



ACT
Government

Territory and Municipal Services

Project Plan

**Capital Upgrade Program
2016/17**

Stormwater Improvement Program

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1.0	10/05/2016	<Initial draft>	Neil Pincombe
1.1	16/06/2016	Minor amendments	Alvaro Amorim

Approved by Senior Responsible Officer

Is an exemption required to procure this project without Procurement Capital Works (PCW) involvement? No

Jim Corrigan, Acting Deputy Director General, City Services

Date:

Definition of Terms

Term	Definition
Functional Brief	<p>The Functional Brief provides:</p> <p>An overview of all the project components, how you intend to produce the outputs and describes the roles and responsibilities of each of the parties in the governance structure of the project.</p> <p>A documented framework to ensure the achievement of defined project outcomes and to effectively monitor the project from start to finish.</p> <p>A formalised agreement between the Client Project Manager and the Procurement Project Manager (Internal or External to ACT Gov) of what needs to be done and when.</p>
Outcomes	<p>The benefits or disbenefits that will be realised from the utilisation of the outputs delivered by a project. Not to be confused with Agency Budget Outcomes.</p>
Outputs	<p>The services or products delivered to the TCCS Business Entity(s) by the project. Not to be confused with Agency Budget Outputs.</p>
Project Objective	<p>A statement of the overarching rationale for why the project is being conducted.</p>
Quality	<p>The totality of features and characteristics of a product or service that bear on its ability to satisfy stated needs. Also defined as 'fitness for purpose' or 'conforms to requirements'.</p>
Senior Responsible Officer (SRO)/ Executive Director	<p>The Senior Responsible Officer (SRO) is ultimately accountable for the programme, ensuring that it meets its objectives and realises the expected benefits. The individual who fulfils this role should be able to lead the programme with energy and drive, and must be empowered to direct the programme and take decisions. They must have enough seniority and authority to provide leadership to the programme team and take on accountability for delivery.</p>

Background

The older inner areas of Canberra are experiencing urban space consolidation which means the opportunities for rainfall infiltration through pervious areas has reduced. This increase in impervious areas has increased the amount of rainfall that runs off into the stormwater network.

Many parts of Canberra experienced significant flooding during high intensity storms in December 2006 and February 2007. In response to these events, the Transport Canberra and City Services Directorate, Roads ACT, initiated investigations at more than 120 sites by selected consultants to determine solutions to these flooding problems.

The subsequent investigation reports made recommendations on short and long term solutions for each of these sites. Short term improvements were subsequently implemented at a number of sites to provide interim relief from future flooding until the more costly longer term augmentation measures could be funded in future years.

The aforementioned stormwater investigation reports classified each site in terms of 'risk', ranging from "extreme" to "low", which reflected the likelihood of repeated flooding, damage to property and risk to public safety.

In addition to these projects, particularly since February 2007, further localised flooding issues have been experienced across Canberra. A similar approach has been taken to undertake initial investigations and to make recommendations on short and long term remedial measures. These investigations have also been ranked using the same ranking system, from 'extreme' to 'low'.

Subsequent to these reports, all sites classified as "extreme" were further ranked in accordance to the level of risk, severity and other criteria, to allow the various stormwater improvements for this risk category to be implemented on a staged basis over a number of years, consistent with available funding and priorities.

This Brief covers the construction of long term solutions for local residents and business which has been ranked as an "extreme" risk sites.

Objective

Works undertaken as part of this project will improve the capacity and flow of the stormwater system in Canberra, to reduce the likelihood of flooding during extreme rain events and protect both private and public property from flood damage.

Outcomes

An improved stormwater network to cope with extreme rain events

See **Attachment: Outcomes and Outputs Matrix**

Output(s)

Increased capacity of the localised stormwater network, minimising the likelihood of flooding.

See **Attachment: Outcomes and Outputs Matrix**

Scope of Work

There will be three sites where works will be carried out as listed in the table below:

Construction Projects
Pialligo Brook, Beltana Road, Pialligo
Alivio Tourist Park, O'Connor
Gross Pollutant Trap Upgrade, Lyneham Wetland

The current designs will be reviewed and documents finalised before the works are tendered and constructed.

Assumptions and Constraints

That the budget allocated to undertake this project is sufficient and will allow the CWDD Project Manager to deliver all of the elements outlined in this Plan.

The three construction projects will be tendered as separable portions or up to three separate projects to allow Roads ACT to reprioritise projects if the available budget is insufficient to cover all of the works identified within this Project Plan.

Due to the amount of utility relocations involved in the Pialligo Brook Culvert project, this part of this project may be partially completed with the balance of works being completed next financial year or when additional funding is available.

Governance

The Project's Governance structure simply sets out the management and accountability structure for the project.

Acting Director:	Ben McHugh, Capital Works Design and Delivery
Project Manager:	Alvaro Amorim, Capital Works Design and Delivery
Contract Manager:	David Munson, Procurement and Capital Works
Project Sponsor:	Tony Gill, Roads ACT

See **Attachment: Roles and Responsibilities** for details.

Reporting

The Capital Works Design & Delivery Acting Director is Ben McHugh, who can be contacted on (02) 6207 2738 or by email at Ben.McHugh@act.gov.au.

