THE UNIVERSITY OF SYDNEY

Principal's Work Requirements

University Infrastructure

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1. General

1.1 Application

1.1.1. Generally

The Contractor acknowledges and agrees that nothing contained in the Principal's Work Requirements will relieve the Contractor from any of its obligations contained elsewhere in the Contract.

1.2 Defined terms

1.2.1 Terms used in the Contract

Subject to clauses 1.2.3 and 1.2.4 and unless the context otherwise requires, terms defined in the Contract have the same meaning in the Principal's Work Requirements, despite those terms not being italicized in this Principal's Work Requirements.

1.2.2 Other terms used in the Principal's Work Requirements

In the Principal's Work Requirements, except where the context otherwise requires:

UI: means University Infrastructure.

Contractor's Licensed Surveyor: has the meaning in clause 4.2.2.

Contractor's Personnel: means the Contractor's employees, agents and subcontractors.

Dilapidation Survey: has the meaning in clause 6.3.

IRP: has the meaning in clause 2.6.

NATA: means the National Association of Testing Authorities.

ongoing operations: has the meaning in clause 2.1.

Product Data: means the current edition of brochures, manuals and similar printed documents describing the appearance and properties of a manufacturer's products, including:

Test Results;

- Guidelines and instructions for:

  (i) selection of suitable products with regard to use and conditions;
  (ii) installation of materials; and
  (iii) related adhesives, fixings and accessories for a complete installation; and

correspondence with, and minuted oral statements by, the manufacturer's employees, agents and representatives.
Registered Testing Laboratory: means a testing laboratory registered by NATA in Australia, or a testing laboratory registered by an equivalent recognised international registration authority, to carry out the relevant testing.

services: includes all plant, equipment and apparatus, including all mechanical, electrical, communications, air-conditioning, waste, access control, security, fire protection, hydraulics, CCTV, vertical transportation, heat exchange systems, integrated extra low voltage systems and building management services.

Shop Drawings: means project-specific drawings prepared by the Contractor, subcontractors or suppliers indicating construction details of fabrication, assembly and installation, with relevant notes and specification information.

Site Personnel: means people working at or visiting the site including:

- The Contractor's Personnel;
- the Principal;
- the Superintendent; and
- other people nominated by the Superintendent.

sufficient notice: means not less than 10 days.

sufficient time: means not less than 10 days.

Sustainability Framework: means the Principal's dynamic Microsoft Excel-based tool used to calculate sustainability points for a particular project.

Sustainability Standards: has the meaning in clause 2.7.

Test Results: means the written test results of tests carried out by a Registered Testing Laboratory, and may include details of procedures and observations, in English or English translation, if directed.

University's Design Risk Management Procedure: means the Principal's design risk management procedure set out in the document in Schedule B.

University's Design Standards: means the standards listed under the heading 'University of Sydney Design Standards' at:
http://sydney.edu.au/about/working-with-us/contractors.shtml,
as amended from time to time.

University's Signage Guidelines: means the signage guidelines found at: http://sydney.edu.au/about/working-with-us/contractors.shtml, as amended from time to time.

University's WH&S Requirements for Contractors: means the work health and safety requirements set out in the document in Schedule C.

utilities: includes electrical supply, telephone and communications utilities, water and gas supply, drainage and sewerage, and the like supplied to the site, and the ducts, conduits, pipes and wires that reticulate such utilities within the site including connection and access points, meters, junctions, changes in direction, fittings, cocks, sumps and pits, and includes the services.

WUC: Work under Contract.

2 WORKING ON THE PRINCIPAL'S LAND

2.1 Ongoing operations of the site

The Contractor acknowledges that activities in buildings and areas forming part of the site, adjoining the site or in the vicinity of the site will continue during the carrying out of WUC ("**ongoing operations**").

The Contractor agrees that, during the carrying out of WUC, the Contractor shall ensure that all persons (including the Principal's tenants, students, the Principal's staff and the general public) continue to have quiet enjoyment of the areas where the ongoing operations are being carried out and the Contractor shall:

(a) Not interfere with or otherwise affect the ongoing operations;
(b) Maintain continuous and safe access to the ongoing operations for all persons; and
(c) Comply with any directions of the Principal or the Superintendent in this regard.

2.2 University examination periods

The Contractor agrees that, during the carrying out of WUC, the Contractor will not interfere with or disturb the University's examinations. The Contractor shall:

(a) Check the following website monthly for planned examination periods on or near the site: **https://www.sydney.edu.au/students/exams.html**

(b) Co-ordinate and cooperate with the Principal and the Superintendent to ensure that the University's examinations are not interfered with or disturbed;

(c) Comply with any direction issued by the Principal or the Superintendent to cease any or all WUC during the examination period; and

(d) Make any necessary allowance in the program for the examination periods.

Compliance with, and anything arising from the matters referred to in, this clause 2.2 will not constitute a qualifying cause of delay under the Contract and will not entitle the Contractor to an extension of time or any other claim.

2.3 Working hours

2.3.1 Generally

Working hours shall be in accordance with legislative requirements with which the Contractor or the Works must comply, and in accordance with any direction by the Superintendent.

On some occasions, there could be events held on the University grounds, such as examination periods (as described in clause 2.2 above), open-days, Orientation Week and Post-graduate exhibitions, which may

affect the carrying out of WUC. The Contractor is deemed to have made allowance for all such events, including non-work periods arising from such events, within its program.

Events such as those described in the paragraph above may involve increased numbers of students and the public being present on University grounds and may require the Contractor to utilise additional resources to ensure it complies with its obligations under the Contract, including to a higher level of safety awareness and noise level reduction. The Contractor shall liaise closely with the Principal and Superintendent in relation to any such events and must provide reasonable advanced notice to the Superintendent of any WUC that will take place in the period affected by any such event.

2.4 Non-smoking policy

The University is a **smoke free environment**. The Contractor must ensure that:

(a) the Contractor's Personnel do not smoke whilst on University grounds, except in the Principal's designated smoking areas; and

(b) no person smokes on the site.

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2.5 Code of conduct for Contractor's Personnel

2.5.1 Generally

The Contractor shall:

- establish a code of conduct for all Contractor's Personnel working at the site for the Superintendent's approval;
- inform the Contractor's Personnel of the requirements contained in the code of conduct (in the form approved by the Superintendent) at the safety induction session;
- provide a printed copy of the approved code of conduct to all Contractor's Personnel; and
- take immediate action to remedy any non-compliance with the approved code of conduct by the Contractor's Personnel.

Where the Superintendent becomes aware of repeated non-compliance with the approved code of conduct by any of the Contractor's Personnel, the Superintendent may direct the Contractor to remove the offending Contractor's Personnel from the site and from the University grounds, and prevent that person returning to the site and to the University grounds, and the Contractor shall comply with the direction.

2.5.2 Particular requirements

At a minimum, the code of conduct shall require that the Contractor and the Contractor's Personnel shall:

- enter and leave the site through the access points directed by the Superintendent only;

- not use bad or offensive language;
- not harass any member of the public or any person on the University grounds;
- not use radios and other noise producing devices;
- not use existing toilets, other than toilets designated for 'builder's' use;
- not bring on to or consume alcohol or any prohibited drug on the site or University grounds;
- not use existing lifts, other than lifts designated for 'builder's' use;
- not bring dogs or any other animals onto the site or the University grounds;
- wear clean and tidy clothing, and wear shirts, including all safety clothing, at all times;
- not smoke anywhere on the site or on the University grounds apart from the Principal's designated smoking areas: and
- not take breaks and enter the University grounds during working hours.

2.6 Industrial relations

2.6.1 General

The Contractor shall be responsible for industrial relations on the site. The Contractor shall keep the Superintendent informed of any disputes with or demands by its workforce and any other circumstances which could result in industrial action affecting the normal working of the site. The Contractor shall ensure its employees work in accordance with the relevant awards, site agreements and the arrangements in place from time to time between the Contractor and its employees.

2.6.2 Industrial Relations Management Plan

Within 14 days of the date of the Contract, the Contractor shall submit to the Superintendent an industrial relations plan (**IRP**). The IRP shall outline the Contractor's approach to the following industrial relations issues:

- the strategic framework proposed to secure the rates of pay and conditions for the project;
- employment arrangements of any subcontractor;
- quantity and origins of labour;
- steps to prevent industrial relations problems from arising and/or escalating during the project; and
- The Contractor's union and award/agreement coverage at sites currently and over the last 3 years.

The Contractor shall adjust the IRP as necessary for it to be accepted in principle by the Superintendent and the Principal. Such acceptance shall not relieve the Contractor in any way from its obligations under this clause 2.6 or the Contract.

2.7 Sustainability framework

The Contractor shall carry out and complete WUC in accordance with the University's Design Standards which, among other things, set out the Principal's minimum requirements for sustainable design.

A key objective of the Principal is to reduce its environmental footprint and to demonstrate environmental leadership among Australian and international peer research universities. The Sustainability Framework sets the Principal's fit-for-purpose, sustainable and low lifecycle cost initiatives requirements that the Contractor must consider and incorporate into the design of the Works in order to achieve a sustainable, energy efficient and low impact building.

The Contractor shall:

(a) complete the Sustainability Framework, in a manner which the Superintendent is reasonably satisfied with, in order to determine:
(i) the minimum number of sustainability points that the Contractor must achieve in respect of the WUC; and
(ii) the fit-for-purpose, sustainable and low lifecycle cost initiatives requirements for the WUC and the Works, including mandatory measures and discretionary measures, to be satisfied by the Contractor in order to earn sustainability points ("**Sustainability Standards**");

(b) implement the Sustainability Standards; and
(c) achieve the minimum number of sustainability points determined under clause 2.7(a)(i).

2.8 Geotechnical requirements

2.8.1 Geotechnical Investigations and Sample Collections

A comprehensive geotechnical investigation of the site must be carried out by the Contractor and provided to the Principal prior to commencement of WUC, which must characterise the materials and conditions which may be encountered during the construction and operation of the Works, including their nature, variability, extent and any special requirements to be observed in respect of the materials and conditions.

The Contractor must ensure all field logging and sampling is undertaken by a suitably trained, qualified and experienced geotechnical engineer, engineering geologist or soil technician. Sampling shall be conducted or supervised by the person logging the excavations and boreholes. All geotechnical investigations and sampling are to be undertaken in accordance with AS 1726 – 1993 – Geotechnical Site Investigations as a minimum requirement.

2.8.2 Geotechnical Material Testing Requirements

Any testing required to be undertaken by the Contractor shall be carried out by an independent authority fully accredited with NATA to perform the specified testing. All soil testing shall be conducted in accordance with AS1289.0 – 2000 – Method of Testing Soils for Engineering Purposes as a minimum requirement. All in situ testing must be carried out in accordance with the relevant Australian Standard and supervised accordingly. If no Australian Standard is appropriate, other standards may be utilised with the approval of the Principal.

The Contractor shall not, without the approval of the Principal, commence or conceal work subject to tests until the tests have been satisfactorily completed and passed and the results provided to the Principal and approved by the Principal.

2.8.3 Geotechnical Information, Reporting and Documentation

All geotechnical information included in any reports, or shown on any drawings, provided by or on behalf of the Principal shall be deemed to be Information Documents. Such information is not necessarily a complete description of conditions existing at or below ground level. The Principal does not warrant the information in the supplied reports or drawings.

The following information, reporting and documentation requirements must be adhered to by the Contractor as a minimum:

- A log report shall be prepared and submitted to the Principal for each excavation or borehole. The location of all test excavations and boreholes shall be accurately defined using GPS coordinates;
- For excavation logs, the log shall include a factual record of the ease with which the various materials encountered were excavated;
- Where appropriate, the information provided must be supplemented with good quality, colour photographs of the test excavations and the excavated material;
- All works shall be based on the Australian Height Datum (AHD) unless otherwise specified.
- A layout map of all sample locations must be provided in a format specified by the Principal.
- The layout map and sample naming details must match the soil test certificates; and
- Copies of all test certificates must be signed and dated by a NATA accredited laboratory technician.

3 QUALITY

The Contractor shall refer to the UI Quality Requirements of Contractors in Schedule A.

3.1 Contractor's design compliance & responsibilities

The Contractor shall carry out and complete the WUC in compliance with:

(a) the requirements set out in Schedule A (UI Quality Requirements of Contractors);
(b) the University's Design Standards;
(c) the University's Design Risk Management Procedure; and
(d) all other requirements of the Contract.

As condition precedent to practical completion, the Contractor must duly execute and provide to the Principal a "Design Compliance Certificate", in a form required by the Principal, confirming that the Works have been verified as being in compliance with the Building Code of Australia, all applicable Australian Standards and the University's Design Standards.

4 SITE

4.1 Site

Without limiting clause 2.1, all rooms shown on the Contract Documents which are not shown as having work carried out in or to them will continue to be used by the occupants. The Contractor shall ensure that the occupants of these rooms continue to enjoy quiet enjoyment of the rooms. The Contractor will not have access to those rooms unless the Principal grants access.

4.2 Setting out

4.2.1 Generally

If the set out for the Works is to be based on existing structural and architectural building elements, the Contractor must make its own investigations as to the locations of existing elements prior to setting out the Works.

Drawings of existing utilities, building services, buildings and building elements provided by or on behalf of the Principal are for information only, and shall be deemed to be Information Documents, and must be verified by the Contractor.

As soon as practicable after the date of the Contract, the Contractor shall set out the Works and establish datums, levels, gridlines and offsets, and all services and penetrations.

Dimensions, levels, locations and set-out indicated on the Contract Documents shall not be changed without the Superintendent's approval in accordance with the Contract.

4.2.2 Licensed surveyor

The Contractor shall engage and pay for a licensed surveyor (**Contractor's Licensed Surveyor**) to establish or verify site boundaries and datum points as required.

Where the Principal has issued survey and set out drawings, such drawings are for information only and shall be deemed to be Information Documents. The Contractor must ensure that such drawings are verified by the Contractor's Licensed Surveyor.

4.2.3 Confirmation of correct set out

After setting out, the Contractor must ensure that the Contractor's Licensed Surveyor confirms that the set- out complies with the Contract, including any directions by the Superintendent, and that the whole of the Works is contained within the site boundaries and any applicable setbacks.

The Contractor shall submit to the Superintendent the Contractor's Licensed Surveyor's certification of correct set-out.

4.2.4 Progressive survey of base-structure

The Contractor must ensure the Contractor's Licensed Surveyor progressively surveys and confirms the correct as-built location of each area and level of the Works, including:

- Below-groundwork: The position of piles and perimeter walls, in relation to the site boundaries and the subsequent work above.
- Above-groundwork: The position of the internal face and the levels of all columns; and
- The position and profile of the slab edges and the external faces of columns, with regard to the site boundary.

The Contractor shall ensure the Contractor's Licensed Surveyor surveys all above-ground work immediately after fresh concrete has hardened sufficiently for access.

The Contractor shall submit to the Superintendent the Contractor's Licensed Surveyor's certification of correct as-built locations.

4.2.5 Survey of falls and gradients

For all in-situ concrete slabs laid to fall to drainage outlets, the Contractor must cause the Contractor's Licensed Surveyor to:

- carry out a detailed as-built survey of concrete slab levels and falls as soon as the concrete has hardened sufficiently to enable access and before final finishing. The survey must be carried out to an accuracy of 1 mm; and
- check that all falls and gradients are correct and that there are no ponding points or incorrect falls. Where any incorrect falls or gradients are discovered, the Contractor must immediately rectify and refinish the incorrect concrete surfaces.

Concrete slabs laid to fall to drainage outlets may include, without limitation:

- Forecourts and terraces;
- Balconies; and
- Trafficable roof slabs and plant areas.

The Contractor must submit certified as-built drawings to the Principal within two days of survey indicating the finished levels and falls including the finished levels and falls of any rectified work.

4.3 Existing utilities and easements

4.3.1 Generally

Before commencing any work, the Contractor shall locate and identify all existing utilities on or adjacent to the site that might be affected by the WUC and assess whether the utilities are active or inactive.

The Contractor shall record the location of all utilities on as-built documentation, including inactive utilities, and progressively record any other utilities discovered during the WUC.

Locations of utilities indicated in the Contract Documents, and other documents, made available to the Contractor by or on behalf of the Principal are approximate only and shall be deemed to be Information Documents. The Principal is not responsible for the accuracy or completeness of such information.

The Contractor shall coordinate with and notify the relevant Authorities before commencing any work that affects the utilities provided by such relevant Authorities.

The Contractor shall obtain written confirmation from the relevant Authorities verifying that work has been carried out correctly.

The Contractor shall promptly submit to the Superintendent such written confirmation from the relevant Authorities progressively upon receipt.

4.3.2 Work on utilities

The Contractor shall:

- carry out all work on utilities, including inactive utilities, in accordance with the requirements of the relevant Authorities;
- protect and maintain all existing active utilities on or adjacent to the site at all times;
- relocate utilities if required, and shall (at the Contractor's cost) provide and maintain temporary utilities during relocation; and
- except as expressly provided in the Contract, not disrupt or prevent the continuous and proper supply of utilities during the performance of WUC.

4.3.3 Damage to utilities

The Contractor is responsible for all damage and disruption to utilities resulting from the performance of WUC, including as determined by the relevant Authorities, and the cost of rectification.

In the event of any damage or disruption to any utilities on or adjacent to the site, the Contractor shall immediately notify the Superintendent and the relevant Authorities.

4.3.4 Temporary interruption of utilities

The Contractor shall not interrupt utilities to Adjacent Sites without written approval by the Superintendent and the relevant Authorities.

The Contractor shall:

notify the Superintendent, and submit a risk assessment of all proposed utility disruptions for review and approval by the Superintendent, not less than 14 days before any anticipated temporary interruption of utilities;

- carry out approved temporary interruption of utilities, if any, in a manner that causes the minimum practicable inconvenience to the owners and occupiers of Adjacent Sites;
- coordinate and cooperate with the owners and occupiers of Adjacent Sites; and
- notify all owners and occupiers of Adjacent Sites of all anticipated temporary interruption of utilities not less than 7 days before the anticipated temporary interruption, and subsequently again not less than 4 days before the interruption.

4.4 Site protection

4.4.1 Generally

The Contractor shall be responsible for the protection of the site and other areas under the control of the Contractor.

The Contractor shall:

take all proper and adequate precautions to prevent:

(i) unauthorised access to the site; and
(ii) vandalism and theft; and,

before commencing work and at all times; and

- except as otherwise required by the Principal, barricade and lock-up the site during all non-working hours and when the Contractor is not in attendance.

4.4.2 The Principal's keys and access cards

Where the Contractor requires access to locking gates, doors and other areas for the purposes of WUC, the Contractor shall arrange with the Principal to obtain keys or access cards or otherwise arrange with the Principal to open and close such areas when required.

If the Principal provides keys or access cards to the Contractor, then the Contractor shall:

- sign for and be responsible for all keys and access cards obtained from the Principal, and shall return all keys and access cards when directed;
- not make or enable others to make unauthorised copies of the Principal's keys or access cards; and
- pay the Principal the costs and expenses incurred by the Principal in respect of all keys and access cards lost by the Contractor, including replacement costs and all other costs and expenses incurred by the Principal as a result of such loss.

4.4.3 The Principal's existing security

Where the Principal has existing security procedures, security personnel or security equipment, the Contractor shall coordinate with, and comply with the requirements of, the Principal regarding such security procedures, security personnel or security equipment and shall not compromise the Principal's existing security procedures, security personnel or security equipment in any way.

Security cameras:

Where the Principal has existing security cameras and surveillance equipment, the Contractor shall not damage or obstruct such cameras and surveillance equipment.

Identification cards:

Where the Principal has an existing security identification card system and requires the Contractor and the Contractor's Personnel to use the existing system, the Contractor shall ensure that it and the Contractor's Personnel implement and use the system as required by the Principal.

