

Scope of Consultancy Services

LG314/621/18/150

Strategic Partnership for Professional
Services

CITY OF
GOLDCOAST™

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Part A: General

1. Interpretation

Unless implied to the contrary, all directions in this Clause onwards of this document are addressed to the Consultant. Except where the context otherwise requires, the following are applicable.

- 'apply', 'carry out', 'rectify', 'ensure', 'supply', 'install', 'reinstate', and similar expressions means by the Consultant and included in the contract price and/or rates unless specified otherwise.
- 'approved', 'directed', 'required', 'rejected', and similar expressions means approved, directed, required, rejected, and the like, by the Client's Nominated Representative.
- 'environmental laws' means in respect of the land and buildings the subject of Contract and the use to be conducted by the Consultant pursuant to the contract, any law (whether Commonwealth, state or common law), orders, notices, consents, regulations, authorisations, approvals and permits or any authority relating to or dealing with the following:
 - planning and land use
 - the environment
 - health
 - any contaminant or hazardous substance or material
 - the use, storage or transportation of a contaminant or hazardous substance
 - the disposal, discharge or treatment of a contaminant or hazardous substance
 - the spill or leakage of a contaminant or hazardous substance
 - the treatment, containment or removal of a contaminant or hazardous substance
 - the remediation of land.
- 'give notice', 'submit', 'furnish', and similar expressions means give notice, submit, furnish, and the like, to the Client.
- 'Client's Nominated Representative' is the Council Contract Representative, as specified in the Contract Header or any other person from time to time appointed in writing by the Client to be the Client's Nominated Representative and Notified as such in writing to the Consultant by the Client.
- 'responsible authority' means a local government or any government (state or federal) department or other agency charged with the responsibility of administering or enforcing legislation.

Where there is an inconsistency, ambiguity, or discrepancy between the required qualities or standards in different Parts of this document, the Consultant shall comply with the highest quality or standard or perform the more onerous obligation.

2. Definitions

ASS:	Acid Sulphate Soil
BFP:	Belt Filter Press
BNR:	Biological Nutrient Removal
BOD:	Basis of Design
HAZOP	Control Hazards and operability Study (Review0
City:	City of Gold Coast
Client/Principal:	the City of Gold Coast Council
Client's Nominated Representative/Council Contract Representative (CCR):	means the Client's Nominated Representative specified in the Contract Header to exercise the functions of the Client relating to the Contract.
Concept Design:	phase of project planning that includes producing ideas and taking into account the strengths and weaknesses of implementing those ideas – particularly resolving practicality and costing issues, with a nominal TCC of accuracy of $\pm 50\%$.

Scope of Consultancy Services

Consulting Services	Services provided by the Consultant
DAFF:	Department of Agricultural, Fisheries and Forestry
Delivery Milestone:	the stage that the work has reached, such that payment for work done leading up to this stage may be made
DEHP:	Department of Environment and Heritage Protection
Deliverables:	documents produced by Consultants or Sub-consultants including: sketches, drawings, data sheets, calculations, specifications, plans, lists or schedules.
Detailed Design (DD):	the further development of the preliminary design, aimed at resolving all practicality and cost issues with a nominal TCC accuracy of $\pm 15\%$ so that tenders might be called for or construction might commence.
draft:	the stage where a task has been completed and the results submitted for approval (not for checking or verification) by the Client, and where the originator is satisfied that it is a fair representation of the intended outcome
EA:	Environmental Authority
ECI:	Early Contractor Involvement
EOI:	Expression of Interest
EMS:	Environmental Management System
EP:	Equivalent population
EPBC:	Environment Protection and Biodiversity Conservation Act.
equipment:	any tools, items of plant, apparatus or machinery used for performing the scope of work.
experienced:	trained, competent, and having a minimum of 10 years on-the-job current industry experience.
FY:	Financial Year
GDD:	Gravity Drainage Deck
GIS:	Geographic Information System, being a system for capturing, storing, analysing and managing data and associated attributes which are spatially referenced to the earth.
HAZOP:	Hazard and Operability Study (Review)
Hold Point:	the stage that the work has reached, such that it requires a review, comments, action or instruction from the Client's Nominated Representative prior to work continuing
ICT:	Information, Communication and Technology
IFC:	Issued for construction
IFT:	Issued for tender
KPI:	Key Performance Indicator
LAFHA:	Living away from home allowance
LGA:	Local Government Act 2009 and Local Government Regulation 2012.
materials:	any consumables used to perform the scope of work.
MCA:	Multi Criteria Analysis
MCU:	Material Change of Use (rezoning)
MNES:	Matters of Environmental Significance
NATA:	National Association of Testing Authorities
NCA:	Nature Conservation Act

Scope of Consultancy Services

operator:	individual(s) who are licensed, trained and experienced in the operation of equipment to be used to perform the scope of work
PCBU:	person conducting a business or undertaking (as defined by Queensland Work Health and Safety Act 2011)
PPE:	Personal Protective Equipment
Preliminary Design:	the further development of the concept stage, aimed at producing sufficient details of the project that major decisions can be made – and the uncertainty of practicality and costing issues with a nominal TCC accuracy of $\pm 30\%$.
preliminary:	the stage where a task has been partially or wholly completed, but the results have not been fully checked/verified, and the desired outcome has not been achieved or determined
Principal's Engineer	Consultant's role when providing Services for the Client on nominated major projects
Project Brief	Client's Scope for Service requests
PUP:	Public Utility Plant
PTF:	Primary Treatment Facility
QAS:	Quality Assurance System
qualified:	having undergone formal training
Return Brief	Consultant's response to Clients Project Brief
RAS:	Return activated sludge
RFI:	Request for Information
RPEQ:	Registered Professional Engineer of Queensland
SID:	Safety in Design
SME:	Subject Matter Expert
STP:	Sewage Treatment Plant
SWMS:	Safe work method statement
TCC:	Total Contract Cost
TM:	Technical Memorandum
Upper Limit Fee	Maximum amount payable for a Service
VMA:	Vegetation Management Act
WAS:	Waste activated sludge
work site(s):	any fixed or moving work sites
WHS:	Work Health and Safety
W&W:	The Client's Water and Waste Directorate

3. Introduction**General**

City of Gold Coast is the second largest local government in Australia based on resident population, home to over 540,000 residents and host to around 12 million visitors annually. The Client employs more than 3200 staff and provides a range of services, activities and facilities for residents and visitors to enjoy.

Scope of Consultancy Services

W&W was established on 1 July 2016, bringing together the former Gold Coast Water teams and the Waste and Resource Management teams as a new merged entity.

W&W consists of more than 500 professional, technical and field-based staff. W&W is responsible for providing safe drinking water supplies and sewage collection, treatment, reuse and disposal; solid waste, recycling and green waste kerbside collection; operation of waste and recycling centres, landfills and resource recovery. W&W is also responsible for sustainable management of our aquatic, riverine and marine ecosystems, keeping our catchments and waterways healthy and resilient to change. A W&W Organisational Structure and Fast Fact Sheet are included in Attachments SPB1 and 2 respectively.

W&W comprises the following internal branches:

- Business Performance (Finance, Economic Regulation, Strategic Asset Management, Business Systems and Data Services Reporting)
- Service Sustainability (Growth Planning, Waste and Recycling Centre Network Planning, Landfill Planning, Catchment Planning and Operations, Total Water Cycle Management, Water and Sewer Planning, Environmental Planning)
- Asset Solutions (Major Capital Works Design and Delivery)
- Network Reliability (Repairs and Maintenance and Tactical Asset Management of Passive Network assets)
- System Control (Treatment Operations, Network Operations, Mechanical/Electrical and Control, Tactical Asset Management of Active Assets, Landfill Operations)
- Customer Engagement (Customer and Stakeholder Management, Trade Waste, Water Metering, Laboratory Services, Waste and Recycling Centre Network Operations, Waste Strategy, Waste and Recycling Collection Services, Development Assessment and Audit)
- Strategy and Innovation (Long term business strategy).

W&W provides customers with water, sewerage and waste services in the Gold Coast region and operates as a Commercial Business Unit. A Commercial Business Unit conducts business by adhering to the key principles of commercialisation, namely having:

- clarity of objectives
- management autonomy and authority (governance)
- accountability for performance
- competitive neutrality.

W&W is committed to:

- managing our resources for a sustainable future
- providing safe and reliable water, sewerage and waste services to the people of the Gold Coast to protect our community's health and wellbeing and to care for our waterways and catchment areas that supports our City's lifestyle and prosperity.

W&W's business objectives are:

- we ensure zero harm – we ensure the health and safety of ourselves, our environment and our community
- we strive for satisfied customers – we provide value for money, innovative, customer focused services
- we manage finances responsibly – we balance life-cycle costs and service prices, to sustain our City
- we provide reliable services – we plan, build, operate, maintain and renew assets prudently and efficiently.

W&W is facing a number of challenges and opportunities over the next several years. To successfully meet the challenges and optimise outcomes from opportunities, W&W is proposing to build capacity and capability via partnering arrangements with suitable service providers for organisational benefits and to maximise customer value. The challenges and opportunities W&W currently face include, but are not limited to:

- Increasing development (particularly infill) along the light rail corridor (Stage 1 and 2) and future extension (Stage 3), and within the northern Gold Coast area.
- High level of re-development within Southport Priority Development Area.

Scope of Consultancy Services

- Ongoing legacies associated with the 2018 Commonwealth Games.
- Projected increased capital works program from around \$50-60m per year over last several years to over \$140m per year over the next five years.
- Establishment of agreements with University of Queensland Global Change Institute and twinning arrangements with Manila Water in programs of mutual interest.
- Ongoing involvement in the Smart Water Research Centre based at Griffith University with a range of industry and University consortium partners.
- Increasing asset management and performance issues, condition assessment programs, along with asset renewals planning and delivery requirements.
- Increasing community expectations in respect of environment and value for money services.
- Introduction of a waste levy.
- Introduction of the waste container deposit scheme.
- Significant fluctuations in commodity rate for recyclable material.
- Capacity upgrades to STPs, landfill and recycling centres within the next several years.
- Major staged works associated with the upgrade of recycled water release infrastructure.

The City's permanent population is expected to increase by over a 100,000 people over the next eight years. Many of these new residents will choose to live in medium to high density housing, close to facilities and services. This style of living has become increasingly common in our City. Population growth, the trend towards higher density living, and our significant visitor numbers present challenges for the client in the way we manage the Gold Coast's water and waste. W&W require an innovative professional services contract and engagement process which maintains probity, demonstrates value for money, and allows access to a broad range of consultant disciplines.

In accordance with the *South East Queensland Water (Distribution and Retail Restructure) Act*, the primary functions of W&W are to:

- purchase and distribute potable water
- provide water and sewerage services to customers
- charge customers for relevant services
- manage customer enquiries, service requests and complaints
- perform functions relating to trade waste and seepage water as a sewerage service provider
- perform planning and development assessment functions under the Planning Act
- anything else likely to complement or enhance a function mentioned above – specifically, analytical laboratory services directly to external customers.

In accordance with the *Waste Reduction and Recycling Act 2011*, the primary functions of W&W are to:

- promote waste avoidance and reduction, and resource recovery and efficiency actions
- reduce the consumption of natural resources and minimise the disposal of waste by encouraging waste avoidance and the recovery, re-use and recycling of waste
- minimise the overall impact of waste generation and disposal
- ensure a shared responsibility between government, business and industry and the community in waste management resource recovery
- support and implement national frameworks, objectives and priorities for waste management and resource recovery.

4. Background

To achieve its business objectives W&W utilises specialised professional services including but not limited to strategic including adaptive and integrated business planning, servicing master and detailed planning, business case preparation, procurement documentation, design and design review, project management, construction supervision, contract management, change management and training, financial planning, tariff review/modelling, ICT research and advisory services, data analytics and interpretation of results, portfolio management, planning applications, strategic and tactical asset management including condition assessment, infrastructure planning and modelling, development assessment, environmental monitoring, audits and applications, odour assessment and monitoring.

