

**European Association
of Establishments for Veterinary Education**

**Association Européenne
des Etablissements d'Enseignement Vétérinaire**



REPORT on the STAGE 1 VISITATION to RDSVS (Edinburgh)

(in the context of an International Visitation together with RCVS, AVMA and AVBC)

09-13/11/2015

by the EXPERT GROUP :

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INTRODUCTION

The Visitation to the Royal (Dick) School of Veterinary Studies (RDSVS), University of Edinburgh was undertaken conjointly between EAEVE, the Royal College of Veterinary Surgeons (RCVS), the Council on Education of the American Veterinary Medical Association (AVMA COE) and the Australasian Veterinary Boards Council (AVBC). The procedure for the Visitation, including the composition of the Visitation Team and the documentation and criteria to be followed, had been agreed by the International Accreditors Working Group.

The RDSVS was visited by EAEVE in 2005 and approved by an ECOVE decision in July 2006.

1. OBJECTIVES, STRATEGY AND ORGANISATION

1.1. Findings

The RDSVS mission is to benefit society and the environment by educating veterinary surgeons to become members of world-wide public and professional health care teams; and to advance veterinary and comparative medicine through research into disease and disease processes, with the goal of improving the health and welfare of both animals and human beings.

The RDSVS' major objective is to educate and to advance knowledge through research and clinical service. As such, it identifies three core pillars in which it is dedicated to providing excellence in Education, Research and Clinical Service. This involves creating a research-led educational environment that serves to enhance the health and wellness of animals and people, nationally and globally.

The University of Edinburgh is a degree-awarding institution as recognised by the Secretary of State and by Royal Charter. The Institution is recognised as a University by the Privy Council. In terms of Quality Assurance, the University undergoes an Enhancement-Led Institutional Review (ELIR) every four years. ELIR is the method by which the Quality Assurance Agency (Scotland) reviews universities and other higher education institutions in Scotland. The University's next review takes place in October and November 2015. The previous review took place in 2011 where the University received the highest possible outcome, that of "confidence" in the University's current, and likely future, management of the academic standards of its awards and the quality of the student learning experience it provides.

The School is one of two schools within the College of Medicine and Veterinary Medicine. The Royal (Dick) School of Veterinary Studies is located on the Easter Bush Campus of the University of Edinburgh and comprises the School teaching building (including teaching labs), the associated hospitals and clinics, the Roslin Institute building and accompanying University farms. The School is structured to include eight Academic Divisions, The Veterinary Teaching Organisation (VTO) and the Roslin Institute. The eight core divisions are:

- Preclinical Veterinary Sciences
- Pathology
- Production Animal, Food Security and Public Health
- Equine Sciences
- Companion Animal Sciences
- Anaesthesiology
- Veterinary Medical Education
- Animal Welfare and Conservation Medicine

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In 2008, the School incorporated the Roslin Institute, where the vast majority of the School's research is now based within the Institute. The Director of the Institute is Associate Dean for Research and the Institute comprises five research divisions:

- Genetics and Genomics
- Infection and Immunity
- Developmental Biology
- Neurobiology
- Translational Veterinary Sciences

Professor David Argyle is the Head of School and the Dean of Veterinary Medicine. He chairs both the School Operations Executive and the Senior Management Group.

The School has the following major committees:

- School Operations Executive
- Senior Management Group
- Learning and Teaching Committee
- BVM&S Board of Studies
- Admissions Executive
- Quality Assurance Committee
- Finance and Contracts Committee
- Business Operations Committee
- Health and Safety Committee
- Genetic Modification and Biological Safety Committee
- Radiation Protection Committee
- Estates and Buildings Services Committee
- IT Strategy Group
- Veterinary Ethical Review Committee
- RDSVS Career Support Committee

The Roslin Institute has an internal governance structure that includes the following:

- Institute Executive, chaired by the Director
- Science Management Group, chaired by the Director
- Business and Finance group that is focused on Research Income and Infrastructure
- Operations Committee
- Research Quality Committee
- Animal Ethical and Welfare Committee (Research requiring Home Office License)
- Institute Negotiation and Consultative Committee

1.2. Comments

The University administration is highly supportive of the School both organisationally and financially.

The Head of School and Academic Heads of the Clinical Divisions are all veterinarians and well-qualified for their roles. In addition, they are well supported by senior administrative directors for each clinical service.

The School has a comprehensive range of committees with appropriate linkages to provide both managerial control and appropriate governance at several different levels. The Learning and Teaching Committee has frequent meetings of a smaller core, at the same time as providing less

frequent forums (twice per year) of a more comprehensive cross section of the faculty. In some instances it was difficult to understand the rationale for how appointments to committees were made.

The School was well staffed for support of all aspects of its academic mission.

The University, College and School are commended for the quality and comprehensive nature of support provided to the professional programme.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

1.3. Suggestions

It is suggested that School Management look at clearer policies for membership and turnover of committee appointments, to further enhance both the managerial and governance functions and ensure inclusivity of all its processes.

2. FINANCES

2.1. Findings

In line with the overall strategic plan there has been a steady growth in total income for the School over the last five years rising 25% from £38.39M to £47.87M. This growth in income has been supported by all the activities of the School. The State Appropriations have increased by over 12% during this period despite the student numbers funded by the state remaining static over the same period. The income from tuition fees has grown considerably and is a reflection of some increase in numbers in both their fee paying undergraduate and postgraduate programmes.

Research income has continued to grow over the five years largely as a result of greater numbers and success in competitive grant applications. The School's research activity has a success rate of 35-40% per annum compared to the national average of 25% for research council and charitable activity. The teaching hospitals have continued to grow despite the recession having a significant impact on the equine services during this period. The diagnostic laboratory income has grown, not just as a result of increased numbers of cases going through the clinics but also, as a result of transfer of some pathology services from the Roslin Institute into the Easter Bush Pathology service. Other income, generated from the farm, has grown steadily.

Overall the expenditure of the School has risen by 20 % over the last five years. The increased expenditure in Instruction and Academic support is a reflection of the investment in staff and equipment to improve the quality of teaching and to support increased student numbers. The high cost in academic support in 2011/12 was largely as a result of a central University overcharge that was rectified in 2012/13. There was an increase in real costs across these two years due to a significant investing in equipment and some increased costs relating to restructuring which resulted in savings in subsequent years.

In 2012/13 the School invested significantly in the student experience, which can be seen in the increased student services costs and student aid expenditure from this period onwards.

The rise in expenditure in the teaching hospitals has been driven by the growth of the business is well controlled and in line with increases in income. The School has committed to building a new Equine Diagnostic, Surgical and Critical Care unit at total cost of £3.7M, which will partly be funded by the University and partly by the School. The School also intends to purchase a replacement CT scanner and a MRI scanner in the Hospital for Small Animals. The expenditure in the diagnostic laboratories

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has fluctuated as a result of investment in equipment and transfer of some staff from the Roslin Institute, but is well controlled and demonstrates a reduction over the five years. Expenditure from other sources comes from the farm and these costs have risen considerably due to significant increases in the world prices of the major inputs of feed, fertiliser and power and the transfer of staff from Agricultural Wages Board employment terms to University terms.

