VISITATION TO THE UNIVERSITY OF BRISTOL 2007
Visitation to the Veterinary School of the University of Bristol
12 – 16 March 2007

Report to the Council of the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966, and to the Education Committee of the European Association of Establishments for Veterinary Education (EAEVE) in compliance with European Directive 2005/36/EC

RCVS, June 2007
LIST OF VISITORS

Mr Stephen Ware, BVM&S, MRCVS
Chairman of the Visitors

Mr Timothy D Davies, BVSc, CertSAS, MRCVS
Visitor for Small Animal Clinical Studies

Dr Mogens Jakobsen
Visitor for Large Animal Clinical Studies
and nominee of EAEVE

Professor Timothy M Skerry, BVetMed, PhD, CertSAO, MRCVS
University of Sheffield
Visitor for Pre-clinical Sciences

Professor Frans Smulders, DVM, DipECVPH
University of Veterinary Medicine, Vienna
Visitor for Food Hygiene and Veterinary Public Health
and nominee of EAEVE

Professor Stuart W J Reid BVMS PhD DVM DipECVPH FRSE MRCVS
University of Glasgow
Visitor for Para-clinical Studies

Professor R Max Zuber was present as an observer nominated by the Australasian Veterinary Boards Council (Inc).

Mrs Freda Andrews, Head of Education at RCVS, was present for the duration of the visit, together with Miss Anne Jermy, Education Committee Manager at RCVS.
INTRODUCTION

1. This report is prepared in accordance with the provisions of Section 5(1) of the Veterinary Surgeons Act 1966, “for the purpose of securing that the courses of study to be followed by students training to be veterinary surgeons and the standard of proficiency required for registration in the register shall be such as sufficiently to guarantee that persons registered in the register will have acquired the knowledge and skill needed for the efficient practice of veterinary surgery”.

2. The Visitors were also mindful of the Directive of the Council of the European Communities (2005/36/EC, Annex V.4, section 5.4.1) of September 2005 concerning the requirements for the study programme for veterinary surgeons. The evaluation was undertaken in accordance with the evaluation criteria defined by the European Association of Establishments of Veterinary Education (EAEVE) in 2002, which are incorporated within the RCVS procedures for visitations. The visit was conducted in accordance with the procedures set out in the document “Criteria and Guidance for RCVS Approval of Veterinary Degree Courses in the UK and Overseas”, as revised January 2006.

3. The Visitors were appointed by RCVS Council and included two nominations from EAEVE, as well as an observer from the Australasian Veterinary Boards Council with which RCVS has a mutual recognition agreement. The Visitors’ remit was to report on all aspects of the courses of study, staffing, accommodation, and equipment available for training in veterinary surgery, and the other arrangements and facilities for such training with reference to 1 and 2 above.

4. The Visitors were present at the University from 12 – 16 March 2007 inclusive. The Visitors stayed together for tours of the facilities at the Veterinary School on both the Bristol and Langford sites, and for the majority of the meetings with staff and students. The Visitors individually undertook more detailed visits to the individual departments with which they were principally concerned, and to the various clinics and Wyndhurst farm. The Visitors held a final meeting with the University’s Vice Chancellor, the Head of School and the Dean of the Faculty on the final day of the visit to provide a summary of their main findings. The programme for the visit is attached at Annex 2.

5. The Visitors thank the Head of School, Dr Frank Taylor, and his colleagues at the University of Bristol School of Clinical Veterinary Science for their help and hospitality during the visit. A thorough self-assessment document was prepared by the School and provided to the Visitors before the visit. Factual extracts have been included as part of this report. Additional documents including timetables, examination papers, external examiners’ reports, detailed course material, minutes of internal meetings, and access to the University’s intranet were provided for reference in a separate ‘base-room’. This material was catalogued and presented in a thoroughly professional and structured way and was found to be a valuable resource for the Visitors.

6. The Visitors commend the University on the quality, commitment and motivation of its veterinary students. Their positive contribution to the visit was most important. Equally, the staff were enthusiastic and committed to the mission of the School and very helpful to the Visitors.
7. The last full RCVS visitation in 2000 concluded with a number of recommendations concerning the organisation of the School, the need to strengthen the facilities and curriculum provision in pathology, preferably by establishing a new chair in the discipline, concerns about the teaching provision and facilities for veterinary public health and food hygiene, the staff recruitment and retention strategy, and the electives system.

8. A re-visit was undertaken in February 2002 to check on progress with these recommendations. The Visitors were able to report to RCVS Council that “the long lasting deficiency in ensuring adequate academic leadership in veterinary pathology has been satisfactorily addressed by the appointment of a professor to a newly established chair. The deficiencies in the facilities for teaching veterinary pathology have been satisfactorily addressed by refurbishment and plans for new buildings. The deficiencies in the teaching of veterinary public health, food safety and food science have been, or are being, satisfactorily addressed through curriculum reform, recruitment of new staff and adoption of the course objectives in the document ‘Report of the Heads of Veterinary Schools to the Royal College of Veterinary Surgeons on Veterinary Public Health Teaching in UK Veterinary Schools’, dated 16th October 2001”.

9. In addition to these important changes, there have been a number of other organisational changes and significant investment in buildings and equipment since the 2000 visitation.

   • In 2003, the former Faculty of Medicine was split into a new Faculty of Medical & Veterinary Sciences (within which sits the School of Clinical Veterinary Sciences) and a separate Faculty of Medicine and Dentistry which covers the NHS-oriented clinical departments. This realignment is considered by the School to provide a number of benefits, most notably that all the departments associated with teaching veterinary undergraduates and postgraduates (with the exception of parasitology, which comes under the Faculty of Science) now reside within one Faculty, thereby improving interaction between the heads of those departments involved in teaching the BVSc programme.

   • In response to a recommendation in the 2000 Visitors report, the roles of the Head of School and Head of the Department of Clinical Veterinary Science have now been combined into a single post, thus providing the Head of School with a greater degree of academic authority and budgetary control than heretofore.

   • There has been further reorganisation within the Department of Clinical Veterinary Science, now structured into three roughly even divisions: Companion Animal Studies, Farm Animal Science, and Veterinary Pathology, Infection & Immunity. The enlarged Department now has research and teaching responsibilities for paraclinical veterinary science (pathology and microbiology) in addition to its traditional responsibilities for animal husbandry, food science, veterinary public health, veterinary medicine and surgery.

   • Following the appointment of a new Chair in Veterinary Pathology in August 2001, the veterinary pathology and microbiology units transferred from Bristol to Langford. The diagnostic laboratory disciplines of histopathology and clinical pathology were amalgamated to form Langford Veterinary Diagnostics (LVD). The academic pathology unit was due to move to a refurbished suite of laboratories and offices at Langford, such that the whole of LVD will be housed together and in close proximity to the research arm of the Division.
• There has been improvement and rationalisation of facilities within the Department of Anatomy at Bristol, such that all dissecting room facilities (both veterinary and human) are managed and run within a single Comparative Morphology Centre. The School of Medical Sciences (the ‘sister’ school to Veterinary Science within the Faculty) has been awarded a £5 million Higher Education Funding Council (HEFCE) grant to develop a Centre of Excellence in Teaching and Learning (CETL), a major component of which is development of state-of-the-art clinical anatomy teaching facilities. The Veterinary School will be benefiting from many of these new teaching facilities.

• The Departments of Physiology and Pharmacology are in the process of merging, providing opportunity for greater horizontal and vertical integration in the teaching of veterinary physiology and pharmacology.

• The internal committee structure, which had been criticised for its complexity by the Visitors in 2000, has been rationalised.

• The following new buildings and refurbishments have been completed:
  - an equine hospital stable court (2001)
  - an impressive new teaching and learning building at Langford (the Pearson Building), including a new lecture theatre, seminar rooms and computer suite (2004)
  - teaching laboratory for microbiology and pathology practicals (2004)
  - wet laboratory for pathology (2004)
  - new genetics laboratory (2005)
  - EU compliant incinerator (2005)
  - a new small animal practice building, including hydrotherapy unit for dogs (2006)
  - laboratory refurbishment for the pathology team (2006)
  - upgraded lecture theatres at Southwell Street
  - refurbishment of research laboratories across all five departments in the Faculty including a suite dedicated to whole animal physiology
  - new and upgraded facilities to house small experimental animals including animal care facilities at Bristol and Langford
  - a new small group teaching facility which includes on-line computer access, in the ‘Animal Barn’ at Southwell Street
  - investment in laboratories in the Department of Physiology

10. This list of changes demonstrates an impressive level of support to the Veterinary School from the University and the Faculty.

SUMMARY OF VISITORS’ COMMENTS AND FINDINGS

11. As reported above, there have been numerous beneficial developments at the Veterinary School since the last full RCVS visitation in 2000, including significant capital investment in teaching and research facilities (detailed above) as well as organisational changes which the Visitors welcomed. The extent of this investment clearly reflects the support by the University for its Veterinary School, which the Visitors agreed was most encouraging.
12. The Visitors observed many good features during their visit which are reported more fully later in this report, and the School is to be commended for its many strengths. For example: the Visitors remarked upon the strong team spirit and sense of family which was apparent wherever they went and with virtually all their contacts. The quality and commitment of the institution and the staff and, in turn, the exemplary and universal support given by staff to the students was most impressive. The Visitors witnessed a very high level of pastoral care for the students both within the University in general and in the Veterinary School in particular.

13. An excellent example was the level of care devoted to the arrangements for extra-mural study placements and the level of support that students received during and after their EMS experience. The arrangements for EMS with the use of ‘foster practices’ in which students spend the majority of their placements is a significant strength. The Visitors were also pleased to see the progress that has been made with the development of an electronic system for recording and monitoring students’ EMS experience which, if used properly, has the potential to improve the students’ learning experience substantially.

14. The Visitors were impressed by the pre-clinical facilities and teaching at Southwell Street in Bristol and especially by the quality of staff, their teaching skill and enthusiasm in the Department of Anatomy. The development of facilities in the ‘Animal Barn’, and close association between the animal handling course and the teaching of anatomy was seen as a particular strength.

15. Bristol should be congratulated on its award from the Higher Education Funding Council (HEFCE) for the Centre of Excellence in Teaching and Learning in the Faculty of Medical and Veterinary Sciences. This initiative is developing innovative learning materials and new strategies for the teaching of anatomy, histology, pharmacology and physiology. Innovations such as the virtual microscope, the virtual dog and the human patient simulator, ‘STAN’, are becoming available to veterinary students and demonstrate the benefits that can be derived from pooling resources across departments.

16. The presence of an EU licensed abattoir at Langford is a unique and useful facility which the School would like to develop further as a teaching facility. Used principally for research purposes at present and with a very low throughput, it cannot replace the experience that students need to gain in full-throughput commercial abattoirs, but there is potential to optimise its availability as part of an introduction to food hygiene.

17. The Visitors were impressed by the excellent small animal first opinion practice at Langford, as well as the consulting arrangements within the referral hospital, the facilities for kennelling and equine stabling (although the equine isolation unit was felt to need investment), and the equine clinic. The new teaching block, the Pearson Building, with its excellent lecture theatre, seminar rooms and computer suites is also a strong addition to the Langford site.

18. The post mortem facilities, which were the subject of critical comment in 2000, are now significantly improved and adequate for purpose, and the availability on site of the Veterinary Laboratories Agency is a bonus for the teaching of pathology.
19. The Visitors were of the opinion that the revised organisation structure of the Veterinary School, within the Faculty of Medical and Veterinary Sciences, was fit for purpose. As the School is part of a wider Faculty which is headed by a Dean, the Head of School does not have direct control of the full budget for the School, but arrangements appeared to work well nevertheless, with the Dean in full support of the aims and objectives of the School. This support will be vital as the University goes through what is expected to be a challenging year ahead with general tightening of budgets and restrictions on recruitment.

20. Bristol is to be congratulated on achieving a significant increase in the number of students undertaking intercalated degrees. The take-up rate is now in excess of 20%, thanks in part to the Veterinary Training and Research Initiative (VTRI) funding from government. It is hoped that consideration will be given to measures to maintain this level of intercalation when the VTRI funding runs out.

21. A significant strength for the School is its geographical location at Langford in the midst of an area with a high involvement in production animals, although the Visitors were of the view that this opportunity was perhaps not being fully optimised.

22. Notwithstanding these considerable strengths, there were a number of areas in which the Visitors had concerns, and which will need to be resolved quickly if the education of veterinary undergraduates is not to be compromised in the near future. Most of these problems are well known to the staff of the School and the University, and the Visitors were encouraged to hear of plans to address them. Less encouraging was the fact that the plans have been in discussion for some considerable time and, although perhaps nearing resolution, it appeared to the Visitors that there was still a risk that the proposals could fall through or be unacceptably delayed because of funding constraints. Specifically, any agreements for capital funding that will not start immediately will need to take account of index-linking if there is not to be a shortfall by the time work begins. There appeared to be little evidence of contingency planning for that event.

23. The Visitors observed evidence of breaches in health and safety throughout the week which, in their opinion, presented a risk that students particularly, as well as other personnel, are not developing a sufficient awareness of the importance of this subject. **The Visitors recommend that there should be a significant increase in attention to the detail of health and safety matters across the board on both campuses.**

24. Allied to this, the Visitors were disappointed to observe the poor state of repair of some of the older buildings at Langford. Although it is acknowledged that some facilities are earmarked for development, their age cannot be used as an excuse for lack of cleanliness, nor for failing to ensure that they are maintained as well as they could be in the circumstances. **The Visitors therefore recommend that further attention is paid to a programme of maintenance and cleaning of the fabric of many of the buildings on the Langford campus, especially those used for teaching purposes.**

25. The Visitors were concerned at the low level of biosecurity at Langford. Perhaps of most significance was the poor condition of the farm which the Visitors regarded as one of the worst examples they have experienced of a totally unacceptable environment in which to train veterinary
students. Access to a farm for teaching purposes is essential for a university veterinary school but it is not acceptable for impressionable students to be trained in such circumstances. The problems here must be addressed as a matter of urgency. The University has plans to upgrade the farm, possibly in partnership with an external organisation and, if this comes to fruition, there is potential for an excellent state-of-the-art resource which will be of significant benefit to the Veterinary School. **Until such plans are implemented, however, measures must be put in place to improve cleanliness and bio-security on the farm, especially if it continues to be used to teach students in the meantime.**

26. The Visitors were concerned at the declining clinical caseload for companion animals, the reasons for which are acknowledged to be complex. They identified in particular that the facilities for surgery and diagnostic imaging were no longer fit for purpose and that these deficiencies were contributing, amongst other factors, to the decline in the clinical caseload. The facilities for surgery are not up to modern standards for teaching, and the surgery building is in need of urgent attention if it is to continue in use in the short to medium term. The RCVS Visitors report in 2000 commented that there was “a continuing need to upgrade both the physical facilities and equipment base of the clinical departments to maintain the professional credibility of the referral services which underpin their teaching and clinical research activities” and this position still stands.

27. The Visitors welcome the fact that the School and the University have recognised these problems and that serious efforts at rectification have been initiated. There are firm plans agreed at University level to take forward an ambitious business model which, if successful, could lead to significant improvements in clinical services. However, it is taking some time for final decisions to be taken, and there are no guarantees, even if contracts are agreed, that investment will follow quickly enough to resolve the problems before they begin to impact seriously on students’ clinical training. The clinical education of veterinary undergraduates must be protected in the meantime. **The Visitors recommend that decisions are made and action taken to confirm and implement the business models needed to resolve these problems, and that a contingency plan is put in place to manage the risks in the meantime.**

28. The Visitors were pleased to learn that the School has embarked on a long-overdue review of the curriculum, but would suggest that this exercise would benefit from a greater degree of input from external sources. They have made some recommendations concerning the curriculum, in particular the need for veterinary public health to continue to be identified as a separate discipline, notwithstanding the importance of integrating VPH concepts with other parts of the curriculum. It will also be important for the review to ensure that the teaching of production animal practice gives due emphasis to the veterinarian’s increasing role in herd health management and welfare in addition to the treatment of individual animals. Attention must also be paid to ‘professional knowledge’, including introducing students to practice management through an appreciation of practice standards.

29. The Visitors are of the view that the problems they have identified are in principle resolvable, especially given the support of the Faculty and the University management, together with the commitment of the staff in the School. However, even taking into account the many positive
features of the Bristol programme, the problems are such that they have the potential to have a negative impact on the quality of education received by Bristol’s veterinary undergraduates.

CONCLUSION

30. It is therefore appropriate for the Visitors to recommend to RCVS that the BVSc degree should be subject to “conditional approval”. The University will be required to take steps to correct the deficiencies within a two year period, extendable for a further two years if significant progress is demonstrated.
SUMMARY OF RECOMMENDATIONS

(Reproduced from elsewhere in this report)

Facilities

a. The Visitors recommend that Wyndhurst Farm should not be used for training students until significant improvements are made to the facilities. The School should explore the use of alternative locations for training in the meantime, for example by contracting with local farmers (para 246).

b. Finance needs to be released for the immediate development of a new equine theatre and equine isolation facilities, to allow re-development of the old equine theatre or an alternative site to provide a new imaging and operating environment for small animals, to incorporate an intensive care unit. (para 240)

c. The Visitors recommend that the School should consider working towards the principles of RCVS Practice Standards to ensure its clinical facilities adhere to the highest levels of clinical practice. (para 233)

d. Measures must be explored to avoid splitting the accommodation for the Farm Animal group across the Langford site. (para 276)

e. It is recommended that the Head of School should have access to an appropriate maintenance budget. (para 210)

f. Greater attention must be paid to routine cleaning and maintenance of buildings at Langford. (para 40)

g. It is recommended that the School puts in place more extensive depreciation planning and structured replacement policies. (para 36)

h. A clinical IT information systems group should be established to define and cost the IT solutions which may needed in the new units. (para 283)

Health & Safety

i. Close attention must be paid as a matter of urgency to developing an appreciation of the importance of health and safety amongst staff, students, and any external contractors, not only in order to ensure proper compliance with relevant regulations, but also to demonstrate best practice to students. All teaching staff should be aware of emergency shower facilities (to which access must be maintained) as well as eye wash provision. Laboratories should be kept tidy and clutter free and the obstruction of walkways with student belongings avoided. Food and drink should never be allowed in laboratories. (para 209)

j. Ensure that proper bio-security measures are put in place at the farm and elsewhere at Langford to prevent the spread of infectious disease and zoonoses. (para 245)
k. Standard operating procedures for small animal isolation should be posted on the access door clearly visible to all personnel before they enter the room. (para 212)

Clinical case load and clinical services
l. The School must expedite its plans for improving the clinical services at Langford, either through the proposed development of LCVS or otherwise, in order to ensure continued viability of all its clinics and to maintain an adequate supply of a varied clinical caseload for teaching purposes. If LCVS is established as a commercial partnership, it is necessary to ensure that the needs of the business operation do not compromise students’ access to case materials and clinical experience. (para 275)

m. The School must expedite plans to increase the clinical case load to ensure that students are exposed to a sufficiently broad range of clinical cases, and to allow the development of a broader range of options within the clerking rotations in the final year. (para 113)

n. A review of client service should be carried out separately by equine and small animal referral departments. This could involve visits to the larger private referral centres which are regarded as exemplary in this respect. (para 232)

Curriculum
o. During its curriculum review, the School should give serious consideration to extending the length of electives, in order to comply with the published RCVS and EAEVE recommendations on this subject. (para 50)

p. Continue to build on the good work already undertaken to develop the teaching of Communication Skills, and ensure that it continues to receive due attention throughout all years of the course, both as a separate taught subject, and integrated within other client-focussed clinical teaching. (para 56)

q. The School should ensure that greater attention is paid to the coverage of RCVS Practice Standards within the first opinion practice in order to introduce students to the concept of practice performance and management. (para 132)

r. The School should ensure that Veterinary Public Health is identified as a separate subject within the curriculum, integrating aspects of microbiology, epidemiology, food technology and production animal practice, in order to prepare students for their important role in the ‘stable to table’ continuum. (para 126)

s. During the ongoing curriculum review, the School should ensure that attention is paid across the curriculum to the coverage of professional knowledge, including ethics, certification, report writing, practice management and practice standards, paying particular reference to the RCVS Day One Competences. (para 133)
Staffing

t. The School should introduce the use of trained and student nursing staff on night duties in the clinics to ensure a more equitable distribution of support staff, and to ensure that an adequate standard of professional nursing care is available at all times. (para 114)

u. The School should consider the provision of 24/7 professional nursing support for the clinical departments to ensure that professional nursing cover is available on a 24 hours basis. (para 322)

v. In addition to the existing staff allocated to Veterinary Public Health, the School should take steps to recruit a veterinary qualified VPH teacher, preferably with Diplomate status, to lead teaching in this area. (para 125)

w. In view of the importance and increasing reliance on information technology, the Visitors recommend that the University gives sympathetic consideration to the School’s desire for additional IT staff resources. (para 302)

x. The Visitors recommend that the School makes every effort to safeguard the role(s) of EMS Administrator and to establish a smooth progression of that role to another equally dedicated individual. (para 359)
CHAPTER 1 - OBJECTIVES OF THE VETERINARY DEGREE COURSE

The objectives of veterinary training institutions are to provide adequate, research-based veterinary training which enables veterinary students to examine and treat sick animals, contribute to animal production whilst maintaining the animals' health and welfare, protect humans from zoonoses and ensure high-quality food products of animal origin for human consumption. The training must cover the broad requirements for veterinary graduates in the individual states, and comply with the EU Directives in the case of EU Member States.

In addition the institutions should conduct research, provide postgraduate and specialist training and play a role in continuing veterinary education.

They should, furthermore, provide services to members of the veterinary profession and the community as a whole.

Findings

1. The aims and objectives of the Veterinary School are articulated in the Department of Clinical Veterinary Science Plan (2003-2012) as being “to maintain the position of the School of Clinical Veterinary Science as a leading European Veterinary School with an internationally recognised reputation in research, teaching and clinical work.” More detailed objectives are also set out in the plan.

2. The Departmental Plan is reviewed during a Departmental Review, which occurs every five years and evaluates the full range of departmental activity, including education, research, management and financial issues. The Review Team consists of a Pro Vice-Chancellor, the Dean, a representative from another Faculty and various external representatives with relevant interests in teaching and research. A university-led review of the Department was undertaken in April 2005 and included the Head of Education of the RCVS in the visiting team. So far as the Department is concerned, the aims and objectives were sustained by the 2005 review.

3. A number of Departments that contribute to veterinary pre-clinical teaching are recognised internationally for excellence in research, including the Departments of Anatomy and Biochemistry, the latter having achieved the highest research rating available of 6*A during the last Research Assessment Exercise (RAE) undertaken by the Higher Education Funding Council for England (HEFCE). The Department of Clinical Veterinary Sciences also has a strong international research profile, across the four themes of Infection & Immunity, Animal Behaviour & Welfare, Food Science & Food Safety (Foodborne Zoonoses) and Matrix Biology.
Comments

4. The Visitors consider that the School’s objectives comply with EU, RCVS and EAEVE requirements.

5. As far as research is concerned, the objectives are being met within the faculty as a whole and although there are concerns over the disparate levels of research performed by different staff members, it cannot be disputed that the student body as a whole are well trained and as motivated and knowledgeable about research as those in other UK veterinary schools.

6. The clinical referral services for practitioners and the provision of continuing education courses are services for the profession. The first opinion service provides a benefit for the community. As an employer, the clinical departments contribute to the local economy of the Langford area.
CHAPTER 2 - ORGANISATION

Veterinary training must take place within institutions of higher education, formally recognised as such in the respective country, and should be undertaken preferably by a free-standing unit, specifically established for that purpose. If it is undertaken by one or more departments of a parent institution, some of which also have other teaching commitments, the veterinary curriculum must be properly integrated, with effective central veterinary control to ensure co-ordinated delivery of the teaching programme. Such a programme must be afforded the same recognition, status and autonomy as other professional training programmes in the institution and/or the state.

The organisational structure should make possible an objective evaluation of the quality of the training provided and the skills of the graduates.

In order to ensure that the veterinary training meets the national objectives and requirements, the organisational structure should allow input from members of the profession and from the public.

Findings

7. The Faculty of Medical and Veterinary Sciences (FMVS) at Bristol is one of six Faculties in the University, the others being Medicine and Dentistry, Science, Engineering, Arts, and Social Sciences & Law. FMVS comprises six academic departments, the departments of Anatomy, Biochemistry, Cellular & Molecular Medicine, Clinical Veterinary Science, Pharmacology and Physiology. The Department of Clinical Veterinary Sciences (DCVS) is situated on the Langford campus and is made up of three ‘divisions’: Companion Animal Studies; Farm Animal Science; and Veterinary Pathology, Infection & Immunity.

8. The organisation of FMVS is facilitated by two ‘virtual’ Schools, with the School of Medical Sciences encompassing the five medical sciences departments, while the School of Clinical Veterinary Science encompasses the Department of Clinical Veterinary Science, Langford, plus the components of the medical sciences departments that contribute to the BVSc programme. In addition, the Department of Biological Sciences, in the Faculty of Science, contributes Veterinary Parasitology teaching to the BVSc programme.