The Capital Works Design & Delivery Project Manager for this project is Alvaro Amorim who can be contacted on (02) 6205 3902 or by email at Alvaro.Amorim@act.gov.au.

The Procurement and Capital Works Contracts Manager shall provide the Project Manager with a written, monthly report on the physical and financial progress of the

project. Verbal updates of the project officers shall be provided on an “as needs basis”.

The Capital Works Design Delivery Project Manager is to be invited to the project meetings during the design and construction phases of the project, where necessary.

Procurement and Capital Works is to coordinate a tender evaluation on behalf of Capital Works Design Delivery at the tender assessment stage.

Procurement and Capital Works shall provide the Capital Works Design Delivery Project Manager with a cash flow prediction at the earliest opportunity after acceptance of the brief. The cash flow will be updated and provided with the monthly report.

Procurement and Capital Works is to provide a report to Capital Works Design Delivery at Final Completion of the project on the out turn project cost i.e. the overall cost that allows for the project delivery costs and the contractors construction costs.

Schedule

The following milestone dates apply to this project, unless a variation is agreed with the CWDD Project Manager:

Key Milestones – Stormwater Improvements	Target Date
Issue Functional Brief	July 2016
Acceptance of Functional Brief	August 2016
Call for Design Tenders	August 2016
Design period	October 2016
Call Construction Tenders	November 2016
Close Construction Tenders	December 2016
Letter of Acceptance - Construction	January 2017
Possession of Site	January 2017
Physical Start of Construction	February 2017
Physical Construction Completed (Capitalisation of project)	June 2017
Start of Defects Liability Period	June 2017
Close of Defects Liability Period	June 2018

Within two weeks of the date of acceptance of the Functional Brief, Procurement and Capital Works shall provide the Capital Works Design Delivery Project Manager with a draft program in sufficient detail to demonstrate that the milestones can be achieved.

Budget

A total budget of \$1.415m (excl GST) has been allocated for 2016/2017 financial year for the implementation of stormwater improvements. The allocation of this budget is shown in the Table below.

Project Description	Budget Allocation
Construction and Superintendence of Pialligo Brook Culvert Improvements	\$0.610m *
Construction and Superintendence of Alivio Tourist Park Improvements	\$0.605m
Gross Pollutant Trap Upgrade, Lyneham Wetland	\$0.200m
TOTAL	\$1.415m

NOTE: * The total cost of Pialligo Brook Culvert Improvement is estimated at just under \$1 million. It is expected that the remaining two projects are constructed in 2016-17 and that the residual budget is used to complete a portion of the Pialligo Brook Culvert Improvements. The remaining sections of the work would roll-over into 2017/18 if funds are available.

This total budget available for the implementation of the work outlined in this Project Plan is \$1.415m (excl GST). This includes Procurement and Capital Works fees, Capital Works Design & Delivery fees, Superintendent Fees, construction costs and contingencies.

Stakeholders & Communication Strategy

The key stakeholders for this project include:

- Environment and Protection Authority (EPA)
- Roads ACT - TCCS
- Parks & City Services – TCCS
- Urban Trees - TCCS
- Asset Acceptance - TCCS
- Pialligo Residents Association
- Local residents immediately impacted

Procurement and Capital Works to ensure that the Consultants have obtained all approvals from the relevant authorities and utilities whose assets/responsibilities may be impacted upon by this project. These may include TCCS, EPA, ICON Water, AGL, Telco's.

Risk Management

See **Attachment: Risk Register**

Guidelines & Standards

Works are to be undertaken in accordance with the latest versions of the following standards:

- Municipal Infrastructure Standards (MIS);
- Municipal Infrastructure Technical Specification (MITS);
- Trunk Road Infrastructure Standards (TRIS)/Technical Specifications (TRITS); and
- Transport Canberra and City Services Ref 08 Requirements for Works as Executed Quality Records Issue 1 Revision 0.

The Municipal Infrastructure Standards reference other standards and guidelines. If the Standards are considered to be inappropriate then Procurement and Capital Works shall advise the Capital Works Design & Delivery Project Manager and recommend alternative standards for acceptance.

Construction works shall comply with current Municipal Infrastructure Standards and guidelines together with all relevant Acts currently in force in the ACT.

During this period the Trunk Road Infrastructure Standards and Technical Specifications and the Municipal Infrastructure Standards and Technical Specifications will be tested.

Quality Control

Project quality will be monitored and maintained in accordance with relevant Territory policy and associated procedures will be utilised as per any and all applicable standards. Where possible, the project team will utilise mandatory tender criteria to engage technically capable contractors or consultants with a level of Prequalification (where applicable) suitable to the standards and specification of the project scope.

Capital Works Design Delivery will utilise the services of Procurement and Capital Works, as required by internal guidelines, for the purpose of tendering services and to ensure quality in the project deliverables, including but not limited to the over-all project administration.

Procurement and Capital Works will ensure all relevant project quality plans and contractor/consultant quality management systems are current and certified at the time of tender close and throughout the duration of the delivery of services/works.

Project Closure

Procurement and Capital Works shall be responsible for ensuring that the works are designed in accordance with Municipal Infrastructure Standard and the subsequent updated version.

Operational Acceptance from Roads ACT is required. It is expected that Procurement and Capital Works will implement contractual arrangements that will ensure the works are constructed in accordance with the Specification.