There has been increased investment in all research resources as the Roslin Institute has grown in size. This investment has been with a view to future requirements and is currently slightly ahead of income. The other sponsored activity expenditure shows a significant cost increase in 2012/13 which was due to a capital repayment to the central University. External and public services expenditure has risen in line with activity which is mainly providing courses for an external body.

RDSVS has improved its financial performance over the past five years with growth in all major areas of revenue. The growth in income has been necessary to support the growth in all areas; student numbers, clinical activity and research. This growth has been achieved while largely keeping costs under control, allowing the School to demonstrate a small surplus.

In certain specific areas the growth in revenue has not kept pace with costs. This is notable for research where currently the expenditure is ahead of revenue, which reflects a planned investment in staff and equipment for the future. Farm revenue has recently failed to cover costs but is governed by world prices in commodities, which have fluctuated widely in recent years. The farms are a key resource and the School plans to support them during this period of price fluctuation. The diagnostic laboratories income fails to cover all their costs but this is largely as a result of a failure to identify and attribute true costs of the teaching effort within the commercial service and a limited ability to compete for outside work due to scale.

The Sponsor Programme Income/cost recovery apparently shows a reduction in revenue although this has been re-assigned to Roslin in recent years.

2.2. Comments

There is a clearly articulated vision for the consolidation of high quality educational, research and clinical facilities on a single site, and the University's past and planned investment in its achievement.

The University is commended for its fiscal support of the teaching, research and clinical strands of the Veterinary School's work to support the education of high quality veterinary graduates.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

2.3. Suggestions

None.

3. CURRICULUM

3.1. Findings

The BVM&S degree at the Royal (Dick) School of Veterinary Studies provides students with breadth and depth of knowledge in veterinary science. This allows appreciation of fundamental scientific principles and their integration with, and application to, the whole animal. This holistic education combines with the staged acquisition of specific clinical and generic skills to produce graduates trained to the core competencies identified by the accrediting bodies.

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The curriculum was last reviewed in 2013 by a curriculum development group reporting to the Learning and Teaching Committee (LTC). All recommendations of the group were approved. Curriculum content, design and review is the overall responsibility of the Learning and Teaching Committee (LTC; formerly the Curriculum Executive), which meets monthly (and 2 times a year is convened as a larger Board of Studies). In practice, working groups of LTC will deal with specific projects and report back to LTC for final discussion and approval. For example, the clinical skills committee recently carried out a mapping process resulting in introduction of additional practical classes in Year 3.

Outside of major course level changes, all suggestions for course content or assessment changes must receive approval from LTC. All aspects of quality assurance of the BVM&S programmes are carried out by the School's Quality Assurance Committee (VMQAC), which meets four times per year. Membership of this committee includes School academic staff, students and external college representation. VMQAC has a rigorous set of processes and procedures supported by a series of 7 Quality Assurance documents for completion annually. Documentation relating to individual courses is reviewed by a member of VMQAC who is not directly associated with the course to provide a degree of externality.

VMQAC coordinates for each course, the following portfolio of documents:

- Staff Student Liaison committee meeting minutes
- End of Course evaluation
- Post Course Review minutes
- Examination Board minutes
- External Examiners report
- Reflective Summary by the Course Organiser
- Independent review by member of the QA committee

With additional annual cross-curriculum documentation comprising:

- Summary of external examiners and course organisers' comments
- Year summary document from Director of Teaching, Admissions, Library Services and Student experience/support

The School values student feedback and employs a number of means to ensure the student voice is heard. These include questionnaires/evaluations, Staff-Student Liaison Committee (SSLC) meetings and evaluation follow-up.

Veterinary Public Health (VPH) teaching at the RDSVS is integrated within the curriculum across all years of the programme of studies and every year it focuses on different aspects of the subject.

In the early years, students experience an introductory VPH lecture series which includes the role of vets in the food chain, principles of Hazard Analysis Critical Control Point (HACCP), waste management, zoonoses and emerging diseases. This material is supported by related biosecurity, evidence based medicine, animal husbandry, animal welfare, parasitology and microbiology material in tandem courses. In Year 3 they cover aspects of veterinary epidemiology and veterinary pathology that are propaedeutic for the VPH (Food Hygiene & Safety) course that is taught in Year 4. This course is designed not only to integrate theoretical and practical aspects of VPH during the course itself but also to bring together and integrate with the Farm Animal Course.

A core Final Year module comprises Farm Animal, VPH (including abattoir visits and State Veterinary Medicine tutorials), Epidemiology and Pathology (including Microbiology and Antimicrobial Resistance tutorials). Students wishing to specialise in VPH and veterinary epidemiology can attend an additional three week-long Selected Rotation. In addition several

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externship opportunities are available including Farm Animal Assurance Schemes, local Animal Health offices and the Veterinary Public Health Association (VPHA) EMS Masterclass. The VPH teaching team offers support to those students who have an interest in VPH-related topics and wish to carry out a research project as part of the Student Research Component.

Students can also benefit from the use of the Virtual Slaughterhouse simulator, an interactive computer based learning tool developed by faculty that allows students to explore a “state of the art” cattle abattoir with embedded problem-solving scenarios related to the most common practical issues observed in real time work.

Strengths of the BVM&S programme as viewed by the School include:

- Increasingly well-developed clinical and professional skills theme running throughout the programme with year on year increases in practical classes and tutorials supporting professional and clinical skills development. This is supported by small and large animal clinical skills teaching suites.
- A robust approach to assessment and standard setting and quality assurance in general.
- In-house staff development programme and CPD/CE opportunities aligned to the Higher Education Academy (HEA) framework.
- Opportunities afforded by the facilities at the Easter Bush Campus and co-location of Roslin Research Institute as the School’s research arm (e.g. ‘Portrait’ lectures in Year 1).
- Since the last accreditation, the School has appointed a student experience officer, implemented a new personal tutor system and made study skills support and counselling much widely available both locally and centrally.
- A highly experienced and enthusiastic teaching faculty many of whom are actively engaged in education development and related CPD/CE.

Current challenges are seen as:

- Despite curriculum review reducing lecture content, an over-reliance on lecture based approaches for covering core material.
- EMS provides important experience for students; the School is working to further develop monitoring and QA processes related to its management.
- The NSS scores over the past 3 years have been steadily improving in the area of assessment and feedback but there is still work to be done in this area.
- The School is in a transition phase between 2 different virtual learning environments, which is challenging for staff and students.

3.2. Comments

The School is commended for the quality of curricular assessment and effective cross-referencing of curricular outcomes to accreditation criteria.

Concerning Animal Production, RDSVS is strongly commended for its excellent teaching. Although there is a clear focus on bovine and ovine medicine and herd/flock health management, the School provides those students that want to focus on pig and poultry medicine and herd/flock health management with special arrangements for selected rotations and EMS opportunities in these two areas.

Concerning FSQ and VPH, RDSVS has an adequate focus and teaching in this area.

In the Visitation team’s opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

3.3. Suggestions

The development of virtual slaughterhouse simulators for other production animal species (pig and poultry) and food business units is encouraged.

