UNIVERSITY OF
DUNDEE

College of Life Sciences

Annual Health & Safety Report 2007

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1 Introduction

The College of Life Sciences' (CLS) long term health & safety aims are (1) to achieve full compliance with the University Health & Safety Policy, including all relevant associated policy arrangements, and (2) to develop a positive health and safety culture throughout its workforce. Safety Services' policy arrangements define the standards that the College aspires to and these standards, in combination with other appropriate indicators, are what our health & safety performance will be measured against in the long term*. By fostering a positive health & safety culture, compliance will be achieved and maintained, not through imposition, enforcement and strict discipline, but via good co-operation, communication and control amongst a competent, committed workforce. (*A baseline has been established by analysing our compliance with current policy arrangements at the present time. Details are available upon request.)

In order to achieve the long terms aims, a number of short term, specific, time-bound targets will be set each year. Targets will be proposed by the CLS Health & Safety Working Group (H&SWG; composition and remit summarised in Appendix 1) and formally approved by the CLS Health & Safety Management Committee (H&SMC; composition and remit summarised in Appendix 2). These targets, and the tasks that must be carried out in order to achieve them, will form the basis of the College's health & safety action plan. This approach will give the flexibility to continually review and modify the plan as priorities change. Section 2 of this report details the health & safety targets for the period 1/5/07 to 1/5/08 (subject to approval by the H&SMC) and how they will be attained.

Although this report focuses on the shortcomings of the current CLS Health & Safety Management System and the significant amount of progress still to be made, it is vitally important to acknowledge that since the formation of the School of Life Sciences in 2000 a vast amount of time and effort has been dedicated to improving health & safety standards and laying the foundations for future progress. Also, it should be noted that there has been successful implementation of specific policies/procedures in certain areas where line managers and their staff have recognised the benefits of good health & safety and stepped up to the challenge of fulfilling their responsibilities.

2 Targets

2.1 Setting Policy & Organising for Health & Safety

Effective health & safety management within the College of Life Sciences will be achieved by adopting a system conforming to the widely accepted "POPIMAR" model (see Appendix 3), as advocated by the Health & Safety Executive (HSE) in the publication HSG65, *"Managing Health & Safety: 5 Steps to Success"*. Each element identified in the model must be realised if a successful health & safety management system is to be established. **Therefore, the first target for 2007/2008 is to ensure the principles relating to the Policy and Organising elements are adopted by CLS and put into effect.** The principles are clearly defined in HSG65 and the key actions required to achieve this target are described below. Once this phase is complete, other elements in the management model will become the subject of future targets.

2.1.1 Policy

The Life Science's H&SMC was formally established when it first convened on the 22nd of April 2003, the first item of business being to endorse the new School Health & Safety Policy. The Policy was drawn up by the Life Sciences' H&SWG (established in January 2002) primarily to define the roles and responsibilities of managers and key personnel, to elucidate the composition and remit of the H&SMC and H&SWG and to illustrate the health & safety management structure. The Policy has evolved over the years to clarify roles/responsibilities, to allow for the formation of the Life Sciences' Health & Safety Committee (HSC, established in October 2005) and, most recently, to reflect the changes precipitated by the transition from School to College.

Despite the formal endorsement of the Policy by the H&SMC and the effort invested in continually refining the content, it is not yet fully comprehensive nor is it being fully implemented. The reasons for this and the required remedial actions are identified below.

(i) The Policy document could be improved: it is not as clear and concise as it should be; there is no summary of specific health & safety arrangements; roles and responsibilities were defined without proper consultation of all those expected to fulfil them; the current health & safety management structure does not follow the line management structure. Therefore, the first task is to produce a more concise document, summarising specific health & safety arrangements, redefining roles and responsibilities in consultation with the relevant individuals, and amending the health & safety management structure. This task will be assigned to the CLS Health & Safety Information Officer and the revised policy will be submitted for approval at the next H&SMC meeting, due in May 2007.