Procurement and Capital Works shall advise Capital Works Design & Delivery two weeks in advance of the anticipated date of Practical Completion or where there are several separable portions the dates of Practical Completion for each separable portion.

Since Roads ACT resumes responsibility for the assets at Practical Completion it is essential that Procurement and Capital Works ensure that the works-as-executed information is provided to Roads ACT – Road Maintenance within the timeframe nominated in the contract documents. Procurement and Capital Works shall also assist Capital Works Design and Delivery with the Handover of the project to Roads ACT – Road Maintenance as well as assisting with the project capitalization:

- One full set of AutoCAD drawings compliant with the latest version of “Ref-11 TCCS Drafting Standard”;
- One full set of drawings in Adobe PDF format created at a minimum size of A3 with a resolution of 600 DPI or higher. These drawings must be oriented correctly with respect to the original;
- Three full set of either A3 or A1 hardcopy drawings;
- CD discs or USB drives for the above and for each update; and
- All of the above to be submitted to Roads ACT for their records and to Asset Acceptance for handover purposes

Evaluation

Under the Basic Brief of Engagement of a consultant/superintendent for any of TCCS projects, there is a requirement to prepare and submit at the various stages of the project a construction performance report, covering all aspects of the contract. These reports cover all the milestones of the project from implementation, delivery until handover stage. Once received these reports are then reviewed and improvements are made where required.

Attachment: Outcomes and Outputs Matrix

Outcome	Output
An improved local stormwater network	Local stormwater network with greater capacity
Reduced likelihood of localised flooding	Reduction in 'flood related' claims Reduced complaints from the local residents

Attachment: Roles and Responsibilities

Acting Director

The Acting Director, Capital Works Design and Delivery is responsible for resourcing decisions essential for the delivery of project outputs and the attainment of project outcomes. The role is also responsible for:

- approving milestone release of funds to the project;
- ensuring appropriate management of the project components outlined in this project plan including risk monitoring, quality and timeliness;
- project assurance; and
- conflict arbitration

The Acting Director also lends support, by advocacy, at senior levels and ensures that the necessary resources (both financial and human) are available to the project. The Acting Director is ultimately responsible for ensuring that project outcomes are secured.

The Acting Director is

- **Ben McHugh, Capital Works Design and Delivery**

Section Manager (CWDD)

The Section Manager managing the project oversees the business management and project management issues that arise outside the formal business.

Section Manager leads project managers in the effective and successful delivery and completion of projects. Ensuring projects are delivered in accordance with ACT Govt. legislation, policies, value for money, procurement requirements, TCCS standard systems and record keeping.

The Section Manager has delegation for endorsement of:

- Expenditure related to the project e.g. contracts up to \$250k, invoices
- Functional Briefs
- Design

The Section Manager is:

- **Uma Vasudevan, Capital Works Design and Delivery**

Project Manager

The Project Manager is accountable to deliver the defined project outputs to the required quality within specified time and cost parameters.

They are responsible for managing the day-to-day aspects of the project, resolving planning and implementation issues, and monitoring progress and budget.

The Project Manager will:

- Develop and maintain the Project Plan and Project Schedule;
- Manage and monitor the project activity through detailed plans and schedules;

- Deliver a Monthly Project Status Report to Steering Committee;
- Report to the Project Sponsor and Steering Committee at regular intervals;
- Develop and maintain the project's risk register;
- Manage change control and implementation of project outputs;
- Manage stakeholder expectations through formal specification and agreement of goals, objectives, scope, outputs, resources required, budget, schedule, project structure, roles and responsibilities; and
- Develop a Project Closure Report at the completion of the project.

The Project Manager is:

- **Alvaro Amorim, Capital Works Design and Delivery**

Contract Manager (PCW)

The Contract Manager will undertake all procurement activities for the project and manage the consultant and contractor contracts to physical and financial completion. This includes:

Procurement

- Preparation of a Procurement Plan Minute
- Prepare Project Brief from the Functional Brief in consultation with Project Manager
- Preparation of RFT and other tender documentation
- Prepare Tender Evaluation Report
- Prepare Contract Documentation and award contract

Construction

- Effective communication between relevant parties to enable the timely progress of the project, including formalising Project Control Group
- Manage the delivery of the construction
- Review and assess variation claims and extensions of time for Project Manager's approval.
- Manage and complete incidents and WHS checklists, reporting and Active Certification based on Contractor's supplied information
- Co-ordinate and distribute design documentation and reports as necessary to the relevant ACT Government Directorates for Design Acceptance; Operational Acceptance and Final Acceptance

The Contract Manager is:

- **David Munson, Procurement and Capital Works**

TCCS Finance

The TCCS Finance is responsible for:

- Providing guidance and assistance with project costing and financial reporting to Project Managers;
- Reviewing the Project Plan and any project variation requests for completeness and accuracy of financial information;

- Ensuring the approved project budget figures are entered in financial management systems;
- Accounting for the costs of the project;
- Monitoring the projects actual costs against the budget;
- Monitoring availability of approved funds and warning the Project Manager of potential overruns;
- Reconciling the Oracle account against Monthly Project Status Reports prepared by the Project Manager
- Capitalising assets in accordance with capitalisation procedures; and
- Reviewing the Project Closure Report to confirm final actual expenditure of the project.

