Estates Development and Projects Division

Construction Health, Safety and Environment Code of Practice
## Revisions 2016

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1. Introduction

The Estates Development & Projects Division has produced the Construction Health, Safety and Environment Code of Practice (CoP) to ensure that all construction works comply with the Imperial College London 2015 Health and Safety and Environmental policy. The policy statement can be accessed via the address below:


The College Health and Safety policy statement states; “Imperial College London is committed to pursuing excellence in everything it does and this includes the management of health and safety”.

It is the intention of the Estates Development & Projects Division to provide safe and healthy working conditions for staff and to take all reasonably practicable steps to ensure such conditions are achieved and maintained. In addition we will seek to ensure that our work activities do not adversely affect the health and safety of anyone who may be affected by our work, such as staff, students, visitors, members of the public and contractors and have no adverse effect on the environment.

The Estates Development & Project Division is a division within the Operations Group part of the College Support Services and this Code of Practice complies with the Operations Group Health and Safety Code of Practice dated May 2014.

The purpose of this CoP is to set out the management arrangements that the Estates Development & Projects Division has in place to enable it to implement College policy and procedures and comply with Health, Safety and Environmental Regulations.

This document should be read and understood by every staff member of the Estates Development & Projects Division and all parties who undertake work for the division.

This Code of Practice 2016 is organised in the same chronological sequence that a project would develop;

Policy
Design
Survey
Pre-Construction
Construction Works
Post Construction
2. Policy

The College being a highly complex organisation operating across a number of campuses and offering a diverse range of services presents a particular challenge when it comes to managing health, safety and environment.

The College has implemented a safety management system which is predicated on the Health and Safety Executive’s publication ‘Successful Health & Safety Management’ (HSG65). The illustration below identifies the component parts of the management system which organisations can use to benchmark themselves against in terms of health, safety and environmental management.

The following provides a succinct description of the elements which make up the health, safety and environmental management model:

POLICY – Effective health and safety policies set a clear direction for the organisation to follow,

ORGANISATION – An effective management structure and arrangements are in place for delivering the policy,

PLANNING & IMPLEMENTATION – There is a planned and systematic approach to implementing the safety policy through an effective health, safety and environmental management system,

MEASURING PERFORMANCE – Performance is measured against agreed standards to reveal when and where improvement is needed,

AUDITING AND REVIEWING PERFORMANCE – The organisation learns from all relevant experience and applies the lessons learned.
Underpinning the College policy is UK legislation and the College recognises the statutory duties and obligations imposed upon it by the:

- Health & Safety at Work etc Act 1974
- Management of Health & Safety at Work Regulations 1999
- Construction (Design and Management) Regulations 2015

The Policy and Legislation referred to above applies to all individuals and companies who carry out ‘construction work’ for, or on behalf of, Imperial College London. Construction work includes the undertaking of non-intrusive and intrusive survey work.

It is the Contractors’ responsibility to notify the College’s representative of any potential hazards associated with their activities during the course of the works. Contractors must take all reasonable precautions to ensure the health and safety of all those persons under their control and to adequately safeguard members of staff, students and the general public.

3. Construction (Design and Management) Regulations 2015

The College is committed to the HSE’s aims and objectives in the implementation of the Construction (Design and Management) Regulations 2015, which are to integrate health and safety into the management of the project and to encourage everyone involved to work together to:

- improve the planning and management of projects from the very start,
- identify hazards early on, so they can be eliminated, or reduced at design, or planning stage and the remaining risks can be properly managed,
- target effort where it can do most good in terms of health and safety and
- discourage unnecessary bureaucracy.

Imperial College London, as Client, will conform to the new Regulations in accordance with the information contained within the HSE’s guidance document L153 “Managing Health and Safety in Construction”.

Planning and managing for safety in construction is also subject to the provisions contained within the Management of Health and Safety at Work Regulations 1999.

A copy of the CDM Regulations 2015, including all associated guidance, can be downloaded free from:

http://www.hse.gov.uk/construction/cdm/2015/index.htm

The Management of Health and Safety at Work Regulations 1999 can be downloaded free from:


All construction work undertaken for Imperial College London is subject to the appropriate Regulations and College policy and the standards to be adopted should be considered as best practice.
As Client, Imperial College London will provide surveyors, designers and contractors, with pre-construction information, in accordance with Regulation 4(4) of CDM 2015. The information will conform, in general terms, with that outlined in Appendix 2 in the HSE’s document L153.

