32,656 beekeepers in England registered on BeeBase, the NBU's online database. Between them they have 149,182 colonies in 42,845 apiaries – an average of 4.6 colonies per beekeeper and ~3.5 colonies per apiary.
(N.B. this data excludes Scotland and Wales).

Western England Region has ~10% of the beekeepers registered in England.

Western England Region beekeeper, apiary and colony numbers
BeeBase (Jan 2016)

County	Current beekeepers	No of Current Apiaries	No of Colonies
Gloucestershire	697	1010	4080
Herefordshire	278	485	1428
Shropshire	537	735	2221
Staffordshire	331	495	2174
Warwickshire	461	738	2502
West Midlands	464	498	2370
Worcestershire	542	802	3890
WESTERN ENGLAND TOTALS	**3310**	**4763**	**18665**

Inspections in 2015

In 2015 the Western Inspectorate team visits totalled 476 beekeepers, 645 apiaries and 3500 colonies. These numbers are down on our inspection numbers from 2014 when we inspected 498 beekeepers, 733 apiaries and 4583 colonies and this downward trend was seen across the country.

The reasons for this were fourfold:

- We were operating for 5 months of the season with 9 inspector vacancies nationally; one of these vacancies was in Western region, which is still open.
- Exotic Pest Inspections (EPS) were ramped up significantly in response to the heightened threat of Small Hive Beetle, now established in SW Italy. An EPS take considerably longer to complete than a foulbrood inspection, with the floor, hive sides and super frames also requiring inspection, hence fewer inspections per day were completed.
- As mentioned at the start of the newsletter, returning SBIs were faced with a plethora of training and induction demands arising from the move to APHA and this too impacted on inspection time.
- There was a large outbreak of European Foulbrood (EFB) in Shropshire and the Welsh borders which necessitated several Bee Inspectors being seconded from their normal inspection area to help with the management and clear up exercise.

Notifiable diseases: European Foulbrood (EFB) and American Foulbrood (AFB)

The EFB outbreak in Shropshire/Welsh borders, mentioned above, was a surprise to many who considered this to be a low risk foulbrood area. It shows just how dangerous it is to make these assumptions and let your guard down. When 3km radial sweeps were done after the initial outbreaks many of the new cases of EFB found were in colonies that had been collected as swarms or in bait hives.

County	Colonies Inspected	EFB Colonies 2015	EFB % 2015	EFB Colonies 2014	EFB Colonies 2013
Gloucestershire	1029	21	2.04%	25	7
Herefordshire	480	9	1.88%	20	35
Shropshire	772	77	9.97%	0	0
Staffordshire	163	3	1.84%	2	6
Warwickshire	374	0	0.00%	10	1
West Midlands	211	0	0.00%	0	2
Worcestershire	471	10	2.12%	2	7
Western Totals	**3500**	**120**	**3.43%**	**59**	**58**
National	31497	578	1.84%		

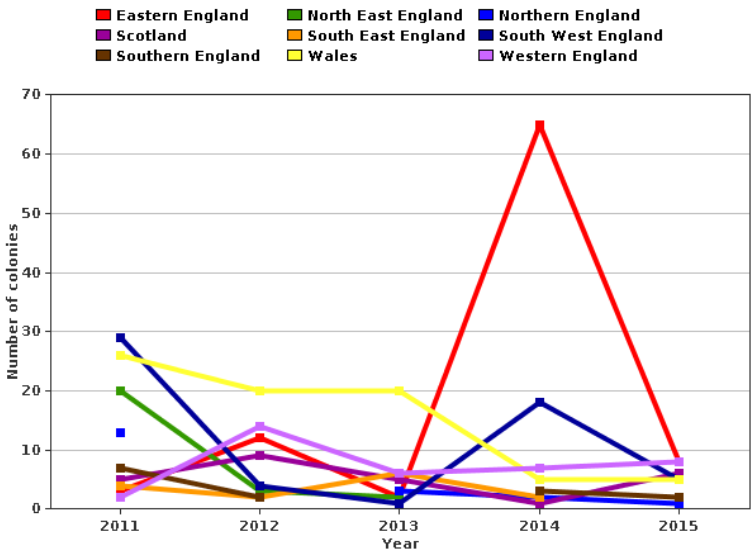
EFB is still embedded and persistent around Gloucester, Worcester and west of Hereford. One of our team priorities this season will be to address these areas - but we need your help. Regrettably, we are still discovering unregistered beekeepers that we didn't previously know about and consequently diseased colonies are evading our efforts and continually infecting and re-infecting surrounding beekeepers.

