Annual Summary Form

To Be Completed:

Standard S3: A registrant must seek to ensure that their CPD has contributed to the quality of their practice.
The standard is met if the registrant's personal statement shows that their CPD activities have improved the quality of their work and this is backed up by evidence or they believe that their CPD might improve the quality of their work, but this had not been the case. The registrant's statement must show that they have considered why this has happened, and what they will do next to make sure their CPD will improve the quality of their work in the future.
Standard S4: A registrant must seek to ensure that their CPD benefits the users of the service (employee, customer, student etc).

The standard is met if the registrant has shown (through evidence provided or an explanation given) how their CPD activities have benefited users of their service, either directly or indirectly.

Name:

Membership Number:

Start date of CPD year: 08 October 2014

a) Date of activity	b) Activity area and Category	c) Description of the activity and benefit gained from undertaking it	d) Formal hrs	d) Formal crd	e) Informal hrs	e) Informal crd
2015-08-24	**Formal/Educational: Maintenance/Development Specialist Skills**	Biology Field Work. Monitoring and collecting shrimps from Pitsford Res, part of killer shrimp population control and dynamics. Checking 7 locations of Pitsford Reservoir, collecting shrimps from the bottom side of previously selected stones and rocks on the shore. **S3 & 4.** This is a part of ongoing cross training sessions within the Life Sciences Department. As of August 2015 I have been fully trained in monitoring and different techniques of collecting shrimps from reservoirs, so in case of understaffed Biology Department I can provide a backup. In addition, I understand the importance of ongoing monitoring of zoo fauna within a selected reservoir, especially the dynamics of invasive species (e.g. American crayfish, killer shrimp, demon shrimp, population of each rapidly expanded within the last few years in the South East area of the UK).	**5**	**10**		

2015-04-23	**Formal/Educational: Maintenance/Development Specialist Skills**	Nightingale Survey Volunteer, Nature Reserve at Grafham Water, Cambridgeshire. Early morning (5am) monitoring of 6/7 different locations based in Grafham Water. Listening, spotting and marking locations of nightingales on the map. Determining population dynamics and tendencies. **S3 & 4.** The study continued in 2016 and is to determine the size of the population of Nightingale, its dynamics. Also, by implementing tracking devices (Geo-locator), the exact migration from and to Africa can be monitored. The CPD activity has benefited Biodiversity Team at Anglian Water in the manner that I am fully trained and I can provide help when it's needed. It gave me an idea of how important keeping the environment intact and wild is.Nightingale nest on or near the ground in dense vegetation hence the Biodiversity Team protects that particular type of environment or creates it when needed (the chosen area is thoroughly inspected and all the pros and cons are carefully discussed before making any changes to the environment).	**5**	**10**		
2015-03-04	**Formal/Educational: Attendance at Conferences or Scientific Meetings**	Lunch time talk presentation was on Nightingale Survey at Grafham Water Area, project that started 5 years ago and is to monitor Nightingale population that declined in UK in the last 30 years. Birds captured are measured and tagged. Also a few tracking devices (Geo-locator) were fitted to monitor migrations (UK to Africa and back). All that a part of Grafham Water biodiversity project. **S3 & 4.** The presentation gave me a basic idea of what Biodiversity Team is all about and increased my interest in field work. That was the reason why I decided to volunteer for Nightingale Survey in 2015. Also, by getting to know a few technicians from Biodiversity Team I improved my networking skills (at least within the company) and that led me to getting detailed information about bird tagging courses that I am planning to take next year.	**1**	**2**		
2015-02-06	**Other: Other**	The aim of project is to record the volumes of routine water samples arriving in the lab on a daily basis. Information recorded is: name of the courier, time samples arrived and registration time, amount of samples and type: expected, unexpected, raw or commercial. This is a part of a bigger project of changing the method of detecting and confirming E. coli and Coliform organisms from standard MLSB filtration method to Quanti-Tray method. Main factor taken into consideration in this instance is the time needed for the single sample to reach the room temperature (in order for Quanti-Tray to work correctly sample tested need to have a room temperature). Water samples are transported in a van fridge so they arrive in the lab slightly cool. **S3 & 4.** This gave me an idea of how many samples is an average and what to expect on a particular day of the week hence gave an idea of how to sensibly distribute the work force and how much media is needed for the day (e.g. Wednesday is the most busy day of the week which means that we need more MLSB plates and secondary indicators, most of the for the raw and commercial samples; most of them arrive on the Wednesday as well).	**5**	**5**		
2015-01-06	**Work Based Learning: Experiential Learning**	The aim of work is to keep track on sludge samples received on a weekly basis so sufficient volumes of media can be made (TBX agar for E.coli bacteria, MRDA and RV and XLD for Salmonella testing) and consumables ordered from stores. Spreadsheet was created with specified dates, sample point codes, no of	**2**	**4**		