Existing security patrols:

Where the Principal has existing security patrols, the Contractor shall coordinate and cooperate with the Principal's existing security patrols.

Fences and gates:

Where the Principal has existing fences or gates that are normally kept closed or locked, the Contractor shall not leave such fences and gates in an unsecured condition, other than with the full knowledge and express approval of the Principal, on each occasion.

4.4.4 Record of personal attending site

The Contractor shall maintain a record of all Personnel attending site. A copy of the attendance book shall be provided to the Principal, if directed.

If the Principal (including any of its University faculties, schools or departments) requires, or has in place, additional after-hours sign-in and out procedures, the Contractor shall implement and comply with the procedures.

4.5 Hoardings and signs

4.5.1 Temporary hoardings

The Contractor must:

ensure that dust, noise and other nuisance are not transmitted to areas outside the site;
erect sufficient temporary hoardings and barriers to prevent the escape of dust, noise and other nuisance from the site. The Contractor acknowledges that in many instances, the works will be undertaken adjacent to occupied areas or areas that contain specialist equipment that are sensitive to dust, noise and other nuisance;

- provide all required temporary hoardings and the like during the performance of WUC, including gantries, screens and fences, in accordance with legislative requirements; and
- ensure the outside surfaces of temporary hoardings are free of sharp edges and protruding nails, wire and the like which may cause injury.

4.5.2 Project sign board / banner

The Contractor shall not be permitted to erect individual sign boards within the site, the University grounds or their surrounds except as provided by these Principal's Work Requirements.

At the Principal's discretion:

- project sign boards may be provided by the Superintendent; or
- the Contractor may be required to provide project sign boards,

for placement at the main entrance to the site and any other locations directed by the Principal or the Superintendent.
The project sign boards must be in accordance with the Principal's branding and graphics as advised from time to time and the Principal or the Superintendent may direct which of the following information is to be presented on the project sign boards:

- the name of the project;
- the names of the parties to the Contract;
- the name of the Superintendent;
- a general description of the Works;
- a contact name and phone number (including after-hours number) for the Principal Contractor;
- the date for practical completion;
- the location of the site office (if any); and
- any other information as notified by the Principal or the Superintendent.

If the Contractor is required to provide project sign boards pursuant to this clause, the Contractor must, within 14 days of the commencement of the WUC on site, submit the proposed layout of the project sign boards to the Superintendent for approval.

The Contractor must:

- fix the project sign boards at the main entrance to the site and in any other locations directed by the Principal or the Superintendent;
- maintain the project sign boards until the date of practical completion; and
- dismantle and remove the project sign boards within 7 days of the date of practical completion.

The Contractor shall provide "Construction Site" signs to the Superintendent for approval. Once approved, the Contractor must fix the "Construction Site" signs at the entrance of each site work area.

4.5.3 Signage to hoardings and site fences

The Contractor shall allow for the provision of visual graphics on all of its hoardings and site fences. The Superintendent will provide the visual graphics in electronic form to the Contractor, and the Contractor will be responsible for producing and erecting the visual graphics on to the hoarding. The Contractor shall provide an indicative visual graphic layout for the Superintendent's approval prior to erecting the visual graphics on the hoarding.

The Contractor shall not install or display, and shall ensure that subcontractors do not install or display, any other signs or advertisements on the hoardings, fixed cranes or within the University grounds or its surrounds unless approved by the Principal. The Contractor shall immediately remove any such other signs or advertisements not approved by the Principal.

All signage must comply with the University's Signage Guidelines.

4.6 Site control plan

4.6.1 Generally

The Contractor shall prepare and submit a detailed draft site control plan prior to site mobilization for the Superintendent's review and approval.

The site control plan shall, as a minimum requirement, include details and locations of:
Site perimeter:

- Temporary fences and hoardings;
- Gates, security points and controls;
- Temporary walls, site retention and supports; and
- Temporary crossings and access.

Loading areas and cranes:

- Parking for Site Personnel;

- Locations of cranes and hoists, including mobile cranes; and
- Loading and unloading areas;

Temporary sheds:

- Site accommodation and amenities buildings; and
- Storage areas.

Pedestrian traffic:

- Public footpaths and pedestrian traffic adjacent to the site and Adjacent Sites; and
- Temporary obstructions, barriers, signs and lighting to such public footpaths.

Nuisance, water, dust and noise:

- Location of noisy equipment; and
- Temporary drains, pumps, erosion and dust control.

Trees and vegetation:

- Trees and vegetation to be retained; and
- Trees and vegetation to be removed.

Vehicular traffic:

- Public roads and vehicular traffic adjacent to the site and Adjacent Sites;
- Temporary obstructions, barriers, signs and lighting to such roads; and
- Temporary traffic controls, lights and personnel to operate such equipment if required.

Emergency vehicles:

- Evacuation areas; and
- Access for fire and ambulance vehicles.

Changes over the duration of the project:

- Changed conditions over the course of the project.

The Contractor is to revise the site control plan to incorporate the requirements of the Superintendent and reissue the site control plan incorporating those requirements prior to commencement of the WUC.

Where the location of any items referred to in the site control plan changes from time to time during the performance of WUC, the Contractor must revise and resubmit the site control plan for the Superintendent's approval.

The Contractor shall carry out WUC in accordance with the site control plan approved by the Superintendent.

4.6.2 Relevant Authorities

Where any Authority requires a copy of the site control plan, the Contractor shall prepare and submit the required site control plan in accordance with the particular requirements of the Authority.

Where any Authority requires any changes to the site control plan, the Contractor shall make all such changes and carry out WUC in accordance with the amended plan.

4.6.3 Other signs

The Contractor shall provide a suitable area or zone (if fencing), approved by the Superintendent, for the installation of the University's advertising signage.

This space is to be provided in line with the University's Signage Guidelines.

4.7 Access and loading

4.7.1 Access to the site by the Contractor

The Contractor shall provide temporary crossovers, ramps and the like for vehicle access to and from the site as required.

4.7.2 Loading and unloading areas

The Contractor shall provide suitable loading and unloading areas within the site where practicable.

There shall be no loading and unloading outside the site boundaries unless approved by the Superintendent and relevant Authorities.

4.7.3 Pedestrian and vehicular traffic

The Contractor shall provide safe passage for pedestrians and vehicles on all lands adjacent to the site at all times.

The Contractor shall provide and operate:

- traffic safety and control equipment (including barricades, signs and lights) required by the Principal; and
- additional traffic safety and control equipment required by any Authority, and personnel to operate such equipment if required.

4.7.4 Traffic management plan

The Contractor shall prepare a traffic management plan.

The traffic management plan shall indicate all pedestrian and vehicular traffic movements around the site, and shall indicate all procedures, equipment and personnel required to ensure the continuous safe passage of pedestrians and vehicles.

The Contractor shall submit the traffic management plan in draft to the Superintendent for approval and shall make any changes required by the Superintendent. Once the Superintendent has approved the traffic management plan, the Contractor must submit the traffic management plan to all relevant Authorities, if required, and include any additional requirements or directions of the relevant Authorities.

The Contractor shall implement the traffic management plan approved by the Superintendent, and which incorporates the requirements of all relevant Authorities, prior to commencing WUC on site.

4.8 Services

The Principal may, at the Contractor's cost make available to the Contractor electrical power and water sufficient for the execution of the WUC, the extent and location of the supply of which is to be discussed and agreed between the Contractor and the Superintendent. The provision of connection points to the existing services will be arranged by the Contractor with the agreement of the Superintendent and installed and maintained at the Contractor's expense.

4.9 Delivery, handling and storage

4.9.1 Delivery Inspections

The Contractor shall inspect all deliveries to site to verify the quality of materials arriving to site.

The Contractor shall give reasonable notice to the Principal of the proposed delivery of all major items and shall ensure that the Superintendent and the Principal have the opportunity to inspect such items upon delivery.

4.9.2 Advance / early ordering

The Contractor shall:

- order sufficient quantities of materials and products ahead of installation to avoid shortages and delays;
- order sufficient additional quantities of materials and products to include provision for spares, wastage, breakages and damage, and to prevent shortages;
- submit details of alternative sources of supply where there is any risk of shortage or delay in the supply of a material or product.

- submit to the Superintendent copies of all advance / early orders and acknowledgements by the relevant suppliers; and
- for items with long lead-times and imported items, indicate ordering and manufacturing lead-times on the program, including critical dates for shipping and customs clearance, if applicable.

4.9.3 Stock-piling

The Contractor shall:

- ensure that its suppliers set aside and stock-pile all advance / early ordered items;
- ensure that all stock-piled items are labeled and stored in a suitable, secure location to prevent loss and damage;
- ensure that stock-piled items are not used for purposes other than the Works; and
- submit to the Superintendent an inventory of all items stock-piled, and revise the inventory progressively to reflect changes.

The Superintendent may inspect stock-piled items and the Contractor must arrange for inspection by the Superintendent at the storage locations.

4.9.4 Sequence of delivery

The Contractor shall give reasonable notice to the Superintendent of proposed deliveries of bulky materials or products and shall so far as practicable ensure such delivery does not impact other users of the site and surrounds.

The Contractor shall deliver materials and products to the site in accordance with the program, in the correct installation sequence and to the correct installation areas to minimise onsite storage and handling.

The Contractor shall not deliver materials or products to the site until ready for immediate installation, where practicable.

The Contractor shall stabilise the moisture content of absorptive materials before installation where practicable or where directed.

The Contractor shall itself, and shall ensure that all Contractor's Personnel and all staff and delivery and associated persons, at all times:

- observe the safety and traffic control requirements of the Principal (including the University's Security and Traffic Management Service); and
- obey all reasonable instructions given by the Superintendent in respect of the safety and traffic control requirements of the Principal.

4.9.5 Protection

The Contractor shall:

- protect materials and products from the weather, and from damage or staining;
- not store materials and products in contact with ground or concrete surfaces, or in damp conditions;
- handle and store proprietary products in accordance with the Product Data and by methods that will keep products dry and prevent damage or deterioration;
- provide suitable packing and wrapping, covers or other protection materials and procedures as required; and
- store materials and products clear of the ground, concrete or damp surfaces on suitable packers spaced to prevent distortion.

4.9.6 Identification

The Contractor shall ensure that proprietary products delivered to the site and stored on-site are delivered and stored in the manufacturer's original, unopened and properly identified packages, containers or bundles.

The Contractor must ensure that identification includes product brand name and reference number, batch number and, if appropriate, colour, date of manufacture and shelf life (use-by date).

Products that have exceeded the stated shelf-life (use-by date) shall not be used or installed and shall be immediately removed from the site by the Contractor.

4.9.7 Materials Safety Data Sheets

The Contractor shall:

- provide suitable accepted industry-standard Materials Safety Data Sheets for all materials and products delivered to the site;
- provide copies of, and ensure relevant Site Personnel are familiar with, relevant Materials Safety Data Sheets and handling instructions; and
- ensure Materials Safety Data Sheets shall be available on-site for inspection by the Superintendent at any time without notice.

4.10 Interruptions to services / essential services shut-down

The Contractor must refer to the Contractor Handbook for the Principal's requirements and the Contractor's obligations in relation to interruptions to services and essential services shut-downs and comply with all such requirements and obligations.

4.11 Fire precautions / fire isolations

The use of equipment or methods which may create a fire hazard is prohibited except with the express written approval of the Superintendent. The Contractor must refer to the Contractor Handbook for the Principal's fire isolation and services isolation requirements and comply with all such requirements.

4.12 Protection of building operations

The Contractor must liaise with the Superintendent to ensure it has a full understanding of the operations (including the operations of the Principal) taking place at or near the site and all other areas affected by the WUC.

Operations includes all aspects of user needs, safety access and the like necessary for the maintenance of function and safety.

The Contractor shall take all reasonable precautions to prevent disruptions to the operations and shall establish procedures to expeditiously remedy disruptions.

The Contractor acknowledges that it understands the nature of functions of the buildings, and their locations, within the University grounds.

Prior to commencing work on site, the Contractor must ensure that the Superintendent is satisfied that the Contractor understands its obligations under this clause 4.12.

All costs associated with the protection of operations are to be borne by the Contractor.

4.13 Security

4.13.1 Site Security

The Contractor shall be solely responsible for the proper and adequate security and safeguarding of:

the WUC and the Works (including completed separable portions).

- areas of the site under the Contractor's control; and
- all fixed and unfixed materials and equipment on the site,

at all times until practical completion (which, if there are separable portions, shall be taken to be practical completion of the last separable portion to achieve practical completion).

The Contractor shall erect signage stating that unauthorised entry to the site is prohibited.

The Contractor must ensure the site is number-locked if no overnight works are carried out and must promptly submit the number code (and any changes to the number code) to the UI Project Manager for submission to Campus Security.

If there are access problems encountered, please call Campus Security at (02) 9351-3333 or other notified to the Contractor by the Superintendent.

4.13.2 Parking

The Contractor shall be responsible for and bear the cost of all parking fees incurred by the Contractor and the Contractor's Personnel associated with the performance of WUC.

4.13.3 Parking Fines

The Contractor shall be responsible for parking by the Contractor and the Contractor's Personnel in the University and must ensure a ticket is paid for any such parking for the duration of stay.

University parking fines are managed by Revenue NSW. Any disputes in relation to parking fines are referred to the respective organisations listed on the back of the parking fines.

Refer to the website: **https://www.revenue.nsw.gov.au/fines-and-fees**

or call 1300 138 118.

4.14 Site records

4.14.1 Daily diary

The Contractor shall keep a daily site diary, including to record general progress and any significant events, the number of Site Personnel and list of subcontractors on-site, temperature and weather conditions, meetings, visits and inspections, delays, unusual events and accidents.

The Contractor must ensure the original copy of the daily site diary is available for inspection by the Superintendent at any time without notice. The Contractor shall submit to the Superintendent copies of the daily site diary in part or in full, if directed. As a minimum, the daily site diary shall record the following:

- List of subcontractors at the site;
- List of Separate Contractors at the site;
- Approximate count of Contractor's Personnel and subcontractor's personnel at the site;
- High / low temperatures and general weather conditions;
- Meter readings and similar recordings;
- Instructions, orders and / or requests by any Authority;
- Meetings and significant decisions.
- Union requirements and industrial action;
- Variation orders, variation instructions or directions and variation price requests received and / or implemented;
- Utilities or services connected and / or disconnected;
- Equipment or system tests and start-ups;
- Partial completions and / or occupancies;

- Accidents/incidents;
- Unusual events (including theft);
- Stoppages, delays, shortages, losses;
- Significant events;
- Progress of the WUC;
- Details of any meetings or inspections; and
- Emergency procedures and orders.

4.14.2 WHS Performance Monitoring

Contractor WHS performance is monitored throughout the progress of the contracted work, and should a Contractor not be performing their WHS duties as per the contract, the responsible UI Project/Contract Manager will take steps to remedy the situation. For Contractor Requirements please click **here** for further information.

4.14.3 Compliance and Non-Conformances

Non-compliance with the requirements of the UI/COS Contractor Handbook, University WHS Policy and Procedure the Contractor's Safe Work Method Statement, or other known conditions and requirements may be recorded on the Corrective Action Request Form. Corrective actions will be determined and documented on this report. Contractors will be issued with a copy of the Contractor Corrective Action Request Form and will be required to respond to the University (or as required to the Principal Contractor) regarding their progress in addressing corrective actions.

5 ADMINISTRATION

5.1 Key personnel

The Contractor shall prepare and submit a project organization chart setting out the Contractor's key personnel, their roles and status (which shall include at least the Contractor's Project Manager, Construction Manager, Foreman and Supervisor) (**Key People**).

5.1.1 Communications

The Contractor must ensure that all Key People are able to speak, write and understand the English language.

The Contractor shall provide the Superintendent with the mobile telephone numbers of all Key People for communication at all reasonable times.

The Contractor shall provide on-site Internet and email equipment and shall notify the Superintendent of the email address for communications.

5.1.2 Compulsory site induction session

The Contractor shall provide and ensure that all Site Personnel have attended and received the appropriate COMPULSORY health and safety induction in accordance with the WH&S Law before entering the site.

The Contractor shall ensure that no person shall enter the site before attending and receiving the health and safety induction.

5.1.3 Principal's particular requirements

The Contractor must ensure the health and safety induction session advises Site Personnel of the Principal's particular requirements and conditions with regard to conduct in or adjacent to the site and the University grounds and the high level of student flow around these areas.

The Contractor must comply with, and must ensure that all Site Personnel comply with, the University's WH&S Requirements for Contractors.

5.1.4 Emergency Contact Person

The Contractor shall appoint a responsible person who may be contacted out of hours in the event of an emergency and who has the full authority of the Contractor to act immediately on its behalf in such an emergency.

The Contractor shall notify the Superintendent of the name and contact telephone number of the responsible person and shall display the full name and contact details, including a mobile telephone number, of the person at each gate to the site. All signage text is to be not less than 50mm in height.

5.2 University induction

In collaboration with COS, UI has prepared the Contractor Handbook to inform all contractors about the requirements when working for or on behalf of the Principal. The Contractor must ensure that all persons undertaking WUC complete a contractor induction with, and receive a personalised contractor ID card from, UI prior to the commencement of the WUC on site.

The **Contractor Handbook** is available through the University Website:
https://www.sydney.edu.au/about-us/working-with-the-university/contractors.html

The Contractor must at all times comply with the **Contractor Handbook** and must incorporate it as part of its own site inductions. The Contractor must maintain a site induction register and daily sign in sheets and ensure that each have a section to identify the University Induction Number for all persons on site.

The Contractor must provide a list of full names and vehicle registration numbers of all Key People to the Superintendent prior to commencement of the WUC on site.

The Contractor shall confirm the person(s) requiring swipe card access.

The swipe card access for each person takes approximately 2-3 working days to be fully processed and ready for encoding into the swipe cards. The Contractor must arrange for processed swipe access cards to be picked up in person from UI. The Contractor shall allow this processing period, and additional time for collection of swipe access cards by the Contractor, in its mobilisation period, prior to the commencement of the WUC on site. The Contractor shall ensure that no personnel enter the site without first completing contractor induction with, and obtaining a personalised contractor ID card from, UI.

5.2.1 Communication & Chain of Command

Other than as expressly provided in the Contract or as directed by the Superintendent, the Contractor shall:

- only deal with the Superintendent as the point of contact with the Principal and all persons present on the University grounds (including consultants and end-users and staff of any of the University faculties, schools or departments). All email queries to the Superintendent must be addressed only to the Superintendent unless the Contractor is otherwise instructed by the Superintendent to also include other persons; and
- at no time communicate directly with any person other than the Superintendent in relation to scope queries or discrepancies relating to the Contract Documents.

If WebFM has been nominated by the Principal as the managing tool for operation and maintenance manuals, the Contractor shall answer requests for information/queries issued by the Superintendent in the WebFM, with a response time of 2 business days or such longer response time agreed by the Superintendent.

5.3 Photographs

5.3.1 Generally

The Contractor shall ensure that a photographic record of construction progress is prepared by a competent photographer with suitable equipment and kept by the Contractor. The Contractor shall submit all such photographs to the Superintendent regularly at intervals and in a manner required by the Superintendent.

5.3.2 Medium

The Contractor must ensure that the photographs are taken using a digital camera of not less than 10 mega-pixels resolution with output in JPG format.

The Contractor shall submit an electronic copy to the Superintendent by email or on CD-ROM as directed by the Superintendent and shall ensure that all photographs are automatically date stamped.

5.3.3 Required views

The Contractor shall ensure that:

- at least 30 significantly different views are taken in the photographs each week and that at least 15 of the views are maintained in the same locations throughout the duration of the performance of WUC;
- the views in the photographs include:

(i) general views of the Works, taken from constant positions;
(ii) work to be demolished, before and after demolition;
(iii) work to be concealed, including utilities and concrete reinforcement; and
(iv) storage of salvaged items for reuse in the Works; and

- not less than four views of covering all parts of the Works are maintained and photographed throughout the duration of the performance of WUC.