4. TEACHING QUALITY & EVALUATION

4.1. Findings

Numbers on the BVM&S programme are relatively stable with a slight rebalancing of numbers of students coming into the 5 year programme and the 4 year programme. There are no plans to increase the intake. First year is the first year of the five year programme; First-year GEP is first year of the 4 year programme. Cohorts merge for the last 3 years of both programmes. Over the past 5 years there has been an increase in the number of postgraduate students registered in the School, in particular PhD students. This reflects the research ethos of the School and the support both financial and in terms of opportunity and environment provided by the School and the Roslin Institute for training postgraduate students.

The University provides a number of support services for students across its campuses – the Student Counselling Service, the Student Disability Service and The Advice Place. Student counselling is provided both centrally and on Campus. There are counsellors attending the Campus for sessions two days a week. A member of the counselling team regularly attends the School Student Support Management Group.

The School operates a house system. There are ten houses headed up by a Senior House Tutor, each including 5-6 Personal Tutors and approximately seventy students. Every student has a Personal Tutor, a member of the teaching faculty who provides academic and pastoral support and guidance. Additional support comes from a network of Year Administrators/Student Support Officers, the School Student Experience Officer, the Student Support Team and the Student Peer Supporters. The School offers dedicated study skills advice, through drop-in and individual bookable sessions. There are also workshops and other events on offer where students can try out various techniques and talk to fellow students about what methods they use.

The School has a vibrant clubs and societies offering and faculty are supportive of new initiatives suggested by students.

The University Careers Service assists with career planning, information on employers, job applications and CVs, preparing for job interviews and developing employability skills. The Careers Service has a named Careers Advisor for the School who visits the campus throughout the year to provide this guidance. The School also runs its own careers events and talks including the annual “Vet Choice” event showcasing a range of career opportunities for the students. The development of the student CV is an annual requirement within the personal portfolio and Final Year students are offered individual drop in sessions to help prepare their CV for job applications by members of the professional skills team.

The School continually seeks input from the students with regards to their experience whilst studying at the RDSVS. There are many opportunities for the students to engage with the School and these are at as many different times of the year and in as many different formats as possible – tailored questionnaires/surveys, open ‘Town-Hall’ meetings with the Dean, written comments that can be posted (anonymously) in the comments box, input into formal decision making committee meetings and staff attendance at student meetings. The School shows the students what they do with their feedback through a “You said... we did...” response which is posted electronically to them,

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reproduced on cards and placed on tables in the cafeteria, handed out in welfare week and included as pages within the student handbook.

Work is already underway on the new Easter Bush Innovation Centre, which will provide additional student facilities in addition to being a focal point for the Campus. This centre will provide new gym facilities, more catering outlets, a mini supermarket and an outreach laboratory where students will interact with local junior and high schools. The Campus is also developing a series of jogging tracks and walkways to promote exercise and relaxation of staff and students.

4.2. Comments

The services provided for the students by the School are comprehensive and of high quality.

From the point of view of the student member of the Team, the existence and display of joint veterinary science / art and sculpture / computerised design projects was impressive as well as the dedication and passion of some of the students running associations/clubs.

All the students seem well aware and educated to life-work balance as well as work-ethics.

As mentioned by different member of staff on separate occasions: « the biggest asset of the School is the student ». A sense of pride has been sensed throughout our meetings with the students, who constitute a positive, balanced and diverse group of people.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

4.3. Suggestions

None.

5. PHYSICAL FACILITIES & EQUIPMENT

5.1. Findings

Following the completion of the new Veterinary Teaching building in 2011 and the Roslin Institute building in the same year the relocation of all activities previously carried out at the Summerhall Campus in Edinburgh and at the old Roslin Institute building in Roslin are now located on a single site at the Easter Bush Campus.

The Easter Bush Campus now accommodates the following facilities:

The Veterinary Teaching building provides the majority of the formal teaching facilities, student support facilities and administration offices capable of accommodating the needs of the undergraduates. The ground floor has a large atrium and reception area, a cafeteria, two large lecture theatres each with a capacity of 202, two digital group teaching suites each capable of seating 48 students in groups with access to computers, a 100 seat seminar room, an anatomy dissection room, a post mortem room with a bio-secure viewing gallery and associated diagnostic laboratories, a multi-head microscope teaching room, two large teaching laboratories, a student common room, student locker room, showers and a student gym. On the first floor there is a large library with journals, textbooks and capacity for 95 study places and six open access computers. There are five tutorial/meeting rooms and a quiet study room leading directly off the library and five other larger tutorial/meeting rooms on the same floor. All these tutorial rooms can be used for private study when not in timetabled use. For more practically based study there is a large 'study landscape' with teaching aids, specimens and group study areas with computer access and a small animal clinical skills laboratory which houses further specimens and clinical equipment. In addition, on this floor there is

the BVM&S student hub which houses student support services, teaching administration and the admissions team. The top floor of the building consists of academic and administration staff offices, meeting rooms, a second multi-head microscope room for teaching and a staff breakout area.

The Hospital for Small Animals (HfSA) accommodates the first opinion (primary) dog and cat small animal practice, first opinion (primary) exotic animal practice and referral services. The Hospital houses diagnostic and therapeutic facilities that include consulting rooms, treatment rooms, imaging facilities, a pharmacy, a range of surgical theatres with preparation areas and recovery suites, emergency and critical care facilities, laboratory facilities, kenneling and isolation facilities for both pathogen control and radiation protection. The Hospital has overnight accommodation for staff and students on emergency and critical care rotations. There is office accommodation for the academic clinical staff and administrative staff. There is a range of tutorial rooms and an extension to the building completed in 2009, the Riddell-Swan Veterinary Cancer Centre, includes a therapeutic linear accelerator, CT scanning and Positron Emission Tomography capability.

The Equine Hospital services both the first opinion equine practice (ambulatory) and referral services. The Hospital has three large diagnostic and treatment rooms, which are designed to accommodate student teaching with adequate space for large groups and various teaching aids such as whiteboards, posters and anatomic specimens. A range of up-to-date diagnostic equipment (e.g. ultrasound, endoscopy) is available to use in these areas; this equipment has been chosen to ensure clinical excellence as well as to provide a good student learning experience. There is stabling for 36 horses, a pharmacy, clinical laboratory, student break out areas, and staff facilities within the hospital. There are indoor and outdoor trotting areas used for demonstration/tutorials and diagnosis of clinical cases. Adjoining the main hospital is a surgical unit, which has two theatres and a radiography facility with support services and tutorial space. Isolation facilities, (two dedicated boxes with adjoining personnel changing and preparation areas), a scintigraphy unit and a standing MRI unit are all separate, but close to, the main hospital. Computed Tomography (CT) services are accessed in a shared facility in the Hospital for Small Animals.

The Farm Animal Hospital accommodates the farm animal teaching facility which has a range of animal accommodation capable of housing all the main agricultural species. Included in this building are student changing facilities, tutorial rooms, teaching laboratories, procedure rooms and animal handling facilities. This facility is dedicated to teaching using donated clinical cases. There are isolation facilities close to, but separate from the Hospital, allowing the treatment of referred cases.

Easter Bush Middle Wing accommodates the first opinion Farm Animal Practice (ambulatory). Facilities include reception area, student break-out area, tutorial room, pharmacy, and diagnostic laboratory. This wing also accommodates the farm and equine clinical staff.

F Block – includes the large animal clinical skills teaching facility, tutorial rooms, the exotic animal teaching facility, an equine scintigraphy unit and farm animal isolation facilities.

