

UNIVERSITY COLLEGE CORK

Establishment of a Multi Supplier
Framework of Construction
Consultancy Services for Small &
Minor Projects for the Buildings &
Estates Office, UCC

Capital Projects Office

Schedule of Stage Services for Civil
& Structural Engineering



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Document Revisions

Issue	Prepared by	Reviewed by	Authorised by	Date Issued	Status
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1.0 INTRODUCTION

This Schedule of Services has been developed to ensure that University College Cork (hereinafter called UCC) service requirements for the completion of the commission are clearly understood by the service provider and is mutually agreed between UCC and the service provider.

The schedule has been developed in a generic format to facilitate its use for all UCC capital developments and while the schedule has been developed to be a comprehensive statement of the service requirements of UCC the service provider must ensure that all necessary actions normally required for the completion of the commission are included for in their proposal.

Any conflicts between this Schedule of Services and the partially complete Schedules A & B or any other information issued by UCC should be immediately brought to the attention of Capital Projects Office.

The Capital Projects Office Design Team Procedures apply to all to all design team members, regardless of whether they are part of a single point design team, an integrated design team or directly procured by UCC.

Where the commission relates to a single point design team appointment, the term Integrated Design Team Lead (IDTL) shall be replaced with Design Team Lead, and Integrated Design Team (IDT) with Single Point Design Team.

This document is to be read in conjunction with the following documentation:

- 1 UCC's Capital Projects Office Design Team Procedures,

1.1 CLIENT

For this commission the client is "*University College Cork*"

1.2 CONTRACTUAL ARRANGEMENTS

For this commission the client shall appoint single point design team and Section 1.2.2 below applies.

1.2.1 Integrated Design Team (IDT)

The Client shall appoint an integrated design team ("the Design Team") comprising of the following principal service providers (PSP).

- Architect and associated specialist skills providers
- Civil & Structural Engineer and associated specialist skills providers
- Mechanical and Electrical Engineer and associated specialist skills providers
- Project Supervisor Design Process.

A principal service providers may be requested to provide a specialist skills provider (SSP), as described in the Suitability Assessment Questionnaire and ITT. A PSP may provide these services as in-house or

engage the services of an external consultant. Where an external consultant is used to provide these services, then the PSP shall enter into a sub-consultancy agreement with their respective specialist service. These agreements are to be furnished to UCC prior to completion of Stage 1. A Collateral Warranty will be completed between the Employer and all sub consultants using model form 2.3 latest revision.

UCC reserves the right to withhold payment of services until the executed Collateral Warranty and Sub-consultant agreements have been received by UCC.

In most cases, the Architect will be nominated as the integrated design team lead (IDTL), however for civil engineering projects, the Civil & Structural Engineer may be nominated as the design team lead and will be clearly defined in the Definitive Project Brief.

Each member of the Integrated Design Team shall enter into a direct contract with the Client under their respective Conditions of Engagement, but all parties shall operate as an Integrated Design Team, collaborating and coordinating their services in accordance with these integrated design team procedures, the relevant schedule of services and all other contract documents.

The IDTL shall also be responsible for coordinating and integrating the work of any other consultants appointed directly by the Employer who are not members of the Integrated Design Team, including but not limited to:

- Quantity Surveyor,
- Carbon Co-ordinator,
- Energy Efficient Designer; or
- Any other such consultants engaged by the Client for the Project.

The IDTL's role in managing these additional consultants shall include:

- Programme and Interface Management: Ensuring alignment of deliverables and design information with the Integrated Design Team,
- Information Coordination: Incorporating their outputs into the overall design and documentation; and
- Communication Management: Acting as the primary point of coordination between such consultants and the Integrated Design Team.

The Integrated Design Team shall collectively adopt and implement an Integrated Working Protocol, covering:

- Agreed procedures for design coordination,
- Common Data Environment (BIM),
- Risk management processes,

- Collaborative decision-making and reporting structures; and
- Regular coordination meetings.

Each integrated design team member remains responsible for the performance of their own services under their Conditions of Engagement, including compliance with Building Control (Amendment) Regulations 2014 and all statutory obligations.

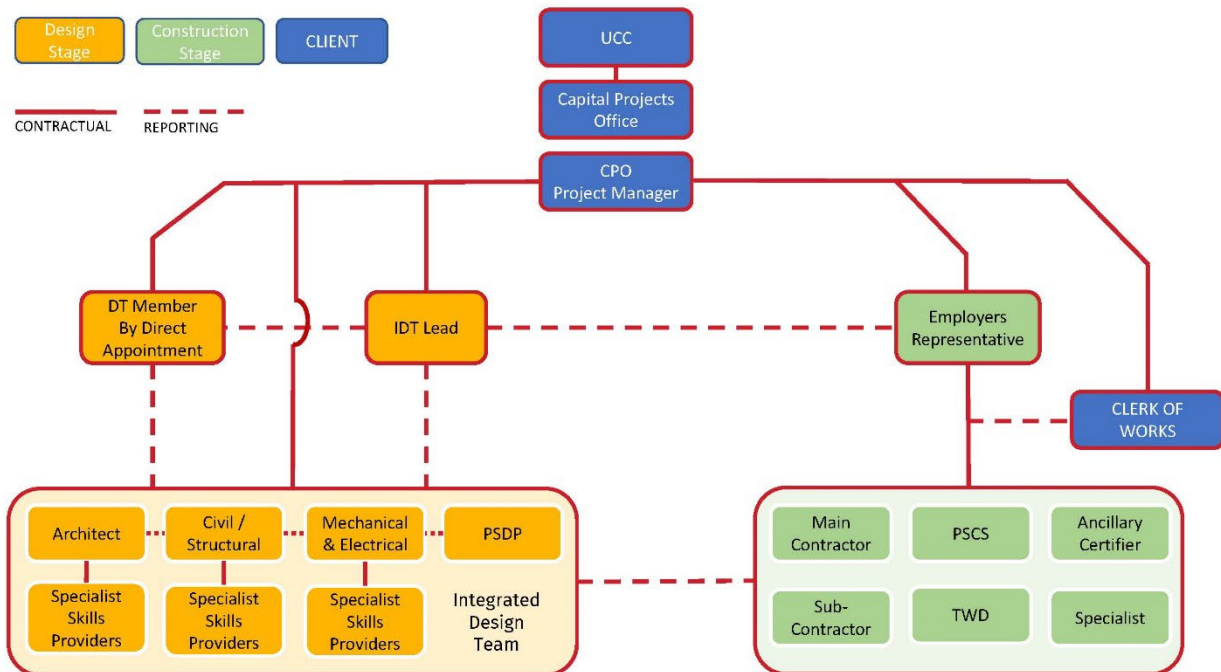


Figure 1.2.1 Integrated Design Team Reporting Structure

1.2.2 Single Point Design (SPDT)

The employer will enter into a contract with the Design Team Leader who is identified as the Architect for this project. The Architect will enter into a sub consultancy agreement with the other consultants i.e. Civil & Structural Engineer, Mechanical & Electrical Engineer, Quantity Surveyor, PSDP, ER, Design Certifier, Assigned Certifier etc.

These agreements are to be furnished to UCC prior to completion of Stage 1. A Collateral Warranty will be completed between the Employer and all sub consultants using model form 2.3 latest revision.

UCC reserves the right to withhold payment of services until the executed Collateral Warranty and Sub-consultant agreements have been received by UCC.

Where identified in the Definitive Project Brief, some disciplines may not form part of the single source provider and shall be procured by direct appointment by UCC. In this instance the Design Team Lead and all other design team members shall accept this discipline as an active member of the overall Design Team.