(ii) The Policy has not been effectively communicated to all those responsible for its implementation, i.e. those with roles/responsibilities defined in the Policy. Despite the Policy being made available on the CLS Health & Safety Web Site, posted on notice-boards throughout CLS and incorporated in the health & safety induction pack presented to new recruits, it is apparent that many personnel are unaware of, or do not fully understand, their health & safety roles/responsibilities. The second task, therefore, is to ensure effective communication of the revised Policy to all personnel. Those with defined roles/responsibilities will have them communicated directly to them and be given ample opportunity to give feed back and ask for clarification. The Health & Safety Information Officer will take responsibility for this with the full backing of the H&SMC. This must be completed within 6 months of the revised Policy being approved.

(iii) Many line managers are often failing to hold their subordinates accountable for fulfilment of their health & safety roles/responsibilities as defined in the Policy. This may appear understandable in light of point (ii) but many of those who are familiar the Policy and its content are still failing to fully discharge this duty. The likely cause being that, in general, health & safety duties are low priority compared to other duties and, when the workload is high, low priority tasks are allowed to go undone. To address the immediate cause, the Health & Safety Information Officer will ensure that lines of accountability are emphasised in the revised Policy and that role definitions clearly state that each line manager is expected to hold subordinates accountable for fulfilling their health & safety obligations. (See Appendix 4 for the current CLS Health & Safety Management Structure showing lines of delegation/accountability.) The root cause, i.e. the low priority given to health & safety, also has to be tackled in order to effect positive change. Many senior and middle managers appear to be failing to fully acknowledge the moral, legal and financial arguments for good health & safety and give it equal status amongst other business activities. Responsibility for redressing the balance lies with senior management. As a first step, at the next H&SMC meeting, the Head of College and College Secretary will endeavour to have all senior managers agree to adhere to the guidance laid down by the Health & Safety Commission (HSC) in publication INDG 343, *"Directors' Responsibilities for Health & Safety"*.

2.1.2 Organising

Consultation and employee involvement is vital to the Organising aspect of health & safety management. Failure to properly take this on board has contributed to the general lack of awareness and compliance in CLS and the perception that health & safety is something imposed on employees by managers rather than something that employees are actively and positively involved in developing and improving. Consultation has taken place to some degree but has been limited to small select groups, e.g. Division Heads or Lab Managers, primarily to avoid lengthy delays in getting health & safety policies/procedures finalised and in place. In October 2005, the Life Sciences' Health & Safety Committee (H&SC; composition and remit summarised in Appendix 5) was formed and charged with improving consultation and involvement on/in health & safety throughout the workforce and ensuring fair representation of all personnel groups. This has been achieved to a limited extent but the potential of the H&SC is not being fully realised. Therefore, the Chair must take responsibility for reviewing the composition of the Committee at the next H&SC meeting and ensuring each member is aware that they are expected to actively consult the personnel groups they represent and keep them informed of health & safety developments. The H&SC must be perceived as effective and it is up to the Chair to facilitate this by ensuring representatives have ample opportunity to

raise issues, that these issues are addressed, that any prescribed actions are carried out and that prompt feedback is given. It is also vital to make sure all employees are aware of the H&SC and who they are represented by. The Health & Safety Information Officer must ensure this is effectively communicated. Note: employee involvement and consultation is also an issue for the H&SMC, where academic teaching staff and research group leaders are represented by the Dean of the School of Learning & Teaching and Division Heads respectively. Therefore, in this respect, the Chair of H&SMC has similar responsibilities to those of the H&SC Chair

2.1.3 Establishing an Effective Health & Safety Management Committee

Management control is vital when organising for health & safety and the H&SMC has a key role to play here. To date, the H&SMC has not been fully effective despite the fact that it is comprised of the most senior people in the College and this must be addressed. Analysis of the minutes from previous H&SMC meetings (details available upon request) shows that: many agreed actions are not being carried out and no one is being held accountable; policy decisions are being made and procedures approved with little thought as to how implementation and compliance will be achieved and non-compliance dealt with; directives emanating from the Committee are being ignored by many CLS personnel and there is no obvious mechanism for addressing such failures. The root cause for these failures has already been alluded to in section 2.1.1 point (iii). The Committee will never be truly effective if it cannot secure the unwavering commitment and support of *all* senior managers. The Committee Chair must take responsibility for ensuring these issues are tackled, starting with an open discussion at the next H&SMC meeting.