9. Each teaching ‘unit’ of the BVSc programme is overseen by a Unit Organiser, who liaises in the management of the unit with the other teachers (Element Organisers). Unit Organisers meet termly in Working Groups to discuss issues relating to pre-clinical and clinical teaching, and these groups report to the Veterinary Programme Committee.

10. The Veterinary Programme Committee is responsible for overseeing the whole programme and reports to the School’s Undergraduate & Taught Programme Committee. It also receives reports for consideration from the Staff/Student Liaison Committee, which deals with issues raised by students in relation to teaching facilities and other student matters. The Veterinary Programme Committee reports through the Undergraduate and Taught Programmes Committee to the Faculty Board, which in turn reports to Senate.

11. The University has developed this so-called “Bristol system” as a means of teaching basic medical sciences to a wide range of undergraduates on the three professional programmes in Medicine, Dentistry and Veterinary Science, as well as other related BSc honours programmes. Although there is overlap in content of the medical science components taught to these four distinct cohorts
of students, Bristol has chosen to teach each cohort separately, thereby providing a suitably-tailored course for each type of student.

Comments

12. The organisation of the School falls over two sites and mostly as part of a single Faculty shared with Medical Sciences. The Faculty is supportive of the School’s activities. The programme is largely delivered along lines defined by geographical location with years 1-3 located in Bristol and years 4 and 5 at Langford. The curriculum is managed across both sites and all 5 years, although vertical integration is limited. The organisational structure includes several different levels of governance both within the Department of Veterinary Clinical Studies and the Faculty. There is appropriate and adequate representation of the Department on Faculty Committees. There has been streamlining of governance structures since the last visit but there was evidence that it can take some time to resolve major decisions, for example, the formation of a competent structure to manage the proposed Langford Clinical Veterinary Service.

13. The School’s organisation, governance and quality assurance mechanisms allow for the objective evaluation of the quality and training provided and of the skills of the students.

14. The School involves members of the profession and the public in an advisory function, albeit in a largely informal manner. However, it was not entirely clear to the Visitors exactly how the profession or the public were involved in curriculum matters. The opinion of the group responsible for curriculum review, as expressed to the Visitors, was that the curriculum was in need of little change. Wider consultation with external parties might give different insights into this.

15. An advantage of the “Bristol system” is that it has enabled a significant pooling of resources which has led to excellence in pre-clinical teaching. Efforts are made to ensure there is maximum horizontal integration between departments.

16. The Head of School has only a very small budget under his direct control. In many circumstances, the Head of School has to approach other heads of department or the Dean for any issue that has financial implications. The support of the Dean and the Vice Chancellor is helpful, as is the considerable capital support that the School has had in recent years, but as noted elsewhere in this report, there are still significant issues with infrastructure that can only be met by increased funding to the Veterinary School, which may be hard to drive forward given the range of people involved in decision making.
CHAPTER 3 - FINANCE

Universities and national ministries must recognise that veterinary education is more expensive than training in other science-based disciplines, since it includes clinical instruction and public services (e.g. patient care). It also requires a higher level of funding than other professional training programmes, such as medicine and dentistry, which are often subsidised by National Health Service operations and/or similar programmes. Core funding from central sources must reflect this fact.

Findings

17. The University of Bristol has a current annual income of £273M (2006/07), of which £110M is teaching-derived and £163M is research-derived.

18. Currently, the University finds it extremely difficult to aggregate the costs directly related to the BVSc programme across the contributing Departments, since staff and facility costs are nearly all shared between several different taught programmes. However, the University has recently embarked upon an analysis of the full economic cost of teaching; when this is complete, it is anticipated that figures relating to the BVSc will be available. State funding arises from the UK Government via its Higher Education Funding Council for England (HEFCE).

19. The tables and explanations shown below relate principally to the major contributor to the BVSc programme, the Department of Clinical Veterinary Science (DCVS), but the University states that these are indicative of the overall income and expenditure of all the contributing departments. The figures used are those of the budget for 2006/07.

Comments

20. The financial resources appear to be adequate to support the School’s mission when needs are identified. As the School is part of a larger Faculty it is not possible to assess the degree to which all costs are attributed to the provision of the programme and it is evident that there is cross support of the DCVS by the Faculty. There is also evidence that additional financial investment will be required on an ongoing basis.

21. The Veterinary School appears to receive a reasonable share of the HEFCE grant income for teaching, but the way that this is distributed was not altogether clear to the Visitors. In the later years, where funding goes to the clinical departments via the School, this is clear. In the earlier years, where veterinary student related funds go to departments with a wider remit to teach anatomy, biochemistry, pharmacology etc. to other non-veterinary students, it was not sufficiently clear whether the Veterinary School receives the full value of the HEFCE funding per head that is related to their students. Staff maintained that this issue was “hard to disentangle”. The Visitors did, however, view a computerised system that demonstrated how all staff contact time was recorded, which suggests that it would be relatively easy to determine the hours of contact of individual staff within different departments and ensure that the distribution of funding was equitable.
### Table 1.1 Annual Expenditure of the Department

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<th>Academic Year:</th>
<th>2006/07 (Budget)</th>
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#### a. Personnel
- a.1 Teaching Staff \(^{(1)}\) 3,219,000 4,667,550
- a.2 Support Staff 1,514,000 2,195,300
- a.3 Research Staff 1,520,000 2,204,000
- a.4 Clinical Staff 1,082,196 1,569,184
- a.5 CPD Staff 73,443 106,492

**Total Personnel Costs:** 7,408,639 10,742,527

#### b. Operating Costs
- b.1 Utilities and Support Services 3,278,000 4,753,100
- b.2 Expenditure relating specifically to Teaching 137,065 198,744
- b.3 Expenditure relating specifically to Research 2,319,795 3,363,703
- b.4 Clinical Operations 1,066,298 1,546,132
- b.5 CPD 516,557 749,008
- b.6 Services Rendered 316,506 458,934
- b.7 General operations 184,140 267,003
- b.8 Faculty Costs 633,000 917,850

**Total Operating Costs:** 8,451,361 12,254,473

#### c. Equipment \(^{(2)}\)
- c.1 Teaching FIGURES NOT AVAILABLE IN THE SER
- c.2 Research
- c.3 General/common Equipment

**Total Equipment Costs:**

#### d. Maintenance of Buildings
1,254,000 1,818,300

#### e. Total Expenditure
17,114,000 24,815,300

**NB:** The total expenditure quoted here is for the teaching provided at Langford only, and not for the whole of the BVSc course.

### Table 1.2 Cost of Veterinary Training

<table>
<thead>
<tr>
<th>Academic Year:</th>
<th>2006/07 (Budget)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£</td>
</tr>
</tbody>
</table>

1. Annual direct cost of training a student 19,188 27,822
2. Direct cost of training for a degree 95,940 139,112
Table 1.3 Annual Revenues of the Department

<table>
<thead>
<tr>
<th>Academic Year:</th>
<th>2006/07 (Budget)</th>
<th>£</th>
<th>Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Revenue from the State</td>
<td>4,852,000</td>
<td>7,035,400</td>
<td></td>
</tr>
<tr>
<td>b. Revenue from Private Bodies</td>
<td>6,551,000</td>
<td>9,498,950</td>
<td></td>
</tr>
<tr>
<td>c. Revenue from Research (1)</td>
<td>6,551,000</td>
<td>9,498,950</td>
<td></td>
</tr>
<tr>
<td>d. Revenue earned:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.1 Registration fees from Students</td>
<td>1,241,000</td>
<td>1,799,450</td>
<td></td>
</tr>
<tr>
<td>d.2 Revenue from Continuing Education (2)</td>
<td>590,000</td>
<td>855,500</td>
<td></td>
</tr>
<tr>
<td>d.3 Revenue from Clinical Activities</td>
<td>2,721,038</td>
<td>3,945,505</td>
<td></td>
</tr>
<tr>
<td>d.4 Revenue from Diagnostic Activities</td>
<td>324,332</td>
<td>470,281</td>
<td></td>
</tr>
<tr>
<td>d.5 Revenue from non-clinical Services Rendered</td>
<td>448,630</td>
<td>650,514</td>
<td></td>
</tr>
<tr>
<td>e. Revenue from other sources (Sponsorships, Endowments, Recovered Salaries etc):</td>
<td>20,000</td>
<td>29,000</td>
<td></td>
</tr>
<tr>
<td>f. Total Revenue from all sources:</td>
<td>16,748,000</td>
<td>24,284,600</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
(1) Revenue from Research includes:
- HEFCE QR Funding: £1,505,000
- HEFCE Charity Partnership Funding: £117,000
- Direct Research income: £3,800,000
- Indirect Research income: £1,129,000

(2) Revenue from Continuing Education (CPD) is provided from CPD courses arranged by a two-person unit dedicated to the provision of CPD.

Sufficient funds should be available to support the teaching staff/student and teaching staff/support staff ratios recommended by the ACVT.

22. The staffing ratios are as follows and are within the acceptable range defined by EAEVE:

Table 2

<table>
<thead>
<tr>
<th>Teaching staff/undergraduate students (whole programme):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Teaching Staff</td>
</tr>
<tr>
<td>Number of undergraduate students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching staff/support staff (whole programme):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Teaching Staff</td>
</tr>
<tr>
<td>Number of Support Staff</td>
</tr>
</tbody>
</table>

23. Current staffing ratios are acceptable but have deteriorated since the last visitation. Continued investment in teaching staff to support the programme will be necessary if these ratios are to be maintained. The same will be true of support staff.
24. There appears to be adequate provision for clinical and research postgraduate students, although the success in recruiting graduate students at Langford is placing some pressure on office space.

25. Much of the funding for research students is from the finite time-limited VTRI fund, and there is no commitment to continue this from the University when it ends. The current laudable level of intercalation (c. 20%) is also dependent on this funding. Efforts are being made to secure external funds to continue the level of support and particularly intercalation but the likelihood that the School can maintain current numbers is extremely low. This situation could have an impact on clinical training: if there is a significant drop in intercalation due to lack of funds, there is the possibility that a year of up to 120 students may gain an additional 25 students from the last VTRI funded year and lose few, if any, to intercalation. The Visitors were not appraised of any contingency plans to cope with such numbers if the funding for intercalation were to end. (See also para 137.)

Veterinary education must take place in a research environment, and public funds should be made available to support research infrastructure and to provide seed money for projects.

26. The research environment is well supported by public money.

27. However, very little funding is available for infrastructure support or seed money for pump-priming. It is not surprising that there are fewer PhD students in companion animal studies compared with other more research active areas, although there are some PhD students in clinical departments working on clinical research subjects.

**Table 3: MSc and PhD Research Students**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of research students</td>
<td>55</td>
</tr>
<tr>
<td>Male students</td>
<td>12</td>
</tr>
<tr>
<td>Female students</td>
<td>43</td>
</tr>
<tr>
<td>Nationals</td>
<td>38</td>
</tr>
<tr>
<td>Foreign students</td>
<td>17</td>
</tr>
<tr>
<td>- from EU countries</td>
<td>8</td>
</tr>
<tr>
<td>- from non-EU countries</td>
<td>9</td>
</tr>
<tr>
<td>1st year students</td>
<td>17</td>
</tr>
<tr>
<td>2nd year students</td>
<td>15</td>
</tr>
<tr>
<td>3rd year students</td>
<td>13</td>
</tr>
<tr>
<td>4th year students</td>
<td>4</td>
</tr>
<tr>
<td>5th, or subsequent, year students</td>
<td>6*</td>
</tr>
</tbody>
</table>

* 21 BVSc students are currently intercalating in other subjects, either at the University of Bristol or elsewhere; 3 students are deferring a year; 3 students are considered as “external”, i.e. not attending teaching, but returning to sit examinations in summer 2007.

Salaries should be sufficiently high so as to attract and retain highly qualified staff, i.e. staff with veterinary degrees and/or PhDs, and should be equivalent to those of comparably trained individuals in the non-academic sectors. Adequate funds must be available for teaching purposes.
28. Salaries are in line with those offered at comparable institutions; in common with the rest of the sector, competing with the non academic sector is increasingly difficult. There appear to be adequate funds to support teaching.

29. The proposed creation of “Langford Clinical Veterinary Services” may offer a more creative opportunity to align salaries with those available commercially. However, there was still much uncertainty surrounding this project and numerous problems remained to be overcome. (More comments are made about this project in this report – see para. 247)

| Adequate provision must be made to fund necessary teaching, laboratory and clinical equipment, including computers, and to replace and update such equipment at regular intervals. |

30. A prioritised list of requests for minor capital works (< £150k per item) is submitted annually via the Dean of the Faculty of Medical and Veterinary Sciences to the Bursar. Awards are made for the following academic year, subject to a financial limit imposed by the Bursar’s overall minor works budget.

31. Major capital bids (both building and equipment) are submitted (together with full business plans) to the University “Sifting Committee”, chaired by the Pro-Vice-Chancellor responsible for Resources. Recommended projects are then subject to further approval by Estates Committee and Council, before being matched to the University’s cash-flow projections, when funds and timescales are attributed accordingly.

32. The School’s charity – The Langford Trust – has spearheaded several fund-raising campaigns, and has been successful in acquiring funds from charities and private bodies to assist with equipment costs.

Comments

33. There appears to be adequate provision in this regard, although funding for teaching, laboratory and clinical equipment is not available centrally. Any expenditure of this sort must be obtained from other sources.

34. Shared facilities in Bristol for the pre-clinical years are of good quality and are maintained well.

35. At Langford, there is concern for the future over sources of funding to support the replacement of an expanded computer programme in 3 – 5 years time.

Recommendation

36. It is recommended that the School puts in place more extensive depreciation planning and structured replacement policies.

| Sufficient funds must be available to ensure the routine cleaning and maintenance of buildings |
Comments

37. The preclinical buildings in Bristol are in good order and kept clean.

38. The position at Langford, however, was less clear. There was a large body of evidence that there is insufficient funds and/or attention directed at ensuring clean and well maintained environments. In areas this lack of attention impacted on health and safety.

39. For example, many facilities in the small animal surgery/imaging area were in a state that suggested long term inattention to cleanliness and maintenance. Even if the problems over the building’s structure have led to reduction in maintenance due to an intention to replace the facilities in the future, the Visitors observed serious neglect to maintenance of minor items.

Recommendation

40. Greater attention must be paid to routine cleaning and maintenance of buildings at Langford.

41. Since the last visitation to Langford, enhancements and improvements, totalling some £8.2 million, include:

- An equine hospital stable court.
- A teaching laboratory for Microbiology and Pathology practical classes.
- A new wet laboratory facility adjacent to the PM Room.
- Refurbished facilities for Diagnostic and Histopathology Laboratories.
- A new Genetics laboratory.
- Refurbished Infectious Diseases laboratories.
- A new Teaching and Learning complex.
- A new Small Animal Practice building.
- A refurbished incinerator.
- Refurbished IT, Photographic and Computer-aided Learning facilities.

Future approved projects include:

- A new Equine Surgery Building (£3.3 million: 2010-11).

42. There has been significant provision in new clinical facilities in recent years, particularly the equine stable blocks and the small animal first opinion practice. However the equine and companion animal surgical facilities are now very outdated and inadequate for training students, as are the diagnostic imaging facilities. University clinical facilities should ideally be “state of the art” and currently this is far from the case. Whilst some money has been promised in 2010-2012 for equine surgery, such a delay will have a detrimental affect on students’ education, especially given the number of students who can be expected to pass through these facilities in the meantime. Notwithstanding the ambitious capital programme which has support from the higher offices of the
University, unless capital can be made available on a shorter timeframe to construct new facilities in line with other UK veterinary schools, the School will need to consider other measures to ensure that students are trained in accordance with best veterinary practice. The experience of being trained in such substandard space cannot but lead to an acceptance of conditions that would not meet good practice standards.

43. It is important to recognise that the goodwill of the staff is currently driving the clinical departments, but that any difficulties in recruitment are likely to be exacerbated by the condition of these facilities.

44. There is evidence that clinical services are subsidised by the funding formula in place. Greater investment will be required as the School expands student numbers.

45. There are mechanisms for retaining surplus in the clinics although attribution of full costs would suggest that such surpluses are low.

46. The farm animal practice has a good system of reduced charging for clients who allow clinical teaching to occur on their farms. This initiative has stabilised the case load. However, because of the deficiencies at Wyndhurst farm, more and more teaching will need to be delivered on commercial farms and the School will need to take steps to increase the farm animal case load.

47. It is important that clinical departments are able to retain any monies they earn from providing clinical services. Allowing any surplus to be retained and spent by the Head of School in consultation with the Dean of the Faculty would immediately assist in development of the site. However, at Bristol, clinical income surpluses go into a reserve account that is not rapidly or easily accessible for use. Given the antiquated nature of some key equipment such as the x-ray machines in small animal surgery, a large reserve may be necessary, but not at the cost of disenfranchising the clinical departments.
CHAPTER 4 - CURRICULUM - GENERAL

The total body of knowledge of veterinary science has grown to such an extent that no one can achieve the desired high level of expertise in all fields within the time allotted for professional training. Therefore, it is desirable to combine the acquisition of basic knowledge in all fields of veterinary science with more advanced training in one given field. This will enable qualified veterinarians to begin their careers with more confidence and autonomy (up to 20 per cent of the total training time should be devoted to this aspect).

48. Bristol’s BVSc curriculum is designed to deliver both the RCVS Day One Competences, and to meet the Quality Assurance Agency’s ‘Benchmark Statement’ for Veterinary Science which was drawn up in consultation with RCVS and all other UK veterinary schools. Both these documents are sufficiently generic to allow considerable flexibility within the detail of the curriculum. The five-year programme offered at Bristol covers all the subjects required by the EU Directive, with ‘Directed Self Education’ (DSE) built in at all stages to encourage personal responsibility on the part of the student to determine their own education in a directed environment. DSE develops through the programme from relatively simple, time constrained exercises in year 1, to more complex investigations and personal research at later stages in the course and aims to develop students’ skills in problem solving, investigation and communication, as well as preparing them to be independent learners.

A summary of the curriculum is illustrated below:

Table 4:

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
<th>YEAR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy I</td>
<td>Anatomy II</td>
<td>Basic Clinical Science</td>
<td>Veterinary Pathology</td>
<td>CLINICAL CLERKING ROTATIONS</td>
</tr>
<tr>
<td>Animal Management</td>
<td>Animal Health and Husbandry</td>
<td>Microbiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry Physiology I</td>
<td>Physiology II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parasitology Integrated DSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacology and Therapeutics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Public Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companion Animal Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm Animal Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication skills in veterinary practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

49. Although RCVS and EAEVE recommends that up to 20% of the veterinary course should be devoted to more advanced training in elective areas, the current Bristol curriculum only allows for a single 3 week elective to be followed by students at the end of their clinical rotations in Year 5. At the time of the visit, the curriculum review team were not considering extending this elective programme.

Recommendation

50. During its curriculum review, the School should give serious consideration to extending the length of electives, in order to comply with the published RCVS and EAEVE recommendations on this subject.
Veterinary training must comprise at least five years’ full-time theoretical and practical study.

Table 5: General table of curriculum hours taken by all students

<table>
<thead>
<tr>
<th></th>
<th>Lectures</th>
<th>Practical work</th>
<th>DSE</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>210</td>
<td>302</td>
<td>86</td>
<td>51</td>
<td>649</td>
</tr>
<tr>
<td>Second year</td>
<td>271</td>
<td>201</td>
<td>174</td>
<td>15</td>
<td>661</td>
</tr>
<tr>
<td>Third year</td>
<td>310</td>
<td>168</td>
<td>89</td>
<td>12</td>
<td>579</td>
</tr>
<tr>
<td>Fourth year</td>
<td>399</td>
<td>122</td>
<td>23</td>
<td>31</td>
<td>575</td>
</tr>
<tr>
<td>Fifth year</td>
<td>7</td>
<td></td>
<td>945</td>
<td>952</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1197</td>
<td>793</td>
<td>372</td>
<td>1054</td>
<td>3416</td>
</tr>
</tbody>
</table>

*The fifth year actually starts during the final six weeks of the third term in fourth year
**practical clinical rotations (‘clerking’)

51. The Bristol programme fully complies with the requirement for a 5 year full time programme.

52. Communication skills are currently part of the Basic Clinical Science course, but consideration is being given to developing this as a stand alone unit. The course is delivered throughout the programme in a vertically integrated fashion throughout years 1 to 4, and is also part of final year clerking. Bristol has taken an active part in the collaborative project on communication skills training led by the Veterinary Defence Society, using scenarios with trained facilitators and actors to develop students’ confidence in communicating in complex situations with clients and others.

53. Written skills are developed throughout the course and tested in course work and written examinations. Communication with clinicians, support staff, peers and clients is also assessed in some rotations.

54. The course has been well thought out and is no doubt improving the communications skills of graduates produced and the Visitors were impressed by the level of commitment in this area. However the assessment of the communication skills course in the final years is an intensive and time consuming occupation. Care should be taken to ensure that the burden of teaching, as well as assessment is shared amongst several members of staff, to prevent over-reliance on any one individual. Furthermore, whilst it is excellent that communication skills are being taught separately, this should not be seen as a reason to take it away from other subjects: it should also be integrated as a natural part of all other subjects that include interaction with clients.

55. An important component of oral communication skills is the use of oral examinations (vivas) in the course. There are strongly held beliefs in many educational circles that vivas are an inappropriate way to examine students and should be removed from modern assessment processes. However, in the Visitors’ opinion, it is of great importance that vivas remain in the veterinary course throughout the 5 years. Comments from recent graduates reflect that the vivas prepare students well for the unstructured problem solving experience of the consultation. If questions over the retention of vivas are raised, then the School should introduce alternative assessment arrangements for
Communication Skills, for example in the form of objective structured examinations (OSEs) in both pre-clinical and clinical areas.

**Recommendation**

56. Continue to build on the good work already undertaken to develop the teaching of Communication Skills, and ensure that it continues to receive due attention throughout all years of the course, both as a separate taught subject, and integrated within other client-focussed clinical teaching.

The curriculum must be designed in such a way as to allow each student to acquire: adequate general knowledge and technical expertise in biomedical sciences; basic knowledge in the broad field of veterinary science; as far as possible, greater knowledge and technical skills in a specific field of veterinary science.

57. The curriculum is designed to meet this objective, but as stated above, limited attention is given to developing “greater knowledge and technical skills in a specific field”, as only 3 weeks is currently available for elective studies in the final year.

The training in biomedical sciences must enable each student to acquire basic knowledge of the life sciences; learn to search for, select and use information to solve problems (the acquisition of problem-solving skills is a major course objective); gain, analyse and use this knowledge in accordance with the principles of scientific research; demonstrate sufficient scientific curiosity.

58. The opportunity for scientific curiosity is available to those who wish to undertake vacation studentships or to intercalate. This is probably a self-selecting population and more efforts to involve and interest all students in the scientific method would be good, though difficult to achieve in reality.

59. One area where Bristol appears to be ahead of other veterinary schools (as far as the Visitors are aware) is in the analysis of the ways to identify students who will be successful in research or clinical work. The School has made real advances in this and this may provide the ability to advise students on areas for which their skills and attributes may be most advantageous. This could also helpfully impact on selection processes if earlier attributes (ie. before entry to University) can be linked to different performances.

Curriculum development is the responsibility of the institution as a whole, and should not be left to individual departments. The aims of the curriculum, and the learning objectives, must be clearly explained to both staff and students. These aims must reflect the needs of the profession and of society, and mechanisms must be introduced to ensure this. Methods must be established to monitor and, where necessary, amend the curriculum.

60. The curriculum is the “property” of groups comprising the unit organisers, so that there is broad representation of the academic staff body in curriculum monitoring and change. Staff who are not unit organisers have the opportunity to influence it through their unit organisers. Overall responsibility rests with the Veterinary Programme Committee, which in turn reports to the
Undergraduate & Taught Programme Committee, and thence to Faculty Board. Substantive changes need to be approved by the University Education Committee. The BVSc Working Groups for Years 1-2 and 3-5 discuss the taught units within the pre-clinical and clinical parts of the curriculum, respectively. Their reports are passed to the Veterinary Programme Committee. Decisions are shaped by experience in the previous academic session and are informed by External Examiners’ reports and student feedback. At the end of each session, the programme is reviewed as a whole by the Veterinary Programme Committee.

61. The current curriculum was last reviewed in 1993. Following the University’s internal quality audit in 2005, the School initiated a curriculum review led by a Steering Group. Some basic guidelines have been established, namely that the principles enshrined in the 1993 review are still relevant and that its overarching principles should be followed, and that the principle of building on a foundation of science taught by pre-clinical departments should be retained. The Steering Group maintains that this “Bristol System” is still fit for purpose, although it recognises that it does require some adjustment and changes. Consideration is being given as to how to reduce the material overload on both students and staff, to maximise opportunities for vertical and horizontal integration, and to split core and elective teaching. The Group has rejected the concept of a fully vertically integrated, themed curriculum on both practical and educational grounds, although it has recommended some introduction of vertical themes to tie together aspects of Veterinary Public Health as well as generic professional key skills and clinical skills.