		samples to be received with specified testing (E.coli or Salmonella) and route details. Schedule details Jan - March 2015. Any unexpected samples will be recorded separately. **S3 & 4.** The project made me feel responsible for the "Sludge" department and made me realize how important being well prepared for the working day is. That includes getting my media ready (TBX, MRDA, RV and XLD) and ordering consumables from stores (micro pots, 10ml pipettes, 10ml universals and pipette tips). This way I am able to provide efficient and thorough service and be free to help out with other things that needs doing hence it benefits the user of the service.				
2014-12-16	**Work Based Learning: Experiential Learning**	100ml QuntiTray pot calibration. Pouring SDW (sterile distilled water) to 100ml pot (use 100ml line on the pot as the indicator) and weighting the lot on the lab scale; tare the weight of the pot beforehand. Five pots were used, results recorded on the spreadsheet and used for Idexx QuantiTray E.coli/Coliform method validation. **S3 & 4.** This one-off study made me realize how detailed a validation work can be. It's not just about making sure that the method works within the outlined concept but making sure that all the components used in the validation process are scientifically acceptable (so in this instances: balance was calibrated beforehand, pipette used to dispense distilled water was also calibrated and than the pots used in Quanti-Tray method were calibrated using previously calibrated equipment).	**1**	**2**		
2014-11-18	**Work Based Learning: Peer Review of Own Work**	Ongoing PDR task involving measuring time required to complete a specific task within Microbiology Laboratory. Tasks included: 1. Sample registration: time required to register 20 samples on AQ Windows System; 2. Laboratory preparation: assembling funnels, cleaning down fumigation cabinets, topping up alcohol tins and chloros bottles, preparing padded MLSB e.coli/coliform media Petri dishes; 3. 2 & 3 day TVC (total viable count) reading: based on small volumes processed during the weekend; 4. Media preparation: includes SDW (sterile distilled water), YEA (yeast extract agar), Chromogenic media. **S3 & 4.** At the end the project was terminated as we realized (as in, me and the senior scientist) that every technician got a different method or way to perform each task on hand. Loads of times you can get sidetracked to, for example, report a presumptive coliform on a customer tap or set up a confirmation test for either primary or secondary indicator. It made me realize that within analytical lab environment it's not at all about moving from task 1 to 2 to 3 and so on. I had to learn how to be fluent and approach work in a more flexible manner (that means prioritizing work) and learn how to multitask and organize work and make time for any unexpected tasks.	**2**	**4**		
2014-11-04	**Formal/Educational: Attendance at Training Course**	Training session on Idexx Colilert-18 Quanti-Tray technique used to detect and enumerate E.coli and coliform organisms. Test gives confirmed result after 18 hours of incubation in 35C and is based on Idexx's patented Defined Substrate Technology (DST). When total or faecal coliform metabolize nutrient indicator	**2**	**4**		