Scope of Consultancy Services

W&W's annual capital investment portfolio has recently been of the order of \$60M to \$70M however this will increase to over \$700M over the next five years. Details of the capital projects program are included in Attachment SPB8. W&W's annual operational projects program varies between \$5M and \$10M. Details of the operational projects program are included in Attachment SPB9.

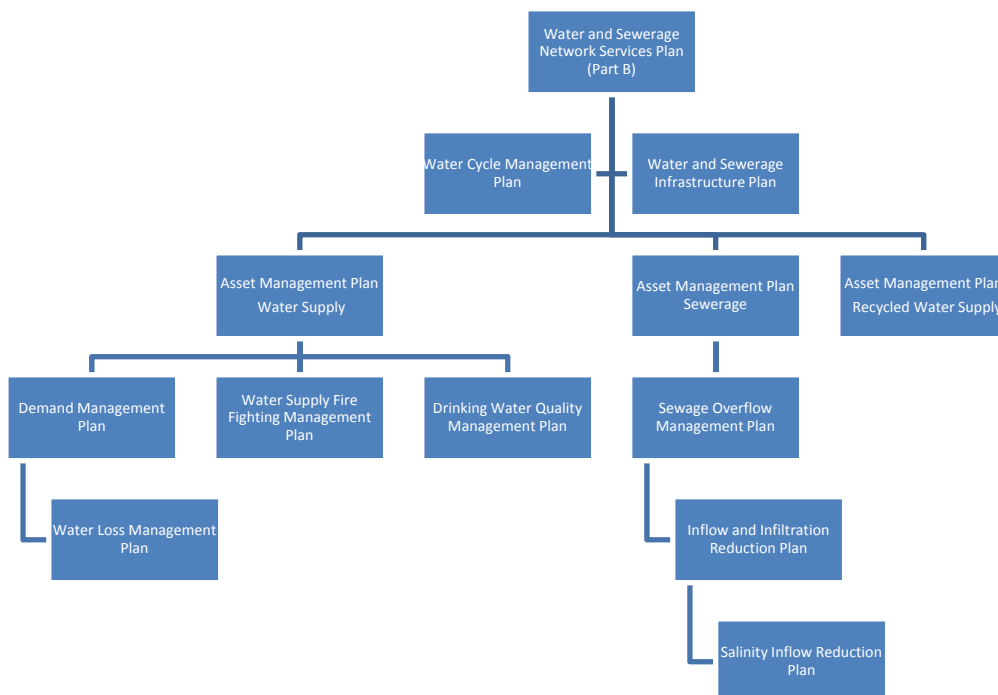
Over the past two years annual capital and operational projects expenditure targets have generally been achieved and a number of improvements have been made to implement processes, systems and work flows, however the current procurement process for engagement of professional services remains fragmented and inefficient. The Client is therefore seeking a strategic partner to provide integrated water and waste management professional services in a long term collaborative arrangement.

W&W operates within the framework of City of Gold Coast's Corporate Plan (<http://www.goldcoast.qld.gov.au/council/corporate-plan-609.html>) which outlines the Client and community's shared vision for a sustainable city that focuses on preserving our natural environment and quality of life. It identifies key focus areas that reflect the community's aspirations for the city's 30-year vision.

W&W has completed a Water Supply and Sewerage Infrastructure Plan (2014) for projected growth between 2011 and 2066. This has identified schedules of works, at a master plan level, for augmentation of trunk water and sewerage infrastructure within five year cohorts. This schedule of work forms the basis for detail planning programs and eventual growth delivery programs. This Plan is due for review.

In addition to the above Infrastructure Plan, W&W has documented the following management and improvement plans:

Figure 1

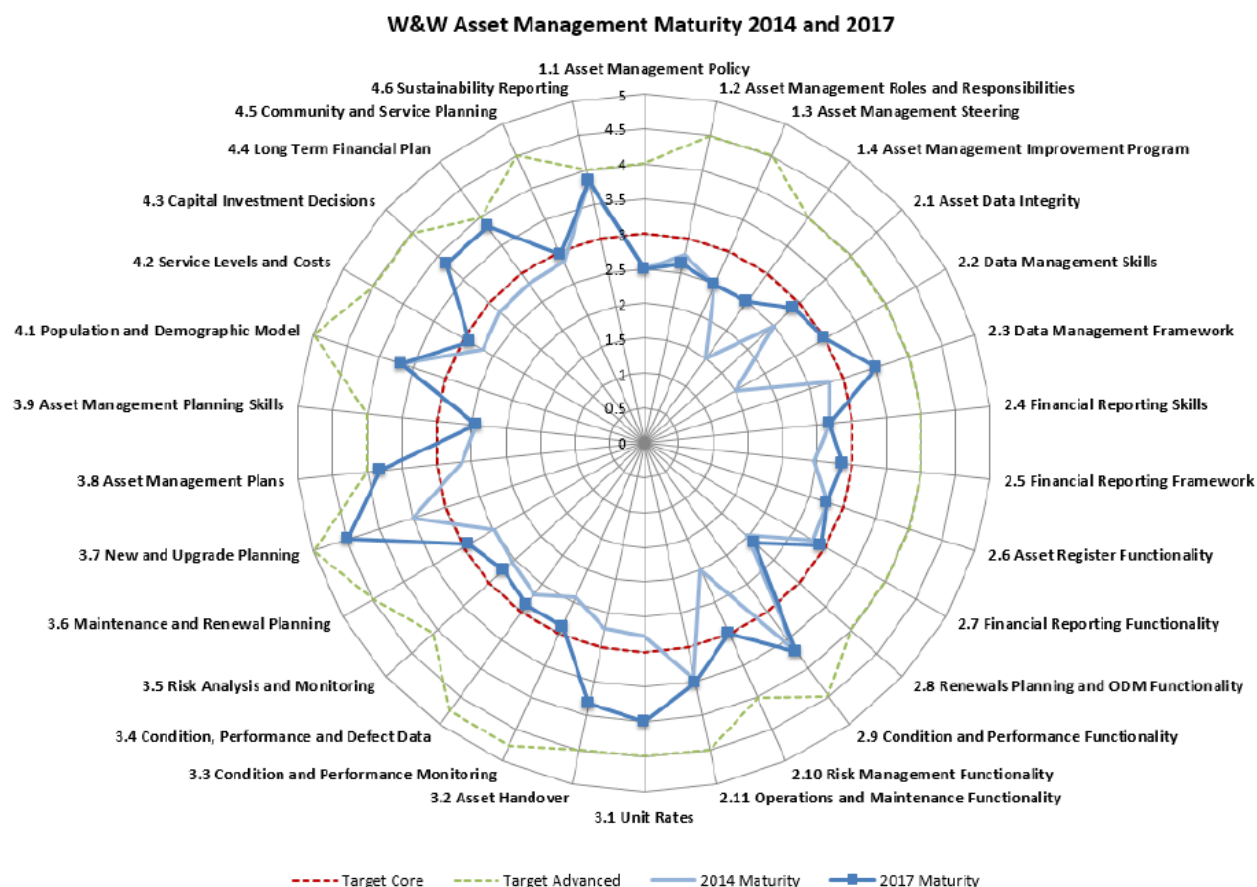


W&W also has documented:

- Solid Waste Strategy available at <http://www.goldcoast.qld.gov.au/solid-waste-strategy-23703.html>
- Draft Water Strategy - Attachment SPB3
- Asset Management Plans which include:
 - Maintenance Specifications
 - Condition Assessment and Performance Monitoring Plans

The following indicates the current benchmarked level of asset management maturity within W&W. The assessment was carried out using an enhanced version of the Institute of Public Works Engineering Australia's NAMS.PLUS maturity model.

Figure 2



Overview

With the decision to establish a new Directorate for total integrated water and waste management, an opportunity exists for the Client to become a global leader in sustainable resource use, recovery and reuse. The Client has recognised the opportunities in developing a partnership approach to professional services to increase efficiencies, reduce risk, consistently meet target dates and ensure defined project outcomes are achieved.

Contract Objectives

The Client is seeking a strategic delivery partner to achieve required commercial outcomes by optimising its professional services category under a long term collaborative partnership arrangement.

This Contract will form a collaborative relationship between the Client and the Consultant to achieve objectives as follows:

- The engagement of a suitably qualified, resourced and experienced partner to optimise and where required assist in the delivery of programs of work.
- Provide a longer-term partnering relationship with a professional services supplier/consortium of high technical capabilities and suitable resourcing.
- Work closely with the Client to ensure the partnership develops into a mutually successful relationship.
- Drive efficiencies and good practice in planning, project development, design, delivery, operations, condition assessment, data analytics and asset management.
- Assist in optimising and delivering capital and operational programs at the most efficient cost through creating a sustainable pipeline of works and contracting models.
- Proactively pursue a continuous improvement program which delivers efficiency, cost savings and improved customer service.

Scope of Consultancy Services

- Enable synergies, savings and efficiencies in the procurement space.
- Increase expertise and resources to partner with the Client in delivering strategic direction and harnessing emerging technologies and solutions.
- Develop and deliver asset management programs to optimise performance and maximise efficiencies.
- Provide technical expertise and knowledge transfer improving W&W staff capabilities via ongoing innovation and continuous improvement.
- Provide flexibility and future proofing in partnership to adapt to changing regulatory, political and commercial circumstances.
- Establish practical KPIs to allow performance monitoring and assessment and incentivise efficiency, cost-savings and good customer service.
- Deliver social procurement benefits.
- Develop local competitive business and industry.
- Reduce contract administration workloads
- Derive benefits through economies of scale.
- Drive greater efficiencies by reducing duplicated administrative and contract management requirements.

It is envisaged that the bundling of a defined body of works over an extended period will result in highly-competitive pricing, which in combination with reduction in internal procurement and administration costs for individual engagements will provide significant cost and time benefits to the Client.

For administrative and operational reasons, the Contract is structured into two Separable Portions as follows:

Separable Portion A: Consulting Services for Sewage Treatment Plant Upgrades

Provision of professional Consulting Services to undertake the role of Principal's Engineer for Sewage Treatment Plant Upgrades primarily associated with Coombabah Stage 6 and Pimpama Stage 2 and concurrent minor upgrades at other W&W sites.

Separable Portion B: Strategic Partnership for Professional Services

Provision of integrated water and waste management professional Consulting Services in a long term collaborative arrangement to provide assistance with service delivery across all activities undertaken by W&W.

Separable Portion A is based upon a specific scope of works for which the Consulting Services can be more readily defined whereas Separable Portion B by its nature is not able to be scoped to a similar level at this stage.

The scope of Services envisaged for each Separable Portion are set out in the following Parts B and C.

Part B: Separable Portion A: Consulting Services for Sewage Treatment Plant Upgrades

1. Introduction

General

This Contract is for the provision of professional Consulting Services to undertake the role of Principal's Engineer for STP upgrades focusing on the Coombabah Stage 6 and Pimpama Stage 2 Sewage Treatment Plants.

Services for other STP upgrades may also be required including Elanora and Merrimac.

The scope of Services for the Principal's Engineer includes tasks that support the Client with overall project delivery including:

- Supplement the Client's technical and project management resources.
- Manage approvals.
- Undertake concept and preliminary design and provide the required deliverables.

Scope of Consultancy Services

- Prepare construction tender packages.
- Assist the Client evaluate construction contract tenders.
- Review, verify and comment on design drawings and specifications produced by the design development and construction contractor. IFC RPEQ drawing signoff will be by the design development and construction contractor.
- Assist the Principal with audit, inspection and witnessing of construction and commissioning activities of the design development and construction contractor.

