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Bed Bugs Limited

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Confidential report on the
Evaluation of
Bed Bug Beacon

**RESULTS OF ONGOING
FIELD TRIALS OF THE BED
BUG BEACON ACTIVE
MONITOR**

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Forward:

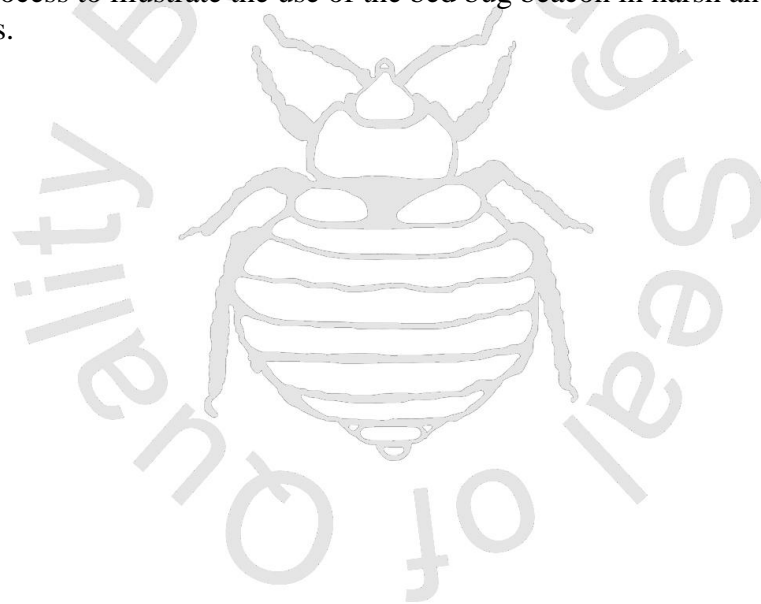
The bed bug beacons is part of a new class of active bed bug monitors, notably the simplest of this product class as it is not electronic in nature and relies upon CO2 as the main lure to bed bugs.

The CO2 source is produced in the reaction bottle and fed through to a simple pit fall trap where bed bugs can be captured for confirmation and identification.

We envisage that this product will be used in conjunction with routine passive monitoring as either a spot check quality assurance to integrated systems or as an adjunct to treatment in unoccupied areas.

The simple design of the system makes it suitable for non professional users to administer and once started the reaction occurs for 5 days offering a cost effective solution to active monitoring.

We agreed to field test the product and this report forms part of this ongoing evaluation process to illustrate the use of the bed bug beacon in harsh and complex environments.



Background of test location

The test location for this report is a residential care home in London which has suffered from a repeat and ongoing outbreak of bedbugs for the last 12 months.

Despite repeated requests to screen the whole facility the management feel that this is too disruptive to the occupants who are all elderly and many infirm requiring near constant assistance.

It was our suspicion that an infected seat within the day room had effectively become the infestation source for other rooms in the home and that rooms were becoming infected through contact with the communal areas.

Although we initially thought that a K9 scent screen would be the most suitable way to test the facility and common areas, the strong smell of urine and human odours would have been a distraction for the unit and we could not be confident of the efficiency in this harsh environment.

Human screening although feasible was problematic for the staff as it would need to be conducted in the evening as the day rooms were constantly in use until 9pm.

Following an onsite visit it was decided that the best course of action would be to deep clean the seats in the day rooms and to place a beacon in the suspected location to see if it could confirm the infestation, this was followed up with an extensive search of the area to confirm the infestation and treatment using our standard approach.

Test Protocol

The bed bug beacon was left with one of the senior care staff to be set-up and run the day after the deep cleaning had been conducted.

The original manufactures instructions were left with the client to ensure they were user friendly and could be followed by a non trained professional.

The monitor was inspected after 5 days to identify any capture.



Results

After 5 days of monitoring a bed bug was reported to have been caught in the pit fall of the beacon and a time to inspect the site for activity was scheduled for a few days later.

Upon finger tip visual inspection of the location we were able to confirm the presence of bed bugs on two of the 8 chairs in the side room where the beacon captured a sample although the infestation was not significant enough to be the source of infestation for the bedrooms it may have played some roll in the spreading of infestations through the facility.

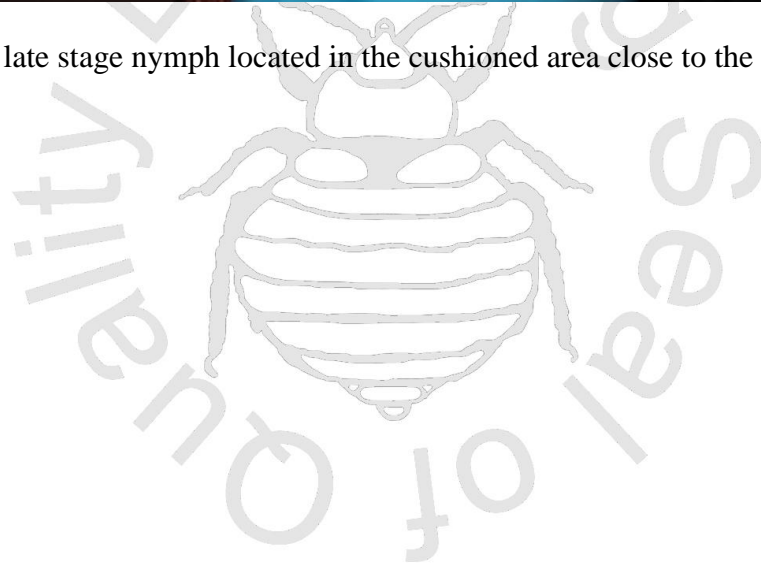
Each sign of the infestation was recorded using high resolution digital photography which are included for reference below:



