



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Department of Facilities Management

CONSTRUCTION PROJECT MANAGEMENT PROTOCOL (CPMP)



Version 7.0 Rev 3
September 2014

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DOCUMENT VERSION TABLE

Version	Date
Version 1	05/07/2008
Version 2	08/09/2008
Version 3	26/10/2008
Version 4	27/01/2009
Version 4.2	13/02/2009
Version 4.3	22/02/2009
Version 4.4	28/02/2009
Version 4.5	05/03/2009
Version 4.6	03/08/2009
Version 5	11/11/2009
Version 5.1	14/06/2010
Version 5.2	15/12/2010
Version 6.0 Rev 1	30/03/2012
Version 6.0 Rev 2	12/04/2012
Version 6.0 Rev 3	15/05/2012
Version 7.0 Rev 0	24/08/2014
Version 7.0 Rev 1	9/09/2014
Version 7.0 Rev 2	19/09/2014
Version 7.0 Rev 3	23/09/2014

SECTION A: GENERAL NOTES ON FACILITIES PROJECT MANAGEMENT

Abbreviations used in this document:

- CIP: Capital Improvement Plan. This plan typically includes major construction projects for example a new lecture hall complex, synthetic athletics track, new residences etc.
- CPA: Contract Principal Agent
- CPM: Construction Project Manager – an official of UP to whom a project has been assigned for execution.
- CPMP: Construction Project Management Protocol (this document).
- DFM: Department of Facilities Management.
- DRA&A: Department of Residence Affairs and Accommodation.
- DR&R: Deferred renewal and replacement.
- E@UP: Enterprises at UP, an University business unit.
- FAC: Facilities Advisory Committee.
- hpc: The high performance centre, an University business unit.
- IPC: DFM's Internal Planning Committee.
- MBW: Minor building work. Work amounting to a total cost of less than R20 000, escalated at 10% per annum from 2008 (about R30 000 in 2012).
- PIA: Pretoria Institute for Architects.
- PROCSA: Professional Consultants Service Agreement. As suite of documents prepared to regulate the terms of engagement between the client and the team of consultants.
- PSPMS: PeopleSoft Project Management System. The University's integrated computerised software system used to manage financial and physical progress of all projects.
- R&R: Renewal and Replacement. Work of a corporate nature to keep facilities in good working condition including work required to comply with statutory requirements and to make provision for changing academic needs. Projects in this category may also be of a major nature, e.g. the refurbishment or replacement of a building's central air-conditioning system.
- UP: The University of Pretoria

The DFM renders a construction project management service to all Academic Faculties, Support Services Departments and business units, as well as work of a corporate nature. For the sake of good corporate governance, all project management services as described below are the sole responsibility of the DFM. No other entity will be allowed to conduct any of this work without prior written permission from the Director: Facilities Management.

Construction project management in this context refers to the construction of new facilities and infrastructure (CIP), the renewal, refurbishing, renovation, restoration and replacement of existing facilities and infrastructure (R&R) and the execution of minor building work (MBW).

Abovementioned facilities and infrastructure refer to:

- Buildings and other structures, including lecture rooms, laboratories, offices, residences, houses and sport facilities like courts, tracks, pavilions and pools.
- Building systems, including heating, ventilation and air conditioning, elevators and lifts, electrical systems, access control, fire and intruder detection systems with alarms relayed to the control centre, mechanical pumps etc.
- Services infrastructure including roads and parking, electrical, water, storm water, sewer and gas reticulation.
- Landscaping, irrigation and sports fields

All projects in terms of this Protocol originate from:

- The annual CIP
- the annual approved R&R budget
- the annual approved long term maintenance plan
- the annual approved budget from DRA&A
- the annual approved budgets from business units
- *ad hoc* requests, approved during the year from the corporate budget, or funded by the client
- Additional capital allocations by the Executive, including major R&R projects
- *Ad hoc* requests for MBW

