



APPOINTMENT OF TECHNICAL RESOURCE TEAMS CONSISTING OF A MULTI-DISCIPLINARY PROFESSIONAL TEAM TO RENDER FULL BUILT ENVIRONMENT CONSULTING SERVICES ON AN AS AND WHEN REQUIRED BASIS FOR GOLDFIELDS TVET COLLEGE FOR (3) THREE YEARS

Scope of Works

DESCRIPTIONS OF WORKS (PROFFESIONAL SERVICES) GOLDFIELDS TVET COLLEGE'S

OBJECTIVES

Proposals are requested for the appointment of Technical Resource Teams (TRT) consisting of a multi- disciplinary professional team for the rendering of full built environment related consulting services within the boundaries of GOLDFIELDS TVET College. GOLDFIELDS TVET College requires appropriate specialist skills qualified in Principal Agent/Programme Management, Architect, Quantity Surveyor, Structural/Civil Engineer, Electrical and Mechanical Engineer, Health and Safety Officer (OHS), Environmental Consultants, Social Facilitators, etc.

The (CIEG Project Manager) as the primary custodian of all Institution-owned properties - inclusive of land and buildings - has been mandated in terms of the approved strategy to plan, develop, manage, and maintain the Institution's property portfolio by providing the following dedicated services:

ALL future tenders are to be run with PURCO SA and the appointed of provider/s after plans/bills/BOQs are drawn up and are complete and RFPs are issued to Public Contractors

- Management of new property developments and refurbishment projects pipeline for client departments based on approved demand plans.
- Establish and maintain a Project Management Office (PMO) to coordinate all property development within the Institution.
- Facilitation projects development on GOLDFIELDS TVET College land as required by other structures of the College.
- Provide professional services and technical oversight for all property development projects undertaken on behalf of client departments.
- Render project support/scrutiny services for client departments' projects in terms of feasibility studies, pre-planning, design development and project implementation.
- Management of all contracts in respect of all property development related consulting and construction services on an as and when required basis
- Management of all enquiries relating to the leasing of GOLDFIELDS TVET College owned properties including all customer and tenant interface.
- Oversight of GOLDFIELDS TVET College owned property portfolio for the benefit of all user's departments and the portfolio's ultimate owners – citizens of GOLDFIELDS TVET College. Third party properties may also be covered with approval of management.
- Conducting of property inspections and valuation for the purposes of property asset management and conclusion of property related transactions.
- Management of GOLDFIELDS TVET College offices and provision of adequate staff accommodation for user/client departments through optimised use of the existing portfolio.
- Provision of other related services including, Property Records management; Land Surveying; Property Valuations and Conveyancing Services.
- Development of asset management strategies, portfolio administration systems including the management of property information/data;
- Implement and administer a property information management system (PIMS) to manage assets records and in support of portfolio management.
- Develop portfolio segmentation and perform research and analysis of individual property asset classes to support the value chain.
- Maintenance of an accurate asset and lease register, monitoring and reporting property portfolio performance.
- Ensure portfolio compliance and adequate horizontal reporting in terms of relevant legislation such as GRAP, GIAMA, NIAMMS etc.
- Development of maintenance plans and management of maintenance projects on all GOLDFIELDS TVET College owned buildings.
- Provision of hard services on all GOLDFIELDS TVET College owned operational buildings, public amenities, and community facilities: General Building Maintenance.
- Facilities Management Planning and Implementation. Appointment of contractors for facilities implementation

The implications of the above mandate and functions for the bidder(s) are the following:

1. The GOLDFIELDS TVET College requires professional service of qualified specialist bidders (TRT's) to provide skills for Capital projects as well as Operational funded maintenance projects, and when required/based on the need respectively around GOLDFIELDS boundary.
2. The Bidding Entity can be either a **consortium of specialists** or it can be an **individual specialist** who are putting together a team of specialists. Care however should be taken that the Bidding Entity is aware of the implications of **a consortium versus single entity regarding B-BBEE points**. The consortium should also take note that all payments will be made into the account of the Bidding Entity or Consortium and never into the account of an individual member of the team unless he/she is the bidding entity.
3. The professional team for each individual project will be sourced from an identified TRT or Consortium according to the unique requirements of each individual project. The team members will thus consist of only the disciplines as identified by the implementing department. Work will also be allocated on a rotational basis between TRT's.
4. The Principal Agent (Bidding Entity or Consortium) appointed, will be required to remunerate a multi-disciplinary team of consulting professionals. The Principle Agent (Bidding Entity) can be any one of the various disciplines required or can be a consortium established only for the purposes of this tender. The appointed team of specialists shall also serve as occupational Health and Safety Officer for the Project.
5. The lead consultant for each individual project, will be identified by the implementing department from the team of disciplines required for the project, and will be entitled to a management fee over and above the normal fees related the specific discipline. Provision for this is made in the Pricing Schedule. If only one discipline is required from a TRT, no lead consultant fees will be applicable.
6. The project will be executed as per guidelines of the relevant project and construction management profession read in conjunction with GOLDFIELDS TVET College's project specification. The projects are mainly funded by Department of Higher Education and Training (DHET) and the required progress reports must be submitted monthly. They have capped the works at 12% maximum Project Value for the teams.