2.2 Health & Safety Induction Training

2.2.1 Health & Safety Induction Seminar

Despite attendance of the CLS Health & Safety Induction Seminar being compulsory for all new recruits, only 50% attendance was achieved at the most recent seminar on 30/3/07. The main reasons for this are (1) the fact that attendance is mandatory has not been effectively communicated to all the relevant individuals and (2) no penalties are being imposed for failing to attend. **The second target for 2007/2008 is to achieve a 100% attendance rate at the CLS Health & Safety Induction Seminar.** In order to achieve this, the Health & Safety Information Officer must write to line managers reminding them that they are responsible for ensuring that their subordinates attend and the Health & Safety Co-ordinator must ensure that failure to attend, without a valid reason, is penalised as previously agreed by the H&SMC.

2.2.2 Health & Safety Induction Questionnaire

The Health & Safety Coordinator will also re-introduce the Health & Safety Induction Questionnaire, to be in keeping with Safety Services' Policy Arrangement 7/2002, *Induction Health & Safety Training.* **The third target for 2007/2008 is to achieve a 100% return rate on the Induction Questionnaire.** The Questionnaire must first be adapted to ensure that all questions are relevant to CLS and can be answered using the information given at the Induction Seminar and during the completion of the Basic Training Checklist (see section 2.2.3). Submission of the completed questionnaire within two weeks of completing health & safety induction will be mandatory. Completed questionnaires will be checked and feedback provided to ensure the process is seen to be of benefit to the individual rather than just a paper exercise.

2.2.3 Basic Health & Safety Training Checklist

The CLS Basic Health & Safety Training Checklist program was initiated in June 2004 with the aim of ensuring each new recruit receives essential health & safety training and information as soon as they start work. The completion rate for 2006 was approximately 50%, despite that fact that the H&SMC agreed in April 2003 that completion of the Checklist is mandatory. **The fourth target for 2007/2008 is to achieve a 100% return rate on Basic Health & Safety Training Checklists.** The Checklist is currently being revised by the Health & Safety Information Officer and the appointed trainers will be reminded of their responsibilities when the new version is issued. In areas with a particularly low compliance rate, the trainers will be contacted directly to discuss the problem.

2.3 Training in Good Laboratory Practice

Many of the risks to health arising in Life Sciences' laboratories can be adequately controlled by adhering to Good Laboratory Practice (GLP) and this is often stated on risk assessments without a detailed account of what GLP entails. Therefore, it is vital that all laboratory personnel have a working, detailed knowledge of GLP. **The fifth target for 2007/2008 is to develop a comprehensive GLP training package, in conjunction with University Safety Services, and make this part of health & safety induction training for lab based personnel and undergraduate students.** Discussions have already taken place with the Head of Safety Services and plans are afoot to begin developing the training material. Once the package is complete the Health & Safety Officer for the School of Learning & Teaching will arrange for its delivery to all new undergraduate students and the Health & Safety Co-ordinator will factor it in to the induction training package for the research block.

2.4 Liquid Nitrogen Training

The report resulting from the HSE Liquid Nitrogen Facility Inspection in March 2000 called for training to be developed, documented and delivered from a single, constant source. This has not yet been complied with. **Therefore, the sixth target for 2007/2008 is to develop a training package for liquid nitrogen users and devise a system to ensure all users undergo training and that this training is documented.** This will be tackled in tandem with the GLP training project and the Health & Safety Co-ordinator will take responsibility for ensuring the training is delivered to all users and records compiled.

2.5 Risk Assessment

2.5.1 Risk Assessment Program

A risk assessment program has been successfully established in the School of Learning & Teaching but the School of Research has yet to be systematically tackled. As a first step, two areas in the Sir James Black Centre, JBC Floor1 and Floor 4, are participating in a pilot scheme. **The seventh target for 2007/2008 it to fully and successfully establish a risk assessment program in these two areas.** The Health & Safety Information Officer will take responsibility for seeing this through to completion and, in conjunction with the Health & Safety Co-ordinator, providing the required training, assistance and advice.