SECTION B: THE GENERIC PROJECT MANAGEMENT PROCESS

Projects approved on the annual CIP, R&R and DRA&A budgets are scheduled for execution throughout the year. Scheduling priorities are determined by a combination of user client needs and availability of DFM resources. All *ad hoc* requests outside the approved annual budgets are subject to the approval and placement of additional funds for the project by the requestor and will be scheduled on the same priority base. Construction Project Managers from the DFM shall generally perform the following standard services under the following project stages, in line with the standard PROCSA document:

- **Stage 1 - Initiation:** Prioritise projects and programme them for execution during the year. Agreeing on user client requirements and preferences, assessing user client needs and options, appointment of initial consultants in establishing project brief, objectives, priorities, constraints, assumptions and strategies in consultation with the user client. The deliverables of this stage include the project brief, signed client/consultant agreements, project initiation programme, milestones schedule and approval of user client to proceed to Stage 2.
- **Stage 2 - Concept and Viability:** This stage comprises the finalisation of the concept and feasibility, appointment of balance of consultants, the initial cost estimate, feasibility study, value engineering and construction programme. Deliverables include indicative project documentation and construction programme.
- **Stage 3 - Design Development:** Manage, co-ordinate and integrate the detail design development process within the project scope, time, cost and quality parameters. Design drawings are delivered either in-house or by a consultant. Review the designs until all role players (see below) are satisfied and have approved the design development. Deliverables include detailed design and documentation programme, updated construction programme and approval of user client to proceed to Stage 4.
- **Stage 4 - Documentation and Procurement:** The process of establishing and implementing procurement strategies and procedures, including the preparation of necessary documentation, for effective and timeous execution of the project. Follow the due process to procure and appoint relevant contractors and subcontractors. The procurement phase ends with the issuing of purchase orders and the signing of relevant contracts.
- **Stage 5 - Construction:** 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. This stage comprises site handover, management of the scope of works, schedule, budget and contract administration. Conduct review meetings to ensure all role player (see below) are satisfied. The construction phase ends once works completion has been achieved.
- **Stage 6 - Close-out:** The process of managing and administering the project closeout, including preparation and co-ordination of the necessary documentation to facilitate the effective operation of the project. Ensure that as-built drawings and operations and maintenance manuals have been submitted. The work is handed over to the end user, the Operations and Maintenance team, including warranty related work. Latent defects remain the responsibility of the project management team. The final steps include the compilation of a project close out report, clearance of outstanding financial encumbrances and return of the balance of funds to the original source.

See **ANNEXURE A** for the detailed steps in the project management process. This may be used by the construction project manager as a checklist and by the user client to track progress.

ROLE PLAYERS

Apart from the DFM's Project Management team, the following are **ROLE PLAYERS** in the compilation and approval of the scope of work and the final project:

- The Construction Project Manager from the DFM
- The various consultants appointed by the DFM
- The nominated end user for whom the project is executed. This person(s) will be a member of all project panels.

- The Department of Information Technology Services regarding IT and telephone equipment, cabling, computer labs and audio / visual equipment.
- The Department of Security Services regarding access control, fire and intruder alarms, CCTV systems and guards during construction.
- The Department of Academic Administration in so far a project impacts on lecture halls, timetables and graduation ceremonies.
- The Department of Education Innovation when learning spaces are involved.
- The expert consultant regarding the needs for people with disabilities.
- Unit for people with special needs.
- The expert consultants regarding heritage and archaeological issues.
- The UP Arts Committee regarding art work in and around buildings.
- The Curator of the Botanical Garden for projects impacting on the Botanical Garden.
- The member of the Executive for post graduate studies, for projects involving any post graduate centre or space for post graduate students.
- The UP occupational health and safety team.
- The DFM's Planning and Administration team regarding space management, signage, records and archiving of project documentation.
- The DFM's Campus Services team regarding landscaping, cleaning, waste management, furniture and the long term maintainability of new facilities.
- The DFM's environmental and sustainability team.
- The DFM's Maintenance and Operations team (M&O) regarding the type of plant and equipment, the commissioning of such plant and equipment, operations and maintenance, the long term maintainability of the new facilities and the pointing out of underground services where applicable.
- Specially selected panels to conduct design review and progress meetings as required.