The Superintendent may nominate the required date, time, location and direction of each view and may direct additional views.

Photographs must be clear and sharp, showing work without obstruction (including by equipment, vehicles and the like), except where such equipment is part of the Works.

5.3.4 Work of particular trades

Where required by the Superintendent, the Contractor shall ensure that photographs of particular stages of the Works and construction details are taken, recorded and provided to the Superintendent in accordance with this clause 5.3.

5.3.5 Sending by email

Electronic files submitted by the Contractor must be named to identify the project, location, level and date.

Electronic files submitted by email must also be submitted by the Contractor to the Superintendent by CD-ROM, hand delivered to the Superintendent.

5.4 Documents

The Contractor must keep on site in good, legible condition at all times one full current set of:

(a) the Contract Documents;
(b) approved shop drawings;
(c) approved samples;
(d) all Product Data relevant to all work carried out or in progress on site;
(e) Australian Standards and international standards relevant to WUC;
(f) Safe Work Method Statements;
(g) site-specific Safety Management Plan;
(h) induction records;
(i) IRP and industrial relations policy;
(j) inspection and test plans; and
(k) work method statements.

The Contractor shall maintain on site at all times a full sized set of Contract Documents and approved shop drawings.

6 SAFETY & PROTECTION

6.1 Nuisance, water, dust and noise

6.1.1 Generally

The Contractor shall not disrupt or cause nuisance to the owners and occupiers of Adjacent Sites or the public generally, including nuisance from noise, dust, water, debris and obstructions resulting from the WUC.

The Contractor shall comply with all legislative requirements and the requirements of all relevant Authorities, including those governing noise, soil conservation and environmental matters.

If directed by the Superintendent, the Contractor shall submit to the Superintendent details of procedures to minimise and control nuisance. The Contractor shall promptly submit to the Superintendent details of any proposed changes to previously submitted procedures.

The Contractor must give the Superintendent sufficient notice of all activities that may generate excessive noise, dust or vibrations.

The Contractor must minimise disruption to all Adjacent Sites, including the owners and occupiers of the Adjacent Sites as well as the public generally, and occupants within the site.

The Contractor must give to the Superintendent a minimum of 72 hours prior notice before commencing any disruptive works. The Contractor must schedule all disruptive works at a time that causes minimal disruption to the owners and occupants of Adjacent Sites and to all persons present on the University grounds. Any out of hours or out of sequence works required to minimise disruption are deemed to be included in the contract sum and will not be grounds for an extension of time, variation or any other claim.

The Contractor shall comply with all directions of the Superintendent associated with minimisation of disruption and no such direction, or compliance with any such direction, shall give rise to a variation, extension of time or any other claim.

6.1.2 Noise

The Contractor must ensure that all noise producing equipment is fitted with suitable noise suppression devices that are in proper working order. The Contractor shall:

- comply with all directions of the Superintendent requiring the Contractor to ensure that no noise is produced in relation to WUC;
- clearly identify in the program all periods the subject of any such direction by the Superintendent; and
- plan construction activities requiring high levels of noise around these periods.

Without limiting the previous paragraph, the Contractor must give the Superintendent sufficient notice of all activities that may generate excessive noise, so that the Principal can inform the occupants that may be affected.

6.1.3 Cleanliness of adjacent public areas

The Contractor shall keep all public roads, footpaths and other areas adjacent to the site clean and free of dust, mud and debris, including by washing and sweeping and comply with any other requirements of any Authorities.

The Contractor shall provide the Contractor's Personnel and equipment as required to comply with the previous paragraph.

6.1.4 Water

The Contractor shall prevent water run-off, including water-borne silt or debris, from the site (including to Adjacent Sites and public land).

The Contractor shall not discharge water from the site containing silt, debris or other contaminants into stormwater drains.

6.1.5 Dust and mud

The Contractor shall fit trucks carrying loose or dusty loads with suitable covers properly tied down to prevent spillage or air-borne spreading of dust and debris.

The Contractor shall dampen loose or dusty loads and dusty site conditions by water spraying. The Contractor shall clean the wheels and underside of trucks before the trucks leave the site.

The Contractor shall implement all necessary dust suppression measures required by the prevailing conditions to prevent the spread of dust from the site or to occupied areas and areas that contain equipment that are sensitive to dust, noise, and other nuisances.

6.1.6 Fire safety

The Contractor shall comply with all legislative requirements, and implement all accepted industry practices, relating to fire safety.

The Contractor shall provide all required temporary fire protection equipment and shall arrange required inspections of equipment by the relevant Authorities.

The Contractor must not, and shall ensure the Contractor's Personnel do not, light fires on or adjacent to the site.

6.2 Protection of Adjacent Sites

6.2.1 Generally

The Contractor shall protect Adjacent Sites from damage.

The Contractor shall give notice in writing to the owners and occupiers of Adjacent Sites at least 7 days before the commencement of any work that may cause nuisance or disruption to the owners or occupiers. The notice shall include a general description of the work, times and anticipated nuisance or disruption.

6.2.2 Requests and complaints by others

If the Contractor receives a request or complaint in respect of WUC from an owner or occupier of an Adjacent Site, the public or any other source, the Contractor shall:

- respond courteously, and with regard to any previous directions by the Superintendent.
- record all such requests and complaints received; and
- notify the Principal immediately.

6.3 Damage to Adjacent Sites and Dilapidation Surveys

6.3.1 Generally

Where any Adjacent Site is damaged by or as a result of the WUC, the Contractor must rectify all such damage and restore the damaged parts at least to an equivalent condition existing at the date of the Contract.

The Contractor shall comply with all legislative requirements in relation to Adjacent Sites.

All such rectification shall be carried out and completed prior to, and as a condition precedent to, practical completion.

The Contractor shall engage suitably qualified project personnel (e.g. Engineer/Construction Manager) to carry out the Dilapidation Surveys and other reporting required by this clause 6.3 and each Dilapidation Survey must:

- be in a form required by the Superintendent; and
- record and describe the physical condition, at the time the report is prepared, of the areas, buildings and improvements to be surveyed.

The Contractor is deemed to be responsible for verifying the extent of the required Dilapidation Surveys. Any claims of damage to adjacent properties that are not the subject of a Dilapidation Survey shall be the Contractor's responsibility.

6.3.2 The Contractor's Dilapidation Survey

In the event of any damage (or unusual movements) in adjacent properties/rooms in or adjacent to the site, the Contractor shall immediately:

- stop all work;
- notify the occupants affected or likely to be affected and notify the Superintendent and the relevant Authorities;
- determine the cause of such damage or movements; and
- take preventative and remedial action.

6.3.3 Buildings and other improvements on the Principal's land

Before the commencement of WUC, the Contractor shall cause a dilapidation survey of all areas, buildings and other improvements (including Adjacent Sites and roads and infrastructure on the Principal's land and any adjacent public land) which may be affected or damaged by the conduct of the WUC to be prepared and provided to the Superintendent (**Dilapidation Survey**).

The Contractor shall give the Principal not less than 7 days' notice in advance of when the Dilapidation Survey shall be carried out.

The Contractor shall take such steps as are considered necessary to record the prevailing condition of the building fabric and utilities.

Formal documentary, photographic and video records deemed necessary by the Superintendent must be prepared and maintained by the Contractor at its own cost and a full copy of such provided to the Superintendent.

6.3.4 Trees

The Dilapidation Survey must record the condition of all trees to be retained. The Superintendent or the Principal may attend during the preparation of any Dilapidation Survey.

Any Authorities may nominate representatives to be in attendance during the preparation of any Dilapidation Survey. The Contractor shall:

- submit copies of the Dilapidation Survey to the Superintendent not less than 7 days prior to the commencement of any demolition work; and

- provide copies of the Dilapidation Survey to Adjacent Site owners and occupants in accordance with the legislative requirements.

6.3.5 Final dilapidation survey

The Contractor must no earlier than 14 days before practical completion but prior to practical completion, cause a further Dilapidation Survey of all areas, buildings and other improvements the subject of the Dilapidation Survey provided under clause 6.3.3 to be carried out and provided to the Superintendent and all other relevant parties.

The Contractor is responsible for and must rectify any discrepancy between the conditions described in the Dilapidation Survey provided under clause 6.3.3 and the Dilapidation Survey provided under this clause 6.3.5.

6.3.6 Adjacent Site owners

The Contractor shall indemnify the Principal against all claims from owners and occupiers of Adjacent Sites arising out of or in connection with the performance of WUC.

6.4 Protection of trees

6.4.1 Generally

The Contractor must not damage trees to be retained, including those on or near the site or on Adjacent Sites. The Contractor shall protect all trees to be retained, which may be affected by WUC, with suitable temporary guards or enclosures during the performance of the WUC. As a condition precedent to practical completion or whenever directed by the Superintendent, the Contractor shall remove such temporary guards or enclosures.

The Contractor shall (at its cost) provide to the Superintendent a report prepared by a qualified arborist detailing recommendations that can be implemented by the Contractor to ensure that trees to be retained are not damaged by WUC performed in or around the trees. The Contractor shall comply with all such recommendations at its cost and no such compliance shall give rise to a variation, extension of time or any other claim.

6.4.2 Trees to be retained

The Contractor shall clearly identify all trees to be retained that may be affected by WUC, with identification labels that are non-damaging to the trees. As a condition precedent to practical completion, the Contractor must remove such labels. The Contractor shall not carry out any work on or adjacent to trees to be retained without the prior written approval of the Superintendent.

6.4.3 Particular requirements

Cement dust:

The Contractor shall prevent damage to trees from wind-blown materials such as cement dust.

Back-filling:

The Contractor shall only use a suitable top-soil mixture approved by the Superintendent to back-fill excavations around tree roots.

The Contractor shall:

- place the back-fill in layers of 300 mm maximum depth, compacted to a dry density similar to that of the adjacent ground;
- not back-fill above the original ground surface; and
- immediately after back-filling, thoroughly water the root zone of the affected trees.

Fungicide sealant:

Immediately after cutting of tree roots or branches, the Contractor shall apply a suitable, approved fungicide sealant to prevent rot or disease.

6.4.4 Particular prohibitions

The Contractor shall not:

- store bulk or harmful materials under or near trees.
- place any bulk materials, such as imported or excavated soil from excavations against tree trunks or within the drip zone;
- attach stays, guys and the like to trees;
- add or remove top-soil under tree canopies;
- leave excavations under tree canopies open any longer than necessary;
- cut tree roots unless approved by the Superintendent after the Contractor has provided an arborist report in support of the activity; or
- compact ground under trees. If compaction occurs due to heavy construction plant or other reasons, the Contractor must notify the Superintendent and obtain instructions.

The Contractor shall:

- if excavation is required under tree canopies, use hand methods to avoid damage to root systems; and
- if it is necessary to cut tree roots, use methods to prevent disturbance to remaining root systems.

6.4.5 Damage to trees

If trees are damaged, the Contractor shall immediately:

- cease work adjacent to the damaged trees;
- take action to prevent any further damage; and
- notify the Superintendent of the damage and the action taken by the Contractor to prevent further damage.

The Contractor must await the Superintendent's direction before recommencing any such work ceased.

6.4.6 Rectification by the Principal

The Contractor shall not carry out any rectification or replacement of damaged trees. Rectification or replacement of trees damaged during the performance of WUC will be carried out by the Principal and the costs of rectification or replacement may be recovered by the Principal from the Contractor as a debt or deducted from the contract sum. Such costs will be determined by the Superintendent and will include the cost of services provided by arborists selected and appointed by the Principal and the cost of replacement with trees of similar species, size and condition to the trees being replaced. Where similar trees are not available, such costs will include the cost of trees used.

6.4.7 Maintenance of Plants/Trees (12 months maintenance period)

Where there are existing or new trees on-site, the Contractor must (at its cost) maintain all such trees up to practical completion and for a period of 12 months from the date of practical completion.

7 PLANT, AMENITIES & ACCOMMODATION

7.1 Construction plant

The Contractor shall:

(a) provide all construction plant required for the performance of WUC;
(b) ensure that all construction plant complies with the requirements of all relevant Authorities, industrial agreements and accepted industry practices;
(c) obtain all required permits and arrange all required inspections in respect of the construction plant; and
(d) including in accordance with all legislative requirements and all requirements of relevant Authorities, industrial agreements and accepted industry practices:

(i) provide, operate, maintain and remove prior to practical completion all plant and fixed hoisting used as part of the WUC;
(ii) provide and maintain all small tools and temporary materials required for use during the WUC;
(iii) provide and maintain all required lighting for the performance of the WUC;
(iv) provide and maintain an updated first aid kit and the Contractor must ensure the contents of the kit have not expired and are in full operational readiness; and
(v) manage the rental costs for all scaffolding required for the construction of the Works.

7.2 Amenities

The Contractor shall:

(a) provide all required amenities for all Site Personnel, which shall include toilets and ablution facilities, lunch rooms and first aid facilities;
(b) provide separate toilet and ablution facilities for males and females;
(c) ensure that all such amenities comply with all legislative requirements, industrial agreements and accepted industry practices and the Contractor shall obtain all required permits and pay all fees, and comply with all conditions, applying to the amenities;
(d) maintain the amenities and keep them tidy, clean, and in sanitary condition at all times; and
(e) as a condition precedent to practical completion, remove all temporary amenities.

7.2.1 Lighting

The Contractor shall provide sufficient lighting and any additional temporary lighting the Superintendent may direct for inspections.

The Contractor shall ensure that all temporary lighting is at least equivalent to actual in-service artificial and natural lighting.

7.3 Site accommodation

7.3.1 Principal Supplied Site Accommodation

The Principal may in its discretion provide areas within the site for the use by the Contractor as site accommodation. The Contractor shall supply all required site accommodation to supplement that provided by the Principal to meet all necessary legislative requirements, industrial agreements and accepted industry practices and as otherwise required for the performance of the WUC.

Where the Principal's existing facilities are not available for use, or are unsuitable or insufficient, the Contractor shall make its own arrangements for the provision of site accommodation.

The Principal will not supply as part of the site accommodation any disposables, filing systems, telecommunications, IT infrastructure or furniture.

7.3.2 Contractor Supplied Site Accommodation

The Contractor shall provide all required site accommodation not provided by the Principal. Site accommodation provided by the Contractor shall:

- include offices, meeting rooms, storage rooms and the like;
- include all required telephones and electronic communications equipment and connections required for communications between the Contractor and the Superintendent and the Principal; and
- comply with all legislative requirements, industrial agreements and accepted industry practices. The Contractor shall obtain all required permits and pay the fees, and comply with all conditions, applying to the site accommodation.

As a condition precedent to practical completion, where the Contractor provided site accommodation, the accommodation shall be removed from the site. The Principal shall advise the location within the site that is to be used by the Contractor for the provision and installation of site accommodation.

The Contractor shall provide all required materials and equipment for the performance of WUC, including but not limited to the following:

- equipment for printing and binding of drawings and documents;
- mobile phones;
- internet connection;
- desk lighting (where required);
- laptops/ computers;
- cameras;
- site log books;
- arch-lever filing (including for Safe Work Method Statements);

- stationery;
- equipment for photo-copying/scanning;
- postage and courier service;
- office furniture;
- protective clothing/safety gear; and
- fire extinguishers.

7.4 Facilities for the Superintendent

7.4.1 Access and inspection

The Contractor shall provide facilities for the Principal, the Superintendent and any person nominated by the Principal, including:

- use of the Contractor's scaffolding, personnel lifts, swing stages, safety harnesses and the like; and
- protective clothing, including not less than five (5) sets of clean new safety helmets, jackets, eye protection and ear protection, which must be kept clean and in new condition by the Contractor.

The Superintendent may take accompanied visitors on to the Site during or outside working hours with reasonable notice.

7.4.2 Accommodation for the Superintendent

The Contractor shall permit use of the Contractor's site accommodation by the Superintendent and any person accompanying the Superintendent, including use of meeting rooms, telephones, fax machines, kitchens and toilets, while the Superintendent is visiting the site.

The Contractor shall provide a lockable samples area with storage shelves for all approved sample submissions.

8 MATERIALS & WORKMANSHIP

8.1 Quality/ samples/ prototyping

Refer to Schedule A (UI Quality Requirements of Contractors).

8.2 Products and materials

8.2.1 Quality

In this document the expression 'products' includes materials, and the expression 'materials' includes products. In this document, these two expressions have the same meaning and may be used interchangeably as the context requires, and include component parts and complete systems incorporating several component products.

The Contractor must ensure that all products used in connection with WUC are:

- of best quality throughout;
- suitable for the required purpose;
- of adequate strength and stiffness;
- free from defects and do not impair appearance, strength, durability or performance of the Works;
- reputable proprietary products and factory manufactured under a recognised quality system in accordance with all relevant Australian Standards and international standards (including AS/NZS ISO 9001:2000);
- of the type commonly available, successfully used in similar recent applications and are likely to be available at a later date for maintenance, rectification or additional work; and
- new and un-used, unless otherwise provided in the Contract or approved by the Superintendent.

To the greatest practicable extent, the Contractor shall obtain all products for each generic type from the same manufacturer.

8.2.2 Product selection

Where the Contract Documents do not nominate a particular product and require products to be approved, the Contractor shall nominate suitable products and submit details of the proposed manufacturers and products to the Principal for approval before ordering the products.

The Contractor shall submit final colour selections to the Principal before ordering products.

The Contractor shall select proprietary products and systems having regard to the site conditions and the performance requirements indicated in the Contract.

The Contractor shall select products that will ensure a coordinated and consistent visual effect in respect of the Works.

The specification of a proprietary item or trade name in the Contract Documents or in any Principal's approval in respect of a product shall be deemed to indicate the required type, quality, appearance, composition and the like of the product.

The Contractor must obtain the Principal's prior written approval in accordance with clause 8.2.4 below before substituting any products nominated in the Contract Documents or approved by the Principal.

8.2.3 Product naming

Before using any product in connection with WUC, including for the substrates, the Contractor shall verify the product is correct and appropriate and complies with all applicable Product Data and Contract Documents.

Neither the nomination of products nor the approval of any products by the Principal or the Superintendent shall reduce or modify the Contractor's obligations or liabilities under the Contract.

8.2.4 Alternatives and substitutions

Where particular proprietary products are indicated In the Contract Documents, the Contractor may propose equivalent alternative products for approval by the Superintendent.

The Contractor shall submit to the Superintendent details required by the Superintendent to verify that the alternative products comply with the Contract.

At its cost, the Contractor shall carry out all additional work resulting from the use of alternative products, including additional or revised approvals from relevant Authorities, changes to work and submission of revised shop drawings. The costs incurred by the Principal or the Superintendent in assessing such alternative products may be recovered by the Principal from the Contractor as a debt.

8.2.5 Products Supplied by the Principal

The Principal may direct the Contractor that the Principal shall supply certain products for incorporation into the Works by the Contractor. The effect of such a direction shall be a deemed variation to be valued under the Contract.

The Contractor shall:

- take delivery of, unload and inspect all such Principal supplied products for defects;
- notify the Superintendent if any of the products are defective, unsuitable for the proposed use or do not comply with the Contract;
- store the products in suitable storage so as to maintain the condition of the items until incorporated into the Works;

- record the storage location on the delivery documents and promptly submit copies of the delivery documents to the Superintendent;
- notify the Superintendent if items are not delivered five days before required or if items are lost from storage;

- incorporate the products into the Works in accordance with the Contract; and
- return unused items of the products to the Principal.

8.2.6 Responsibility

At the Superintendent's sole discretion, the Contractor will not be held responsible for any defects existing in the Principal supplied products at the time of delivery which are not discoverable upon reasonable inspection by the Contractor.

8.2.7 Product Data

The Contractor shall obtain and submit to the Principal all Product Data for all materials and products to be incorporated into the Works.