The TCCS Finance representative for the Project is:

- **Kae Harradine, TCCS, Manager Capital Budgets & Reporting**

Work Group

The Working Group comprises the following members, who also represent their respective Business Entities and champion the project asset management within their respective groups:

Capital Works Design Delivery:

- Uma Vasudevan (Section Manager)
- Alvaro Amorim (Project Manager)

Procurement and Capital Works:

- Darren Smith (Senior Manager)
- David Munson (Contract Manager)

Strategic Planning & Development

- Darwin Zeta
- Neil Pincombe

Road Maintenance Services

- Ross Schofield
- Greg Skaines

Traffic Management & Safety

Robyn Hawkins

- Ben Hubbard

The Working Group representatives from operational areas are responsible for ensuring that their business areas prepare the initial versions of the Strategic Asset Management Plans utilising the template to be developed.

Attachment: Risk Register

Project Life Cycle	Risk Ref. No.	Risk Description/Source	Consequence	Risk Owner	Risk Controls-What is in place to manager risks	Consequence	Likelihood	Risk Rating	Control Effectiveness
Planning & Development	1	DR Docs not complete or with missing information	<ul style="list-style-type: none"> Delays in consultation process Delayed implementation and execution processes 	PCW/ CWDD	DR docs to be checked by managers and professionals	Minor	Likely	Medium	Adequate
	2	Stakeholder not providing timely feedback	Delayed implementation and execution processes	CWDD	Provide documentation to the various stakeholders with a due date and follow up	Minor	Likely	Medium	Adequate
	3	Project Plans/Functional Brief not defined adequately	Delayed approval by PCW and the tendering process	CWDD	Project Plans to be checked by Senior Managers	Minor	Likely	Medium	Adequate
Implementation & execution	4	Statement of Requirements not defined adequately	<ul style="list-style-type: none"> Multiple addenda issued to resolve confusion in market. Delay in closing tenders and tender process runs over time. <p>Tender responses and prices vary over a wide spectrum demonstrating market confusion.</p>	PCW	<ul style="list-style-type: none"> Statement of Requirements reviewed by senior manager Compare with current methodology and contract to identify issues with current project delivery. 	Minor	Likely	Medium	Adequate
	5	Delay in tender advertisement	Delay in engaging a contractor	PCW	Allow sufficient time in the program	Minor	Likely	Medium	Adequate

Implementation & Execution	6	<p>Timeframe for the evaluation of tenders exceeded</p> <p>Evaluation Team members unavailable to undertake the evaluation and/or tenders received require extensive clarifications.</p>	<ul style="list-style-type: none"> • Evaluation Team members priorities shift to pressing business as usual activities • Request for Tender lacks clarity making it difficult for industry to provide a clear and consistent response. 	PCW	<ul style="list-style-type: none"> • Request for Tender documentation to be reviewed with input from Procurement and Capital Works. • Evaluation Team members to commit to the evaluation process and timeline. 	Moderate	Unlikely	Medium	Adequate
	7	<p>Unethical conduct during the Tender evaluation process</p> <p>Evaluation of received Tenders not undertaken in an ethical and/or transparent manner.</p>	<ul style="list-style-type: none"> • Evaluation criteria, methodology and/or services sought not understood by members of the evaluation team. • Nominated Chair inexperienced to control the conduct of the evaluation team and/or process. • Evaluation Team members not aware and/or understand the probity framework applying to tender evaluations. • Value for money outcome compromised. 	PCW	<ul style="list-style-type: none"> • Evaluation Team members to be across / involved in the development of procurement documentation. • Deeds of confidentiality and conflict of interests' declaration to be signed by all officers involved in the evaluation process. 	Minor	Possible	Medium	Adequate
	8	<p>Tenders exceed project budget</p>	<ul style="list-style-type: none"> • Re-visit tender documents to ensure scope identified appropriately. • Negotiation with preferred tenderer to achieve project outcomes. • Re-tender with reduced scope if it is impossible to identify preferred tenderer for negotiation. <p>Delay in engaging contractor.</p>	PCW/ CWDD	<ul style="list-style-type: none"> • Ensure RFT and statement of requirements outline scope of works appropriately. • Project costing/estimates prepared based on current rates. • Allow appropriate contingency. • Seek additional funding. • Scope has been significantly reduced. Budget issues are unlikely. 	Minor	Rare	Low	Adequate
	9	<p>Ineffective management of Contracts</p> <p>Executed Contracts do not achieve value for money.</p>	<ul style="list-style-type: none"> • Unanticipated or unexpected work associated with the delivery of the work. • Scope creep and work exceeding budget. • Territory charged a premium to undertake works. 	PCW	<p>Superintendent to ascertain that works are in accordance with AS2124.</p>	Moderate	Likely	Medium	Adequate
	10	<p>Ineffective management of Contracts</p> <p>Ineffective management of contracts to ensure the safe and economical completion of the works.</p>	<ul style="list-style-type: none"> • Exposure and /or delivery of sub-standard / unprofessional work. • Unsafe work practices applied. • Danger to contractor and any subcontractor on site. • Community exposed to unnecessary risk and dangers. 	PCW	<p>Superintendent and PCW Contract Manager to monitor / coordinate:</p> <ul style="list-style-type: none"> • invoicing, contractor performance and budget compliance; • tracking the progress of work and monies paid; • conducting performance reviews and manage poor performance and identify remedial actions and outcomes; and 	Moderate	Unlikely	Medium	Adequate