EXTENT OF THE WORKS

The work to be carried out by the Service Provider under this contract comprises *inter alia* of the following:

1. The preliminary investigations and detailed design of various projects on the 2020/2021, 2021/2022 2022/2023 Multi Year Budget
2. The compiling of subsequent bid documentation including specification according to GOLDFIELDS TVET College guidelines/ requirements
3. The liaison with GOLDFIELDS TVET College for the bid advertising of the respective projects.
4. The bid evaluation of the bids received from contractors – together with PURCO SA. Bills are to be done by the appointed provider. Evaluations by PURCO SA and the QS.
5. Undertake duties falling under the OH&S on behalf of the GOLDFIELDS TVET College on the project
6. Provide construction administration, supervision and monitoring of the respective project.
7. The successful completion and finalising of project/s
8. Completing the projects in stages subject to availability of funds
9. Submission of final reports to GOLDFIELDS TVET College , together with PURCO SA.

It is the intention of the GOLDFIELDS TVET College to appoint one (1) bidder. The bidder must have all the expertise (Quantity Surveyor, Architect, Electrical Engineer, Mechanical Engineer, Civil Engineer, Project Management, Health and Safety Officer) related to the projects that GOLDFIELDS TVET College will be rolling out – they must oversee the project and ensure compliance to all specifications and will have regular site meetings with contractor and college staff (Physical resources Manager and Campus Managers) to discuss progress/challenges and sign off all works of contractor and if satisfied with delivered work.

LOCATION OF THE WORKS

This will be provided.

BUILDING PROJECTS

SCOPE AND SPECIFICATION OF PROFESSIONAL SERVICES

The required Professional Services as referenced is provided below:

The project entails full range of professional services for the feasibility, planning, design and construction of various property development, upgrading, refurbishment and maintenance related works throughout the boundaries of the GOLDFIELDS TVET College as well as the rendering of whole range of supplementary services on an as and when needed basis.

The bidding entity (TRT or Consortium) must be able to demonstrate that it has all of the required disciplines readily available as part of the TRT. Bidders must also provide proof of relevant qualifications for each discipline and each discipline must be registered with their respective professional body Institution. The Principal Agent (Lead consultant) sourced from any professional discipline for a specific project, will be responsible for full coordination and management of the professional team.

The Principal Agent will:

- Manage other sub-consultancy professionals,
- Appoint and co-ordinate with the sub-consultant,
- Manage the procurement of contractors together with PURCO SA.
- Administer the construction contracts for the specific project.
- Serve as occupational Health and Safety Officer for the project.
- Generate invoices in the name of the Bidding Entity and ensure payment to the different specialists of the project team.

The following documents must accompany the bid, **failure to do so will result in the rejection of the bid.**

- Proof of membership of at least one member per discipline, as registered professionals of their respective **Professional Council/Body Institutions**. Validity for each registered professional will be verified with their respective professional Institution.
- Certified copies of ID Document, qualifications and professional membership of at least one member per discipline must be submitted in respect of each bidder or employees within a company or consortium that submit a bid. The certified copies must not be more than three months with effect from closing date.

NATURE OF SERVICE REQUIRED

The Professional Team will be appointed for the following 6 stages:

PROJECT STAGE	DESCRIPTION
1	INCEPTION
2	CONCEPT AND VIABILITY
3	DESIGN DEVELOPMENT
4	DOCUMENTATION AND PROCEDUREMENT
5	CONSTRUCTION
6	CLOSE-OUT

HOURLY RATE TO SCRUTINIZE THE DESIGN WILL BE APPLICABLE

PRINCIPAL AGENT/PROGRAMME MANAGER OR LEAD CONSULTANT

STAGE 1- INCEPTION

Definition

Agreeing client requirements and preference, assessing user needs and options, appointment of necessary consultation with client.

Scope of service

- 1.1 Facilitate the development of a clear project brief
- 1.2 Establish the client's Procurement policy for the projects – together with PURCO SA.
- 1.3 Assist the client in the procurements of any specialist consultants including the clear definition of their roles, responsibilities and liabilities.
- 1.4 Establish in conjunction with the client, consultants, and all relevant authorities the site characteristics necessary for the proper design and approval of the intended projects.
- 1.5 Management the integration of the preliminary design to form the basis for the initial viability assessment of the project.
- 1.6 Prepare, co-ordinate and monitor a Project initiation Programme.
- 1.7 Facilities the preparation of the Preliminary Viability Assessment of the project.
- 1.8 Facilities client approval of all Stage 1 documentation

Project Management Deliverables

- Project Brief
- Project Procurement Policy
- Signed Consultant /Client Agreements
- Project Initiation Programme
- Record of all meetings
- Approval by Client to proceed to Stage 2

STAGE 2-CONCEPT AND VIABILITY

Definition

Finalization of the project concept and feasibility

Scope of Services

- 2.1 Assist the client in the procurements of any specialist consultants including the clear definition of their roles, responsibilities and liabilities.
- 2.2 Advise the client on the requirement to appoint a Health and Safety Consultant.
- 2.3 Communicate the project brief to the consultants and monitor the development of the concept and Feasibility within the agreed brief.
- 2.4 Agree the format and procedures for the cost control reporting by the cost consultants on the project.
- 2.5 Co-ordinate and integrate the income stream requirements of the clients into the concept design and feasibility.
- 2.6 Manage and monitor the preparation of the projects costing by other consultants.
- 2.7 Prepare and co-ordinate an Indicative Project Documentation and Construction Programme.
- 2.8 Manage and integrate the concept and feasibility documentation for presentation to the client for approval.
- 2.9 Facilitate client approval of all Stage 2 documentation.