The Product Data must include quality assurance documentation for factory manufacture, and evidence of adequate long-term performance in similar construction without failure or deterioration.

The Contractor shall keep an on-site copy of all Product Data.

If directed by the Superintendent, the Product Data shall include:

- Supporting justification of a particular product selection; and
- The product manufacturer's verification of suitability of the products selected.

The Product Data must include the manufacturer's current Test Results for proposed systems and components in accordance with all relevant testing standards, carried out by a Registered Testing Laboratory. The Contractor must submit details of the Registered Testing Laboratory to the Superintendent if directed by the Superintendent.

The Contractor shall:

- submit to the Superintendent copies of all relevant testing standards upon which the Test Results are based, if directed by the Superintendent;
- where testing is based on an international standard, submit to the Superintendent details of equivalent Australian Standards and describe to the Superintendent the differences between the international standard and the equivalent Australian Standards; and
- where there are any differences between the items the subject of Test Results and the items to be incorporated into the Works, describe such differences to the Superintendent and carry out additional testing if directed by the Superintendent.

8.2.8 Samples

Where required by the Principal, the Contractor shall submit to the Superintendent for approval samples of materials, products, sections, fabrications, components and finishes, indicating colour, gloss, pattern, texture and the like.

The Contractor shall label or mark each such sample stating the product name, the manufacturer's reference number for the product and the finish, the contact details of the supplier and the date.

Un-labeled samples will not be accepted by the Superintendent.

The Contractor shall prepare a sample material register, noting the quantities, model or part numbers, serial numbers, type of spare/sample, approximate dimensions and final storage location at hand-over of all samples approved by the Superintendent, which must be submitted to the Superintendent at least 14 days prior to the commencement of the Works.

The Contractor shall submit not less than TWO identical samples for each sample to be submitted by the Contractor. Upon approval of a sample by the Superintendent, one of the identical samples provided in respect of the sample will be retained by the Superintendent and the other identical sample will be returned to the Contractor.

The Contractor shall retain all approved samples on-site in a secure location.

Samples of finishes shall be applied to substrates similar to the actual substrates where practicable.

The Contractor shall provide additional samples where required for testing. The Contractor shall pay costs of delivering samples to and from the Superintendent's office.

The Superintendent will take reasonable care of samples submitted to it but will not be responsible for any loss or damage to submitted samples.

8.2.9 Sample Panels

Where required by the Principal, the Contractor shall construct on site sample work (including sample panels) for the Superintendent's approval to establish the quality standard required for the subject work when it is incorporated into the Works.

Works the subject of such sample work (including sample panels) must not be incorporated into the Works until approved for incorporation by the Superintendent. Where sample works are not incorporated into the Works, the Contractor shall dismantle, remove and dispose of the sample works as directed by the Superintendent.

The Contractor shall record the position of approved sample works and maintain access during the relevant work.

The Contractor shall maintain, store under cover and protect all approved sample works from damage until directed by the Superintendent.

8.2.10 Prototypes

Where required by the Principal, the Contractor shall submit prototypes for parts of the Works for the Superintendent's approval, which must be in accordance with the design intent before commencing installation of work on-site.

The Superintendent may require design modifications to be carried out in respect of prototypes as a condition of approval. The Contractor shall coordinate and cooperate with the Superintendent and shall carry out such design modifications.

The Contractor shall provide to the Superintendent not less than 7 days' notice of when each prototype will be ready for inspection by the Superintendent.

The Contractor shall construct the prototypes at locations identified by the Superintendent.

Where a prototype is constructed on-site, the prototype may be incorporated into the Work where approved by the Superintendent. Where a prototype is not approved, the Contractor shall dismantle, remove and dispose of the prototype when directed by the Superintendent.

The Contractor shall prepare a prototype sample register, noting the quantities, model or part numbers, serial numbers, type of spare/sample, approximate dimensions and final storage location at hand-over of all prototypes approved by the Superintendent. The Contractor must submit the register to the Superintendent within 14 days of the commencement of the Works.

Where the location identified by the Superintendent for installation of a prototype is not available, the Contractor shall construct the prototype in a suitable location on-site or elsewhere in the metropolitan area as directed by the Superintendent. The Contractor must ensure safe and convenient access for the Superintendent to the location of each prototype and must ensure that suitable support and framing is included in each prototype to simulate the structural characteristics of the base-structure and the junctions with the base-structure and adjacent work.

8.2.11 First installed example

Where required by the Principal, the Contractor shall submit the first installed example of each type of work, and any non-standard parts or construction details, for approval by the Superintendent to establish the quality standard for the subject work, part or detail when it is incorporated into the Works.

The Contractor shall give the Superintendent sufficient notice for on-site inspections of all first installed examples of each type of work and all non-standard parts or construction details.

The Contractor must ensure that:

- first installed examples are complete and finished in every respect; and
- first installed examples are of adequate size to demonstrate all typical details, and not less than the area indicated in the Contract or required by the Principal.

Upon approval of a first installed example by the Superintendent, the approved first installed example shall become the standard of quality, appearance and colour required for the subject work, part or detail upon incorporation into the Works. The Contractor must ensure the subject Works match the applicable approved first installed example in every respect.

The Contractor acknowledges and agrees that compliance with this clause, including preparation and provision of all first installed examples and any modification required to them at the direction of the Superintendent, is deemed to be included within the contract sum and shall not give rise to a variation, extension of time or any other claim.

8.2.12 Inspection and Test Plans (ITPs)

The Contractor shall submit to the Superintendent for approval project specific inspection and test plans (ITPs) prepared in accordance with all relevant standards.

The Contractor shall implement all approved ITPs and submit to the Superintendent all documentation required by the approved ITPs progressively in accordance with the applicable plan, including inspection records, non-compliance records and actions to rectify non-complying work.

8.2.13 Spares for practical completion

As a condition precedent to practical completion, the Contractor shall supply spares as identified as being supplied in the Contract Documents to the Principal not less than **seven days** before practical completion. The Contractor shall deliver spares to an on-site or off-site storage location, as directed by the Superintendent.

The Contractor shall coordinate with the Superintendent and arrange a suitable time and place for delivery.

8.2.14 Documentation:

As a condition precedent to practical completion, 28 days before practical completion the Contractor shall submit to the Superintendent a detailed inventory of spares supplied or to be supplied to the Principal, which must include all manufacturers' product names and numbers, and sources of re-supply for each of the spares.

The Contractor shall submit to the Superintendent complete replacement instructions and any special tools required by the Principal.

If approved by the Principal the Contractor may, instead of supplying particular spares agreed by the Principal, submit certification that those spares and replacements will be available off-the-shelf, or with a lead-time not exceeding four weeks from date of order, for the warranty period.

8.2.15 Wrapping and identification

The Contractor must ensure that all spares supplied to the Principal are:

- new and unused; and
- wrapped and packed in the manufacturer's properly labeled original unopened containers, which the Contractor shall ensure is durable enough for long-term protection (including protection of finished surfaces) during storage.

8.2.16 Tools

As a condition precedent to practical completion, the Contractor must supply to the Principal:

- 2 complete sets of special tools and portable indicating instruments necessary for operation and maintenance of the Works;

- a suitable means of identifying, storing and securing the tools and instruments; and
- instructions for use of the tools and instruments.

8.3 Testing

8.3.1 Generally

The Contractor shall carry out testing and submit Test Results to the Superintendent of proposed products and materials, prototypes and installed work to verify compliance with the Contract.

8.3.2 Manufacturer's Test Results

At the sole discretion of the Superintendent, Test Results of proposed products and materials may include recent applicable manufacturer's published test results provided that products the subject of such tests are identical or nearly identical to the products proposed.

The Contractor must ensure that products required to be tested before installation are not incorporated into the Work or brought to the site until Test Results are provided to the Superintendent verifying compliance of the applicable products with the Contract.

8.3.3 Testing of installed work

The Contractor shall ensure sufficient time for carrying out testing of installed work.

The Contractor shall submit to the Superintendent all Test Results progressively including non-complying Test Results, within one day of testing.

The Contractor shall submit proposed remedial procedures to rectify non-complying work.

9 COMPLETION

9.1 Joint inspections/defects liability period/ maintenance period

9.1.1 Generally

The Contractor shall arrange preliminary joint defect inspections with the Superintendent with sufficient time for rectification, final cleaning and final inspections before the date for practical completion.

Preliminary joint inspections may be progressive for particular areas agreed between the Contractor and the Superintendent.

Before arranging preliminary inspections with the Superintendent, the Contractor shall correct known defects, carry out trade cleaning and make the work ready for inspection.

If, in the opinion of the Superintendent during the preliminary inspection, the Contractor has not properly made the work ready for inspection, the Superintendent may terminate the inspection.

9.1.2 Defects list

The Contractor shall prepare a list of apparent defects and issue a copy to the Superintendent as soon as practicable after any inspection.

The Contractor shall rectify all defects on the defects list and all other defects identified before the date of practical completion.

Minor defects may be rectified on-site in accordance with approved repair procedures and the Contract, otherwise if required by the Superintendent the Contractor shall remove defective products from the site immediately and replace.

9.1.3 Defects Liability Period & Maintenance Period

The Contractor shall provide all scheduled preventative maintenance to all of the Works to comply with all manufacturers' specifications throughout the defects liability period. The Contractor shall submit to the Superintendent prior to the date of practical completion a preventative maintenance schedule identifying the name, location and anticipated date for each item of preventative maintenance required.

The Contractor shall submit to the Superintendent and the University Facility Management team records of all preventative maintenance activities undertaken by the Contractor during the defects liability period.

9.2 Operation and Maintenance Manuals

9.2.1 Generally

The Contractor shall submit a comprehensive operation and maintenance manual for the Works including a section or a separate volume for the work of each trade.

Approval of the operation and maintenance manual by the Superintendent does not:

- Mean approval of the accuracy or completeness of the operation and maintenance manual;
- Reduce or modify any right of the Principal; and
- Reduce or modify the Contractor's responsibility to provide products which are fit for the intended
- purpose or the Contractor's other obligations and liabilities under the Contract.

9.2.2 Operating & Maintenance Manual Preparation

The Contractor shall utilize the system nominated by the Contractor or by the Superintendent for all operation and maintenance manual preparation (if any).

9.2.3 Purpose of the operation and maintenance manual

The Contractor shall ensure that the operation and maintenance manual:

- contains complete details for the correct cleaning, maintenance, repair, replacement, operating and emergency procedures required to maintain the Works in a clean, safe and satisfactory condition, and without damage or excessive increases in cost or energy consumption during the service life of the Works;
- provides a complete statement of the Principal's ongoing legislative requirements with respect to safety of occupants, users and the general public; and
- includes sufficient information to enable the Principal to engage a third party to carry out the ongoing cleaning and maintenance of the Works with suitable service agreements.

The provision of the operation and maintenance manual shall not reduce or modify the responsibility of the Contractor with regard to the requirement to provide warranties.

9.2.4 Standard operation and maintenance manual Headings

Unless otherwise directed by the Superintendent, operation and maintenance manuals to be provided by the Contractor are to follow the standard headings shown below to ensure consistency for all elements of the Works:

- **Introduction and Scope** - description of the systems, the approach taken and other relevant information to ensure facilities staff have an understanding of the equipment and its intended purpose;

- **Assets** - detailed schedule of all financial assets data, maintainable assets data, items and locations all reconciled to the total project value;

- **Maintenance** - detailed instructions and frequency to ensure proper function of the assets;

- **Operations Data** - detailed instructions for safe and efficient operation of the assets;

- **Spare Parts** - listed items or components required to complete maintenance or operation tasks or for replacements;

- **Warranty and Certificates** - descriptions of all warranties and (both contracted and procured through suppliers) for the assets and descriptions of any certificates issued as part of the Works including uploaded copies of all relevant documents;

- **Help and Contact** - details of any relevant subcontractors, suppliers and the like who may be used by the Principal to support the operation and maintenance of the assets; and

- **Drawings and Reference** - lists of all final as built drawings, specifications and other relevant documents forming the final contract scope and other relevant attachments - like product manuals, specifications and the like relevant to the proper operation and maintenance of the Works.

Where a particular section is not relevant it may be left blank.

9.2.5 Handover of asset, maintenance and operations data

The Contractor must advise the Principal when the operations and maintenance data is complete and accurately reflects the Works.

The Contractor must complete and submit to the Superintendent draft operation and maintenance manuals (or parts thereof) 28 days before it anticipates it will achieve practical completion or in accordance with a commissioning and handover plan approved by the Principal (whichever is the earlier date).

Should the Principal or the Superintendent identify any errors or omissions in the submitted data or have any other requirements in relation to the data, then the Contractor must (at its cost) rectify any such errors or omissions and address such other requirements within the time period stated in the approved commissioning and handover plan or the time period required by the Superintendent.

9.2.6 Document Completion

The Contractor must integrate the collection of asset data documents, and their subsequent production and submission in accordance with the timing set out in an approved commissioning and handover plan (including inspection and test plans and staged works handover) or otherwise as required by the Superintendent, with progressive development of documents in electronic form.

The Contractor must supply the Superintendent with the number of electronic copies of operation and maintenance manuals stated in the approved commissioning and handover plan or, in the absence of a stated number, 1 copy for each defined recipient in the approved commissioning and handover plan. In the absence of any defined recipients, a minimum of 2 CD copies must be supplied.

The Contractor must advise the Principal when the operation and maintenance manuals are at draft stage and ready for review.

The Principal in accordance with the approved commissioning and handover plan shall access the on-line operation and maintenance manuals, or otherwise review the draft operation and maintenance manuals, and provide comments or directions for any corrections or changes required by the Principal.

The Contractor will update the operation and maintenance manuals data in accordance with the comments and directions of the Principal, including as to the required timetable for completion of the updates, and must notify the Principal upon completion.

Upon being notified by the Principal that the Principal is satisfied with the form of all operation and maintenance manuals, the Contractor must direct WebFM to close on-line access (to prevent further alteration to the approved data) and transfer all operation and maintenance data to CD versions for handover.

9.2.7 Compliance with Laws, Standards & Specifications

The Contractor shall ensure that all data and attached files and documents that form the completed operation and maintenance manuals comply with all legislative requirements and the performance level or performance requirement stated in the Contract to enable the proper operation and maintenance of the Works by the Principal or its appointed agents.

9.2.8 Works As Executed Drawings (As-builts)

The Contractor must provide to the Principal work-as-executed drawings in electronic format, including for all subcontract packages, showing the completed Works as constructed. The format must be PDF and CAD or another format approved by the Principal.

The Contractor shall ensure the content, accuracy and level of detail of work-as-executed drawings are equivalent to those in the detail design drawings used for construction and are sufficient to describe and to ensure the efficient maintenance and operation of the Works. Where required to describe the Works, the Contractor must provide to the Principal digital photographs of specific aspects of the Works in work-as-executed drawings or operations and maintenance manuals.

The Contractor shall include in work-as-executed drawings a survey drawing indicating the position of the Works relative to a primary survey grid, which must be certified by a registered surveyor where required by the Principal.

All work as executed and as-built documentation must be in accordance with the Contract and the Contractor must verify and certify that all such documentation is accurate, complete, correct and in compliance with CAD conventions.

The Contractor must ensure that:

- all work as executed and as-built documentation;
- all uploaded files including such documentation are adequately and description boxes, including drawing title, number, short description of the works, location (i.e. Building number etc) similar to the drawing register;
- where a Zip file is used, all contained files and their titles are shown in the description box with sufficient detail to allow easy assessment of the contents of each file; and
- as-built documentation includes:

(i) the Contract Documents and shop drawings certified by the Contractor as correct as-built documentation where no differences occur;

(ii) the Contract Documents and shop drawings marked up by the Contractor where work differs from the Contract Documents and approved shop drawings, which must be certified by the Contractor as correct as-built documentation;
(iii) additional drawings as required by the Principal;
(iv) photographs of concealed work that may require maintenance;
(v) services search verification to be shown on as-builts; and
(vi) identification to all plant and equipment that requires ongoing repairs and maintenance.

The Superintendent shall supply the format and character to comply with the Principal's asset register.

9.3 User training sessions

9.3.1 Generally

The Contractor shall arrange and carry out the number of user training sessions specified in the Contract or directed by the Superintendent for induction, demonstration and training of the Principal's maintenance staff or other nominated personnel responsible for the ongoing, in-service operation, cleaning and maintenance of all manual and mechanical operating components in respect of the Works.

The Contractor shall arrange for the attendance at such training of all relevant subcontractors, suppliers and manufacturers' representatives required to provide or assist the induction and training.

The Contractor shall prepare and carry out a short examination procedure to assess the competency of each attendee at the training sessions with regard to the essential occupation health and safety aspects of all operation, cleaning and maintenance procedures.

9.3.2 Location and timing

The user training sessions referred to in clause 9.3.1 shall be carried out and completed using the installed equipment forming part of the Works on dates approved by the Principal. The Contractor shall notify the Principal of a range of suitable dates not less than seven days before the date for practical completion.

Where user training sessions involve class-room, lecture or seminar activities, these sessions may take place in suitable off-site accommodation approved by the Principal.

The completion of the user training sessions in accordance with the Contract is a condition precedent to practical completion, unless otherwise agreed by the Superintendent.

9.3.3 Documentation

The Contractor shall prepare and submit to the Superintendent written records of all user training sessions conducted by the Contractor, which must include as a minimum:

- Attendance records of all attendees complete with names and contact details of each attendee, and signed by each attendee; and
- A schedule of the training procedures, including a description of the equipment, the relevant operation, cleaning and maintenance procedures, which shall include an estimate of the time required for each training procedure.

The Contractor shall provide copies in whole or part of the relevant operation and maintenance manual to the attendees and any other required printed training materials.

9.4 Commissioning

9.4.1 Generally

The Contractor shall perform, or cause to be performed by appropriate contractors and trades, pre-commissioning, commissioning and quality monitoring of all systems and equipment on site in accordance with ASHRAE Guideline 1 1996 The HVAC Commissioning Process, CIBSE Commissioning Code s 2003.

The Contractor shall commission, test and adjust as required all services and all manual and motorised operating systems as a condition precedent to practical completion.

The Contractor must coordinate with all relevant SERVICES trades.

The Contractor must hand over to the Principal completed systems in full operational order, working correctly in all functional modes.

9.4.2 Operation and maintenance manual and records

The Contractor shall:

- provide all commissioning records, certificates and approvals to the Superintendent and incorporate them into the final operation and maintenance manual.
- notify all manufacturers of dates for proposed commissioning and testing and ensure that the duration for product warranties does not commence until the date of practical completion; and
- not void or limit product warranties.

9.4.3 Labels and instructions

The Contractor shall:

- provide to the Principal approved permanent labels and operating, safety and maintenance instructions in accordance with all legislative requirements, the University's Design Standards and the other requirements of the Principal;
- locate labels and instructions in suitable locations approved by the Principal for convenient use and visibility;
- submit to the Principal details, including the size, colour and text of proposed labels, and a setout diagram indicating proposed positions and mounting heights; and
- provide traffolite identification to all plant and equipment that requires ongoing repairs and maintenance.

The Superintendent shall supply the format and character to comply with the Principal's asset register.

9.4.4 Attendance by the Superintendent

The Contractor shall give sufficient notice of all commissioning to the Superintendent to enable the Superintendent to attend the commissioning. Where the Contractor has not given sufficient notice to the Superintendent, the Superintendent may direct the commissioning to be repeated and the Contractor shall comply with such direction.

9.4.5 Reports

The Contractor must submit to the Superintendent reports indicating observations and results of tests and compliance or non-compliance with all requirements of the Contract.