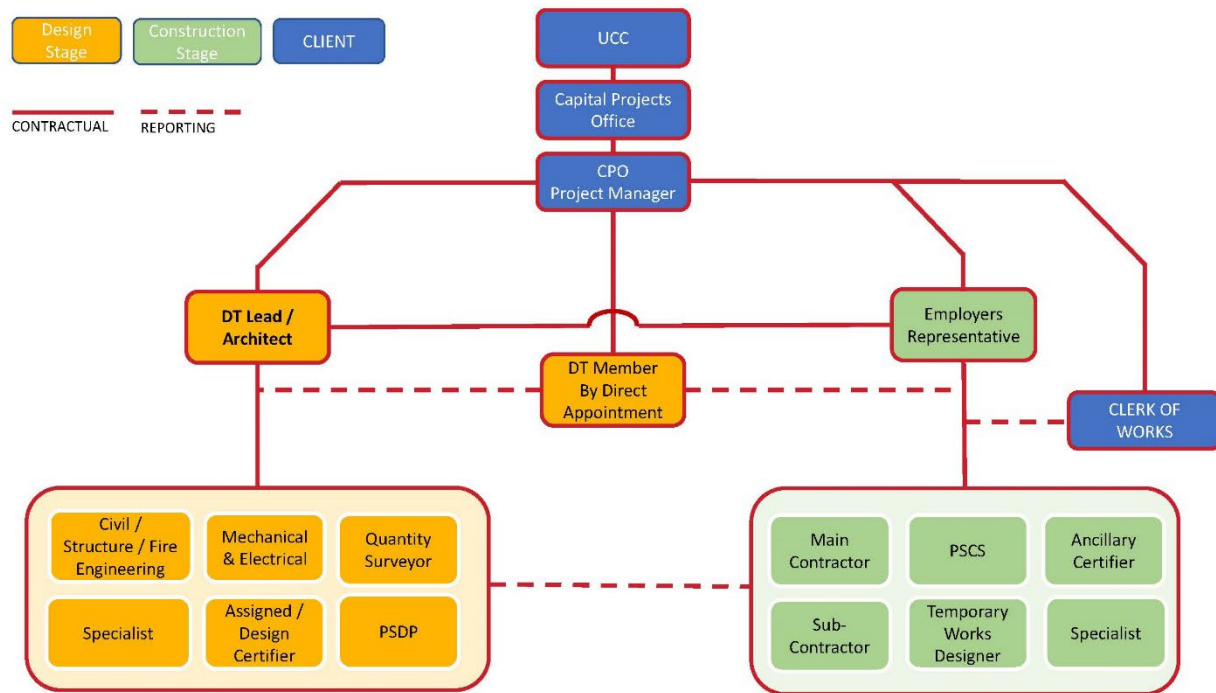


Figure 1.2.2 Single Point Design Team Reporting Structure

1.3 THE SCOPE OF SERVICES

The terms of engagement for consultants is the Department of Finance Conditions of Engagement current at the time of the appointment. (available at <https://constructionprocurement.gov.ie/standard-conditions-of-engagement/>)

The scope of services is as set out in this document and is to be read in conjunction with all other schedule of services for each discipline.

The scope of service includes all work required to design and construct the project in a competent and professional manner (whether expressly stated or not); prepare all documentation and reports required by these procedures; obtain all necessary approvals whether UCC or statutory approvals, all in accordance with the above documents or as otherwise modified by the briefing information. All work required to comply with the Building Control (Amendment) Regulations 2014 is included in the scope of service, including the roles of Design Certifier and Assigned Certifier to be carried out by the Design Team Leader.

Consultation with UCC and UCC's end users is an on-going process during the stages and is included as part of the Service. In particular, the service includes for repeat submissions (where required), meetings and such other communications as may be needed to complete the Project or Stage.

The design team is responsible for the printing, reproducing or purchasing of all documents, drawings, maps, photographs and other records for the proper performance of the service.

Delays caused by the main contractor resulting in prolongation of the contract are not a cause for additional fees in accordance with the Conditions of Engagement.

1.4 BREEAM

The BREEAM rating for the project is as per that stated in the Definitive Project Brief, if no such rating is provided, then a BREEAM “Excellent” building shall be provided.

The Lead consultant for the delivery of BREEAM shall be the Mechanical and Electrical Consultant; however the Civil & Structural engineer shall have significant input into the BREEAM process and shall assist the M&E consultant (or any agent engaged by the M&E Consultant with respect to BREEAM) in all aspects of delivering a BREEAM “Excellent” building throughout all stages of the project.

The consultant shall include for all services, specialist or otherwise to assist the M&E Consultant to deliver a BREEAM "excellent" building, including design, inspection, testing and commissioning throughout all stages of the project, including producing any reports necessary.

All team members involved in the delivery of BREEAM i.e. Mechanical and Electrical Consultant; Architect and Civil & Structural Engineers shall jointly complete a Gap Analysis prior to the teams tender submission to ensure all required services associated with the delivery of BREEAM are covered in the overall Fee bid.

Any additional fee claims for services, reports or otherwise related to the delivery of a BREEAM rated building will not be considered, and all consultants are reminded to ensure that they have fully included for the delivery of a BREEAM rated building as part of their tender price.

2.0 PROJECT MANAGEMENT AND CO-ORDINATION

2.1 DESIGN TEAM LEADER

The design team leader is the Architect, unless otherwise noted in the Definitive Project Brief.

The following duties apply to the Design Team Leader (for all Stages) in addition to the duties relevant to his/her professional discipline:

- Overall Management / Co-ordination of Project Stages and Programme including ensuring that any information, communications and/or Stage Submissions are channelled through the Design Team Leader.
- Chair and record Design Team Meetings, Site Meetings, third party and stakeholder meetings as necessary.
- Prepare and submit monthly reports on progress, quality, cost and Health & Safety in relation to the development with the assistance of the other Design Team members in such form as UCC may reasonably require.
- Ensure that the Design Team comply with UCC procedures and SOP's as they may apply to building design and construction to include fully co-ordinated plans, room data sheets and elevations of all rooms.
- Develop and provided fully co-ordinated room data sheets for each room to the level of detail as outlined in examples provided in Appendix A, Room data sheets are to identify and locate all fixture and fittings placed on the walls, floors, ceilings and reflected ceiling plans, but also all fixed and loose furniture. In addition, all M&E equipment within ceiling and wall voids are to be indicated ensuring that access hatches are located such that all necessary plant that needs to be maintained can be easily accessed. The room data sheets are to be extracted from the fully co-ordinated federated BIM model, where BIM is a requirement of the project.
- The Design Team Leader is responsible for reviewing all documentation (from whatever source or discipline), carrying out a quality check on that information and ensuring that all drawings and documents are co-ordinated between the disciplines.
- The Design Team Leader must also ensure effective communications between the relevant DT disciplines, and, where such communications or responses are not effective, implement corrective action including (if required) UCC notification.
- In addition, the Design Team Leader is required to act as Design Certifier and Assigned Certifier in accordance with the requirements of the Building Control (Amendment) Regulations 2014 and the associated Code of Practice for Inspecting and Certifying Buildings and Works.
- The Design Team Leader shall monitor and review the progress of the project in line with the approved project program and budget and shall report any divergences, with recommendations to mitigate any further deviations to the employer. The design team leader in conjunction with design team members shall ensure that inflation is accounted for in their design and budget management.