Project Management Deliverables

- Signed Consultant/Client Agreements
- Indicative Project Documentation and Construction Programme.
- Approval by Client to proceed to Stage 3

STAGE 3- DESIGN DEVELOPMENT

Definition

Management, co-ordinate and integrate the detail design development process within the project scope, time, cost and quality parameters.

Scope of Services

- 3.1 Assist the client in the procurements of any specialist consultants including the clear definition of their roles, responsibilities and liabilities.
- 3.2 Prepare, co-ordinate and agree a detailed Design and Documentation Programme, based on an updated Indicative Construction Programme, with all consultants.
- 3.3 Establish and co-ordinate the formal and informal communication structure, processes and procedures for the design development of the project.
- 3.4 Manage, co-ordinate and integrate the design by the consultants in a sequence to suit the project design, documentation programme and quality requirements.
- 3.5 Conduct and record the appropriate planning, co-ordination and management meetings.
- 3.6 Facilitate any input from the design consultants required by Construction Manager on constructability.
- 3.7 Facilitate any input from the design consultants required by Health and Safety Consultant.
- 3.8 Manage and monitor the timeous submission by the design team of all plans and documentation to obtain the necessary statutory approvals.
- 3.9 Establish responsibilities and monitor the information flow between the design team, including the cost consultants.
- 3.10 Monitor the preparation by the cost consultants of cost estimates, budgets, and cost reports.
- 3.11 Monitor the cost control by the cost consultants to verify progressive design compliance with approved budget, including necessary design reviews to achieve budget compliance.
- 3.12 Facilitate and monitor the timeous technical co-ordination of the design by the design team.
- 3.13 Facilitate client approval of all Stage 3 documentation.

Project Management Deliverables

- Signed Consultant/Client Agreements.
- Detailed design & Documentation Programme.
- Updated indicative Construction Programme.
- Record of all meeting.
- Approval by Client to Proceed to Stage 4.

STAGE4 - DOCUMENTATION AND PROCUREMENT

Definition

The process of establishing and implementing procurement strategies and procedures, including the preparation of necessary documentation, for effective and timeous execution of the project.

Scope of Services

- 4.1 Select, recommend and agree the Procurement Strategy for contractors, sub- contractors and suppliers with the client and consultants
- 4.2 Prepare and agree the Project Procurement Programme together with PURCOSA
- 4.3 Co-ordinate and monitor the preparation of the tender documentation by the consultants in accordance with the Project Procurement Programme.
- 4.4 Facilitate and monitor the preparation of the site-specific Health and Safety Plan by the Health and Safety Consultant.
- 4.5 Advise the client, in conjunction with other consultants on the appropriate insurances required for the implementation of the project.
- 4.6 Monitor the reconciliation by the cost consultants of the tender prices with the project budget.
- 4.7 Agree the format and procedure for monitoring and control by the cost consultants of the cost of the works.
- 4.8 Facilitate client approval of the tender recommendation(s).

Project Management Deliverables

- Contractors, subcontractors, and suppliers Procurement Strategy
- Project Procurement Programme
- Project Tender /Contract Conditions
- Site specific Health and Safety Plan
- Record of all meetings;

STAGE 5 – CONSTRUCTION

Definition

The Management and administration of the construction contracts and processes, Including the preparation and co-ordination of the necessary documentation to facilitate effective execution of the works.

Scope of Services

- 5.1 Appoint contractor (s) on behalf of the client including the finalization of all agreements.
- 5.2 Instruct the contractor on behalf of the client to appoint subcontractors.
- 5.3 Receive, co-ordinate, review and obtain approval of all contract documentation provided by the contractor, subcontractors, and suppliers for compliance with all of the contract requirements.
- 5.4 Monitor the ongoing projects insurance requirements.
- 5.5 Facilitate the handover of the site to the contractor.
- 5.6 Establish and co-ordinate the formal and informal communication structure and procedures for the construction process.
- 5.7 Regularly conduct and record the necessary site meetings.
- 5.8 Monitor, review and approve the preparation of the Contract Programme by the contractor.
- 5.9 Regularly monitor the performance of the Contractor against the contractor programme.
- 5.10 Review and adjudicate circumstances and entitlements that may arise from any changes required to the Contract Programme.
- 5.11 Monitor the presentation of the contractor's Health and Safety Plan and approval thereof by the Health and Safety Consultant.
- 5.12 Monitor the auditing of the contractor's Health and Safety Plan by the Health and Safety Consultant.
- 5.13 Monitor the compliance by the contractors of the requirements of the Health and Safety Consultant and contractors.
- 5.14 Monitor the production of the Health and Safety File by the Health and Safety Consultant and contractors.
- 5.15 Monitor the preparation by the Environment Consultants of the Environmental Management Plan.
- 5.16 Establish the construction information distribution procedures.