Langhill Farm - the School manages a 250 hectares livestock farm in the land that surrounds the Campus. The main farm steading is two miles from the Campus and houses the cattle facilities. These facilities include housing capable of accommodating the 230 cow dairy herd and all of the young stock. It has a modern milking facility and associated handling facilities. Although all of the farm facilities are used for demonstration and teaching, to provide a safe and unhindered access to cattle for teaching there is a dedicated building with specially designed stocks used for certain classes. There are tutorial rooms and student changing facilities on site.

The sheep enterprise is located adjacent to the main Campus within walking distance of the teaching building and has a sheep shed used to demonstrate both husbandry and veterinary care. There are dedicated changing facilities.

The Roslin Institute building houses the majority of the RDSVS research staff. This building provides office and laboratory accommodation for over 500 staff. The ground floor and basement provides some office space, cafeteria, a 300 seats auditorium, seminar rooms, cell-sorting and imaging facilities, laboratory support services and a 980m² Specific Pathogen Free (SPF) rodent facility. The two upper floors consist of 1980m² of Cat 2 containment laboratory space (as defined by the Advisory Committee on Dangerous Pathogens (ACDP)), office accommodation, meeting rooms and breakout areas. Cat 3 (ACDP) containment laboratories are available on the upper floors.

Animal Research Facilities – to service the research requirements for farm animals there are three main facilities. Dryden farm, located three miles from the Campus has accommodation for all the key farm species and specialist facilities including embryo manipulation, surgery and critical-care. The Greenwood building, on Easter Bush Campus, offers poultry accommodation and specialist facilities for a range of studies. The Bumstead building, opened in 2014, contains in-bred lines of poultry under SPF conditions to service the national requirement for this resource.

A core clinical rotation and a selected rotation in small animal first opinion practice takes place at Inglis Veterinary Practice in Cowdenbeath, Fife. All students are required to complete the core rotation. The practice is 25 miles away and is 45 minutes away by car. There are regular trains and buses that serve Cowdenbeath from Edinburgh.

The responsibility for Health and Safety across the School lies with the Dean. The Dean manages this through the Campus Operating Officer and a Health and Safety team consisting of 2.5 FTE staff. The Health and Safety Manager reports directly to the Campus Operating Officer and, as required, directly to the Dean. The Campus hosts a Health and Safety Committee, which has a student representative as part of the Committee membership. The Committee receives formal reports from the Genetic Modification & Biological Safety Committee, and the Radiation Protection Committee. These Committees report and provide Minutes directly to the Senior Management Groups of the RDSVS and Roslin Institute.

Where required, Health and Safety notices and information are clearly displayed across the Campus. All staff and students receive a general health and safety induction as part of their formal induction process at the beginning of their employment or studies. Additional and specific Health and Safety information, instruction and supervision takes place local to the specific hazard or higher risk procedure. Staff that are responsible for supervision of students during lectures, practical classes and clinics are invited to attend Health and Safety Awareness training for those with Supervisory responsibilities.

The Campus has a Biological Safety Officer who provides advice on the safe use and handling of biological agents, including pathogens. The School has Radiation Protection Supervisors (RPSs) in key areas of the School who are responsible for ensuring compliance with the University policy on the safe use of radiation and other relevant legislation. Fire safety arrangements are based on fire risk assessments that are conducted by the University Fire Safety Officer. First Aid Equipment, including defibrillators are available across the Campus. There are trained First Aiders and three dedicated First Aid Rooms available at the Campus. Proactive systems to monitor the effectiveness of the School's Health and Safety arrangements includes both locally arranged audits and external risk control agencies inspections and audits. The online Accident and Incident Reporting system (AIR),

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managed by the University of Edinburgh Health & Safety Department, is used to report any accident, incident or near-miss which occurs at the School.

5.2. Comments

There is a new specifically designed four year old highly functional teaching building that provides the majority of teaching spaces, student support services, study spaces, catering, social areas and staff offices. A renovated building provides a multi-purpose practical teaching complex with a large animal clinical skills laboratory, exotic animal facility and other practical teaching laboratories. Also on site there are teaching hospitals for small animals, horses and production animals as well as the newly constructed Roslin Research Institute. In addition, the school also manages an adjacent dairy farm with a herd of 230 cows, and supporting stock, a sheep farm as well as research animal facilities on and off site. All buildings are without exception well equipped and maintained whether new builds, renovations or old building stock. They provide an exceptional learning environment for students. The University operates a building and equipment maintenance and replacement programme that pro-actively ensures that inspections and replacements occur in a timely fashion that noticeably maintain an excellent learning environment.

School facilities are well designed and provide a high quality collegial learning and work environment.

Animal accommodation allowed animals to be housed in environments that are appropriate to maintain their welfare. Equipment was available to allow examination, diagnosis and treatment of all major species. Safety equipment, training, notifications and processes were evident throughout all facilities.

The quality, range and maintenance of the teaching and learning resources in the establishment are commended.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

5.3. Suggestions

None.

6. ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

6.1. Findings

Normal animals in a clinical setting (Final Year):

Access to normal animals uses the School's first opinion hospital based in the Hospital for Small Animals and their ambulatory practices (farm, equine, dog and cat and exotic species) which provide preventative health care services. There is also access to normal animals at the Edinburgh Dog and Cat Home (EDCH), Five Sisters Zoo, the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) and the Inglis Veterinary Centre. Activities are integrated fully into the teaching programme with complete student involvement.

Normal animals in a non-clinical setting (Years 1 to 4):

The School has their own dairy farm and sheep flock and has direct involvement with Scotland's Rural College beef and sheep farms locally, which have over 3,000 beef cattle and sheep. It has an on-site Exotic Animal Teaching Facility, which houses a range of small mammals, reptiles and birds and access to the EDCH. It has a group of teaching horses (10), which are used for a number of formal classes and student volunteering (stable management and routine care). Students can also

access healthy horses through the Edinburgh University Exmoor Pony Trekking Section and be involved in their routine care. Activities are integrated as needed into the teaching program.

Clinically diseased animals (Years 3, 4 & Final Year)

Companion Animal (Hospital for Small Animals), Primary, Secondary and Tertiary Cases; (Final Year)

There is a robust and expanding clinical case load at all levels of care for companion animals, including dog, cat, rabbit, and other small mammals, reptiles and birds, which are more than adequate to meet teaching needs. The HfSA admits cases for all the major specialisms except for ophthalmology, which is taught in the primary care clinic.

Opportunities are provided for all Final Year students to perform neutering procedures in the HfSA. Edinburgh undergraduates also have increased access to the small animal neutering caseload (and other surgical caseload) through the core rotation at the Inglis Practice. Rabbit neutering experience is also provided through their partnership with the SSPCA.

Farm (Farm Animal Practice; FAP) and Equine Ambulatory Services (Years 3, 4 & Final Year);

These operate as separate units within Production Animal Services and Equine Veterinary Services. The School is seeing recovery in primary care equine case numbers adequate for its teaching requirements, and has recently taken on an equine first opinion caseload from a local practice of approximately 600 clients and 1000 horses. The FAP has a strong caseload, operates herd health schemes (Scottish Government initiative), services three pig farms with quarterly herd-health visits and will be providing veterinary services for a 100 head deer farm. The School actively recruits farm animal cases to maintain adequate numbers for their educational needs.