2.5.2 Web Interface for the CLS Risk Assessment Database System

The CLS Risk Assessment Database System has been slowly evolving since 2001 and proving to be a major asset. However, further development is required to fully maximise the potential of the system. **The eighth target for 2007/2008 is to publish the database system to the web.** The Health & Safety Information Officer will undertake this task with help and advice from CLS IT Support.

2.6 Work Related Stress

The College's local policy and procedures for dealing with work related stress and the plan to roll out generic stress risk assessments to all personnel were approved by the H&SMC in November 2006. The CLS Human Resources Officer is co-ordinating the roll out. **The ninth target for 2007/2008 is to complete the roll out and conduct a survey to assess the efficacy of the policy/procedures.** The Human Resources Officer will take responsibility for this with assistance being provided by the H&SWG as required.

2.7 Display Screen Equipment

In a laboratory environment, where there are many obvious hazards, the risks associated with poor ergonomics and, in particular, the use of Display Screen Equipment (DSE), are often overlooked. DSE policy/procedures have been in place in CLS since April 2005 but implementation has been sporadic. In recognition of DSE related ill health reports, **the tenth target for 2007/2008 is to devise a plan for effective implementation of DSE policy/procedures that gives priority to identifying, registering and**

ensuring assessments are carried out for official DSE users. This must start with refresher training for the existing CLS DSE Assessors that focuses on the official user issue. The Health & Safety Co-ordinator and Information Officer will devise and deliver this training. DSE Assessors will then be responsible for ensuring assessments are completed throughout their designated area. The Health & Safety Information Officer will compile and maintain the register of official users.

2.8 Manual Handing

Manual handling is a major issue in CLS Stores and the requirement for risk assessment of manual handling tasks is not being met. **The final target for 2007/2008 is to have all manual handling tasks undertaken by Stores' staff fully risk assessed.** In order to achieve this, the Stores Manager must appoint a member of Stores' staff as manual handling assessor and charge them with completing the necessary risk assessments. If the assessor has not already done so, they must first attend Safety Services' manual handling risk assessment training course. Note: all Stores' staff have attended a practical manual handling training course. The Stores Manager is responsible for ensuring the risk assessments are done and must be held to account by the relevant line manager.

3 Summary

This report identifies Life Sciences' health & safety long term aims, 2007/2008 targets (summarised below) and the actions required to achieve them. Success hinges upon senior managers fulfilling their health & safety responsibilities and providing visible, active support, strong leadership and commitment. In future annual reports, an account of how successful the College has been in achieving the targets set for the previous 12 month period will be given, providing a measure of the College's health & safety performance in the short term. Performance in the long term will be measured by analysing how the College's degree of compliance with Safety Services' policy arrangements improves over the coming years.

Summary of CLS 2007/2008 Health & Safety Targets

1. Ensure the principles relating to the Policy and Organising elements of the POPIMAR health & safety management model are adopted by CLS and put into effect.

2. Achieve a 100% attendance rate at the CLS Health & Safety Induction Seminar.

3. Reintroduce and achieve a 100% return rate on the Induction Questionnaire.

4. Achieve a 100% return rate on completed Basic Health & Safety Training Checklists.

5. Develop a comprehensive GLP training package and make this part of health & safety induction training for lab based personnel and undergraduate students.

6. Develop a training package for liquid nitrogen users and devise a system to ensure all users undergo training.

7. Fully and successfully establish a risk assessment program on JBC Floors 1 and 4.

8. Publish the Risk Assessment Database System to the web.

9. Complete the roll out of generic stress risk assessment and conduct a survey to assess the efficacy of Stress policy/procedures.

10. Devise a plan for effective implementation of DSE policy/procedures that gives priority to identifying, registering and ensuring assessments are carried out for official DSE users.