Comments

62. The aims and objectives of the curriculum are clearly set out in course documents which are used by both staff and students.

63. There was clear evidence that monitoring of the curriculum and its delivery is an ongoing process. The use of external examiners’ reports to tune the curriculum and its delivery is well established. Where issues arise there is clear evidence that there are channels for students to inform unit organisers. A specific example of this occurred recently when a staff member’s sabbatical led to problems with one area of teaching: this problem was resolved quickly and efficiently.

64. The issue of vertical course integration was discussed with a number of staff members during the visit. Whilst there are different educational theories concerning this subject, it appeared to the Visitors that the current amount of vertical integration achieved at Bristol was about right, given the context of the split campuses and faculty organisation. The structure of the current curriculum appeared to both protect fundamental science teaching and maintain the interest of students.

65. Thought should be given to allowing greater input from the “next generation” of senior staff, and to widening the consultation process with practitioners to take a more panoramic view of the course. Furthermore, while it is important to view the feedback of recent graduates with caution, the Visitors encountered a widespread view that students could be better prepared for their postgraduate career by using them less as labour/exposing them to complex surgery, and giving them more practical training in fundamentals of clinical subjects particularly in relation to common conditions rather than exotica. The Visitors appreciate that exposing students to less common conditions and the more complex aspects of surgery can serve to inspire them for their future
careers, but a balance between routine and more advanced procedures will need to be achieved in the curriculum.

66. Whilst it was stated that consideration was being given to how the RCVS Day One Competences matched the curriculum, the Visitors were disappointed to learn that the Steering Group was not adopting a ‘top down’ approach to its review, namely that they had not adopted the Day One Competences as a starting point for curriculum design. The Visitors accept that there are many ways in which to undertake curriculum review, but would wish to emphasise that the outcome of the review must still be such that it is possible to identify clearly how Day One Competences are to be covered and assessed within the new curriculum.

Suggestions

67. Whilst it is helpful that the curriculum review is being taken forward by a small, focussed Steering Group, consideration should be given to extending the external consultation with practitioners and others such as junior staff to ensure that a genuinely independent view of future curriculum needs is achieved.

68. The Steering Group will need to pay attention to the coverage, and arrangements for assessment, of the RCVS Day One Competences within the new curriculum, ensuring that these are transparent for students and staff.

69. Further consideration should be given to extending the length of electives, to take account of RCVS and EAEVE recommendations in this area. (See para 49 above)

70. The curriculum review should take into account that the veterinary profession is undergoing significant change, and the team tasked with taking this work forward should start from a vision for the future function of the veterinarian. For example, the approach to Animal Management, Animal Health, Farm Animal Science and Veterinary Public Health should take into account the need to prepare production animal veterinarians of the future to take responsibility for the ‘stable to table’ approach. Accordingly, Veterinary Public Health needs to be accorded due status within the curriculum, not only as a separate discipline, but as a new concept composed of elements of microbiology, food technology, production animal practice and epidemiology. Farm Animal Science needs to undergo a paradigm shift away from reactive treatment to a proactive herd health management philosophy which fully incorporates farm to fork approaches.

The instruction provided should include basic training in all the subjects noted below1, covering the major domestic species.

71. The ‘Barn’ at Southwell Street in Bristol houses a large number and range of animals which are used to teach Live Anatomy within the Anatomy I and II Units. In 2006, a “pod” was introduced within the barn - a room housing 8 computers for accessing computer-assisted learning, live anatomy tasks, and DVDs relevant to clinical anatomy. Within the pod there are also a large

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1 Basic subjects must include: anatomy incl.histology & embryology; biochemistry & molecular biology; biology incl. cellular biology; biophysics; biostatistics; chemistry; epimediology; genetics; immunology; microbiology; parasitology; pathological anatomy (macroscopic & microscopic); pharmacy; pharmacology; physiology; physiopathology; scientific & technical information & documentation methods; toxicology incl. Environmental pollution.
selection of clinical anatomy posters to facilitate DSE, a set of radiographs with light boxes, stethoscopes, an ophthalmoscope and an auroscope, and a number of veterinary journals. As well as using this facility for anatomy, all students do one week’s ‘Barn duty’ in rotation. This involves spending an hour in the morning before lectures, with the Anatomy Animal Technician, being trained in husbandry, handling and sexing of the animals. These sessions are linked to an Animal Management handling assessment. Groups of 5 or 6 students are involved in caring for the animals for a one-week period. Students are expected to attend the morning sessions each day of the week.

Table 6 Number of curriculum hours in ‘Basic Subjects’ taken by every student

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lectures</th>
<th>Practical work</th>
<th>DSE</th>
<th>Clinical work</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Basic subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anatomy (incl. embryology)</td>
<td>101</td>
<td>167</td>
<td>83</td>
<td></td>
<td>4</td>
<td>355</td>
</tr>
<tr>
<td>Biochemistry and molecular biology</td>
<td>53</td>
<td>21</td>
<td>30</td>
<td></td>
<td>13</td>
<td>117</td>
</tr>
<tr>
<td>Biology (incl. cell biology)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biophysics</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Biostatistics</td>
<td>6</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epidemiology</td>
<td>5</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genetics</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunology</td>
<td>16</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td>33</td>
<td>47</td>
<td>7</td>
<td></td>
<td></td>
<td>86</td>
</tr>
<tr>
<td>Parasitology</td>
<td>24</td>
<td>21</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathological anatomy (macroscopic &amp; microscopic)</td>
<td>52</td>
<td>43</td>
<td>47</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy/Pharmacology/Therapeutics</td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>Physiology (incl. histology)</td>
<td>119</td>
<td>102</td>
<td>19</td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Physiopathology</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific and technical information and documentation methods</td>
<td></td>
<td></td>
<td></td>
<td>Included in clinical pathology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxicology (incl. environmental pollution)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Comments

Pre-clinical subjects

72. Training in the basic subjects listed above is well covered. There is a clear commitment to expose students to a range of the common domestic species and a laudable range of more exotic species from the start of the course. This, and the “Barn duty” arrangement, are areas of strength at Bristol.

73. Other strengths of the Bristol experience for veterinary students include the “Standard man” simulation system. Although this is a human simulation, “Stan” is a valuable teaching aid which is used by veterinary students and without question gives them experience in areas that would be covered much less consistently by exposure to clinical scenarios. The planned development of a standard dog simulation will be an excellent addition.

Para-clinical subjects

74. The School does not define paraclinical subjects per se. The majority of these subjects are delivered at the Bristol site although pathology is also taught at the Langford site. Microbiology laboratories are well appointed and the new teaching complex at Langford is a good facility and the University is to be complimented on its construction.

75. Teaching in all of the paraclinical subjects is delivered by a combination of lectures, practicals and DSE. The proportions of these differ greatly between subjects with DSE comprising, for example, 47 hours in pathology but only 7 hours in microbiology. There does not appear to be any rationale for this disparity. The quality of the DSE materials available for inspection was good.

76. Epidemiology is significantly under represented in the curriculum as an identifiable subject.

77. In comparison to some of the other subjects, there is a large emphasis on Veterinary Public Health.

78. In common with other elements of the programme, there is limited evidence of true vertical integration.

79. Pharmacology and Therapeutics is taught across years 2 and 3 of the course. It comprises 66 hours of lectures and 43 hours DSE. Focussed on providing both core and applied knowledge, there is significant opportunity for including more “real world” clinical examples of relevance to would-be veterinary surgeons, an issue raised by the student body.

80. Veterinary Pathology is delivered by 52 hours of lectures, 43 hours of practical work and 47 hours of DSE. Immunology constitutes a further 16, 10 and 10 hours, respectively. Pathology teaching space has been increased since the last visitation and is adequate for requirements. This new space will require very careful management with increasing student numbers; indeed, it is difficult to see how this space will remain adequate for the incoming class sizes. Pathology is also delivered to final years students during the clerking rotations. The presence of the Veterinary Laboratories Agency laboratories on the Langford site provides significant opportunity that the School is encouraged to maximise.
81. Veterinary Microbiology is delivered by 33 hours of lectures, 47 hours of practical work and 7 hours of DSE.

82. Veterinary Parasitology is taught in both preclinical and clinical years. The course comprises 24 hours of lectures, 21 hours of practicals and 30 hours of DSE. The subject would appear to be largely delivered by a single Faculty member, newly appointed since the last visitation. It is an anomaly that this subject falls under a separate Faculty’s jurisdiction.

| Practical training requires the active participation of students under appropriate staff supervision (ratio of one teacher to a maximum of five students in the clinical sciences, one teacher to a maximum of eight students in other subjects). |

Comments

83. For Companion Animal training, there is a system of clinical clerking rotations during the last term of fourth year and all of final year. During this time students are taught to perform clinical tasks, such as examination, catheter placement, x-ray and ultrasound technique. The students are encouraged to perform these tasks themselves under close supervision. There is also at least one supervised neutering procedure performed by each student.

| The breakdown of the theoretical and practical courses between the various groups of subjects must be balanced and co-ordinated so that the students may acquire the knowledge, skills and experience mentioned in these guidelines and be able to perform their various duties adequately. |

84. The ratio of theoretical to practical training throughout the course is as follows:

**The first set of ratios includes the DSE component as part of ‘practical training’:**

<table>
<thead>
<tr>
<th>Theoretical Training</th>
<th>1197</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical and Clinical Training</td>
<td>2219</td>
<td>1.85 (Satisfactory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Training</th>
<th>1054</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical and Practical Training</td>
<td>2362</td>
<td>2.24 (Satisfactory)</td>
</tr>
</tbody>
</table>

**The second set of ratios excludes the DSE component:**

<table>
<thead>
<tr>
<th>Theoretical Training</th>
<th>1197</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical and Clinical Training</td>
<td>1847</td>
<td>1.54 (Satisfactory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Training</th>
<th>1054</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical and Practical Training</td>
<td>1990</td>
<td>1.89 (Satisfactory)</td>
</tr>
</tbody>
</table>

85. From the figures quoted above, and from the more detailed information provided for each part of the course in the SER, the students appear to have a reasonable balance of didactic teaching, practical classes and more independent studies.
Extra-mural practical training may form part of a full-time veterinary course so long as it is directly supervised by the institution concerned and does not exceed six months of the total five-year training period.

86. In line with RCVS policy, the Bristol course includes a full programme of extra-mural studies for veterinary students, covering both pre-clinical and clinical EMS. More detailed comments on EMS are provided later in this report.

**CURRICULUM - BASIC SUBJECTS**

*Instruction in basic subjects should build on a solid background in chemical, physical and biological sciences, with the objective of preparing students for the subjects to be taught later.*

87. The majority of applicants are A-level students and will therefore have an equal knowledge of Chemistry and Biology, since these subjects are compulsory and highly recommended, respectively, at A2 level. Student knowledge of Physics and Mathematics will vary considerably depending on whether these subjects have been taken to GCSE, AS or A2 level. Students with alternative qualifications will have similar backgrounds in Chemistry and Biology. For graduate student entrants, who may be admitted with a relevant science or animal related degree, A-level results in Chemistry and sometimes Biology are scrutinised and a reasonable result would also be expected in Mathematics at GCSE level at least.

88. Entry requirements are clearly set out for applicants, and students coming into the course have a good starting level of basic knowledge.

- The teaching must provide students with an understanding of the fundamental biological principles and mechanisms underlying animal health and disease, from the molecular and cellular level to the level of the organs, the whole animal and animal populations. This includes an understanding of the biological basis of normal function, the mechanisms governing homeostasis, the physiopathology of organ systems and the biological mechanisms by which disordered states are returned to normal.

- The teaching must emphasise the relationship between morphological, chemical, physical and functional expressions of the manifestations of health and disease.

- It must also cover the biology of the agents that cause and transmit diseases from animal to animal and from animal to man, the transmission mechanisms and the mechanisms by which animals defend themselves against infectious agents.

- The basic subjects must include: Anatomy (including histology and embryology), Biochemistry and molecular biology, Biology (including cellular biology), Biophysics, Biostatistics, Chemistry, Epidemiology, Genetics, Immunology, Microbiology, Parasitology, Pathological anatomy (macroscopic and microscopic), Pharmacy, Pharmacology, Physiology, Physiopathology, Scientific and technical information and documentation methods, Toxicology (including environmental pollution)

**Findings**

89. Details of curriculum hours for basic science subjects are given at Table 6 above.
Comments

**Anatomy (including histology and embryology)**

90. Anatomy teaching is performed in a modern (1993) space, using a wide variety of materials samples and specimens. Particular strengths are the use of the dissection suite and museum specimens together with prossections, original drawings, illustrations and diagrams. The range of preserved material, fresh specimens and live animals is exemplary and the involvement of technical staff in teaching has been a considerable success. The current technical supervisor appears to be functioning in a role closer to that of a member of academic staff than as a technician, to the considerable benefit of the students. The enthusiasm and motivation of all the anatomy staff is high. The use of live animals deserves special praise. Bristol students are required to spend one week caring for the live animals on site and this includes feeding and handling of a wide range of species including birds and snakes. The understandable decision to replace a live cow at Southwell Street with two goats is however regrettable and consideration might be given to finding a calf to rear as a tame live anatomy cow for the future.

91. Histology training has been changed from lectures to a predominantly practical based course to great advantage, using high quality slide sets and also a web accessible virtual microscopy system. This has been developed to a high standard by the staff and is taught by a highly experienced and valuable teacher who is due to retire soon. His replacement will be difficult and it will be important to ensure continuity of the current high standards.

**Other basic science subjects**

92. Lectures and practicals covering all other basic science subjects are given in appropriate surroundings and at levels appropriate for the course. Some subjects, Biology and Chemistry, are covered by students before entry to the course, and recapped in subjects such as Biochemistry. Parasitology is delivered by staff from the Biology Department, in the Faculty of Science.

93. The students are well prepared for the clinical subjects. However, the paraclinical subjects are not defined as such (see above) with the divide being “basic” and “clinical” There is some vertical integration but this is of a limited amount and appears to relate mostly to technical skills rather than disease considerations. At Bristol, Pathology is treated as a “clinical” subject.
This course must provide students with the basic knowledge in preparation for the study of general husbandry principles, e.g. animal behaviour and welfare, the genetic basis of animal breeding and disease, production systems, the feeding and nutrition of domestic animals and international trade in animals and animal products.

The training must be orientated towards the application of clinical treatment for livestock and companion animals in preventive veterinary medicine (e.g. herd health) and the provision of advisory services.

Theoretical and practical training must cover the broad requirements of the individual states.

Table 7: Curriculum Hours taken by every student in Animal Production

<table>
<thead>
<tr>
<th>Agronomy</th>
<th>Included in Animal Management and Animal Husbandry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal behaviour (incl. behavioural disorders)</td>
<td>16 6</td>
</tr>
<tr>
<td>Animal husbandry (incl. livestock production systems)</td>
<td>71 162 7 19 259</td>
</tr>
<tr>
<td>Animal nutrition and feeding</td>
<td>19 8</td>
</tr>
<tr>
<td>Animal protection and welfare</td>
<td>Integrated into Animal Behaviour</td>
</tr>
<tr>
<td>Environmental protection</td>
<td>Integrated into Animal Management and Veterinary Public Health</td>
</tr>
<tr>
<td>Preventive veterinary medicine (incl. health monitoring programmes)</td>
<td>Integrated into Epidemiology, Veterinary Public Health and individual species medicine (CAS and FAS) units</td>
</tr>
<tr>
<td>Reproduction (incl. artificial breeding methods)</td>
<td>Integrated into individual species medicine (CAS and FAS) units</td>
</tr>
<tr>
<td>Rural economics</td>
<td>Included in Animal Management and Animal Husbandry (including pre-clinical EMS reports) as well as in farm animal clinical rotations</td>
</tr>
</tbody>
</table>

Clinical training in animal production is mainly based on pre-clinical EMS, and in EMS 'foster practices'. This has the advantage of providing excellent opportunities for very intensive training in a real clinical environment. However, the Veterinary School has less control over the clinical situations that students are exposed to.

Suggestion

As the farm in its current state is an unacceptable environment in which to teach students, the School needs to explore alternative means of providing students with access to live animals in order to cover core teaching in animal production. However, if this is to be achieved solely through arrangements with local practices and farms (either as part of EMS or otherwise), then the School needs to take account of the changing nature of large animal practice – shifting from the individual animal to herd health - and avoid the risk that students are unintentionally given a misleading or outdated view. Formal protocols for clinical treatment should therefore be established with any practices/farms used to provide core training in animal production, covering...
good veterinary practice in, for example, mastitis, lameness, etc. Such protocols should be dynamic, to take account of structural change to working practices and the overall diminishing importance of examination and treatment of the individual production animal.

96. As regards production animal clinical studies, although the focus of teaching is shifting away from the individual animal towards herd health management, there is still a need to diagnose and treat individual animals as well as groups, with due regard for animal welfare. The herd health management approach requires students to be trained in the importance of good record keeping for registration and certification purposes, covering apparently healthy animals as well as those requiring individual treatment. The curriculum review team should ensure that these approaches are adequately covered in the ongoing review.

**CURRICULUM - CLINICAL SUBJECTS**

The course of instruction in the basic and paraclinical sciences should have laid the necessary groundwork on which to build clinical knowledge and skills.

The teaching must provide the skills generally required of veterinary graduates in the individual state, whilst not precluding the acquisition of additional knowledge in selected areas for which there is less demand.

The clinical subjects must include: Anaesthetics; Clinical examination and diagnosis and laboratory diagnostic methods; Clinical medicine; Diagnostic imaging; Obstetrics; Reproductive disorders; State veterinary medicine; zoonoses; public health and forensic medicine; Surgery; Therapeutics.

**Table 8: Curriculum hours taken by every student in Clinical subjects**

<table>
<thead>
<tr>
<th>C. Clinical Subjects</th>
<th>16</th>
<th>24</th>
<th>16</th>
<th>105</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthetics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical examination and diagnosis and laboratory diagnostic methods</td>
<td>12</td>
<td>8</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Clinical medicine Farm Animals</td>
<td>149</td>
<td>94</td>
<td>2</td>
<td>175</td>
</tr>
<tr>
<td>Clinical medicine Companion Animals</td>
<td>261</td>
<td>26</td>
<td></td>
<td>490</td>
</tr>
<tr>
<td>Diagnostic imaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obstetrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State veterinary medicine, zoonoses, public health and forensic medicine</td>
<td>10</td>
<td></td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>Extra mural clerking</td>
<td></td>
<td></td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>Surgery</td>
<td></td>
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</tbody>
</table>

These three subjects are integrated into the Farm Animal and Companion Animal Units.

Surgery is integrated into individual species units.
97. Companion Animal Studies is taught during third, fourth and final year. The bulk of lectures are delivered in fourth year, leaving final year as a lecture free year.

98. Comprehensive notes are provided, most of which are excellent but in the case of Neurology, the notes appeared to be photocopied pages of the BSAVA neurology manual.

99. The final year is divided into “clerking” periods when students focus on one particular subject area for three weeks, although there is often subdivision within that time.

100. Excellent guidelines are provided to the students for each clerking rotation. Learning objectives are given, as are the marking criteria for the rotation.

101. There is one three week elective rotation when the students can select a topic to study in more detail. The Farm Animal Science programme is in especially high demand.

102. The equine clerking rotation comprises only three weeks. The case load of the equine unit appears to be just adequate. Efforts should be made to increase the case load and so provide greater opportunity for learning by the students. This may then allow an increased number of clerking weeks in equine studies.

103. The clerking system introduces the students to case management in an excellent way. They are required to follow clinical cases through and to take responsibility for some aspects of care.

104. The small animal practice first opinion clinic provides an excellent setting for learning. All of the practical exotics material is taught in the small animal clinic.

105. However there may also be a missed opportunity in that students’ introduction to elementary practice management and in particular practice finance such that they have a basic understanding of fee setting, and income and expenditure, is not adequately addressed at present. More is reported on this topic under the heading “Professional Knowledge”, see page 42 below.

106. Whilst the importance of various topics can always be debated, the Visitors’ view would be that management and practice standards are very much activities for the veterinary surgeon, whilst the puppy parties and geriatric clinics currently run by students are more appropriately seen as a nursing activity. Consequently a shift in emphasis for a small part of the rotation should be considered.

107. An example of the low priority given to the principles of practice standards would be that there did not appear to be any max/min thermometers in fridges used to store pharmaceuticals. The consulting rooms did not appear to have the four categories of waste disposal defined.

108. Whilst these topics may not be seen as directly relevant by the students they are important parts of the framework within which the students will be required to work post-qualification, and some attention should be paid to such topics within the curriculum.
109. The clinical case practical experience gained is naturally dependent on the case load presented to the clinics. Some disciplines are poorly represented. The ultimate goal must be to offer a broad based clinical service covering all the major disciplines. The goal must be not only to educate practical veterinarians, but to inspire students to seek further qualification and clinical expertise post qualification.

110. In the case of Ophthalmology, whilst it is accepted that intra-ocular surgery is a post-graduate discipline, the same cannot be said of extra-ocular disease. For example, the management of severe corneal ulceration, or laceration should be considered normal within Tier 2 or Tier 3 private practice.

111. There was insufficient nursing support overnight and consequently students were being used as ‘free labour’ (as opposed to students doing night duties to learn about patient care). Three weeks of student’s EMS time must be spent at Langford simply to keep the clinics working. This is not a satisfactory situation.

112. It is important that the professional nursing staff and indeed the students on the Veterinary nursing course should be required to share these night duties. It is difficult to see how professional nursing care would not raise the standards of care to in-patients. This may require an increased commitment to the support staff budget which could be part of the LCVS initiative.

Recommendation

113. The School must expedite plans to increase the clinical case load to ensure that students are exposed to a sufficiently broad range of clinical cases, and to allow the development of a broader range of options within the clerkings rotations in the final year.

114. The School should introduce the use of trained and student nursing staff on night duties in the clinics to ensure a more equitable distribution of support staff, and to ensure that an adequate standard of professional nursing care is available at all times.
The instruction must focus on the acquisition of knowledge and skills necessary to develop and implement programmes on the supervision and assurance of: the quality of agri-food products and services (quality assurance, certification of companies and products); food safety (in line with the principles used to develop the HACCP system) in the context of veterinary public health in the individual state (including legislative aspects).

It must ensure that each student understands the fundamentals of food science and modern food technology; the scientific basis of the relationship between food and human health; and the factors underlying the quality of hygiene (of food and the environment).

The food hygiene subjects must include: certification of food production units; food certification; food hygiene and food quality (including legislation); food inspection, particularly food of animal origin; food science and technology.

Table 9: Curriculum hours taken by every student in Food Hygiene and Veterinary Public Health

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lectures</th>
<th>Practical work</th>
<th>DSE</th>
<th>Clinical work</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification of food production units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food certification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food hygiene and food quality (incl. legislation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food inspection, particularly food of animal origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food science and technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Public Health</td>
<td>62</td>
<td></td>
<td></td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments

115. The Bristol School’s approach to VPH teaching is that the curriculum needs to convey to students that veterinarians are medical professionals who should be concerned with both animal and public health.

116. The VPH curriculum is currently under review. It was convincingly demonstrated to the Visitors that the staff responsible are well aware of the essentials of a modern VPH curriculum. An excellent textbook (edited by former faculty member Prof. Buncic) became available in 2006. This text includes the core facts that are further explained during lectures. In addition, the ‘directed self education’ exercises serve to teach students how to analyse more complex issues using a problem-solving approach.

117. The School has experienced considerable difficulties in finding qualified staff to take responsibility for teaching VPH. Following the departure of two veterinary qualified VPH staff, a senior veterinary member of staff, assisted by non-veterinary scientists from the Food Animal Division have set out to restructure the curriculum. In January 2007, an expert food microbiologist joined this team with
the expressed mission to restructure the VPH curriculum in order to generate a VPH model that could serve as an example for other UK schools.

118. It is of some concern, however, that in the foreseeable future none of the teaching staff will have a veterinary background. It is the Visitors’ firm belief that this will lead to the students not perceiving VPH as a priority area. This might significantly compromise the Bristol initiative to revitalise the VPH curriculum and portray it as a pivotal veterinary task. Notwithstanding the existing expertise in one important element of VPH (i.e. food hygiene and microbiology) it is important to realise that across Europe, VPH is first and foremost taught by veterinarians with Diplomate status (i.e. by veterinary specialists accredited by the European College of Veterinary Public Health), which encompasses many more aspects. **The Visitors therefore recommend that in addition to the current staff, the School should seek to recruit an ECVPH Diplomate or equivalent to lead the team.**

119. Although the Bristol staff’s efforts, to achieve an integrated approach to VPH by including experts from various disciplines (e.g. farm and food animal science, microbiology etc.) in the teaching of VPH, is much appreciated, this should not lead to underemphasizing VPH as a separate discipline. For instance, whilst combating zoonoses is obviously part of VPH, it is also part and parcel of generic veterinary medicine (avoiding disease spread among the animal population) – not just part of public health.