**Principal Designer and Principal Contractor – Regulation 5 – CDM 2015**

Where there is more than one contractor, or if it is reasonable foreseeable that more than one contractor will be working on the project at any time, Imperial College London, as Client, will appoint in writing:

a) a designer with control over the pre-construction phase as Principal Designer and
b) a contractor as Principal Contractor.

The Principal Designer should ideally be a designer by profession, be a member of the design team and have “control” over the design, during the pre-construction phase of the project. The Principal Designer should ideally be appointed at Stage 1 - Feasibility.

However, the Regulations define a Designer as, “an individual, or organisation that prepares, or modifies a design for a construction project, including the design of temporary works, or arranges for, or instructs someone else to do so”.

This definition opens the role to permit those who are not designers by profession, to be appointed as Principal Designer. Individuals such as members of the Client’s organisation, Project Managers and Quantity Surveyors may undertake this role, provided they have the necessary skills, knowledge and experience to perform all of the functions this role entails.

Where appropriate, on design and build type contracts, Imperial College London will appoint the Principal Contractor to undertake the functions of the Principal Designer.

Estates Development & Projects have developed a Scope of Services document for the appointment of the Principal Designer and a copy can be accessed via the web-link below:

[http://www.imperial.ac.uk/estates-projects/resources/](http://www.imperial.ac.uk/estates-projects/resources/)

**Notifiable Projects**

Projects that are “Notifiable” to the HSE under CDM 2015 are defined as follows:

a) where construction work is likely to take more than 30 days and involve more than 20 persons working on site simultaneously, at any time, or
b) likely to exceed 500 person days.

Where a project is deemed to be subject to the above criteria, Imperial College London will notify the Health & Safety Executive as soon as is practicable, but in any case, before the construction work commences on site.

Estates Development & Projects has developed an F10 Notification Template and a copy may be accessed via the web-link below:
The Project Manager and/or the Principal Designer should complete the template and forward it to the Head of Health & Safety, who will use the information to complete the HSE on-line F10 Notification process.

4. Surveys

4.1 Asbestos

Asbestos containing materials (ACM) are present throughout many of the College’s properties, especially those built in the 1960s. The College employs an Asbestos Management Team who have developed and maintain an Asbestos Register for all College buildings. The Asbestos Management Team is also employed to undertake surveys that assist the College to meet its legal obligations, under the Control of Asbestos Regulations 2012.

Contractors, consultants and anyone undertaking survey work on behalf of the College will be issued with appropriate information and advice regarding the location of ACM and any control measures required to be in place, prior to commencing any construction related work on site.

Designers and contractors undertaking pre-construction survey and/or enabling works, will be provided with the appropriate and project specific information on ACM, as part of their College induction.

Under no circumstances will any survey works be permitted, or any construction activities whatsoever, until the individuals employed have been adequately inducted and made fully aware of the locations and condition of any ACM located in the areas they need to access and survey.

The Project Manager will submit a request for an “initial asbestos survey report” through the Estates Facilities Customer Service Centre (email at fm.csc@imperial.ac.uk). The request must be accompanied by a College issued floor plan, marked to indicate the extent of the survey information required.

All personnel working on site, including site based managers and supervisors, must attend a suitable Asbestos Awareness training course. The Principal, or Main Contractor, must maintain a record of this training on site, for the Client’s inspection.

Contractors may undertake this training in-house, using the appropriate training material and information and issue certification as proof of attendance.

The College organises a number of asbestos awareness training sessions at various campuses throughout the year and approved contractors managers and supervisors currently working on projects, are expected to attend. This short training session is
free of charge. The dates and joining instructions for asbestos awareness courses, will be advised by the Client.

In order to raise asbestos awareness, contractors will be issued, free of charge, A3 sized posters for use on site and A4 size laminated posters, to use as visual aids/prompts, during their own site inductions. Asbestos Awareness cards will also be provided for distribution to all site operatives and staff. These must be carried on site at all times and used to alert the Estates Facilities Customer Services Centre in the event of an incident, or to report damaged asbestos material.

Where possible, all concerns about asbestos should be dealt with, in the first instance, by reporting to the contractor’s Site Manager and/or Supervisor.

4.2 Decontamination Certificates

Due to the nature of the teaching and research work undertaken at the College, Decontamination Certificates for Areas and Equipment will be issued to the contractor prior to works commencing on site. The decontamination process is particularly important to pursue for areas formerly used as laboratories, research activity, or any spaces where hazardous materials may have been used or stored.