11. Have all manual handling tasks undertaken by Stores' staff fully risk assessed.

Appendix 1: CLS Health & Safety Working Group

Composition/list of members:

- H&S Coordinator (Chair)
  - o Irene Blair
- H&S Officer for the School of Learning & Teaching
  - o Monica Lacey
- H&S Information Officer (Minutes)
  - o Lisa Grayson

Remit

- To act as the College's health & safety think-tank and workhorse.
- Analyse all accidents, incidents, near misses and ill health cases and decide if further investigation and, in the case of ill health, Occupational Health referral, is necessary. Ensure investigations are carried out and properly documented.
- Form the basis of the CLS safety inspection team. Co-ordinate inspection, audit and other monitoring processes, both internal and those involving Safety Services and external agencies. Develop inspection checklists and ensure inspection reports are drafted and communicated to the relevant people.
- Formulate and co-ordinate implementation of corrective action plans based on the above.
- Deal with minor problems and instances of non-compliance. Consult the H&SC or H&SMC on more serious problems/instances.
- Identify training requirements, develop and deliver in-house training programs and co-ordinate attendance of Safety Services and external courses.
- Propose annual targets and priorities.
- Propose health & safety roles and responsibilities.
- Assess and advise the College Secretary of health & safety resource requirements.
- Approve material for inclusion on the Health & Safety Web Site.
- Approve risk assessments and safe operating procedures.
- Identify when new policies, procedures or plans are required or when existing ones require revision.
- Review and finalise draft health & safety policies, procedures, plans, reports and agendas put forward by the Health & Safety Information Officer.
- Identify and allocate tasks that must be completed to ensure day-to-day health and safety issues are dealt with and longer term targets are achieved.
- Monitor and maintain the College's compliment of health & safety personnel.
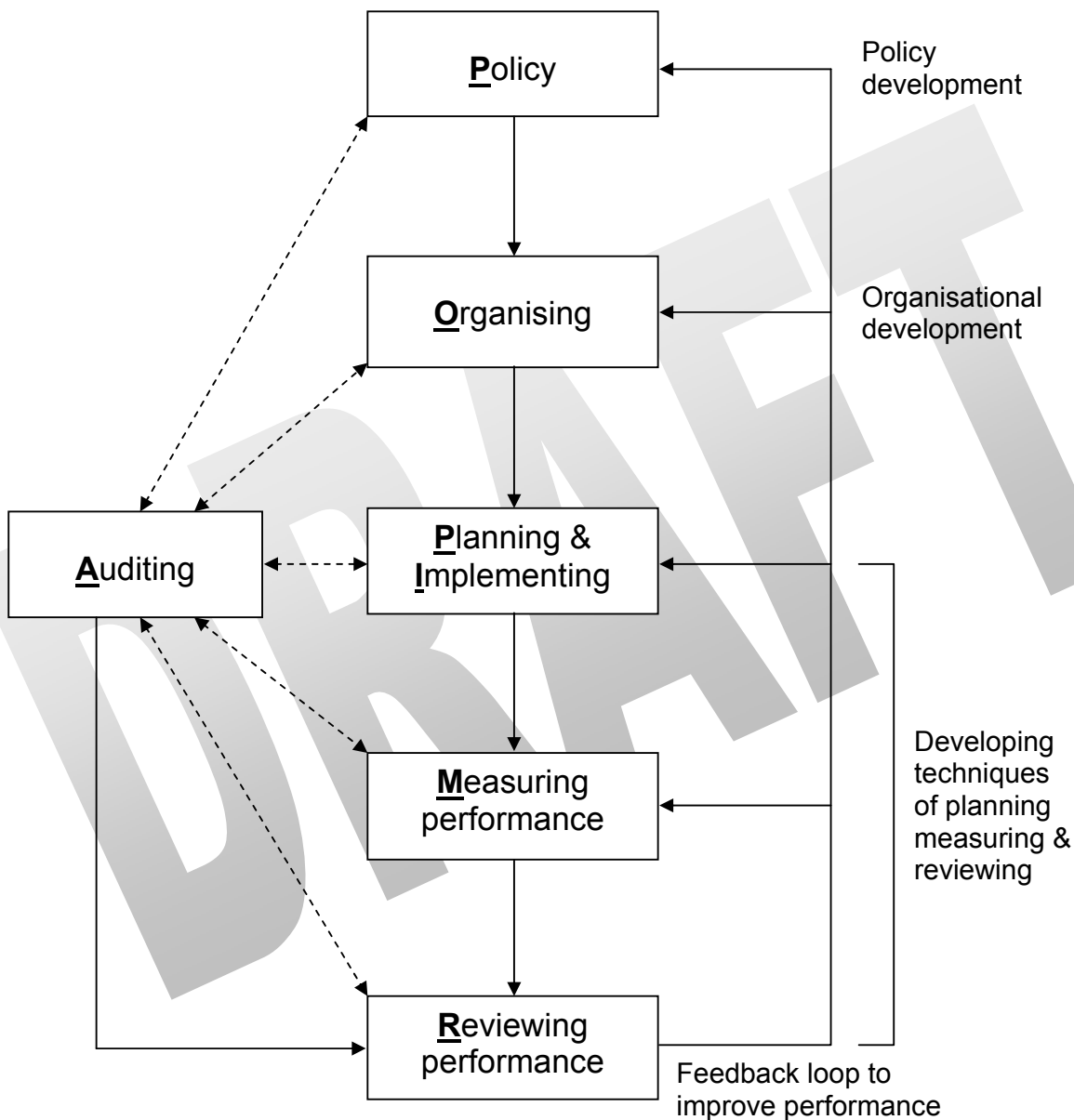
Appendix 2: CLS Health & Safety Management Committee