9.4.6 Starting up

The Contractor must:

- coordinate schedules for starting up of various systems and equipment and give 5 working days' notice to the Superintendent before starting up each item;
- before starting up an item, verify that each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence, circuit protection or for other conditions which may cause damage;
- verify that tests, meter readings and specified electrical characteristics are in accordance with those required or recommended by the manufacturer;
- verify that wiring and support components for equipment are complete and tested;
- ensure that authorised manufacturers' representatives are present on site to inspect, check and approve equipment and system installation prior to starting up, and to supervise placing equipment and operation;
- execute starting up, under supervision of manufacturers' representatives and appropriate
- Contractor's Personnel, in accordance with manufacturers' instructions; and
- submit to the Superintendent a report demonstrating that equipment has been properly installed and is functioning correctly.

9.4.7 Circuit protection

The Contractor must confirm that circuit protective devices are sized and adjusted to protect installed circuits.

9.4.8 Controls

The Contractor must calibrate, set and adjust control instruments, control systems and safety controls.

9.5 Cleaning, protection and rectification

9.5.1 Generally

The Contractor must ensure that finished work is complete, clean and undamaged, with smooth, even finishes.

The Contractor shall ensure that access paths roadways/access ways in, around and adjacent to the site are kept clear, unhindered, tidy and free of rubbish and debris.

9.5.2 Progressive cleaning

The Contractor shall keep the site and the Works, including all common areas, clean and tidy at all times. The Superintendent may direct any area to be cleaned.

The Contractor shall:

- Provide sufficient Contractor's Personnel and equipment for such cleaning;
- Provide waste containers for debris generated by the work that meet local/statutory environmental requirements;
- Locate waste containers as close as practicable to the work areas;
- Regularly empty waste containers and remove debris to a legal disposal location;
- Ensure that drains, gutters and downpipes are clean and properly flowing;
- Prevent debris generated from the works entering the University grounds; and
- manage and enforce no smoking policies at all times.

The Contractor must dispose of all hazardous, toxic or flammable wastes (including those requiring special treatment) in a manner that fully complies with all requirements of relevant Authorities and all applicable legislative requirements. If there are such substances present at or near the site, the Contractor must notify the Superintendent immediately and seek the Superintendent's directions in respect of the substances.

The Contractor shall ensure that no liquid wastes are disposed of via sewerage or storm water systems.

The Contractor shall not locate waste containers outside the site unless approved by the Principal and the relevant Authorities, and the Contractor has obtained and paid for all required permits.

The Contractor shall remove immediately all spots, marks and stains to finished Works.

9.5.3 Final cleaning

The Contractor shall clean the Works thoroughly and leave the Works ready for occupation by the Principal before the date of practical completion.

The Contractor shall employ recognised, experienced and professional specialist cleaners to carry out all required cleaning.

The Contractor shall select and use suitable cleaning products in accordance with the substrate Product Data.

The Contractor shall forward details to the Principal of the proposed cleaning subcontractor who will be undertaking the final clean and the Contractor must obtain the Principal's approval of the identity of the subcontractor prior to undertaking the final clean.

The Contractor shall ensure that site cleaning includes (but is not limited to) the following:

- removal of all construction debris and waste;
- cleaning of external drains and drain-grates and ensure free-flowing drainage;
- sweeping of paths, pavement, timber decking and the likes;
- removal of all temporary supports and structures;

- removal of all product labeling not required or as directed by the Superintendent;
- removal of all packaging and product protection as directed by the Principal; and
- cleaning of windows/glazed areas by a subcontractor, and using products, approved by the Principal from a list of names of preferred companies and products provided by the Contractor to the Principal.

9.5.4 Protection of installed work

The Contractor shall protect all installed work from dirt, damage and deterioration, and shall maintain installed work in clean, undamaged condition.

The Contractor shall keep water and other spillages off finished work.

The Contractor shall restrict unauthorised access to installation areas until the trafficable work is cured, hardened and safe.

The Contractor shall provide barriers and warning signs as required.

The Contractor shall provide suitable temporary wrapping and protection materials to installed work where applicable, which shall be capable of removal without damage or marking to finished surfaces.

The Contractor shall remove wrapping and temporary protection before the date of practical completion.

The Contractor shall rectify any damage or marking to the installed work and finished surfaces due to wrapping and temporary protection.

9.5.5 Protection of adjacent areas

The Contractor shall protect areas adjacent to the Works during installation, including by using protective coverings where required.

The Contractor shall rectify any damage to the adjacent areas.

The Contractor shall remove all spots, marks and stains from surfaces in the adjacent areas and the Contractor shall not cause damage to adjacent areas by welding, grinding or similar activities.

If damage caused by the Contractor cannot be rectified properly, the Contractor shall replace or re-apply the whole area affected, as directed by the Principal.

Rectified work shall match applicable approved samples and adjacent installed work.

9.5.6 Painting

The Contractor shall touch-up damaged paint and gaps to ensure a consistent overall finish, using the same paint batch if practicable or carefully colour matching touch-up paint with original colour.

If a consistent overall finish cannot be obtained, the Contractor shall re-apply the whole area affected.

9.5.7 Floor finishes

The Contractor shall protect all installed floor finishes and surfaces with suitable applied coverings and protection.

The Contractor shall ensure that any plant or equipment, and all materials handling equipment, travelling over any finished floor surface is fitted with suitable rubber tread wheels.

9.5.8 Waterproofing

The Contractor shall be responsible for the water tightness of the Works.

The Contractor shall provide all required temporary protection to prevent entry of water or dampness that may be detrimental to the quality of finishes and materials or may delay the progress of the WUC.

9.5.9 Roofing

The Contractor shall regularly inspect and keep clean roofing and roof plumbing during the performance of WUC.

At the end of work each day, and immediately before rain, the Contractor shall inspect roof and roof plumbing and remove all debris and materials which may cause blockages or corrosion, including loose fixings and off-cuts.

9.5.10 Cladding

The Contractor shall regularly inspect and keep clean external cladding and glazing, including glass, coatings and drainage channels, during the performance of the WUC.

9.5.11 Glass

The Contractor shall protect all installed glass surfaces with suitable applied coverings and protection.

The Contractor shall contr
ol and prevent air-borne cementitious dust or water-borne cementitious run-off from contact with glass surfaces.

The Superintendent may direct the Contractor to replace (at the Contractor's cost) any glass which has been exposed to air-borne cementitious dust or water-borne cementitious run-off.

9.5.12 Ground surfaces

On completion of external work, the Contractor shall reinstate the ground surfaces of the site to match the condition that existed at the date of the Contract or as otherwise required by the Principal.

The Contractor shall smooth and level all disturbed surfaces generally.

The Contractor shall merge new surfaces with existing adjacent surfaces to ensure continuity of level and finish.

9.5.13 Construction plant

The Contractor shall remove all construction plant and temporary site accommodation and amenities, temporary works and temporary utilities when no longer required and before practical completion.

The Contractor shall rectify any damage to the site.

9.6 Asset register / asset stickers tagging

9.6.1 Generally

The Contractor shall undertake all asset tagging and prepare an asset register incorporating the Works in accordance with the Principal's asset tagging specification.

The Contractor shall submit a populated electronic asset register, including traffolite labeling, to the Principal in the format required by the Principal for integration with the Principal's building management system prior to practical completion.

The Contractor shall be issued with an asset data capture register.

9.6.2 Asset stickers

The Contractor shall install all asset barcodes and stickers upon receipt from the Principal (in accordance with the Principal's instructions), which the Principal shall provide following receipt of the electronic asset register completed by the Contractor.

The Contractor shall notify the Superintendent when the asset barcode and stickers tagging will commence and provide an asset tagging completion report upon completion of all tagging which corresponds to the electronic asset register and confirms each asset barcode and sticker has been tagged in the designated area.

The Superintendent and UI Engineering team may conduct impromptu inspections to check that the asset barcodes and stickers have been tagged onto the areas listed on the electronic asset register.

Schedule A-UI Quality Requirements of Contractors

THE UNIVERSITY OF SYDNEY

UI Quality Requirements of Contractors

University Infrastructure

Table of Contents

1 INTRODUCTION

The Contractor shall implement a project-specific quality system adequate for the quality management needs and requirements of the project. The quality system shall cover all activities and extend to all areas of the Contractor's organisation involved in the WUC and include, as appropriate, engineering, design, procurement, fabrication, erection, construction, installation, testing and commissioning. The quality system shall be based on existing proven work routines and practices described in written documents which reflect a planned and systematic approach to achieving and maintaining quality.

1.1 Scope

UI's requirements of the system aim to establish a comprehensive, integrated and systematic approach to managing quality by:

(a) describing the role of the Contractor in managing the quality of the WUC.
(b) describing the framework of the quality management system; and
(c) establishing mechanisms for reporting quality management activities.

1.2 General

The Contractor shall provide the following documents to the Principal at the times set out in this document or elsewhere in the Contract or where no time is stated at a time that is appropriate given the nature of the document and in sufficient time to enable the Principal to consider the document:

(a) the Contractor's quality manual;
(b) the project quality management plan (PMQP);
(c) the inspection and test plans (ITPs);
(d) the test certificates;
(e) a schedule of quality records (MDR);
(f) all procedures, schedules and work instructions to be used for the performance of the WUC;
(g) an internal audit schedule; and
(h) all other records referenced by AS/NZS ISO 9000 or equivalent.

1.3 Terms and Definitions

For the purposes of this document, the terms and definitions given in AS/NZS ISO 9000 apply. Throughout this document, wherever the term "product" is used, it also means "service".

2 QUALITY MANAGEMENT APPROACH AND FRAMEWORK

2.1 Quality Management System

The Contractor shall implement a project quality management system that complies with the AS/NZS ISO 9001 Quality Management Systems – Requirements, or equivalent unless otherwise approved by the Principal (PQMS).

The Contractor shall ensure that all WUC meets the technical, contractual and quality requirements of the PQMS.

The Contractor shall at all times:

(a) maintain effective control of the quality of the WUC;
(b) provide and conduct any and all tests and examinations necessary to ensure the quality of the WUC, including by conducting those tests and examinations at the Contractor's or subcontractor's facilities, in order to ensure conformance of the WUC with the requirements of the Contract; and
(c) rectify all non-conformances found during production or upon receipt of delivery of an item, or as a result of inspection or testing of the WUC, or during any audit, at the Contractor's expense.

2.2 Quality Management Plan

The Contractor must provide the PQMP to the Principal for approval prior to commencing the WUC. The Contractor shall implement the PQMP approved by the Principal. The PQMP shall include the following information:

(a) a cover page containing the following details:
(i) the Contractor's name and logo;
(ii) "CONTRACT QUALITY PLAN";
(iii) "Contract Name: [*contract name to be inserted by the Contractor*]";
(iv) "Contract No: [*contract number to be inserted by the Contractor*]";
(v) a document number (which includes a revision and version history);
(vi) the date of issue; and
(vii) the names, positions and signatures of the author and approver of the PQMP (if different).

(b) a policy statement identifying the PQMS to be implemented by the Contractor for the WUC;
(c) a summary of the following contact information for all key employees of the Contractor and subcontractors involved in the WUC (as identified to the Contractor by the Principal):
(i) full name;
(ii) title/positions;
(iii) job description;
(iv) that person's functions and responsibilities under the Contract; (v) address;
(vi) email address;
(vii) office number; and
(viii) mobile number.

(d) an overview of the allocation of management responsibilities by the Contractor with respect to the Contract, including the name of the employee(s) of the Contractor that will maintain responsibility for ensuring the quality of the WUC;
(e) the Contractor's proposed organisational management chart for the Contract, specifying those positions of management with responsibility for quality management or verification activities;
(f) an outline of the Contractor's procedures for reviewing, updating and controlling the PQMP and referenced documentation including design documents;
(g) a description of the steps required to be undertaken by the Contractor for the execution of the WUC, and the means that the Contractor will adopt to ensure the steps are controlled. Each method of control should adopt one or more of the following methods, as applicable:
(i) a documented procedure;
(ii) a schedule; or
(iii) a competent person or process with responsibility for control.

(h) a description of how the Contractor intends to verify that the design (including all design documentation) and other engineering work meets each Contract requirement (eg, by using verification plan, compliance matrix or other verification method);
(i) reference to the Technical Specifications and quality requirements specific to the WUC;
(j) details of the quality audit process (including an audit schedule) adopted by the Contractor and its subcontractors;
(k) details of special processes and control procedures;
(l) a copy of the Design Management Plan;
(m) details of how non-conformances in the WUC will be treated;
(n) details of the quality records to be made and maintained by the Contractor in relation to the WUC;
(o) details of methods of traceability of materials and products used in the WUC; and
(p) copies of all inspection and test pro-forma sheets relevant to the WUC.

3 RESPONSIBILITY AND ACCOUNTABILITY

3.1 Contractor Responsibility

The Contractor must be committed to the maintenance of high standards in quality. The Contractor must provide the Principal with evidence of the Contractor's commitment to the improvement of the PQMS during the WUC, by ensuring that the Contractor:

(a) communicates (through, amongst other things, inductions, special training sessions and staff meetings) to all of the Contractor's employees and subcontractors that they each must satisfy at all times:
(i) the Principal's project requirements; and
(ii) all legislative requirements;
(b) implements the PQMP;
(c) conducts regular PQMS reviews throughout the term of the Contract; and
(d) maintains adequate resources to meet the Contractor's obligations under the Contract.

3.2 Customer Focus

The PQMS must identify UI and the Principal's requirements in each important area of service or product delivery. The PQMS shall enable the achievement of these requirements.

3.3 Human resources

The Contractor must provide competent, qualified and experienced resources to facilitate the effective and efficient progress of the WUC. Resources must include the assignment of trained and competent personnel and subcontractors for the management, performance and verification of the WUC, including site inspections and internal quality audits and must be identified in the PMQP.

The recruitment and selection process of the Contractor's resources shall be completed by the Contractor in accordance with their recruitment and selection procedures as identified in the PQMP. The necessary competencies, qualifications and experience required to perform the roles and responsibilities of the position must be stipulated in the PQMP.

Prior to commencing the WUC, the Contractor shall provide the Principal with evidence of the existence of a satisfactory training matrix for key roles in addition to a program to assess skills and competencies necessary to carry out the WUC and a methodology for monitoring and managing personnel and subcontractors under that performance management system.

3.4 Work environment

Prior to commencing the WUC, the Contractor must provide the Principal with a copy of the Contractor's plan for managing all work, health and safety issues associated with the delivery of the WUC (WH&S Plan) for approval. The Contractor must ensure that the Contractor, the Contractor's employees and subcontractors implement the approved WH&S Plan in order to ensure that the work environment at the site is managed in accordance with Contract and legislative requirements.

4 SUBCONTRACTOR MANAGEMENT AND PROCUREMENT

4.1 Selection and Appointment of Subcontractors

The Contract must ensure that subcontractors are selected and appointed in accordance with clause 0 of this document. The Contractor must ensure that the subcontractor meets the quality requirements of the project as identified in the PQMP.

The Contractor must maintain adequate documentation (copies of which must be provided to the Principal on request) in relation to the WUC, including all subcontractor agreements and deeds. The documents must include a scope of work and requirements for quality.

Upon the request of the Principal, the Contractor shall demonstrate to the Principal that a subcontractor was selected to perform the WUC based on an examination and evaluation of the subcontractor's experience and capabilities.

4.2 Provision of Information to Subcontractors

The Contractor must ensure that the subcontractor procurement process includes the provision of Technical Specifications to ensure that quality requirements can be reviewed by the Principal and that the subcontractor demonstrates they are able to comply with the Principal's project requirements and the requirements of the Contract.

4.3 Monitor and Review of Subcontractor Performance

The Contractor must implement a compliance auditing and/or inspection program that provides sufficient confidence to the Principal throughout the duration of the WUC that the Principal's project requirements and the requirements of the Contract are met, including those related to quality control and quality assurance.

4.4 Procurement

The Contractor must maintain adequate control of procurement resources to ensure that all subcontractors of any tier comply with the Principal's project requirements and the requirements of the Contract as applicable to the subcontractor. The Contractor must itself and have its subcontractors undertake source inspections, as necessary, to ensure the products used in performance of the WUC meet requirements of the Contract.

All products purchased by the Contractor or a subcontractor shall be evaluated by the Contractor to assure conformity with the Principal's project requirements and Technical Specifications and other requirements of the Contract. The Contractor must ensure that both the Contractor and its subcontractors (as the context permits) maintain adequate records of all inspections and tests performed by the Contractor or subcontractors (as the context permits) on purchased products. The Contractor must provide the Principal with documentation (in a form approved by the Principal) stating that material and equipment conform to the Principal's procurement requirements.

The Contractor shall ensure that purchased products conform to the requirements specified in the Contract and that the Contractor's purchase orders:
(a) stipulate applicable quality system requirements;
(b) identify requirements for verifying purchased products;
(c) address product identification and traceability requirements; (d) specify material certification requirements; and
(e) specify the requirement to provide operation and maintenance manuals applicable to the product.

5 DESIGN MANAGEMENT

The Contractor shall be responsible for the coordination and management of the design and design development for this Contract, through a process of consultation with any third parties that the Principal requires (such as school and/or faculty representatives). All design activities, including the appointment of a design manager, must be in accordance with the UI Design Risk Management Procedure.

The Contractor shall submit the design documents to the Principal or its nominated UI representative and any key/relevant stakeholders (pursuant to the terms of this clause 5) at regular intervals as agreed by the parties throughout the course of the design phase, for review and consent. All documentation issued by the Contractor shall be accompanied by a transmittal note detailing the relevant Contract references.

6 INSPECTIONS, TESTING AND MONITORING

6.1 Control of monitoring and measuring equipment (MME)

The Contractor shall ensure that:

(a) all MME is calibrated or checked by National Association of Testing Authorities, Australia certified agents before the MME is used on site;
(b) all MME shall have a calibration sticker affixed, when physically possible, which includes the MME unique ID, the calibration due date and provides traceability back to the calibration records;
(c) the Contractor uses calibration instructions for each type of MME calibrated;
(d) the handling, preservation and storage of MME are in accordance with manufacturer's recommendations;
(e) the Contractor maintains a process (to be approved by the Principal) that documents where MME has been used;
(f) the Contractor maintains a calibration recall process to ensure that MME devices are recalled for calibration regularly and when otherwise necessary to ensure compliance with all relevant legislative requirements;
(g) Contractor shall maintain process for evaluating the impact on completed installations for MME that is lost, damaged or found to be out of calibration and document any deficiencies; and
(h) the Contractor shall ensure that MME calibration information is documented on inspection and test records (which must be available for inspection by the Principal at any time).

6.2 Monitoring and measurement

The Contractor shall establish, implement and maintain procedures at all times to measure and evaluate compliance to:

- legislative requirements;
- the Principal's project requirements;
- the Principal's Work Requirements;
- all Technical Specifications;
- the WH&S Plan;
- the PQMP; and
- calibration parameters for inspection measuring and checking equipment.

6.3 Inspection and Test Plans

The Contractor must ensure that ITPs describe the process for inspection and/or testing of the WUC in logical numbered steps from start to finish. The ITPs must be submitted to the Principal for approval and the approved ITPs must be implemented by the Contractor.

Each step of the ITPs must include the following information:

(a) a description of the work activity;
(b) the type of inspection required;
(c) identification of the responsible party to carry out inspection for each activity;
(d) the acceptance criteria to be applied and the applicable control documents for each activity (including references to procedures, specifications, codes, work instructions or standards);

(e) all verifying documents, reports, certificates or similar generated by the Contractor to provide evidence of compliance with the specified requirements (If required by the Principal, the Contractor must include these documents in the MDR with a reference to the relevant report form number);
(f) details of all Contractor, subcontractor and Principal inspection activities including details of any witnesses, surveillance undertaken or document review points;
(g) a provision for notification of the inspection requirements of the Principal or any third party inspectorate; and
(h) the location at which each activity will take place.