SECTION C: PROJECTS ORIGINATING FROM AD HOC REQUESTS FROM USER CLIENTS, SELF FUNDED OR CORPORATE FUNDED

Should circumstances warrant it, user clients may lodge requests for *ad hoc* projects. Such requests may be either self-funded (funded by the user client), or a request for corporate funding may be considered by the Department of Facilities Management for approval by the Executive in exceptional cases. Since these requests have not been pre-approved on the University's annual capital budget, they:

- are not funded in the DFM's capital budget
- need to go through a corporate governance screening process
- should be screened for possible space management implications
- approved by the Executive

Request for minor building work will be funded from the DFM's budget for minor building work depending on the availability of funds, or may be self funded by the applicant, or a combination of both.

For *ad hoc* requests not considered to be minor building work, see **SECTION J** and **ANNEXURE A Section 1 & 2** for the generic project management process. This may be used by the project manager as a checklist and by the user client to track progress.

SECTION D: PROJECTS EXECUTED FOR THE DEPARTMENT OF RESIDENCE AFFAIRS AND ACCOMMODATION.

This section is applicable to projects approved on the annual capital budget of DRA&A as well as to *ad hoc* needs that may arise during the year. At large the steps are the same as for corporate CIP and R&R projects, but differ in that they are neither of a corporate nature nor corporate funded.

Certain minor self-funded projects may be managed in-house by DRA&A using departmental resources. All these projects have to be communicated and agreed upon with the IPC. Preference will be given to UP term-contractors to execute these projects subject to availability of resources.

For projects managed by DFM the same generic Project Stages are followed with the following provisos:

- In all cases the user client is the Director: DRA&A or his/her nominated representative who will be a member of all project panels.
- The project brief is compiled and approved by the Director: DRA&A or nominated representative.
- The funds for the project is transferred from the DRA&A to a special cost centre for DRA&A projects, but managed by the DFM. The DRA&A will remain the cost centre owner.
- Note that all project management transactions and activities are managed in the PSPMS.
- The normal DFM procurement processes for consultants and contractors will be followed in collaboration with the Director: DRA&A or his nominated representative.
- DFM will issue requisitions for purchase orders, approve it according to delegations and revert the requisition and source documents to the DRA&A for final release.
- the DFM Construction Project Manager will forward copies of the following documents to the Director: DRA&A:
 - the official work orders
 - approved progress payments
 - monthly cost reports
 - the final completion certificate
 - the final account
 - the project close-out report
- All completed projects have to be approved by the Director: DRA&A or his/her nominated representative, and where applicable, the Head of Residence or his/her representative, before the close-out report will be finalised.
- No project will be finally signed off by the Director: DRA&A unless the above mentioned procedures have been followed and finalised.

See **ANNEXURE A** for the generic project management process. This may be used by the project manager as a checklist and by the user client to track progress.

SECTION E: PROJECTS FOR BUSINESS ENTITIES OF THE UNIVERSITY OF PRETORIA

This section is applicable to projects resulting from needs originating at autonomous business units of the University, including the highperformancecentre (hpc), the Gordon Institute of Business Sciences (GIBS) and Enterprises at UP (E@UP) and similar legal entities. These projects are usually self funded.

These business units will decide which projects will be managed by DFM (mainly major projects) and which projects will be managed using in-house resources. All the latter projects have to be communicated and agreed upon with the IPC.