- The Design Team Leader shall monitor and review the progress and performance of its design team and report any divergences, with recommendations to mitigate any further deviations to the employer.
- The Design Team Leader is also responsible for ensuring compliance with UCC's Schedule of Services, for all disciplines. Refer to the following Schedule of Services for the following roles,
 - Civil & Structural Engineering Services,
 - Mechanical & Electrical Engineering Services,
 - Quantity Surveying Services,
 - Project Supervisor Design Process (PSDP),
 - Employers Representative,
 - Information Manager (BIM Only),
 - Planning Consultant (Project Specific); and
 - Other Specialist Service Skills Providers (refer to the DPB).
- For the construction period the Design Team Leader will act as UCC's representative in line with schedules A & B of the Standard Conditions of Engagement. The Design Team Lead must ensure that the completed design meets the budgetary requirements. The Design Team Lead must ensure that the completed design of the project fulfils the programme requirements.

2.2 OTHER DESIGN TEAM MEMBERS

The other Design Team members are responsible for all work (relevant to their discipline) required to design and construct the project in a competent and professional manner (whether expressly stated or not).

The other disciplines are required to co-operate with each other and the Design Team Leader and provide (in a timely manner) all information and documentation needed to permit the other disciplines to complete their work.

All Design Team members are also required to review, quality control and co-ordinate all information and Stage documentation with other DT members and ensure compliance with each disciplines UCC's Schedule of Services.

In addition, all Design Team members (with the exception of the Quantity Surveyor), including any sub-consultants that may be employed and relied upon for elements of the design, will be required to provide ancillary certificates for the elements of work for which they are responsible in accordance with the requirements of the Building Control (Amendment) Regulations 2014.

A member of the team will be required to fulfil the role of Employers Representative (ER) for the project in accordance with the requirements of the CWMF. The role of the ER is a dedicated role and the individual must not have any other function (design or otherwise) for the project. The ER can be independent of the other members of the design team i.e. a separate individual or company or can be chosen from within one of the participating team members. The role of ER should be fulfilled by the same candidate for stages i to v.

3.0 STAGE SERVICES

3.1 STAGE 1 – PRELIMINARY DESIGN

3.1.1 Co-ordination of the Project Stage.

- Obtain written approval from UCC to commence stage.
- Assist in co-ordinating design team members and provide all information as necessary for Stage completion.
- Assist in reviewing, quality control and co-ordinating all information and stage documentation with other Design Team [DT] members and ensure compliance with UCC's Design Team Procedures.
- Design Team Lead in conjunction with DT members to discuss and outline the principles of integrating the Building Services within the building structure and finishes, including agreement on distribution routes for service runs, "soft spots" and cross over zones within the building.
- Provide the UCC appointed Project Manager with sufficient notice for all UCC required approvals, decisions on matters that require any action by UCC, and where appropriate, assist UCC by providing recommendations and options.
- Within one month of the appointment, the design team lead shall prepare and submit to UCC a detailed and comprehensive **Responsibility Matrix**, (with contributions from all design team members) which will identify all significant individual and collective responsibilities for the safe and efficient delivery of the project.
- Prepare and co-ordinate all drawings in a software format this is compatible and allows the Design Team or UCC to provide clean drawings without additional cost.
- Allow for responding to all UCC queries within 2 days of being requested or sooner if required to maintain contract programme or for urgent matters.

3.1.2 Design Team Meetings and UCC Consultation

- Allow for fortnightly (more if required) for UCC consultations meetings (by Senior or Director) on site including travel time & expenses:
 - initial consultation to review brief and programme or work,
 - prior to developing sketch designs; and
 - to discuss and agree draft report.
- Allow for fortnightly Design Team Meetings on site to coincide with UCC meetings.
- Allow for at least 3+ brainstorming sessions with the Design Team and UCC.
- Allow for all other meeting as required in the UCC Meeting Matrix.
- Include for repeat consultation as above for all material changes to the design or Stage 1 report (other than substantive UCC changes to brief).

- Allow for 10No. design consultation meetings with the UCC and the End-User groups. A summary Charette exercise will be required. UCC and the End-Users will need a reasonably extensive initial design critique approach in this consultation.

3.1.3 Review Brief

- Validate all briefing and supplementary information (from whatever source) including Health and Safety Risk Assessment and Project Viability Assessment.
- Carry out Ground Contamination Desk Top Study.
- Where the project involves expansion or refurbishment of an existing building(s), carry out a full and detailed review of all relevant existing information that UCC makes available to the design team. All information in relation to the existing building is to be verified by visual inspection for accuracy.

3.1.4 Site Investigation

- Prepare tender documents (using the Public Works Short Investigation Contract) and obtain fixed price tenders from at least 5 suitable firms all in compliance with the Design Team Procedures and the applicable approval thresholds. Include for ground contamination in the scope of works where the desk top study reveals this possibility.
- Allow for environmental sampling to adequately classify the soil for waste disposal to an appropriate authorised land fill site.

3.1.5 Surveys

- Prepare tender documents (using the Public Works Short Investigation Contract) and obtain fixed price tenders from at least 5 suitable firms all in compliance with the Design Team Procedures and the applicable approval thresholds for a Topographical Survey and / or detailed external surveys to building perimeter only. (Internal Building Surveys are required as part of the Architects scope of work).
- Prepare tender documentation (using the Public Works Short Investigation Contract) and obtain fixed price tenders from at least 5 suitable firms all in compliance with the Design Team Procedures and the applicable approval thresholds for all required opening up works required to existing buildings in order to allow the civil structural engineer to fully understand the building structure.
- Prepare tender documents (using the Public Works Short Investigation Contract) and obtain fixed price tenders from at least 5 suitable firms all in compliance with the Design Team Procedures and the applicable approval thresholds for a Below Ground Utility Survey.
- Prepare tender documents (using the Public Works Short Investigation Contract) and obtain fixed price tenders from at least 5 suitable firms all in compliance with the Design Team Procedures and the applicable approval thresholds for an external CCTV survey of the foul & storm drainage system to the perimeter of the building and both upstream and downstream of the connection point(s).

- Consultant and agree with the Local Authority to carry out any Road Traffic Surveys and prepare a Traffic Management Report as required.
- Prepare Preliminary Traffic Management Plan for all construction related activity during all phases of the project, including initial surveys taking account of the SOP 18 & UCC's Traffic Management Plan.

3.1.6 Undertake a Suitability Assessment of Site & Location(s)

- Prepare and provide written evaluation of all possible locations on site (with evaluation criteria clearly indicated and applied to all the options).

3.1.7 Evaluation of Existing Building(s)

- Where the project includes the evaluation / assessment of one or more existing building(s), or where a Schedule of Alterations to existing Accommodation and/or a provisional Schedule of essential Remedial Works is provided with the brief, the Design Team must make a careful evaluation/detailed inspection and viability assessment of those existing building(s) identified in the Brief and in particular the elements requiring remedial works.
- The scope of works to the existing building should be the minimum required to comply with current regulations and to provide a safe, durable educational facility.
- Compile detailed accurate information of the existing building(s) and their systems and include for all relevant surveys and recommendations and procurement of any opening up works required (refer section 3.1.5 Surveys).
- Allow for the procurement, assessment and recommendation of consultant for Laser Survey of existing building.
- Where project involves expansion or refurbishment of existing buildings, carry out a full and detailed review of all relevant existing documentation that UCC makes available to the design team. Undertake as necessary any opening up works to verify the content of this information and to ensure the design is a true reflection of the existing building. UCC reserves the right to recoup additional costs (including consequential costs) arising during the construction stage from the Designs Team failure to verify existing information from the Design Team and/or their Professional Indemnity insurance.