					<ul style="list-style-type: none"> • safety reporting in accordance with WHS Guidelines 				
	11	Ineffective management of Contracts Unsafe work practices and / or damage to property not part of the works.	<ul style="list-style-type: none"> • Adverse media attention and/or criticism directed back to Government over the conduct of the works. • Injury to onsite personnel and / or to members of the community. • Inadequate site safety containments and / or security measures in place. • Disregard for WHS compliance requirements. • Community confidence diminished. • Closure of site pending an outcome of an audit/investigation. 	PCW	<ul style="list-style-type: none"> • Contractors to implement QA and WHS systems which ensure the safety of all individuals onsite as well as to safe guard the safety of members of the community. • Safety reporting undertaken in accordance with WHS Guidelines to provide assurance to Territory. 	Major	Unlikely	High	Adequate
	12	Non-compliance by Contractors with Contract Conditions Work Health & Safety (WHS) issues identified during construction	<ul style="list-style-type: none"> • Disregard for WHS processes to ensure the safety and well-being of all onsite personnel including to members of the community. • Contractor does not possess sufficient or adequately trained staff to safely undertake the works. • Criticism directed at Government from a variety of sources (other businesses, the Opposition and the general public) over construction work practices. • Contractors may look to increase costs through price variation requests to accommodate WHS requirements 	PCW	<ul style="list-style-type: none"> • Contractor to ensure WHS plans are developed and implemented and that all nominated staff and/or sub-contractors are appropriately qualified and trained prior to the conduct of any work. • Audits / Checks to regularly review WHS plans, staff qualifications and work processes including Safe Work Management Plans for suitability. • Safety reporting undertaken in accordance with WHS Guidelines to provide assurance to Territory. 	Major	Possible	High	Adequate
Implementation & Execution	13	Disruption to delivery of construction Works Delays experienced due to extended community intervention / concern and / or from contractor industrial disputes.	<ul style="list-style-type: none"> • Delays in the completion of the works pending resolution. • Possible budget cost increases. • Community voice anger and frustration at speed and efficiency of works. • Reputation of Government tarnished / compromised. 	PCW/CW DD	<ul style="list-style-type: none"> • Superintendent to ensure disruption to the road users is kept to a minimum. • CWDD to communicate to the public to ensure they are aware of the timing and duration of works 	Moderate	Unlikely	Medium	Adequate
	14	Disruption to road users during construction	<ul style="list-style-type: none"> • Delays to road users • Community voice anger and frustration at inconvenience of works. 	CWDD	Temporary Traffic Management plan being erected and maintained during construction and reviewed constantly to suit construction activities.	Major	Possible	High	Adequate

Attachment: Functional Brief

Overview

This Functional Brief is the high level management document for the project. It is owned, maintained and utilised for the delivery of the Stormwater Improvement Program.

Roads ACT is a part of the Transport Canberra and City Services Directorate and manages all ACT road, bridge, cyclepath, pedestrian, traffic signal, street lighting, public transport and stormwater assets to ensure a safe, efficient and effective built urban environment for the people of the ACT.

Roads ACT, is responsible for managing the Territory's stormwater assets to ensure these assets are safe, efficient and meet the needs of the community. As part of its role it identifies capital upgrade works that are funded through the Capital Upgrade program.

This Project Brief outlines general requirements which are specific to this project, and is to be read in conjunction with the **Basic Brief for Engineering Projects (Basic Brief)**.

The Reference Documents provide detailed background information relative to the project and the standards provide guidance on technical matters related to this Brief.

Site of Works

The three sites requiring construction and supervision are:

Construction Projects
Pialligo Brook, Beltana Road, Pialligo
Alivio Tourist Park, O'Connor
Gross Pollutant Trap Upgrade, Lyneham Wetland

Scope of Works

The scope of works which Procurement and Capital Works have to carry out is as follows:

- To arrange the tendering for the construction and supervision of the three stormwater improvement projects listed in the Table above;
- Contractors are required to provide fixed price fees for the three construction projects as separable portions or tender as three separate contracts.
- Assess the tenders received;
- Provide a Tender Evaluation Report and to recommend contractor(s) capable of successfully completing the design and construction of the stormwater improvements.
- award construction contract(s) ;
- contract manage the construction works
- liaise with stakeholders

- handover of completed works with WAE drawings where appropriate; and
- with the assistance of the Designer will be responsible for responding to all RFIs during the construction tender process. All proposed changes to the scope of works will be communicated to the Procurement and Capital Works Contracts Manager;

Contracts are to be prepared by Procurement and Capital Works and approved by the Capital Works Design Delivery Project Manager.