For projects managed by DFM the same generic Planning and Construction phases are followed with the following provisos:

- In all cases the user clients are the Directors of the different business units or his/her representative.
- The project brief is compiled and approved by the Directors of these business units.
- The normal DFM procurement processes for consultants and contractors will be followed in collaboration with the Directors of these business units or their nominated representatives.
- the DFM Construction Project Manager will forward copies of the following documents to the Directors of these business units:
 - monthly cost reports
 - the final completion certificate
 - the final account
 - the project close-out report

See **ANNEXURE A** for the generic project management process. This may be used by the project manager as a checklist and by the user client to track progress.

SECTION F: NOTES ON THE APPOINTMENT OF CONSULTANTS

Note that for certain smaller projects, architectural and quantity surveying services may be insourced. This will depend on the availability and current work load of these in-house officials. All other consulting services are outsourced to external consultants.

External consultants may be appointed in the prescribed way as the need arises, including architects, quantity surveyors, various engineers (structural, electrical, electronic, mechanical, civil, fire, acoustical and geotechnical), landscape architects, land surveyors, health and safety consultants and heritage consultants. Always ensure that consultants have the expertise as required by the appointment. Note that a dedicated lift consultant is required for lifts. All consultants are recommended on the standard form and approved by the DFM's IPC.

More on appointment of architects:

- For work in or adding to existing buildings, try to use the original architects where possible.
- For smaller projects, submit shortlist of architects to IPC on standard form.
- For major projects, advertise UP's intent on the UP Procurement website and/or in the PIA newsletter and invite architects to register their interest in the project, submit their company profiles to the FAC where a shortlist may be drawn up. The final choice will be made by FAC.
- For iconic projects, advertise a competition on the UP Procurement website and/or in the PIA newsletter, invite architects to register their interest, submit the interest to FAC where a shortlist will be drawn up for presentation of competition entries to FAC. The final choice will be made by the FAC.

More on appointment of all consultants:

- First obtain preferences from appointed architects regarding the rest of the professional team.
- Verify B-BBEE status of each consultant.
- Ascertain that each consultant is registered as a vendor on the financial system. If not registered, ensure that the consultant complies to the requirements to become a registered vendor.
- Present a list of the proposed consultants using the standard form to IPC for approval.
- After approval, agree on professional fees structure, based on the standard fee structure announced in the Government Gazette, minus an agreed percentage discount.
- Ensure that PROCSA agreements between UP and all consultants are signed.
- Issue an official order to each consultant.
- Issue an appointment letter and conditions of appointment where applicable.

After their appointment, the relevant consultants must clarify their planning and designs with the relevant UP role-players, notably the Security Department, the ITS Department and the M&O Division of the DFM. Throughout the planning, design, construction and commissioning processes, the various **consultants remain professionally accountable for their designs**. The functionaries in O&M will scrutinise the designs for statutory compliance, good engineering practises, compatibility with normal UP standards and the availability of the required engineering services. The CPM must ensure that the abovementioned roleplayers have approved the various designs. **It will remain the responsibility of all consultants to see to it that work is executed in accordance with the approved scope of work and general accepted engineering standards.**

Functions of the Consultant include:

- Review and agree to the Contractor's quality assurance plan.
- Inspect the works for quality and contract documentation.
- Review outputs and advise the contractor and client on the adequacy and need for additional controls, inspection and testing.
- Check and approve construction drawing for design intent.
- Instruct, witness and review all tests and mock ups carried out both on and off site.
- Review and comment on O&M manuals, plant inventory, guarantee certificates and warranties.
- Inspect the works and issue defect lists and once satisfied, practical completion certificates.
- Arrange for hand over of the completed project (see **Section H**).

The CPM will for each project inform each applicable consultant via email about these functions, as well as the relevant UP role-players involved in the project. The project will not progress to Stage 4 until the CPM has received a written acceptance by means of an email or signature on a drawing from each UP role-player regarding a project and all PROCSA documentation has been signed.