3.1.8 Local Authority & Third-Party Consultation

- The Architect and the Civil/Structural Engineer should consult with the relevant Local Authority Planning Section and Roads Section to determine what constraints if any apply to the particular project and to ascertain the likely conditions which may apply.
- Additional Design Teamwork including subsequent revision to design proposals arising from Planning or Fire Certificate conditions which should have been foreseen at Sketch Design stage

are deemed to be part of the scope of service and not a change to the Conditions of Engagement.

- The Civil Structural Engineer shall advise UCC on the application of the current guidelines in relation to Flood Risk Management and assessment and prepare a Flood Risk Management Report.
- Consult with all third parties, including all adjoining landowners and those with easements across the site, on matters of principal in connection with the civil structural design of the project and negotiating all necessary consents.
- Advise UCC on any agreements, leases and consents necessary for the installation, removal and / or relocation of their services and for the provision of supplies.
- Assist in negotiating all approvals, agreements, leases and necessary consents with the statutory undertakers.
- Prepare any special drawings, or technical information for use of UCC or as required in connection with the approvals and consents or for negotiations with adjoining owners, public authorities, licensing authorities, financing bodies and others and in relation to land dedications and road widening schemes.
- Assist UCC to ensure that advance orders are placed with local and statutory authorities and utility service providers as necessary so that completion of the design is not reasonably delayed.

3.1.9 Benchmarking Visits

- Identify relevant similar projects in conjunction with the UCC's appointed Project Manager and visit with UCC as required to develop a fuller understanding of the UCC's and the End-Users requirements.
- Allow for a 2-3 day visit to mainland Europe for a design benchmarking trip to view similar buildings / facilities. Please note that the Design Team lead will determine which disciplines will attend the benchmarking trip with all costs incurred to be included with the Form of Tender & Schedule Price. The Design Team led is to also include all associate travel and accommodation costs for three UCC personnel.

3.1.10 Preliminary Sketch Designs

- Develop the brief through full engagement with UCC's project manager, all identified end-user, relevant stakeholders and other DT members.
- Develop a flexible phasing strategy for the implementation of the development.
- Assist with the preparation of feasibility reports and all other necessary works.
- Analyse and develop UCC's & End-Users requirements. Carry out studies as may be necessary to determine the feasibility of the UCC and End Users Requirements. Advise space planning and vertical and horizontal circulation. Advise on and analyse UCC's & End-Users internal

requirements to ensure a properly functioning building for UCC & End-Users current business operations and intended / potential future use.

- Undertake the civil & structural engineering scheme designs for the proposed development.
- Assist the Architect in developing a basis of design document in a format agreed with UCC.
- Develop initial proposals and alternative options for UCC's consideration.
- Identify the most appropriate locations for services.
- Prepare preliminary sketch design (in consultation with other D.T. members). Assess and record cost implications (in consultation with QS). Carry out H&S risk assessment.
- Repeat above design process indefinitely (other than for substantive UCC changes to brief) until design meets UCC's Brief and schedule of services requirements.
- Value Engineering if required to keep the project within approved budget. Any value engineering decisions shall be taken in conjunction with UCC representatives without comprising on performance.
- Identify specialist's sub-consultancy packages.
- Phasing
 - Where phasing is a requirement of the project, develop a feasibility study for all phases of the development, including a priority list of works for all phases.
 - Allow for all enabling works packages.
- Assist in recommending project execution strategy, involving phasing, programme, form of contract and method of contract procurement to provide satisfactory completion of the development at or below the approved cost limit and within the approved time periods identified.
- Advise on all contractual matters that arise during this stage.
- Assist the Architect in developing a constructability report with the assistance of the other Design Team members and present to the UCC.
 - Review with UCC alternative design and construction approaches and cost implications and include within Stage 1 report.
- Undertake Designers Assessment of Risk with respect to the Health and Safety Construction Regulations.
- Prepare a Preliminary Mobility Management Plan.
- Prepare a façade engineering report in order to evaluate alternative cladding system types and materials, as required and appropriate.
- Advise on Vibration requirements for the building.
- For projects involving medical or healthcare services, ensure that the civil / structural design fully considers the HBN, HTM, HFN guidelines as set down by the NHS and DoH&C, HSE any other relevant recommendations and guidelines attributable to health care facilities.

3.1.11 Cost Management

- Assist in the preparation of an order of magnitude cost to define the design scope in line with funding.
- Identify and cost all abnormal works:
 - Review, mitigate and fully justify each item and its cost in consultation with other D.T. members.
- Provide schedule of changes, if required to ensure that the design is within the approved Cost Plan and on Programme
- Assist in cost checking of the Design against the cost plan and provide all necessary information.

3.1.12 Risk Register

- Within one month of appointment, the design team lead shall prepare a detailed and comprehensive **Risk Management Plan**, (with contributions from all design team members) which will identify all significant risks associated with the project, analyse / rate the risks, set out proposals to manage the risks and set out plans to review the risks.
- The Design Team lead shall assist UCC in developing appropriate risk management strategies for dealing with and managing risk throughout all stages of the project. The Risk Management Plan shall examine all risks that could affect the projects safety, cost, programme or quality. Each risk is to be rated and scored, assigned an owner and provided with a mitigation strategy to minimise its impact on the project. The Risk Management Plan shall be updated on a two-monthly basis or at shorter intervals as determined by UCC should the project needs dictate shorter intervals.

3.1.13 Health & Safety

- Ensure that the civil & structural design fully complies with the requirements of the Safety, Health and Welfare at Work (SHWW) (Construction) Regulations 2006. The SHWW (General Applications) Regulations 2007, SI 299 if 2007 and the SHWW Work Act 2005, compliance with the SHWW (Construction) Regulations 2013 and any other relevant Health, Safety and Welfare Legislation in force at the time of the commission.
- Update the Designers Assessments of Risk for this stage and submit to the appointed PSDP.
- Take account of the UCC's Health & Safety Building in Use questionnaire.
- Take account of UCC's Standard Operation Procedure 18 in determining the buildability of the project and ensure that all tendering contractors are aware of their obligations under SOP 18, and all other UCC Standard Operating Procedures.

3.1.14 Stage 1 Report (including repeat submissions as required)

- Civil & Structural Input into the Stage 1 Report.

- Assist the Design Team Led to fulfil his duties in co-ordination and preparation of the Stage 1 Report.
- Signed Stage Completion Certificate.

3.1.15 Pre-Stage 1 Stakeholder Meeting

- Attend Pre-Stage 1 Stakeholder Meeting in University College Cork, or an alternative local as chosen by UCC.
- Repeat for each revised Stage 1 submission (if required) resulting from non-compliance by the Design Team as a group with area and cost limits, (excludes substantive UCC changes to the brief).

3.2 STAGE 2A – DEVELOPED DESIGN

3.2.1 Co-ordination of Project Stage

- Obtain written approval from UCC to commence stage.
- Assist the Design Team Leader to ensure co-operation of Design Team to provide all information necessary for Project Stage.
- Assist the Design Team Leader in reviewing, quality control and co-ordinating all information and Stage documentation with other DT member and ensure compliance with this design team procedures and scope of services.
- Review any implications for the proposed design arising from any Building Control Amendments, transition periods or proposed future amendments.
- Provide the UCC appointed Project Manager with sufficient notice for all UCC required approvals, decisions on matters that require any action by UCC, and where appropriate, assist UCC by providing recommendations and options.
- Assist the DT lead and ensure integration of designs of the other members of the Design Team.
- Prepare and co-ordinate all drawings in a software format this is compatible and allows the Design Team or UCC to provide clean drawings without additional cost.
- Allow for responding to all UCC queries within 2 days of being requested or sooner if required to maintain contract programme or for urgent matters.