The Services for this Contract have been split into six phases at each STP to help manage and administer the Contract. Prior to commencing each phase, the Client and Consultant will agree on the scope (deliverables), budget and target dates. This Schedule of Rates approach has been adopted, rather than a Lump Sum approach, as the Client understands that in the early stages of design, particularly on large complex projects, significant improvements to the overall project outcomes can be realised by having a flexible approach to concept and preliminary engineering where design effort and budgets can be targeted towards improving overall project value.

- Contract Term is specified in the Contract Header.
- The Client's estimated quantity of Services for the Coombabah STP upgrade is approximately 13,400 hours.
- The Client's estimated quantity of the Services for the Pimpama STP upgrade is approximately 11,400 hours.
- The Client's estimated quantity of the Services for Pimpama Early Works and other STP upgrades is approximately 2,700 hours.

Once appointed, the Consultant will be excluded from tendering either separately or as part of any consortia for both the subsequent design development and construction contract.

2. Background

Overview

This Contract is to assist the Client to deliver projects for design, construction and commissioning of the Coombabah STP Stage 6 and Pimpama STP Stage 2 upgrades. Both are nominally sized as 70,000 EP upgrades however studies are continuing to determine the optimum stage sizes. The Coombabah upgrade may be significantly larger to provide a more appropriate operational period before the next upgrade.

Coombabah STP upgrade will utilise existing biological nutrient removal technology and include a new PTF, bioreactor and pair of secondary clarifiers, disinfection system, waste sludge thickening and dewatering and associated ancillary and support facilities.

Similarly, Pimpama STP upgrade will utilise existing biological nutrient removal and include a new PTF, bioreactor and pair of secondary clarifiers, disinfection system, waste sludge thickening and dewatering and associated ancillary and support facilities.

Early works are also required to extend capacity of the Pimpama STP prior to completion of the full upgrade. These works potentially include improved flow splitting, temporary polymer dosing to clarifiers, installation of wet weather bypass, additional BFP and improved aeration.

Various upgrade works may also be required to extend capacity, improve reliability or replace existing aged equipment at the Client's other STP sites. These works may potentially include upgrades to PTF's, BFP's, biosolids handling, pump stations, chemical dosing, electrical systems and associated ancillary and support facilities.

Key Business Benefits

Both STP upgrade projects involve increasing the capacity of the respective treatment plants to cater for growth and meet licence requirements, as the catchments are expected to experience significant growth over the coming years.

Additionally, the Pimpama STP upgrade will allow load from the Stapylton catchment to be redirected from the Beenleigh STP to Pimpama STP.

Scope of Consultancy Services

Coomababah Background

The Coomababah STP is the largest in the City, servicing an EP of approximately 330,000 (approximately 60% of the City's sewage).

Recent capacity assessment of the STP's catchment identified that, given the expected growth projections, the treatment plant is nearing capacity.

Various optimisation practices have been employed to improve performance and capacity since the last upgrade (Stage 5) in 2011. However, these have been exhausted and there is now a need to upgrade the facility to meet future growth load.

This Stage 6 upgrade will increase capacity by between 70,000 to 140,000 EP.

Pimpama Background

Pimpama Stage 1 was commissioned in 2008 to treat approximately 70,000 EP.

The Client plans to divert the Stapylton catchment's sewage from the Beenleigh STP to the Pimpama STP. This diversion, together with expected growth in the Pimpama – Coomera catchments has triggered the need to upgrade the Pimpama STP and to augment the recycled water main to Coomababah STP.

This Stage 2 upgrade will increase capacity by 71,000 EP.

Delivery Strategy

A comprehensive options study was completed for the Coomababah STP upgrade where master planning options, process technologies and financial analysis were considered in significant detail. The result of the study was the upgrade would utilise existing BNR technology with final augmentation sizing to be determined to ensure an appropriate operational period before the next upgrade is required.

Pimpama STP upgrade options study is currently being finalised with the outcome being the upgrade will utilise existing BNR technology for the augmentation.

A Strategic Procurement Plan was compiled and explored project delivery options including: Design Then Construct, Design and Construct, ECI and Alliancing. The conclusion based on outcomes, risk and timing was for the project to be implemented via a design development and construction delivery model. An overview of preferred project delivery model is below:

1. Appoint a Consultant to complete various tasks for the Client to assist with overall project delivery including concept design, preliminary design, prepare tender packages, verify design and audit construction.

Designs will be progressed to a level sufficient to provide the Client certainty of outcomes prior to requesting tenders from experienced design development and construction contractors.

The Consultant will provide overall process and hydraulic performance designs and provide deliverables and performance based specifications to support the design. The design development and construction contractor will guarantee performance of individual aspects of constructed and installed equipment such as pump duties, aeration efficiencies, flow rates, etc. Refer to Clause 9 Project Specific, Certification of Design, for further information.

This Contract addresses these Services.

2. The remaining detailed design will be completed by a contractor who will deliver the project via a single AS4300 design development and construction contract. The extent of the design development and construction contractor's design will be defined during preliminary design and is likely to include items such as structural design of water retaining structures, small bore pipework locations, handrails, steel structures and switchboard design. Additionally, some items may be detailed in performance based specifications. This approach will allow the design development and construction contractors the opportunity to offer alternative technologies and construction techniques which could reduce overall costs.

The design development and construction contractor will provide RPEQ As Constructed drawings.

The Coomababah STP upgrade design development and construction construction contract tender will be issued to shortlisted contractors who will be selected via an EOI process.

Then approximately 9 to 12 months after award of the Coomababah STP upgrade contract, the same shortlisted contractors will be issued with Pimpama STP's upgrade tender for pricing.

Scope of Consultancy Services

Shortlisted design development and construction contractors may be requested to provide constructability feedback on draft concept and preliminary designs. These comments and/or suggestions may be incorporated into the final preliminary design drawings and specifications.

In addition to the above, the Pimpama STP requires Early Works to provide additional treatment capacity by 2021 to cater for the loads up until the Pimpama STP Stage 2 upgrade is commissioned in 2023. This is to cater for growth in the Pimpama catchment and the additional load from the Stapylton catchment which will be redirected from the Beenleigh STP to the Pimpama STP in 2021.

Pimpama Early Works design development and construction is proposed to be delivered in parallel with Coombabah STP upgrade works. Refer to Attachment SPA4, Coombabah Stage 6 and Pimpama Stage 2 Program for further information.

Consequently, it is proposed that the Coombabah STP upgrade and Pimpama Early Works will be issued to the shortlisted contractors and awarded as one contract.

Type of Consultancy

Role of the Principal's Engineer

Provide the necessary technical expertise to support the Client deliver the project, commencing with concept design and using the preferred delivery method.

This will require the Consultant to develop a detailed knowledge of the existing STP's, how they operate, and the current constraints and risks. Commencing with these augmentations but also moving forward as the City grows and additional capacity is required, the STP master plan needs to be well understood by the Consultant.

Given the timeframes involved, and the considerable investment in obtaining knowledge necessary to acquire a full detailed understanding of the technical aspects of the STP's a long term commitment with stable continuity of resources is expected.

The delivery method provides the Client with improved control over the end product as compared to other delivery models. Consequently, the Client and Consultant are to work closely together to optimise design early in the project with the view to avoiding rework and minimising capital cost whilst meeting all stakeholder requirements.

Personnel

Key roles that together fulfil the role of the Consultant have been nominated by the Client in the Price Submission with activities and tasks described in Clause 4, Scope.

Personnel for all roles must have substantial experience in STP design including BNR processes, latest equipment technologies (grit removal, pump types, GDD and BFP) and industry best practices.

In particular, the Consultant will:

- be technically competent and have multi-disciplined engineer skills and knowledge.
- manage day to day discipline design interface issues.
- manage deliverables and ensure they are delivered within budget, in a timely manner and to a high standard.
- be committed to the project and ensure other company responsibilities do not impact on the project outcomes.
- and be readily accessible to answer Client queries and attend workshops and meetings.

A dedicated Consultant's Project Engineer may be required to manage design of the Pimpama Early Works.

Ensure the Personnel are made available to undertake their nominated roles as required by the Client. Should the Consultant wish to substitute alternative Personnel throughout the course of this Contract, only substitutions of Personnel with equal or greater experience and capability will be acceptable to the Client.

The Client has prepared a draft Project Structure (refer Attachment SPA3) outlining the proposed interaction between the Client, the Consultant, the superintendent and the design development and construction contractor.

The acceptable range of years' experience per role classification is defined below:

- Graduate Engineer 0 to 5 years' experience.
- Engineer 5 to 10 years' experience.
- Senior Engineer > 10 years' experience.

Scope of Consultancy Services

- Project Manager > 15 years' experience
- Principal Engineer / Design Manager > 20 years' experience.
- Executive Manager >20 years' experience.

Return Brief and Negotiation of Upper Limit Fees

The Scope has been divided into six phases per project. These phases are described in Clause 4, Scope.

This Contract is a Schedule of Rates, with rates sought for various disciplines, covering all phases over the duration of the Contract Term. An estimated quantity of hours has been provided by the Client in the Price Submission (Consultant Estimate) for roles within each phase.

At the commencement of each phase the Client and Consultant will undertake an initiation meeting to further define the tasks to be completed, the quantities and time required for each task and the Personnel proposed for each task based on the Price Submission.

A Return Brief following the initiation meeting will be required from the Consultant outlining the tasks, quantities, deliverables, time and personnel proposed for each phase, which once agreed by the Client will form an Upper Limit Fee for that phase of the Contract. All phases for each STP and the early works will follow this process.

During implementation of the Services, any variations to the agreed Return Briefs and Upper limit Fees will be managed via the variation mechanisms described in AS4122 and Annexure Part B.

Payment and Pricing

The Price Submission forms the basis for negotiation of the Upper Limit Fee for each phase. The nominated rates for all Personnel must include:

- office and/or site accommodation
- corporate overheads including secretarial, administration support and project controls (excluding document control).
- mobile phones, vehicles, fuel, parking, training
- software and hardware
- allowances for working outside standard working hours
- disbursements to cover food and beverages
- LAFHA
- profit. No claims for loss of profit are claimable if the budget allowance listed in Clause 1 is not achieved.

Payment

Refer to the Contract Header for specific payment information.

Rate Adjustment

The Consultant may request for the Schedule of Rates to be amended in line with the Australian Bureau of Statistics, Wage Price Index, once over the Contract Term, two years after the Commencement Date.

Allowances

Specialist contractors and consultants costs will be paid at cost plus the % mark-up nominated in the Price Submission. Also refer below, Specialist Contractors and Consultants, for additional information.

Travel and/or accommodation allowances are described in Part D: Clause 4, Travel and Accommodation.

Environmental approval fees and applications will be reimbursed at cost.

Hard drives and scanning will be reimbursed at cost.

Specialist Contractors and Consultants

Scope, specify, procure, project manage and deliver investigations, studies or surveys as necessary to support delivery of the project including but not limited to the following:

Scope of Consultancy Services

- Topographical, cadastral and 3D survey
- Corrosion investigations (ferrous and cementitious)
- Odour investigations
- Estimators
- Concrete Inspections and Condition Assessments
- Contract and legal support
- Project document control system (possibly “Cloud” based)
- Underground services investigations
- Geotechnical investigations (see the note below)
- Environmental assessments (see the note below)

An allowance has been included in the Price Submission for investigations, studies or surveys. The Consultant’s mark-up fee for subcontracted work will be nominated in the Price Submission to cover minor administrative costs. Costs to manage the contracts will be included in the Upper Limit Fee. As a minimum:

- Provide a scope and/or specification for the works.
- Present the proposed scope to the Client and seek approval to seek quotations from the market.
- Finalise the scope and obtain at least three fixed price quotations from suitably qualified and experienced contractors or consultant.
- Prepare written evaluation based on productivity and efficiency of the offers and recommend a preferred contractor or consultant for engagement. Once the Client has endorsed engagement the works may commence.
- Manage the preferred contractor or consultant ensuring compliance with all obligations under this Contract. In particular, attention is drawn to:
 - Clause 5, Project Specific, Existing Services and Public Utilities.
 - Part D: Clause 2, Work Health and Safety.
- Submit final reports detailing the results, conclusions and recommendations.