		ONPG the sample turns yellow; when E.coli metabolize nutrient indicator MUG the sample also fluoresces. Quanti-tray will be used in Raw & Commercial Laboratory within Microbiology Department initially. It will save time and resource as there is no need for setting up time-consuming confirmation when following MLSB procedure. **S3 & 4.** Quanti-Tray method is still not being used as it wasn't yet approved by the board of directors. It made me understand that it's not that easy and straight-forward to push through a new (improved, or so it seems) method of detection. There is much more things to consider than just improvements for the Microbiology Lab, for example: the cost of one Idexx Quanti-Tray set and the volume of samples processed on a daily basis; volume of waste created and the cost of that to be disposed off, the sensitivity of the test and the cost of re-sampling in case of detecting any non targeted organisms. Currently test is used for the audit purposes and, in that instance, I am trained to present it to whoever audits the method.				
2014-11-01	**Professional Activity: Lecturing or Teaching**	Training and supervising colleague in weekend tasks. Mainly focusing on reading secondary indicators (*Clostridium perfringens, Pseudomonas aeruginosa* and *Enterococcus feacelis*), entering data on AQ Windows system and setting up confirmation tests of presumptive Coliform and E.coli. **S3 & 4.** I was given a one-off task to train and supervise a new staff member in reading and confirming primary and secondary microbiological indicators during the weekend. In addition, I gave him an idea of how to organise your day within the microbiology lab as weekends are the most labour intensive and requiring extreme multitasking (jobs to be completed include: pipette calibrations, morning and afternoon temperature reading, autoclaving funnels for late processing, registering samples from previous night and creating worksheets for the day, preparing daily environmental MLSA and Chromogenic plates, autoclaving waste and dish washing bottles and flasks in-between tasks, reading and confirming "dirty side" samples, sludges, salmonellas and E.coli's, reading and confirming primary and secondary indicators and reporting through any presumptive and confirmed results to duty scientist). I benefited through the CPD activity and gained a basic supervisory experience, I took responsibility for all task performed by the new technician although my main job was to train him in reading and confirming primary and secondary indicators. I realized how important patience and understanding is when it comes to training a new member of staff. I understood that what seemed perfectly clear to me can be puzzling for a new micro technician.	**10**	**20**		
2014-10-13	**Work Based Learning: Discussions with Colleagues**	Discussion with Colleagues about improving TVC (total viable count) checking system. Reason for it was plates missing, labelled with the wrong sample number, not labelled at all or incubated in the wrong temperature. Worksheet label was introduced to fulfil right testing requirements. Label includes TVC check, secondaries and E.coli check, signature, time and date of checking, processing and collecting plates. **S3 & 4.** After the check label was introduced my attention to conduct the TVC, secondary indicator and E. coli check properly and thoroughly has increased and numbers of non-conformances within the Microbiology Lab has noticeably dropped. I also perform a double TVC check after all the samples of the day were processed (this requires two technicians, one reading out the sample numbers written on the	**1**	**2**		

		TVC petri dishes, other highlighting the correspondent sample numbers on the worksheet, any missing samples are ticked and processed immediately). That contributes to professionalism of the Microbiology Lab and ensures that the service provided is thorough and proper.				
2014-10-11	**Work Based Learning: Discussions with Colleagues**	On the phone discussion with Life Science Manager about reporting commercial samples. Information in the email must include sample location; date the water sample was taken, sample point code and presumptive or confirmed result to be reported. In addition, any details from retained bottle can be included. Addition of sample number is not necessary in case of commercial customers. **S3 & 4.** This gave me an understanding of importance of passing the correct, detailed information of the failed sample to a commercial customer. It improves the service provided and increases the professionalism of the Microbiology Lab. Not all the sample information is included on the system when the bar coded label is scanned, therefore it is crucial to check for any additional information on the bottle itself. This makes it easier for the commercial customer to identify the correct sample and take the appropriate action as soon as possible (it is important to remember that we are dealing with potentially life-threatening, pathogenic microorganisms and that we test tap, fresh, drinkable water).	**1**	**2**		
					f) Total Credits	**71**

By submitting this form, you declare that the information provided above is a true and accurate account of your CPD activities