- 5.17 Agree and monitors the Construction Documentation Schedule for timeous delivery of required information to the contractors.
- 5.18 Expedite, review and monitor the timeous issue of construction information to the contractors.
- 5.19 Manage the review of all approval of all necessary shop details and product propriety information by the design consultants.
- 5.20 Establish procedures for monitoring, controlling and agreeing all scope and cost variations.
- 5.21 Agree the quality assurance procedures and monitor the implementation thereof by the consultants and contractors.
- 5.22 Monitor, review, approve and certify monthly progress payments.
- 5.23 Receive, review and adjudicate any contractual claims.
- 5.24 Monitor the preparation of monthly cost reports by the cost consultants.
- 5.25 Monitor long lead items and off- site production by the contractors and suppliers.
- 5.26 Prepare monthly project reports including submission to the client.
- 5.27 Manage, co - ordinate and monitor all necessary testing and commissioning by consultants and contractors.
- 5.28 Co- ordinate, monitor and issue the Practical Completion Lists and the Certificate of Practical Completion.
- 5.29 Co-ordinate and monitor the preparation and issue of the Works Completion List by the consultants to the contractors.
- 5.30 Monitor the execution by the contractors of the defect items to achieve Works Completion
- 5.31 Facilitate and co-ordinate adequate access with the occupant for the rectification of defects by the contractors.
- 5.32 Co-ordinate the submission of any special project related monthly progress report in line with SDPIP, WAR ROOM and SMT requirement.

Projects Management Deliverables

- Signed Contractors Agreements
- Agreed Contract Programme
- Adjudication and award of contractual claims
- Construction Documentation Schedule
- Monthly progress payment certificates
- Monthly project progress reports
- Record of all meetings
- Certificates of Practical Completion.

STAGE 6 –CLOSE OUT

Definition

The process on managing and administering the project closeout, including preparation and co-ordination of the necessary documentation to facilitate the effective operation of the project

Scope of Services

- 6.1 Issue the Works Completion Certificate
- 6.2 Manage, Co-ordinate and expedite the preparation by the design consultants of all as-built drawings and design documentation.
- 6.3 Manage and expedite the procurement of all statutory compliance certificate and documentation.
- 6.4 Manage the finalization of the health and Safety File for submission to the client.
- 6.6 Co-ordinate, monitor and manage the rectification of defects during the Defects Liability Period.
- 6.7 Manage, co-ordinate and expedite the preparation and agreement of the final account by the cost consultants with the relevant contractors.
- 6.8 Co-ordinate, monitor and issue the Final Completion Defects list and Certificate of Final Completion
- 6.9 Prepare and present Project Closeout Report in line with Institution special requirement.

Project Management Deliverables

- Works Completion Certificate
- Certificate of Final Completion
- Record of all meetings
- Project closeout report

ARCHITECT

Stages

The scope of works is based on the South African Institute of Architects (SAIA) Work Plan (Architectural Profession Act No. 44 of 2000). The appointment is for the following Six stages:

- Stage 1: Inception – already partially conducted by others and not fully applicable;
- Stage 2: Concept and viability;
- Stage 3: Design development;
- Stage 4: Documentation and procurement
 - Stage 4.1: Local authority approval plans; and
 - Stage 4.2: Construction drawings and specifications.
- Stage 5: Contract administration and construction monitoring during the construction phase; and
- Stage 6: Close out phase.

STAGE 1: INCEPTION

Scope of work

This phase will **only** address the following aspects, and NOT the FULL Stage 1:

- Study the accommodation requirements to create a formal brief
- As-built drawings of existing structures and site features.
- Survey of existing street furniture, site conditions, services, etc, all aspects of site survey.
- Project program/ Overall WBS (work breakdown structure)
- Evaluation and recommendations of existing structure

Deliverables

- Understanding and formalization of the brief, i.e. Draft copy.
- As-built drawings of the relevant area of intervention.

STAGE 2: CONCEPT AND VIABILITY

Scope of work

- The architect will prepare design concept layouts based on the approved Space Planning Norms and other design criteria applicable to the building typology and in accordance with the current National Building Standards and regulations.
- Clarify and confirm the project space norms to optimize functional and operational efficiency in terms of scale, circulation and relationships of areas
- Co-ordinate design interfaces with the other consultants where applicable to fully integrate design, services and technology required.
- Provide information to the quantity surveyor for suitable estimates of construction costs
- Prepare and submit presentation of the design concept to the client for approval

Deliverables

A written report: to include any possible variations from the original scope and expected changes due to potential variations.

The Architect should also provide drawings to show layouts; Layout plans, scale 1:200 / 1:500 on A1; 1:100 / 1:200 scale plans on A1;

- sections to indicate heights and levels in a typical station/area
- Zoning diagrams – colour coded for ease of reference.
- Overall external works concept for site.
- Full extents of concept structure and placement of all ancillary buildings required.
- Final and Approved Brief.
- Approved Concept Layout

STAGE 3: DESIGN DEVELOPMENT

Scope of work

The Architect will develop the design in detail, including:

- Finalize the client's detailed requirements into building design
- Develop the design into more detail, develops a construction system, materials and components
- Incorporate building services and coordinate with the work of consultants
- Review the design, costing and programme together with the consultants
- Review the documentation programme with the principal consultant and the other consultants
- Attend design and consultants' co-ordination meetings
- Incorporate and co-ordinate the other consultants' designs into building design
- Prepare design development drawings including draft technical details and outline specifications
- Review budget in conjunction with the quantity surveyor
- Liaise, co-operate and provide necessary information to the client, consultant and other sub-consultants
- Submit drawings to local authorities at the end of this stage, including the SDP for Institution approval

Deliverables

The deliverables for this phase are:

- All final design drawings (size A1), submitted to and approved by the Client, Planning Review Committee.
- Full L. A Submission to relevant Building Control Section in area of proposed development, through to the final approval thereof.
- A written report (Stage 3 Design Report) on the design development work stage