120. Finally, it must be borne in mind that some of the teaching staff are funded through research grants which justifiably will steer their priorities in that direction, rather than towards teaching.

121. Bristol University aims to make more effective use of the unique abattoir facilities on the Langford site for teaching the more practical aspects of VPH, possibly in collaboration with other UK veterinary schools. For this option to become realistic, significant investment will be necessary. Most importantly, the slaughter and processing activities would need to be stepped up in order to assure a guaranteed throughput of sufficient volume of various species of slaughter animals. To realise this, it seems inevitable that additional staffing would be required, as well as a careful analysis as to whether or not such an approach would be economically viable.

122. As far as Practicals are concerned: at the time of the visit, it appeared that students had negligible exposure to practical VPH work in the laboratory. The Visitors were reassured, however, that the first steps to achieving this (a consolidated practical organised by both veterinary and food microbiology staff) are currently being taken and, according to teaching staff, is well-received by students.

123. It was brought to the Visitors’ attention that identifying adequate opportunities for EMS in VPH (exposure to food control in an industrial setting and on an industrial scale) is becoming increasingly difficult. The current one week of EMS exposure to food control in industrial practice is hardly comparable to the extent to which veterinary students in continental Europe are taught for this part of the curriculum. Consequently the School would be advised to think in terms of a more intense ‘on-site’ preparation for the VPH EMS. If the intention is to use the on-site facilities for this purpose, then a means of increasing the throughput, as mentioned above, will need to be found.
124. There should be more emphasis within the VPH curriculum on students gaining knowledge of the European (and national) legislation on food control. This is particularly appropriate as EU legislation lists the professional qualifications of veterinarians who are active in food control - be it as Official Veterinarians or as practitioners in their role as ‘approved veterinarians’ performing parts of ante mortem inspection on farms. Making this clear within the course would help to justify to students why certain topics are mandatory within the curriculum.

Recommendations

125. In addition to the existing staff allocated to Veterinary Public Health, the School should take steps to recruit a veterinary qualified VPH teacher, preferably with Diplomate status, to lead teaching in this area.

126. The School should ensure that Veterinary Public Health is identified as a separate subject within the curriculum, integrating aspects of microbiology, epidemiology, food technology and production animal practice, in order to prepare students for their important role in the ‘stable to table’ continuum.

PROFESSIONAL KNOWLEDGE

The course of instruction must cover subjects necessary to prepare the graduate to perform effectively not only in the traditional veterinary practice, but also in other common professional roles. Professional knowledge subjects must include: Practice management; Professional ethics; Veterinary certification and report writing; Veterinary legislation.

127. According to the SER, few curriculum hours are explicitly devoted to this area, although topics are included as part of other courses, such as Communication Skills training in which some of the scenarios used with students will touch on aspects of ethics. Practice management is covered to some extent in EMS.

Table 10: Curriculum hours in ‘Professional Knowledge’ taken by every student (as shown in the SER)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lectures</th>
<th>Practical work</th>
<th>DSE</th>
<th>Clinical work</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice management</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional ethics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Veterinary certification</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>and report writing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary legislation</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11: Curriculum hours in other subjects taken by every student

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lectures</th>
<th>Practical work</th>
<th>DSE</th>
<th>Clinical work</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>4</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Integrated DSE</td>
<td></td>
<td></td>
<td>71</td>
<td></td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>Research Training</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
Comments

128. The excellent small animal first opinion clinic would be an ideal environment in which to introduce students to practice management. Topics which could be covered include

- practical health and safety assessments in practice
- good pharmacy practice
- staff contracts including a brief approach to employment problems
- practice finance, targets and performance markers
- the RCVS practice standards scheme.

129. The RCVS practice standards scheme is only loosely adhered to in any of the clinical divisions and not well introduced to students. It may be worth considering introducing a 2 hour slot during the first opinion rotation to allow students to review the small animal practice performance for the week, caseload and financial targets, staffing issues and so on. In addition a small part of the DSE for that rotation could include a practice standards element. For example, considering questions such as “how well does our practice meet standards required for good pharmacy management” or “review waste control procedures within the practice”.

130. It is recognised that the already congested lecture timetable is unlikely to find space for an increased number of lectures on these subjects, but DSE sections of the final year clerking rotations could be utilised in this respect.

Suggestion

131. Consider introducing a short slot during the first opinion rotation to allow for a review of the small animal practice performance for the week, caseload and financial targets, staffing issues and so on.

Recommendations

132. Ensure that greater attention is paid to the coverage of RCVS Practice Standards within the first opinion practice in order to introduce students to the concept of practice performance and management.

133. During the ongoing curriculum review, ensure that attention is paid across the curriculum to the coverage of professional knowledge, including ethics, certification, report writing, practice management and practice standards, paying particular reference to the RCVS Day One Competences.
CHAPTER 5 - TEACHING, QUALITY AND EVALUATION

THE TEACHING OF BASIC SUBJECTS

The acquisition of problem-solving skills is a major course objective. To this end, the instruction must cover the methods of acquiring, documenting and analysing scientific and technical data. The aim of practical training in the basic subjects is not to convert veterinary students into highly skilled laboratory workers. Practical training must serve to familiarise students with subjects studied in theoretical courses, to give them some insight into how scientific knowledge is acquired and to show them that abstract theoretical concepts can sometimes be illustrated by simple laboratory experiments.

134. It was clear from the documentation provided, and from comments from staff and students, that problem solving approaches are well embedded in the curriculum.

135. The practical classes in the first two years fully meet these requirements. However, the Visitors considered that the decision to stop 4th year projects was a loss.

THE TEACHING OF CLINICAL SUBJECTS

Clinical courses must ensure that students become familiar with the methods of handling and examining animals prior to the start of clinical training proper.

Clinical instruction must take place in-groups that are small enough to ensure hands-on experience for all.

Comment

136. Animal handling is introduced in the first year of the course. This is conducted in the live anatomy barn where a variety of species are kept. This unit introduces students to husbandry and management of all the major species. The students are required to do a week of “Barn” duty where they attend early in the morning and provide care for the variety of small and large animal species housed in the barn. Students also visit Langford for one day each week and instruction is also offered there. The visits to Langford serve to integrate the first year students well into the School as a whole.

137. The group sizes are adequately small at the current time, and the system will not be put under major strain if numbers are increased to 120. However an increase in student numbers beyond 120 would lead to “small group” sizes increasing unacceptably. Although the School has not declared any intention to increase beyond 120, it should be borne in mind, that, with 20-25 students intercalating each year, continuous funding for the intercalation programme needs to be secured. If it is not, then a temporary increase in student numbers may inadvertently occur which would have undesirable consequences for group sizes. Although this may only have an impact for one year, it would have a negative effect on the quality of teaching provided to the cohort concerned. (See also para 25.)
### Suggestion

138. A contingency plan should be put in place to cover the risks of an inadvertent temporary increase in student numbers in the clinical years due to any failure to secure continued funding for intercalation.

#### Students’ problem solving and clinical skills should be developed through their full involvement in case management under suitable supervision. The mere observation of others practising veterinary medicine and surgery is not acceptable.

It is recommended that time-tabled lectures be excluded from a substantial proportion of the clinical course as they may clash with students’ case management activities.

Those responsible for theoretical clinical training must also be involved in the practical side dealt with in the institution’s clinics.

The advancement of knowledge is a task involving all members of the profession. Therefore, interaction between students and clinical researchers working in the clinical field should be arranged in order to stimulate students’ interest in research.

The placement of students in practices or in other institutions for clinical training is to be encouraged so long as there is adequate provision for quality control. However, this should be regarded as a supplement to and not a substitute for the instruction provided by veterinary schools.

139. Problem solving skills are addressed well in some departments. For example, in small animal surgery, problem solving in a clinical situation is used as a teaching tool. This approach is to be commended as it attempts to replicate the time pressured environment in which the students will need to function once they have graduated.

140. The last six weeks of fourth year and all of final year is lecture free. This allows the students to spend the time uninterrupted on clinical work and case management activities.

141. Clinical teachers generally spend adequate time in the institution’s clinics. However there is an administrative burden which is shared by senior members of staff often on a rotating basis. This may mean that involvement with clinical work may suffer from time to time.

142. Clinical training scholars and permanent clinical staff in theory have “protected” time to undertake research. However this time needs to be fiercely protected. Currently any member of staff working 50% clinics/50% research is in reality 50% clinics and 50% admin/teaching/research/annual leave. Thus in reality research may not be protected.

143. Some of the farm animal practices providing EMS placements appear to have students for almost 52 weeks per year. The practical arrangements for this have been dealt with superbly by the current EMS Administrator, although this member of staff is due to retire shortly and a successor needs to be appointed and trained.

144. However, clinical departments do need to give more precise guidelines to EMS practices concerning what they expect from the provider practices. It is acknowledged that some of this information is available in student guidelines, but the information does not always reach the practice concerned.
145. See also Chapter 14 (page 81) for more comments and suggestions about Extra Mural Studies.

**Suggestion**

146. Consider ways to improve the information flow to EMS practice, to ensure that practitioners understand what is expected of them as EMS placement providers.

**THE TEACHING OF FOOD HYGIENE**

<table>
<thead>
<tr>
<th>Practical training must familiarise students with food safety evaluation methods, especially with regard to foods of animal origin, at various stages in the food chain, particularly in slaughterhouses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Such training must take place in-groups that are small enough to ensure that all students are able to gain hands-on experience.</td>
</tr>
<tr>
<td>It should also give students the opportunity to monitor units involved in the production, processing, distribution and consumption of foodstuffs.</td>
</tr>
<tr>
<td>Extramural instruction may be used to supplement the training in food hygiene so long as it is properly monitored and controlled.</td>
</tr>
</tbody>
</table>

**Findings**

147. See page 39 above for comments on the curriculum and teaching of food hygiene and veterinary public health.

**THE TEACHING AND LEARNING ENVIRONMENT**

<table>
<thead>
<tr>
<th>The academic environment must be conducive to learning and basic and specialist facilities must be adequate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern facilities for supervised practical work must be available.</td>
</tr>
<tr>
<td>Buildings must be suited to the teaching programme, and well maintained, clean and safe.</td>
</tr>
<tr>
<td>Courses must be well organised and managed.</td>
</tr>
</tbody>
</table>

148. More information about teaching facilities is provided in Chapter 6, “Facilities and Equipment”.

149. The pre-clinical facilities at Southwell Street are relatively new and have been upgraded. They are fit for purpose and of high quality.

150. There has been significant investment in laboratories for teaching and the University is to be complimented on these improvements. However, there is a need to ensure that this provision will be adequate with increasing class sizes.

151. There is a skills laboratory available at Langford, although it appears to be used more by the veterinary nursing students than the veterinary students. Practical skills are taught more commonly in the various clinics which the School runs.
152. As reported elsewhere, whilst some of the buildings are up to standard, other facilities at Langford are far from ideal, and the small animal theatre and imaging facilities need replacement. The large animal theatre is not up to standard for a referral practice as it does not have separate facilities for clean (e.g. orthopaedic) and dirty (e.g. colic) surgery. The facilities at Wyndhurst Farm are not appropriate for teaching purposes.

153. The Visitors observed various breaches of health and safety rules which caused them concern. (See also Chapter 6, Facilities and Equipment, para. 205.)

154. The Visitors had confidence in the systems used to monitor the curriculum and teaching, and were of the view that the course as a whole was well organised and delivered to its objectives.

Recommendation
155. See Chapter 6, page 54 for the Visitors’ recommendation concerning health and safety.

Staff development facilities should be available, particularly in relation to teaching skills. A system of reward for teaching excellence (e.g. accelerated promotion) should be established.

Findings
156. The University has a requirement for ‘peer observation’ of teaching. Guidelines recommend that all established teaching staff are observed once every two years, and junior staff more frequently as part of their probation period. Within departments, the scheme is coordinated by the Teaching and Learning Advisor or the Head of the Teaching Committee.

157. The Graduate School of Education offers three training programmes for those involved in teaching. These include programmes for postgraduate students, contract research staff and newly appointed academic staff. For academic staff, this course forms part of the contractual requirement, completion being required for progression from the probationary period. Within the Department of Clinical Veterinary Science (DCVS), clinical training scholars are encouraged to attend either the postgraduate course or the contract research staff course, depending on their teaching commitments and their career plans. Postgraduate students involved in teaching are also required to attend the Teaching Skills units run by the Faculty of Medical and Veterinary Sciences.

158. The University’s Personnel Services oversee an annual staff review and development scheme, providing staff with the opportunity to discuss issues (including teaching) with their Head of Division/Department and to plan for their own personal development. Staff development courses are also run each year, through Personnel Services and the Learning Technology Support Service which are open to all staff and postgraduate students. The School holds seminars and Away Days to discuss Teaching and Learning issues.
At University level, teaching excellence may be offered in support of promotion within an academic career pathway. The University also awards four annual learning and teaching prizes per Faculty. The Veterinary School introduced five, commercially sponsored staff teaching awards in 2006, based on student consensus.

The University’s Reward Programme was initiated in 2002 and will be implemented in 2007. The clinical work of veterinarians is recognised alongside teaching, administration and research for progression on this single pay and grade structure. In addition, a new pathway for teaching and administration (‘pathway 3’) will recognise the University’s commitment to maintaining teaching quality within a research intensive organisation.

Comment

The Visitors were impressed by the attention paid to teaching skills development and monitoring and would wish to commend the commitment of the member of staff who oversees this within the Department of Clinical Veterinary Science.

MONITORING AND EVALUATION

THE EXAMINATION SYSTEM

Student performance, particularly in the clinical, animal production and food hygiene subjects, must be evaluated regularly by various methods by both internal and external examiners. Written, project and practical work and problem solving must all be evaluated. Evaluation methods must be known and understood.

Findings

A wide variety of assessment methods are used throughout the course, including unseen written papers, multiple-choice questions, practicals, orals and clinical examinations. In addition, the School is piloting the use of Objective Structured Clinical Examinations (OSCEs). Formative assessment occurs throughout the programme. Clerking in the final year is continuously assessed and feedback given to students after each rotation.

The monitoring, assessment and examination processes and the weighting of marks for individual course elements are clearly stated in the documentation for students viewed by Visitors.

In accordance with standard UK university practice, external examiners monitor the standards of all examinations and a thorough system of internal quality monitoring and quality assurance is in place. Any concerns identified by external examiners are reported in writing and must be acted upon by the departments concerned. The system for monitoring reports is oversee by the Faculty Quality Assurance Team (FQAT) and the University’s Teaching Support Unit.

Comments

Adequate monitoring and evaluation of students work is carried out.

The balance between different examinations was felt to be appropriate.
167. Assessment in the paraclinical subjects is carried out by a variety of assessment procedure. Detailed review of the reports by the external examiners suggests that in each of the subject areas the standards expected by external examiners are being met. The scripts available for review were of an acceptable standard. The School is encouraged to address the comments of the external examiners; in the area of Public Health the external examiner’s comments are particularly robust.

168. The Visitors studied the clinical examination papers and scripts and found the standard of questions to be appropriate and the marking uniform. The clinical studies external examiner’s report noted that standards were as high as those achieved at other institutions and his report was generally favourable. However, concern had been reported about the consistency of marking between clinical elective projects which needed to be addressed. In addition one external examiner recommended that more use should be made of objective skills assessments where possible.

169. Clinical clerking guidelines were found to be particularly good in terms of the information provided for students. Comprising several pages of notes which students receive before their clerking duty, they describe clearly the parameters by which students will be judged and advice on how to achieve good marks. In addition advice is provided on the common reasons for not achieving pass marks in some clerking duties.

170. For Veterinary Public Health and Food Hygiene, examination questions were felt to be relevant and assessed in a fair way.

| A system must be available to allow students to evaluate teachers and teaching. |
| Students should be able to participate in the design and monitoring of courses and the curriculum in general. |

171. Students are able to evaluate teaching and teachers through Unit questionnaires, evaluations or class discussion led by a trained academic rapporteur. Students also provide feedback on EMS placements. Student feedback is also collected through year representatives on a variety of committees such as the School Staff/Student Liaison Committee, BVSc Working Groups and the Veterinary Programme Committee. The veterinary students association, ‘Centaur’, has representation on the Undergraduate Taught Programmes Committee. All available student feedback is discussed in the Annual Programme Review meeting at the end of each teaching year.

172. Systems for obtaining student feedback were found to be appropriate.
STUDENT WELFARE

Adequate provision must be made for student accommodation and recreation facilities. The institution must provide a system of routine and special guidance for students, especially those with social problems or those having difficulties with their studies. The guidance programme should also cover career development and job selection.

Bristol, Years 1 - 3

173. In general students were satisfied with the accommodation and recreation facilities provided. All new students are provided with housing in their first year through the University and transport to and from Southwell Street to the Langford site has been well organised. Facilities for interim relaxation (common room, museum room) are in place and are well utilised, as are the computers which appear to be available in sufficient numbers.

174. Catering (lunch) is covered both by daily sandwich delivery services on site, as well as by supermarkets in the immediate vicinity or finally by the services of the Student Union, approximately 10 minutes away from Southwell Street.

175. According to 1st and 2nd year students recreational facilities in Bristol are up to par. For relaxation during the evening and at weekends, there is the full range of social and night life in the city centre. Wednesday afternoons are lecture free, allowing students to take part in sports. There is a gym and other sports facilities in Bristol, available at reasonable rates.

176. Every student is assigned a personal tutor, and the tutorial system provides individual support for both academic and personal matters. In addition to academic staff, senior students act as ‘fathers and mothers’, thereby providing peer-group mentoring for younger students.

177. Students have access to a full professional counselling service through the University which can help with more pressing personal problems.

Langford (3rd, 4th, final year)

178. Most students either find housing around the Langford area or take the bus service to and from Bristol. A significant number of students have private cars allowing for more flexibility. Catering services are provided in a cafeteria on the campus site.

179. In general, students had no complaints about welfare issues, and indeed were enthusiastic in discussions with the Visitors about the support they received from staff at Langford.

180. Welfare issues off campus (e.g. during EMS placements) are adequately addressed. Students expressed their satisfaction with the fact that these off campus activities are well organised and are monitored adequately.

181. The social facilities are minimal at Langford compared with Bristol. This did not appear to present a serious problem for undergraduates as most live off site in local villages using social facilities there. However, foreign postgraduate students living on site are provided with little beyond a bar, squash facilities and two tennis courts.
**Comments**

*Career planning, job search*

182. The Visitors commend the University and the School on the systems in place and attention paid to student mentoring, pastoral care and welfare, particularly in connection with arrangements for EMS.

183. Some effort is made to discuss the issues of intercalation, career options and post graduate study with students. However despite these efforts the implications of decisions on whether or not to intercalate does not seem to have been absorbed by pre-clinical students. It is suggested that greater effort should be made in this area. There has been an examination pass rate hurdle of 60% set in some years to allow students to apply for intercalation, but if a hurdle of any sort is to be applied it is important that students are made aware of this at the start of their course so that educational and subsequent career opportunities are not unwittingly denied to them. The opportunities for summer vacation postings in American and other universities are brought to the attention of students and some have attended Cornell University during summer vacations. The Visitors acknowledge that efforts are made to enlighten students as to the benefits of intercalation and post-graduate training for research careers. However the increased benefits of intercalation to students wishing to pursue a clinical track (as opposed to research) should be equally emphasised.

184. In addition it would be helpful for clinical students to have an explanation of the American and international intern applications system in some detail. This would encourage more students to apply for these posts.

**Suggestion**

185. The School should investigate ways of providing more information to students about clinical careers, access to research and vacation training, for example through the provision of a regularly updated notice board, to ensure that opportunities are brought to the attention of all students on an ongoing basis. Furthermore, the benefits of intercalation – not only for those contemplating a research career, but also for those who may wish to follow a particular clinical track – should be explained to students at the earliest opportunity, together with clarification on any hurdles they may need to pass before applying.
CHAPTER 6 - FACILITIES AND EQUIPMENT

- The site, buildings and its equipment should be conducive to teaching and to the acquisition of knowledge.
- Access to the site by public transport should be good, as should vehicular access for the general public bringing animals for treatment. Buildings and equipment should be adequate for the activities conducted within them in terms of space, heating, lighting, ventilation and cleanliness. In particular, the buildings used for basic training must be adequate for the number of students enrolled, without the need for excessive repetition of classes.
- Health and safety standards must be conscientiously observed, as should the requirements of good laboratory practice.
- The institution should have a clear strategy and programme for maintaining and upgrading its buildings and equipment.
- The practical side of animal production must be taught on the institution’s own farms or on farms to which it has access, to sufficiently small groups of students, thereby allowing hands-on experience for all.
- Adequate and hygienic facilities for the humane treatment of animals must be available, including provisions for hospitalisation, for operative surgery and recovery from anaesthesia, for exercise and the isolation of infectious cases.
- The clinical and hospital buildings must be up-to-date, clean and well maintained, and should be at least as adequate as those available in the private sector in the individual states.
- Clinical and hospital facilities must operate day and night for most of the year - i.e. like a normal practice.
- The diagnostic, medical and surgical equipment provided must promote state-of-the-art practice of veterinary medicine and surgery.
- Institutions must have a mobile clinic for farm animals so that students can practise veterinary medicine on the farm under expert supervision.
- Where practical training involves the use by the institution of material obtained from slaughterhouses and unfit for human consumption, vehicles and facilities must be properly adapted, maintained and operated to ensure the safety of students and staff and to prevent the spread of infectious agents.

Findings

Teaching in Bristol.

186. The Pre-Clinical Veterinary Science Building is sited in Southwell Street and pre-clinical science departments are able to use the available space. The Department of Anatomy provides the Dissection Room and the ‘Barn’, but there are shared teaching facilities for other basic science departments (lecture theatres, seminar rooms and computer suites). Substantial teaching also takes place in buildings on St. Michael’s Hill, the School of Medical Sciences, and the School of Biological Sciences.

Langford

187. The following facilities are located at Langford, providing facilities for years 3 – 5, and clinical services:
  - lecture theatres
  - seminar rooms
  - teaching laboratory
  - clinical skills laboratory
– library
– recreational areas (student common room, canteen, bar, snooker room, plus squash and tennis courts and a cricket pitch)
– student hostels
– child nursery
– administrative offices
– post-mortem room
– wet lab
– abattoir
– incinerator
– VLA laboratory
– research animal accommodation
– extensive research laboratories
– There is an adjacent livestock farm (Wyndhurst Farm) with a dairy herd and sheep flock.

188. Small animal, equine and farm animal work are performed at both first-opinion and referral levels and are largely located in separate buildings, although they share some facilities such as imaging, anaesthesia and surgery. There is access to shared laboratory facilities on the Langford campus, both inside and outside normal office hours.

Small Animal facilities
189. The Small Animal Practice (SAP) is a first-opinion practice serving the local community. It is sited in a new, purpose-built facility (the Mendip Building, opened in 2006) near to the site entrance. It is staffed by 2.8 fte veterinary surgeons, a practice manager, 2 fte nurses and full time receptionists. The SAP has a reception and waiting area and adequate client parking. There is a pharmacy and 6 consulting rooms, including one large room. This room is used for behaviour consultations and ‘puppy parties’, and is equipped with a private exit and CCTV facilities for remote viewing by staff and students.

190. The SAP shares imaging, surgery, isolation and some kennelling facilities with the referral hospital, but has its own cat and dog wards with a communal treatment room. There is a climate-controlled room for housing rabbits, and two rooms with isolator cages for birds, reptiles and other exotic species. In addition, there is a minor procedures room. Adjacent to the SAP is a new, purpose-built canine rehabilitation centre, with spa, water-walker and swimming pool.


192. The Small Animal Hospital building was opened 12 years ago to provide a single portal of entry for all referred dogs and cats and continues to be an excellent, functional building. There are separate waiting rooms for cats and dogs. On the ground floor there are 6 general consulting rooms, two special consulting rooms for dermatology and ophthalmology, a pharmacy, day-case kennelling facility and two minor procedures rooms for blood sampling, CSF and bone marrow sampling, chemotherapy and videoendoscopy. Upstairs, there are three consultation rooms and a ward for cats, as well as offices, a recreational area and student teaching space.
193. *There is an adjacent kennel block*, recently expanded to provide extra kennels with under-floor heating, an exercise area and a long-stay cat ward. The hospital and kennels are serviced by a kitchen/laundry block, which has recently been fitted with state-of-the-art low temperature, ozone laundry facilities and gas-powered driers.

194. *Small animal isolation facilities* have been set up in the old SAP building separate from the main hospital. They are functional, but await development of a designated changing area in April 2007.

195. *The Intensive Care Unit (ICU), Surgery and Imaging facilities* are all housed in the Surgery Building in conjunction with the Large Animal Theatre. The Wellcome Anaesthesia Laboratory is adjacent. The ICU is equipped with state-of-the-art equipment, including incubators, water-beds, piped oxygen and oxygen generator, telemetric monitoring of ECG, CVP etc, a blood-gas machine, patient-side ultrasound, and i-STAT and other laboratory equipment for monitoring and supporting critically ill animals.