SECTION G: NOTES ON THE PROCUREMENT OF CONTRACTORS

Note that for certain smaller projects, the compilation of quotation/tender documentation may be insourced. This will depend on the availability and current work load of the in-house project and contract managers.

Contractors are procured and appointed as per the official Tender Policy of the University of Pretoria. Where projects costs are:

- Within delegation of a Project Manager: Classified as Minor Building Work. At least one written quotation required from a term contractor or two written quotations from an outside contractor whom must be registered or registerable as a vendor. Appoint the contractor by means of an official UP purchase order.
- Within delegation of a Senior Assistant Director: At least three closed quotations required from contractors / suppliers whom must be registered or registerable as vendors. The Senior Assistant Director evaluates the quotations and appoints the contractor by means of an official UP purchase order.
- Within the delegation of a Deputy Director and the Director: At least five tenders requested from contractors from a list pre-approved by the IPC. A tender evaluation report (TER) is compiled and approved by the IPC. Appoint the contractor by means of an official UP purchase order.
- Above delegation of the Director: RFQ's are advertised on the UP Procurement website. The QS is to compile a recommendation report to be approved by the IPC, after which tender documents are provided to qualifying tenderers. A tender evaluation report (TER) is compiled and approved by the Facilities Advisory Committee. Appoint contractor by means of an official UP purchase order.

Tender Evaluation Reports should include:

- Name of project manager.
- Description of project.
- Project number, description and available budget.
- List of tenderers.
- Recommended successful contractor, including tender recommendation report in case of outsourced tender process.
- List of other expected costs, including professional fees, provision for contingencies, VAT etc.
- Printout from financial system to prove availability of funds.
- Valid B-BBEE certificates of all tenderers.
- Correctly filled in project evaluation matrix.
- Recommendation from CPM.
- Recommendation / Approval of Tender Evaluation Report according to delegations

SECTION H: NOTES ON COMMISSIONING AND HANDOVER OF PLANT AND EQUIPMENT

COMMISSIONING: All plant and equipment must be formally commissioned before handover to the end-user and the M&O Division. Both these events must be completed prior to the granting of Practical Completion and occupation of the facility. The relevant consultants are to oversee the testing and commissioning of all plant and equipment:

- Commissioning procedures need to be compiled by the Consultants and approved by M&O.
- The plant and equipment need to be commissioned and witnessed by all parties involved – Consultant, Contactor and M&O.
- All test certificates, as-built drawings, procedures and instructions need to be available during commissioning.
- Areas of concern or non-conformance need to be documented and managed to completion.
- The supplier and/or installation contractor must provide OEM specific training to the maintenance team during or after the commissioning.

HANDOVER: The CPM will notify the M&O Division of the status of these installations, and arrange for a handover between the respective consultant and the M&O Division. The M&O Division will accept the handover when the following has been achieved and provided:

- All work including items identified in the plant and equipment commissioning snag list has been completed.
- The plant, equipment or systems are tested and confirmed to be functional as per the approved design.

At this stage the Consultant would have:

- Inspected the works to ensure that practical completion can be achieved.

- Confirmed that the items on the commissioning snag list has been completed.
- Reviewed and commented on Operation & Maintenance manuals, guarantee certificates and warranties. O & M manuals must be available including the following:
 - A design overview.
 - Plant inventory.
 - Compliance certificates.
 - "As built" drawings.
 - Commissioning test sheets.
 - Operating procedures and instructions.
 - Supplier detail.
 - Equipment specifications.
 - Applicable warranties and / or guarantees, for maintenance.

Once all building systems and engineering services have been taken over by the M&O Division, by means of a signature on the official Project Handover Report, and when the principal agent has deemed the rest of the works fit for the purpose intended, he/she will issue a Certificate of Practical Completion, after which the works may be occupied.