Equine Referral and Hospitalised Equine Cases; (Years 3, 4 and Final Year)

There is a robust equine referral caseload that has stabilized since the recession and is now recovering, and there is a large and increasing emergency equine case load. The Equine hospital admits cases covering all disciplines. Activities are integrated fully into the BVM&S teaching programme with complete student involvement (Final Year). Hospitalised equine cases are also used for Year 3 & 4 practical classes, centered on normal clinical examination with clinician and peer-to-peer instruction (Year 3), and diseased animals clinical syndromes (Year 4).

Clinical Support Services; (Final Year)

The Hospitals have the full range of support services, including diagnostic imaging, anaesthesia and pathology incorporated into the clinical activities and with students fully involved in their delivery. The current Practice Management Systems (PMS; Tristan) was introduced in 2007 and now covers all areas of clinical and diagnostic services activity including billing, and complies with both legal and professional requirements. The ambulatory services record details in the field and transfer to the computer system on return to the workplace.

The students have full access to the system through password-protection, can contribute to small animal case records and have their case notes reviewed and approved or rejected by their attending clinician. Database searching is used for teaching and clinical research, including student research projects. Diagnostic images are accessed using PACS linked to the PMS and images are always available to students. The school is working on a replacement Practice Management System which can deliver greater business, research and teaching support. Of particular interest is a system which can provide mobile functionality for their ambulatory practices and direct integration with PACS. The 'Virtual Veterinary Practice' is maintained for all years teaching and includes audio and video podcasts of core clinical techniques, heart and lung sounds and interesting cases within the Virtual Clinic, Virtual Post Mortem Room and Virtual Slidebox. Data from the Langhill dairy herds and the

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Easter Bush sheep flock are fed into the Virtual Farm and students can access information at a herd or flock level or individually on their own adopted animals in real time.

The clinical resources for production medical training by production group (dairy, beef feedlots, cow-calves, small ruminants, pigs, horses, poultry, fish, others) are well described in the SER.

6.2. Comments

The School has developed a plan to address the static or decreasing caseload in equine and food animal. Data from the past 10 months indicate a substantial increase in case material. Even without this increase teaching material/cases are adequate. The acquisition of the equine practice has provided a better balance of types of cases. The production animal farms provide a diverse array of learning opportunities.

The School has a robust exotic animal practice and programme in husbandry in these species. They have a large caseload in rabbits which is an important part of primary care practice in the UK. The Inglis practice is an excellent resource for first opinion cases.

Overall the caseload available for student learning opportunities is well-balanced.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

6.3. Suggestions

None.

7. LIBRARY & EDUCATIONAL RESOURCES

7.1. Findings

The Lady Smith of Kelvin Veterinary Library (LSoKVL) is the library for Easter Bush campus and is part of the University of Edinburgh Library (EUL), one of the largest university libraries in the UK. RDSVS staff and students have access to a large range of veterinary, medical and life sciences print and e-resources. EUL has over 3.4 million print books, over 360,000 e-books, over 48,000 e-journals and over 200 bibliographic databases. EUL's e-resources include CAB Abstracts, VetMed Resource and Veterinary Record Case Reports. EUL recently purchased a new Library Management Platform. The new DiscoverEd search combines the functionality of the former library catalogue and discovery tool as a single search tool helping staff and students search quickly and easily across most collections (both in print and online). EUL uses Talis Aspire to provide a flexible and dynamic way for Course Organisers to give students easy access to a wide range of resources. List structure is flexible and statistics on Resource List usage are provided.

LSoKVL has c20,000 volumes of books and journals. In addition to veterinary material, the library holds a selection of titles in the biological and medical sciences. LSoKVL also lends bone boxes to students across all years. Students can borrow items from any EUL site, items can be delivered to the LSoKVL or scanned and emailed (within copyright allowances). Library users can log in to their library account and renew and request books remotely. Items which are not held can be recommended for purchase using the student Recommend a Book (RAB) service or requested on inter-library loan.

The Reserve Section holds well-used short loan textbooks to support the curriculum. Veterinary textbooks are also purchased for the High Use Book (HUB) collection in the Main Library in Edinburgh. EUL has an e-reserve facility. This electronic reserve collection provides scans of book chapters, journal articles etc. for inclusion in password protected virtual learning environments

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(VLEs). This allows students to access some required reading without competing over limited numbers of textbooks. This is becoming less well used as more e-books are purchased.

During semester the LSoKVL is staffed 45 hours per week, with all students having access for an additional 53 hours using swipe access. Fourth and Final Year students, and clinical staff, have 24 hours swipe access. The LSoKVL has 95 study spaces and five seminar rooms which may be used for group study, six open access PCs and a cloud enabled printer/copier/scanner. The Study Landscape and Vet School cafeteria provide 33 public-access PCs with two cloud enabled printers. Public-access PCs and printers are replaced on a 4 years cycle and are supported by Information Services Group (ISG) staff.

The Veterinary Library budget is allocated by the Head of Library Academic Support from within the CMVM allocation. The Academic Support Librarian (ASL) for Veterinary Medicine is responsible for the management of this allocation and selects material for purchase, seeking advice from School staff as appropriate.

The Academic Support Librarian (ASL), a professional librarian, is full time and has responsibility for collection development, managing the library materials budget, for liaising with staff and students of the School and for the provision of information skills, etc. The LSoKVL Helpdesk is staffed by Helpdesk Assistants, who are able to help students with any problems they may have in finding information.

Front –line support for students is provided across the University by a mix of ISG Helpdesk (Library) and Helpline (User support staff). User support staff are backed by an on-site campus ISG team. The on-site IS team provide campus specific IT expertise and a presence for resolving IT issues of a physical nature.

Teaching and learning resources include the following:

- Continued creation of instructive video resources, to support blended teaching in the Clinical Skills Labs and via YouTube as open access resources for public engagement and education.
- Use of QR codes and other technologies to facilitate ease of access for students.
- Development of the virtual environments used in the Schools programmes, such as tutorial spaces and training resources for postgraduates in Easter Bush Farm and the Virtual Pharmacy for undergraduates in Second Life.
- Purchase of a 3D printer to create physical objects for student learning to complement the traditional bone boxes. The development of 3D computer models also feeds into research to produce other types of 3D resources to help students develop their spatial awareness.
- Massive Open Online Courses (MOOCs) – serving a dual role in facilitating wider public engagement and helping faculty develop new modes of teaching.
- Supporting student-generated resources to encourage peer learning.
- In addition to software licensed by the University and CMVM, the School licenses a number of software packages for its students, such as the Glass Horse.
- The School also has bought twenty licenses for the Articulate Storyline software, which is being used by lecturers and students to create interactive learning resources.

7.2. Comments

The School is proactive in investigating and adopting new and innovative methods for learning and teaching. They provide numerous opportunities for faculty to integrate new methodologies and pedagogical methods. The Digital Education Unit is an excellent resource.

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The School is commended for the adoption of innovative technologies and pedagogical methods to enhance the student learning experience.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

7.3. Suggestions

None.