196. *Small Animal Surgery* is conducted in four operating theatres (orthopaedics, soft tissue, ophthalmology & soft tissue, and neutering), which are adjacent to an anaesthetic induction room, dirty procedures room (e.g. dentistry), sterile preparation area and autoclaves, and a recovery ward.

197. *Imaging* has two ceiling mounted X-ray machines, a D-arm fluoroscopy unit, and two colour Doppler ultrasound machines. Scintigraphy is a shared resource available in another building. That building is also approved for radioactive iodine treatment of hyperthyroid cats.

**Equine clinics**

198. The Equine Centre comprises: the Equine Diagnostic Centre (EDC), two stable courtyards, the Jim Joel Treadmill Building, a covered ride and lunging ring, the Scintigraphy Block.

199. *The EDC* contains a reception area, pharmacy, loose boxes, procedure rooms (with stocks for videoendoscopy, standing dental treatment etc.), and an imaging facility with radiography and ultrasound machines. There is an adjacent covered ride and lunging circle. *Two stable courtyards* are available for the hospitalisation of horses. *The Jim Joel Treadmill Building* houses a treadmill for the investigation of performance-related problems in horses and basic research in equine science. *The Scintigraphy Block* houses a gamma camera for scintigraphic investigations in all species, and appropriate housing/kennelling for safe containment of patients.

200. *The Equine First Opinion Practice* operates out of the EDC, but as a mobile clinic that shares hospitalisation facilities when needed.

**Farm Animal clinics**

201. Farm animal clinical teaching at Langford is centred around the Farm Animal Practice, which runs an active mobile clinic.

202. *The Farm Animal Practice (FAP)* consists of a reception area and offices for the clinicians and a small student/seminar room. There is also a small pharmacy, a preparation area and an area for collation and submission of diagnostic samples as well as facilities for cleansing and disinfection of protective clothing and practice vehicles. The FAP is due to be relocated to a refurbished building.
(the 'Horlicks Building') later in 2007, to fit with the site zoning plan and to vacate space for the new Animal Behaviour & Welfare Building.

203. *The Farm Animal Hospital* (which is run alongside the Practice) comprises animal accommodation for all farm animal species (the 'Cattle Lines') and a minor procedure room where some surgical and diagnostic procedures can be undertaken.

Comments

204. Whilst provision of space is currently acceptable, there will be increasing pressure on space in the coming years with increased student numbers.

205. There were many transgression of health and safety regulations throughout the visit including, food and drink in laboratories, unprotected building sites and power tools, emergency wash facilities and access obstructions. Taken overall, the Visitors were concerned that these deficiencies suggested an institutional lack of awareness, or disregard for health and safety issues which would be particularly inappropriate in a teaching environment. (See also para 153.)

206. There is a strategy for maintaining and upgrading facilities although in common with many in the sector, funding is not identified for each project.

207. The University farm is an unacceptable teaching environment. Immediate action is required to remedy this situation.

208. Isolation facilities for large animals (horses) are rudimentary.

Recommendation

209. Close attention must be paid as a matter of urgency to developing an appreciation of the importance of health and safety amongst staff, students, and any external contractors, not only in order to ensure proper compliance with relevant regulations, but also to demonstrate best practice to students. All teaching staff should be aware of emergency shower facilities (to which access must be maintained) as well as eye wash provision. Laboratories should be kept tidy and clutter free and the obstruction of walkways with student belongings avoided. Food and drink should never be allowed in laboratories.

210. It is recommended that the Head of School should have access to an appropriate maintenance budget.

Companion Animal Facilities

211. Comments on standard hospitalisation areas are listed below, however the small animal isolation area is mentioned here. The isolation kennels are not purpose built and are housed in the old small animal practice building. Access is controlled by a key pad lock. There was evidence of standard isolation equipment within the area but no Standard Operating Procedure notice was visible from the outside. The location of the unit has some rationale for isolation purposes, but is not ideal in terms of viewing of patients who may be seriously ill. There was no CCTV system visible. CCTV monitoring between isolation and the ICU section would allow staff to monitor constantly patients in isolation and should be considered in any new facility.
Recommendation

212. Standard operating procedures for small animal isolation should be posted on the access door clearly visible to all personnel before they enter the room.

213. A new small animal first opinion practice building is in use and has allowed the development of the first opinion small animal case load. The facility provides excellent consulting rooms, minor treatment and animal holding areas. Within the small animal practice building are exotic animal caged areas. These are state of the art with climate control able to maintain temperatures at a level appropriate for the species concerned. The upstairs areas of the buildings are used largely as offices although there is a student rest room.

214. The small animal practice building is directly connected to the long stay kennel block mentioned below.

215. The small animal hospital building which is approximately 12 years old is the admission conduit for all referral small animal cases. It provides an excellent environment for consultation, client waiting areas for dogs and cats. In addition there is an endoscopy suite, feline hospitalisation area and treatment rooms. There is a specialised ophthalmology room and also a dermatology room.

216. In a separate block are a large number of walk-in kennels for longer stay canine patients, some large “cat-condo” type kennels for long stay cat patients. This block is physically separate to the SA hospital and there are SOP precautions in place to prevent the escape of patients. Whilst it is not ideal that this block is separate, the block itself is more than fit for purpose.

217. Upstairs in the small animal hospital block is a feline hospitalisation area which is used primarily by the feline medicine service. The standards in this area appeared to be excellent.

218. Imaging and small animal surgery is housed in an elderly block which also houses the equine operating theatre. There are several small animal operating rooms, and x-ray room and ultrasound area. This building is now very old and whilst efforts have been made to decorate the building it does not conform to “state of the art” in any sense. There is a corridor running through the centre of the building which separates anaesthetic and surgery areas, but also connects the building to the outside. Changing rooms are cramped. During the visit, there was evidence of longstanding inattention to cleanliness (eg. cobwebs), cracks in floors and wall tiles, even in theatres, which compromises hygiene.

219. The x-ray heads are elderly and placed in one large room, in a back-to-back fashion. There is a single generator supplying both heads so that exposure is only possible from one head at a time. Whilst local rules do address this arrangement there is clearly increased scope for inadvertent exposure of staff and students to radiation. This is acknowledged by staff who have stringent rules to try and prevent it happening. Traditional film processing is used. There is an Idexx digital imaging system which is used for teaching as well as traditional radiography techniques.

220. The small animal operating theatres are not suitable for state of the art surgery. There is penetrating damp in some areas. The overall design does not allow good patient or staff flow through the building. There are no particular teaching aids such as CCTV.
221. No particular attention has been made to meet RCVS practice standards. Eg in the sterilisation room, no sterilisation markers are placed within the centre of the packs.

222. There is also an ICU unit which is staffed by a specific resident and two veterinary students. No overnight nurses are available in ICU, care being provided by veterinary students. The unit has a variety of cages and two incubators. There is a small oxygen cage which does not have a humidifier fitted. Oxygen supplementation is provided by nasal catheter to dogs who require it.

**Summary of small animal infrastructure**

223. The consulting areas are good as is the new small animal practice. The kennel and long stay cattery areas suffer from being detached from the SA Hospital.

224. The small animal surgery and x-ray units are not fit for purpose. Whilst the staff manage to do excellent work and morale is high, they in no way represent modern practice design. The provision of a new surgical and imaging suite should be considered at the highest level of priority. Within this sophisticated imaging such as CT and MRI should be incorporated and a radiotherapy unit should be considered.

225. It is emphasised by the Visitors that the commitment and excellence of clinical staff from clinical training scholar to professorial level is beyond reproach. However staff cannot be expected to practice their profession in an environment which is below standard. There will be an inevitable decline in caseload, ability to attract staff and hence revenue unless these matters are addressed urgently. Other UK veterinary schools and indeed private practices are moving ahead fast and Langford’s reputation as a centre of excellence will be lost if measures are not taken soon.

226. Cases are accepted as emergencies and there is appropriate cover provided by the first opinion, referral, equine and farm units. However nursing and in-patient duties are performed by students and residents. There are no qualified nurses required to work night duties. This does not present best-practice, particularly in a referral context.

227. Local practitioners report a decline of client service to clients. This matter needs to be addressed urgently. Even many practices who act as foster practices or EMS placement practices do not refer cases to Langford routinely because they do not see Langford as providing good customer care. The quality of clinical work is considered excellent by local practitioners, but client service is poor.

228. It is notable that the comments received from practitioners concerning the farm animal service were completely the opposite, in that the accessibility and service were considered exemplary.

229. Nor do these comments apply to small animal first opinion practice. Visitors did not have the opportunity to meet clients of the first opinion practice on this occasion.

230. There is some excellent endoscopy, arthroscopy and surgical equipment available. However it is not housed in buildings which can be considered adequate in some cases.
Practice management and practice standards

231. The small animal first opinion practice is one of the strengths of the clinical departments. However in some respects best use is not being made of the facility. The matters of practice management, and perhaps most particularly the principles of the RCVS practice standards scheme, are not at the forefront of teaching. Currently it would not be possible for the School to achieve RCVS ‘Tier 3’ status, largely because of the problems in surgical and imaging infrastructure. But where possible the Tier 3 standards should be encompassed.

Recommendation

232. A review of client service should be carried out separately by equine and small animal referral departments. This could involve visits to the larger private referral centres which are regarded as exemplary in this respect.

233. The Visitors recommend that the School should consider working towards the principles of RCVS Practice Standards to ensure its clinical facilities adhere to the highest levels of clinical practice.

Equine facilities

234. The Equine Diagnostic Centre is of modern construction and provides excellent facilities, along with two excellent stable blocks and the Jim Joel Equine treadmill building. The EDC includes loose boxes, pharmacy area, stocks, and an imaging facility with x-ray and ultrasound machines. This area is considered fit for purpose. There is also a gamma camera available in the scintigraphy block which is used for all species.

235. The Equine isolation facility, however, is not adequate and requires improvement.

236. Equine surgery is conducted in the large animal theatre building which also houses the small animal theatres mentioned above. The equine theatre design is no longer adequate. There are padded knock-down/recovery boxes, but the hoist system does not extend into the boxes. This makes movement of the anaesthetised horse difficult and may indeed be a health and safety problem. There is only one operating area. This is utilised for both equine orthopaedic surgery and also potentially contaminated abdominal surgery. This is not a satisfactory situation.

237. The School operates an ambulatory equine first opinion service. The staff providing this service were very committed to the School and the service. However they did report that there is a conflict between the needs of some horse owners (fast service/short on site times) and the needs of teaching students. Every effort should be made to market the equine service as completely as possible in order to build up the case load.

238. Funds have been granted by the University to build a new equine theatre but not until 2010 or even 2012. This time frame is unacceptable.

239. It is the Visitors’ view that not including advanced imaging facilities in any new plans will simply mean that the School is only catching up with other service providers and not moving ahead.
Recommendation

240. Finance needs to be released for the immediate development of a new equine theatre and equine isolation facilities, to allow re-development of the old equine theatre or an alternative site to provide a new imaging and operating environment for small animals, to incorporate an intensive care unit.

Farm Animal facilities

241. Wyndhurst Farm is not fit for purpose, and the facilities are being managed in a way that compromises biosecurity. The Farm Animal Hospital also occupies a building which is less than ideal (the ‘cattle lines’). Although the farm is only used for teaching pregnancy testing, any animal facilities used for teaching students should be run to the highest possible standards: what the students see and experience will have a far greater impact on their learning than the spoken or written word.

242. The School has been discussing plans for some time on how to improve the farm animal teaching/research facilities, and proposals for establishing a farm business tenancy with an external partner are under negotiation. The major issue of how the farm animal teaching needs can be met within this tenancy agreement has still not been fully resolved.

243. Until agreement is reached on any new tenancy for the farm, the School should make alternative arrangements for students, contracting with farmers in the locality if necessary. The Visitors are of the opinion that Wyndhurst should not be used as a production farm unless it can be quickly and properly upgraded, although the facilities (with suitable improvements to cleaning and maintenance) could perhaps still be used for animal handling. As the farm currently operates at a loss, closing it down could save money which could in turn be diverted to providing students with alternative access to production animals.

244. The Visitors did not see any evidence of appropriate biosecurity procedures or rules in the farm animal hospital and surgery, nor any biosecurity procedures for Visitors to the farm, or covering the movement of animals at the farm or elsewhere at Langford. These are essential to prevent the in-house spread of infectious disease and zoonoses.

Recommendations

245. Ensure that proper bio-security measures are put in place at the farm and elsewhere at Langford to prevent the spread of infectious disease and zoonoses.

246. The Visitors recommend that Wyndhurst Farm should not be used for training students until significant improvements are made to the facilities. The School should explore the use of alternative locations for training in the meantime, for example by contracting with local farmers.
Comments on ‘Langford Clinical Veterinary Services’

247. The senior staff have a good understanding of the problems they face of decreasing case load, staff recruitment and retention, lack of client focus and the downward spiral these problems present. They have been aware of these issues for some time and the hope of the staff is that these problems will be solved by the formation of ‘Langford Clinical Veterinary Services’ (LCVS).

248. It is proposed that LCVS will essentially be a commercial enterprise offering client focussed referral and first opinion services on the Langford site. There is a member of staff working 4 days per week to manage this project. There are two possible business models. Firstly a partnership with a commercial organisation which would introduce capital to the project. Secondly a University owned company structure.

249. Because of the confidential nature of negotiations, Visitors were unable to consider the financial models to any satisfactory degree. However the following comments are applicable:

250. The Visitors considered that the time frames within which LCVS has been developed are unacceptable, it having taken between 2-5 years already to reach this indeterminate point. The Visitors were given to understand that the decision to go forward now rested with senior University authorities, and would urge that their deliberations are concluded rapidly to allow progress.

251. The School should not regard LCVS as the solution to all the problems, however. The Visitors could see no reason why matters such as client service, and good business practice could not be addressed immediately, and not have to wait for impending decisions on LCVS. They do however acknowledge that they were unable to see the entire plan because of matters relating to confidentiality.

252. In the Visitors' view, all matters relating to LCVS now need to be progressed in a timeframe of weeks to months, rather than months to years. Indecision in this matter is resulting in a failure to advance any of the other issues pertaining to clinical matters in the School.

Surgical and diagnostic imaging facilities

253. Whilst this matter is inextricably linked to LCVS no real progress is being made. The Visitors acknowledge that the pledge of £3.3m to rebuild the equine hospital in 2010-2012 is helpful, but the time frame is too long. Inflation in the medical sector is running at nearer 10% than the more commonly quoted retail price index figures. This is due to the cost of medical equipment and facilities. The Visitors believe that by 2010-2012 the £3.3m promised will be inadequate, and in any case still leaves the small animal surgical and imaging to be financed.

254. The Visitors believe that as other UK veterinary schools modernise and develop their clinics, there is a risk that Bristol will be left further and further behind. Retention and recruitment of staff will become more difficult than it is now and the downward spiral will be unstoppable.

255. The Visitors urge the University to provide immediate financial assistance to the School to allow these matters to be dealt with immediately. They would wish to emphasise that, in their view, it is only thanks to the superb commitment of the clinical staff, from clinical training scholar to professor, that the clinical departments are holding together at the present time.

256. Recommendations are made elsewhere in this report (para. 275) concerning the need to make an early decision on the business models proposed to resolve these problems.

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CHAPTER 7 - ANIMALS AND TEACHING MATERIAL OF ANIMAL ORIGIN

The farms should contain the major animal species relevant to veterinary practice in the individual state. Farm facilities and equipment should be up-to-date, and at least as good as that available in the private sector of the countries concerned.

Adequate clinical material including all of the major species relevant to veterinary practice in the state concerned must be made available to the students. Such practical, hands-on clinical experience should account for at least 20 per cent of the entire curriculum.

The clinical material should be varied, providing experience in routine and more complex operations.

Findings

Anatomy

257. There is an ample supply of animal material available for anatomy teaching, including dog cadavers, ponies, goats/sheep, calves, and rabbits which are embalmed and stored. Chickens, pigs, rodents/guinea pigs are dissected fresh. In addition, isolated fresh viscera are obtained from a local abattoir. There are approximately 300 stored prosections, which are used repeatedly; and approximately 500 specimens in pots, which are all catalogued and mostly digitised. In addition to the cadaveric material, live animals are used regularly in anatomy teaching.

Animal husbandry/handling

Table 12: Animals maintained at Southwell Street for teaching purposes

<table>
<thead>
<tr>
<th>Domesticated species</th>
<th>Number</th>
<th>Breeding/Non-breeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horse</td>
<td>1</td>
<td>Non-breeding</td>
</tr>
<tr>
<td>Cow</td>
<td>1</td>
<td>Breeding (currently off site)</td>
</tr>
<tr>
<td>Dogs</td>
<td>3</td>
<td>Non-breeding (privately owned and brought in daily)</td>
</tr>
<tr>
<td><strong>Birds and Exotics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boa Constrictor</td>
<td>1</td>
<td>Non-breeding</td>
</tr>
<tr>
<td>Budgerigars</td>
<td>6</td>
<td>Breeding</td>
</tr>
<tr>
<td>Chinchillas</td>
<td>4</td>
<td>Breeding</td>
</tr>
<tr>
<td>Cornsnakes</td>
<td>2</td>
<td>Breeding</td>
</tr>
<tr>
<td>Ferrets</td>
<td>3</td>
<td>Non-breeding</td>
</tr>
<tr>
<td>Gerbils</td>
<td>4</td>
<td>Breeding</td>
</tr>
<tr>
<td>Guinea pigs</td>
<td>8</td>
<td>Breeding</td>
</tr>
<tr>
<td>Hamsters</td>
<td>4</td>
<td>Breeding</td>
</tr>
<tr>
<td>Mice</td>
<td>6</td>
<td>Breeding</td>
</tr>
<tr>
<td>Milk snakes</td>
<td>2</td>
<td>Breeding</td>
</tr>
<tr>
<td>Pigeons</td>
<td>6</td>
<td>Breeding</td>
</tr>
<tr>
<td>Rabbits</td>
<td>4</td>
<td>Breeding</td>
</tr>
<tr>
<td>Rats</td>
<td>4</td>
<td>Breeding</td>
</tr>
<tr>
<td>Royal python</td>
<td>3</td>
<td>Breeding intended</td>
</tr>
</tbody>
</table>

258. Six privately-owned greyhounds are kennelled on site at Langford and are used for teaching purposes in animal handling classes, and as blood donors. Six cats fulfil a similar purpose, but are allowed free access to the surrounds. Neither cats nor dogs are bred on site. For other small exotic species there are two inter-connected rooms dedicated to holding animals for handling by veterinary students at Langford. They contain a total of 8 species and three examination tables, and are supported by animal care staff. The rooms contain cleaning and maintenance facilities and
tools, risk assessments, laboratory coats and a first aid box. The species held are shown in Table 13.

Table 13: Animals maintained at Langford for teaching purposes

<table>
<thead>
<tr>
<th>Exotic species</th>
<th>Number</th>
<th>Breeding/Non-breeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgerigars</td>
<td>9</td>
<td>Non-breeding</td>
</tr>
<tr>
<td>Degus</td>
<td>2</td>
<td>Non-breeding</td>
</tr>
<tr>
<td>Gerbils</td>
<td>11</td>
<td>Breeding</td>
</tr>
<tr>
<td>Guinea pigs</td>
<td>10</td>
<td>Breeding</td>
</tr>
<tr>
<td>Hamsters</td>
<td>7</td>
<td>Breeding</td>
</tr>
<tr>
<td>Mice</td>
<td>21</td>
<td>Breeding</td>
</tr>
<tr>
<td>Rabbits</td>
<td>7</td>
<td>Breeding</td>
</tr>
<tr>
<td>Rats</td>
<td>10</td>
<td>Breeding</td>
</tr>
</tbody>
</table>

Pathology

259. The figures in Table 14 below show a reduction in necropsy examinations by the Department of Clinical Veterinary Science (DVCS) over the last three-year period, most noticeably in the numbers of cattle and small ruminants. This reflects a reduction in the numbers of livestock hospitalised as the academic pathology unit of DCVS only undertakes necropsy of livestock that die or are euthanized on-site. To address this deficiency, DCVS has developed a relationship with the regional Veterinary Laboratory Agency (VLA) at Langford, which shares the post-mortem room facility. Necropsy of livestock dying on-farm is undertaken by the VLA and final year veterinary students are shown this material on a weekly basis during the Farm Animal clerking rotations. There is no audit of the number of cadavers seen by individual students, but there is a large combined amount of material available through DCVS and the VLA, and it is estimated each student sees between 4-12 necropsies during his/her rotation. Even carcasses dealt with by the Farm Animal Practice (82 in the last three years) are processed through the VLA, and can be followed by students.

260. Companion animal necropsies are performed by DCVS on cases dying/euthanized in the SAP, during hospitalisation and on referred cadavers. The number of companion animal necropsies is relatively stable, but proportionally more of these are now external submissions rather than cases coming through the Langford hospitals. The number of on-site companion animal submissions is limited by owner permission; many pet owners will not give consent for necropsy and animals are simply processed for cremation. This shift in public sensitivity has reduced the availability of necropsy material.
Table 14 Number of necropsies over the past 3 years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of necropsies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DCVS</td>
</tr>
<tr>
<td>Farm/large animals</td>
<td>Cattle</td>
</tr>
<tr>
<td></td>
<td>294</td>
</tr>
<tr>
<td>Horses</td>
<td>43</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>2</td>
</tr>
<tr>
<td>Pigs</td>
<td>0</td>
</tr>
<tr>
<td>Birds</td>
<td>0</td>
</tr>
<tr>
<td>Other farm animals</td>
<td>3</td>
</tr>
<tr>
<td>Small/pets</td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>91</td>
</tr>
<tr>
<td>Cats</td>
<td>35</td>
</tr>
<tr>
<td>Other pets</td>
<td>23</td>
</tr>
<tr>
<td>Totals</td>
<td>1252</td>
</tr>
</tbody>
</table>

*Alpacas, goats, wildlife

261. The following cadaveric material is also available to students, but numbers could not be quantified accurately:

- Bovine reproductive tracts obtained from the local abattoir for reproduction teaching.
- During the fourth year of the course, each student will undertake one small group \( n = 10 \) tutorial session in the wet laboratory, during which fresh specimens obtained from the local abattoir are examined under the guidance of one of the academic pathologists. This material is difficult to access regularly and timetable slots for such classes are limited. The School has started to digitally archive this material to make it available for student viewing on the web.
- Poultry post-mortem material is used in the Year 4 Avian Medicine element.
- Tutorials on necropsy technique and processing samples are available to students online
- Fresh material from naturally infected animals is used for Parasitology practical classes.
- Approximately 700 whole and sectioned specimens showing parasite material are available.
- Phantom models are used in the clinical years for teaching venepuncture, intubation and CPR.

**Animal production**

- CATTLE: 110 dairy cows, 80 followers and small numbers of beef calves.
- SHEEP: Approximately 250 ewes, including some cull ewes maintained purely for handling classes, plus lambs at foot or fattening, according to season.
- PIGS: Brought specifically to the Langford campus to meet teaching requirements.
- POULTRY: Brought specifically to the Langford campus to meet teaching requirements.
262. The University operates a Farm Animal Teaching Practice, which services the local agricultural community. The Practice has approximately 170 clients. Commercial enterprises serviced by the practice constitute the following stock numbers: 1,500 dairy cows (plus followers); 700 suckler cows; 2,000 finishing cattle; 5,000 ewes plus lambs/store lambs (according to season); 50 sows and 500 finishers and approximately 400 goats. In addition, the Farm Animal Unit has a largely good relationship with local practices, which supply additional clinical material through the Farm Animal Hospital and in ‘Preventative/Production Medicine’ teaching.

Consultations

263. There are three first opinion veterinary practices in the DCVS: Small Animal, Equine and Farm Animal. In addition, there are three referral hospitals in the DCVS: the Small Animal Hospital (SAH), the Equine Hospital (EH) and the Farm Animal Hospital (FAH). All of these clinics offer a year round service, 24 hours per day.

264. Normal consulting times operate Monday to Friday, but all provide emergency services out of hours.

265. According to the self-evaluation report, the number of referred cases is under threat from private referral practices that are seen to offer a more customer-focused service, without the encumbrance of a teaching commitment. Over the past few years, case numbers have tended to decline, although the teaching quality has not yet suffered, as there are enough cases still being seen that are having more investigations than previously. The trend was reversed last year by improvements to the way referrals are booked and through the use of advertising, but the School recognises that there is a real danger that clinical services will ultimately cease to be viable when there is insufficient income to invest in providing state-of-the-art facilities and first class clinicians. The provision of clinical services is currently under review with the possibility of the clinics being set up as an inwardly investing business, Langford Clinical Veterinary Services (LCVS), to provide state-of-the-art facilities in a customer-focussed manner. The School’s view is that this should provide incentives for staff whilst maintaining high quality teaching and clinical research.