Note:

1. The Client is currently engaging consultants to undertake the initial scope of work for geotechnical and environmental assessments. The Consultant will be provided with the results of the assessments and investigations for incorporation into the various aspects into the design. Should the information provided be unacceptable or insufficient the Consultant will provide a RFI detailing the extent of additional work and information required. The Client will then manage the existing consultants and provide the information required.
2. Should the performance of existing contractors and consultants engaged by the Client be deemed unacceptable, the Consultant may be requested to provide these Services.
3. Refer to Clause 5, Project Specific for additional information regarding environment and geotechnical requirements.

Governance

Project Meetings

Technical matters and project management will be discussed at regular meetings between the Client and Consultant, in conjunction with the project team and various stakeholders. Refer to Clause 9, Reporting Requirements, for additional information.

Executive Meetings

A Client and Consultant executive management team will meet every three months or as required to discuss and review the projects. Aspects for discussion include deliverables, cost, schedule, quality, resourcing, and relationships. In particular, productivity will be discussed during execution of each phase. This governance team will comprise Client CCR, Consultant Project Manager, Client Executive Manager and Consultant Executive

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Manager. This team will ensure the project goals are achieved in a constructive, proactive and positive manner at all times. A regular “Dash Board” type report will be provided by the Consultant to monitor the project.

General

It is a Client expectation that the proposed Personnel listed in the Non-Price Response Forms are available for the full contract duration. Internal Consultant Personnel transfers to other projects should not adversely impact on this project's outcomes. Should key personnel resign from the Consultant, replacement Personnel of equal or greater experience must be offered in a reasonable time frame. The Client reserves the right to engage alternative Personnel directly or via direct labour hire if project outcomes are jeopardised as a result of Personnel movements or lack of resources.

Critical Success Factors

- A willingness to commit to a long term contractual arrangement as the Consultant and continuity of Personnel throughout the Contract lifecycle.
- Technical expertise and experience to cover the numerous engineering disciplines necessary to implement the project using the Client preferred delivery method.
- A detailed knowledge and understanding of not only the Client's existing facilities, but the intended future master plan.
- Adherence to the specifications and Codes including asset design lives and desire for minimum lifecycle costs when preparing/reviewing designs and cost estimates.
- Ensure the constructability for all designs where new infrastructure is proposed and the ability for practical and cost effective connection to future works.
- Ensure the constructed works are as per the specifications and drawings.
- Appropriate engagement with internal and external stakeholders in liaison with the Client.
- Strong commitment to and promotion of WHS.
- Provision of deliverables with sufficient detail to avoid construction contract variations and excessive technical clarifications from the design development and construction contractor.
- Provision of deliverables which are of a high standard; free of errors and omissions; and correctly interfaced with other engineering disciplines.

4. Scope

Overview

The Scope of the upgrade Services are broadly described in Clause 2, Background, Overview.

Six phases are nominated for each STP upgrade project, plus six phases for Pimpama Early Works. The Client may add additional or combine phases to facilitate delivery of the projects. Also, Phase three maybe split into individual Return Brief's per work area.

The project phases are generally detailed in the tables below:

Table 1: Coombabah Stage 6 STP Upgrade – Project Phase Overview

<u>Phase</u>	<u>Name</u>	<u>Description</u>	<u>Allowance (hours)</u>
1C	Review	Review all existing information to gain an understanding of the project requirements.	240
2C	Concept Design	Undertake Concept Design and options studies to define the works. Provide TM's, initiate approvals and provide preliminary TCC estimate.	2500

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3C	Preliminary Design	<p>Undertake Preliminary Design for each of the following five work areas:</p> <ol style="list-style-type: none"> 1) Primary Treatment Facility 2) Secondary Treatment 3) WAS Thickening 4) Sludge Dewatering 5) Site Wide Facilities <p>Prepare design deliverables to enable a design development and construction contractor to adequately price project costs and to finalise design. Finalise environmental approvals, service locations and geotechnical investigations. Revise TCC estimate. Prepare final documents inclusive of feedback from Client on draft versions.</p>	4035
4C	Specification and Evaluation (Construction)	<p>Assist the Client integrate design deliverables with the design development and construction contract documents, including scope of works, design documents and construction management plans.</p> <p>Evaluate design development and construction tender submissions, answer RFI's and issue clarifications.</p>	508 plus 159
5C	Design Development	Review deliverables produced by the design development and construction contractor (potentially up to 500).	2100
6C	Construction and Commissioning	Provide assistance to verify and audit construction. Provide technical advice. Verify commissioning. Provide contract and project management advice.	3873
			13,415 hours

Table 2: Pimpama Stage 2 STP Upgrade – Project Phase Overview

<u>Phase</u>	<u>Name</u>	<u>Description</u>	<u>Allowance (hours)</u>
1P	Review	Review all existing information to gain an understanding of the project requirements.	240
2P	Concept Design	Undertake Concept Design and options studies to define the works. Provide TM's, initiate approvals and provide preliminary TCC estimate.	1480
3P	Preliminary Design	<p>Undertake Preliminary Design for each of the following five work areas:</p> <ol style="list-style-type: none"> 1. Primary Treatment Facility 2. Secondary Treatment 	3320

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		3. WAS Thickening 4. Sludge Dewatering 5. Site Wide Facilities Prepare design deliverables to enable a design development and construction contractor to adequately price project costs and to finalise design. Finalise environmental approvals, service locations and geotechnical investigations. Revise TCC estimate. Prepare final documents inclusive of feedback from Client on draft versions.	
4P	Specification and Evaluation (Construction)	Assist the Client integrate design deliverables with the design development and construction contract documents, including scope of works, design documents and construction management plans. Evaluate construction tender submissions, answer RFI's and issue clarifications.	236 plus 159
5P	Design Development	Review deliverables produced by the design development and construction contractor (potentially up to 500).	2100
6P	Construction and Commissioning	Provide assistance to verify and audit construction. Provide technical advice. Verify commissioning. Provide contract and project management advice.	3873
			11,408 hours

Table 3: Pimpama Stage 2 STP Upgrade Early Works and Upgrade Works at Other STP Sites - Project Phase Overview

<u>Phase</u>	<u>Name</u>	<u>Description</u>	<u>Allowance (hrs)</u>
1E	Review	Review all existing information to gain an understanding of the project requirements.	160
2E	Concept Design	Undertake Concept Design and options studies to define the works. Provide TM's, initiate approvals and provide preliminary TCC estimate.	415
3E	Preliminary Design (and Specification)	Undertake Preliminary Design to enable a design development and construction contractor to complete the design. Common phase for both STP upgrades. Provide sketches and revise TCC estimate.	520
4E	Specification and Evaluation (Construction)	Assist the Client integrate design deliverables with design development and construction contract documents, including scope of works, design documents and construction and environmental management plans. Evaluate design development and construction tender submissions, answer RFI's and issue clarifications.	135 Plus 97
5E	Design Development	Review deliverables produced by the design development and construction contractor (potentially up to 100).	312

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6E	Construction and Commissioning	Provide assistance to verify and audit construction. Provide technical advice. Verify commissioning. Provide contract and project management advice.	1117
			2,756 hours

Additionally a Provisional allowance of \$200,000 has been included for upgrade Works at other STP Sites which equates to approximately 1000 hours of labour depending on rates and resources.

Phase Details

Coombah Stage 6 upgrade project specific details are below:

Phase 1C - Review

General: The Consultant is required to review existing documentation and become familiar with the site, project construction scope, constraints, environmental issues and high level stakeholder requirements in order to have sufficient knowledge to scope the next phase of the project.

Methodology: The Client will facilitate a number of meetings and site visits to brief the Consultant on key aspects of the project which require further investigation.

An allowance of 240 hours has been allocated for this task. The Client and Consultant's Project Manager, after award, will determine which engineers will be involved in this phase and how many hours will be allocated to the respective disciplines. The initial basis for the 240 hours allocation is six people for one week (40 hours/week). The following engineering disciplines are likely to be required: project management, process, civil/hydraulic, mechanical, electrical/SCADA and environmental.

Tasks: The following list is a high level summary of some of the tasks required in this phase which will be refined prior to approval to commence this phase:

1. Project Setup
 - a. Kick off meeting and initial plant briefings
 - b. Preliminary site investigations and project familiarisation
2. Review Basis of Design
 - a. Review plant existing constraints
 - i. Capacity (process, electrical, control, mech)
 - b. Review existing EA
 - i. Confirm recycled water class release requirements
 - ii. Confirm bypass constraints
 - iii. Review recent site ecological assessments
 - c. Review Master Plan, business cases, existing consultant reports and existing documents. Refer to Clause 13 and 14, Other Documentation/Attachments
3. General
 - a. Review current Concept Designs.
 - b. Agree the extent of initial specialist contractor and consultant studies and investigations; such as, geotechnical investigations.

Phase 2C – Concept Design

General: After completion of Phase 1C, define the project Scope of Services. There are various process areas and systems which require upgrade as a result of the augmentation. Some areas and systems require option studies and MCA whilst other areas require process capacity reviews, site investigations and integration with master planning requirements. All engineering disciplines will be involved in this phase; however, process engineering will initially lead the investigations. The final deliverables from the Concept Design phase will be TM's completed with recommended layouts, equipment and project scope. These TMs will be then used as a BOD which will help progress the next phase, where the

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project scope will be developed further to a point where it can be packaged into a design development and construction tender specification.

The majority of project savings and innovation opportunities can be unlocked in the early stages of the projects. Consequently, a number of workshops will occur to add value, encourage innovation, simply design, manage risk, obtain stakeholder input and improve constructability. Information, constraints and project requirements from these workshops will be captured in a BOD document which will form part of the design development and construction tender package.

Various aspects of the existing environmental assessment and geotechnical investigations are likely to drive Concept Design recommendations and have the potential to delay the project. A detailed review of these documents is required and an action plan is to be compiled with the view to resolving and understanding all key constraints so informed design decisions can be made early in Concept Design.

Methodology: Prepare TM's, consisting of the following tasks:

1. attendance at an initiation meeting with the Client at the Client's Nerang office
2. review and understand the concept deliverables.
3. prepare Return Brief and agree Upper Limit Fee with the Client including a program with key milestones.
4. prepare the following documents for review by the Client
 - a. BOD.
 - b. environmental and geotechnical action plan
5. prepare Concept Design TM's and draft sketches per work area.
6. prepare high level project TCC estimate.
7. provide final documents inclusive of feedback from the Client.

Tasks: The following list is a high level summary of some of the tasks required in this phase:

- Provide BOD and environmental and geotechnical action plan. These draft documents are required as per Clause 6, Key Delivery Dates.
- Provide TM's.
- Provide preliminary TCC estimate.

A summary of issues and constraints to consider early in the Coombabah STP upgrade Concept Design Phase 2C is provided in Attachment SPA5.

Phase 3C - Preliminary Design

General: Prepare deliverables for an AS4300 contract. Refer to Attachment SPA6, Preliminary Construction Contract Document Suite and Deliverables, for further information. The aim of this phase is:

- to define the scope sufficiently for the design development and construction contractor to accurately price the project costs, commence design and undertake construction works.
- achieve the Critical Success Factors listed in Clause 4, Type of Consultancy.
- to define the scope and provide deliverables with sufficient details to ensure:
 - variations during construction are minimal
 - design development and construction contractor technical clarifications are minimal
 - construction rework is minimal
 - high quality outcomes are achieved including meeting the EA and highly reliable STP performance
 - operations and maintenance stakeholders requirements are met, and readily accessible and maintainable
 - designs are practical and readily constructible.