Individuals (including consultants and engineers) undertaking survey work must be made aware of these matters and properly inducted by an appropriate member of College staff prior to entering any space where hazardous materials are/were being used or are/were stored. In some instances it may be necessary for the Department to issue a decontamination certificate.

It is the responsibility of the College Project Manager to discuss and agree these matters with the Departmental Safety Advisor and/or the appropriate member of staff employed by the College Safety Department.

All decontamination certificates should be issued by the Building Manager, who is ultimately responsible for the space.

4.3 External Works

External works must be agreed in advance with the Director of Estates Facilities, who will authorise car parking suspensions, road closures and the location of construction related plant, equipment and accommodation. Any proposed works on the South Kensington Campus should also be presented to the monthly Campus Coordination Meeting chaired by the Director of Estates Facilities.

Any underground work including excavations, boreholes, trenching or new cables requires a permit to work to be in place before the work can start. This can be obtained from the Estates Facilities website at: http://www.imperial.ac.uk/estates-facilities/contractors/permit-to-work/

The contractor must ensure that all available information is obtained regarding the type and location of existing underground services, obstacles and tunnels.

Contractors should be aware that the South Kensington Campus has a series of underground service tunnels that feed the buildings and impact potential loading capacities of the road surface. This may affect, for example, the location of a crane lift site.
5. Pre-Construction

5.1 Contractor's Competence

Estates Development & Projects requires all contractors to be registered with the Construction Health and Safety Assessment Scheme (CHAS) which provides an independent evaluation of health and safety competence.

Additionally the following qualifications are required for individuals:

- Site Managers must have a valid 5 Day CITB ‘Site Managers Safety Training Scheme (SMSTS) Certificate’ or equivalent
- Site Supervisors must have a valid 2 Day CITB ‘Site Supervisors Safety Training Scheme (SSSTS) Certificate’ or equivalent
- All site personnel must be in possession of a valid Construction Skills Certification Scheme (CSCS) card and have it available for inspection prior to entering a construction site.
- All site managers and supervisors must attend and complete, an industry recognised environmental awareness training scheme, by the end of 2016. Examples of acceptable training would include:
  - Site Environmental Awareness Training Scheme-CITB accredited
  - Environmental Good Practice on Site-Recommended by the Construction Industry Research and Information Association (CIRIA) and approved by the Institute of Environmental Management and Assessment (IEMA)
  - Environmental Awareness at Work-NEBOSH accredited
  - Fire Protection Association (FPA) Hot Works Passport Scheme. Individuals responsible for managing hot works permits on site, must be suitably trained and be in possession of a valid and current FPA Hot Works Passport.

N.B Copies of relevant certification should be available on site for the Client’s inspection.

5.2 Client’s Safety Inductions

During the design and surveying stages of a project Consultants and Contractors must complete the College ‘Day 1’ safety induction. This requires watching a 20 minute DVD and completing a multiple choice questionnaire.

Subsequently, during the construction phase of the works, contractors are to incorporate the College Day 1 induction into their site induction process ensuring all personnel on site have viewed the DVD and completed the questionnaire.

Prior to works commencing on site, a representative from Estates Development & Projects will chair a Safety Induction meeting which must be attended by all Contractors supervising personnel. Subsequent induction training for operatives and visitors is the responsibility of the Principal or Main Contractor who is expected to maintain a Register of Inductions on site, for inspection by the Client’s Representative.
5.3 Building Services Surveys and Isolations

Services on College premises must not be interrupted without the permission of the College representative. The Project Manager will arrange a ‘Site Handover’ meeting, prior to works commencing on site to establish liaison with the building maintenance team and to identify, as far as possible, existing live services within the works area. This meeting will also identify the location of essential controls such as valves and distribution boards and agree procedures for isolation.

The contractor should use this opportunity to discuss and agree his requirements for onsite services, including any three phase supplies anticipated.

A programme of services shutdowns, to allow Estates Facilities sufficient time to re-route services and/or provide temporary supplies, must be agreed with the maintenance team.

The Project Manager must apply for all services isolations and reconnections, through the Estates Facilities Customer Services Centre fm.csc@imperial.ac.uk, ensuring adequate time is allocated for maintenance team resources, to complete these tasks and meet the project programme.

Contractors must retest all electrical cables on site, prior to cutting and/or removal and visually check that all other services have been properly isolated, as part of their health and safety responsibilities.

5.4 Method Statement and Risk Assessment

Construction work at Imperial College London is complex and consequently the College has imposed conditions appropriate to the nature of the environment, for example working in laboratories and in occupied buildings.