STAGE 4: DOCUMENTATION AND PROCUREMENT

Scope of work

- Local authority building plans and rational designs for approval;
- Complete technical documentation and complete primary co- ordination with other consultants
- Confirm material specifications and extent of works for implementation
- Prepare specifications for the works and agree preambles with the quantity surveyor
- Review the costing and programme with the consultants
- Obtain the client's authority
- Recommend and agree procurement strategy for contractors, sub- contractors and suppliers with the client and the other consultants
- Prepare and agree the procurement programme
- Provide working drawings to the quantity surveyor for preparation of procurement documentation
- Liaise, co-operate and provide necessary information to the principal consultant and the other consultants
- Obtain the client's authority for the execution of the works
- Assist with the preparation of contract documentation for signature
- Assess samples and products for compliance and design intent
- Finalise documentation for the execution of the works (working drawings)
- Attend all design and consultant's meetings
- Co-ordinate services and prepare necessary services co-ordination drawings
- Check cost estimate with the quantity surveyor and adjust documents if necessary to remain within budget
- Advise the client, in conjunction with the other consultants on the appropriate insurances
- Co-ordinate and monitor preparation of procurement documentation by consultants in accordance with the project procurement programme
- Manage procurement process and recommended contractors for approval by the client
- Agree the format and procedures for monitoring and control by the quantity surveyor of the cost of the works
- Co-ordinate and assemble the contract documentation for signature

Deliverables

- A complete set of construction drawings of all disciplines in either A1 or A0 format;
- An A4 or A3 detailed specification document inclusive of all disciplines;
- A completed priced Bill of Quantities and un-priced Bill of Quantities for construction and tender purposes;
- Request written instruction from client to proceed with Construction phase.
- Procurement programme
- Contract documentation for signature

STAGE 5: CONTRACT ADMINISTRATION AND CONSTRUCTION MONITORING DURING THE CONSTRUCTION PHASE

Scope of work

- Arrange and attend the site handover as Principal Agent from Client/EMM to Contractor.
- Issue construction documentation in accordance with the documentation program
- Carry out contract administration procedures delegated by the principal agent in terms of the contract
- Attend regular site, technical and progress meetings
- Inspect the works for conformity to contract documentation
- Clarify details and descriptions during construction as required
- Receive, comment and approve interim payment valuations
- Witness and review all tests and mock-ups carried out both on and off site
- Check and approve subcontract shop drawings for design intent
- Update and issue the drawings register
- Issue contract instructions as and when required
- Review and comment on operations and maintenance manuals, guarantees, certificates and warranties
- Inspect the works and issue practical completion and defects lists
- Assist in obtaining statutory certificates Agree and monitor issue and distribution of construction documentation
- Instruct the contractor on behalf of the client to appoint subcontractors
- Conduct and record regular site meetings
- Review, approve and monitor the preparation of the construction programme by the contractor
- Regularly monitor performance of the contractor against the construction programme
- Adjudicate entitlements that arise from charges required to the construction programme
- Receive, co-ordinate and monitor approval of all contract documentation provided by contractor(s)
- Agree quality assurance procedures and monitor implementation thereof by the other consultants and the contractors
- Monitor preparation and auditing of the contractor's health and safety plan and approval thereof by the health and safety consultant
- Monitor preparation of the environmental management plan by the environmental consultant
- Establish procedures for monitoring scope and cost variations
- Monitor, review, approve and issue certificates
- Receive, review and adjudicate any contractual claims
- Monitor preparation of financial control reports by the other consultants
- Prepare and submit progress reports
- Co-ordinate, monitor and issue practical completion lists and the certificate of practical completion

Deliverables

- Progress meetings and meeting minutes on a monthly basis, with minutes in approved format;
- Progress reports at each monthly Progress meeting;
- Quality reports supported with photographs at each monthly progress meeting;
- Payment certificates signature and submission to client on monthly basis;
- Completion Certificates including final completion and Final account as per definition of the contract to be signed
- Signed contracts
- Approved construction programme
- Construction documentation
- Payment certificates
- Progress reports
- Record of meetings
- Certificate(s) of practical and Works Completion
- Facilitate and expedite receipt of occupation certificates

STAGE 6: CLOSE OUT PHASE

Scope of work

The primary scope to be covered in this work stage is the completion of the following:

- Inspect and verify rectification of defects
- Receive, comment and approve relevant payment valuations and completion certificates
- Prepare and/or procure operations and maintenance manuals, guarantees and warranties
- Prepare and/or procure as-built drawings and documentation
- Co-ordinate and monitor rectification of defects
- Manage procurement of operations and maintenance manuals, guarantees and warranties
- Manage preparation of as-built drawings and documentation
- Manage procurement of outstanding statutory certificates
- Monitor, review and issue payment certificates
- Issue completion certificates
- Manage agreement of final account(s)
- Prepare and present the project close-out report

Deliverables

The deliverables will include:

- As Built drawings;
- Final Completion Certificate;
- Occupation Certificate and all regulatory requirements;
- Final Account;
- Project review meeting and minutes, and
- Close out report and letter of closure.
- Completion certificates
- Record of necessary meetings
- All guarantees, warranties, commissioning certificates, etc.

STRUCTURAL/CIVIL ENGINEER

Defined as: Establish client requirements and preferences, refine user needs and options, appointment of necessary consultants, establish the project brief including project objectives, priorities, constraints, assumptions, aspirations and strategies.