The consequences of practical completion include that:-

- The contractor is no longer obliged to carry out a contract instruction in relation to additional work;
- The employer takes possession of the works subject to any right of retention (lien); and
- Risk passes to the employer and the contractor's insurance obligations are terminated.

After commissioning and handover, the M&O Division becomes responsible for:

- all maintenance, including work on plant and equipment still under guarantee, but excluding latent and patent defects.
- submitting requests for increased M&R budgets where applicable.

SECTION J: NOTES ON PROJECT CLOSE-OUT

After issuing the Practical Completion Certificate, the Principal Agent must issue a Works Completion defect list within 5 working days. The main contractor has 20 working days to complete the work listed on the works completion list in order not to forfeit compensatory interest on the value of the outstanding work. The main contractor will notify the principal agent when the works completion list has been completed, after which the principal agent will inspect the works. If not satisfied, this process may be repeated until the principal agent is satisfied that all work on the works completion list has been satisfactorily completed. When this stage has been reached, the principal agent will issue a Works Completion Certificate.

The issuing of the Works Completion Certificate marks the commencement of the 90 calendar days defects liability period. During this time the Contractor is not entitled to compensatory interest on the value of outstanding work. At the end of the 90 days defects liability period, the principal agent must inspect the works again, and if satisfied that no defects are present, issue the Final Completion Certificate. The achievement of final completion by the contractor has the following consequences:

- All the contractor's liabilities and obligations in relation to a subcontractor's defects comes to an end and any remaining portion of the subcontractor's defects period is agreed and assumed by the employer;
- All guarantees, warranties and indemnities provided by the contractor, subcontractors and suppliers are ceded to the employer on the date which the Certificate of Final Completion is issued; and
- The Certificate of Final Completion constitutes conclusive evidence as to the sufficiency of the works and that the contractors obligations have been fulfilled other than latent defects.

Once the contractor has achieved final completion, the latent defects liability period commences which ends 5 years after the date when Final Completion was achieved. Note that while normal

maintenance, including warranty/guarantee related work, shifts over to the M&O Division once Practical Completion has been certified, the management of all latent defects related work remains the responsibility of the CPM.

SECTION J: NOTES ON UNFUNDED AD HOC PROJECTS

The following generic planning processes are normally applicable to new unfunded, *ad hoc* projects:

- The requesting user client must lodge a request for an *ad hoc* project at the office of the Deputy Director: Planning and Administration by filling out a standard request form available online. DFM's One Stop Help Desk can also be contacted in this regard via email at eenstop@up.ac.za or by phoning 012 420 2244.
- The Planning & Administration Division will adjudicate the project in terms of good corporate governance, space implications and location. Should the request not be supported, the Planning and Administration Division will inform the requestor in writing giving reasons for the decision.
- Should the request be supported, the Planning and Administration Division informs the Manager *Ad hoc* Projects, who assigns the project to a CPM and requests the accountant to open a project number.
- The CPM sees to the completion of the rest of the Stage 1 activities below.
- If the scope of work and cost estimate of the supported project are not known, the CPM follows the same generic steps below until the scope of work and cost estimate have been agreed. If the scope of work and cost estimate are known, the CPM renders support to user client to prepare a document to the Executive for approval.

Once the request has been approved by the Executive, it becomes a normal funded project. Funds (either self, donar or corporate funded) will be placed against the project number by the accountant.

ANNEXURE A: STEPS IN THE GENERIC PROJECT MANAGEMENT PROCESS

The table may be used by the project manager as a checklist and by the user client to track progress. Please provide milestone dates in the Comments column.