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Whilst these documents are prepared, the Client will prepare EOI tender documentation for the Design Development and Construction contract which will request details from potential offerers including:

- capacity and capability to undertake the works
- consortia and/or sub-contract arrangements (if any) and personnel proposed

Once selected the shortlisted offerers may be requested to provide constructability feedback on preliminary designs. Refer to Clause 2 “Delivery Strategy” for further details.

The deliverables required are generally described in Clause 5, Project Specific, Construction Contract Document Suite and Deliverables.

The Client’s Standard Specifications do not generally cover the nature and magnitude of the works proposed, project specific technical specifications will need to be compiled or existing Client specifications will require review and revision. Existing documents will be provided on award.

The documentation must align with the Client’s Procurement Policy and Contract Manual (<http://www.goldcoast.qld.gov.au/documents/bf/procurement-policy-and-contract-manual.pdf>).

Methodology: Prepare drawings and specifications, consisting of the following tasks:

1. attendance at an initiation meeting with the Client at the Client’s Nerang office.
2. review and understand the Client’s procurement policy, standards and templates.
3. prepare Return Brief and agree Upper Limit Fee with the Client including a program with key milestones.
4. prepare draft deliverables for the design development and construction contract for each work area including, drawings, schedules and specifications for review by the Client.
5. provide input to environmental and other approvals.
6. revise project TCC estimate.
7. prepare final documents inclusive of feedback from the Client on the draft version

Tasks: The following list is a high level summary of some of the tasks required in this phase which will be refined prior to commencing this phase of the Services:

- Project Administration
 - Consolidate existing STP drawings and specifications.
 - Manage and control drawings.
 - Provide 4 of 5Tb portable hard drives to facilitate document exchange during the contract. The hard drives may be used in addition to transferring the majority of documents via an agreed cloud based system.
 - Assign, manage and control equipment lists and asset numbers in accordance with the documents listed in Clause 13 – Other Documentation.
 - Scan existing hard copy drawings located at the STP which have not been digitised.
 - Attend design reviews, constructability reviews and HAZOPs.
 - Undertake Value Engineering workshops. Refer to Clause 5 of this document for additional information.
- Revise preliminary TCC estimate.
- Provide input to investigations and assessments as required to support the above services:
 - Survey
 - Geotechnical
 - Underground service locations
- Provide tender documentation for the design development and construction contract including:
 - Scope of works which design development and construction contractor is to perform.
 - Basis of design summarising all design requirements.
 - Provide deliverables as listed and agreed in Attachment SPA6.
- Provide specifications for the design development and construction tender package. The Client will provide a number of existing technical specifications from previous STP augmentations.
- Manage and/or prepare and submit approvals:
 - Initiate approvals to support the approval process.

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- Refer to Clause 5, Project Specific, Approvals, of this document for additional information.
- Prepare draft CEMP.

Phase 4C – Specification and Evaluation

Specification

General: The proposed construction contract delivery method is one EOI process to short list potential offerers and two subsequent design development and construction tenders to the same short listed offerers, approximately 9 to 12 months apart.

The Client will prepare the final tender documents. The Consultant is required to assist the Client integrate the design deliverables into an AS4300 design development and construction contract.

The contract documentation will only be offered to shortlisted offerers deemed capable to proceed, where costing will be requested. Under this delivery model there will still be a component of design required to execute the construction contract.

The shortlisted offerers may be invited to comment on designs and/or participate in workshops prior to tendering. Assist the Client facilitate the process if this approach is adopted.

The documentation must align with the Client's Procurement Policy and Contract Manual (<http://www.goldcoast.qld.gov.au/documents/bf/procurement-policy-and-contract-manual.pdf>).

Methodology: Integrate deliverables (drawings, specifications, plans, etc) with contract documents for the design development and construction contract, consisting of the following tasks:

1. attendance at an initiation meeting with the Client at the Client's Nerang office.
2. review and understand the deliverables
3. prepare Return Brief and agree Upper Limit Fee with the Client
4. prepare deliverables including draft and final design development and construction specifications including draft CEMP.
5. assist integrate deliverables and tender contract documents
6. review the online tender document package to verify that it is complete and correct versions are included.

Tasks: Prepare design development and construction tender documents:

- Deliverables including scope, drawings and specifications.
- Integrate these documents into the design development and construction tender package.

Evaluation

General: Provide advice to the Client during the evaluation phase. The Client will use in-house resources as scoring members on the evaluation team with the Consultant providing technical advice and expertise to support the Client as required.

This includes a review of offers from the tender process and participation in workshops if necessary to support the Client in selection of the shortlisted offerers. Additionally, the Consultant may be required to support the Client in responding to RFI's during the tender period.

The Consultant may be required to develop and facilitate risk and opportunity workshops with shortlisted offerers during the tender process.

Methodology: Provide advice and support to the Client in relation to the tender process, consisting of:

1. attendance at an initiation meeting with the Client at the Client's Nerang office
2. prepare Return Brief and agree Upper Limit Fee with the Client

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3. development and facilitation of risk and opportunity workshops with shortlisted offerors.
4. responding to RFI's during the advertising period
5. detailed review upon receipt of tenders
6. advice in relation to a preferred tenderer.

Tasks: The following list is a high level summary of some of the tasks required in this phase:

- Review tender submissions.
- Assist with responses to RFI's and draft clarifications.
- Provide advice.

Phase 5C – Design Development

General: Review all designs and documentation prepared and submitted for review by the design development and construction contractor.

This will cover numerous engineering disciplines given the scope of work proposed. Timeframes or milestones must be written into the contract to allow sufficient time for the Consultant, in consultation with the Client, to review and endorse all design submissions. Have sufficient resources to meet agreed timeframes and project milestones.

Methodology: Review design deliverables, including liaison and communication with the Client, consisting of the following tasks:

1. attendance at an initiation meeting with the Client at the Client's Nerang office.
2. attendance at a pre-start meeting with the design development and construction contractor and the Client at the Client's Nerang office
3. prepare Return Brief and agree Upper Limit Fee with the Client
4. review, provide red-line mark-ups and comments on all designs, reports, calculations and documentation from the design development and construction contractor
5. ensure designs enable environmental approvals and associated conditions to be implemented successfully
6. attendance at design review, constructability, safety in design, HAZOP meetings as required
7. check that feedback from above reviews and workshops are incorporated into final construction documents and advise the Client of any potential issues

Tasks: The following list is a high level summary of some of the tasks required in this phase:

- Review designs and documents. It is estimated approximately 500 deliverables will be produced by the design development and construction contractor.
- Draft RFI responses.
- Provide technical advice and guidance to the Client.

Phase 6C - Construction and Commissioning

General: For construction of the works the Client will appoint a superintendent to administer the contract, which will not be sourced from the Consultant. However, the construction supervisor / superintendent representative role may be resourced from the Consultant. Tasks performed by the construction supervisor / superintendent representative will include: verification of construction and commissioning work, safety audits, environmental compliance audits and contract management.

The role of construction supervisor / superintendent representative must cover the multiple engineering disciplines involved in the works. Ideally Personnel involved in the earlier specification, evaluation and design phases would be assigned to this role.

Methodology: Perform an audit, verification and contract management role including field based inspections of construction in accordance with the design development and construction contract. As the Client's construction supervisor / superintendent representative ensure that construction of the works by the design development and construction contractor conforms to all aspects of the approved designs and specifications including:

1. attendance at an initiation meeting with the Client and superintendent at the Nerang Office
2. prepare Return Brief and agree Upper Limit Fee with the Client
3. verification of the works covering all engineering disciplines
4. provide contractual advice during construction
5. support with commissioning and testing of all works
6. support with completion and handover activities with the Client's operational staff.

Tasks: The following list is a high level summary of some of the tasks required in this phase:

- Attend site meetings
- Ensure work is performed as per the approved management plans including quality, safety and environmental management
- Ensure work is constructed as per the approved design and specifications
- Prepare defects list
- Witness commissioning and confirm plant performance is achieved
- Provide contract advice
- Assist processing variations and RFI's

Pimpama Stage 2 upgrade project specific phase details are below:

Phase 1P - Review

As per Phase 1C above.

Phase 2P - Concept Design

As per Phase 2C above.

Phase 3P – Preliminary Design

As per Phase 3C above.

Phase 4P – Specification and Evaluation

As per Phase 4C above.

Phase 5P – Design Development

As per Phase 5C above.

Phase 6P – Construction and Commissioning

As per Phase 6C above.

Pimpama Stage 2 Upgrade Early Works and Upgrade Works at Other STP Sites phase details are below:

Phase 1E - Review

As per Phase 1C above.

Phase 2E - Concept Design

As per Phase 2C above.

Phase 3E – Preliminary Design

As per Phase 3C above.

Phase 4E – Specification and Evaluation

As per Phase 4C above.

Phase 5E – Design Development

As per Phase 5C above.

Phase 6E – Construction and Commissioning

As per Phase 6C above.

Allowance

Individual upgrade works at other STP sites will be implemented in similar phases as described above via an agreed Return Brief and Upper Limit Fee. A provisional allowance is included in the Price Submission for these Services.

5. Project Specific

Construction Contract Document Suite and Deliverables

The various main deliverables provided in this Contract will be included in AS4300 design development and construction contracts. The anticipated deliverables and how they will be incorporated into the contract is summarised in Attachment SPA6, Preliminary Construction Contract Document Suite and Deliverables.

The list of deliverables and level of detail in each document will be agreed and defined in each Return Brief.

Design

The Client will provide existing drawings, reports and specifications in native format where possible to support design activities. An indicative list of the documentation available is contained in Clause 13, Other Documentation.

All equipment nominated on the drawings, lists, schedules and specifications will have a unique Technical Asset Identification conforming to SD-22 Asset Hierarchies and Numbering Definitions.

Drawings

Drawing and document standards will be in accordance with W&W technical specifications. .

Value Engineering and Stakeholder reviews

Participate and, as agreed, lead and manage workshops that are required to successfully implement the contract, including the following:

- Design Reviews
- Constructability Reviews
- HAZOP
- CHAZOP
- SID workshops. Refer below, Safety – Design, for additional information.

The Client and Consultant will determine the extent of workshops with the view to ensuring:

- Safety risks are minimised.
- Value engineering is systematically implemented throughout the contract.
- Stakeholder's requirements are met.

Existing Services and Public Utilities

Supervise, manage and control the specialist consultants and sub-contractors when performing Services and utilities investigations or any site works.

Where services, public utilities or other Client utilities, whether overhead, at the surface, underground or in conduits, exist at or in the vicinity of the site, take all care necessary to protect such facilities from damage.

Consult with and manage all interfaces in the vicinity of the works with service authorities for works outside the STP site and the Client's STP operational staff for works inside the STP. These authorities include but are not limited to communications, gas, water and power.

It is anticipated investigations outside the STP site will only be on Kerkin Road North between the Pimpama STP and the associated lagoons to the southeast.

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Prepare a services plan prior to commencing the works on the site. The plan must include:

- measures to ensure the integrity of all services throughout the duration of the works.
- confirmation of level and location of all services prior to works commencing within the site to ensure protection.

For any excavation outside the STP site limits, Dial Before You Dig enquiry must be lodged at least two business days prior to starting any excavation and allow sufficient time to receive plans back from registered asset owners to locate any affected infrastructure asset.

In the case of any damage occurring to such services or utilities, the matter must be immediately reported to the department, public authority or company concerned and to the Client. The cost of repairs and/or renewals will be borne entirely by the Consultant or sub-contractors. Any PUP damaged or interfered with during the works is to be restored to its previous condition at the earliest possible opportunity, in accordance with the requirements of the respective asset owner. If the Consultant or sub-contractors fails to arrange/undertake such repairs as required by the asset owner, then the Client may arrange for the repairs and has the right to deduct the costs incurred from monies otherwise owing by the Client.