If you believe that you know of any apiaries that may be 'off radar' then please do let inspectors know, so we can track down their owners and ensure that colonies are clear of disease.

The quicker we can find the remaining sources of disease, the sooner we will see levels in these areas drop.

American Foulbrood (AFB) is still bubbling along in Staffordshire with another 5 colonies found to be infected in 2015 and a total of 8 colonies across the region.

Regional Trends of AFB



Unfortunately, this means that Western region had 20% of all the positive AFB inspections in 2015 (40) and 21% of all the positive EFB inspections in 2015.
We have yet to confirm the source of each case but now all the positive samples are being put through Multilocus Sequence Typing (MLST) at York we should be able to identify where outbreaks are linked across the country. Of course, it is important to remember that AFB can be picked up from imported honey; a discarded jar of supermarket honey that the bees manage to find can just as easily be the source.

Please heighten your vigilance if you have bees in these areas. Far too much disease continues to go un-noticed by the beekeeper, despite colonies clearly failing to prosper with patchy brood patterns, this should raise immediate alarm bells when checking colonies.

A few barrier management suggestions to help reduce chances of infection:

- **Familiarise yourself with foulbrood** - the NBU Foulbrood Disease of the Honey Bee advisory leaflet can be downloaded here: http://www.nationalbeeunit.com/downloadDocument.cfm?id=7
- **Check your brood regularly** - shaking bees off the brood. If you don't look you won't find!
- **Isolate all incoming stock** - (purchases and swarms) for 6 weeks and check the brood
- **Clip your queens** - this helps prevent feral colonies establishing and becoming reservoirs of disease
- **Practice good swarm control** - as above
- **Clear away dead colonies asap** - if you can't do so immediately then seal it up to prevent robbing
- **Avoid the temptation to re-use drawn comb** - from colonies that have died due to unexplained losses
- **Replace old brood combs regularly** - if you can't see through them when they are held up to the light they need changing, this can happen in one season
- **In foulbrood areas it is best not to use bait hives** - but if you really still wish to do so then minimise the risks:
  - Use an old hive with plenty of smell to it
  - Ensure hive is scraped and scorched (which the bees seem to like)
  - Provide full complement of frames and fresh foundation(a full box stops wild comb)
  - Utilise a swarm lure