Seat 1 indicating a single refugia visited by a late stage nymph under the covers on the front of the seat. The refugia displayed 6 faecal traces as well as the cast skin.

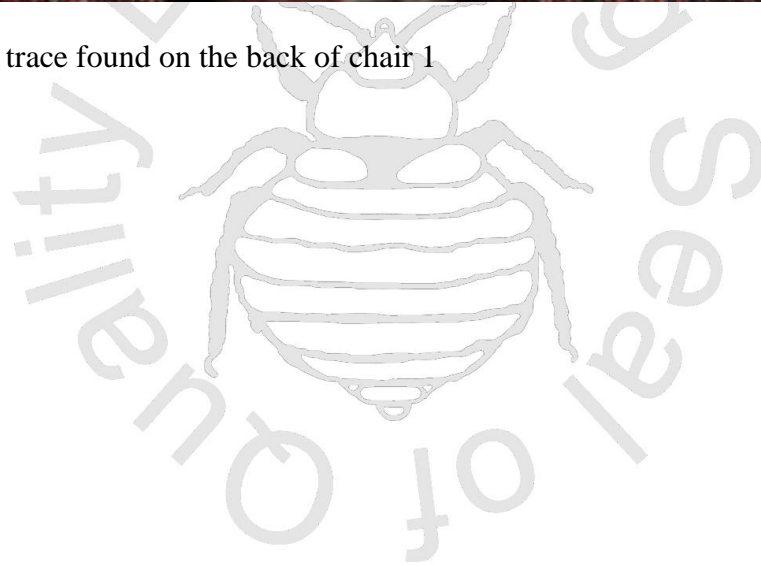


Seat 2 single late stage nymph located in the cushioned area close to the head of the chair.



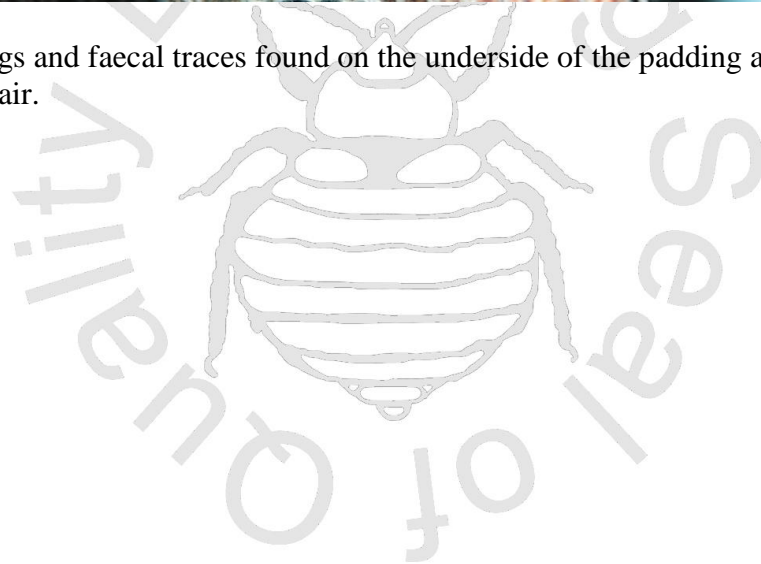


Single faecal trace found on the back of chair 1





Cluster of eggs and faecal traces found on the underside of the padding at the head end of the chair.



Conclusions

The bed bug beacon proved its efficacy in the detection of low level bed bug infestations even within harsh environments.

Although this level of infestation is not likely to be part of the common source for infestations in the building if left undetected it would have developed to the point where it became a significant part of the issue.

We are also confident that the bed bug beacon detected the infestation at a level so low that only the true “bed bug experts” with meticulous attention to detail and advanced inspection skills would have been able to detect it. Given the ratio of potential refugia versus number of samples in the area this challenge would have been beyond the skill of most pest controllers to detect in an economically feasible timeframe.

The system is clearly capable of being operated by someone with little or no pest control training by following the manufacturer's guidelines.

Although further testing will be required to establish its long term efficiency and efficacy in heavier infestations and as part of an adjunct treatment program the initial results are extremely positive.

Although we have not conducted a full side by side trial with other active monitoring systems it is fair to report that this is the most efficient product in this class that we have tested to date.