ITPs shall be submitted to the Principal for review and acceptance prior to commencement of the relevant part of the WUC to which the ITP relates. The Contractor shall not commence the WUC to which the ITP relates without acceptance of the ITPs by the Principal. The minimum acceptance level at which the WUC can commence is for the hold, witness, surveillance and review points to be agreed to by the Principal, documented and strictly adhered to, unless otherwise agreed by the parties.

The Contractor shall be responsible for the review and approval of its subcontractors ITPs as appropriate. The Contractor shall maintain a live ITP register for the WUC inclusive of any ITPs from its subcontractors.

The Contractor shall give the Principal's nominated inspector adequate notice (as agreed between the parties) of an impending witness or hold point. In case of hold points the Contractor shall not proceed without the agreement or approval of the Principal's nominated inspector.

Inspection and test procedures outlined in the ITPs shall be made available to the Principal for review at any time. Inspection and test procedures that require acceptance by the Principal shall be outlined in the Technical Specifications.

6.4 Hold and Witness Points

Inspection and test requirements, including independent inspection, witnessing and monitoring, shall be conducted in accordance with the terms of the Contract and any relevant legislative requirements (as they apply to the activity). The Contractor is responsible for arranging all necessary inspections and tests in accordance with the ITPs. The parties agree that the WUC will only continue beyond the hold point following satisfaction of the requirements to pass a particular hold point.

Hold points and the entity (whether it be the Principal, the Contractor or a different contractor/consultant) responsible for their release shall be documented on the appropriate ITPs. The entity responsible for the release of hold points must sign-off the relevant ITPs or checklist.

The Contractor shall give the entity responsible for release of hold points reasonable notice of upcoming hold point inspections to check that they are performed and the WUC is not delayed.

6.5 ITP Review

The Contractor shall submit ITPs to the Principal for review and acceptance 4 weeks prior to the programmed date for commencement of the relevant WUC covered by each ITP. The Contractor shall ensure that all review comments, including any additional hold or witness points, are incorporated in the ITPs and are resubmitted to the Principal for approval. The Contractor shall not progress affected WUC beyond the relevant ITPs intervention points without the Principal's (or its nominated representative's) acceptance of the revised ITP.

Notice periods for the completion of WUC covered by an ITP shall be agreed by the parties during the initial review process.

6.6 Manufacturers Data Report (MDR)

The Contractor shall provide the Principal with a MDR prior to commencement of the WUC. The MDR shall demonstrate (where necessary) the achievement of traceability and specified certification requirements.

The data contained in MDRs must provide assurance to the Principal that the PQMP has been complied with and that the quality of workmanship required by the Contract has been achieved. To do this, the MDRs shall be written in English and include the following information:

(a) the materials and design used;
(b) the manufacturing process adopted; (c) all relevant certification;
(c) traceability records from the subcontractor;
(d) all inspections and testing undertaken as required by an ITP;
(e) details of the material's fabrication;
(f) the construction history of the material; and
(g) confirmation that all subcontractors have complied with the Technical Specifications. The documents that comprise the MDR must either be originals or clearly legible copies.

6.7 Identification and Traceability

Throughout the course of the WUC, inspections and tests of all products (including those that have been pre-fabricated or manufactured off-site) shall be conducted by the Contractor, the results of which shall be retained by the Contractor for record keeping purposes for the duration of the Contract. The regularity of the inspections and tests shall be agreed between the parties.

6.8 Continual Improvement

The Contractor must ensure that continual improvement of the PQMS is achieved through the application of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and system reviews as is required by the PQMP. The Contractor shall implement corrective action appropriate to the non-conformance encountered to eliminate the cause of non- conformances in order to prevent recurrence.

The Contractor shall do the following during the performance of the WUC (and maintain appropriate records):

(a) review all non-conformances;
(b) determine the causes of all non-conformance;
(c) evaluate the need for action to ensure that any non-conformances do not recur; and
(d) determine (in consultation with the Principal) and implement all necessary action required to comply with this clause 6.8.

The reporting and investigation of non-conformances will be recorded along with the details of any actions taken and the follow-up findings.

7 AUDIT AND NON-CONFORMANCES

7.1 Audit

The Contractor shall use trained and competent auditors to plan and conduct documented audits to confirm that the PQMS conforms to planned arrangements and is effectively applied and updated regularly.

An audit program shall be implemented by the Contractor and approved by the Principal to address key processes to be audited and considering prior audit outcomes. The Contractor shall ensure that findings raised during audits are followed up and closed out in a timely manner.

Contractors shall document a procedure that details how audits are managed and how records shall be maintained. The procedure must be reviewed and approved by the Principal prior to commencement of the WUC.

The Contractor shall be responsible for carrying out audits, inspections and tests at the Contractor's and/or subcontractor's facilities to ensure that the Principal's project requirements and the requirements of the Contract are achieved at all times.

The Contractor shall confirm the quality assurance audit schedule with the Principal's nominated representative at the pre-inspection meeting. The audit schedule shall include all programmed audits to be implemented by Contractor and/or subcontractors. The Contractor must ensure that all audit schedules are updated and provided as part of a monthly quality report.

The parties agree that the Principal may undertake audits of the WUC in order to compare it against the Principal's own quality management system and requirements. The Principal will provide advance notice and scheduling to the Contractor when the audits will be undertaken and completed.

7.2 Access to Audit Documentation

The Principal shall provide the Contractor with access to data and documentation stemming from audits undertaken, and shall, as requested by the Contractor, provide electronic copies of any audit documentation.

The Contractor must provide the Principal and its representatives with unencumbered physical and electronic access to all documentation produced in respect of the project for the purposes of audits carried out by or on behalf of the Principal.

7.3 Control of nonconforming product

The Contractor is responsible for and shall develop procedures for the control and disposition of nonconforming conditions. The Contractor must take measures to preclude WUC containing uncorrected deficiencies from being built on, sealed, closed, or concealed in any manner until corrected to the Principal's satisfaction. The Contractor shall prepare procedures for documenting and controlling nonconforming items or services. If the Contractor's corrective action does not result in full conformity with any manufacturer's/supplier's requirements, final acceptance requires the Principal's written approval.

The Principal reserves the right to correct nonconforming items and back charge the Contractor for such corrections.

The Contractor must:

(a) provide holding areas or methods for segregating nonconforming items to prevent unauthorised use.
(b) maintain records identifying nonconforming items, the nature of the non-conformance, disposition of the non-conformance, and evidence that the disposition has been satisfactorily completed.

The Principal may also identify and report non-conformance to the Contractor. In such cases, a non-conformance report will be delivered to the Contractor by the Principal who shall provide appropriate closure action.

The Contractor shall submit copies of all deficiency reports to the Principal for their respective information and use. The Contractor shall evaluate each deficiency for potential corrective action to prevent recurrence of the problem and implement corrective action.

7.4 Defects Liability Period (DLP)

Through consultation with the Contractor, a maintenance schedule will be developed by the Principal in accordance with the manufacturer's recommendations to be undertaken in the defects liability period.

The extent of maintenance will include planned maintenance and may include unplanned maintenance.

The project completion manual (to be prepared in a form approved by the Principal) will summarise the planned and unplanned maintenance requirements and specialist subcontractor contacts.

8 DOCUMENT AND RECORD MANAGEMENT

8.1 General Requirements

The Contractor shall maintain records of all documents necessary to provide objective evidence to the Principal, which demonstrates and verifies achievement of the quality requirements specified within the Contract. Such records shall be available for review by the Principal at all times during the term of the Contract.

The Contractor shall be responsible for ensuring the security of such records for a period of retention, which, as a minimum, meets Contractual and/or legislative requirements, whichever is the greater.

The Contractor shall submit nominated quality records (in a form approved by the Principal) to the Principal or its nominated representative at the times and in the quantities specified within the Contract.

8.2 Control of Documents

The Contractor shall prepare procedures to control documents and data that relate to control of the WUC. The Contractor is responsible for ensuring that documents provided for construction are maintained to the most up-to-date revisions. The Contractor's control procedure shall ensure that all necessary information is delivered to the proper locations and to the personnel responsible for the performance of the WUC. The

Contractor's procedure shall ensure that obsolete documents are promptly removed from all points of issue or use.

8.3 Control of Records

The Contractor must ensure that all records required by the PQMS to demonstrate compliance with the requirements of the Contract shall be controlled. The Contractor must develop a procedure that addresses:

(a) record formats, storage, protection, retention, retrieval and disposal; and
(b) whether record retention is governed by any legislative requirement.

The procedure must be submitted to the Principal for approval. The approved procedure must be implemented by the Contractor throughout the duration and following the completion of the Contract.

8.4 Design Documents

The Contractor shall have written procedure(s) or instruction(s) that establishes a system for receipt, control and distribution of design documents. The procedures(s) or instruction(s) shall provide for:

(a) the verification of actual documents received;
(b) the maintenance of document control logs or registers for drawings, interim changes, specifications and vendor prints, listing current revision of each document to preclude use of invalid and/or obsolete documents;
(c) establishing a method of identification between controlled and uncontrolled documents; and
(d) the removal of superseded or voided documents from the relevant location and/or site to assure against unintended use. The Contractor must ensure that any obsolete documents retained for legal and/or knowledge-preservation purposes are clearly identified.

8.5 Access to Documentation

The Contractor shall provide free and unencumbered access to the Principal to all data and documentation and shall, as requested, provide copies of any required documentation to the Principal at no additional cost. Access to data shall include "electronic access".

8.6 Operations and Maintenance Manuals (O&M)

The Contractor shall provide O&M information to the Principal in a form and format specified by the Principal. All information in the O&Ms shall be written in the English language and be clearly legible.

9 COMMUNICATION AND REPORTING

9.1 Internal/External Communication

The Contractor shall document procedures and requirements for communication:

(a) internally to staff regarding the policies, procedures and objectives of the PQMS; and
(b) externally to subcontractors and visitors (and other affected parties) as appropriate on relevant details that they require concerning the PQMS.

Records of communication shall be maintained by the Contractor during the performance of the WUC.

9.2 Responsibility, authority and communication

The Contractor shall formally appoint a specific member(s) of the management team as the representative responsible for the PQMS. This project quality management representative (PQMR) shall coordinate the monitoring and maintenance of the PQMS and report on the status of the system to the Principal on a monthly basis.

9.3 Quality Performance Reporting

The Contractor shall provide a quality performance report on a monthly basis to the Principal to ensure the continuing suitability, adequacy and effectiveness of the PQMS. The inputs to the report must include (but are not limited to):

(a) a register of non-conformances, corrective, remedial and preventive actions;
(b) a schedule of internal and external audits;
(c) a register of subcontractor feedback (including complaints);
(d) details of the Contractor's performance to PQMP objectives;
(e) a register of requests for information (RFI);
(f) details of all outstanding RFI's;
(g) details of all improvements and changes to the PQMP; and
(h) the current status of ITPs.

9.4 Close Out Report

As a prerequisite to achieving Practical Completion the Contractor must submit a quality management closeout report (in a form approved by the Principal) to the Principal for review and approval.

The Report shall include:
(a summary covering an overview of the WUC including brief detail related to quality assurance and quality control issues, non-conformances raised, the number of internal/ external audits conducted, rework and concessions and details of program slippages complete with incumbent remedial actions taken to comply with the program;

(a) a copy of the audit log;
(b) a copy of the corrective action log;
(c) a copy of the non-conformance log;
(d) a copy of the technical query log;
(e) a deliverable documents list including the title, document number, revision at closeout and the date the documents were submitted to the Principal. This List must cover documents required to be submitted for review and approval as identified within the Contract; and
(f) all information required for 'as built' drawings (such as changes in materials, coating system, welding procedure, or changes to drawing details).

Schedule B-University Design Risk Management Procedure

THE UNIVERSITY OF SYDNEY

UI Design Risk Management Procedure

University Infrastructure

Table of Contents

1 Purpose

The purpose of this document is to set out the requirements and application of processes for the consideration of health and safety risks relating to the Design of structures in line with the WH&S Obligations.

Where the Contractor has been engaged and is responsible for the Design, all activities related to the Design must be completed pursuant to the terms of this document.

2 Scope

This document applies to all Designers.

This document is to be read by the Contractor in addition to the University of Sydney Design Standards (click **here** to access standards (**University Design Standards**) applicable to all building and refurbishment projects delivered by the Principal.

The University Design Standards are informed by the Principal's policies and strategic plans and were developed in consultation with the Stakeholders. The University Design Standards provide parameters for those involved in planning, Design and pre- construction of building projects and major refurbishment work at all University campuses.

The objectives of the University Design Standards are:

(a) to provide a uniform approach to Design issues for projects, incorporating the Principal's project requirements, legislative requirements and applicable best practice; and

(b) to highlight aspects to be considered at the commencement of design projects so that any previously identified safety, environment, construction, maintenance, operability or other difficulties or ongoing problems can be avoided.

3 Definitions

For the purposes of this document, the terms and definitions given in AS/NZS ISO 9000 apply.

To the extent that there is any inconsistency between the definitions given in the Contract and this document the terms defined in this document apply to this document.

Term	Definition
Design	Includes design documents and any bill of quantities (including specification of articles or substances) relating to a structure, and calculations prepared for the purpose of a design.
Designer	A person whose profession, trade or business involves them in preparing sketches, plans or drawings for a structure, including variations and modifications to a plan or changes to a structure, and extends to those persons making decisions for incorporation into a Design that may affect the health or safety of persons who construct, use or carry out other activities in relation to the structure.
Design Manager	A suitably qualified and experienced professional whose responsibility it is to manage the Design of the WUC and who is specifically responsible to

	oversee and implement the procedures set out in this document and its processes. Where the Principal manages the Design, the Design Manager will be appointed by the Principal's Director of UI or the Principal's Campus Planning Manager or their appointed delegate. Where this document is attached to a design & construct contract the Contractor must submit to the Principal's Campus Planning Manager for approval the CV of the proposed Design Manager. The Campus Planning Manager may approve or reject the proposed Design Manager in their absolute discretion.
lifecycle of the structure	• the Design; • approval of the Design; • the construction, including the materials used and methods of construction; • the commissioning including the testing and analysis processes; • the operation and maintenance, including the cleaning and repairs, modifications, or refurbishments; and • the decommissioning, demolition or disposal or possible recycling.
Reasonably Practicable	In relation to the Designer's duty, this requires taking into account and weighing up all relevant matters including (but not limited to) the likelihood of the hazard or the risk occurring, the degree of harm that might result from the hazard or the risk, knowledge about the hazard or risk and ways of eliminating or minimising the risk. After assessing the extent of the risk and available ways of eliminating or minimising the risk, the costs associated with eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk must be taken into account.
Safe Design	The integration of hazard identification and risk assessment methods early in the Design process to eliminate or minimise the risk of injury throughout the life of the structure being designed.
Stakeholders	The parties who may influence the Design during any phase of the life of the structure, including: Authorities Builders Clients commissioning agents constructors the Contractor demolishers Designer Developers end-users erectors ergonomic professionals financiers government regulators industrial designers insurers leasing agents manufacturers operations and maintenance personnel project managers purchasers safety professionals subcontractors surveyors
structure	Means anything that is constructed, whether fixed or moveable, temporary or permanent, and includes: • buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels); and • any component of a structure and part of a structure.

4 Roles and Responsibilities

Roles	Responsibilities
Designers	Must ensure, so far as is Reasonably Practicable, that the structure is without risks to the health and safety of persons: • who, at a workplace, use the structure for a purpose for • which it was designed; or • who construct the structure at a workplace; or • who carry out any reasonably foreseeable activity at a workplace in relation to the manufacture or assembly or use of the structure for a purpose for which it was designed or the proper demolition or disposal of the structure; or • who are at or in the vicinity of a workplace and who are exposed to the structure at the workplace or whose health or safety may be affected by a use or activity referred to above. All Designers must consider how the Design will affect the health and safety of those who will interact with the structure throughout the lifecycle of the structure. Must perform tasks and activities to assist the Design Manager in performing its obligations.

Design Manager	The Design Manager is a Designer and is accountable for ensuring the Design Management Plan is complied with. In addition to the requirements of this document, this means the Design Manager must: • establish the Design and risk management context of the WUC; obtain a brief from the Principal, which contains: • all available information relating to the site that may affect health and safety; and • information about the types of activities and tasks likely or intended to be carried out in the structure, including the tasks of those who maintain, repair, service or clean the structure as an integral part of its use; • carry out, or arrange the carrying out of, any calculations, analysis, testing or examination of the structure that may be necessary as required by the WH&S Law; • give adequate information to each person who is provided with the Design for the purpose of giving effect to it; • give, so far as is Reasonably Practicable, current relevant information on the matters referred to above to a person who carries out, or is to carry out, any of the activities that give effect to the structure; • ensure that Designers are competent, having the necessary skills and knowledge of risk management and WH&S Law and other legislative requirements; • conduct a preliminary hazard analysis and consult, co- operate and co-ordinate with other duty holders (as defined in the WHS Law) with regard to the hazards and risks associated with the structure; • identify hazards that are affected by the Design of the structure, and are within the control of the Designers; • record the results of the preliminary hazard analysis and any actions required in the design risk register (see Appendix A); • determine how risks will be eliminated or minimised by either referring to solutions identified in legislative requirements or conducting risk assessments

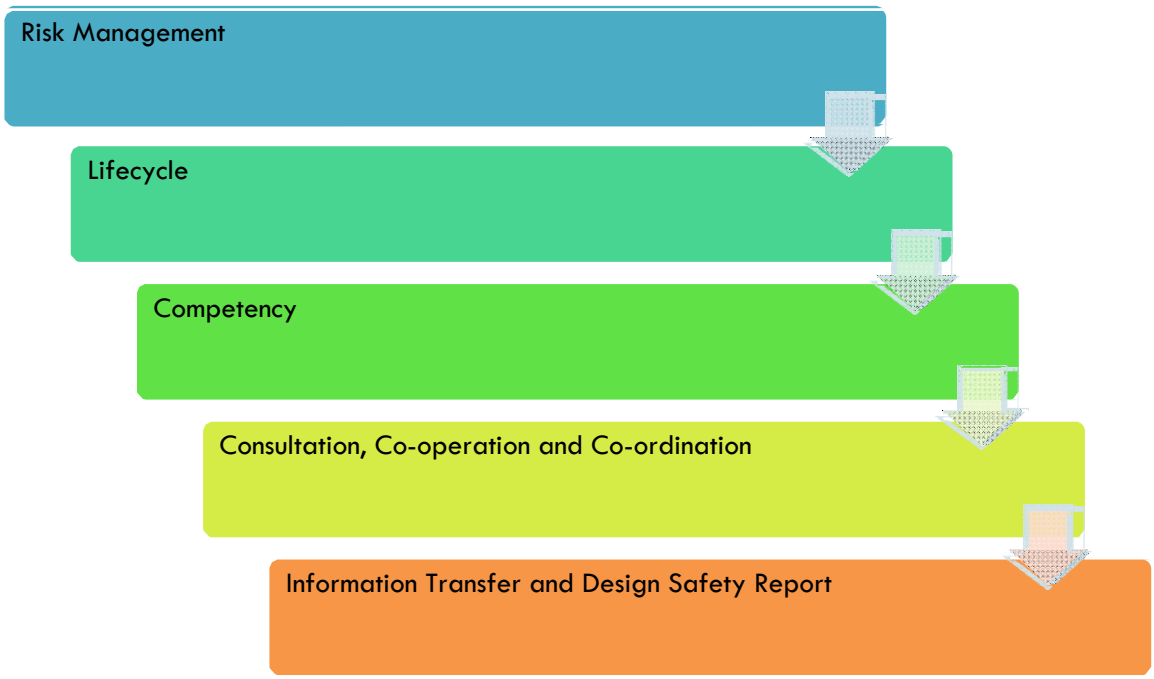
5. Key Elements of Safe Design

Safe Design refers to the integration of control measures early in the Design process to eliminate, or if this is not Reasonably Practicable, minimise the risks to health and safety throughout the life of the structure being designed.