STAGE 1: INCEPTION

- Assist in developing a clear project brief.
- Attend project initiation meetings.
- Advice on procurement policy for the project.
- Advice on the rights, constraints, consent and approvals.
- Define the service and scope of work required.
- Concludes the terms of
- Inspect the site and advise on the necessary surveys, analyses, tests and site or other investigations where such information will be required for **Stage 2** including the availability and location of infrastructure and services.
- Determine the availability of data, drawings and plans relating to the project.
- Advise on criteria specific own scope of work that could influence the project life cycle cost significantly.
- Provide necessary information within the agreed scope of the project to other consultants involved.

Deliverables will typically include:

- Agreed service and scope of work.
- Signed agreement.
- Report on project, site and functional requirements
- Schedule of required surveys, tests, analyses, site and other investigations.
- Schedule of consents and approvals and related lead times.

STAGE 2: CONCEPT VIABILITY (PRELIMINARY DESIGN)

Defined as: Prepare and finalise the project concept in accordance with the brief, including project scope, scale, character, form and function, plus preliminary programme and viability of the project.

- Agreed documentation programme with principal consultant and other consultants involved.
- Attend design and consultant's meetings.
- Establish the concept design criteria.
- Prepare initial concept design and related documentation.
- Advise client for further surveys, analyses, tests and investigations which may be required.
- Establish regulatory authorities' requirements and incorporate into design.
- Refine and assess the concept design to ensure conformance with regulatory with all regulatory requirements and consents.
- Establish access, utilities, services and connections required for the design.
- Co-ordinate design interfaces with other consultants involved.

- Prepare preliminary processes designs, preliminary designs, and related documentation for approval by authorities and client and suitable for costing.
- Provide cost estimate and comment on life cycle costs as required.
- Liaise, co-operate and provide necessary information to the client, principal consultant and other consultants involved.

Typical deliverables will include:

- Concept design
- Schedule of required surveys, tests, and other investigations and related reports.
- Process Design.
- Preliminary Design
- Cost estimates as required.

STAGE 3: DESIGN DEVELOPMENT

Defined as: Develop the approved concept to finalise the design, outline specifications, cost plan, financial viability and programme for the project.

- Review documentation programme with principal consultant and other consultants involved.
- Attend design and consultants' meetings.
- Incorporate client's and authorities' detailed requirements into the design.
- Incorporate other consultants' design and requirements into the design.
- Prepare design development drawings including draft technical details and specifications.
- Review and evaluate design and outline specification and exercise cost control.
- Prepare detailed estimates of construction cost.
- Liaise, co-operate and provide necessary information to the principal consultant and other consultants involved.
- Submit the necessary design documentation to local and other authorities for approval

Typical deliverables will include:

- Design development drawings.
- Outline specifications.
- Local and other authority submission drawings and reports.
- Detail estimates of construction costs.

STAGE 4: DOCUMENTATION AND PROCUREMENT

Defined as: Prepare procurement and construction documentation, confirm and implement the procurement strategies and procedures for effective and timeous procurement of necessary resources for execution of the project.

- Attend design and consultant's meetings.
- Prepare specifications and preambles for the work.
- Accommodates services design.

- Check cost estimate and adjust designs and documents if necessary to remain within budget.
- Formulate the procurement strategies for contractors or assist the principal consultant where relevant.
- Review designs, drawings and schedules for compliance with approved budget.
- Prepare contract documentation for signature
- Assess samples and products for compliance and design intent.

Typical deliverables will include:

- Specifications.
- Services co-ordination.
- Working drawings.
- Budget construction costs.
- Price contract documentation

STAGE 5: CONTRACT ADMINISTRATION AND INSPECTION

Defined as: Manage, administer and monitor the construction contracts and processes including preparation and coordination of procedures and documentation to facilitate practical completion of the works.

- Attend site hand over.
- Issue construction documentation in accordance with the documentation schedule including, in the case of structural engineering, reinforcing bending schedules and detailing and specifications of structural steel sections and connections.
- Carry out contract administration procedures in terms of contract.
- Prepare schedules of predicted cash flows.
- Prepare pro-active estimates of proposed variations for client decision making.
- Attend regular site, technical and progress meetings.
- Review the contractor's quality control programme and advise and agree a quality assurance plan.
- Inspect the works for quality and conformity to contract documentation, on average once every two weeks during course of the works as described in more detail in 3.3.2 for Level1: periodic construction monitoring.
- Review the outputs quality assurance procedures and advise the contractor and client on the adequacy and need for additional controls, inspections and testing.
- Adjudicate and resolve financial claims by contractor(s).
- Assist in the resolution of contractual claims by the contractor.
- Establish and maintain a financial control system.
- Clarify details and descriptions during construction as required.
- Prepare valuations for payment certificate to be issued by the principal agent.
- Instruct, witness and review all tests and mock ups carried out both on and off site.
- Check and approve contractor drawings for design intent.
- Update and issue drawings register.
- Issue contract instructions as and when required.
- Review and comment on operation and maintenance manuals, guarantee certificates and warranties.
- Inspect the works and issue practical completion and defects lists.
- Arrange for delivery of all tests certificates, statutory (regulatory) and other approvals, as-built drawings and operating manuals.

Typical deliverables will include:

- Schedules of predicted cash flows.
- Construction documentation.
- Drawings register.
- Estimate for proposed variations.
- Contract instructions.
- Financial control reports.
- Valuation for payment certificates.
- Progressive and draft final account(s).
- Practical completion and defects list.
- All statutory certification and certificates of compliance as required by Local and other Statutory Authority.