Prior to starting work on a site Contractors must agree with the College’s representative how best to carry out the works in order to:

- minimise the inconvenience caused to the Department(s)
- manage the health, safety and environmental aspects of the work
- safeguard students, members of staff, visitors and project personnel.

It is the Contractor’s responsibility to notify the College representative of hazards associated with their activities, which may have the potential to cause disruption to the College’s core business activities.

A comprehensive Construction Phase Health and Safety Plan outlining the Contractor’s management approach, must be produced by the Contractor and agreed with the College Representative, prior to the works commencing on site. This information must include details of the welfare facilities which must be in place and maintained throughout the works.

The Plan must also set out the contractor’s proposals for managing and controlling the prevention of fire during the construction period and the actions to be taken in the event of a fire on site, or an evacuation of the building for any reason.
6. Construction Works

6.1 General Information

The minimum requirement for Personnel Protective Equipment (PPE) working on construction sites is:

- Full length trousers (no shorts)
- A t-shirt or shirt with sleeves
- A high visibility vest or jacket
- Suitable head protection
- Suitable foot protection
- Suitable gloves
- Suitable eye protection

These requirements apply to all site operatives, supervisors, managerial staff and visitors. These rules generally do not apply within the site administration or welfare areas.

In all cases the hi visibility vests or jackets must display the Principal or Main Contractor’s name and must be worn at all times during working hours when moving around the campus.

Additionally, high visibility vests or jackets may be required to note the project name, project code and/or location. Should this be a Client requirement, this instruction will be specifically included in the tender documents.

Working hour restrictions are detailed in the tender documents for individual projects.

The use of radios or personal stereos is not permitted within the work area or inside any of the College buildings.

Cartridge firing tools may not be used on College premises without written permission from the Head of Health & Safety – Estates Development and Projects.

Working at the College imposes numerous restrictions on Contractors due to the nature of the environment, e.g. working in laboratories and, in most cases; the work is being carried out in occupied buildings. For example: Nitrogen Gas may be transported in pressurised vessels using the building’s lifts. When this occurs it is forbidden for persons to use the lift at the same time and the contractor’s safety induction information needs to include the protocol for managing this hazardous activity.

Contractors must, in all cases, agree in advance with the College’s representative how best to carry out the works in order to:

a) minimise the inconvenience caused to the Departments and
b) manage the health, safety and environmental aspects of the work by, for example, erecting barriers and signage, using noise reducing barriers and systems and employing suitable dust mitigation measures in order to safeguard persons working on the project, College employees and visitors and to protect the environment.
6.2 Safety Health Environment Leadership Team (SHELT)

To drive positive changes to construction safety culture, the Client initiated the creation of a SHELT to provide a monthly forum where the Client and the contractors could meet and discuss and agree, the practical means and processes that would need to be put in place, to deliver the safety culture vision.

SHELT commenced in January 2014, where it was agreed in principle to adopt the safety management philosophy used during the construction of the Olympic Park. It was also agreed to adopt the principles contained within the following legacy documents provided via the HSE’s website:

- “Pre-conditioning for success” – document reference RR955
- “Leadership and worker involvement on the Olympic Park” – document reference RR896 and;

These three documents were enshrined in the agreed Terms of Reference for SHELT that all the attending organisation’s directors signed up to.

As a consequence SHELT has produced and agreed the following policies and procedures that will apply to all contractors applying for, or undertaking construction work for, Imperial College London:

- An occupational health scheme to be available for all employees and self-employed individuals who regularly undertake work for a Principal Contractor.
- By the end of 2016, all supply chain members involved in delivering construction work on site, to have access to an occupational health scheme.
- Behavioural Safety Training to be available for all employees and supply chain partners.
- Daily Activity Briefings (DABs) to be delivered by supervisors, prior to any works commencing on site.
- DABs to be used by supervisors as an opportunity to discuss and agree the RAMS for the various tasks and to engage with the workforce and encourage participation in site safety matters.
- All supervisors to undertake communications training.
- Communications training is to assist supervisors confidently deliver the safety messages and engage with the workforce, encouraging their participation in site safety matters.
- Operatives should be encouraged to stop work and seek assistance from their supervisor, if they believe that they, or others, are being put at risk.
- Contractors should develop a “fair blame” culture, taking into consideration the potential for Human Error. However, deliberate flouting of site rules must have consequences that all site staff and operatives have agreed to and discussed, at the Principal Contractor’s site induction.
6.3 Fire and Emergency Procedures

At all times consultants and contractors must be aware of building specific fire and emergency evacuation procedures. This includes how the system works, the emergency evacuation procedures and the location of the “Muster Point”.