Specific and Key Issues

Specific requirements covered by the Functional Brief that Procurement and Capital Works are responsible for are to:

- Coordinate a multidisciplinary project team;
- Ensure all sub-consultants are fully qualified and certified;
- Prepare a project program that specifies milestones and meetings schedule for the procurement, design and construction components of the works;
- Negotiate and prepare contracts that specify that payment will only be made upon critical milestone achievements for the project being met in accordance with the approved project program;
- Arrange all engineering works certifications and approvals if relevant. Application processing fees associated with these items are refundable;
- Participate in consultation meetings with relevant government, community and business stakeholders;
- Record minutes and maintain records of all meetings relating to the project and distribute as appropriate to the relevant parties within two days of the meeting;
- Organise payment of all sub-consultants as deemed necessary for the work. These costs must be included as an integral component of the Tender lump sum fee;
- Coordinate fortnightly progress meetings during the construction period with lead contractor, relevant sub-contractors, ACTPS and client representatives;
- Provide a progress update to the project officer which details progress made during the month, progress due in the forthcoming month, any critical risks or issues that have arisen and how the risks or issue will be dealt with. This can be supplemented with a fortnightly activity report provided by the consultant/contractor;
- Provide formal written monthly progress reports on project/construction activities during the construction phase of the project.
- Co-ordinate and distribute design documentation and reports as necessary to the relevant ACT Government Directorates for Design Acceptance; Lodge the Development Application for this project. PCW will be responsible for liaising with ACTPLA regarding all matters associated with DA Lodgement and public Notification; and

- Undertake all the necessary work to ensure effective communication between all relevant parties and to enable the timely progress of the project.

Engineering Brief and Contract Arrangements

The draft engineering brief is to be circulated to the Capital Works Design and Delivery project officer for comment and approval prior to advertising tenders.

Reference Documents & Standards

Works are to be undertaken in accordance with the latest versions of the following Municipal Infrastructure Standards and referenced other standards and guidelines. During the course of the tendering process if the Standards are considered to be inappropriate, the Capital Works Design Delivery Project Manager will provide advice and/or an alternative standard as relevant. ACT Procurement and Capital Works Project Manager will be kept abreast of changes when/if they occur.

- Municipal Infrastructure Standards (MIS) and subsequent amendments
- Municipal Infrastructure Technical Specifications (MITS) and subsequent amendments
- The Trunk Road Infrastructure Standards and Technical specifications available on line at
[http://www.tams.act.gov.au/roads-transport/Road Infrastructure and Maintenance/trunk-road-infrastructure-standards-tris](http://www.tams.act.gov.au/roads-transport/Road_Infrastructure_and_Maintenance/trunk-road-infrastructure-standards-tris)
[http://www.tams.act.gov.au/roads-transport/Development Approval and Applications/page/Trunk Road Infrastructure Technical Specifications and Standard Drawings](http://www.tams.act.gov.au/roads-transport/Development_Approval_and_Applications/page/Trunk_Road_Infrastructure_Technical_Specifications_and_Standard_Drawings)
- Requirements for Works as Executed Quality Records, Issue 1, Revision 0, TCCS. Available on line at
[http://www.tams.act.gov.au/_data/assets/pdf_file/0004/34708/Ref-08 WAE Quality Records.pdf](http://www.tams.act.gov.au/_data/assets/pdf_file/0004/34708/Ref-08_WAE_Quality_Records.pdf)
- Requirements for Landscape Consolidation of Final Handover of Soft Landscaping Works, Issue 1, Revision 0, TCCS. Available on line at
[http://www.tams.act.gov.au/_data/assets/pdf_file/0015/34710/Ref-10 Landscape Consolidation.pdf](http://www.tams.act.gov.au/_data/assets/pdf_file/0015/34710/Ref-10_Landscape_Consolidation.pdf)
- Requirements for Operational Acceptance Submissions, Issue 1, Revision 0, TCCS. Available on line at
[http://www.tams.act.gov.au/_data/assets/pdf_file/0005/34709/Ref-09 Operational Acceptance.pdf](http://www.tams.act.gov.au/_data/assets/pdf_file/0005/34709/Ref-09_Operational_Acceptance.pdf)
- Development Control Code for Best Practice Waste Management in the ACT. Available on line at
<http://www.nowaste.act.gov.au/files/developmentcontrolcodeforbestpracticewastemanagement.pdf>

- WAE Asset Description Form Templates. Available on line at http://www.tams.act.gov.au/work/standards_and_procedures/tams_reference_documents

Government requirements

The Project's governance structure is based on the Project Management Guidelines. The assessment and selection of people to perform the functions within an appropriate structure is critical to the project's overall success.

Project Manager

The Project Manager is contracted to deliver the defined project outputs. They are responsible for organising the project into one or more sub-projects, managing the day-to-day aspects of the project, developing the Project Execution Plan(s), resolving planning and implementation issues, and monitoring progress (schedule) and budget.

The Project Manager will:

- Manage and monitor the project activity through detailed plans and schedules;
- Report at regular intervals against forecast schedule milestones and budget;
- Maintain close working relationship with Procurement Directorate to ensure that the contract and its management are meeting the overall project expectations, especially in the area of Schedule and Budget;
- Approve all variations to the contract or Functional Brief in a formal manner, ensuring the Asset Manager or Owner is involved in the process; and
- Manage (client/provider/stakeholder) expectations through formal specification and agreement of goals, objectives, scope, outputs, resources required, budget, schedule, project structure, roles and responsibilities.

The Project Manager is Alvaro Amorim.