In the event of any discrepancy between location drawing information and physical location of the existing underground services, the service provider or the Client's STP operational staff must be asked to attend the site to confirm the accuracy of the location drawing information. Work with the service provider or the Client's STP operational staff to locate/confirm the existing underground services. Excavation must not commence until approval documents and sign off is received from the service provider or Client's STP operational staff that work can continue.

Certification of the Design

Comply with the requirements of the *Queensland Professional Engineers Act*.

IFT deliverables will be signed by the Consultant's RPEQ engineers.

As-constructed drawings will be signed by the design development and construction contractor's RPEQ engineers.

Process and hydraulic designs will be by the Consultant.

Refer to Clause 2 Background, Delivery Strategy, for additional information.

Environmental Approvals

Further to Clause 3 Type of Consultancy, Specialist Contractors and Consultants and in addition to the requirements of Part D: Clause 3 Environmental Protection:

- Make an independent assessment of the environmental information provided by the Client and inform the Client on any issues which require further clarification or adversely impact on design.
- Review the required project approvals and confirm the approvals are achievable and appropriate.
- Attend stakeholder workshops to discuss and review approval issues as required.
- Ensure approval conditions are incorporated in the design and the draft CEMP.
- Provide specialist environmental advice to support the Client as required.

Geotechnical Investigations

Further to Clause 3 Type of Consultancy, Specialist Contractors and Consultants:

- Make an independent assessment of the geotechnical information provided by the Client and inform the Client on any issues which require further clarification or adversely impact on design.
- Attend stakeholder workshops to discuss and review issues as required.
- Request additional investigations as required.
- Ensure the results of the investigations are incorporated in the design.
- Provide specialist geotechnical advice to support the design as required.

Project Management

Provide a designated Project Manager for the duration of the Contract that will coordinate all Services to be performed by the Consultant. Communications can be direct between engineers and stakeholders; however the

Scope of Consultancy Services

Consultants' project manager and Client's project manager must be informed and aware of all project matters. Refer to Attachment SPA3, Draft Project Structure and to Clause 3 Type of Consultancy, Governance for additional information.

Safety - Design

In addition to the requirements of Part D: Clause 2 Work Health and Safety, during the various project phases:

- Ensure the design development and construction tender documents specify safety legislative requirements, design standards, risk workshops (design and constructability) and SID reports.
- Actively participate in design reviews, constructability reviews and HAZOPs.
- Perform regular site safety audits to ensure conformance with agreed SWMS's and Safety Management Plans.

Office Space

Consultant's design office: make available two desks and chairs for use by the Client from the commencement of Phase 2C to the completion of Phase 5E. Power and lighting must be available. Stationery, computers, etc will be provided by the Client.

Coomababah STP: only temporary desk space is available to the Consultant up until construction commences. During construction office space will be provided on site.

Pimpama STP: only temporary desk space is available to the Consultant up until construction commences. During construction office space will be provided on site.

6. Key Delivery Dates

Phase dates: The Client and Consultant will agree prior to commencing each phase, target completion dates which are to be achieved for each phase. These dates will be included in the Return Brief.

Deliverables: A number of key deliverables are listed in Clause 4 Scope. However, these deliverables will be agreed prior to commencing each phase and included in the Return Brief.

Key Dates: Work with the Client to meet the below Key Dates or Durations.

Table 4: Key Dates or Durations

Phase Name	Key Dates or Durations		
	Coomababah STP Stage 6	Pimpama STP Stage 2	Pimpama STP Early Works
Review (Phase 1C, 1P, 1E)	Three working weeks from commencement date.	Compatible with Early Works Design	To align with Tender Period for Coomababah STP Stage 6 August 2019
Concept Design (Phase 2C, 2P, 2E)	Nine working weeks from commencement date.		
Preliminary Design (Phase 3C, 3P, 3E)	29 weeks from contract award.	June 2020	
Specification and Evaluation (Phase 4C, 4P, 4E) Construction Tender Specification	August 2019	July 2020	

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Tender Evaluation	December 2019	November 2020	December 2019
Design Development (Phase 5C, 5P, 5E)	March 2020	February 2020	May 2020
Construction (Phase 6C, 6P, 6E)	July 2021	July 2022	December 2020
Commissioning and Closeout (Incl. contingency) (Phase 6C, 6P, 6E)	November 2021	November 2022	May 2021

The above dates and durations have been determined from preliminary programming which has limited float or contingency. Refer to Attachment SPA4, Program, for additional information. The program will be reviewed under the initial phase of the Services to form the Services Program further described in clause 10 below. The actual timing of the initial phases may need to be adjusted to account for Christmas holiday periods.

The Pimpama STP Early Works are required to be issued with the select tenders for the Coombabah STP Stage 6 works and has some flexibility in commencement as a result. Similarly, commencement of the balance of the Pimpama STP Stage 2 works Concept Design works can proceed at any stage to suit resource efficiency however the request for select tenders is not proposed to commence until approximately nine to 12 months after commencement of the Coombabah Stage 6 contract.

Coombabah and Pimpama STP's are approaching capacity and in order to avoid environmental licence breaches, it is vital key dates are met. Consequently, the Client reserves the right to engage additional internal or external resources to meet the program should the Consultant be unable to provide deliverables by the required dates.

Return Briefs will be submitted within two weeks of the Client request.

7. Site Location, Condition and Limits

The location of sites for the Services to be performed is below:

- Coombabah STP: Shelter Rd, Coombabah, 4216 (Lot plan: 201SP235731)
- Pimpama STP: Kerkin Road North, Pimpama, 4209 (Lot plan: 270SP236795 and 1SP236796)

Do not enter onto the Client's workplace other than to undertake the Services assigned by the Client.

No site excavation for pothole or geotechnical investigations will be undertaken without first advising the Client. Submit details outlining the extent of any excavation required.

Induction and supervision by the Consultant of anyone entering the worksite must be in accordance with the legislative requirements and relevant Policies and Plans of the Client.

Works within Sewage Treatment Plant Sites

It is a requirement that all persons successfully complete the relevant induction for the Client's site prior to being permitted to access to that site. Accordingly, all of the Consultant's Personnel and sub-consultants will be required to be inducted to the sites prior to being provided access. Refer to Part D: Clause 2 for details on inductions.

The sites are fully operational facilities, and any Services must be performed in a manner such as to minimise any disruption or hindrance to current operational or maintenance activities.

Scope of Consultancy Services

All internal roadways within the STPs are to be kept clear and accessible at all times. Parking of the Consultant's vehicles or equipment within existing roadways is only be permitted for short-term loading or unloading of equipment or facilities. All other vehicles, including vehicles used by Personnel to commute to the site for meetings, site inspections, etc, must be parked within the respective STP car parking area located in the vicinity of the STP administration building, or at other locations within the STP site.

Site specific conditions (relating to facilities located within the Client's property)

- The sites of Service comprise operating treatment plants.
- Plant operations will take priority over activities associated with this Contract and as such, some points may be unavailable for survey.
- Certain plant and equipment can only run subject to coastal tide conditions.
- Certain plant and equipment can only run subject to system and pump station load.
- Necessary portions of the sites will be accessible for the Services at mutually agreed times between the Consultant and Client.
- All Services are to be carried out with minimum disruption to plant operation or access.
- The Consultant's Personnel are to report and sign in on arrival on site and report and sign out when leaving. The Consultant and Consultant's personnel are to respond to any warning or evacuation procedures relevant to that site.
- The Client is to be kept informed of the work status.
- The Client is to be warned of any activity that may cause interference to the operation of the plant or its equipment.
- Before works may commence, the Client is to be notified that access to site is required. The minimum period of notification may vary from site to site, however if not stated elsewhere the minimum notification period is five Business Days.
- Access gates, in particular those at sewage treatment plants, may be linked to site security systems. On arrival at a site gate, the visiting Consultant must press the 'Plant Operators Mobile' button on the communications box.
- Before any work commences on a site, the Consultant's Personnel are to be inducted for the site.
- All Services are to be programmed to ensure minimal disruption to the plant and pump station operation, access or power supply to each site.

8. Constraints and Restraints

Access and decisions from key stakeholders including regulatory approval authorities.

Operational issues with existing assets to remain in service during the construction and commissioning of new infrastructure.

All designs must be compatible with the ultimate STP Site Master Plan.

The final location of the Coombabah Stage 6 reactor and clarifiers will be driven and constrained by environmental considerations (marine plants and koala habitat), geotechnical ground conditions and compatibility with Master Plan requirements (additional augmentations into the future).

The final location of the Pimpama Stage 2 reactor and clarifiers will be driven and constrained by limited site space with sloping ground conditions and compatibility with Master Plan requirements (additional augmentations into the future).

Refer to Attachment SPA5, Summary of Issues and Constraints, for further information.

9. Reporting Requirements

9.1 Project Reports

Allow for a progress report (email) to the Client by 10am each alternate Tuesday, advising Contract progress status. This report is to include a Gantt chart, based on the tasks outlined in the current agreed Services Program further described in Clause 10 below and includes:

- Tasks undertaken.

Scope of Consultancy Services

- The estimated remaining duration to completion of that task.
- Workshop and Milestone dates
- Activities, tasks and deliverables.

The preferred format is a Microsoft Project Tracking Gantt chart with the baseline set to the agreed Services Program.

The progress report will also include a deliverables list. The list will be an excel spreadsheet and contain as minimum the following information:

- Rows
 - Each deliverable.
- Columns
 - Name, number, revision, status, hours, hours completed, due date for each revision (A, B, IFT), % complete, work area, discipline, phase, Return Brief reference number.
- General
 - Filters to facilitate sorting.
 - Summary information including overall percent complete.
 - Earned value in the form of an S-curve calculated by an agreed accurate and predictable methodology.

9.2 Agendas and minutes

Be responsible for arranging the meetings, for drafting agendas, taking the minutes of meetings to a supplied template format, and for their circulation. The Client will chair the meetings.

Scope of Consultancy Services

Allow for the following:

Minimum lead time to submit agenda	24 hours
Maximum delay time to provide minutes to the Client	five working days
Maximum time for the Client to review the minutes, and provide feedback	five working days
Make the changes, and distribute the minutes	five working days

On occasions the Client may assume all of these duties.

10. Services Program

Provide a fortnightly Services Program update in accordance with contract Header Annexure Part B, Item 43, clause 12F.

In addition, workshops and deliverables must be represented on the program.

11. Transport of Materials

Convey soils, earth, sand, loose debris, and similar loose materials to or from the site in a manner that will prevent dropping of materials on streets. Cover all loads with taut heavy-duty purpose fitted tarpaulins to ensure no loss of load or dust. Ensure that the wheels, tracks and body surfaces of all vehicles and plant leaving the site are free of mud, and that mud is not carried on to adjacent paved streets or other areas. This may require a wash bay on site.

Be aware of legal obligations if moving restricted items from or within Fire Ant Restricted areas. This includes understanding the risks of spreading fire ants and developing strategies to address these risks. Refer <https://www.daf.qld.gov.au/plants/weeds-pest-animals-ants/invasive-ants/fire-ants>. Strategies to address risks must be included in a Fire Ant Risk Management Plan which must be approved by a Biosecurity Queensland inspector. Follow the Approved Risk Management Plan (ARMP) to prevent the spread of fire ants. A copy of the ARMP must be provided to the Client's Nominated Representative prior to commencement of any site works.

12. Project Budget

The budget will be based on Upper Limit Fee per phase. Refer Clause 3 of this document for further information. Manage resources to ensure this budget not exceeded.

Variations to the agreed Upper Limit Fee will be administered as per AS4122 and Annexure Part B requirements.