Prior to works commencing on site the Principal Contractor must agree a Fire and Emergency Evacuation Plan with the College Senior Fire Officer, which must be implemented during the works.

The Fire and Emergency Evacuation Plan should ensure that:

- Sufficient firefighting appliances are available throughout the works area and that everyone is conversant with their use.
- Firefighting appliances are annually tested.
- An attendance register for all operatives, staff and visitors is maintained on site and should be used to confirm all operatives and visitors have left the site/building.
- All fire escape routes are kept clear of materials and trailing leads, have adequate lighting and are well signposted throughout the site.
- All temporary fire escape routes, or diversions, adequately address the needs of the disabled.
- Sufficient temporary fire alarm call points or Klaxons are available, where appropriate.

For incidents requiring assistance of the Emergency Services dial 4444 from an internal telephone or +44 (0)20 7589 1000 from an external telephone. Both numbers will connect directly to the College’s Emergency Response Team who will ensure the Emergency Services are directed to where they are needed. Please provide the operator with your name, the company name, your location and details of the assistance you require.

Details of the emergency procedures should be adequately displayed around the site and welfare areas.

6.4 First Aid Information and Arrangements

All College Security personnel and a number of the department’s personnel are trained to administer first aid. Anyone requiring assistance should contact Security or the nearest First Aid trained individual within the building.

For accidents requiring assistance of the Emergency Services see Section 6.3.

Contractors shall provide the Client with names of at least one operative who holds a current First Aid certificate. A first aid box must be provided by the Contractor and kept adequately stocked. All Security personnel will respond to calls for assistance and additionally are trained to use defibrillation equipment.

6.5 Use of College Facilities

Contractor’s staff and operatives are not permitted to use any College catering facility that is reserved for the exclusive use of College staff and/or students e.g. the Junior
Common Room; the Senior Common Room; or the Queens Tower Rooms in the Sherfield Building. These are for the exclusive use of College students and staff. The Imperial College Union outlets on the Level 2 walkway are available for the purchase of goods, but all food and drink must be consumed in the welfare facilities that have specifically been designated for the project.

On the South Kensington Campus, contractors are not permitted to use specific public areas on the campus during break times. Contractors must not use the Queens Lawn, the open area of the walkway or any part of Dalby Court decked area surrounded by the Faculty, Mechanical Engineering, Bessemer and Electrical Engineering buildings.

The use of facilities on other campuses should be agreed in advance with the Building Manager and noted within the pre-construction information schedule provided with the tender documents.

Persons undertaking survey work are subject to the same campus rules as contractors.

6.6 Welfare Facilities

On the South Kensington Campus the College provides shared contractor welfare facilities which are located in modular buildings on Ayrton Road between the Sherfield Building and the Royal College of Music.

These facilities consist of:

- Canteen serving hot food - Ground Floor
- Drinking water font - situated externally and adjacent to the canteen
- Male and Female toilets are situated in a separate cabin - adjacent to the canteen facility.
- Changing room space (Male) - First Floor
- Changing room space (Female) - First Floor
- Contractors must provide their own lockers in the changing rooms and remove them at the end of the project.
- Contractors must still make provision for providing facilities for making tea and coffee and for heating and consuming food.
- Contractors must ensure that a readily available source of drinking water is available, with the water source conspicuously marked with an appropriate sign.
- Contractors are to advise their staff to use these facilities and to include such information within their site rules and induction processes.
- All welfare facilities must conform to CDM 2015 Schedule 2 requirements.

6.7 Smoking Policy

Non-smoking is the norm at Imperial College London. Smoking is only permitted where it will not cause nuisance to others, create safety risks or contravene smoking policies of NHS Trusts. The College will comply with all legislative requirements on the control of smoking.

Smoking is not permitted within any building, or substantially enclosed space, any site office, any site welfare facility or any construction site.
The **College Smoke Free Policy** can be found on the Human Resources web pages.

Smoking is restricted in certain external areas of the South Kensington Campus and this is advised by signage. Smoking is not permitted on Dalby Court (the open area enclosed by the Faculty, Electrical Engineering, Bessemer and Mechanical Engineering Buildings) or on the Level 2 covered walkway leading from Dalby Court to the Huxley Building.

There is a limited smoking area adjacent to the shared contractor welfare facilities on Ayrton Road between the Sherfield Building and the Royal College of Music. This smoking area is close to Ayrton Road. Smoking is not permitted close to the entrance to the welfare facility, or near any ventilation inlet.