UI (or the Designer engaged by UI) commences the Safe Design process at the concept development stage of a structure. This occurs when making decisions about:

(a) the Design and its intended use of the structure and the project which it forms part of;
(b) the materials to be used to construct the structure;
(c) the possible methods of construction, maintenance, operation, demolition or dismantling and disposal of the structure; and
(d) what legislative requirements need to be considered and complied with.

There are five key elements to the Safe Design process which are outlined below and which must be considered by the Designers.



5.2 Risk Management

The Designers must use a systematic risk management approach in order to achieve a Safe Design. The Designers must use a qualitative risk matrix with likelihood and consequence descriptors. The risk management approach adopted by the Designers must involve:

(a) identifying reasonably foreseeable hazards associated with the Design of the structure;
(b) assessing the risks arising from the hazards (as required);
(c) eliminating or minimise the risks by designing control measures;
(d) reviewing the control measures; and
(e) any other requirements outlined in section 6 of this document.

5.3 Lifecycle

The Designers must consider how their Design will affect the health and safety of those who will interact with the structure throughout the lifecycle of the structure.

After the Design has been approved as required by the Contract, the lifecycle of a structure encompasses the:

(a) construction of the structure, including the materials used and methods of construction;
(b) commissioning the structure, including the testing and analysis processes;
(c) operation and maintenance of the structure, including the cleaning and repairs, modifications or refurbishments; and
(d) decommissioning, demolition or disposal or possible recycling of the structure.

The Designers earliest deUlions fundamentally affect the health and safety of people who interact with the structure during the lifecycle of the structure. The Designers must consider the lifecycle of the structure as early as possible as certain Design deUlions may influence later Design choices and considerable rework of the structure may be required if it is necessary to reverse earlier Design deUlions.

5.4 Competency

Designers must be adequately trained in the risk management processes relevant to produce a Safe Design. In addition to risk management processes, Designers must have knowledge of WH&S Law and other legislative requirements relevant to health and safety.

Designers must have an understanding of the intended purpose of the structure and the relevant Technical Specifications. Designers must understand construction methods and appreciate how their Design impacts on those construction methods.

Designers are required to have the ability to source and apply relevant data on human dimensions, capacities and behaviours. This includes consulting with subcontractors, experts and other Stakeholders with specific skills and knowledge, such as engineers, to fill in competency or knowledge gaps.

Where gaps are identified by the Principal or the Contractor in competency requirements of a Designer, the Contractor shall review the available resources and training needs of that Designer to bridge the identified gap.

5.5 Consultation, Co-operation, and Co-ordination

Consultation, co-operation and co-ordination between the Designers, the Principal and relevant Stakeholders is crucial for effective and successful implementation of the Safe Design process. By drawing on the knowledge and experience of Stakeholders, including workers, more informed deUlions can be made about how the structure can be designed to eliminate or minimise risks. Involvement throughout all Design stages is encouraged with open communication about potential risks and collectively finding solutions.

The Contractor will, as far as is Reasonably Practicable, consult with other known duty holders (as defined in the WHS Law) with regard to hazards and risks associated with the structure and work together to find appropriate solutions to those hazards and risks. On construction projects, duty holders are generally (but not exclusively) comprised of:

(a) clients;
(b) design-build entities;
(c) designers and design consultants;
(d) constructors;
(e) principal contractors;
(f) contractors and subcontractors;
(g) operations and maintenance personnel.

The consultation, co-operation and co-ordination process may take place via emails and telephone calls or in structured meetings or risk workshops. Where the Design risk register (refer to Appendix A) has been populated and contains actions requiring performance, the Contractor must ensure that the Design risk register forms part of the agenda of structured meetings, such as each Design review or progress meeting.

5.6 Information Transfer and Design Safety Report

As stated in section 4 of this document, the Design Manager must give adequate information to each person who is provided with the Design in order to give effect to it. From a safety viewpoint, this is information about identified hazards and action taken or required to be taken to control the risks being transferred from the Design stages to those people involved in later stages of the lifecycle of the structure.

The aim of this information transfer is to inform other duty holders of any residual risks and minimise the likelihood of safety features incorporated into the Design from being altered or removed in later stages.

Transferring information can be as simple as making notes on drawings as these are immediately available to subcontractors and workers who will perform the construction of the structure. The Design Manager must provide the Principal with a Design safety report as required by the WHS Law for approval prior to the commencement of the WUC (**Design Safety Report**). The Design Manager must provide a copy of the approved Design Safety Report to the person conducting a business or undertaking that constructs and or commissions the design. The Design Safety Report must include the Design risk register (refer to Appendix A) and specify the hazards relating to the Design of the structure that, so far as the Design Manager reasonably knows:

(a) create a risk to persons who are to carry out the construction work; and
(b) are associated only with the Design and not with other designs of the same type of structure.

(c) This Design Safety Report should also include: any hazardous material or structural features pertaining to the structure and the assessments of the risks to WH&S Obligations resulting from those hazards;
(d) any actions taken to reduce the risk (such as Design changes);
(e) changes to construction methods of the WUC; and
(f) any parts of the Design where hazards have been identified but not resolved, that is, what risks will remain within the Design or may require specific procedures to be implemented during the operation and maintenance of the structure.

The UI Design Safety Report Template attached to this document sets out the contents and requirements that are to be included in the Design Safety Report.

When reviewing the scope of a design project the Design Manager shall determine and submit to the Principal for approval, advice as to whether a Work Health and Safety File is required to be maintained for the duration of the project. This File can assist the design team meet the duty to provide information to others. Where a deUlion has been made to use a Work Health and Safety File it is recommended that it include copies of all relevant health and safety information the Designer prepared and used in the design process. The Work Health and Safety File will include:

(g) the Design Safety Report;
(h) the Design risk register; and
(i) safety data sheets, manuals and procedures for safe operation, maintenance, dismantling or eventual demolition of the structure.

6 Design and Risk Management

The NSW Code of Practice '*Safe Design of Structures*' recommends a systematic approach that integrates the risk management process in the Design stages and encourages collaboration between the Principal, Designer and Contractor. The Principal requires the Contractor to comply with this recommendation (see Figure 1below).

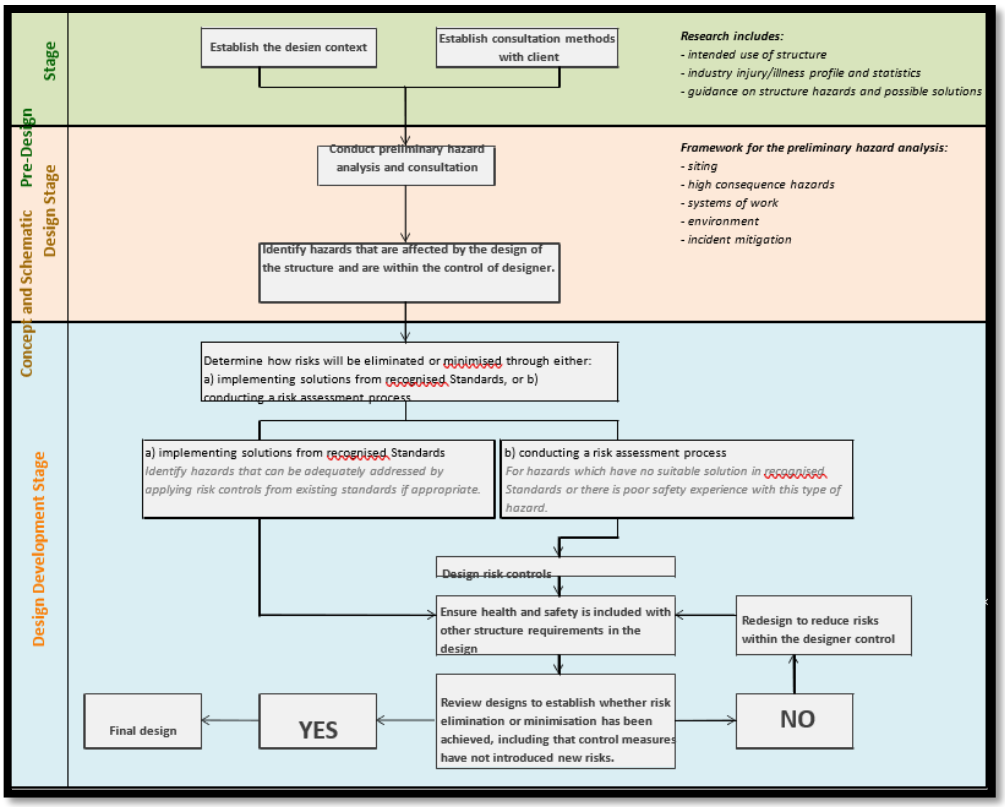


Figure 1: Systematic approach integrating design and risk management

Where hazard and risk workshops are required, the Principal requires the Designers workshop to be independently facilitated. The facilitator must be experienced in safety risk workshops, be able to challenge the Design and construction methodologies and the operational activities relevant to the structure. Where a Contractor has been engaged to prepare the Design, the Contractor will be responsible for expenses associated with the workshop.

6.1 Pre-design

At the pre-design stage the Design Manager is responsible for:
establishing the Design context in terms of the purpose of the structure, as well as the scope and complexity of the project;

(a) establishing the risk management context by identifying the breadth of workplace hazards and relevant legislative requirements that need to be considered;
(b) identifying the required Design disciplines, skills and competencies;
(c) identifying the roles and responsibilities of Stakeholders in relation to the project, and establishing collaborative relationships with those Stakeholders who influence the Design outcome;
(d) obtaining the Principal's project requirements from the Principal and ensuring that it includes the safety requirements and objectives for the project;
(e) achieving a shared understanding of safety expectations between the Principal and UI and the nominated Contractor by requesting from the Principal (or other UI representatives):

(i) all available information relating to the site that may affect health and safety; and
(ii) information about the types of activities and tasks likely or intended to be carried out in the structure, including the tasks of those who maintain, repair, service or clean the structure as an integral part of its use;

(f) coordinating research to assist in identifying hazards, assessing and controlling risks. In coordinating the research, the Contractor must have regard to:

(i) industry statistics regarding injuries and incidents;
(ii) hazard alerts or other reports from relevant Authorities, unions, employer associations, professional bodies representing designers and engineers; and
(iii) research and testing done on similar designs.

6.2 Conceptual and Schematic Design

(a) During the conceptual and schematic design stage the Design Manager, in consultation with the Designers and other relevant Stakeholders, (including WHS Representatives, Dangerous Goods & Laboratory Managers) must:

(i) conduct a preliminary hazard analysis and consult with relevant Stakeholders; and
(ii) identify hazards that are affected by the Design of the structure that are within the control of the Designers.

(b) The Design Manager must ensure that the hazard identification process referred to in section 6.2(a) takes place as early as possible in the concept development and Design stages. To comply with this clause 6.2(b), the Design Manager must provide the Principal with a report for the Principal's review and approval that must show evidence that the Designer Manager has:

(i) consulted with relevant Stakeholders (such as radiation, chemical, laboratory specialists);
(ii) conducted workshops and discussions with personnel using or working on similar structures within the Principal's property including health and safety representatives;
(iii) conducted an onsite assessment of an existing similar structure with feedback from the users of that existing structure;
(iv) researched information or reports from similar structures on hazards from or that have been prepared by Stakeholders and then complete an analysis of the Design;
(v) conducted workshops with experienced contractors and subcontractors who will be asked to construct, use and maintain the structure; and
(vi) conducted workshops with specialist consultants and experts in hazards.

(c) There are numerous workshop processes that can be used for the hazard identification process, choosing the most appropriate format will often depend on the type of structure and the complexity of the Design. Refer to *Appendix C Workshop Guide* for an example of how workshops can be organised.

(d) The Design Manager is responsible for determining the most suitable process. Whichever process is used it is important that it is systematic and not limited to one or two people's involvement.

(e) The Design Manager must refer to *Appendix B Generic Hazard Groups*, which provides a generic grouping of hazards. Along with the Designers that will be involved in the preliminary hazard analysis, decisions should be made determining which hazards are 'in scope' of the steps of the risk management process and this should be considered in the Design process. A hazard would be considered to be 'in scope' if it can be affected, introduced or increased by the Design of the structure.

(f) The Design Manager must ensure that the preliminary hazard identification report includes the following information:

(i) (**Location of the structure**) potential Design issues that may affect safety include:

(A) proximity of the structure to adjacent properties or nearby roads;
(B) surrounding land use;
(C) clearance required for construction equipment and techniques;
(D)demolition of existing assets on the site;
(E) proximity of the structure to underground or overhead services such as electrical services;
(F) exposure of workers to adjacent traffic or other hazards;
(G)site conditions such as foundations and construction over other assets or over water;
(H) safety of the public; and
(I) use of streets adjacent to the site;

(ii) (**High consequence hazards**) the storage and handling of dangerous goods, or work with high energy hazards and health hazards such as biological materials;

(iii) (**Systems of work that involve the interaction of persons with the structure**) consider both technical and human factors, including the ability to change the behaviour of people throughout the lifecycle of the structure to compensate for Design changes. In anticipating the misuse of the structure throughout the lifecycle of the structure, regard must be had for the:

(A) cleaning and maintenance activities that pose risks;
(B) rapid construction techniques;
(C) materials to be used in construction;
(D) staging and coordination with other works on the site;
(E) inadequate pedestrian or vehicle separation;
(F) restricted access for building and plant maintenance;
(G) hazardous manual tasks;
(H) working at height; and
(I) exposure to occupational violence;

(iv) (**Environmental conditions**) the impact of adverse natural events such as cyclones, floods and earthquakes, inadequate ventilation or lighting, high background noise levels and welfare facilities that do not meet workplace needs; and

(g) (**Incident mitigation**) consideration of the possibility of the structure adversely impacting the ability of the Principal, the Contractor, subcontractors and other relevant persons to respond to an incident that occurs on the site due to inadequate egress, siting of assembly areas and inadequate emergency services access.

6.3 Design Development

(a) During this stage the Design Manager is responsible for managing and coordinating:

(i) Design concepts being converted into design documents and Technical Specifications;

(ii) how risks will be eliminated or minimised on the site by either referring to solutions in recognised legislative requirements, including by:

(A) developing a set of Design options in accordance with the hierarchy of control set out in Figure 2 in paragraph 6.3(i) below;
(B) selecting the optimum Safe Design solution;

(C) testing, trialing or evaluating the Safe Design solution;
(D) redesigning the Design to control any residual risks; and
(E) ensuring the control measures are implemented;
(F) preparing the design documents; and
(G) finalising the Design by:

(I) closing out the Design risk register;
(II) preparing the Design Safety Report (refer to the UI Safety Design Report Template); and
(III) preparing any other risk control information needed for the lifecycle of the structure.

(b) The Designer (including the Contractor where it is responsible for the Design) must regularly review and update the Design Safety Report whilst completing the WUC (which the Principal may request to review at any time).

(c) The Contractor must submit the design documents to the Principal at regular intervals (as agreed between the parties) during the Design phase for review and approval by the Principal. All design documents provided by the Contractor must be accompanied by a transmittal note (in a form approved by the Principal) recording the transmittal of information between the parties and detailing the relevant contract references.

(d) If the Contractor requires any amendments to the Design after the design documents have been 'issued for construction', the amendments must be approved by the Principal. The Contractor shall ensure that Design remains compliant with the Principal's project requirements. Any proposed amendments to the approved Design that vary from the Principal's project requirements that are initiated by the Contractor shall not be implemented until formal written approval from the Principal is obtained by the Contractor.

(e) When selecting solutions to eliminate or minimise risks to health and safety, Designers must identify and comply with all legislative requirements relevant to the structure. Designers must also consider:

(i) The University Design Standards;
(ii) the Technical Specifications; and
(iii) any solutions proposed by relevant industry or professional bodies.

(f) Designers must keep in mind that while the National Construction Code of Australia (**NCCA**) and Building Code of Australia cover many health and safety provisions (such as access and egress, fire-fighting equipment, emergency access, Legionella controls and sanitary facilities), these may not adequately satisfy all WH&S Obligations and deal adequately with all workplace risks. For example, the NCCA does not provide guidance for some specialised structures such as major hazard facilities.

(g) Where legislative requirements do not provide a suitable solution for a particular hazard identified by the Designers or there is poor safety experience with this type of hazard in the industry generally, the Design Manager must ensure that a risk assessment process is conducted. If similar tasks or processes apply for a number of projects, or the Design is of fairly routine nature, a generic risk assessment model might be appropriate. However, the Design Manager is still responsible for ensuring that the generic assessment is valid for the project, before deciding to adopt it. This decision should be made in consultation with the UI planning manager.

(h) In assessing Design safety risks under section 6.3(g), the following risk assessment methods must be considered by the Designers (whether or not as part of a risk assessment workshop):

(i) fact finding to determine existing controls, if any;

(ii) testing Design assumptions to ensure that aspects of it are not based on incorrect beliefs or anticipation on the part of the Designer, as to how workers or others involved in the lifecycle of the structure will act or react;

(iii) testing of structures or components specified for use in the construction of the structure and the end use and maintenance of the structure;

(iv) consulting with Stakeholders who have specialised knowledge and/or the capacity to control or influence the Design to identify, assess and mitigate risks;

(v) consulting directly with other experts who have been involved with similar projects or structures;

(vi) when designing for the renovation or demolition of existing buildings, reviewing previous design documents or information about the Design structure and any modifications undertaken to address safety concerns; and

(vii) consulting professional industry or employee associations who may assist with risk assessments for the type of work and workplace.

(i) The hierarchy of controls referred to in Figure 2 below must be used by the Designers when assessing risks and determining controls. This hierarchy ranks controls from the highest level of protection and reliability to the lowest.

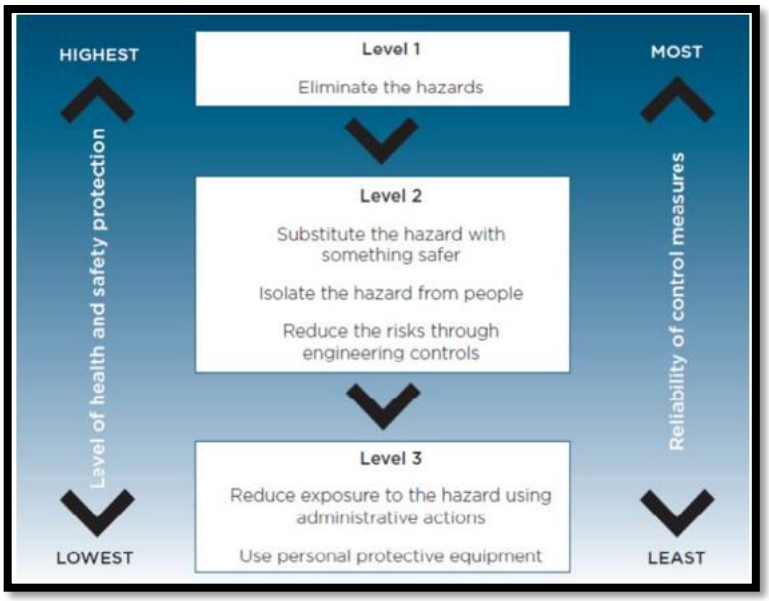


Figure 2: Hierarchy of controls (reproduced from Code of Practice: How to manage work health and safety risks)

(j) It is expected that on occasion it will be necessary to use a combination of control measures to minimise the risks to health and safety. When considering which control measures to implement to minimise the risks of the Design to health and safety, Designers must:

(i) look specifically at identifying any risks that a competent builder or user would not be expected to be aware of;

(ii) consider where residual risks remain, and ensure these are communicated to the Contractor and/or other people likely to exerUle control in the next stage of the lifecycle of the structure (refer to section 5.6);

(iii) take a holistic view on the interaction of hazards in the assessment of risks and implementation of control measures; and

(iv) assess alternative control measures for their applicability.