Composition/list of members:

- Head of College (Chair)
  - o Prof CP Downes
- Dean of the School of Learning & Teaching
  - o Dr J Elliot
- Heads of Research Divisions/Units
  - o Prof AH Fairlamb, Biological Chemistry and Molecular Microbiology
  - o Prof DA Cantrell, Cell Biology and Immunology
  - o Prof AI Lamond, Gene Regulation and Expression
  - o Prof CJ Weijer, Cell and Developmental Biology
  - o Prof DG Hardie, Molecular Physiology
  - o Prof GM Gadd, Environmental and Applied Biology
  - o Prof S Black, Anatomy and Forensic Anthropology Unit
- College Secretary
  - o IR Leith
- H&S Information Officer (Minutes)
  - o L Grayson
- H&S Co-ordinator
  - o Irene Blair
- H&S Officer for the School of Learning & Teaching
  - o Monica Lacey
- Director of Biological Services
  - o Dr L Newman
- MRC Protein Phosphorylation Unit & Division of Signal Transduction Therapy Unit Safety Co-ordinator
  - o Dr NR Helps
- University Safety Services Representative
  - o Dr IG Scragg, Head of University Safety Services

Remit

- Lead by example and be committed to achieving best practice.
- Drive continual improvement.
- Ensure health & safety within the College is adequately resourced.
- Identify log term aims and agree the standards against which the College's health & safety performance will be measured.
- Approve health & safety roles/responsibilities.
- Authorise health & safety personnel appointments.
- Approve targets and priorities.
- Approve policies, procedures and plans and authorise their implementation.
- Approve the CLS Annual Health & Safety Report for submission to the University Safety Committee.
- Give authorisation for training and inspection programs to go ahead.
- Ensure those with health & safety roles/responsibilities are held to account.
- Ensure control is being achieved through firm but fair discipline.
- Ensure health & safety performance is being regularly monitored and measured.
- Review accident/incident statistics and investigation reports and inspection/audit reports.
- Approve corrective action plans.
- Deal with major instances of non-compliance and other serious problems that cannot be resolved at local or Health & Safety Committee level.
- Publicly support health & safety initiatives and health & safety personnel.
- Bring health & safety issues raised by your Division/Unit/School to the attention of the Committee and feed back on Committee decisions and directives.

Appendix 3: POPIMAR Health & Safety Management Model

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                    ┌─────────────────┐
                    │    Policy       │ ◄──────────      Policy
                    └─────────────────┘                 development
                             │
                             ▼
                    ┌─────────────────┐
                    │   Organising    │ ◄──────────      Organisational
                    └─────────────────┘                 development
                             │
                             ▼
   ┌──────────────┐   ┌─────────────────┐
   │  Auditing    │◄─►│  Planning &     │ ◄──────
   └──────────────┘   │  Implementing   │
                      └─────────────────┘
                             │
                             ▼
                    ┌─────────────────┐                 Developing
                    │   Measuring     │ ◄──────         techniques
                    │   performance   │                 of planning
                    └─────────────────┘                 measuring &
                             │                          reviewing
                             ▼
                    ┌─────────────────┐
                    │   Reviewing     │ ──────
                    │   performance   │
                    └─────────────────┘      Feedback loop to
                                             improve performance
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Policy — **Organising** — **Planning & Implementing** — **Auditing** — **Measuring performance** — **Reviewing performance**