On larger projects it may be possible to designate a smoking area which must be agreed in advance with the College Senior Fire Officer and written into the construction phase plan and site rules.

In line with National Health Service policy, smoking is not permitted anywhere on any medical campus.

### 6.8 Hot Works Permits

Contractors must comply with the College ‘Fire Services Code of Practice for Project Works and Contractors’ which can be found at:

[www.imperial.ac.uk/estatesfacilities/services/fire/cop/priorities](http://www.imperial.ac.uk/estatesfacilities/services/fire/cop/priorities)

Permission is required from the College Fire Officer for operations that require the use of flame and spark sources, or the application of heat, such as for welding or burning.

Contractors are required to seek permission to undertake hot works from the College Chief Fire Officer. To assist this process, a ‘Hot Works Notifications’ pro-forma is available on the College Fire web site (link above) and must be completed and submitted to the Fire Officer, in advance of the works being undertaken.

Based upon the information provided by the Contractor, the Fire Officer will decide whether they need to inspect the work location to assess the implications of the intended Hot Works prior to giving permission. The Fire Officer may determine that permission for the Hot Works can be granted conditional upon certain measures being implemented to mitigate any hazards associated with the works. Where the measures prescribed include changes/adaptation to the local fire safety systems, or arrangements, these will be specified on the pro-forma and actioned by the Fire Officer in liaison with the relevant Building Manager. Where a particularly hazardous, or fire sensitive operation is foreseen, the Fire Officer may require a detailed Method Statement to be submitted for approval, prior to any hot works commencing.

**N.B:** Dust from construction activities has the potential to set off the fire alarm system and requires suitable control measures to be used. A permit for dusty works is required, as if it were hot works.

The above procedure gives agreement for Hot Works to be undertaken, enabling the contractor to issue his own company “Hot Works Permit”.

The Principal Contractor is responsible for issuing hot works permits and managing all hot works on site. The College requires Contractors to demonstrate their...
competence to manage Hot Works undertaken by their staff or those of a sub-contractor. The College has determined that Contractors can best demonstrate their competence by signing up to the Fire Protection Association’s Hot Works Passport scheme, which is a national benchmark for the knowledge and understanding required to effectively manage hot works.

Any individual issuing Hot Works Permits on site must have attended training in the Fire Protection Association Hot Work Passport Scheme and be in possession of an appropriate training certificate. Alternatively, individuals issuing hot works permits may be trained in-house by a member of staff who holds an appropriate and current FPA Passport.

6.9 Other Permits to Work

The College uses an electronic permit to work (ePTW) system and one of these is required to be completed and submitted for any works that:

- have a risk of creating an interruption to College business
- an intrinsic risk, for example, working on a roof without handrails
- create a risk to the individual.

Examples where an ePTW will be required include electrical and mechanical work, chemical stores, radiation stores, certain categories of laboratory and access to various plant rooms, service risers, under floor services and roofs. Contractors must request a work permit online at:

www.imperial.ac.uk/estatesfacilities/reportrequest/onlineforms/permitwork

Roof Construction Works permit

Contractors must request and complete a permit, for any roof works that has the potential to damage the roof surface, or where existing service penetrations are being opened, new penetrations are required, or any other circumstances were the building will be at risk of water ingress.

The roof permit must be requested from the Client’s Project Manager for the works and submitted with sufficient time for review and comment by the Client’s team.

http://www.imperial.ac.uk/estates-projects/resources/forms/

6.10 Working in Tunnels

Any project work requiring access to any service tunnels, must comply with the Temporary Tunnel Access Procedure policy, which can be found on:

https://workspace.imperial.ac.uk/facilitiesmanagement/Public/Safety/Tunnel-Access-CoP-April-2013-v1.2.pdf

6.11 Security Issues

All personnel working at the College must obtain a security identity card and wear at all times whilst on College property. This ID card is also used as a proximity card permitting access to specific areas of the College.
All contractors and those consultants/contractors undertaking survey work, must view the College’s Day 1 Induction video and attend an induction by the Building and Maintenance Managers. For those requiring ID cards, an additional induction is required from the Head of Health and Safety and/or the Construction Safety Advisor for Estates Development & Projects.