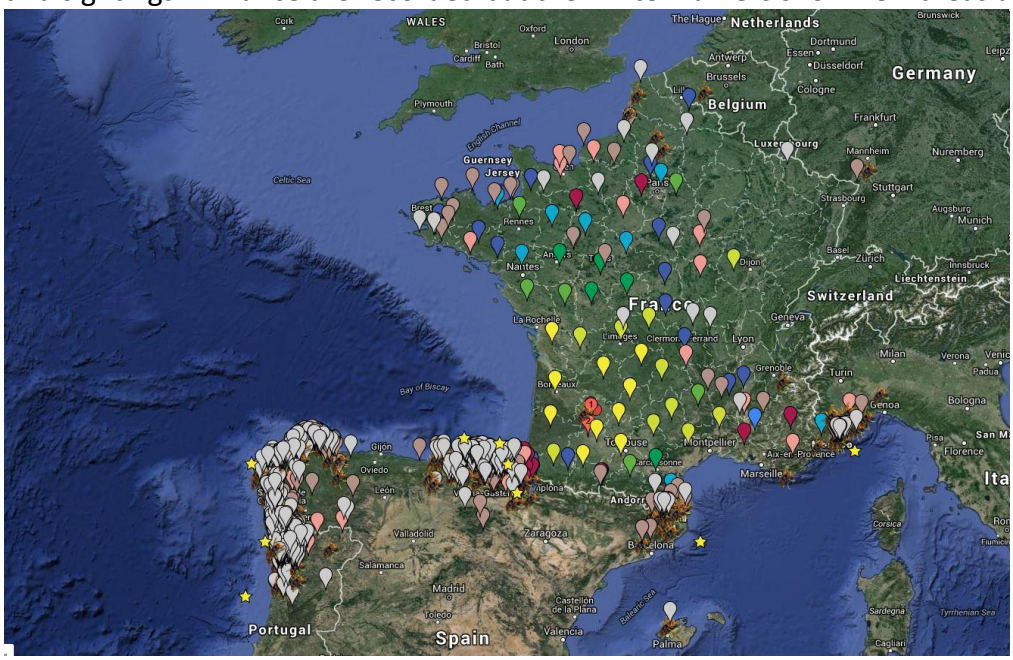
Exotic Pests Update and Inspections (EPS)

Small Hive Beetle (SHB), *Aethina tumida*, appears to be established in the Calabria region of SW Italy having been found once again in 2015. At the moment, with the sea to one side and mountains to the other three, it would seem that this may be forming something of a natural barrier, but it is of course really too early to say with any certainty. All it will take is an illegal movement of an infested hive out of the protection area and SHB could be spread a great distance.

The current situation and spread of SHB in Italy may be found here:
http://www.izsvenezie.com/aethina-tumida-in-italy/

Additionally, an extremely detailed paper has been published by the European Food Safety Authority and may be accessed and downloaded from here:
http://www.efsa.europa.eu/en/efsajournal/pub/4328

The Asian hornet, *Vespa velutina*, continues to spread through North West France and this year has been reported in and around the area of Calais. The open access google map is regularly updated to show the continuing spread of Asian hornet in Europe. Note not all nests and sightings in France are recorded but the white markers show new areas affected this year.



https://www.google.com/maps/d/viewer?mid=zQZZvCfJcXQo.k0cLRXyow4C0&msa=0

It is of serious concern that this pest could make its own way or hitch a ride across the English Channel into the UK. With the amount of traffic entering the UK from Europe the Asian hornet could arrive almost anywhere, though the South and South East coasts remain most at risk. Contingency plans have been put into place and all attempts will be made to eradicate any incursion. However, to be successful, any developing nests established by fertile queens in spring must be located and destroyed before the next generation of queens is released. Beekeepers are at the forefront of surveillance for Asian hornet as it is quite likely be observed hawking in front of bee hives, but any suspect sightings should be reported to the NBU and the Non-Native species secretariat (NNSS) at alertnonnative@ceh.ac.uk

An identification sheet for the Asian hornet and details of monitoring traps are available as downloads from BeeBase. Please encourage your members to become familiar with the hawking nature of this hornet, once you have seen video clips of it you could never mistake it .

We now have Asian Hornet videos available for viewing on the APHA YouTube channel which may be found here: https://www.youtube.com/playlist?list=PLouExecY1KnfANGcLUd2D6KkLRHEn_-T

Western region Inspectors carried out 345 inspections specifically for exotic pests this year, with 2433 EPS inspections being completed nationally. These targeted a combination of identified risk points and random sites.

The risk point categories are shown in this table and we have tried to identify risks that fall into this category within the region e.g. Gloucester Docks and Dudley Zoo.
If you are aware of any potential risk points that are near to you please let me know so that I can check we have them recorded.