STAGE 6: CLOSE-OUT

Defined as: Fulfil and complete the project close-out including necessary documentation to facilitate effective completion, handover and operation of the project.

- Inspect and verify the rectification of defects.
- Receive, comment and approve relevant payment valuations and completion certificates.
- Facilitates and/or procure final operations and maintenance manuals, guarantees and warranties.
- Prepare and/or procure as built drawings and documentation.
- Conclude the final accounts where relevant.

Typical deliverables will include:

- Valuations for payment certificates.
- Works and final completion lists.
- Operations and maintenance manuals, guarantees and warranties.
- As built drawings and documentation.
- Final Accounts.

ELECTRICAL/MECHANICAL ENGINEER

Defined as: Establish client requirements and preferences, refine user needs and options, appointment of necessary consultants, establish the project brief including project objectives, priorities, constraints, assumptions, aspirations and strategies.

STAGE 1: INCEPTION

- Assist in developing a clear project brief.
- Attend project initiation meetings.
- Advice on procurement policy for the project.
- Advice on the rights, constraints, consent and approvals.
- Define the service and scope of work required.
- Concludes the terms of reference.
- Inspect the site and advise on the necessary surveys, analyses, tests and site or other investigations where such information will be required for **Stage 2** including the availability and location of infrastructure and services.
- Determine the availability of data, drawings and plans relating to the project.
- Advise on criteria specific own scope of work that could influence the project life cycle cost significantly.
- Provide necessary information within the agreed scope of the project to other consultants involved.

Deliverables will typically include:

- Agreed service and scope of work.
- Signed agreement.
- Report on project, site and functional requirements
- Schedule of required surveys, tests, analyses, site and other investigations.
- Schedule of consents and approvals and related lead times.

STAGE 2: CONCEPT VIABILITY (PRELIMINARY DESIGN)

Defined as: Prepare and finalise the project concept in accordance with the brief, including project scope, scale, character, form and function, plus preliminary programme and viability of the project.

- Agreed documentation programme with principal consultant and other consultants involved.
- Attend design and consultant's meetings.
- Establish the concept design criteria.
- Prepare initial concept design and related documentation.
- Advise client for further surveys, analyses, tests and investigations which may be required.
- Establish regulatory authorities' requirements and incorporate into design.
- Refine and assess the concept design to ensure conformance with regulatory with all regulatory requirements and consents.
- Establish access, utilities, services and connections required for the design.
- Co-ordinate design interfaces with other consultants involved.
- Prepare preliminary processes designs, preliminary designs, and related documentation for approval by authorities and client and suitable for costing.
- Provide cost estimate and comment on life cycle costs as required.
- Liaise, co-operate and provide necessary information to the client, principal consultant and other consultants involved.

Typical deliverables will include:

- Concept design
- Schedule of required surveys, tests, and other investigations and related reports.
- Process Design.
- Preliminary Design
- Cost estimates as required.

STAGE 3: DESIGN DEVELOPMENT

Defined as: Develop the approved concept to finalise the design, outline specifications, cost plan, financial viability and programme for the project.

- Review documentation programme with principal consultant and other consultants involved.
- Attend design and consultants' meetings.
- Incorporate client's and authorities' detailed requirements into the design.
- Incorporate other consultants' design and requirements into the design.
- Prepare design development drawings including draft technical details and specifications.
- Review and evaluate design and outline specification and exercise cost control.
- Prepare detailed estimates of construction cost.
- Liaise, co-operate and provide necessary information to the principal consultant and other consultants involved.
- Submit the necessary design documentation to local and other authorities for approval

Typical deliverables will include:

- Design development drawings.
- Outline specifications.
- Local and other authority submission drawings and reports.
- Detail estimates of construction costs.

STAGE 4: DOCUMENTATION AND PROCUREMENT

Defined as: Prepare procurement and construction documentation, confirm and implement the procurement strategies and procedures for effective and timeous procurement of necessary resources for execution of the project.

- Attend design and consultant's meetings.
- Prepare specifications and preambles for the work.
- Accommodates services design.
- Check cost estimate and adjust designs and documents if necessary to remain within budget.
- Formulate the procurement strategies for contractors or assist the principal consultant were relevant.
- Prepare documentation for contractor procurement.
- Review designs, drawings and schedules for compliance with approved budget.
- Prepare contract documentation for signature
- Assess samples and products for compliance and design intent.

Typical deliverables will include:

- Specifications.
- Services co-ordination.
- Working drawings.
- Budget construction costs.
- Price contract documentation

STAGE 5: CONTRACT ADMINISTRATION AND INSPECTION

Defined as: Manage, administer and monitor the construction contracts and processes including preparation and coordination of procedures and documentation to facilitate practical completion of the works.