Those requiring ID cards, need to advise the College’s Project Manager and provide the names, locations requiring access and the start and finish dates for their activities. ID cards will only be issued when this information is logged into the Security Office’s system and the individuals present the ID Security office with a signed authorisation certificate issued at the additional induction meeting and signed by the safety officials noted below:

Denis Murphy d.murphy@imperial.ac.uk and
Dean Trigg d.trigg@imperial.ac.uk

External scaffolding must be fitted with a suitable scaffold alarm system connected and linked to the Security Control desk. The base of all external scaffolding must be enclosed and secured, to discourage unauthorized access. All external scaffolding must be fully enclosed in a suitable fire retardant Mono-flex or similar material.

External timber framed hoardings should be constructed to a minimum height of 2440mm and decorated in Imperial College London colours which are:

- Main plywood panels Trafalgar Blue (Dulux ref 36bb – BS 20D45) with a 125mm timber rail skirting top and bottom Dark Lilac (Dulux ref 17305, but has no BS or RAL number).

Contractors should advise their delivery company and their own in-house drivers that vehicles may be subject to random searches by College Security Staff, before entering or leaving the campus.

6.12 Crane Lifting Operations

The use of cranes on the South Kensington campus is subject to approval of the lifting plan in writing by the Project Manager and the Estates Development & Projects Head of Health & Safety. Depending on the nature or complexity of the lift, the College may wish to appoint an independent Engineer to advise the Estates Development & Project Division and who will attend on the day of the crane lift, to ensure the agreed method statement/lifting plan is fully implemented.

Campus “Lifting Plans” have been developed for all campuses and are now available for information. Contractors should request a copy of the appropriate lifting plan for whichever campus the work is being undertaken, from the Client’s Project Manager.

6.13 Car Parking and Deliveries

All personnel are expected to use public transport to come to work at the South Kensington Campus and generally there is no free parking for suppliers. However, in certain circumstances car parking spaces can be made available to assist the project process. Specialist tasks that require vehicles to be close to the site of the work and contain specialist tools or equipment will be permitted to occupy car parking spaces for the duration of the tasks.
Contractors are strictly prohibited from parking on the pedestrian route adjacent to College buildings on Exhibition Road.

At South Kensington all car parking requests must be made by the Project Manager and approved by the campus Car Park Administration Manager. At other campuses car parking arrangements must be agreed in advance with the Project Manager.

Drivers must comply with the College’s traffic signage and speed restrictions. Contractors are advised to provide their delivery companies with a full, accurate delivery address and a name and contact telephone number. Leaving a name and contact telephone number with the gatehouse personnel will also help reduce the time required for deliveries and assist with reducing traffic congestion throughout the campus.

6.14 Accident and Incident Reporting

Contractors must record and report all near miss incidents, first aid treatments, minor accidents and dangerous occurrences on College premises, as well as those dealt with under the ‘Reporting of Injuries, Diseases and Dangerous Occurrences’ Regulations (RIDDOR) 2013.

This information is to be provided to the Client’s Project Manager, with copies to the Head of Health & Safety and Construction Safety Advisor. This information will be used to collect statistics, in order to better inform decisions on safety management. All reported injury incidents and significant near misses will, after thorough investigation, be reported through the College wide SALUS system, by the Head of Health & Safety or the Construction Safety Advisor.

Contractors are required to provide a monthly summary report to both individuals noted above, using the College’s in-house pro-forma. The information required includes near misses, incidents, minor accidents, reportable accidents, the number of persons working on site and total person hours worked on the project in the reporting month.

In the event of an incident requiring the attendance of the emergency services, Contractor’s must immediately advise the Estates Development & Projects Head of Health and Safety and/or Construction Safety Advisor, in order to facilitate a College investigation to be undertaken. If these individuals are not available, the issue must be escalated to the relevant Client Project Manager or, in their absence, to the Director of Estates Development & Projects. The Principal Contractor must provide an interim written report to the Client’s Project Manager (copied to the Head of Health and Safety and Construction Safety Advisor) within 24 hours and a full detailed report within one week.

6.15 Working at Height

As recognised throughout the industry, there is a hierarchy of control that needs to be followed when selecting the right equipment for the task, for example:

- Fixed scaffold including guardrails
- MEWPS (including cherry pickers and scissor lifts)
- Mobile scaffold towers
• Podiums inherently stable in design
• Step ladders

The above hierarchy should be followed when selecting the equipment to be used whilst undertaking works at height and the information recorded in a suitable and sufficient risk assessment. If as a last resort a step ladder is the only viable alternative, a permit to work should be for issued for short duration works only where 3 points of contact with the step ladder can be maintained at all times.

Any work at height equipment that is used should be erected or used by a competent and trained operative with training records checked before works commence.