8. ADMISSION & ENROLMENT

8.1. Findings

The Minimum Entry Requirements for the BVM&S Programme are:

SQA Highers and Advanced Highers (Secondary (High) School Scottish System) – Highers which are generally taken in the 5th year of High School (S5): Grades AAAAB. Five Highers including Chemistry (A), Biology (A) and either Mathematics or Physics to be achieved by the end of S5. If Biology has not been studied in S5, it should be taken in S6 to Higher level. Advanced Highers, which are generally taken in the 6th year of High School (S6): Grades BB at Advanced Higher in Chemistry and another science subject. If possible Advanced Higher Biology, as this will be beneficial for the first year of the course. If Physics has not previously been studied to Standard Grade or Higher level, it should be studied in sixth year to either Standard Grade, Intermediate 2 or Higher level.

A levels – Three A levels: Grades AAA in Chemistry, Biology and one other approved subject. If Physics has not been studied to A level then we require a good pass at GCSE level.

International Baccalaureate (IB) – The minimum entry requirement is 38 points. This must include:

- Higher level in Chemistry, Biology and either Maths or Physics
- Score 7,6,6 or better in all Higher level subjects with 7 in Chemistry
- Where Higher level Maths or Physics is not possible, another subject at Higher level may be accepted, subject to approval. In this case, 6 at Standard level in Maths or Physics is required. If Physics does not form part of the IB Diploma, candidates must also provide evidence of a qualification at a minimum SQA standard Grade 2 or GCSE Grade B or equivalent in this subject.

Advanced Placements (AP) – 3 APs all at score 4 or above in Chemistry, Biology and either Maths/Physics. If Physics has not been studied as part of the AP examinations, candidates must also provide evidence of a qualification at a minimum of SQA Standard Grade 2 or GCSE Grade B or equivalent in this subject.

Canadian High School Diploma – High School Diploma candidates will be considered provided very high marks have been achieved in Grade 12 courses including Chemistry, Biology and Maths/Physics. Specific requirements will vary depending upon the province.

Pre-Vet – Applicants who have completed the first 2 years of a pre-vet degree with a minimum GPA of 3.4 are eligible to apply for the 5-year BVM&S.

Graduates applying for entry into the 4 year Graduate Entry Programme – The minimum requirement is an Upper Second Class Honours degree (or equivalent) or a minimum GPA of 3.4 in an appropriate Animal or Biological Science Degree.

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Applications from prospective funded students are received through the University and Colleges Admissions Service (UCAS). In 2013-14 the School received 391 SEU and 579 RUK applications (for entry year 2014/15) for the 72 available funded places (36 SEU and 36 RUK). 122 SEU and 211 RUK applicants were interviewed resulting in 58 and 57 offers, respectively.

All UCAS applications are screened for eligibility by the admissions team. Applications are then scored on a number of criteria which are: Academic ability and record, work experience, academic reference from the head teacher and motivation and extracurricular activities as detailed in the applicant's personal statement.

Based on application scores, applicants are selected and invited for interview. In 2013-14 the interview process changed from a panel interview to a multiple mini interview format (MMI). Each interview comprises seven interview stations. An interviewer is present at five of the stations with the remaining two left unstaffed where applicants follow instructions to complete either a numeracy test or a practical task. The majority of interviewers are members of the academic staff with contribution from external practitioners. All interviewers undergo general and station-specific training. The Admissions Committee then reviews the cycle process from applicant scoring through to and including interview of candidates.

Applications from self-funded students (full-fee students) are received through UCAS or VMCAS (Veterinary Medical College Application Service). Each year 80-100 international and UK students are accepted onto the 5-year or Graduate Entry (GEP) programmes. In 2013-14, 48 and 46 students entered the 5 year and GEP programmes respectively. The GEP programme is specifically designed for those applicants who already have a first degree in an appropriate subject area and after completion of an initial bespoke year, progress directly to the third year of the BVM&S 5-year programme.

Each applicant is evaluated on an individual basis taking into account their academic ability and record, references, personal statements, work experience and evidence of motivation. From this current year (for admission in 2015) all full fee eligible applicants are also invited for interview. Interview venues include Edinburgh, North America and Asia. The interview format is identical to that used for funded student applicants and the same scoring criteria apply.

The RDSVS is fully engaged with the University of Edinburgh's policy for Widening Participation. At the level of Admissions application, contextualised data are used to identify prospective students applying through UCAS who come from a widening participation background. This allows consideration of candidates who may not quite meet the entry requirements and who fulfil widening participation criteria to be included in the interview process.

In addition to academic achievement, applications from prospective students are evaluated in relation to extracurricular achievements, academic and non-academic references and career exploration through work experience. Work experience specifically is scored based on experience with animals and veterinary experience (paid or un-paid). Animal experience may include a wide range of experiences such as working in kennels and catteries, dairy, equine, pigs and abattoir/slaughter house. Veterinary experience can relate to a variety of different types of veterinary experience but also may include laboratory and research work.

The seven areas covered in the MMI are: work experience, career exploration, data interpretation, numeracy skills, practical task, awareness of animal welfare and moral and ethical dilemmas. This allows a wide variety of attributes to be evaluated including communication skills, numeracy, problem solving, manual dexterity, ability to follow instructions, exploration of veterinary as a career,

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empathy, awareness of animal welfare, ability to 'think on their feet' and ability to cope with stressful situations.

The School does not routinely admit transfer students. An exception was made in 2011 where 5 students from Antigua were accepted into the third year of the BVM&S programme. This was the result of hurricane damage to Antigua's Veterinary School.

8.2. Comments

The change in the admissions process with the incorporation of the multiple mini interviews has enhanced the admissions process.

Students are very positive about the admissions process which provides a positive impression of the School.

The admissions committee structure has recently been revised. This new organisational structure has been in place for approximately 18 months.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

8.3. Suggestions

The School is encouraged to review the process of appointment to the admissions committee to ensure broad representation of faculty and develop a plan to provide to regular turnover of committee members.

9. ACADEMIC TEACHING & SUPPORT STAFF

9.1. Findings

Reflecting the range of clinical services, which offer both first opinion and referral services across all species, including wildlife and exotics, and all the major disciplines within these, the School has an extensive, highly qualified and experienced academic clinical staff. Certain disciplines have been strengthened by targeted recruitment in recent years, specifically oncology and neurology. The clinical services also have excellent administrative and technical support including 40 registered veterinary nurses. The clinical support services, imaging, anaesthesia, pharmacology and pathology are also staffed with highly qualified experienced staff. Although the pre-clinical area has seen the recent retirements of long serving staff members they have been replaced with well qualified individuals and the Veterinary Medical Education Division has also been strengthened by increasing staff numbers, many of whom are veterinarians capable of teaching across the curriculum. The Roslin Institute has expanded significantly in recent years and Roslin research academics contribute directly to the undergraduate taught programme, mainly in the pre-clinical courses. In addition, the research groups in the Roslin Institute also take on veterinary undergraduate students for summer research projects. Although the majority of the School academic staff are veterinarians, there are eight non veterinarians who supply specialist knowledge in the pre-clinical and animal welfare courses. The Roslin Institute has 19 non-veterinary academics that contribute to the pre-clinical undergraduate programme.