3.2.2 Developed Sketch Design

- Develop scheme as Stage 1 approval (and agreed amendments) and UCC requirements.
- Assess H&S hazards and risks for developed Sketch Scheme.
- Incorporate Sustainable Urban Design Systems within the civil design.
- Design of the foul and surface water drainage systems from the perimeter of the building to the Local Authority / Irish Water main sewer.
- Design the drainage system associated with the civil engineering aspects of a rainwater harvesting system, including any calculations associated surface water catchment areas.
- Design of the external mains water supply to the building including all Fire Engineering requirements, with input from the Fire Engineering Consultant.
- Prepare preliminary traffic management plans where necessary for all construction related activities.
- Prepare a preliminary construction management plan for submission with the Planning Application if requested to do so by the Local Authority.
- Prepare a Flood Risk Assessment Report.
- Prepare a Traffic Impact Assessment Report.

- In conjunction with UCC's Project Manager (if appointed) and other design team members, obtain any agreements, leases, consents for the installation, removal and / or relocation of their service and for the provision of supplies.
- Where part of brief, develop proposals for work to existing buildings within the area and cost limits agreed.
- Allow for the inclusion of a Changing Place Accessible Toilet, in the event that none is available within the campus.
- Review project costs with other DT members and in particular the Quantity Surveyor.
- Review the design of plant and equipment areas with UCC Engineering Service Dept to ensure future maintenance can be carried out safely and efficiently.
- Allow for phased hand overs and enabling work packages.
- Preparation of a quality assessment.
- Provide schedule of changes, if required, to ensure that the design is within the approved Cost Plan and on Programme.
- Assist in cost checking of Design against Cost Plan and provide all necessary information to allow Quantity Surveyor to complete accurate Cost Plan.
- Advise on vibration design for the project.
- Advise on all contractual matters arising from this stage.
- Meet with UCC End-Users groups as necessary to fine tune and sign off on the design as it progresses.
- Value Engineering if required at this stage to keep project within the approved budget. Any value engineering decisions shall be taken in conjunction with UCC representatives without compromising on performance.
- Assist in updating and maintaining the Risk Register.
- Assist the DT lead in updating constructability report in line with design development.
- Assist the DT Lead in preparing the Procurement Strategy Report for Works Contractors.

3.2.3 Statutory Approvals

- Consult and negotiate with Statutory Authorities as required for all statutory submissions including Fire Certificate and DAC.
- Assist in preparing multiple applications for planning permission if reasonably required by UCC to facilitate the planning process, provided that such applications shall constitute only revisions of the original design.
- All statutory approvals are part of the scope of services. Where external expertise (e.g. Fire Specialists, Landscape Architect etc) is considered necessary by the Architect, the procurement and payment of that specialist (sub-consultant) is deemed to be included in the Design Team Fee.

- Preparing & submitting Statutory Approval Documentation including but not limited to:
 - Planning Permission, including all subsequent Further Information Requests. In the case of a Strategic Housing Development Application, all necessary document required to form part of a successful submission.
 - Any other statutory consents as deemed necessary.
- Obtain any agreements, leases and consents necessary for the installation, removal and / or relocation of their services and for the provision of supplies.
- In conjunction with UCC and the Design Team, assist to prepare, submit and process Planning Appeals, if required, but excluding participation in Public Hearings.

The Design Team lead is to note that UCC is entitled under Article 157(1) of the Planning and Development Regulations 2001 to an exemption from the planning application fees.

Where the Fire Safety Certificate and Disability Access Certificate is not submitted at the same time, then the Design Team lead is liable for the additional cost associated with separate submissions.

3.2.4 Design Team Meetings / UCC Consultation

- Allow for fortnightly meetings (more if required) for UCC consultations (by Senior or Director) on site including travel time & expenses.
- Allow for fortnightly meetings Design Team Meetings on site to coincide with UCC meetings.
- Prior to preparation of Stage 2a Report:
 - To discuss and agree draft report.
- Building in Use Safety Review Workshop with UCC Health and Safety Officer.
- Allow for any other meetings as denoted in the meeting matrix and the Definitive Project Brief.
- Include for repeat consultation as above for all material changes to the design or Stage 2a report (excludes substantive UCC changes to brief).

3.2.5 Health & Safety

- Ensure that the civil & structural design fully complies with the requirements of the Safety, Health and Welfare at Work (SHWW) (Construction) Regulations 2006. The SHWW (General Applications) Regulations 2007, SI 299 of 2007 and the SHWW Work Act 2005, compliance with the SHWW (Construction) Regulations 2013 and any other relevant Health, Safety and Welfare Legislation in force at the time of the commission.
- Update the Designers Assessments of Risk for this stage and submit to the appointed PSDP.
- Take account of the UCC's Health & Safety Building in Use questionnaire.

- Take account of UCC's Standard Operation Procedure 18 in determining the buildability of the project and ensure that all tendering contractors are aware of their obligations under SOP 18, and all other UCC Standard Operating Procedures.

3.2.6 Stage 2a Report (including repeat submissions as required)

- Civil & structural engineering input into the Stage 2a Report including the preparation of the Executive Summary.
- Prepare Assist the Design Team Led to fulfil his duties in co-ordination and preparation of the Stage 2a Report.
- Include for amendments (other than for substantive UCC changes to brief) to comply with cost and area limits, and UCC's stated requirements, re-printing and re-submission as required.
- Signed Stage Completion Certificate.

3.2.7 Design Stage Review Meeting

- Attend Design Stage review meeting on UCC Campus and allow for repeat Design Stage Review Meeting resulting from non-compliance.

3.3 STAGE 2B – DETAILED DESIGN

3.3.1 Co-ordination of the Project Stage

- Obtain written approval from UCC to commence stage.
- Co-operate with Design Team Leader and provide all information necessary for the Project Stage.
- Assist in reviewing, quality control and co-ordinating all information and Stage documentation with other DT member and ensure compliance with this design team procedures and scope of services.
- Provide the UCC appointed Project Manager with sufficient notice for all UCC required approvals, decisions on matters that require any action by UCC; and where appropriate, assist UCC by providing recommendations and options.
- Assist the DT lead and ensure integration of designs of the other members of the Design Team.
- Prepare and co-ordinate all drawings in a software format this is compatible and allows the Design Team or UCC to provide clean drawings without additional cost.
- Allow for responding to all UCC queries within 2 days of being requested or sooner if required to maintain contract programme or for urgent matters.

3.3.2 Design Team Meetings / UCC Consultation

- Allow for fortnightly meetings (more if required) for UCC consultations (by Senior or Director) on site including travel time & expenses:
 - initial consultation to review brief and programme or work,
 - prior to developing sketch designs; and
 - to discuss and agree draft report.
- Allow for fortnightly meetings Design Team Meetings on site to coincide with UCC meetings.
- Building in Use Safety Review Workshop with UCC Health and Safety Officer.
- Allow for any other meetings as denoted in the meeting matrix and the Definitive Project Brief.
- Include for repeat consultation as above for all material changes to the design or Stage 2b report (other than substantive UCC changes to the project brief)

3.3.3 Statutory Approvals

- Consult with Statutory Authorities as required for all statutory Permissions and associated conditions.
- Consult with Statutory Authorities as required for all statutory Permissions.
- Prepare and submit all statutory Approval applications.
- Assist the architect in preparing and submitting reports on Statutory Approval decisions (with recommendations) to UCC.