Information and guidance in regards to working at height on any College premise, is contained within the Estates Facilities Group Working at Height Code of Practice May 2013 v1.3:

https://workspace.imperial.ac.uk/estatesfacilities/Public/Health%20and%20Safety/Codes%20of%20Practice/Working%20at%20height.pdf

7. Environmental Policy

The College recognises the impact its activities have on the environment and is committed to environmental protection, as set out within its Environmental Policy.

(http://www3.imperial.ac.uk/estatesfacilities/services/energy/environmentalpolicy)

This commitment extends to construction and refurbishment work undertaken by the Estates Development & Projects and/or the Estates Facilities Divisions. Contractors aspiring to work with the Estates Development & Projects Division, will be expected to demonstrate a similar ethos within their own organisation and will be expected to sign up to the Environmental Policy for Construction, as agreed with the Approved Contractors Group through the Safety Health and Environmental Leadership Team (SHELT) monthly meetings. Principal and Main Contractors will be expected to provide evidence of practical and proactive management of environmental issues on College construction sites and to comply with the policy as outlined above and which may be revised from time to time.

http://www.imperial.ac.uk/estates-projects/resources/

7.1 Sustainable Construction

The concept of sustainable construction is generally in keeping with Imperial College London’s Environmental requirements, as noted above.

Imperial College London is committed to reducing the impact of its construction activities on the local and global environment and its procurement policy is directed to purchasing goods and services from recognised sustainable sources. All new-build and refurbishment projects will register with BREEAM, or other Imperial College London environmental/sustainability assessment criteria and strive to
achieve an appropriate rating, ranging from Good to Excellent, as agreed with the Client.

**Refurbishment Projects**

During discussions around the Client’s Brief, the projects team should give early consideration to the reuse of existing plant, equipment, fittings, fixtures and finishes within the spaces to be refurbished. These discussions should include the Estates Facilities Building and Maintenance Managers and the Soft Services Manager.

**New Build Projects**

On new build projects the concept of sustainable construction must be considered as part of the Client brief. This should include for example, opportunities to employ off-site manufacturing processes and “modular construction”, both known to reduce the risks to operatives during the construction period and to reduce the extent of material waste.

**All Projects**

On all projects, designers should be exploring opportunities to use materials from sustainable sources and materials that include a percentage of recycled material. Similarly, designers should give serious consideration to designing out waste by specifying appropriate materials and dimensions that ensure the elimination, or reduction of waste through on-site cutting. Where cutting materials is unavoidable, the design should specify off site cutting where possible.

Designers should discuss and agree “take-back” arrangements with suppliers, for the return of undamaged goods and/or materials.

**7.2 Waste Management**

Decisions made during the development of the Client’s Brief regarding the reuse of existing plant, equipment, fittings, fixtures and fittings, should be transmitted clearly to the design team and included in the tender documents. This information will inform the contractor’s tender returns, which must include the contractor’s Site Waste Management Plan (SWMP).

The SWMP must set targets for waste management and describe clearly how the targets are to be achieved through the design and construction period. The targets for reuse and recycling must be agreed with the Client, prior to works commencing on site.

During the construction period, the contractor must provide monthly waste management reports to the Client’s Head of Health & Safety and Construction Safety Advisor.

When the work is completed, the contractor must provide a final waste management summary report and note how and why the targets were exceeded, or alternatively, why the targets were not met. This report will be used as part of a
lessons learnt process, which hopefully will assist with achieving better performance on future projects.

8. Record Documentation

8.1 General Information

The College’s requirements for record information, is clearly outlined in the following documents:

- Production Guidelines for the Building Fabric Manual (incorporating Health & Safety File)
- Production Guidelines for the Operating & Maintenance Manuals (Mechanical & Electrical Services)
- Record Document Process Guidelines; Guidance for the Project Team.

The most current versions of the guidelines can be found at:

http://www.imperial.ac.uk/estates-projects/resources/

It is the responsibility of the contractor to ensure sufficient resources are included in the tender return for planning, managing and producing this important information in good time. The record documentation should be considered as a project “deliverable”, with the same importance as factors like programme, quality and cost.

To this end, the contractor will produce a production programme and ensure opportunities are arranged for regular reviews, comments and signing off documents in stages, during the construction period. It is expected that all of the documentation, with perhaps the exception of testing and commissioning certificates, will be signed off and ready to deliver to the Client, on the agreed project hand-over date.

The provision by contractors of accurate record information at the conclusion of construction work is paramount in allowing the Client to maintain plant and equipment crucial to the College’s core business and to manage the College’s assets efficiently.