Risk Point Category
Landfill site associated with imported produce
Crude hive products importer
Imported Honey Packer
Queen Bee Importer
Military airport (UK Forces)
Military airport (American)
Fruit and vegetable wholesale market
Major Zoo
Plant importer
Freight Port / Port
Freight depot
Civilian airport
Quarantine Facility

Western region has also established 15 Sentinel Apiaries (~120 nationally) in order to improve our capacity to combat the arrival of pests from abroad. Sentinel apiaries are set up in areas considered 'at risk' based on the identified risk points. A volunteer beekeeper agrees to designate and monitor one of their colonies specifically for exotic pests (SHB, Asian Hornet and Tropilaelaps). As well as visual inspections, floor debris from the designated hives is sampled twice/year and sent to York where it is checked for SBH and Tropilaelaps. All equipment and paperwork is supplied to the beekeeper. SHB traps are provided and checked at normal colony inspections and results noted on a log sheet.

Given the continued presence of Small Hive Beetle in Italy this year and the proximity of the Asian Hornet across the channel in Northern France, the importance of exotic pest surveillance work cannot be overstated.
I, therefore, would like to take this opportunity to say a big 'thank you' to all our Sentinel Apiarists for their crucial work.

Imports
Imports of bees continue at a high level despite the increased risk presented by Small Hive Beetle (SHB) again found in Italy in 2015.
Imports of queens from the EU have broken through the 10,000 level for the first time with 10,306 queens imported this year into the UK from the EU which is truly staggering – where have they all gone?

Imports of packaged bees were also at a very high level with suppliers and beekeepers obviously not worried about the threat of SHB. The number of Italian bee packages in 2015 hit an all-time high of 1862!

Queen Bees or nucleus colonies imported from the EU into England, Scotland and Wales in 2015					
Country of origin	**Number of consignments imported**	**Batched number of queens**	**Batched number of nucleus**	**Batched number of packages**	**Batched number of Colonies**
Austria	4	31	0	3	0
Cyprus	8	138	0	6	0
Czech Republic	7	179	80	176	0
Denmark	34	1571	0	16	0
Germany	27	297	0	3	0
Greece	99	4337	0	11	0
Ireland	1	48	0	1	0
Italy	27	210	0	1862	0
Malta	1	65	0	0	0
Netherlands	4	6	0	0	15
Poland	2	0	30	350	0
Romania	3	320	0	0	1
Slovenia	67	3192	0	13	0
Spain	1	0	115	0	0
TOTALS:	**285**	**10394**	**225**	**2441**	**16**

If you wish to delve deeper into any of these figures, all of this information and much more is readily available on the public pages of BeeBase – www.nationalbeeunit.com

BeeBase Registration and Association Membership Lists

For effective disease and pest control we rely on three ways of detecting colonies:

- Voluntary registration on BeeBase
- Association membership lists
- Being told about neighbouring apiaries during visits

There are substantial benefits in registering, including; automatic email disease alerts in the event of a notifiable disease (or pest) being found within 3km your apiary; your apiaries will be included in the risk based inspection scheduling; emails with timely advice on the basis of the inspectorate's findings during the season; and a facility to maintain your own beekeeping and apiary records.

Voluntary registration: it is **not** an automatic consequence of joining a local beekeeping association that you will be registered on BeeBase. Some associations still do not share their membership details with the NBU, although this is becoming the exception.
To register you can either go online to www.nationalbeeunit.com or call our office on **0300 303 0094**. Once you have registered you will be issued with a user name and password which will allow you to update and maintain your record and also you will be able to see the results of any inspections we have completed on your apiaries.

Association membership lists – your association can send us their list of members if they wish, but they can only do this if they satisfy the requirements of the Data Protection Act. The easiest way to do this is to amend the membership renewal form to contain the phrase:

"Please note that a condition of membership is your agreement to membership details being held on a computer. This information will be used for the efficient running of the association by its officials, for the distribution of the BBKA magazine, for BBKA Insurance, for Bee Disease Insurance, and passed to the Regional Bee Inspector for inclusion on BeeBase to aid them in the control of notifiable bee diseases".