266. In the longer term, the building of a new Large Animal Operating Theatre in the Equine Centre will release space to enable the refurbishment of the Small Animal Surgery facilities.

267. As far as Farm animal clinics are concerned, since the last visitation the Farm Animal Practice has undergone a restructuring in philosophy and approach in the delivery of its clinical services. Margins on pharmaceuticals have been reduced and services are being charged at realistic market rates. There is now an increased emphasis on the teaching of Production Medicine, though this has not been at the expense of the more traditional individual animal aspects of teaching.

268. The Farm Animal Group is soon to relocate to new premises on site, but this will mean that the Farm Animal Teaching Group will be split around the site. There is a long term aspiration to construct a new farm animal clinical teaching facility, but due to budgetary constraints this is not likely to occur in the near/medium term.
Table 15  Number of animals received for consultation over a three year period

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005/6</td>
</tr>
<tr>
<td>Farm/large animals</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>77</td>
</tr>
<tr>
<td>Horses</td>
<td>651</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>59</td>
</tr>
<tr>
<td>Pigs</td>
<td>5</td>
</tr>
<tr>
<td>Other farm animals*</td>
<td>23</td>
</tr>
<tr>
<td>Small/pets;</td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>1432</td>
</tr>
<tr>
<td>Cats</td>
<td>4661</td>
</tr>
<tr>
<td>Other pets#</td>
<td>923</td>
</tr>
<tr>
<td></td>
<td>1521</td>
</tr>
<tr>
<td></td>
<td>151</td>
</tr>
<tr>
<td></td>
<td>183</td>
</tr>
</tbody>
</table>

*SAP: Small and medium animals, SAH: Small and large animals
*Predominantly Camelids, occasional poultry
# Predominantly rabbits and birds

Hospitalisation

Table 16: Patients hospitalised overnight in the clinics in the past three years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of hospitalisations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005/6</td>
</tr>
<tr>
<td>Farm/large animals;</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>77</td>
</tr>
<tr>
<td>Horses</td>
<td>439</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>59</td>
</tr>
<tr>
<td>Pigs</td>
<td>5</td>
</tr>
<tr>
<td>Other farm animals*</td>
<td>23</td>
</tr>
<tr>
<td>Small/pets;</td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>2264</td>
</tr>
<tr>
<td>Cats</td>
<td>457</td>
</tr>
<tr>
<td>Other pets#</td>
<td>17</td>
</tr>
</tbody>
</table>

* Predominantly Camelids, occasional poultry
# Predominantly rabbits
Table 17  Animals available for clinical work:

<table>
<thead>
<tr>
<th>Ratio: students/production animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of students graduated in the last year</td>
</tr>
<tr>
<td>number of production animals</td>
</tr>
<tr>
<td>1/97.2 (Satisfactory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio: students/companion animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of students graduated in the last year</td>
</tr>
<tr>
<td>number of companion animals</td>
</tr>
<tr>
<td>1/91.3 (Satisfactory)</td>
</tr>
</tbody>
</table>

Comments

269. Clinical case load in companion animal studies is adequate at the present time, but not generous. In particular an increased equine caseload would be desirable.

270. The range of small animal disciplines offered is adequate. However there is no ophthalmology referral service which is not ideal. In addition cardiology does not have a dedicated clinician despite efforts to recruit.

271. As the student year group rises to 120, an increased caseload will be needed. However there is a serious concern that the small animal surgical and imaging facilities will not cope with this increase and the staffing level may also prove to be inadequate.

272. A significant proportion of the farm animal caseload presented to the mobile clinic is for pregnancy testing. The caseload at the large animal hospital is low and in many cases involves exotics or deer park animals, rather than production animals. It may not be advisable to seek an increase in the number of referred cases to the large animal hospital until the identified weaknesses in the facilities are rectified.

273. In the Visitors’ opinion, there may be scope for the mobile clinic to expand its services in collaboration with veterinary practices in the area. For example, by offering herd health services on a referral basis to complement other services offered by local practices.

274. The plans to split the accommodation for the Farm Animal group across the site are regrettable and will only serve to hinder the ability of staff to collaborate and offer an effective service to clients, to the eventual detriment of students.
Recommendation

275. The School must expedite its plans for improving the clinical services at Langford, either through the proposed development of LCVS or otherwise, in order to ensure continued viability of all its clinics and to maintain an adequate supply of a varied clinical caseload for teaching purposes. If LCVS is established as a commercial partnership, it is necessary to ensure that the needs of the business operation do not compromise students’ access to case materials and clinical experience.

276. Measures must be explored to avoid splitting the accommodation for the Farm Animal group across the Langford site.

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The clinical services must have access to appropriate diagnostic support services. The clinical department(s) must maintain close links with the pathology and other diagnostic services so that students can follow cases where animals die of natural causes or are put down, and conduct post-mortem examinations. If necessary, pathology material should also be obtained from outside the institution to enhance the learning experience.

An adequate data retrieval system must be available so that students can undertake case studies.

277. The department of pathology offers excellent clinical pathology services to the on-site clinics and also to outside practices.

278. Pathology is also delivered to final years students during the clerking rotations. The presence of the VLA laboratories in the Langford site provides significant opportunity that the School is encouraged to maximise.

279. Currently the referral services clinical records are based on ‘Telecare’. Once the case is complete the notes are scanned into a document archiving system which can be accessed at a later date by staff and students. A coding system is used to allow searching of the archive material by species/clinical features/diagnosis etc.

280. The small animal first opinion practice maintains records on a commercially available practice management system.

281. Records in the mobile clinic are paper-based and are transferred to an electronic system, although that system is not fully integrated with the Langford IT system.

282. The Visitors acknowledge that until the small animal and equine theatres and imaging are modernised there is little prospect of installing a computerised clinical case system. However such a system should be incorporated into any new developments.
Recommendation
283. A clinical IT information systems group should be established to define and cost the IT solutions which may needed in the new units.

Animals & Teaching Material for Food Hygiene

| The institution must ensure that the students are exposed to an adequate supply of teaching material in the food hygiene area. |

284. The University of Bristol has its own multi-species red-meal slaughterhouse on the Langford site (approved food business operator no 8037). In 2005-6 it processed 913 pigs, 247 sheep and 151 cattle as part of food science research projects and this material was used for teaching Veterinary Public Health during the final year Farm Animal Science clerking rotation. The emphasis in teaching is on methodologies of slaughter, dressing procedures and risk assessments in relation to Food Hygiene and Microbiology. Animal welfare and food technology aspects of abattoir operations are also considered. Didactic teaching on these subjects uses examples from the slaughterhouse.
CHAPTER 8 - LIBRARY AND LEARNING RESOURCES

The Library and related services must help to meet the institution's objectives and lend support to basic training, research and postgraduate studies.

285. The University of Bristol Library comprises thirteen branches whose facilities are available to all staff, students and researchers, as well as on-line access both on and off campus. In particular, The veterinary programme is served by three branch libraries. The Medical Library, in Bristol, is the main library used by 1st to 3rd year veterinary students who also have access to the main veterinary library at Langford. The Biological Sciences Library, also in Bristol, is used by veterinary students mainly for access to texts on Parasitology, although the library does not contain specific veterinary texts. The main Veterinary Sciences Library is at Langford.

286. Apart from a slight dip in funding of the Langford Library in 2005/6, both main libraries show significant increases in their operating budgets over the last three years.

287. 'Metalib' is the library's resource portal, provides access to all of the library's information resources, including the online Library Catalogue, and a large range of databases. The University Library has invested heavily in electronic resources with a policy of purchasing journals in electronic format only (wherever possible) for the two medical faculties. The Library subscribes to over 9,000 electronic journal titles in total and significant back-runs have also been acquired. Off-campus access is available though 'ATHENS', the authenticated proxy service and the University of Bristol Virtual Private Network (VPN). All three libraries serving the veterinary programme support wireless access to the Internet and all of the online library resources. Training on all of these resources is provided to staff, postgraduates and undergraduates.

288. The Medical library is open for 12 hours per weekday during term and for slightly reduced hours on Saturdays, and during vacations. It is staffed by 6 full time professional staff and by 3.67 full time equivalents working part time. Of the 9.67 staff members, 3.6 are professionally qualified Subject Librarians. A part of their duties is to provide a comprehensive training programme for all students. The library is used by about 1500 individuals but there is a generous number of places for private reading. The number of computer work stations was considered to be adequate, in particular considering the increasing number of students with their own laptop computers and the availability of WiFi within the library. Texts on veterinary clinical subjects can be obtained from the library at Langford either personally or by a system of ordering and delivery to Bristol. These can be returned at either site.

289. The Biological Sciences Library weekday opening hours are slightly reduced compared with those of the Medical Library and it is closed at weekends except for a period during summer examinations. It is staffed by 2.5 full time equivalents of which 0.4 is a professionally qualified Subject Librarian.

290. The main Veterinary Sciences Library is at Langford. It is open 24 hours per day. It is staffed by two full time staff and by 0.74 full time equivalents working part-time. Of the 2.74 staff members, 0.4 is a professionally qualified Subject Librarian. Private study areas, including access to computers,
are adequate. The Veterinary School holds relevant stocks of current textbooks at points of need in a variety of locations, such as the small animal hospital.

291. Group study and training rooms were observed at the two main libraries and appeared to be well equipped with audio-visual aids. On-line communications systems appeared excellent.

292. The Langford Library Users Group meets once a term and is representative of teachers and researchers, students and library staff. The chairman of the group reports to the Management Committee of the Department of Clinical Veterinary Science and a representative attends the Medical Libraries Liaison Committee. Thus systems are in place to ensure the ready availability of current textbooks, the efficient circulation of reading material, and to reduce shortages.

293. There are 3 dedicated online catalogue terminals, which give access to information about online resources and most library printed materials, (and also non-book materials such as videocassettes, DVDs, CD-ROMs, microforms), throughout the entire library system. There are 8 Library PCs in a dedicated AVA room, and a further 3 elsewhere in the library. Printing, photocopying and scanning facilities are available in the library.

294. There is a robust programme of Information Skills and Literacy teaching in place for undergraduate and postgraduate veterinary students. Library induction takes place for all new students. In addition to the induction and training sessions for first, second and third year students held in the Medical Library, new students receive an induction to the Veterinary Science Library at Langford. Fourth and final year students are invited to request individual or group training as required. This is provided on demand when possible, or by appointment. Additional sessions are incorporated in the teaching programme, in liaison with academic staff, where a need or opportunity is identified.

295. Although AV services are available to veterinary undergraduates at each of the major locations listed above, it is only at Langford where the Photographic/AV unit is specific to the Department of Clinical Veterinary Science.

296. The unit provides photographic and support services throughout the School as well being responsible for AV equipment in lecture theatres and seminar rooms. Photographic images are stored on video cassettes, CDs, and DVDs mainly for teaching purposes. The same services are provided to researchers. High quality printing of posters and research material for publications is undertaken by the unit. Video material is being created constantly and is commonly accessed via the web.

The Library must offer a comprehensive and up-to-date range of books and journals. Its opening hours, regulations and loan arrangements must facilitate self-learning by undergraduates. The institution must provide an adequate number of places for private study in the library or elsewhere on site. The Library must be professionally managed, have good working relationships with other libraries in the area, and provide modern on-line communication facilities for use by staff, students and researchers. In institutions where departmental libraries are available, the main library should have documentation on the material held in the other libraries.

The institution must provide audio-visual and information technology facilities.
297. The unit supplies IT support for the Student Computer Laboratories, the teaching areas and the entire site network as well as for staff and postgraduates. Recording systems in the small animal, equine, and diagnostic laboratories are also maintained and developed by the unit.

298. On-line teaching is through the University-supported virtual learning environment.

299. A Centre for Excellence in Teaching and Learning has been established in the Department of Physiology (School of Medical Sciences) where a virtual microscope, which particularly impressed the Visitors, is being developed.

300. The computers at some work stations are ageing but the School is well aware of the need for a constant programme of upgrading and/or replacement, as budgets allow, to cope with the use of more powerful software.

301. The need to maintain the existing IT systems as well as the need to develop other IT initiatives, such as the increasing trend towards PowerPoint presentations, the development of software for recording EMS and a desire by the School to expand and develop facilities for self-learning create a danger of over-work and demoralisation for the limited IT staff.

Recommendation

302. In view of the importance and increasing reliance on information technology, the Visitors recommend that the University gives sympathetic consideration to the School’s desire for additional IT staff resources.
CHAPTER 9 - ADMISSION AND ENROLMENT

The veterinary course is a rigorous one, and students admitted must have proven capabilities. A good science background is necessary, including high standards in chemical, physical and biological sciences. Selection should be competitive, based upon academic achievements and on other criteria designed to demonstrate candidates' aptitude and motivation for veterinary medicine.

As veterinary education is expensive, the total numbers of students admitted to institutions in a given state should reflect the output required in that state. Admissions should not only be based on current and foreseeable needs in the traditional areas of livestock, pet care and food hygiene, but also take into account needs in other less traditional careers.

Admissions must also be compatible with facilities and staff numbers, bearing in mind the need for low student/staff ratios, particularly in the clinical side of the course, and the amount of clinical and pathological material available.

303. The School offers conditional places to school leavers who have studied A-level (or equivalent) in biology and chemistry and one other subject. Graduate students are required to have a first class or Upper Second Class degree, preferably in a science subject, but those with other subjects can get in as long as they offer A level Chemistry (and preferably Biology) as well.

304. The School’s admissions process is designed to select students who are highly motivated and who have spent time and effort researching the programme. A “Vetquest” day is offered to year 11 and 12 schoolchildren as an insight into the career training and demands of a veterinary career. The University of Bristol website has a section devoted to the Veterinary School, with advice and instruction about the entry criteria. These include sections about motivation, relevant experience and academic requirements. In addition there is a section concerning interview technique which would help applicants who are less well prepared by their schools.

305. Following consideration of the UCAS\(^1\) application form by admissions staff, an interview may be offered. The interview is conducted by two members of a sixteen strong panel, some of whom are practitioners. Appropriate interview training is given. Following a successful interview an offer conditional on achieving grades AAB at A-level is issued.

306. The goal of widening participation is also achieved by assessing the average examination performance of the school which the applicant attends. Applications from students attending schools with lower than average take-up of higher education places are scrutinised carefully by two senior members of the Admissions committee in order to allow applicants a reasonable opportunity to gain admission.

307. In addition, the University, in collaboration with other universities and colleges under the ‘VetNet Lifelong Learning’ project, is developing an innovative Foundation Degree which will serve as preparation for entry to veterinary, medical or dental degrees for students without the traditional A levels.

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\(^1\) Universities Central Admissions Service
308. The ‘Veterinary Gateway Year’ at the RVC and Liverpool is a further scheme designed to widen participation and Bristol has agreed to accept a number of students from that scheme, but only in competition with general applicants.

Comments

309. The admissions system is well thought out and fair to applicants. Thought has been given to “widening participation” initiatives. Overall the Visitors commend the admissions process as excellent.

310. Applications for admission to the School declined in 2006 but have recovered in 2007 when 1045 applications were received. The overall trend over a 10-year period is however markedly downward in common with applications to other UK veterinary schools.

311. The School admits approximately 110 students, but has aspirations to increase class size to 120. The aim is to increase the number of government funded places to 120 and to offer most of these to school leavers. The School has reservations concerning the admission of more graduate students, as the requirement for them to secure independent financing has led some in the past to encounter financial difficulties.

312. The infra-structure is generally adequate to cope with 120 students (subject to comments made elsewhere). However there will need to be some greater division of the class size to facilitate small group teaching as this number is reached.

313. Entry to the final year of the course for clinical instruction has occasionally been granted to students from St George’s University in Grenada. However this is dependent on the availability of space within the year group.
CHAPTER 10 - ACADEMIC AND SUPPORT STAFF

The competence of the academic staff should enable coverage of all the subject areas of the curriculum, except where alternative arrangements are made for outside teachers.

Part-time staff, residents and graduate students may lend support to full-time academic staff if they are appropriately integrated into the instructional programme.

Academic posts must offer the security and benefits necessary to maintain staff stability, continuity and competence. Appropriate teacher supervision requires adequate teaching staff/student and teaching staff/support staff ratios.

Overall, the academic staff should devote at least 50 per cent of their time to research and other non-teaching-related academic activities.

There should be an adequate number of suitably qualified support staff to enable the academic staff to concentrate on their major roles.

Findings

314. The statistics shown below are based principally upon the Department of Clinical Veterinary Science (DCVS) which contributes some 63% of the programme.

315. With the current University administrative systems, the School was not able to incorporate BVSc specific staff statistics from the pre-clinical departments. Information regarding the pre-clinical departments is included where possible and, in particular, at Table 19, the programme Teaching Staff and Ratios figures.

Table 18.1: Personnel in the Dept of Clinical Veterinary Sciences

<table>
<thead>
<tr>
<th></th>
<th>Budgeted Posts (FTE)</th>
<th>Non-budgeted posts (FTE)</th>
<th>Total (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Academic Staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Teaching Staff</td>
<td>40.15</td>
<td>3.26</td>
<td>43.41</td>
</tr>
<tr>
<td>b. Research Staff</td>
<td>2.25</td>
<td>54.02</td>
<td>56.27</td>
</tr>
<tr>
<td>c. Others</td>
<td>23.22</td>
<td>9.61</td>
<td>32.83</td>
</tr>
<tr>
<td>Total Academic Staff:</td>
<td>65.62</td>
<td>66.89</td>
<td>132.51</td>
</tr>
<tr>
<td>2. Support Staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Responsible for the care and treatment of animals</td>
<td>10.5</td>
<td>19.18</td>
<td>29.68</td>
</tr>
<tr>
<td>e. Responsible for the preparation of practical and clinical teaching</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>g. Responsible for administration, general services, maintenance etc.</td>
<td>19.42</td>
<td>11.22</td>
<td>30.64</td>
</tr>
<tr>
<td>h. Engaged in research work</td>
<td>6.48</td>
<td>33.55</td>
<td>40.03</td>
</tr>
<tr>
<td>i. Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Diagnostic staff</td>
<td>4.63</td>
<td>6.61</td>
<td>11.24</td>
</tr>
<tr>
<td>(b) PM Room Staff</td>
<td>1.31</td>
<td>2.79</td>
<td>4.10</td>
</tr>
<tr>
<td>j. Total Support Staff:</td>
<td>43.33</td>
<td>73.35</td>
<td>116.68</td>
</tr>
<tr>
<td>3. Total Staff:</td>
<td>108.95</td>
<td>140.24</td>
<td>249.20</td>
</tr>
</tbody>
</table>
Allocation of Personnel to the Various Departments

316. Within the pre-clinical departments, the allocation of staff dedicated to the teaching of the BVSc programme is shown in Table 18.2A.

Table 18.2A: Allocation of Personnel in the Pre-Clinical Departments (FTE)

<table>
<thead>
<tr>
<th>Dept</th>
<th>Academic Staff</th>
<th>Other</th>
<th>Support Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prof</td>
<td>Reader, Senior Lecturer, Clinical / Research Fellow</td>
<td>Lecturer, Clinical / Research Fellow</td>
</tr>
<tr>
<td>Anatomy</td>
<td>0.80</td>
<td>0.90</td>
<td>1.32</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>0.77</td>
<td>0.50</td>
<td>0.38</td>
</tr>
<tr>
<td>Parasitology</td>
<td>0.10</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>Pharmacology</td>
<td>0.27</td>
<td>1.11</td>
<td>0.48</td>
</tr>
<tr>
<td>Physiology</td>
<td>2.29</td>
<td>2.05</td>
<td>2.02</td>
</tr>
<tr>
<td>Total:</td>
<td>4.23</td>
<td>4.57</td>
<td>4.90</td>
</tr>
</tbody>
</table>

317. The allocation of staff within the DCVS is shown at Table 18.2B. The Divisions within the DCVS are:

a. DFAS: Division of Farm Animal Science.
b. DCAS: Division of Veterinary Companion Animal Studies.
c. VPII: Division of Veterinary Pathology, Infection and Immunity.

The acronym VGEN includes all central administrative support staff and the Head of School’s office.

Table 18.2B: Allocation of Personnel to the Various Divisions in DCVS (FTE)

<table>
<thead>
<tr>
<th>Div</th>
<th>Academic Staff</th>
<th>Other</th>
<th>Support Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prof</td>
<td>Reader, Senior Lecturer, Clinical / Research Fellow</td>
<td>Lecturer, Clinical / Research Fellow</td>
</tr>
<tr>
<td>DFAS</td>
<td>4.00</td>
<td>12.75</td>
<td>14.98</td>
</tr>
<tr>
<td>DCAS</td>
<td>4.01</td>
<td>4.75</td>
<td>10.65</td>
</tr>
<tr>
<td>VPII</td>
<td>6.00</td>
<td>2.40</td>
<td>11.93</td>
</tr>
<tr>
<td>VGEN</td>
<td>0.00</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total:</td>
<td>14.01</td>
<td>20.90</td>
<td>37.56</td>
</tr>
</tbody>
</table>
Teaching Staff

Table 18.3: Personnel responsible for Undergraduate Teaching (FTE):

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Number of budgeted and non-budgeted teaching and research staff involved in pre-clinical undergraduate teaching</td>
<td>16.51</td>
</tr>
<tr>
<td>B</td>
<td>Number of budgeted and non-budgeted teaching staff involved in clinical undergraduate teaching</td>
<td>69.38</td>
</tr>
<tr>
<td>C</td>
<td>Number of research staff involved in clinical undergraduate teaching</td>
<td>3.56</td>
</tr>
<tr>
<td>D</td>
<td>Total Number of personnel responsible for undergraduate teaching (A + B + C)</td>
<td>89.46</td>
</tr>
</tbody>
</table>

Ratios

Table 19

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching staff/undergraduate students (whole programme):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Teaching Staff</td>
<td>89.46</td>
<td>1</td>
</tr>
<tr>
<td>Number of undergraduate students</td>
<td>535.00</td>
<td>5.98 (Satisfactory)</td>
</tr>
<tr>
<td>Teaching staff/support staff (whole programme):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Teaching Staff</td>
<td>89.46</td>
<td>1</td>
</tr>
<tr>
<td>Number of Support Staff</td>
<td>119.00</td>
<td>1.33 (Satisfactory)</td>
</tr>
</tbody>
</table>

318. Although the Head of Department is the budget holder, the Dean has control of the staff budget and for 2006-07, set a core funded staff budget of 3% below actual predicted costs. This level of saving can only be achieved by delaying replacements if and when vacancies occur or by reducing the level of replacement staff. There are difficulties in recruiting staff in disciplines such as cardiology, farm animal science and public health. Given the considerable clinical teaching load, particularly in clinical support areas such as anaesthesia and imaging, it is rare for these staff to be able to have any protected research time.

Comments

319. Staff retention in clinical departments is a problem, as young staff gain experience then leave to become competitors offering referral services. This is a ubiquitous problem and it is not helped by the poor facilities in some areas, and by the non-competitive pay and reward structure compared with private practice. The Visitors identified that some preclinical staff had little opportunity to perform research, which erodes the concept that the course is research-led. Some clinical staff admitted privately that ‘research time’ was used to catch up on correspondence relating to cases.

320. The Visitors noted that the staff student ratio has fallen significantly since the last visit (although it is still within satisfactory RCVS/EAEVE limits). As the School approaches its aspiration of 120
students per year, the ratio will fall still further. The School should be mindful of the need to maintain the staff/student ratio to ensure that it does not deteriorate beyond the 1:7.5 limit set by RCVS/EAEVE.

321. It is essential that the clinical departments recruit and retain appropriate professional nursing support to provide professional 24 hour nursing. State-of-the-art treatment teams elsewhere have much greater nursing support than is currently offered at Bristol. The learning experience of the students is enhanced by their involvement in out of hours cover, but they should not be the principal care providers.

**Recommendation**

322. The School should consider the provision of professional nursing support for the clinical departments to ensure that professional nursing cover is available on a 24 hours basis.
CHAPTER 11 - CONTINUING EDUCATION

The institution should co-operate with other professional organisations and competent authorities in the design, implementation and quality control of continuing education programmes. It should strive to provide well-designed continuing education programmes in specific areas of practical veterinary medicine.

323. The Continuing Education Unit of the Department of Clinical Veterinary Science is active in providing a number of short courses on clinical subjects that are well attended by practitioners. In addition, Bristol provides training for Official Veterinarians, as well as other courses in meat hygiene, and for veterinary nurses. Clinicians and researchers are regular contributors to courses offered by other associations, and the involvement of teaching staff in continuing education organised by outside bodies is supported by the School. The School is intending to develop modules in Veterinary Public Health and in Animal Welfare to form part of the new RCVS modular certificate programme.

324. In the Visitors’ opinion, although the Continuing Education Unit was active in providing courses, it did not appear to be run on a commercially competitive basis, nor did it yet appear to be making enough of the opportunities to develop a market for CPD in areas in which Bristol could claim to have strengths. The decision to permit staff to engage in CPD provision for competitor organisations, even when the University may be offering an equivalent course in the same year, would appear to erode the University’s efforts further. More could be achieved by the CE unit (and hence income could be derived for the benefit of the School) if staff were only permitted to undertake CE for outside organisations when Bristol’s courses were fully subscribed.