- Attend site hand over.
- Issue construction documentation in accordance with the documentation schedule including, in the case of structural engineering, reinforcing bending schedules and detailing and specifications of structural steel sections and connections.
- Carry out contract administration procedures in terms of contract.
- Prepare schedules of predicted cash flows.
- Prepare pro-active estimates of proposed variations for client decision making.
- Attend regular site, technical and progress meetings.
- Review the contractor's quality control programme and advise and agree a quality assurance plan.
- Inspect the works for quality and conformity to contract documentation, on average once every two weeks during course of the works as described in more detail in 3.3.2 for Level1: periodic construction monitoring.
- Review the outputs quality assurance procedures and advise the contractor and client on the adequacy and need for additional controls, inspections and testing.
- Adjudicate and resolve financial claims by contractor(s).
- Assist in the resolution of contractual claims by the contractor.
- Establish and maintain a financial control system.
- Clarify details and descriptions during construction as required.
- Prepare valuations for payment certificate to be issued by the principal agent.
- Instruct, witness and review all tests and mock ups carried out both on and off site.
- Check and approve contractor drawings for design intent.
- Update and issue drawings register.
- Issue contract instructions as and when required.
- Review and comment on operation and maintenance manuals, guarantee certificates and warranties.
- Inspect the works and issue practical completion and defects lists.
- Arrange for delivery of all tests certificates, statutory (regulatory) and other approvals, as-built drawings and operating manuals.

Typical deliverables will include:

- Schedules of predicted cash flows.
- Construction documentation.
- Drawings register.
- Estimate for proposed variations.
- Contract instructions.
- Financial control reports.
- Valuation for payment certificates.
- Progressive and draft final account(s).
- Practical completion and defects list.
- All statutory certification and certificates of compliance as required by Local and other Statutory Authority.

STAGE 6: CLOSE-OUT

Defined as: Fulfil and complete the project close-out including necessary documentation to facilitate effective completion, handover and operation of the project.

- Inspect and verify the rectification of defects.
- Receive, comment and approve relevant payment valuations and completion certificates.
- Facilitates and/or procure final operations and maintenance manuals, guarantees and warranties.
- Prepare and/or procure as built drawings and documentation.
- Conclude the final accounts where relevant.

Typical deliverables will include:

- Valuations for payment certificates.
- Works and final completion list.
- Operations and maintenance manuals, guarantees and warranties.
- As built drawings and documentation.
- Final Accounts.

QUANTITY SURVEYOR

STAGE 1: INCEPTION

- Assisting in developing a clear project brief.
- Attending project initiation meetings.
- Advising on the procurement policy for the project.
- Advising on other professional consultants and service required.
- Defining the quantity surveyor's scope of work and services.
- Concluding the terms of the client/quantity surveyor professional services agreement with the client.
- Advising on economic factors affecting the project.
- Advising on appropriate financial design criteria.
- Providing necessary information within the agreed scope of the project to the other professional consultants and for which the following deliverables are applicable:
 - Agreed scope of work.
 - Agreed services.
 - Signed client/quantity surveyor professional service agreement.

STAGE 2: CONCEPT AND VIABILITY

- Agreeing the documentation programme with the principal consultant and other professional consultants.
- Attending design and consultant's meetings.
- Reviewing and evaluating design concepts and advising on viability in conjunction with the other professional consultants.
- Receiving relevant data and cost estimates from the other professional consultants.
- Preparing preliminary and elementary or equivalent estimates of the construction cost.
- Assisting the client in preparing a financial viability report.
- Audit space allocation against the initial brief.
- Liaising, co-operating and providing necessary information to the client, principal consultant and other professional consultants and for which the following deliverables are applicable:
 - Preliminary estimate(s) of construction cost.
 - Elementary or equivalent estimate(s) of construction cost.
 - Space allocation audit for the project.

STAGE 3: DESIGN DEVELOPMENT

- Reviewing the documentation programme with the principal consultant and other professional consultants.
- Attending design and consultant's meetings.
- Reviewing and evaluating design and outline specifications and exercising cost control in conjunction with the other professional consultants.
- Receiving relevant data and cost estimates from the other professional consultants.
 - Preparing detail estimates construction cost.
- Assisting the client in reviewing the financial viability report.
- Commenting on space and accommodation allowances and preparing an area schedule.
- Liaising, co-operating and providing necessary information to the client, principal consultant and other professional consultants and for which the following deliverables are applicable:
- Detail estimate(s) of construction cost.
 - Area schedule

STAGE 4: DOCUMENTATION AND PROCUREMENT

- Attending design and consultant's meetings.
 - Assisting the principal consultant in the formulation of the procurement strategy for contractors, sub-contractors and suppliers.
- Reviewing working drawings for compliance with the approved budget construction cost and/or financial viability.
- Preparing documentation for both principal and subcontract procurement.
 - Assisting with preparation of contract documentation for signature and for which the following deliverables are applicable:
 - Budget of construction cost.
 - Priced contract documentation.

STAGE 5: CONSTRUCTION

- Attending site handover.
- Preparing schedules of predicted cash flow.
- Preparing pro-active estimates for proposed variations for client decision-making.
- Attending regular site, technical and progress meetings.
- Adjudicating and resolving financial claims by the contractor(s).
- Assisting in the resolution of contractual claims by the contractor(s).
- Establishing and maintaining financial control system.
- Preparing valuations for payment certificates to be issued by the principal agent.
- Preparing final account(s) including re-measurement(s) as required for the works on a progressive basis and for which the following deliverables are applicable:

- Schedule(s) of predicted cash flow.
- Estimates for proposed variations.
- Financial control reports.
- Valuations for payment certificates.
- Progressive and draft final account(s).

STAGE 6: CLOSE-OUT

- Preparing valuations for payment certificates to be issued by the principal agent.
- Concluding final account(s)
And for which the following deliverables are applicable:
- Valuations for payment certificates.
- Final account(s).

General Notes

- As these stages might overlap, the Standard Services stated hereunder may be required to be undertaken during any one of the project work Stages
- The order of the Standard Services does not necessarily reflect the actual sequence of implementation