Policy development

Organisational development

Developing techniques of planning measuring & reviewing

Feedback loop to improve performance

———————► Control link

- - - - - - ► Information link

Appendix 4: CLS Health & Safety Management Structure

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                              ┌─────────────┐
                              │   Head      │
                              │    of       │
                              │  College    │
                              │ (CP Downes) │
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Head of College (CP Downes)
- Dean of School of Research (P Cohen)
- Dean of School of Learning & Teaching (J Elliot)
- College Secretary (IR Leith)

Dean of School of Research (P Cohen)
- Heads of Research Divisions/Units
  - Research Group Leaders
    - Research Personnel
    - Lab Managers

Dean of School of Learning & Teaching (J Elliot)
- L&T Academic Staff

College Secretary (IR Leith)
- L&T Technical Co-ordinator & H&S Officer* (M Lacey)
- Technical & Admin Support Team Managers
- CLS H&S Co-ordinator (I Blair)
- CLS H&S Information Officer (L Grayson)

L&T Technical Co-ordinator & H&S Officer* (M Lacey)
- L&T Technical Staff

Technical & Admin Support Team Managers
- Support Staff (including Lab Managers)

Legend:
↓ "Delegate(s) down to"
Reverse direction for "Accountable to"

⌐ ¬ (dashed box) Advisory Role
∟ ⌐

*Note: L&T Technical Coordinator is a management role; L&T H&S Officer is an advisory role. It just so happens that, at the present time, the same individual fills both positions.

Appendix 5: CLS Health & Safety Committee

Composition/list of members:

- Chair
  - o Lisa Grayson, H&S Information Officer
- Wash-Up & Media Kitchen Representative
  - o Irene Blair, H&S Coordinator
- Learning & Teaching Representative
  - o Monica Lacey, H&S Officer for the School of Learning & Teaching
- Lab Manager & Above Floor Cleaner Representative
  - o Letty Gibson, Senior Lab Manager
- Stores & Workshop Representative
  - o Donald Gardiner, Stores Manager
- IT Support & Bioinformatics Representative
  - o Kiran Oza, Computing Services Manager
- MRC Protein Phosphorylation Unit & Division of Signal Transduction Therapy Representative
  - o Aileen Watson
- Biological Resource Unit Representative
  - o Andrew Newman
- Anatomy & Forensic Anthropology Unit Representative
  - o Stella Mitchell
- CRUK Nucleic Acid Structure Research Group Representative
  - o TBA
- Post Doc Representative
  - o Magnus Alphey
- PhD Student Representative
  - o Fiona Mitchell
- Research Admin/Clerical/Portering Staff Representative
  - o TBA

Remit

- Lead by example and be committed to achieving best practice.
- Actively contribute to continual improvement.
- Act as a forum for consultation, communication and co-operation amongst all personnel groups.
- Encourage all personnel to become actively involved in health & safety and to help achieve full compliance with policies and procedures.
- Ensure all CLS personnel are consulted, via the Committee members, on health & safety issues relevant to them.
- Encourage input from all personnel and ensure it is considered during decision making processes, when appropriate. Input may include: suggestions/ideas; feedback on user friendliness of policies and procedures (i.e. ease of compliance); training needs; queries, problems, complaints.
- Feed back on input and assure personnel it is valued.
- Review and comment on drafts produced by the H&SWG and approve submission to the H&SMC.
- Effectively relay finalised health & safety policy, plans, procedures and reports to all personnel.
- Review accident/incident statistics and investigation reports and inspection/audit reports.
- Contribute to the formulation of workable corrective action plans.
- Discuss non-compliance and other problems and propose solutions.
- Identify training and other resource requirements within each personnel group.
- Participate in risk assessment and inspection programs.
- Nominate suitable candidates to take on health & safety roles when vacancies arise.