Other Documentation

Drawings, Standards and Specifications

Unless specifically amended in this document, the Consultant will undertake design and reference where applicable, the requirements of the current edition of the following Drawings, Standards and Specifications:

- SEQ Water Supply and Sewerage Design and Construction Code (<http://www.seqcode.com.au/standards/>)
- City of Gold Coast : City Plan (old LDG specs) (<http://cityplan.goldcoast.qld.gov.au/pages/plan/viewer.aspx?vid=10133>)
- Australian Standards / British Standards / American National Standards / Institute Standards.
- Current Manufacturer's Standards and Specifications.

Scope of Consultancy Services

Reference Documents

The following resources of the Client will be available after contract execution:

Coomababah STP

- Coombabah Stage 6 Upgrade Business Case (Client reference iSpot #65888683)
- Coombabah Stage 6 Upgrade, Preferred Options Review, Scenario Assessment by Tyr Group (Client reference iSpot #63333228)

Pimpama STP

- Stapylton Sewerage Catchment Servicing Strategy – Full Transfer to Pimpama STP & Pimpama STP Upgrade Business Case (Client reference iSpot #65678971)
- Pimpama Stage 2 Process Selection Upgrade Business Case (Client reference iSpot #TBA)
- Pimpama STP Master Plan, Strategic Planning and Capacity Review by Advisian (Client reference iSpot #65768535)

General

- Pimpama and Coombabah Scheduling Study by Advisian February 2018
- All existing STP drawings and specifications will be made available including Coombabah Stage 5 and Pimpama Stage 1 documents.
- Terrestrial and Aquatic Ecology Impact Assessment for Coombabah Stage 6 Upgrade of the Coombabah Waste Water Treatment Plant by GHD 2013 (Client reference iSpot#6815377)
- Coombabah Stage 6 Initial Geotechnical and Environmental Assessments 2018
- Water and Waste, Technical Specifications.
- Water and Waste, Briefing Notes.

14. Attachments

- SPA1 Coombabah Stage 6 Upgrade – Scope of Work Overview
- SPA2 Pimpama Stage 2 Upgrade – Scope of Work Overview
- SPA3 Draft Project Structure
- SPA4 Coombabah Stage 6 and Pimpama Stage 2 STP Upgrade Program
- SPA5 Coombabah Stage 6 STP Upgrade – Summary of Issues and Constraints
- SPA6 Preliminary Construction Contract Document Suite and Deliverables

Part C: Separable Portion B: Strategic Partnership for Professional Services

1. Scope

W&W utilise specialised professional Services to supplement its internal capability and capacity for capital and operational planning and delivery. These include but are not limited to:

- strategic including adaptive and integrated business planning
- service master planning
- service detailed planning
- business case preparation
- procurement documentation
- design and design review
- project management
- construction supervision
- contract management
- portfolio management
- financial planning
- tariff review/modelling
- ICT research and advisory services
- data analytics and interpretation of results
- planning applications
- strategic and tactical asset management including condition assessment
- infrastructure planning and modelling
- development assessment
- environmental assessments, audits and applications
- odour investigations, assessment and monitoring
- specialist engineering support functions including:
 - RPEQ certified civil, mechanical, electrical, structural and environmental services
 - geotechnical investigations
 - topographical survey
 - GIS services
 - Building information modelling
 - environmental investigations and assessments
 - underground services investigations
 - quantity surveying/estimating
 - corrosion investigations (ferrous and cementitious)
- asset condition assessments.

Scope of Consultancy Services

The following Table 5 presents an overview the range of Services potentially included but not limited to, in this portion of the Contract.

Table 5

Service	Potential requirements	Baseline	Target
Subject Matter Experts (SMEs)	<ul style="list-style-type: none"> - Strategic including adaptive and integrated business planning - Inflow and infiltration (including salinity) management - Water leakage and loss management - Odour modelling and control - Smart metering and intelligent networks - Sewage treatment process and modelling - GIS services - Legislative and Regulatory Advisor - Strategic Asset Management - Asset condition assessment and renewals planning - SAP maintenance management - Waste and resource management - Catchment management 	SME to peer review initiative proposals as required and attend the Client's Nerang office to participate in relevant improvement plan performance reviews.	Undertake formal mentoring, review and improvement of existing and proposed initiatives, based on benchmarking and measurable KPI's.
Principal's Engineer	Provide resources to assist W&W on nominated major projects to provide specialist technical and contract advice and design review role (RPEQ Certified)	Undertake role as part of W&W project team as appointed on major projects. Provide advice as required on other W&W projects.	Build internal design review and contract documentation capability on major and standard design contracts.
Portfolio and Strategic Procurement Management	Provide resources to assist W&W in management of capital planning and delivery portfolio	Undertake role in management (end to end) of capital planning and project delivery portfolio incorporating strategic procurement of planning, design and delivery capability, in consultation with the Client's City Procurement Office	Establish management (end to end) of capital planning and project delivery portfolio on a four year forward look basis (i.e. Business Case completed years 1-4; design and documentation completed years 1-3; delivery procured years 1-2)
Strategic and Tactical Asset Management	Provide resources and specialist consultants to assist W&W in the development and review of Asset Management Plan's for Water, Sewerage and Recycled Water Networks	Currently undertaken by internal resources. Any variable or specialist capability is anticipated to be provided through the partner organisation.	Undertake review and improvement of existing plans, based on measurable benchmarking to adopted frameworks. Optimisation of combined partnering resources based

Scope of Consultancy Services

	and Solid Waste assets Provide resources and specialist consultants to assist W&W in developing condition assessment and renewals programs.		on current and planned programs.
Infrastructure Planning and Modelling	Provide resources and specialist consultants to assist W&W in the investigation, network modelling and detailed planning and Business Case/ Project Brief preparation of a range of capital and operational projects.	Currently external contractors are utilised to supplement capacity in this function. Any variable or specialist capability is anticipated to be provided through the partner organisation.	Optimisation of combined partnering resources based on current and planned programs.
General Operational and Technical Support	Provide resources and specialist consultants to assist W&W in delivery of various capital and operational activities. Services required may include: Landfill/ Waste and Recycling Centre approvals and operations including <ul style="list-style-type: none"> • void space and compaction assessments Engineering support functions including: <ul style="list-style-type: none"> • civil • mechanical • electrical • structural • environmental • quantity surveying/ estimating • GIS • CAD /drafting • building information modelling • geotechnical investigations • topographical survey • environmental investigations • service locations • corrosion investigations (ferrous and cementitious) 	Currently undertaken by a combination of internal and external resources engaged through ad hoc procurement activities.	Optimisation of combined partnering resources based on variable workloads.
Project Management and Construction Supervision	Provide resources to assist W&W in Project Management or Construction Supervision/Inspection roles (Superintendents Representative or Inspector) in the specification and delivery of select capital projects.	Currently external contractors are utilised to supplement capacity in this function. Any variable or specialist capacity is anticipated to be provided through the partner organisation.	Optimisation of combined partnering resources based on current and planned works programs.

Scope of Consultancy Services

Development Assessment	Provide resources to assist W&W in the review, modelling, assessment and advice associated with a range of development applications.	Currently external contractors are utilised to supplement capacity in this function. This variable or specialist capability is anticipated to be provided through the partner organisation.	Optimisation of combined partnering resources based on variable development workloads.
Financial Planning	<ul style="list-style-type: none"> - Tariff review/modelling - Data analytics and interpretation of results - Portfolio management 	Currently undertaken by a combination of internal and external resources engaged through ad hoc procurement activities.	Optimisation of combined partnering resources based on variable workloads.
ICT Research and Advisory Services	Provide resources and specialist sub-consultants to assist W&W.	Currently undertaken by a combination of internal and external resources engaged through ad hoc procurement activities.	Optimisation of combined partnering resources based on variable workloads.
Change Management and Training	Provide resources and specialist sub-consultants to assist W&W.	Currently undertaken by a combination of internal and external resources engaged through ad hoc procurement activities.	Optimisation of combined partnering resources based on variable workloads.
Environmental Monitoring and Auditing	Provide resources and specialist sub-consultants to assist W&W.	Currently undertaken by a combination of internal and external resources engaged through ad hoc procurement activities.	Optimisation of combined partnering resources based on variable workloads.

In order to build upon existing capabilities and systems, the following Table 6 outlines the anticipated minimum and desirable service performance standards requirements from potential partners.

Table 6

Criteria	Minimum requirements	Desirable additional requirements
Quality Assurance	Current and ongoing certification to ISO9001 and ISO14001	Capability and knowledge of HACCP; ISO18001 and recently updated ISO9001 and ISO14001.
Business ICT Systems Knowledge	Experience in SAP Maintenance Management and Financials; ArcInfo ESRI GIS; InfoSWMM and InfoWATER hydraulic models AUSPLUME odour modelling; MS Project Online project management and BOWIN sewage process simulation modelling.	Infor Public Sector management; ClearSCADA management; TaKaDu water network management; Alternative odour and sewage process modelling platforms.
Asset Management	Capability and knowledge of NAMS asset management processes and performance benchmarking	Capability and knowledge of ISO55000

Indicative Scope of Works

Scope of Consultancy Services

As outlined in previous sections, the Scope of Services is diverse and targets the provision of professional Services assistance and support across basically all activities undertaken by W&W including capital delivery and operational areas.

Whilst the envisaged Scope of services cannot be defined with any real certainty at a project level too far in advance, an overview of the W&W future program of works is presented in the following sections to provide an indication of the potential range and Scope of Services involved.

The Client's budgeting processes require the adoption of detailed Annual and Four Year Service budgets. Ten Year Service Financial Forecasts are also maintained which, although not formally adopted and necessarily based on a range of assumptions, provide a guide to the Client's future service intent for the purpose of long term financial planning. The current adopted budget aligns to Year 1 of the Financial Forecasts.

These Financial Forecasts are reviewed annually (November/December) as part of the Budget preparation cycle to account for any changes in drivers (eg population projections, revised regulatory requirements, emerging issues, revised cost estimates, etc).

Given the timing for the establishment of this portion of the Contract, it is envisaged that commencement of the Services will be associated with Year 2 (2019/20) onwards activities. The Client is current undertaking works associated with the 2018/19 projects through current existing processes.

The following information and attachments is presented for information and planning only and does not represent any commitment to future work to be issued under the proposed Contract.

Capital Works Support

Details of the current Water and Sewerage and Waste Management 10 year capital program financial forecasts are included in Attachment SPB8 at both summary and project level. The project level information includes a preliminary analysis of the potential Services and includes differentiation between general engineering services and Principal's Engineer roles for major projects.

As indicated in Attachment SPB8 a significant proportion of the capital program construction is delivered under pre-qualified panels, design and construction contracts, by developers under Infrastructure Agreements or do not involve any significant design requirements and can be specified on an outcome/performance basis. As a result a majority of the capital program engineering services is anticipated to be associated with the role of Principal's Engineer for future major projects.