325. The Visitors were disappointed to learn that, with the exception of Animal Welfare, no modules have yet been prepared for accreditation under the new RCVS modular certificate scheme. Whilst it is accepted that demand for these new modules is currently untested, it is disappointing that a pro-active approach has not been taken, as linking provision to a nationally accredited scheme could help to expand the market. There are some clinical areas such as feline medicine where Bristol has a long and solid reputation and in which the School could become leaders in the CPD field.

Suggestions

326. A coherent, uniform and equitable staff policy should be formulated to make the issues of continuing education delivery and reward clear and transparent.

327. The School should identify a number of areas where adaptation of existing courses would allow the School to link its provision with the new RCVS certificate structure. These should then be marketed more aggressively. Feline medicine and soft tissue surgery would be immediate examples, in addition to VPH and Welfare already identified by the School.

328. It is suggested that the School should consult more extensively with representatives from practice to identify potential areas of interest for development of new modules.
CHAPTER 12 - POSTGRADUATE EDUCATION

The institution should offer training programmes leading to qualifications in the clinical and paraclinical fields. Where appropriate, the programmes should meet the standards and regulations of the respective European specialist colleges and of the European Board of Veterinary Specialisation or equivalent bodies. The number of postgraduate places should be proportional to the annual number of graduates. Research training: The institution must offer postgraduate training programmes in research. These programmes must be well-designed and must cover theoretical as well as practical training (including research projects), leading to a certificate/degree within a period of two to four years. The institution should provide an adequate number of places for research students.

Findings

329. The Department of Clinical Veterinary Science offers clinical training scholarships to veterinary graduates in a range of subjects at both Intern and Resident level. Programmes are available within the Department that are approved for RCVS or European Diplomas in:
- Avian Medicine
- Cattle Health and Production
- Dermatology
- Imaging
- Large Animal Surgery
- Small Animal Medicine
- Small Animal Surgery
- Veterinary Anaesthesia
- Zoological Medicine.

330. According to the SER, there were 31 postgraduate clinical training scholars, plus 4 members of academic staff enrolled on various RCVS Certificates, Diplomas, and/or European Diplomas.

331. Bristol also offers a postgraduate Diploma and Masters degree in Meat Science and Technology (12 enrolled), an MSc by research (4 enrolled), PhD (42 enrolled full time, 9 part time), and MD degree (1 enrolled).

Comments

Clinical internships

332. For each position advertised there are generally 5-25 applications that are short-listed to 5 before selection is done on the basis of interviews and proof of clinical experience and commitment. There seemed to be a fair representation of the various UK and foreign veterinary schools’ graduates filling these positions.

333. A significant number of the Bristol teaching staff have Diplomate status, although not in all clinical disciplines. Clinical training courses leading to a certified qualification (or indeed Diplomate status) are being offered in a range of areas. There does not seem to be a specific drive towards staff members reaching Diplomate status from one of the clinical (or non-clinical) European Colleges.

334. The clinical training scholars are uniformly highly committed to their subject areas and to the university and the supervising staff. Team spirit observed by the Visitors was high. The clinical training scholars were encouraged to have research interest and time was set aside for that
purpose. The ‘protection’ of this research time did appear to vary between divisions, with some clinical training scholars finding it difficult to obtain time for research.

335. In addition, the requirement by some European Boards that training should be conducted under the guidance of other European Board members has lead to some difficulty where the senior staff did not hold the relevant European board qualification, or when the senior staff was only one member deep.

336. There is no intern programme with the companion animal departments.

Postgraduate Research Programmes

337. Intercalation schemes are in place that aim to promote increased involvement of veterinary students in research. It was shown to the visiting team, that intercalators more so than the control group tend to enrol in postgraduate studies (internships, PhD). Currently, approximately 20% of undergraduate students are on the intercalation track. The recent increase in intercalators has resulted from the funding incentives provided by the ‘Veterinary Training & Research Initiative’ (VTRI). It was brought to the Visitors’ attention that an intercalated PhD programme can be followed under recently altered regulations, although this route has not yet been taken up by any students.

338. The involvement of veterinary graduates in postgraduate research is still rather limited [only 35% of PhD students (i.e. approximately 15 individuals) were veterinary qualified] and focuses mainly in the research strong disciplines (food animal science, infection and immunity, and animal welfare). Possibilities for PhD programmes in clinical research are rather limited, which is attributed to the limited availability of funding.

339. Opportunities for post-graduate research exist in all departments. The numbers of PhD students are reasonable but fewer take up these positions in clinical departments than in pre- and paraclinical departments. Post-graduate training programmes require appropriate compulsory elements in transferable skills training.

Suggestions

340. Permanent staff in clinical departments should be given every encouragement to achieve European board qualifications.

341. It is very important that fair access to clinical training scholar places is maintained. Careful thought to the selection criteria should be given, particularly in the light of changes to the RCVS certificate scheme over the next few years.
CHAPTER 13 - RESEARCH

It is desirable for undergraduate students to gain experience of research by undertaking a research project and writing a report on it.

The institution should offer an adequate number of international-level programmes in biomedical and veterinary research.

They should provide a balance between basic, applied and clinical research.

The institution should assign an appropriate number of academic and technical posts specifically to research.

The institution should also allocate adequate facilities, equipment and operating funds to research.

342. Bristol has put significant effort into encouraging an interest in research amongst its undergraduates, starting with pre-entry 6th form summer studentships. Undergraduates in years 2 – 4 are given the opportunity to undertake vacation research projects with research groups in the School. There has been a marked increase in take-up of these projects, with between 16 and 18 applicants over the last 3 years. These research places have been funded mainly by the Veterinary Training & Research Initiative (VTRI).

343. The School has set and is meeting its target of 20% of students intercalating. The increased interest in intercalation has been helped by the introduction of two new veterinary related BSc programmes: Veterinary Pathogenesis, and Animal Behaviour and Welfare.

344. The Visitors considered that some aspects at Bristol were innovative and excellent – such as the pre-entry 6th form summer studentships, and were pleased to hear of the increase in the number of students intercalating. However, they were disappointed to learn that the School had decided to discontinue undergraduate research projects, and felt that the teaching of research skills in the 3rd year was less than ideal.

345. The aim to intercalate 20% of students is laudable and has been achieved using VTRI funding. It is debateable whether this will be sustained when that funding ends, unless a commitment from the University is given.

346. There was a good balance between basic, applied and clinical research, although naturally there are more clinical positions (internships, residencies etc) than PhD studentships in clinical departments.

347. The University does assign an appropriate number of academic and technical posts specifically to research, although information on the research involvement of individual staff was less clear to the Visitors. It is frequently the case that busy clinical academics may perform case review but less often clinical research programmes.

348. The refurbishment of the Churchill Building laboratory space has provided high quality facilities.

Suggestion

349. Consideration should be given to finding alternative sources of financial support to replace the Veterinary Training & Research Initiative (VTRI) funding when that ends, so that the progress made by the School in increasing intercalations is maintained.
CHAPTER 14 - EXTRA MURAL STUDIES (EMS)

The school should clearly demonstrate that EMS is an integral part of the education and training of veterinary students. There must be a structured system to enable students to undertake 12 weeks of pre-clinical animal husbandry-related EMS in the early years of the course, and 26 weeks of clinically-related EMS in the later years of the course.

350. Students undertake 12 weeks of pre-clinical EMS during years 1 and 2, and 26 weeks of clinical EMS in years 3 – 5. Pre-clinical EMS is integrated into both the Animal Management and Animal Health and Husbandry units.

351. Table 20 shows the structure of clinical EMS:

Table 20 Bristol 'standard' programme of clinical EMS

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Vacation</th>
<th>placement</th>
<th>Number of weeks</th>
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<tbody>
<tr>
<td>3</td>
<td>Easter/Summer</td>
<td>Foster Practice</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Summer</td>
<td>Abattoir/Food Hygiene</td>
<td>1 (5 days)</td>
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<td>3</td>
<td>Summary for year 3</td>
<td></td>
<td>7 weeks</td>
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<tr>
<td>4</td>
<td>Christmas/Easter/ Summer</td>
<td>Foster practice Diagnostic Laboratory/State veterinary Service/Other practices</td>
<td>4/5</td>
</tr>
<tr>
<td>4-5</td>
<td>Summer-Christmas/ Easter</td>
<td>On site EMS small animal/equine</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Summary for year 4</td>
<td></td>
<td>14 weeks</td>
</tr>
<tr>
<td>5</td>
<td>Christmas/Easter</td>
<td>Foster practice</td>
<td>4/5</td>
</tr>
<tr>
<td>5</td>
<td>Summary for year 5</td>
<td></td>
<td>5 weeks</td>
</tr>
<tr>
<td></td>
<td>Grand total</td>
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<td>26 weeks</td>
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</table>

352. Pre-clinical students are provided with a handbook explaining the scheme and then assisted by a Pre-clinical EMS Co-ordinator into rotational places in each of five enterprises. These cover dairy and pig units, a horse enterprise, indoor lambing, and a small animal hospital or veterinary nurse training practice.

353. On completion of pre-clinical EMS, students are expected to be able to handle animals competently and effectively and to be familiar with the basics of production, feeding and management systems as well as the economics of the enterprises and a critical awareness of the welfare aspects of each husbandry system.

354. In respect of Clinical EMS, the scheme is operated by the Clinical EMS Co-ordinator and the Student Administration Office who ultimately report to the Veterinary Programme Committee. Students must provide evidence of satisfactory EMS instruction before being allowed to present for the final examination. Broadly, the aims and objectives of clinical EMS are to enable students to gain as wide a practical experience as possible, to achieve proficiency in routine techniques and to obtain the first hand experience needed to develop the Day One Skills required of a student on graduation.
355. The Bristol system promotes the concept of a ‘foster’ or ‘base’ practice, which must be in the UK and should ideally be a mixed practice, aimed at providing a continuous core of experience gained in a familiar environment in an atmosphere of mutual trust.

356. Complementary to the foster practice are more EMS placements in other, more specialised areas. Students are also encouraged to undertake alternative forms of EMS, subject in some cases to prior approval by the School and to certain time limits. These include placements with the State Veterinary Service, Named Veterinary Surgeons, another veterinary schools in the UK or abroad, other centres abroad, and placements involving participation for up to 8 weeks in a research environment.

---

There must be a member of the academic, or academically-related staff, responsible for the overall supervision of both categories of EMS, including liaison with EMS providers.

Students should have access to a suitable database of EMS placements, and must be able to seek and obtain advice and guidance on the suitability of EMS placements.

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357. The current EMS Administrator (who also has other duties as Student Services Administrator) has established an enviable rapport with students and EMS providers alike. Imminent retirement places this pivotal role at risk of being subsumed into the established duties of other, already hard-pressed staff with a consequent loss of close contact between the School and EMS providers.

358. Foster practices are chosen from available sources of information, including the School’s Foster Practice database, the RCVS ‘Find a Vet’ website and the Directory of Practices, and after consultation between the School, the practice and the student. There is an excellent system of mentoring in respect of EMS placements and the School is to be commended for the effort it puts into this.

**Recommendation**

359. The Visitors recommend that the School makes every effort to safeguard the role(s) of EMS Administrator and to establish a smooth progression of that role to another equally dedicated individual.

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There should be a system in place to enable EMS providers to report back to the school on their assessment of the performance of students during EMS.

There should be a mechanism to enable students to formally report on the quality of the instruction and experience of EMS placements.

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360. Pre-clinical students are assessed by placement supervisors in each enterprise. Assessment reports are retained within the student administration office and provide feedback to the student and to the Year 1 and 2 unit organisers. Students prepare a report on each placement all of which must reach a pass standard, although only three of the reports contribute to the marks of the second BVSc examination. Progress to Year 3 of the course is dependant on completion of this mandatory 12 weeks of pre-clinical EMS.

361. In respect of clinical EMS, placements are subject to assessment by EMS tutors at the practice with feedback to the EMS co-coordinator who discusses relevant issues with the student. At the start of Year 4, written feedback from the student forms the basis for an individual interview with the EMS co-
coordinator to review experience gained to date and to plan the complementary placements which allow for gaps in experience at the foster practice and/or allow for areas of specific interest to the student. Progress is again reviewed between the student and their personal tutor during Year 4.

362. An electronic, web-based recording and verification system is being introduced and was demonstrated to the Visitors. This will help to prepare students for the RCVS post graduate Professional Development Phase. The Visitors were impressed by the demonstration of a web-based recording system for EMS and would like to commend this initiative.

363. Students provide an assessment of the EMS practice to the EMS co-coordinator in order to monitor the breadth of experience obtained by each student and to provide and update information on the administration database. Information of a general nature is fed back to participating practices.

364. Provision of EMS at Bristol is well structured, well co-ordinated and well supervised. Bristol is justified in claiming the Foster Practice system to be both unique and tried and tested in delivering an EMS experience which is both organized and flexible. The ‘Blackboard’ software has facilitated evaluation of EMS reports, and the ability of individual students to experience research, not least through vacation research scholarships, as part of their EMS has greatly increased.

365. The School has some concerns, however, which are acknowledged and endorsed by the Visitors. Students are critical of the mandatory three weeks of EMS at Langford, without which the School claims it would be difficult to run some of the clinics, although this may be of longer-term benefit to students if EMS practices become more difficult to find; abattoir experience is becoming difficult to deliver, although an alternative approach is being explored; and farm animal EMS is also becoming more difficult to deliver, aggravated by a national increase in student numbers and a reduction in practices with a significant farm animal component to their work. Bristol is also concerned about the increasing cost of EMS to individual students, taken with other rising costs.

366. The Visitors are also concerned that truly mixed practices whereby individual vets cover many species are rarely “cutting edge” and clinical excellence may be reduced in such circumstances. EMS has also been the background where clinical skills have traditionally been acquired. Practitioners are now under more pressure than ever before to provide a “fault-free” service to their clients and patients and so the opportunity for students to gain true hands on experience may become less with time. This may make day-1 competences more difficult to achieve through EMS.

367. See also page 44 for other comments on EMS.

**Suggestion**

368. The Visitors suggest that Bristol maximises opportunities for collaborative liaison with EMS practices for their mutual benefit and to safeguard the availability of EMS practices for Bristol students for as long as possible.
ANNEX 1 – ACADEMIC STAFF LIST

Department of Clinical Veterinary Science - Academic/Related Staff

Division of Companion Animal Studies

Professors
- Prof ARS Barr MRCVS: Professor of Veterinary Surgery
- Prof TJ Gruffydd-Jones MRCVS: Professor of Feline Medicine

(Head of Division)
- Prof EJ Hall MRCVS: Professor
- Prof PE Holt FRCVS: Professor of Veterinary Surgery (PVC)
- Prof AE Waterman-Pearson FRCVS: Professor of Veterinary Anaesthesia

Teaching Staff
- Dr FJ Barr MRCVS: Senior Lecturer in Veterinary Imaging Techniques
- Dr KJ Bradley MRCVS: Lecturer in Veterinary Diagnostic Imagine
- Miss CCA Clark: Research Assistant
- Miss EJV Comerford MRCVS: Lecturer in Small Animal Orthopaedics
- Ms M Costello MRCVS: Special Lecturer in Veterinary Diagnostic Imaging
- Dr SH Franklin MRCVS: Clinical Research Fellow
- Dr PB Hill MRCVS: Senior Lecturer in Dermatology
- Mr A Hotston Moore MRCVS: Special Lecturer in SMSTS/Academic Director of the VNPA Programme
- Mr JG Lane FRCVS: Senior Lecturer in Veterinary Surgery
- Ms PJ Murison MRCVS: Lecturer in Veterinary Anaesthesia
- Dr JK Murray: Cats Protection Lecturer in Feline Epidemiology
- Dr MR Owen MRCVS: Senior Lecturer in Small Animal Orthopaedics
- Ms SE Shaw MRCVS: Senior Lecturer in Dermatological/Applied Immunology
- Dr LS Slingsby MRCVS: Research Fellow in Veterinary Anaesthesia
- Dr S Tasker MRCVS: Lecturer in Small Animal Medicine
- Mr WH Tremaine MRCVS: Senior Lecturer in Equine Surgery

SAP Clinical Staff
- Mr CSG Blakey MRCVS: Veterinary Clinical Assistant in Small Animal First Opinion Practice
- Dr AC Blaxter MRCVS: Hills’ Clinician and Director of the Small Animal Practice
- Miss S Hutton MRCVS: Veterinary Clinical Assistant in Small Animal First Opinion Practice
- Mrs KA Lawrenson MRCVS: Clinical Assistant in First Opinion Small Animal Practice
- Mr IR Sayers MRCVS: Clinical Fellow in Small Animal Practice

Equine Clinical Staff
- Mr NS Woodford MRCVS: Clinical Associate in Equine Surgery
- Miss J Griffiths MRCVS: Clinical Fellow in First Opinion Equine Practice
Miss L Harvey MRCVS
Miss AM Harvey MRCVS
Miss PJ Lau MRCVS
Miss EJ Love MRCVS
Ms HL Mash MRCVS
Ms KF Murphy MRCVS
Mrs SM Warman MRCVS

Mr WJ Carter MRCVS
Mrs C Dye MRCVS
Miss AM Harvey MRCVS
Miss PJ Lau MRCVS
Miss EJ Love MRCVS
Ms HL Mash MRCVS
Ms KF Murphy MRCVS
Mrs SM Warman MRCVS

SAH Clinical Staff
Clinical Assistant in First Opinion Equine Practice

Clinical Fellow in Veterinary Ophthalmology
Locum Clinical Associate in Small Animal Medicine
FAB Clinical Assistant in Feline Medicine
Clinical Assistant
Clinical Assistant in Veterinary Anaesthesia
Clinical Assistant
Clinical Fellow in Small Animal Emergency Medicine and Intensive Care
Clinical Assistant in Small Animal Internal Medicine

Clinical Fellow in Veterinary Science
Clinical Fellow in Veterinary Clinical Pathology

Mrs D Fews MRCVS
Ms KV Tennant MRCVS

Diagnostic Clinicians
Clinical Fellow in Veterinary Science
Clinical Fellow in Veterinary Clinical Pathology

Miss L Davis
Miss AJ Maiden

Radiographers
Radiographer (Job Share)
Radiographer (job-share)

Miss SF Badger
Mrs CR Coates
Mrs MP Corbett
Mrs MJ Hickling
Mrs PJ Hotston Moore
Mrs AK Jeffery

VNPA Staff
Director, Veterinary Nursing Unit
Unit Organiser/Lecturer
Veterinary Nurse Tutor
Student Administrator
Internal Verifier (Part-time)
Assistant Tutor in Veterinary Nursing

Mrs CR Coates
Mrs JE Ford
Mr A Jones
Miss SA Monks
Mrs SE Thomas

Practice Managers/Senior Admin
Divisional Administrator
Equine Centre Support Manager
Anaesthetics Research and Teaching Associate
Small Animal Practice Manager
Equine Office Manager

Division of Farm Animal Science

Prof WPH Duffus MRCVS
Prof MT Mendl
Prof CJ Nicol
Prof JD Wood

Professors:
Professor of Veterinary Medicine
Professor of Animal Behaviour and Welfare
Professor of Animal Welfare
Professor of Food Animal Science

Dr AJ Bradley MRCVS
Dr JWS Bradshaw

Teaching Staff:
Senior Lecturer in Farm Animal Science
Senior Lecturer in Animal Behaviour
Mrs RA Casey MRCVS  Cats Protection Lecturer in Feline Behaviour and Welfare
Dr R Grogono-Thomas MRCVS  Senior Lecturer in Farm Animal Science
Dr TG Knowles  Senior Lecturer in Farm Animal Science
Dr DCJ Main MRCVS  BVA Animal Welfare Foundation Lecturer in Animal Welfare
Dr JM Roe MRCVS  Senior Lecturer in Animal Husbandry
Dr PR Sheard  Lecturer in Animal Behaviour and Welfare
Dr BG Miller  University Veterinary Officer and Senior Lecturer in Veterinary Medicine
Dr SA Rands  Lecturer in Food Animal Science
Mr I Thomas FRCVS  Special Lecturer in Reproduction and Farm Animal Medicine
Mr SB Wotton  Lecturer in Food Animal Science

Clinical Teaching Staff:
Miss SE Clayton MRCVS  Farm Animal Clinician (FAP)
Mr C Hudson MRCVS  Clinical Assistant in Farm Animal Studies
Mrs LM Steele MRCVS  Farm Animal Clinician
Mr M Steele MRCVS  Senior Farm Animal Clinician

Research Staff:
Dr VM Allen  Research Fellow
Dr MH Anil  Senior Research Fellow in Food Animal Science
Miss FH Ashley  Research Associate in Equine Welfare
Dr RJ Atterbury  Research Associate
Ms CE Broster MRCVS  Veterinary Clinical Researcher
Mr SN Brown  Research Fellow in Food Animal Science
Dr OHP Burman  Research Associate in Rat Welfare
Ms CC Burn  Research Assistant
Dr A Butterworth MRCVS  Research Fellow
Dr JEL Corry  Senior Research Fellow in Food Microbiology
Dr R-A Cue  Research Assistant
Dr AAG Delsol  Research Associate
Dr O Doran  Research Fellow
Dr KT Elvers  Research Associate
Dr F Fernandez  Research Associate in Clinical Veterinary Science
Mr AV Fisher  Senior Research Fellow in Food Animal Science
Dr BW Gannon  Research Associate
Mr AJ Haig-Ferguson  Research Assistant
Dr MJ Harris  Research Associate in Elephant Welfare
Dr SM Haslam MRCVS  Research Fellow
Dr SDE Held  Research Fellow
Dr K-A Karatzas  Research Associate
Dr MJ Kenny  Research Associate
Dr KA Leach  Research Assistant
Dr KE Littin  Research Assistant
Miss VK Morris  Research Assistant
Mr GR Nute  Senior Research Fellow in Food Animal Science
Dr ES Paul  Research Associate
Dr ABM Raj  Senior Research Fellow in Food Animal Science
Dr RI Richardson  Senior Research Fellow in Food Animal Science
Dr NJ Rooney  Research Associate
Dr CM Sherwin  Senior Research Fellow in Welfare
Mrs KA Stafford  Research Assistant
Mr GG Stonehouse  Research Assistant
Dr NR Taylor  Research Assistant in Pig Welfare
Dr PD Warriss  Reader in Food Science
Dr CA Weeks  Research Fellow in Animal Welfare
Dr HR Whay  Research Fellow
Mr PE Whittington  Tesco Welfare Fellow
Mrs FM Whittington  Research Assistant
Dr C-A Wilkin  Research Associate
Mr LJ Wilkins  Research Fellow in Food Animal Science

Division of Veterinary Pathology Infection and Immunity

Professors  Prof M Bailey  Professor of Comparative Immunology
Prof TJ Humphrey  Professor of Veterinary Zoonotic Bacteriology
(Head of Division)  Prof CR Stokes  Professor of Mucosal Immunology
Prof JA Vazquez-Boland  Professor of Veterinary Molecular Microbiology

Teaching Staff  Dr PW Bland  Senior Lecturer in Mucosal Immunology
Dr SC Cose  Temporary Lecturer in Comparative and Mucosal Immunology
Prof MJ Day MRCVS  Professor of Veterinary Pathology
Dr R Harley MRCVS  Lecturer in Veterinary Pathology
Dr AR Hayman  Lecturer in Connective Tissue Biology
Miss C Krudewig  Lecturer in Veterinary Pathology
Dr LJ Moore  Senior Lecturer in Veterinary Microbiology
Dr K Papasouliotis MRCVS  Senior Lecturer in Veterinary Clinical Pathology
Prof GR Pearson MRCVS  Professor of Veterinary Pathology
Dr AD Wilson MRCVS  Lecturer in Veterinary Virology

Research Staff  Mr NC Avery  Research Fellow
Dr TA Cogan  Research Fellow
Ms KE Coles  Research Associate
Dr K Haverson  Research Fellow
Dr CR Helps  Research Fellow
Miss CF Inman MRCVS  Research Associate
Dr L Knott
Postdoctoral Research Assistant in Matrix Biology

Dr M Lewis
Research Associate

Dr DA Lewis
Research Associate

Dr IR Peters MRCVS
Research Fellow
Postdoctoral Scientist (Courtenay-Cowlin Fellow)

Dr LEN Rees

Dr AD Rodriguez-Lazaro
Marie Curie Intra-European Fellowship

Dr CL Russell
Research Assistant

Dr LC Sait
Research Associate

Research Assistant in Veterinary Molecular Microbiology

Dr MM Scortti

Dr JF Tarlton
Research Fellow

Dr MJ Toscano
VTRI Research Associate

Dr CV Whiting
Research Assistant

Central Department

Head of Department
Dr FGR Taylor MRCVS
Senior Lecturer in Equine Medicine

Administrative Staff
Mr CE Chambers
Animal Support Unit Manager

Mrs JH Cleeve
Senior Computer Support Officer

Mr NP Crabb
Computer & Courseware Production Officer

Mr GC Davies
Student Services Administrator

Mrs J Harbour
Departmental Technical Services Support Manager

Dr L Hewitt
Langford Continuing Education Manager

Mr PWC Read
Senior School and Site Administrator in Dept of Clinical Veterinary Science

Mr GWB Rickard
Computer Support Officer

Farm Staff
Mr ML Jones
Farm Manager
Staff Teaching BVSc Units in Pre-clinical Departments

Department of Anatomy

**Professor**  
**Prof I A Silver MRCVS**  
Emeritus Professor in Anatomy (Veterinary Science)

**Teaching Staff**
- Dr J F Burn  
  Visiting Fellow
- Dr G R Colborne  
  Senior Lecturer in Equine Science
- Miss J M Dunleavy  
  Teaching Fellow
- Dr A J Fulford  
  Lecturer
- **Dr C J Fuller MRCVS**  
  Senior Lecturer
- Ms E Incles  
  Teaching Fellow
- Dr A Sengupta  
  Lecturer in Anatomy
- Dr D J Tortonese  
  Senior Lecturer in Anatomy
- Dr J Townsend  
  Teaching Fellow
- Dr J B Wakerely  
  Reader in Anatomy
- Dr G K Wakley  
  Senior Lecturer in Anatomy

**Research Staff**
- Dr Z A Bottolotto  
  Senior Research Fellow
- Mr D J Hodson  
  Anatomy PhD
- Mr M A Eldridge  
  Anatomy PhD
- Miss R M King  
  Anatomy PhD

**Support Staff**
- Mr S Gaze  
  Teaching Services Manager
- Ms K A Sparey  
  Technician

Department of Biochemistry

**Professors**
- **Prof G S Banting**  
  Professor of Molecular Cell Biology
- **Prof A R Clarke**  
  Professor in Biochemistry
- **Prof R M Denton**  
  Professor
- **Prof S E Halford**  
  Professor of Biochemistry

**Teaching Staff**
- Dr S G Burston  
  Lecturer
- Dr K L Gaston  
  Senior Lecturer in Biochemistry
- Dr E J Griffiths  
  Lecturer
- Dr A H Mellor  
  Reader
- Dr S K Moule  
  Senior Lecturer
- Dr N J Savery  
  Senior Lecturer
- Dr P M Wood  
  Senior Lecturer in Biochemistry

**Research Staff**
- Dr A Cameron  
  Research Associate
- Dr R Rollason  
  Research Associate
### School of Biological Sciences

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### Department of Pharmacology

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<td>Dr H Li</td>
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### Department of Physiology

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<tr>
<td>Mr S Barnes</td>
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<td>Dr B M Lumb</td>
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<td>Dr F M MacMillan</td>
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<td>Dr D M Woolley MRCVS</td>
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<td>Dr C D Nobes</td>
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<td>Senior Research Fellow/Proleptic Reader in Cell Biology</td>
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<tr>
<td>Dr H J Witchel</td>
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<td>Senior Research Fellow</td>
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ANNEX 2 – TIMETABLE FOR THE VISIT

SUNDAY 11 MARCH 2007

4.00 – 8.00p.m Visitors hold private meeting at hotel

MONDAY 12 MARCH 2007 - BRISTOL

9.00 am Visitors meet in Bristol (D31) with Senior Staff:
Dean of the Faculty
Head of School
Philip Duffus (Chair of Programme)
Bevis Miller (Undergraduate Dean)
Max Headley (Pre-clinical VS)

Setting the scene: Powerpoint overview of the ‘Bristol System’, including images of facilities in Depts.