- Include for amendments to documentation and re-submission of revised applications for above (where reasons for refusal should reasonably have been anticipated).
- Allow for preparation and issue of supporting information required by Architect for Planning / DAC appeal.

3.3.4 Detailed Design

- Develop scheme as Stage 2a approval (and agreed amendments), including any amendments arising from Statutory Approvals including thorough pre-planning of the building, services and external works.
- Ensure that civil & structural engineering design complies with the Building Regulations, Relevant standards, Codes of Practice, recognised best practice and EU Directives and all other Relevant Documents.
- Where the project has an exceptional level of complexity, obtain agreement from UCC to use appropriate specialists, if not already included as part of the brief.
- Detail and specify fully all elements, including compliance with the requirements of the Building Control (Amendments) Regulations 2014 and the Code of Practice for Inspecting and Certifying Buildings and Works.
- Provide adequate design information to allow the main contractor to procure any civil and structural elements with a design input.
- Prepare Preliminary Inspection Plan in compliance with the Building Control (Amendment) Regulations 2014 and the associated Code of Practice for Inspecting and Certifying Buildings and Works for inclusion in the Works Requirements. (Assigned Certifier (Design Team Leader) in consultation with full Design Team).
- Review costs, through design and selection of materials ensure project is within approved budget. Prepare Works Requirements (Tender Documents) and including any additional requirements for compliance with the Building Control (Amendment) Regulations 2014 and the associated Code of Practice for Inspecting and Certifying Buildings and Works.
- Production of Clash Detection Reports using an approved clash detection software on a monthly basis (BIM projects only).
- Comply with UCC procedures and Standard Operating Procedures as they may apply to building design and construction to include fully co-ordinated plans, room data sheets and elevations of all rooms.
- Ensure that the civil & structural design fully complies with the Building Control Act and the Irish Building Regulations, Code of Practices, recognised best practice and EU directives and any other relevant documents.
- Ensure that the civil & structural design fully complies with UCC's Standard Operation Procedures.
- Include for all vibration design requirements for the project.

- Ensure that civil & structural design fully complies with the Buildings for Everyone (Inclusion, Access and Use) and Part 3 of the Disability Act 2005. Please note that it is UCC's policy to go beyond the minimum requirements of Part M of the Building Regulations with respect to accessibility.
- Allow for the design of all external foul and surface water drainage from the building perimeter to the Local Authority / Irish Water main sewer.
- Obtain all necessary licences and permissions from Utility providers in timely manner so as not to affect the delivery programme. All connection offers are to be received prior to issuing of tender documentation.
- Assist the architect in landscaping design where appropriate.
- Design & detail all external earth retaining structure and site subsoil drainage systems.
- Prepare in liaison with the Design Team drawings of the structural frame from which shop fabrication drawings of metal or other frameworks can be prepared, ensuring adequate design information where the sub-contractor design input is required for such systems.
- Preparation of RC concrete reinforcement drawings and schedules for all reinforced concrete elements.
- Fixing to the structure for non-structural elements such as but not limited to lights, cameras and flags. The consultant will review the contractor's proposals to ensure that the structure can accept these but will not check the design of the fixings themselves.
- Ensure compliance with the Code of Practice for the Design and Installation of Anchors.
- Design and detail all relevant flood protection requirements for the project.
- Assist the architect with the design interface between the exterior walls and the structure including analysis of tolerances and movement in the structure.
- Allow for the design and detailing of all ground stabilising as required.
- Advise the architect on all non-loading bearing masonry partitions.
- Allow for the design and detailing of architectural metalwork (including associated calculations).
- Allow for the design and detailing of balustrades, handrails and parapets etc (including calculations).
- Advise of the effect on adjacent structures in connection with the site and the proposed building structure.
- The structural engineer shall have input into the interface between specialist elements and the primary structure, particularly in relation to those connections.
- Cladding connection design (in conjunction with the cladding specialist).
- Structural services in connection with the acoustic and vibration design of the building.
- Structural services in relation to the demolition of building structures.

- Ensure that the building specification and design comply with the performance criteria / brief as detailed by UCC and the End-Users. Design and Specifications to demonstrate clarity to allow for ease of approval of contractor submittals post tender.
- Co-ordinate with the Mechanical and Electrical Design Team members on any civil structural requirements the M&E Engineers may have on the construction of access chambers, manholes, builders' openings etc.
- Input into the Constructability Plan and as part of the constructability review provide site set-up drawings showing access, lay-down areas and contractor's compound.
- Take account of all building tolerances, both vertically and horizontally to ensure that the building can be safely constructed and ensure that the architect has made an allowance for these tolerances within their design.
- Assist with identifying the need for advance pre-tender action or pre-ordering of materials or equipment and seek UCC approval to proposals, including preparation of tender lists in conjunction with the appointed UCC Project Manager and other design team members for early action.
- Prepare preliminary traffic management plans for all construction related activities.
- Assist in the prequalification stage for the main contractor procurement.
- Assist in the prequalification and tender of Novated / Reserved Specialists.
- Assess all PQQ and submissions and determine whether each applicant meets the minimum standard, and if so, jointly mark with the (QS) each qualifying applicant.
- Assist the DT lead in submitting the provisional pre-qualification report to UCC.
- Assist in updating and maintaining the Risk Register.
- Revise all design documentation resulting from any value engineering to bring the project in line with the approved budget. Any value engineering decisions shall be taken in conjunction with UCC representatives without compromising on performance.
- Assist the DT Lead in preparing and submitting the Procurement Strategy Report for Works Contractors.
- Assist the DT Lead in completing and submitting the CSA Maintenance Guidelines for Capital Projects, to UCC upon conclusion of stage 2b.

3.3.5 Health & Safety

- Ensure that the Architectural design fully complies with the requirements of the Safety, Health and Welfare at Work (SHWW) (Construction) Regulations 2006. The SHWW (General Applications) Regulations 2007, SI 299 of 2007 and the SHWW Work Act 2005, compliance with the SHWW (Construction) Regulations 2013 and any other relevant Health, Safety and Welfare Legislation in force at the time of the commission.
- Update the Designers Assessments of Risk for this stage and submit to the appointed PSDP.
- Assess H&S hazards and risk for detailed design. Determine appropriate level of risk transfer.

- Take cognisance of the UCC Building in Use Safety Questionnaire; complete and submit to UCC upon conclusion of Stage 2b.

3.3.6 Stage 2b Report (including repeat submissions as required)

- Liaise with other DT members during preparation of Bill of Quantities.
- Manage and co-ordinate assembly of Tender Package(s) (Using appropriate Public Works Contract).
- Assist the Design Team lead in co-ordinating, project managing, and overseeing the preparation of the Stage 2b Report.
- Include for amendments to comply with UCC guidelines, cost and area limits, and UCC's stated requirements (other than for substantive UCC changes to brief), re-printing, re-submission and meetings with UCC all as required.
- Signed Stage Completion Certificate.

3.4 STAGE 3 TENDER ACTION

3.4.1 Co-ordination of the Project Stage

- Obtain written approval from UCC to commence stage.
- Co-operate with design team leader and provide all information necessary for Project Stage.
- Assist in reviewing quality control and co-ordinating all information and stage documentation with other Design Team members and ensure compliance with the Design Team Procedures.
- Prepare and co-ordinate all drawings in a software format this is compatible and allows the Design Team or UCC to provide clean drawings without additional cost.
- Allow for responding to all UCC queries within 2 days of being requested or sooner if required to maintain contract programme or for urgent matters.