The consultant and their nominated sub-consultants are required to liaise with relevant government approval directorates during the design development phase of the project to ensure that all services are identified and all relevant and required processes and approvals are identified prior to the submission of the draft documentation. This applies to utility service Directorate as well as the roads/traffic and stormwater sections of Transport Canberra and City Services Directorate.

Correspondence or evidence of directorate endorsement should be included in relevant design submission packages. Any proposed augmentation or relocation of services must be discussed with the Client project manager.

The superintendent for the project must:

- Ensure that the necessary approvals, signed by an authorised delegate, have been sought from relevant Directorates, sighted and forwarded to PCW ;
- Specify hold points and verification checks throughout the construction program; and
- Ensure services are accurately located on WAE documents.

Electrical services

The requirements of ActewAGL should be met, clearly documented and available for review as required in the event work is required on the lighting or power connections. An information sheet outlining design/approval requirements for power supply connection and street lighting work is attached for reference (Attachment A). Special attention is to be paid to this in the contract documentation.

Water, gas and sewer

Water, gas and sewer pipes must be located.

SS ICT/Telstra/Data

SS ICT, Telstra and Data lines must be located.

Quality Assurance

The consultant may be required to submit a **Project Quality Plan (PQP)** and the Inspection and Test Plan (ITP) that incorporates the activities to be undertaken during the course of the project.

These documents are to be submitted 14 days after signing of contract. The PQP will be checked by Procurement and Capital works and approved by the Client Directorate.

The design and construction of the project must also comply with the requirements of the Quality Management System requirements. These requirements must be satisfied to allow design acceptance and final acceptance of the project. The Consultant should be aware of these requirements.

Construction documentation may be required to be completed with reference to the most current issue of the following:

- TCCS Ref No: 08 - Requirements for Works as Executed Quality Records.
- TCCS Ref No: 09 - Requirements for Operational Acceptance Submissions.
- TCCS Ref No: 06 - Requirements for Design Acceptance Submissions.
- TCCS Ref No: 04 - Guidelines for the Protection of Public Landscape Assets Adjacent to Development Works.
- TCCS Ref No: 10 - Requirements for Landscape Consolidation and Final Handover for Soft Landscape Works
- TCCS Drafting Standard
- TCCS DS-12 and SS-14

The Consultant shall ensure that all documents and drawings produced for this project acknowledge the sponsoring client, Transport Canberra and City Services Directorate, Roads ACT, as well as **Procurement and Capital Works** by including logos and names in the title block of drawings or in text documents.

Project Output Requirements

The Project Manager or the Lead Consultant, depending on the project, will be required to coordinate all the specialist inputs and to deliver the required project outputs:

- Draft Sketch Plans (DSP) Submission should consist of five (5) sets of unbound A3 drawings. Three (3) copies of the costs estimate are also to be supplied.
- Final FSP Submission should consist of three (3) sets of unbound A3 colour drawings. Three (3) copies of the costs estimate are also to be supplied. Final FSP submission should also include graphic material, including perspective drawings, of a high quality suitable for public display.
- Draft Design Review (DR) Submission should consist of five (5) sets of unbound A3 drawings and three (3) copies of the draft Tender document/specifications.
- Final DR Submission should consist of one (1) set of unbound drawings, five (5) sets of bound drawings and three (3) copies of the specifications and Bill of Quantities. Final DR information is also to be supplied in digital form on either CD(s) or USB Drive(s).

Project Acceptance and Handover Requirements

The Superintendent is to carry out the asset acceptance of the project with the assistance of PCW Contracts Manager

Practical Completion / Operational Acceptance

The consultant shall collate and submit the following items to the Procurement and Capital Works on Practical Completion of the works prior to Operational Acceptance.

An Operational Acceptance inspection will be arranged approximately five working days after these documents are submitted.

The following tasks and documentation are required:

- Certificate of Practical Completion signed by the Superintendent and the Contractor;
Construction drawings, three (3) copies X A3 size showing any alterations from the approved DR drawings;
- All Works As Executed (WAE) drawings to be presented as follows:
 - WAE records and documentation in the formats required by TCCS QS Ref No: 08 are to be supplied to PCW at Operational Acceptance;
 - WAE digital data shall be provided in CD-ROM disk(s) or USB Drive(s) in a format compatible with AutoCAD R2002 as set out in the most current TCCS Drafting Standards;
 - All drawings are to be dated and signed by the Superintendent;

- All documentation relating to the deliverable of the project included but not limited to:
- Operating Manuals
- Maintenance Manuals
- Other relevant safety Manuals

Note: The drawings and text in the WAE documentation should show works 'as constructed'. They should not merely be a copy of the construction drawings. The documents that are provided electronically must be an exact duplicate of the data provided in the hard copies.

- Completed Asset Description forms as described in TCCS Ref No: 08. Note: Current, proposed and, actual asset quantities should be shown, with current assets documented **before** construction commences; **(note street lights cannot energised until WAE's have been approved by TCCS)**
- Superintendent's site inspection report completed and presented to Shared Services Procurement or other provider, again at the same time as request for Practical Completion;
- Report to include a draft Defects Rectification Plan that lists all minor defects and omissions with their rectification due dates signed by the contractor;
- Compliance certification for drawings that state they comply with the ACT Design Standards and Standard Specifications for Urban Infrastructure and other relevant standards. Compliance certification is to be signed by the Contractor and the Superintendent;
- Certificate of Site Possession, Electrical Certificate of Safety, Plumbing Certificate and others as relevant;
- A Final Defects Rectification Plan within five (5) working days after Operational Acceptance. The Plan shall be certified as satisfactory and signed by the Superintendent;
- Operational and Maintenance Manuals; and
- Relevant warranties.