Stage	Activity	Responsibility	Dated completed and comments
1. Inception and Initiation	A clear needs statement and project brief are developed.	CPM in collaboration with end user	
	Inputs from the user client and all UP role players as listed in Section B are obtained.	CPM and UP roleplayers	
	Procurement of the necessary and appropriate consultants is initiated and their roles, responsibilities and liabilities spelled out to them. See Section F above.	CPM	
	All consultants are approved by IPC using the standard form.	CPM	
	Proposed professional fees are negotiated and approved by the Director FM. Fees are based on the announced fee scales minus an agreed percentage discount.	CPM and consultants	
	The availability of the project budget has been confirmed.	CPM and accountant	
	A project number has been opened on the financial system and the project budget has been placed.	CPM and accountant	
	Official UP purchase orders have been issued to all consultants.	CPM and Admin Officer	
	PROCSA documents are signed by all applicable consultants.	CPM and consultants	
	All Stage 1 documentation is approved and stored in document repository.	CPM and Admin Officer	
2. Concept and Viability	The availability of infrastructure services to, from and on site are confirmed with the Services Manager, including electricity, water, sewer, gas, storm water, roads and parking.	CPM and Services Manager	
	Particular or extraordinary site characteristics that may influence design and approval have been noted and addressed.	CPM, architect and relevant engineers	
	A project launch meeting to communicate the project brief to all consultants and the end user has been held.	CPM	
	The format of cost control and reporting by the QS on the project has been established.	CPM and quantity surveyor	
	Agree on location and frequency of project management meetings.	CPM and architect	
	The preliminary project brief has been approved by the end user and all applicable UP role players, notably the Departments of Security, IT Services and the M&O and Campus Services Divisions of the DFM.	CPM	
	All Stage 2 documentation is approved and stored in document repository.	CPM and Admin Officer	
3. Design Development	Monitor the design development by the architect and other consultants.	CPM	Ongoing

	Conduct and record all appropriate planning, review and management meetings. Decide on location, frequency and attendees.	CPM	Ongoing
	Monitor the preparation by the cost consultants of cost estimates, budgets and cost reports	CPM	Ongoing
	A final pre-tender review meeting has been held.	CPM	
	The final project brief, including the landscaping plan, has been approved by the end user and all applicable UP role players, notably the Departments of Security, IT Services and the M&O and Campus Services Divisions of DFM.	CPM and other UP roleplayers	
	The Deputy Director FM: Project Management has approved the final project brief.	CPM and DD: PM	
	Applicable site development plans (SDPs) and building plans have been submitted by the design team for the necessary statutory approvals.	CPM and architect	
	All Stage 3 documentation is approved and stored in document repository.	CPM and Admin Officer	
4. Documentation and Procurement	The correct procurement strategy for contractors and subcontractors, as per the Tender Policy, has been selected. See Section G above.	CPM	
	Quotations / tenders have been sourced and approved as per the policy. See Section G.	CPM	
	Consultants have submitted copies of tender documentation and drawings for record purposes.	CPM and consultants	
	All Stage 4 documentation is approved and stored in document repository.	CPM and Admin Officer	
5. Construction	All contractors are registered as creditors on the UP financial system.	CPM	
	Official UP purchase orders have been issued to all contractors.	CPM	
	The applicable building contract has been signed according to financial delegations between UP and contractor(s): <ul style="list-style-type: none"> • JBCC 2000 Contract for larger projects. • Minor Building Works Contract for smaller projects. 	CPM, contractors and Dir FM	
	The Director: Finance has been informed if the project exceeds R100m regarding construction insurance.	CPM	
	The building site has been handed over to the main contractor and a site handover certificate has been issued by the CPA.	CPM and CPA	
	All underground services have been pointed out to the main contractor.	CPA and Services Manager	
	All trees to be removed have been approved and pointed out on site.	CPA	
	Access cards for contractors have been arranged.	CPM	
	A construction programme has been submitted by the contractor.	CPM and contractor	