As for many veterinary schools, retaining and attracting clinical specialists can be a challenge in the face of competing salaries from non-University practices and industry. The size and reputation of RDSVS, however, have meant that, with few exceptions in recent years, they have maintained and developed its staffing profile in line with the expansion of the education and clinical programs. The academic teaching staff has grown by 12 over the last five years. Academic research staff numbers

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have also grown. Maintaining staffing levels in anaesthesia has been challenging due to a shortage of well qualified, experienced veterinary anaesthetists available, however with recent restructuring and new appointments this is now resolved.

Interns and residents (and veterinary nurses) are involved in day-to-day teaching and support of veterinary students in the Hospitals and diagnostic services. All new residents/interns are required to attend specifically designed staff development sessions as part of the rolling programme of staff development. None of these groups formally assesses students other than having input into general discussions at the end of rotations for the purpose of providing constructive feedback.

Teaching, Research and Leadership and Management duties are used to review promotion applications. The individual and the manager will agree and allocate weightings over these areas before the form is submitted to the promotion panel e.g. they will estimate how much time (via a percentage) is spent on research, teaching and management. For clinical veterinary staff there is also a “clinical track” to promotion and clinical work is also weighted during the process e.g. a veterinary staff member could be 60% clinical, 20% teaching and 20% research. The Head of School represents the School on the College promotion panel to ensure that clinical members are appropriately represented.

The School also has a workload model in place which takes into account all of the above, including outreach and pastoral activities. This ensures equal assessment and review of all aspects of workload. The workload model is part of the annual performance and development review and ensures that proactive planning and discussion takes place between managers and staff members in terms of workload. It is also an opportunity for managers to identify any support needs or CPD/CE, which may be of benefit for promotion.

The University has an annual promotion round for both academic and professional services staff. The Head of School together with Human Resources (HR) review a list of all staff ahead of the promotion round to ensure active encouragement and mentoring of those ready for promotion. Applications are considered at a local School panel before being sent to the College panel for final approval. All staff can be considered for promotion regardless of contract status.

The University’s Institute for Academic Development (IAD) provides a range of courses in support of teaching and staff development including the option of studying for the Postgraduate Certificate (PgCert) in Academic Practice. In addition, the School runs an extensive series of in-house staff development workshops and events tailored to the needs of colleagues on-site.

The Campus also funds a Research Leadership Course every two years. This is a four-day programme for early career academics who wish to enhance their research portfolio. The course covers many areas from grant writing, managing a group to impact of research. The University offers a further Leadership Programme for senior managers and the School has supported the senior academic management team through this programme. The Head of School and HR also provide an annual promotions workshop on Campus. This was in response to a staff survey which indicated a low awareness of the University promotion criteria, since starting the workshop awareness and understanding of promotion has increased to 80% across the Campus.

9.2. Comments

Faculty have excellent collegiality and collaboration across disciplines including clinical and basic sciences. The review team received many comments about the positive change over recent years in faculty and staff satisfaction and work environment.

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The annual appraisal and promotion process, together with a robust workload allocation model, support individual faculty and staff development. These processes are well understood and appreciated by different categories of faculty and staff.

The School is commended for the way its comprehensive support for all faculty and staff has led to high morale throughout the organisation.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

9.3. Suggestions

10. CONTINUING AND POSTGRADUATE EDUCATION

10.1. Findings

Postgraduate training programmes are described in the SER.

All except one externally funded scholar, receive a stipend that is paid either by the Vet School or through an external funding body.

The diploma level taught post graduate courses are not combined with clinical training.

The percentage of Masters students holding a veterinary degree is 47%. The percentage of PhD students holding a veterinary degree is 17%.

Continuing education courses held at the school are described in the SER.

10.2. Comments

The School delivers courses to the surrounding referral practices although not all of these were recorded in the SER. Courses are organised with outside bodies and the School provides a range of modules for the RCVS Certificate in Advanced Practice. The School has increased the number of PhD students to over 160.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

10.3. Suggestions

None.

11. RESEARCH

11.1. Findings

The University of Edinburgh is a research-led University and the Veterinary School is a research-led Veterinary School providing a research-led curriculum. The School has taken full advantage of its expansion in research (through incorporation of the Roslin Institute) to drive opportunities for research to be embedded and integrated into the professional programme. In 2008, the University of Edinburgh took the strategic decision to incorporate the Roslin Institute within the Royal (Dick) School of Veterinary Studies to serve as the research arm of the School.

The RDSVS offers a variety of opportunities for veterinary students to become engaged in, and receive training in, research. Formal research programmes available to veterinary students include the Student Research Component (which is integrated into the curriculum), Summer Studentship Program, Intercalated Degree Programmes (BSc./MSc.). Students participating in research will usually follow one of the 5 research programmes described below:

Genetics and Genomics: The intellectual and practical challenge in both livestock production and animal and human health is to generate a predictive biology that links genetic and epigenetic variation with phenotype. The School aims to produce testable models at all possible scales of bioscience: molecular, cellular, organism, population as well as environmental interactions. They make major contributions to functional annotation of livestock and human genomes, sustainable breeding programmes and new breeding tools, capitalizing on new technologies such as Genotyping by Sequencing (GBS). Implementation of the outcomes is achieved through multiple strategic partnerships with major breeding companies and other industry partners.

Infection and Immunity: Infectious disease is the greatest single constraint on livestock production, especially with increasing intensification. The School aims to reduce the economic burden of diseases of livestock and to mitigate impacts on food safety and transmission to humans. The research is based on the genetics, genomics and cell biology of innate immunity in livestock, and includes research on livestock responses, host susceptibility, host-biome interactions and vaccine development to important bacterial zoonoses and emerging diseases. The programme includes pathogen genomics and discovery in livestock species, including an international dimension through the Centre for Tropical Veterinary Medicine. Alongside studies on host-pathogen interactions and pathogenesis, the School continues to expand its ability to utilise molecular diagnostic and mathematical tools to develop predictive epidemiology models.

Developmental Biology: The School investigates fundamental processes such as stem cell biology, control of somatic growth, embryonic patterning, organogenesis, musculoskeletal development, haematopoiesis, gonad function and sex determination that ultimately determine both reproductive success and productivity in livestock, companion animals and humans.

Neurobiology (including Welfare and Behaviour): Animal behaviour and welfare are major areas of public concern as production systems change and intensify. Underpinning this theme, the School continues to expand its focus on fundamental biology of the cells of the CNS of large animals, in part through investment in imaging infrastructure.

Translational Veterinary Science: The pathophysiology and management of disease are major aspects of their translational clinical research and capitalize on the co-location of veterinary hospitals with the research institute. Strategic areas include infectious diseases (including antibiotic and anthelmintic resistance), generic basis of disease in companion animals, healthy ageing, inflammation, cancer and stem cell biology. Collaborative research between veterinary and human medicine has benefits for all species. On this basis, the School continues to enhance their research in the area of “one medicine” through their strong collaborations, particularly focusing on genetics, infectious diseases and large animal models of human disease (e.g. cancer, lung disease).

Research leaders are actively engaged and teach on the professional programme. This provides the most leading edge information given to students and a basis for driving inquiry. In addition, the School provides “portrait” lectures in the professional programme that are delivered by key research and opinion leaders in the School.