6.4 Review of Controls

Throughout the Design stages the Design Manager is responsible for ensuring that Design solutions are reviewed by Designers with the appropriate expertise to confirm the effectiveness of risk controls and, if necessary, redesigned to minimise the risks so far as is Reasonably Practicable.

This review should be carried out as Design safety reviews (refer to the Ul Design Safety Review Template) and should involve the Stakeholders who will eventually construct, use and maintain the structure. Where this is not possible, the review shall **include Stakeholders with the knowledge and experience in construction and** maintenance processes, as well as safety specialists, in the design safety reviews.

Where the Principal is responsible for the Design and construction (i.e., when a Contractor is not engaged), the Design Manager is responsible for conducting post- construction reviews to determine the effectiveness of safety in Design. This post- construction review should be attended by all relevant Stakeholders, preferably in a workshop format. The aim of this review is to identify the most effective Design practices and any Design innovations that could be used on other projects. This should then feed into a review of University Design Standards as applicable. Where Ul are only involved in the Design stages of the project the Design

Manager should attempt to source feedback to assist Designers in improving their future designs.

7 Attachments

(a) UI Design Safety Review Template
(b) UI Design Safety Report Template

Appendix A: Design Risk Register

Each item must be reviewed monthly by each duty holder until closed. The 'verified by' column should be completed by the person responsible for this Risk Register as set out in this document once the action has been verified as complete and witnessed on drawings and documents.

Project:			Design/Project Manager:			Client:					Last Updated:	
Item #	Design Life Cycle Stage	Hazard / Risk	Risk Rating	Proposed Control Measure	Responsibility	By When (date)	Action Taken	Residual Risk	Reference Document (document or drawings number and revision)	Status (open / closed)	Date Closed	Verified By

Appendix B: Generic Hazard Groups

Hazard Groups	Consider the following
Electrical Safety	• Standard compliance requirements • Earthing of electrical installations • Location of underground and overhead power cables • Protection of leads/cables • Number and location of power points • Contact with live hidden/visible cables and distribution boards
Fire and Emergencies	• Standard compliance requirements • Fire risks such as ignition sources and combustibles • Fire detection and fire fighting • Emergency routes and exits • Access for and structural capacity to carry fire tenders • Environmental incidents and spill prevention • Other emergency facilities
Movement of Peoples and Materials	• Standard compliance requirements • Safe access and egress, including for people with disability • Traffic management including during construction • Loading bays and ramps • Safe crossings • Exclusion zones • Site security
Working Environment	• Standard compliance requirements • Ventilation for thermal comfort and general air quality and specific ventilation requirements for the work to be performed on the • premises • Temperature • Lighting including that of plant rooms • Lighting and illumination pollution created by construction work or security lighting • Acoustic properties and noise control, for example, noise isolation, insulation and absorption • Seating • Floor surfaces to prevent slips and trips • Space for occupants
Plant	• Standard compliance requirements • Tower crane locations, loading and unloading • Mobile crane loads on slabs • Plant and machinery installed in a building or structure • Materials handling plant and equipment • Maintenance access to plant and equipment • The guarding of plant and machinery • Lift installations
Amenities, Facilities and Waste	• Standard compliance requirements

	• Access to various amenities and facilities such as storage, first aid rooms/sick rooms, rest rooms, meal and accommodation areas • and drinking water • Waste collection and temporary storage of wastes • Waste transport and disposal • Construction waste
Earthworks	• Standard compliance requirements • Excavations (for example, risks from earth collapsing or engulfment) • Location of underground services • Creation of dust from earthworks, construction and demolition works • Sediment/stormwater runoff entering receiving environments • Runoff and potential erosion from stockpile/excavation areas
Structural Safety	• Standard compliance requirements • Erection of steelwork or concrete frameworks • Load bearing requirements • Stability and integrity of the structure
Manual Tasks	• Standard compliance requirements • Methods of material handling • Accessibility of material handling • Loading docks and storage facilities • Workplace space and layout to prevent musculoskeletal disorders, including facilitating use of mechanical aids • Assembly and disassembly of prefabricated fixtures and fittings
Substances	• Standard compliance requirements • Exposure to hazardous substances and materials including insulation and decorative materials • Exposure to volatile organic compounds and off gassing using composite wood products or paints • Exposure to acid sulphate soils • Exposure to irritant dust and fumes • Storage and use of hazardous chemicals, including cleaning products, paints and • Spills, disposal and transport of hazardous substances and compounds
Falls Prevention	• Standard compliance requirements • Guard rails • Window heights and cleaning • Anchorage points for building maintenance and cleaning • Access to working spaces for construction, cleaning, maintenance and repairs • Scaffolding • Temporary work platforms • Roofing materials and surface characteristics such as fragility, slip resistance and pitch
Specific Risks	Specific risks can be risks identified that are peculiar to the project in relation to: • Building type – Laboratory

	• Construction methodology – Curtain wall erection • Infrastructure • Building type – Laboratory • Construction methodology – Curtain wall erection • Infrastructure – • Dangerous Goods Storage, reticulation & abatement Self-harm – Psychiatric patients or distressed students Building Access Equipment • Exposure to radiation, for example, electromagnetic radiation • Exposure to biological hazards • High risk construction work • Fatigue • Working alone • Use of explosives • Confined spaces • Mechanical vibration • Ecosystems, protected habitats, threatened and significant species • Over and under water work, including diving and work in caissons with compressed air supply
Noise Exposure	• Exposure to noise from plant or from surrounding area • Exposure to long term or single sudden noise

Appendix C: Workshop Guide

Workshops should be well prepared and systematic. The delivery of the workshop can follow the process below:

Step	Task	Responsibility
1	Assemble a workshop team – appropriate representation of Stakeholders is required (internal and external).	Project Manager
2	Define the objective and scope of the workshop.	Design Manager
3	Select a facilitator – the facilitator should be sufficiently removed from the Design process to enable the facilitator to effectively test the Design concepts and encourage participants to constructively challenge the Design. The facilitator should have: • an understanding of Safe Design • be competent in risk assessment methodologies • have a broad understanding of the Principal's project requirements • an understanding of safety in construction, operation and maintenance • the ability to keep the workshop on track • the ability to bring out the view of a diverse range of people participating in the workshop The facilitator does not need to be from the Principal and may be sourced externally.	Design Manager
4	Agree on a set of guidewords to assist the process. These can be based on the information in Appendix B Generic Hazard Groups or developed independently.	Project Manager and Design Manager
5	Separate the Design into logical components of appropriate size. This will help with timing of the workshop and aid in keeping the workshop focused on specific areas.	Project Manager and Design Manager
6	For each component use the guidewords to assist with the identification of safety hazards and their associated risks.	All participants
7	Determine how risk will be eliminated or minimised through either: a) implementing solutions from legislative requirements, or b) conducting a risk assessment process	All participants
8	Assign proposed solution to relevant Stakeholder/participant for action.	Design Manager
9	Assess whether the proposed risk controls are appropriate.	All participants
10	Record appropriate information from the workshop using Appendix A Design Risk Register.	Design Manager

Schedule C University's WH&S Requirements for Contractors

UI Work Health and Safety Requirements of Contractors

University Infrastructure

Table of Contents

1 INTRODUCTION

The Principal engages contractors to perform a variety of work.

Contractors are generally engaged under contracts which includes certain work health and safety obligations.

These Work Health and Safety Requirements of Contractors also set out some obligations and expectations the Principal has of contractors and in specific the Contractor.

1.1 General

On commencement of the Contract, and as otherwise requested by the Principal, the Contractor shall provide the following documents to UI:

a) the Contractor's WHS System; and
b) the WHS Management Plan for the WUC including the proposed audit schedule for the project.

1.2 References

Other documents to be read in conjunction with these UI Work Health and Safety Requirements of Contractors include the:

- Contract;
- UI Design Risk Management Procedure; and
- Contractor Handbook.

2 WHS MANAGEMENT APPROACH AND FRAMEWORK

2.1 WHS Management System

The Contractor shall have in place a WHS management system that complies with AS/NZS ISO 480, OHSAS 18001 and/or ISO 45001:2018 unless otherwise approved.

The Contractor shall be responsible for ensuring that all WUC is undertaken in accordance with the Contractor's WHS management system.

2.2 WHS Management Plan

The Contractor shall prepare and implement a project specific Work Health and Safety Management Plan (WHSMP) for the WUC.

In preparing the WHSMP, the Contractor must:

a) have regard to the Contractor Handbook.

b) ensure the WHSMP identifies UI's or the Principal's requirements in each area of service or product delivery, sets out how these requirements will be met and references particular University Policy or Codes of Conduct as required.

At a minimum, the WHSMP shall include the following:

a) A front cover page containing the following information:
i. Contractor's name and logo ii. "CONTRACT WHS PLAN"
iii. "Contract Name:"
iv. "Contract No:"
Document number, revision, and date of issue, names & signatures of author and of approver.

b) A page setting out contact names, titles, addresses, email addresses, telephone and mobile numbers and WHS responsibilities for all people who have a WHS responsibility for the WUC;

c) Management responsibilities specific to the Contract, including the responsibility and authority for WHS;

d) The Contractor's WHS objectives and key performance indicators for the Contract, specifying how they will be measured and reported;

e) The Contractor's proposed organisational chart for the Contract, specifying those positions of management and those responsible for WHS management activities;

f) An outline of procedures for reviewing, updating and controlling the WHSMP and associated documentation including design documentation;

g) A description of the steps required for the safe execution of the WUC, and the means that the Contractor shall adopt to ensure the steps are controlled;

h) Any site-specific health and safety rules, and the arrangements for ensuring that all persons at the workplace are informed of these rules;

i) Arrangements for the collection and any assessment, monitoring and review of safe work method statements relevant to the WUC;

j) Arrangements for consultation, co operation and the co ordination of activities between the Contractor, and any other party with WHS obligations in relation to the project (including under the WHS Act and Regulations);

k) Reference to WHS requirements specific to the WUC;

l) Details of the Contractor's internal and subcontractor WHS audit process including an audit schedule and how records relating to audits will be maintained;

m) Details of special processes and control procedures;

n) Details of how WHSMP non-conformances will be treated, including how any WHS incidents will be managed;

o) How each person to carry out WUC is made aware of the WHSMP before they commence work (and their right to inspect the WHSMP);

p) Arrangements for the review and revision of the WHSMP to ensure that it remains up to date;

q) Details of the WHS records to be made and maintained by the Contractor; and

r) Copies of all WHS inductions, inspection and audit templates to be used under the Contract.

3 RESPONSIBILITY AND ACCOUNTABILITY

3.1 Human resources

The Contractor will identify resource requirements from a WHS perspective and generally, and provide adequate resources to facilitate the effective and efficient progress of the Works. Resources will include the assignment of trained and competent personnel for management, performance of work and verification activities including site inspections and internal WHS audits.

The recruitment and selection process shall be completed by the Contractor in accordance with their recruitment and selection procedures. The necessary competencies, qualifications and experience required to perform the roles and responsibilities of the position must be stipulated.

The Contractor shall have in place a training matrix for key roles in addition to a program to assess skills and competencies necessary to carry out the work and a methodology for monitoring and managing personnel under the performance management system.

4 SUBCONTRACTOR MANAGEMENT AND PROCUREMENT

4.1 Selection and Appointment of Subcontractors

The Contractor must have an appropriate selection and procurement procedure in place. Subcontractors must be selected and appointed in accordance with the Contractor's selection and procurement procedure. In so doing the Contractor must ensure that the subcontractor can and will meet the WHS requirements of the WUC.

The Contractor must maintain documentation including all subcontractor agreements, supplier agreements and consultant deeds that include a scope of work and requirements for WHS.

The Contractor shall be able to demonstrate that the subcontractor was selected based on an examination and evaluation of the subcontractor's experience and capabilities to perform the work, including having an effective WHS management system to be implemented.

4.2 Provision of Information to subcontractors

Contractors must ensure that the procurement process includes the provision of project specifications to ensure that WHS requirements can be reviewed and the subcontractor demonstrates they are able to comply with project WHS requirements.

4.3 Procurement

All purchased products shall be evaluated to ensure conformity with the requirements of applicable specifications. Adequate records shall be maintained of purchased products and documentation shall be obtained stating that material and equipment conform to procurement requirements.

The Contractor shall ensure that purchased products conform to the requirements specified by the
Contract and that the Contractor's purchase orders:

- Stipulate applicable WHS system requirements;
- Identify requirements for verifying purchased product;
- Address product identification and traceability requirements;
- Specify material certification requirements; and
- Specify operation & maintenance manuals applicable to the product.

5 AUDIT AND RESPONSE BY CONTRACTOR

5.1 Audit

An audit program shall be implemented addressing key processes to be audited, considering prior audit outcomes and the planned high risk activities and milestones throughout the Contract. The Contractor shall ensure that findings raised during audits are followed up and closed out in appropriate timeframes and at the expense of the Contractor.

UI will engage a WHS consultant to undertake audits of the Contractor's work in order to assess it against the Contractor's WHSMP, the Contractor's WHS obligations under the WHS Act and Regulations and compliance with the obligations in the Contract. UI will provide advance notice and scheduling to the Contractor about when the audits will be undertaken and completed. UI reserves the right to determine and change the frequency and extent of the audits at its discretion.

5.2 Audit Commencement and Responding to Audits

UI auditor(s) shall meet with the UI project team and the Contractor's onsite management team, at the start of the Contract to outline the key Contract milestones and identify high risk tasks. The initial UI audit schedule shall be established following this meeting.

The meeting shall discuss the purpose of the audit and provide a clear focus on the audit activities, task observations and expectations for Contractor responses to non-conformances or opportunities for improvement which may be identified.

The Contractor must provide a response within five days of an audit addressing the findings of the audit report with proposed corrective action and a timeline for close out. The Contractor shall agree to rectify or provide solutions to all WHS matters identified during inspection or during an audit, at the Contractor's expense.

As a minimum there will be a desktop audit of site WHS documentation within the first three months and at least one system implementation audit. Additional audits shall be scheduled:

- to correspond to the schedule of project milestones and high risk activities; and
- in response to changes in WHS performance, for example, an increase in incidents or repeat audit findings.

6 COMMUNICATION AND REPORTING

6.1 Internal/External Communication

The Contractor shall document procedures for communication with third parties, including customers, suppliers, other service providers and visitors, as appropriate, about relevant WHS requirements (including those in the WHSMP).

The Contractor must keep a record of communication to workers and external parties about WHS, including a copy of any training or induction material.

6.2 Responsibility, authority and communication

The Contractor shall formally appoint a specific member of the management team as the representative(s) responsible for the WHSMP. This Project WHS Management Representative will coordinate the monitoring, reporting and maintenance of the WHSMP and report the status of the system to the nominated UI representative on a monthly basis.

The person nominated for this role must be approved by the UI Compliance Manager and UI project team prior to commencement of the WUC.

6.3 WHS Performance Reporting

The Contractor shall provide a WHS Performance Report on a monthly basis to ensure the continuing suitability, adequacy and effectiveness of the WHSMP. The inputs to the Report must include (but are not limited to):

a) Register of Non-conformances, corrective, remedial and preventive actions;
b) Schedule of internal and external audits;
c) Performance to WHSMP objectives;
d) Improvements and changes to the WHSMP; and
e) The WHS Monthly Performance Report template in Appendix A.

6.4 WHS Close Out Report

As a prerequisite to achieving Practical Completion of the WUC a WHS Management Closeout Report shall be submitted to UI for review and approval.

The Report shall include:

a) a summary covering an overview of the works under the Contract including key WHS issues managed, details related to WHS issues audit findings;
b) the number of internal / external audits conducted;
c) the project accident/incident register;
d) the project audit log, including non-conformances, corrective, remedial and preventative actions;
e) initiatives implemented during the project;
f) lessons learnt from review of WHS performance; and g) the final project WHS Performance Report.

6.5 Terms and Definitions

WHS Act and Regulations: The *Work Health and Safety Act 2011* (NSW) and the *Work Health and Safety Regulation 2011* (NSW).

Appendix A – Monthly WHS Performance Report

All fields are mandatory				
Contractor Name:				
Project/Contract: (include project code if applicable)				
Prepared by:		**Email:**		
Month / Year of stats.		**Date issued:**		
WHS Statistics				
No.	**Item**		**For the month reported**	
Lag Indicators1				
1.	Number of Hours Worked			
2.	Number of Workers			
3.	Number of Fatalities			
4.	Number of Lost Time Injuries*			
5.	Number of Lost Work Days			
6.	Number of Medical Treatments*			
7.	Number of First Aid Treatments*			
8.	Number of Near Misses*			
9.	Number of SafeWork Notices*			
10	Number of Notifiable Incidents*			
Lead Indicators1				
11.	Number of WHS Inspections / Audits			
12.	Number of Hazards Reported			
13.	Number of Risk Assessments Completed			
14.	Number of Training / Induction sessions completed			
15	Number of WHS Briefings (e.g. prestart/toolbox meetings)			
Unresolved WHS issues or matters to be closed-out:				
WHS topics for focus of coming month:				

1 Definitions of indicators available on next page.

Notes:

a) Data for the project/contract must reflect the data of all contractors working under the principal/head contractor.
b) University Infrastructure reserve the right to conduct checks on reported statistics.
(c) Contractors are required to collate the data on a monthly basis, for each project/contract.
(d) All statistics are compiled and used as key performance indicators to assess and monitor WHS performance of contractors.
(e) This data is used as part of the overall WHS performance statistics of University Infrastructure.

Definitions:
Hours Worked means the number of hours worked, including subcontractor workers, for the contract/project during the reported month.

Number of Workers means the total number of workers, including the number of subcontractor workers, for the contract/project during the reported month.
N.B: This is not an average number of workers at the site for the month. This is the true count of workers at the site throughout the month. Example: If an individual subcontractor worker is at the site for only one day, include the worker in the count.

Loss Time Injury means a work related injury or disease where the injured worker has at least 1 day or shift off work after the day of occurrence;

Lost Work Days means total number of days off work due to work related incidents or diseases;

Medical Treatment means an incident for which medical attention (i.e. doctor or hospital) was sought;

First Aid Treatment means an incident for which on-site first aid was administered and did not require medical treatment;

Near Miss means an incident that did not result in injury, illness, or damage but had the potential to do so;

SafeWork NSW Notice means a Prohibition Notice or Improvement Notice issued by a SafeWork NSW Inspector to the contractor;

Notifiable Incident means an incident that is notifiable to an authority (e.g. SafeWork NSW) under the WHS Act and Regulations;

WHS Inspections / Audits means an internal WHS inspections carried out by the contractor;

Hazard means anything that has the potential to cause injury or illness to people, or damage to plant or equipment;

Risk Assessment means the process to identify reasonably foreseeable hazards associated with the work that could give rise to risks to health and safety, and then manage the associated risks. Often this will be in the form of a safe work method statement (SWMS);

Training Session means any training delivered by the Contractor to enable workers to work in a safe manner;

Induction Session: induction sessions include contractor campus induction (organised through UI), contractor location-specific induction such as animal farms, chemical laboratories, etc. (organised through contract manager and carried out by UoS department/faculty staff) as required and the Contractors own induction;

WHS Briefing means a meeting or short conversation (i.e. toolbox talks) where specific health and safety topics relevant to the work are discussed with workers.

The **online form** for Contractor WHS Statistics must be completed and submitted within the first week of the month (for the preceding month) for review and approval by UI WHS resource and UI Project / Contract Manager. For lag indicators such as Lost time injuries, Medical treatment injuries, First Aid Injuries & Near Miss Incidents, contractor must write a brief description in the comments section of the online form and email supporting documents, such as copies of incident registers, incident investigation reports including corrective, remedial and preventative actions, return to work certificates, SafeWork Notification Records to UI WHS resource and UI Project / Contract Manager when submitting WHS Statistics.