Final Acceptance

The following items must be submitted prior to Final Acceptance.

- Final Certificate signed by the Superintendent; and
- Maintenance records certified by the Superintendent that show all defects and omissions have been rectified according to the Defects Rectification Plan.

Standards

Covered in Reference Documents section above.

Timing

The Project Manager will identify a number of Milestones which will be used to ensure the project is delivering against the agreed schedule (program). These milestones will be critical in the reporting process and providing an early indication as to the health of the project.

The actual number of milestones to be monitored is dependent on many factors such as duration of the project, complexity of the deliverables, and possible links between the milestones within the contracted part of the project and other activities that need to be monitored.

As soon as practicable after the date of acceptance of the Functional Brief, Procurement and Capital Works shall provide the Project Manager with a draft schedule in sufficient detail to demonstrate that all non-contracted milestones can be achieved within the target dates requested.

On receipt of the Contractor's schedule (program) both parties will review the schedule and determine the date of delivery for each of the percentage milestones (25%, 50%, and 75%). These milestones will be attached to a significant completion or start of an activity within the schedule or program, specifically a point in time that is within the critical path identified by the contractor within the schedule or program. This percentage milestone once agreed remains at this point of the activity until the completion of the project. As this activity point may move, e.g. 1 April it's now expected 14 April, this will provide the project manager with an early indication that there could be some considerable issues with progress and will enable early mitigation planning or discussions with the contractor.

Float will be considered for each of the other milestones. This means that if we require the milestone to be delivered on a particular day or month etc, we will ensure we provide or at least consider applying a period of float based on the risk assessment of this activity taking place. This float is in addition to the float that is applied by the contractor and it is the responsibility of the project manager to manage. In most cases this float is held by the PM and not shared with the Procurement Directorate or contractor.

Funding Timing

A total budget of \$1.415m (excl GST) has been allocated for 2016/2017 financial year for the continuing Stormwater Improvement Program. This includes Procurement Capital Works fee, Project Management fee, CWDD internal overheads, Design and Superintendent Fees, construction costs and contingencies.

Consultation

The key stakeholders for this project are:

- ACT Environment Protection Agency
- Roads ACT (Maintenance)
- Capital Works Design Delivery
- ACTPLA
- Local residents and affected land owners
- NCA (designated land approval)

Roads ACT (Strategic Planning Development) have consulted with ACT EPA regarding the scope and scale of works to be undertaken at each of the sites. EPA has reviewed and an endorsement has been achieved for the detailed improvements at each site. The appointed contractor will be responsible to apply for the water ways works licence before possession of site is given.

The contractor, subject to the approval of the Capital Works Design Delivery Project Manager, will arrange to advise adjacent residences prior to commencement of the construction works.

Procurement and Capital Works or the procurement Directorate may advise whether the list of stakeholders is sufficient and appropriate given the nature of the project and if necessary suggest additional stakeholders when preparing the Engineering Brief.

Procurement Capital Works shall be responsible for circulating the PSP and/or FSP reports to all the key stakeholders for comments and shall be responsible for responding to any issues raised by the stakeholders, until they are formally agreed or endorsed.

Procurement Capital Works shall prepare all materials for and assist with undertaking any public consultations or public displays. For this project, subject to the Minister's approval, it is intended that consultation will be undertaken by a letter drop or by consulting adjacent residents.

Procurement Capital Works shall liaise with and obtain the approval from all relevant asset owners or managers whose assets/responsibilities may be impacted by this project. These may include but not limited to ActewAGL (water, sewerage, gas), Telstra, TransACT.

Liaison and Reporting

The Capital Works Design & Delivery Acting Director is Ben McHugh, who can be contacted on (02)6207 2738 or by email at Ben.McHugh@act.gov.au

The Capital Works Design & Delivery Project Manager for this project is Alvaro Amorim who can be contacted on (02)6205 3902 or by email at Alvaro.Amorim@act.gov.au.

Procurement and Capital Works Contracts Manager shall provide the Capital Works Design & Delivery Project Manager with a written, monthly report on the physical and financial progress of the project. Verbal updates of the project officers shall be provided on an as needs basis.

The Capital Works Design & Delivery Project Manager is to be invited to the project meetings during the construction phases of the project where necessary.

Procurement and Capital Works shall provide the Capital Works Design & Delivery Project Manager with a cash flow prediction at the earliest opportunity after acceptance of the brief. The cash flow will be used for billing purposes between Procurement and Capital Works and Capital Works Design & Delivery shall be updated and provided with the monthly report.

Capital Works Design & Delivery will be responsible for responding to ministerial correspondence and requests that are of a policy nature. Procurement and Capital Works shall provide the Capital Works Design & Delivery Project Manager with assistance and information where possible.

Procurement and Capital Works shall provide monthly progress reports to the Capital Works Design & Delivery Project Manager.