3.4.2 Tender Action

- Prepare a full set of fully coordinated civil, structural and fire tender documents for the main contract and any sub-contracts.
- In conjunction with other design team members prepare production information, including drawings, schedules and specifications of materials and workmanship; provide information of Bills of Quantities; complete and in sufficient detail to enable a contractor to prepare a tender.
- Make allowance within the specification for sample taking and carrying out tests of materials, components, techniques and workmanship in relation to the Civil, Structural and Fire Engineering works.
- Ensure that all Main Contractor and sub-contractor obligations under the Building Control (Amendment) form part of the tender documentation.
- Allow for printing tender documents (hard copy) for the chosen CWMF Tender procedure (open or restricted).
- Allow for assembly of documents on CD or in electronic format. Include for one hard copy for record purposes and one (or more as required) for validation and signature by apparently successful Contractor.
- Undertake the contractor / specialist / novated / reserved specialists procurement process in line with the Design Team Procedures and the Capital Works Management Framework.
- Assist the Quantity Surveyor in the preparation of the Pre-Tender Estimate in the provision of all necessary information, schedules and drawings etc.
- Assist in advising on evaluation criteria for assessment of Most Economical Advantageous Tender (MEAT).
- Actively participate in MEAT evaluation of contractors.
- If necessary and in conjunction with other design team members produce a list of revisions that may be made to tender documents to achieve tenders within the approved cost limit, for approval by UCC.

- Advise on the suitability of any proposed sub-contractor to carry out the works and comment on preparation of formal sub-contract documentation relating to accepted tenders for carrying out the works or any part thereof.
- The Architect as Design Team Lead has overall responsibility for the delivery of the project within budget throughout all phases of the project. If the pre-tender estimate exceeds the budget, the design team is collectively responsible for all Value Engineering to align to Pre-Tender estimate within the approved budget. Any value engineering decisions shall be taken in conjunction with UCC representatives without comprising on performance.
- Assist the Design Team Lead in issuing Tender documents to UCC to allow (Main Contractors and, where applicable, Reserved Specialists, Loose Furniture), be uploaded onto the E-Tenders /OJEU web portal.
- Deal with matters arising during the tender period including Questions and Answers and ensure any communications with any tender is through the Quantity Surveyor confirmed in writing and sent to all other Consultants and UCC. Please note that the response to Tender on the E-Tenders web portal is to be via UCC's appointed Project Manager.
- Review Tender Submissions in consultation with QS and other DT members allowing for all work required including all communication and meetings with Tenderers.
- Assist in the preparation of a preliminary Tender Report. (QS with input from other DT members).
- Attend site walk downs during the tender period as required.
- Ensure compliance with European procurement directives and National Procurement guidelines.
- Assist in updating and maintaining the risk register.

3.4.3 Tender Report

- Assist in the preparation of the Tender Report. Liaise with QS and other DT members during preparation of Tender Report.
- Include for all necessary clarification meetings with the apparently successful tenderer.
- Stage Completion Certificate signed by all Parties.
- Comply with the CWMF guidelines on the procurement of reserved specialists (if used).

3.4.4 Design Team Meetings/UCC Consultation (On site)

- Allow for fortnightly meetings (more if required) for UCC consultations (by Senior or Director) on site including travel time & expenses.
- Allow for fortnightly meetings Design Team Meetings on site to coincide with UCC meetings.
- Allow meeting prior to submission of Tender Report.
- Allow for any other meetings as denoted in the meeting matrix and Definitive Project Brief.

3.4.5 Appointment of Contractor

- Allow for all work associated with Notification Letters and pursuing necessary clarifications/ documentation. (Repeat as required until suitable Contractor appointed.) (DT Lead with co-operation and assistance of other DT members).
- Issue Alcatel letter to apparently unsuccessful tenderers and de-brief in connection with UCC as required including requirements of Remedies Directive. Allow for all work associated with Issue of Letter of Acceptance. (Design Team Lead with co-operation and assistance of other DT members).

3.5 STAGE 4 CONSTRUCTION

3.5.1 Commencement Notice (Architect as Design Certifier & Assigned Certifier)

- Assist the Design and / or Assigned Certifier in the preparation of the civil / structural / Fire input on the documentation required for inclusion with the Commencement Notice in compliance with the Building Control (Amendment) Regulations 2014 and lodge with Building Control Authority.

3.5.2 Co-ordination of Project Stage

- Co-operate with Design Team Leader and provide all information necessary for Project Stage. Review, quality control and co-ordinate all information required with other DT members and ensure compliance with UCC's Design Team Procedures.
- Assist ER/QS with a comprehensive Risk Assessment for UCC at various stages on all contractual claims & items referred to conciliation in accordance with CWMF guidelines.
- Assist in updating and maintaining the risk register.
- Ensure continuous clash detection reporting on a monthly basis.
- Allow for detailed design and administration of any UCC changes during the construction period and in conjunction with QS advise on potential cost implications.
- Print, reproduce or purchase all documents, drawings, maps, photographs and other records necessary for the proper performance of the Services.
- Prepare and co-ordinate all drawings in a software format this is compatible and allows the Design Team or UCC to provide clean drawings without additional cost.
- Allow for responding to all UCC queries within 2 days of being requested or sooner if required to maintain contract programme or for urgent matters.

3.5.3 Employer's Representative

- Allow for all work associated with assisting the Employer's Representative to undertake their duties under the contract.
- Provide to the ER & UCC a detailed analysis, valuation and recommendation in relation to all civil, structural and fire engineering notification of claims as received from the contractor.
- Assist the ER in ongoing construction cost control, processing claims within time limits in Clause 10.5 of the Contract.
- Allow for all additional work including contract prolongation (other than for Contract prolongation consequent to Contractor liquidation).
- Allow for attending the Project Board meeting where required for the duration of the construction stage and following on any actions as required.

3.5.4 Contract Administration

- Allow for all work (relevant to professional discipline) necessary for the effective administration of the Contract, including close co-operation communication and information exchange between DT members.
- Advise on all contractual matters arising.
- Allow for responding to all contractor queries within the time limitations of the contract and where required sooner so as to mitigate against time delay.
- Assist to determine where possible, any dispute or difference relating to the works, which may arise between UCC and the Contractor and / or sub-contractor. Assist to make decisions where possible on delays, request for extensions of time and the consequences of acceleration or disruption.
- Assist in the evaluation, negotiation and settlement of any contractual claims.
- Assist to negotiate delay /disruption claims on a contract if such claims arise.
- Assist the ER in developing & managing a contract correspondence log.

3.5.5 Site Inspections and Meetings

- Allow for Director/Senior visiting site at least once a fortnight including travel time & expenses.
- Allow for concurrent Site Meetings at least twice a month and UCC consultation meetings as required by UCC.
- Monitor and inspect the works as being executed by the Contractor on site to ensure that the Development is proceeding in accordance with the terms of the specification. Make further periodic inspections to the site, as appropriate, to the stage of construction as may be necessary to inspect the progress and the quality for the work.
- Produce a quality schedule, update and review with contractor fortnightly.
- Instruct sample taking and carrying out tests of materials, components, techniques and workmanship in relation to the Civil, Structural and Fire Engineering works and examine the conduct and results of such tests whether on or off site.
- Inspect and Certify the works as described in the Code of Practice for Inspecting and Certifying Buildings and Works relative to civil / structural / fire engineering.
- Undertake weekly detailed review of the project during construction, generating a quality control report for contractors to be updated on a fortnightly basis and reviewed at the fortnightly quality review meeting with contractor and as required with the relevant sub-contractor.
- Assist the Design Team lead in issuing to UCC in conjunction with the fortnightly walk-down a report covering quality and progress.
- Attend all monthly cost control meetings with main contractor, specialists and direct contractors.
- Prepare detailed list of samples and long lead items for approval. Note dates by which these are to be submitted by the contractor in order to maintain project schedule. Track dates and report to UCC at progress meeting.