10.00 am Tour of Bristol Departments and Libraries in Medical and Biological Sciences

Visitors’ interests during tours:
Teaching & Learning Environment (5e)
Facilities & Equipment (6)
Animals & Teaching Material of Animal Origin (7)
Library & Learning Resources (8)

1.00 pm Sandwich lunch – Visitors meet with undergraduate students from years 1-3 at Southwell Street

2.00 pm Visitors meet with Senior Staff in D31:
Dean of the Faculty
Head of School
Heads of Depts (Bristol)
Heads of Divisions (DCVS)
Philip Duffus (Chair of Programme)
Bevis Miller (Undergraduate Dean)
Max Headley (Pre-clinical VS)
Peter Read (Senior Administrator DCVS)
Stephen Brooke (Faculty Administrator)

Visitors’ interests:

- Objectives of the Programme (Chapter 1) To be discussed
- Organisation (2) in the context of
- Financial aspects (3) the ‘Bristol
- Academic & Support Staff (10) System’

3.00 pm Visitors meet with Staff teaching Basic Subjects
Basic Subjects (4b and 5a) – Unit Organisers: C Fuller; S Burston; M Headley;
E Morgan; L Moore; A Poole; D Woolley; M Day

5.30 - 7.30pm Visitors private meeting at hotel
TUESDAY 13 MARCH 2007 - LANGFORD

8.30 am  Pre-meeting with Head of School at Langford

9.00 am  Introduction to Base Room at Langford – Philip Duffus; FGRT

9.30 am  Tour of Langford by Visitors – FGRT; P Duffus; P Read, plus local guides: E Hall; A Barr; A H-M; A Blaxter; A Bradley or M Steele; M Day

12.30 pm Sandwich lunch with undergraduate students from years 4-5 in Langford House

Visitors’ meetings:

1.30 pm  Organisation (2) – FGRT; Heads of Divisions; P Duffus; P Read

2.15 pm  DCVS Finance (3) – FGRT; Heads of Divs; P Duffus; P Read

3.00 pm  Admissions & Enrolment (9) – L Moore; P Duffus; G Davies ) Taken Student Welfare (5g) – G Davies; G Pearson; FGRT ) together?

3.45 pm  Curriculum & Teaching (4) ) Overview by FGRT; P Duffus; A H-M; Teaching Quality & Evaluation (5) ) L Moore; B Miller; G Davies

5.00 pm  Visitors private meeting in the base-room

6.00 pm  Wine and ‘nibbles’ at Langford with all teaching staff

7.00pm  Visitors return to hotel for private meeting

8.00pm  Dinner

DAY THREE (WEDNESDAY 14 MARCH 2007) - LANGFORD

8.30 am  Pre-meeting with Head of School at Langford

Visitors’ meetings:

9.00 am  Clinical Subjects (4d and 5b) – T G-J; E Hall; A Barr; A H-M; A Bradley; F Barr; A Blaxter; K Papasouliotis; P Murison

9.45 am  Animal Production (4c and 5b) – Animal Production teaching staff

10.30 am  Veterinary Public Health (4e) / Food Hygiene – A Preston; P Duffus; J Wood; CA Wilkins; T Humphrey

12.00 pm  Professional Knowledge (including Day 1 Competences) (4f) – P Duffus; A Blaxter; A Barr; FGRT
12.30 pm  
Sandwich lunch with Clinical Training Scholars and Research Postgraduates

Visitors’ meetings:

1.30 pm  
E-learning and assessment – B Miller (computer suite, Pearson Building)

2.15 pm  
Monitoring & Evaluation (5f) – B Miller; L Moore; FGRT; S Brooke

3.00 pm  
Extra Mural Studies (14) – P Duffus; G Davies; B Miller

4.00 – 5.00 pm  
Visitors private meeting in base room

5.00 pm  
Visitors return to hotel

7.00–9.00 pm  
Buffet with recent graduates and employers, EMS providers, local practitioners, at Langford

DAY FOUR (THURSDAY 15 MARCH 2007) - LANGFORD

Visitors’ meetings:

8.30 am  
Proposals for ‘Langford Clinical Veterinary Services’; Head of School & project manager, Nigel Derrett.

9.00 am  
Continuing Education and CPD (9) – S Wotton; L Hewitt; E Hall (or A H-M); B Miller

9.45 am  
Postgraduate Education (12) – E Hall; A Barr; A Bradley; C Stokes; C Helps; S Shaw

10.30 am  
Research (13) – T Humphrey; M Bailey; P Duffus

12.30 pm  
Sandwich lunch with junior teaching staff

1.30 – 5.00 pm  
Individual Visitors revisit areas, meet with chosen individuals
Visitors work in base-room; start to prepare reports
Visitors also available for confidential meetings upon request of individual staff or students.

5.30–7.30  
Visitors hold private meeting at hotel

8 – 9.30 pm  
Dinner

10 – 11 pm  
Visitors hold final private meeting at hotel

DAY FIVE (FRIDAY 16 MARCH 2007) - BRISTOL

8.30 am  
Feedback meeting with the Vice-Chancellor in Bristol

9.00 am  
Visitors depart
Dear Miss Hern

RCVS/EAEVE Visitation to the University of Bristol Veterinary School – March 2007

Thank you for sending me the Report of the Visitors, in accordance with Section 5(4) of the Veterinary Surgeons Act 1966, following the RCVS/EAEVE Visitation to our Veterinary School in March. I now attach a detailed response to the points raised in the Report.

Naturally I was delighted that the Report, overall, is extremely supportive of our Veterinary School and commends both staff and students, together with many if our activities and facilities. I was also particularly pleased that the Report fully recognised (in para 11) that 'there have been numerous beneficial developments at the Veterinary School since the last full RCVS visitation in 2000, including significant capital investment in teaching and research facilities as well as organisational changes which the Visitors welcomed'. Indeed Langford has benefited considerably from a multi-million pound investment in its facilities in recent years (new Small Animal Practice Building, new Small Animal Hospital, new Pearson Teaching Block, extensive laboratory refurbishments, new Animal Welfare Building, etc) and further substantial investment in planned in the near future as part of our 'Langford Clinical Veterinary Services' project. This will include a new Equine Surgery Building. We are fully aware of the shortcomings of our current farm and are seeking local authority planning approval for a new, state-of-the-art milking unit, under the tenancy of the Food Animal Initiative (FAI) Ltd. Funding for this has already been approved.
The University of Bristol is in an extremely strong financial position, enabling it to fund one of the most ambitious capital programmes in the sector. Currently our capital expenditure on new buildings and equipment is in excess of £50m per annum and this will continue for at least the next five years. When I look at the recent level of investment in Langford, and that which is planned, it is clear that the Veterinary School is being particularly well-supported by Bristol's capital programme.

You suggest that 'If the University is able to present RCVS with written assurances concerning its plans (as outlined in page 10 of the report) it may be possible to avoid the formal time-bound conditional approval status'. Our preferred plans for the farm (as outlined in Annex 2 of our response) still require local authority planning approval, so I am not in a position to guarantee a time-scale. However, the fact that we have detailed plans and are seeking planning permission is a clear indication of our commitment to this project. With respect to new surgery facilities, my statement to Council at its last meeting (11th July 2007; reproduced in Annex 2 of our response) is a clear indication of our commitment to the LCVS project, and its associated costs. Interviews for the recruitment of a CEO and a Director of Clinical Services (DCS) are scheduled for 14th and 27th September and these individuals will take the LCVS project forward with some urgency over the coming months. I hope that this is more than sufficient assurance that Langford's needs are very high on the University's list of priorities. I cannot give a precise time-scale at this moment, because of the uncertainties of local authority planning permission, the recruitment of the CEO and the DCS, and the approval process of the final business case. However, having made the decision to invest in LCVS, it is clearly in everyone's interest to carry this out as soon as is practical and I will endeavour to ensure that this is indeed the case.

Yours sincerely

[Signature]

Vice-Chancellor

Enc. Response to the Report of the RCVS/EAEVE Visitation to the University of Bristol Veterinary School – March 2007
Facilities

a) The Visitors recommend that Wyndhurst Farm should not be used for training students until significant improvements are made to the facilities. The School should explore the use of alternative locations for training in the meantime, for example by contracting with local farmers. (para 246).

There is already a limit to which the existing facilities can be used for the training of students, as the student number now exceeds the capacity for which the farm was originally intended. Because of this, we are already using alternative locations for some training, for example, practical instruction in the milking parlour. However, reliance on alternative locations is high risk in the long term and we are seeking planning permission to build a new, state-of-the-art dairy unit for both teaching and research purposes (see Annex 1). In the meantime, issues of cleanliness and bio-security at the farm will be reviewed.

b) Finance needs to be released for the immediate development of a new equine theatre and equine isolation facilities, to allow re-development of the old equine theatre or an alternative site to provide a new imaging and operating environment for small animals, to incorporate an intensive care unit. (para 240).

The School has long recognised the need to update its surgery and imaging facilities for both large and small animals. For some time the University has been pursuing a formal project for financial investment associated with commercialisation of the veterinary clinics, ‘Langford Clinical Veterinary Services’ (LCVS), in order to secure their future; these plans are now reaching maturity (see Annex 2).

c) The Visitors recommend that the School should consider working towards the principles of RCVS Practice Standards to ensure its clinical facilities adhere to the highest levels of clinical practice. (para 233).

It is the intention that the School’s clinics will achieve RCVS ‘Tier 3’ status by investment in facilities and infrastructure under the LCVS project (see Annex 2).

d) Measures must be explored to avoid splitting the accommodation for the Farm Animal group across the Langford site. (para 276).

The recent relocation of the Farm Animal Group into refurbished facilities has enabled all the clinicians working within the ambulatory practice to be housed in one unit, the Farm Animal Practice, together with adequate space for group teaching of students. The present Head of the Group, Dr Andrew Bradley, is accommodated close-by in a building that provides his research laboratory facilities. Professor Philip Duffus, Veterinary Preventive Medicine, has office accommodation in the Pearson Building, some 3 minutes walk away. It may be possible in time to seek an extension to the relocated Farm Animal Practice building, but a better long term solution is a new building. However, the new location for the practice has been greeted favourably by staff now working in the building.

e) It is recommended that the Head of School should have access to an appropriate maintenance budget. (para 210).

The maintenance budget is determined for the whole University by the Bursar’s Office and reflects the maintenance needs of the departments, as defined by the Director of Estate Services. In the case of the Langford estate, the Director is currently undertaking a review of the maintenance requirement and the conclusions of the RCVS report will be drawn to his
attention. A Minor Capital Works budget (for projects less than £150k) is allocated by the Bursar to each Faculty and is subsequently allocated to departments by the Dean in discussion with Heads of Departments. The allocation recognises the individual needs of departments, but is unlikely to meet all aspirations. Each Head of Department therefore prioritises the spending of this resource.

f) Greater attention must be paid to routine cleaning and maintenance of buildings at Langford. (para 40).
The School will address this criticism by conducting its own survey at Langford, with a view to correcting the shortcomings.

g) It is recommended that the School puts in place more extensive depreciation planning and structured replacement policies. (para 36).
The need to formalise planned replacement of equipment has long been recognised and it is agreed that for each area of activity this should be done. The issue, as in all institutes, is the availability of a rolling resource, although the University will now consider bids for large items of equipment as part of its capital investment programme.

h) A clinical IT information systems group should be established to define and cost the IT solutions which may be needed in the new units. (para 283).
It is fully acknowledged that appropriate IT systems must be defined for the restructuring of the clinics (LCVS) and these will be established.

Health & Safety

i) Close attention must be paid as a matter of urgency to developing an appreciation of the importance of health and safety amongst staff, students, and any external contractors, not only in order to ensure proper compliance with relevant regulations, but also to demonstrate best practice to students. All teaching staff should be aware of emergency shower facilities (to which access must be maintained) as well as eye wash provision. Laboratories should be kept tidy and clutter free and the obstruction of walkways with student belongings avoided. Food and drink should never be allowed in laboratories. (para 209).
The University of Bristol has a robust regulatory system for upholding health and safety legislation and departments are required to reflect these in policy and audit. Internal and external (HSE) audits occur regularly and are recorded in reports to Heads of Departments. The Visitors properly identified concerns, which are being addressed with some urgency by Heads of Departments and, in the case of external contractors, by the Bursar's Office (to whom representation of the concerns has been made). In this context we are pleased to report that the Hazardous Installations Directorate of the Health & Safety Executive (Dr John Pride and Dr John Newbold) carried out an inspection of the Langford facility on 1st August 2007 and no major issues were raised in their subsequent report of 3rd September 2007.

j) Ensure that proper biosecurity measures are put in place at the farm and elsewhere at Langford to prevent the spread of infectious disease and zoonoses. (para 245).
Major improvements to farm biosecurity will be addressed in the new build (Annex 1) and interim arrangements will be addressed. Biosecurity in the Farm Animal Hospital will be upgraded.

k) Standard operating procedures for small animal isolation should be posted on the access door clearly visible to all personnel before they enter the room. (para 212).
This has now been done. It is intended that a small animal isolation unit will be part of the new clinical facilities.

Clinical caseload and clinical services
l) The School must expedite its plans for improving the clinical services at Langford, either through the proposed development of LCVS or otherwise, in order to ensure continued viability of all its clinics and to maintain an adequate supply of a varied clinical caseload for teaching purposes. If LCVS is established as a commercial partnership, it is necessary to ensure that the needs of the business operation do not compromise students’ access to case materials and clinical experience. (para 275).

The School entirely concurs with the sentiments expressed; the School’s teaching and research imperatives will be fully protected by means of a robust Service Level Agreement (Annex 2).

m) The School must expedite plans to increase the clinical case load to ensure that students are exposed to a sufficiently broad range of clinical cases, and to allow the development of a broader range of options within the clerking rotations in the final year. (para 113).

Increasing the clinical case load and its consequent advantages is the major objective of the LCVS project (Annex 2).

n) A review of client service should be carried out separately by equine and small animal referral departments. This could involve visits to the larger private referral centres which are regarded as exemplary in this respect. (para 232).

A Director of Clinical Services is currently being recruited by the University to assist in the development of the LCVS project. An important part of his/her remit is to review client service as a major priority.

Curriculum

o) During its curriculum review, the School should give serious consideration to extending the length of electives, in order to comply with the published RCVS and EAEVE recommendations on this subject. (para 50).

The curriculum review group will explore this recommendation.

p) Continue to build on the good work already undertaken to develop the teaching of Communication Skills, and ensure that it continues to receive due attention throughout all years of the course, both as a separate taught subject, and integrated within other client-focussed clinical teaching. (para 56).

The success of Communication Skills teaching is fully recognised and it will continue to be developed.

q) The School should ensure that greater attention is paid to the coverage of RCVS Practice Standards within the first opinion practice in order to introduce students to the concept of practice performance and management. (para 132).

The recommendation, particularly as it relates to DSE in final year clerking rotations, has merit and will be considered by the 3-5 year BVSc Working Group for onward passage to the Veterinary Programme Committee.

r) The School should ensure that Veterinary Public Health is identified as a separate subject within the curriculum, integrating aspects of microbiology, epidemiology, food technology and production animal practice, in order to prepare students for their important role in the ‘stable to table’ continuum. (para 126).

Veterinary Public Health (VPH) is timetabled in the curriculum as a separate subject; however, its integration with cognate disciplines throughout the curriculum is encouraged. The curriculum review team and the Unit Organiser have been discussing the VPH curriculum with other schools, particularly through the Government Veterinary Surgeons’ Liaison Group, and it is hoped that a national template for VPH may be achieved, together with a sharing of teaching expertise.
s) During the ongoing curriculum review, the School should ensure that attention is paid across the curriculum to the coverage of professional knowledge, including ethics, certification, report writing, practice management and practice standards, paying particular reference to the RCVS Day One Competences. (para 133).

This recommendation is very sound and will be taken up by the curriculum review group.

Staffing

t) The School should introduce the use of trained and student nursing staff on night duties in the clinics to ensure a more equitable distribution of support staff, and to ensure that an adequate standard of professional nursing care is available at all times. (para 114).

This is a recognised and accepted part of the LCVS aspiration.

u) The School should consider the provision of 24/7 professional nursing support for the clinical departments to ensure that professional nursing cover is available on a 24 hours basis. (para 322).

This will be given serious consideration as part of LCVS.

v) In addition to the existing staff allocated to Veterinary Public Health, the School should take steps to recruit a veterinary qualified VPH teacher, preferably with Diplomate status, to lead teaching in this area. (para 125).

The School accepts this recommendation. However, at the time that Dr Sava Buncic took early retirement, the School wrote to 251 Diplomates of the European College inviting interest in the vacancy. When advertised, only one Diplomate applied. At interview, he was ranked second, behind a candidate who clearly demonstrated superior management potential in drawing together the strands of VPH and driving the Unit forwards. The performance of this candidate has not disappointed.

w) In view of the importance and increasing reliance on information technology, the Visitors recommend that the University gives sympathetic consideration to the School’s desire for additional IT staff resources. (para 302).

A new computer technician post at Langford is in the budget for 2007/8.

x) The Visitors recommend that the School makes every effort to safeguard the role(s) of EMS Administrator and to establish a smooth progression of that role to another equally dedicated individual. (para 359).

The School is proud of its EMS schemes, particularly Clinical EMS and the use of foster or ‘base’ practices. The current EMS Administrator retired in July, but has been re-engaged in this role on a part-time basis for a further two years. However, the Student Administration Office at Langford recognises only too well the need to prepare for a successor.
Redevelopment of Wyndhurst Farm

At the time of the RCVS visit last March, the Visitors were appraised of proposals for the redevelopment of the farm. A plan to build a new milking unit under the tenancy of FAI Ltd was discussed. This is an approved University Project for which £750k of University capital funding has been pledged. The plan is to build a unit for an extensive grazing system incorporating the lease of additional land from our close neighbour Sir David Wills. At the time of writing, a plan of the unit is being submitted to the local authorities for planning permission. This follows consultation with local residents (19/7/07). The design was undertaken by dairy consultants in consultation with the farm animal teaching staff and the FAI and is aimed at providing a state of the art unit that caters for teaching and research at the cutting edge.

If planning permission is granted (anticipated late 2007), then final negotiations on land leasing, the Farm Business Tenancy and a Service Level Agreement will go ahead and we would expect to begin construction in spring 2008. If permission is refused, or there is an unforeseen complication in subsequent negotiations, then the alternative will be to submit a business plan to the University for rebuilding the existing farm as a larger, intensive dairy unit. This type of unit would certainly fulfil our teaching requirements, but it is likely to be less attractive in research terms.
Commercialisation of the clinics and investment in new clinical facilities

At the time of the RCVS visit in March, the Visitors were appraised in outline of proposals to create an independent self-sustaining clinical business, Langford Clinical Veterinary Services, operating under the auspices of the University, but with the freedom to reinvest its income and promote the business. The major reason for this is to enhance the clinical caseload for teaching and to facilitate reinvestment in the clinics. This is a 'high level' University Project, driven by the academic imperatives of providing excellent teaching and research, with a management structure chaired by a Pro Vice-Chancellor and having within its membership the University Registrar, Finance Officer, Head of Personnel Services and Faculty Dean.

Since the visitation in March, the evolved model is to establish a company as a wholly-owned subsidiary of the University, with a Service Level Agreement to protect academic and company needs. Recently, advertisements were placed to recruit a Chief Executive Officer (CEO) and a Director of Clinical Services (DCS) and interviews are scheduled to take place during September. The role of the CEO is to prepare a business plan, based on data already accumulated, for presentation to University Council. The DCS will meanwhile introduce changes to put the clinics on a more commercial footing. Underpinning the project is the recognised need for major investment in buildings and equipment. The Bursar’s team is currently working with users to produce plans and costs for building and equipping new small animal surgery and imaging facilities. The University has already pledged funding for a new large animal theatre building, which now becomes part of this planned development and will include improvements to the equine isolation facility.

Reproduced below is the Vice-Chancellor’s Report to a recent (11th July) meeting of University Council:

Vice-Chancellor’s Report on the Langford Clinical Veterinary Services (LCVS) Project

It has previously been reported to Council that the University has established a project to explore the commercialisation of the veterinary clinics at the School of Clinical Veterinary Science, Langford. The aim is to secure the future of the clinics, which is at risk because of the decreasing case load for research and teaching as a result of external competition. Council Strategy Committee was updated on the project in December 2006, at which time negotiations about forming a partnership were being held with a venture capital company. It has subsequently been decided, however, that the long-term goals of the two organisations are not sufficiently compatible.

The current plan is:

- To invest in buildings and equipment – it has been recognised that increased investment is urgently required in the infrastructure of the veterinary clinics if they are to provide the first-class environment that will help attract case load for veterinary teaching. A proposal is in preparation to improve the surgical and imaging facilities for small animals.
- To form Langford Clinical Veterinary Services (LCVS) as a wholly-owned subsidiary of the University, with a Service Level Agreement to protect academic and company needs.
- The company will be responsible for providing clinical services, but delivery of teaching and quality control will remain under the control of the University.
- The company’s management team will be responsible for executing plans to improve the commercial effectiveness of the Langford clinics and to ensure their long-term sustainability. This is likely to involve business links with local first-opinion practices and may include purchase of local practices.

The choice of the right management team is vital. The process of hiring a CEO and a Director of Clinical Services has been initiated. The right CEO will want to have personal input into the long-term business plan and we therefore intend to give the CEO some time to prepare their plan, based on the work done already by the project team.