The core skills of searching and critically appraising the scientific literature are introduced in first year in the Professional and Clinical Skills course and developed in Animal Life & Food Safety

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(ALFS) (1), Student Research Component (SRC) (Foundation Skills) and ALFS 2 and the Clinical Foundation Course (CFC) in Year 3. Study design, research data management and statistical analysis principles are also introduced in the early years ALFS courses, and expanded upon in CFC. These principles are then developed and used as applied subjects in the context of a student led research component in SRC, which begins in Year 2 and runs through Year 4 for completion in Final Year. Statistical, epidemiological and research skills are explored in Year 4 in the Final Year Preparation phase and are integrated in the Final Year in the context of evidence based veterinary medicine where they form the foundation of students' critical appraisal of support for evidence based decision topics.

Other choice based opportunities include:

1. The School runs a summer research project programme. Each year individual staff and researchers offer between 12-18 laboratory-based projects, which are then advertised to the students. Projects run for a minimum of 6 weeks and projects are funded from a variety of sources including the BBSRC, Zoetis, MSD Connect and Medical Research Scotland.
2. Part of a student exchange programme with Colorado State University (CSU) provides the opportunity for 1-2 Edinburgh students to undertake summer research projects with researchers at CSU and similarly 1-2 CSU students will conduct summer research projects with researchers in Edinburgh.
3. A number of students have been successful in applying for and completing the Cornell Leadership Programme, which also provides an opportunity to design and run a research project.
4. Intercalation opportunities. Undergraduate students can take up the opportunity to take an additional year and gain an intercalated degree (either a BSc or MSc depending on the stage of the programme at which they wish to intercalate and their existing qualifications). There is a large range of opportunities within the University of Edinburgh and at other UK Institutions.

11.2. Comments

The integration of Roslin Institute into the College of Medicine and Veterinary Medicine has provided excellent opportunities for clinical and basic science faculty, graduate students and residents to interact and develop collaborations. It has also enhanced the student experience and their understanding of the importance of scholarship to advance the profession.

Students have opportunities to contribute to research projects at both Roslin and RDSVS. There is integration and opportunities for research experiences over multiple years of the curriculum (the Student Research component – SRC) and the opportunity for intense summer research experience. Generally all students that express interest in the summer programme are accommodated during their tenure at the school.

The incorporation into the curriculum of portrait lectures about ongoing research has provided opportunity for students to hear from scientists and faculty engaged in addressing contemporary biomedical issues.

The University and College are commended for the successful integration of the Roslin and School faculty which creates a robust research environment for faculty, veterinary students, and graduate students.

In the Visitation team's opinion, the requirements regarding this chapter as they are laid down in Annex I of the SOP are met.

11.3. Suggestions

None.

EXECUTIVE SUMMARY

The RDSVS at the University of Edinburgh was founded in 1823. It was evaluated by ESEVT in March 2005 and approved by an ECOVE decision in July 2006.

The SER was written in agreement with both RCVS and ESEVT SOP and provided on time to the Visitation team. A reply to most questions and/or requests for clarification from the experts was provided before the start or during the Visitation.

The Visitation was well prepared, well organised and carried out in a cordial and professional atmosphere. The head of Establishment was easily and efficiently available when requested. The programme of the Visitation was easily adapted when requested by the Visitation team who had full access to the information, facilities and individuals they asked for.

Cooperation with the AVMA, AVBC and RCVS team took place in a friendly atmosphere and the ESEVT observers participated in all meetings.

The Visitation Team has identified many areas worthy of praise, e.g.:

-) a positive working and learning environment;
-) the quality and comprehensive nature of support provided to the professional programme;
-) the financial support from the University of the teaching, research and clinical strands of the Establishment;
-) The quality, range and maintenance of the teaching and learning resources;
-) the well-balanced caseload available for student learning opportunities;
-) the adoption of innovative technologies and pedagogical methods to enhance the student learning experience;
-) the quality and variety of student support services available;
-) the way its comprehensive support for all faculty and staff has led to high morale throughout the organisation;
-) the successful integration of the Roslin Institute and the Establishment which creates a robust research environment.

The Visitation team has also identified few minor concerns:

-) the turnover of committee appointments;
-) the process of appointment to the admissions committee.

No major deficiency has been identified.

Therefore the Visitation Team recommends to ECOVE the status of Approval for RDSVS (Edinburgh).

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Annex 1. Indicators (Ratios)

R1	<u>no. undergraduate veterinary students</u> no. total academic FTE in veterinary training	<u>778</u> 99.2	7.84	Maximum 8.381
R2	<u>no. undergraduate students at Faculty</u> no. FTE total Faculty	<u>778</u> 251.5	3.09	Maximum 9.377
R3	<u>no. undergraduate students at Faculty</u> no. VS FTE in veterinary training	<u>778</u> 90.95	8.55	Maximum 11.057
R4	<u>no. of students graduating annually</u> no. VS FTE in veterinary training	<u>155</u> 90.95	1.70	Maximum 2.070
R5	<u>no. total FTE support staff in veterinary training</u> no. total FTE academic staff in veterinary training	<u>152.4</u> 99.2	1.53	Recommended range 0.505-1.907
R6	<u>Supervised practical training</u> Theoretical training	<u>621</u> 920	0.675	Minimum 0.602
R7	<u>Laboratory and desk based work + non clinical animal work</u> Clinical Work	<u>450.4</u> 1319.5	0.34	Maximum 1.809
R8	<u>Teaching load</u> Self directed learning	<u>2691</u> 110	24.46	Recommended range 2.59-46.60
R9	<u>Total no. hours vet. curriculum</u> Total no. curriculum-hours Food Hygiene/Public Health	<u>2691</u> 125	21.52	Recommended range 8.86-31.77
R10	<u>Hours obligatory extramural work in veterinary inspection</u> Total no. curriculum-hours Food Hygiene/Public Health	<u>8</u> 125	0.064	Recommended range 0.074-0.556
R11	<u>no. of food-producing animals seen at Faculty</u> no. of students graduating annually	<u>174</u> 155	1.12	Minimum 0.758
R12	<u>no. of individual food-animals consultations outside the Faculty</u> no. of students graduating annually	<u>4488</u> 155	28.95	Minimum 8.325
R13	<u>no. of herd health visits</u> no. of students graduating annually	<u>144</u> 155	0.92	Minimum 0.326
R14	<u>no. of equine cases</u> no. of students graduating annually	<u>4672</u> 155	30.14	Minimum 2.700
R15	<u>no. of poultry/rabbit cases</u> no. of students graduating annually	<u>1950</u> 155	12.58	Minimum 0.407
R16	<u>no. of companion animals seen at Faculty</u> no. of students graduating annually	<u>15623</u> 155	100.79	Minimum 48.061
R17	<u>Poultry (flocks)/rabbits (production units) seen</u> no. of students graduating annually	<u>30</u> 155	0.19	Minimum 0.035
R18	<u>no. necropsies food producing animals + equines</u> no. of students graduating annually	<u>330</u> 155	2.12	Minimum 1.036
R19	<u>no. poultry/rabbits necropsies</u> no. of students graduating annually	<u>510</u> 155	3.29	Minimum 0.601
R20	<u>Necropsies companion animals</u> no. of students graduating annually	<u>327</u> 155	2.10	Minimum 1.589

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Annex 2. Decision of ECOVE

No Major Deficiencies had been found.

The 'Royal (Dick) School of Veterinary Studies, University of Edinburgh' is classified after Stage 1 Evaluation as holding the status of: **APPROVAL**.