These lists are very useful to us as they allow us to identify new beekeepers and to update contact details for existing beekeepers. **Secretaries** – if you currently have this in place, please email me your latest membership list as soon as possible, so I can ensure our records are as accurate and complete before the start of the season. This winter I am trying to meet with the exec. of all the County Associations in the region and this is one of the topics we are discussing.

Having BeeBase as up-to-date as possible will be incredibly important if we are unfortunate enough to find Small Hive Beetle or Asian Hornet in the UK in the coming season.

National Beehive Count Pilot

As I write there is one final advantage of registering being emailed to everyone with a current email address on BeeBase:

The UK is committed to taking action to improve the state of our pollinators and recently published strategies set out how, by working together, we can ensure a thriving and sustainable pollinator population. One of the first things we need to do is to improve our current understanding of our honey bee population – how many there are and how healthy they are.

We are doing this by launching an annual National Beehive Count from the winter of 2016/17 onwards. The idea is to estimate the number of beehives going into winter dormancy. In order to work out the best way of estimating the number of bee hives (colonies) in the UK, a smaller, pilot count is taking place during the winter of 2015/16. For the pilot, we propose to use the information on beehives numbers held on BeeBase and other sources to derive our estimate of the national count.

This will also support the European Commission in its project to understand the state of beekeeping across the EU and as a mechanism to allocate funds to support the beekeeping sector from 2020 onwards.

We are asking all beekeepers to help by updating existing information about their beehives by 12 February 2016. We would like to record the number of overwintering hives, so please update your figures to reflect the number of beehives within your apiaries as of 1st November 2015. Using this date will help us ensure consistency across the country by reflecting the national position at a single point in time. If for any reason you are unable to update your records before this date, your response will still be counted and will feed into autumn's Hive Count.

Please could you update or add any new contact details and apiary records, including how many colonies you own. Our Frequently Asked Questions provide guidance on how to do this. If you have any other questions, not covered by this, please don't hesitate to contact us by:

Email: nbuoffice@apha.gsi.gov.uk **Telephone:** 0300 3030094

For more information go to: http://www.nationalbeeunit.com/index.cfm?pageid=362

Training Events

In 2015 three highly successful Healthy Bee Days were held in South Staffordshire, Herefordshire and Cheltenham and Gloucester.

These days are organised and administered by the local association with a team of inspectors demonstrating and lecturing for the day. 3 to 4 topics agreed with the association beforehand are covered, for example: good husbandry/barrier management, disease comb recognition, *Nosema* workshops, varroa management, colony inspections for foulbrood and exotic pests, exotic pest recognition and shook swarm/comb changes.
Normally, we can cater for a maximum of 60 beekeepers during the day – this is to ensure we can give those attending personal attention and so everyone 'can have a go' – from experience higher numbers than this aren't really manageable.

If you believe your members would benefit from a County Bee Health day, please make contact with me for more information. We can only offer a limited number of these each year due to other demands on time and resources. Generally speaking, higher priority will be given to counties that have not hosted one in recent years and where a county is confident that take-up and attendance will be high. For 2016 we are proposing that they are run in Warwickshire and Shropshire but please still contact me if you are interested so we can add you to the list and start plans for future years.

As a general rule Regional Bee Inspectors will tend to limit their participation to County level events but the best way to maximise your local Bee Inspectors time is at hands-on events like Bee Safaris and apiary sessions where they can combine training with inspections.

A final note

May I take this opportunity to thank the team of Western Region Seasonal Bee Inspectors and the office team up at York, for their considerable hard work and support.

Thank you also to all the beekeepers I have visited for your friendly cooperation even when I have had to be the bearer of bad news.
I look forward to meeting and working with all the local Associations and as many Beefarmers and Beekeepers as possible in the forthcoming year. Finally, I'd like to wish you all a successful and trouble free season, but, if the worst happens, please remember we are here to help.

Jo Schup
Regional Bee Inspector, Western England Region
joanna.schup@apha.gsi.gov.uk
Landline: 01948 710632 Mobile: 07979 119368