	A Health and Safety plan has been submitted by the contractor.	CPM and contractor	
	Regular project progress meetings are conducted. Minutes are held of all meetings.	CPM, consultants and end user	Ongoing
	Appropriate review meetings are conducted. Minutes are held of all meetings.	CPM, consultants and end user	
	All consultants see to it that work is executed in accordance with the approved scope of work and general accepted engineering standards. See Section F above.	CPM and consultants	Ongoing
	The scope of work is continuously managed: <ul style="list-style-type: none"> • All changes in the scope of work are approved by the project manager. • Financial implications are approved according to financial delegations. • Project savings are not used to increase the scope of work without approval. • Contingency funds are not used to increase the scope of work without following the proper procedures. 	CPM	Ongoing
	All variation orders (VO's) are adjudicated by the CPM. VO's are approved according to financial delegations.	CPM	Ongoing
	Additional funds are requested by means of a submission to the Executive, should it be required.	CPM	
	Actual progress against the construction programme is monitored. Clause 17.4 notices to the main contractor are issued instructing him to comply with the scope of work, quality requirements or programme if required.	CPM and CPA	
	Claims for additional time have been adjudicated. Approval of claims have been done according to financial delegations.	CPM and CPA	
	The contractor's performance against his Health and Safety Plan is monitored.	CPM and UP H&S Officer	Ongoing
	Construction information is timeously distributed to the contractor.	CPM and CPA	Ongoing
	The quality of the work and compliance thereof is to specification and is regularly monitored.	CPM and consultants	Ongoing
	Monthly cost reports are prepared and submitted.	CPM and quantity surveyor	Ongoing
	Monthly payment certificates and professional fees invoices are prepared and submitted for approval according to financial delegations.	CPM, CPA and quantity surveyor	Ongoing
	All required building and drainage inspections have been executed by the local authority.	CPM and main contractor	Ongoing
	A construction defect list (snag list) has been compiled and attended to.	CPM, CPA and contractor	
	Plant and equipment like mini substations, emergency power generators, lifts, fire detection and alarm, access control and CCTV systems are formally commissioned. See Section H above.	CPM, O&M team and relevant consultants	
	All manuals for plant and equipment have been issued and handed over to the M&O Division and the user client where applicable.	CPM and consultants	
	A Fire Certificate has been issued by the local authority, where applicable.	CPM and CPA	

	The total project, including plant and equipment, has been handed over to the M&O Division. See Section H above.	CPM and relevant consultants	
	An Occupation Certificate has been issued by the local authority.	CPM and CPA	
	Practical Completion of project has been approved by the Deputy Director FM: Project Management.	CPM and DD: PM	
	The Practical Completion Certificate has been issued.	CPM and CPA	
	Access by the user client, including relocation and moving, has been co-ordinated	CPM	
	All Stage 5 documentation has been approved and is stored in the document repository.	CPM and Admin Officer	
6. Close-out	A Works Completion defect list has been compiled and issued within 5 working days after Practical Completion.	CPM and CPA	
	The contractor has attended to the defects list within 20 working days.	CPM, CPZ and contractor	
	A Works Completion Certificate has been issued.	CPM and CPA	
	The 90 calendar day defect liability period is managed.	CPM, CPA and contractor	
	A Final Completion Certificate has been issued.	CPM, CPA	
	All as-built drawings have been issued and handed to the Records Office.	CPM and consultants	
	All statutory compliance certificates and documentation, including the Health and Safety file, have been issued and archived.	CPM and consultants	
	The final account has been agreed upon and issued.	CPM, quantity surveyor and other consultants	
	The construction insurance has been cancelled and normal asset insurance enabled.	CPM	
	Latent and patent defects are attended to and solved.	CPM and CPA	Ongoing for 5 years after Final Completion
	Unused encumbrances on financial system have been cancelled and unspent funds have been returned to original source.	CPM and accountant	
	All Stage 5 documentation are approved and stored in the document repository.	CPM and Admin Officer	
	A project close-out report has been submitted to the IPC for minor and the FAC for major projects.	CPM	

Compiled by:

M F Theron
Deputy Director: Facilities Management

Date

Approved by:

S A Adendorff (Professor)
Director: Facilities Management

Date