- Attend workshop meetings between all relevant parties to address and mitigate Project Risk Register.

3.5.6 Building Control (Amendment) Regulations 2013

- Undertake and perform its duties and obligations in acting as the Civil & Structural Ancillary Certifier in accordance with the Code of Practice for Inspecting and Certifying Buildings and Works.
- Inspect the works as described in the Inspection Notification Framework and the Code of Practice for Inspecting and Certifying Buildings and Works relative to civil & structural engineering.
- Allow for all works in assisting the Design and Assigned Certifier in undertaking their duties in accordance with the Code of Practice for Inspecting and Certifying Buildings and Works.

3.5.7 Project Reviews

- Prepare and submit a Project Review to UCC together with each Interim Certificate. (DT Lead jointly with QS and input from other DT members as required).

3.5.8 Dispute Management Procedure

- Comply with the requirements of the Public Works Contract procedures for dispute management and any other procedural requirements imposed by the appointed Conciliator.

3.5.9 Conciliation and Arbitration

- Allow for maintaining up-to-date project files. [Excluding case preparation; associated research; assembly, printing and issue of documents required, and attendance at hearings.

3.5.10 Contractor Liquidation/Termination

- Allow for cost of administering termination of Contractor (including application of all relevant contract clauses). [Excludes preparation of detailed schedule of work completed to date and all other work associated with termination/liquidation.

3.6 STAGE 5 HANDOVER AND FINAL ACCOUNT

3.6.1 Co-ordination of Project Stage.

- Co-operate with the Design Team Leader and provide all information necessary for Project Stage. Review, quality control and co-ordinate all information required with other DT members and ensure compliance with UCC's Design Team Procedures.
- Attend all meetings post substantial completion to close out all outstanding issues.
- Prepare detailed snag list as required to meet the programme and to ensure that all substantial snags are addressed prior to Practical Completion.

3.6.2 Substantial Completion.

- Assist the Design Team Lead in co-ordinating, project managing, and overseeing the preparation and delivery of the building information pack for UCC at handover.
- Allow for phased handover and multiple substantial completion certificates.
- With respect to the Civil & Structural Engineering:
 - Provide comprehensive sets of the latest issue of construction drawings and specifications to UCC. Liaise with and assist the PSDP in assembly of information/ documents for Safety File.
 - Consult with the PSDP regarding Contractor provision of information for the Safety File prior to issue of Substantial Completion. Meet UCC on handover and explain operation of the building. Allow for supplementary visits as required.
 - As handover approaches, provide final issue drawings, calculations and specifications to the Assigned Certifier, co-ordinate with Tender Documents and confirm compliance of completed design with the Building Regulations; provide Certificates of Compliance Design and Inspection at completion.
 - Co-ordinate and submit to the Building Control Authority all necessary documentation as required by the Building Control (Amendment) Regulations 2014 and the associated Code of Practice for Inspecting and Certifying Buildings and Works, including Certificates of Compliance on Completion from all statutory and specialist certifiers and backup and ancillary certificates & tests as scheduled in previous submissions to the Building Control Authority.
 - Assist the Assigned Certifier to manage and resolve any issues arising with the Building Control Authority in relation to validation of the Certificate of Compliance Completion. Assist the Assigned Certifier to issue the Certificate of Substantial Completion.
 - On anticipated date of Substantial Completion together with other DT members inspect the works and ensure all outstanding items are complete and advise UCC in writing on the suitability of the Works to be considered as ready to receive a Certificate of Substantial Completion.

- Following completion hold weekly review meetings with the contractor to ensure that snags are addressed in a timely manner.
- Prepare Defects list in consultation with the Contractor and UCC.
- Take account of and manage any UCC snag list.
- Submit a BIM as constructed Model.
- Assist the PSDP in compiling the Safety File / UCC Digital Project Manual.
- Advise on all contractual matters that arise at this stage.

3.6.3 Final Account

- Assist in the Preparation of the Draft Final Account Summary.
- Allow for all work necessary in agreement of Final Account with Contractor and UCC and attending meetings as required (including travel and expenses) and preparation of Final Account Report as per the Design Team Procedures.
- Assist in the preparation and submitting of the Final Account Report (supplement) on completion of the Defects Period.

3.6.4 Defects Period

- Assist the ER in confirming the defects liability period.
- Allow for all works necessary to administer defects liability period including site visits as required.
- In conjunction with other DT members, monitor the Projects Defects Liability Period. Compile a list of defects of work, one month before the end of the Defects Liability Period and issue co-ordinated Project Teams defects list to the contractor.
- Instruct the contractor via the ER on any urgent defects which require immediate attention.
- Assist UCC in the occupation phase of the phase of the project, particularly in relation to any unforeseen difficulties in relation to the function or operation.

3.7 ADDITIONAL SERVICES

3.7.1 Façade Engineering

- Provide specialist façade technical input to produce the best possible system that satisfies the architectural design intent.
- Streamline the design and construction process by providing technical support throughout all stages of the project.
- Provide detailed technical input during the design of the project.
- Assist the architect to resolve design issues.
- Ensure materials selected are sustainable and suitable for the life of the building.
- Undertake and perform its duties and obligations in acting as the Façade Engineering Ancillary Certifier in accordance with the Code of Practice for Inspecting and Certifying Buildings and Works.

3.7.2 Environmental Engineering

- Assist the civil / structural engineer in preparing the site investigation scope to include all environmental sampling and testing.
- Ensure soil samples are sent to accredited laboratories to be analysed and tested using elute analysis (leachate – aka WAC testing) and solid analysis (total pollutant content).
- Carry out a waste assessment of the analysed results using the HazWasteOnline assessment tool or other EPA approved assessment tool.
- Compare analysis against the landfill Waste Acceptance Criteria and adequately classify the soil for its suitability for disposal at inert, non-hazardous or hazardous landfill sites.
- Provide dig plans where hazardous or non-hazardous material is identified, to assist in reducing the disposal costs to hazardous and non-hazardous landfill sites.
- Advise on all other environmental services required to safely execute the project.

3.7.3 Planning Appeal

- Amendments to documentation (including the preparation and issue of supporting information by all disciplines) and the submission of revised applications for Statutory Approvals (where reasons for refusal should reasonably have been anticipated) are deemed to be part of the schedule of services. Reasonable additional fees for other UCC approved appeals will apply. (The appropriate tendered hourly rate will apply for attending any hearings).

3.7.4 Transport & Mobility Management

- Provide Specialist Transport & Mobility Management Services for the project.
- Consider all Traffic and Transportation issues and concerns within the Design.
- Execute all traffic engineering requirements including car parking, access routes, loading dock access, on site roadworks, road lighting and liaison (excluding national road design) with the Local authority Engineer on alterations to local and regional roads.

- Provide a mobility management plan for the project, where the proposed project generates sufficient trip demand, as deemed by the Local Authority.

3.8 CONCILIATION AND ARBITRATION

- Reasonable additional costs for case preparation and the assembly and printing of documents for conciliation and/or Arbitration hearings will apply in accordance with Clause 11 of the Conditions of Engagement. The appropriate tendered hourly rate will apply for attending hearings. Maintenance of current and up-to-date project files in accordance with good practice is part of Stage Services.