Operational Works Support

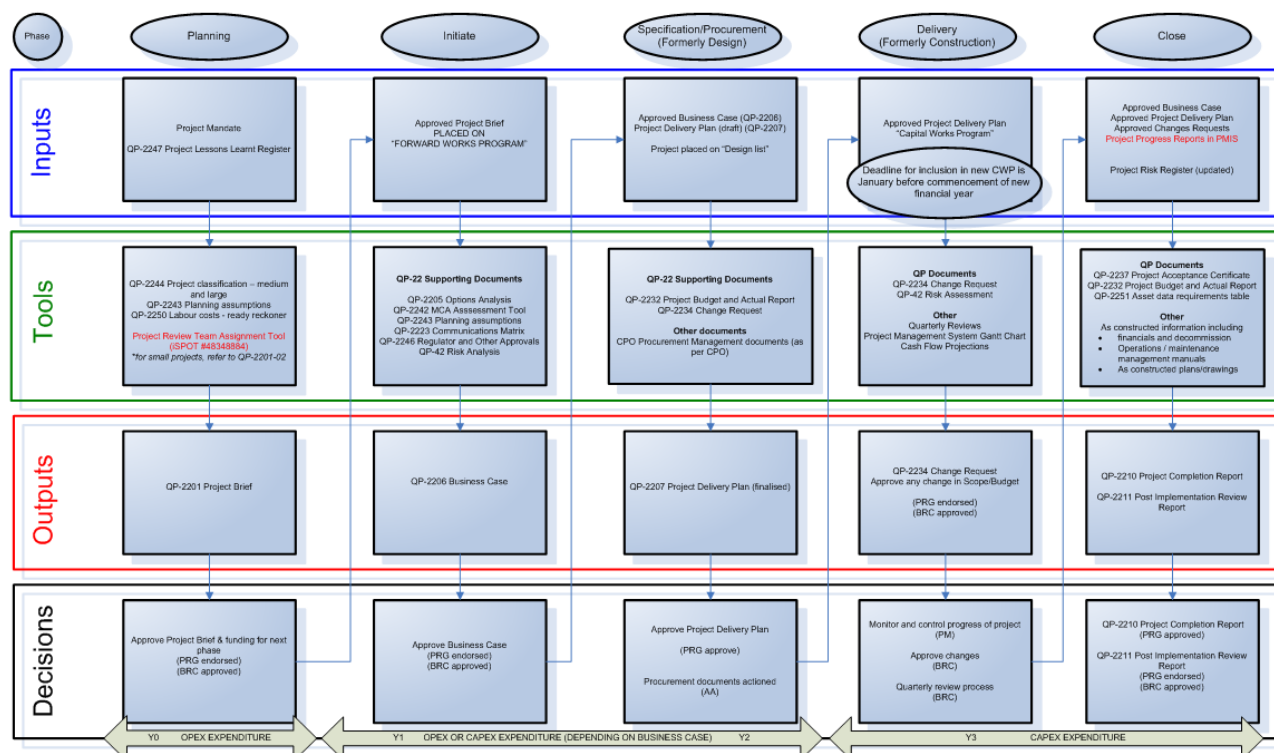
W&W also has an ongoing program of projects funded from operational budgets to support its business activities. Details of the current Water and Sewerage and Waste Management 10 year operational program financial forecasts are included in Attachment SPB9 at both summary and project level.

Projects with zero budget allocation are funded from the labour budget and may also require input from the Consultant.

Further ad hoc consulting work is also required from time to time to address a range of emergent operational issues as they arise. A significant proportion of these are associated with environmental management disciplines.

Project Management Methodology

For projects to be included in an Annual Budget or future Program, W&W has an internal governance process to ensure that only prudent and efficient projects proceed. The Consultant will need to work within this methodology for any Services performed. Details of W&W's project management methodology and the process utilised to progress both capital and operational projects through their lifecycle are summarised in Attachment SPB7.

Lifecycle for medium and large projects (capital and operational)**Figure 3****Principles of the Collaborative Partnership**

This Separable Portion seeks to establish a long-term relationship between the Client and Consultant based upon effective and efficient communication through a clearly defined operational governance model for Services allocation and measuring and maintaining value for money Service performance including continuous improvement mechanisms.

The following sections outline the Client's preferred partnering principles.

Relationship Principles

A successful relationship between the Client and the Consultant will be based on principles that reflect the strategic importance of this Contract to deliver on objectives including;

- Best value for money to the Client
- Fair return for the Consultant
- Mutual trust, respect and good faith
- A flexible outcome oriented mindset
- Excellent communication between both parties
- Well-defined roles and responsibilities.

Operational Principles

The following operating principles will underpin the relationship management and governance between the Client and the Consultant:

- The Client will manage the Consultant through performance outcomes and performance levels and not through managing the Consultant's processes
- Amendments, proposals, project statements of work and other changes under this Contract must follow an appropriate contractual change process
- The Consultant and Client will have defined escalation paths and access to appropriate management levels within each organisation

Scope of Consultancy Services

- Where applicable and agreed, the Consultant will work with third party suppliers/sub-consultants to deliver Services, maintain open and frequent communication and provide up-to-date listings of key Personnel and contacts.

The Client will work with the Consultant to:

- Dedicate sufficient time and resources to make the relationship a success
- Guide the Consultant's delivery of Services to ensure alignment to the Client's business strategy
- Determine the authority of the Client's staff to represent the Client to their Consultant counter parts
- Provide input in developing business-focused innovative solutions
- Monitor Consultant performance against agreed KPIs
- Manage the Contract and its terms including the support and approval of changes to the Contract
- Work proactively with the Consultant to resolve issues as required.

The Consultant will work with the Client to;

- Provide high quality and reliable Services to support the Client's business needs
- Maintain accountability for the overall delivery and quality of Services
- Build and maintain effective relationships with the Client to facilitate the delivery and support of Services
- Collaborate with the Client to agree and implement changes to the Contract as required
- Continuously recommend improvements to the functionality, conduct and delivery of the Services
- Participate in governance, operational, scheduled strategic and operational meetings as required
- Develop the business rationale and benefits of any proposed changes and communicate these to the Client as required
- Contribute to proactively resolving issues and where required, escalate within the Consultant's organisation to obtain a suitable and timely resolution
- Manage all Sub-Consultants/third parties providing Services by;
 - Ensuring the Client is adequately covered for all contractual elements, the continuation of all Service provision, insurances, risk and asset management
 - Ensuring the Client will not lose Service in the event of a sub-consultant failing in the provision of the service they provide to the Consultant
 - Ensuring adequate alternatives are available for the provision of Services in any event affecting a sub-consultant or the consultant directly.

Governance Structure

A two tier Executive Partnership Leadership Group and Partnership Management Team management structure is envisaged. Ideally, this will encompass both Separable Portions if a single Consultant is chosen for both parts. Under this circumstance, the Executive Partnership Leadership Group will oversee both Separable Portions A and B. Separate Partnership Management Teams (but with common key Personnel) may be required for each Separable Portion.

The roles and responsibilities of each group will be agreed as part of the establishment process however both the Client and the Consultant will need to commit to the provision of appropriately qualified and experienced Personnel to undertake governance and relationship management functions including:

- Provide leadership and champion and support partnership principles and objectives
- Monitor and review Service performance, agree and implement necessary corrective changes to deliver outcomes meeting /exceeding performance objectives
- Analyse service demand and supply/capacity trends and resource allocation for improved partnership performance
- Review and make recommendations on any proposed Contract improvement changes
- Resolve technical and Personnel issues that arise.

Contract Term

The Contract Term is five years with up to five years extension options dependent on Contract and Consultant performance, volume of work, and future contracting strategies.

Conditions of Contract

The Terms and Conditions will be based on the Client's amended Conditions of Contract AS4122 and will be negotiated during the partnership establishment tender phase.

Scope of Consultancy Services

Personnel

Key roles that are anticipated to form the key Personnel to fulfil the role of the Consultant are to be nominated in the relevant Non Price Submission Form.

Indicative rates for the nominated key roles are to be included in the Response Schedules Price Submission. Details of rate variability in accordance with utilisation are also required to assist with the evaluation and the Partnering Framework negotiation process.

Personnel for all roles must have substantial relevant experience in nominated area in the water and waste industry.

Given the long term nature of this partnership, the Client's expectation is that the key Personnel are made available to undertake their nominated roles as required. Should the Consultant wish to substitute alternative personnel throughout the course of the partnership, only substitutions of personnel with equal experience and capability will be acceptable to the Client.

As further Personnel are required as a result of specific input to a task or increased Scope the Personnel must be nominated through the provision of the following:

- Employer;
- The nature of Personnel's proposed involvement;
- CV; and
- Rates.

The Client on receipt will undertake a review of the Personnel including a review of the rates. Such Personnel must not commence chargeable Services until such time approval is granted by the CCR.

The nominated range of years' experience per role classification is defined below:

- | | |
|----------------|----------------------------|
| • Graduate | 0 to 5 years' experience. |
| • Intermediate | 5 to 10 years' experience. |
| • Senior | > 10 years' experience. |
| • Principal | > 20 years' experience. |
| • Executive | >20 years' experience. |

Personnel Conduct

The Consultant must;

- exercise the degree of skill and diligence reasonably expected of an experienced professional Consultant performing Services of a similar nature, in accordance with the ethics of the relevant profession
- hold all necessary current licenses, permits, authorisations, certificates and accreditations as required by law in order to provide the service
- undertake and attend all relevant inductions and training courses provided by the Client
- display the standards of experience and behaviour entirely suitable for the provision and/or performance of the Service and the requirements of this Contract
- perform duties in a professional manner
- exercise courtesy in all dealings with the public and customers while carrying out the Services
- at all times, comply with the current requirements of federal, state and local government legislation and regulations.

The Consultant must not:

- enter into any dispute with the customer at any time or in any way cause undue nuisance
- engage in any discussion with the general public in relation to the Client's assets or activities outside of the Services under the Contract, including media reported items concerning the Client
- respond to any media enquiries, if approached by the media take down any contact details and provide these to the Client immediately
- hand out business cards or promote any business while carrying out the Services under this Contract

The Client reserves the right to direct the Consultant to discontinue using an employee or Sub-Consultant engaged by the Consultant for executing the Services under the Contract, if an employee or Sub-Consultant is acting in a manner that is deemed by the Client to be;

- misconduct

Scope of Consultancy Services

- negligence
- incompetence
- abuse
- not following the required standard stated in the Contract, or
- non-compliant with any mandatory safety requirement.

The Consultant must replace any Personnel removed from providing Services without cost and/or time implication to the Contract.

Professional Services Operational Model

Subject to satisfactory performance and programming, work packages under this Portion will be issued by the Client to the Consultant for pricing. In general, individual or packaged Project Briefs will be issued and a Return Brief will be required from the Consultant outlining the tasks, quantities, deliverables, resources and time and expenses proposed, which once agreed by the Client will form an Upper Limit Fee for that work package. As part of the partnership establishment tender negotiation phase and, as the partnership matures, more efficient Services allocation processes will be pursued.

Return Brief's will be based upon the Schedule of Rates included in the Price Submission for various disciplines with adjustment to account for Personnel utilisation and other efficiency factors.

During implementation of the Services, any variations to the agreed Return Briefs and Upper Limit Fee will be managed via variation mechanisms to be agreed during the establishment phase. The variation processes are to be negotiated based upon the general mechanisms described in the amended AS4122 document.

The nominated rates for all Personnel must include:

- office accommodation when working in Consultant's office
- corporate overheads including secretarial, administration support, project controls, document control, printing
- communications such as mobile phones, tablets, laptops
- vehicles
- training
- software and hardware
- allowances for working outside standard working hours
- profit.

Expenses and disbursements may vary depending on resource allocation to individual assignments and will be negotiated as part of the Upper Limit Fee process.

Rate Adjustments

Personnel rates nominated in the Price Submission Schedule for Separable Portion B are expected to remain firm for a period of two years from submission closing date.

The mechanisms for future adjustment of rates will be addressed as part of the partnership establishment tender phase.

Specialist Consultants and Subcontractors

Specialist consultants and subcontractors may be engaged on approval by the Client. Rates for Specialist Consultants and Subcontractors not detailed in the Price Submission will be paid at cost plus the % mark-up nominated in the Price Submission.

The Consultant's costs involved in commissioning and managing specialist consultants and subcontractors will be included as part of the relevant negotiated Upper Limit Fee.

2. Performance Management and Incentivisation Framework

The Client will entertain incentivisation processes being included in a Governance Framework to drive exceptional service performance and continuous improvement. Individual packages of works will likely have differing risks, work types and project objectives and, as such performance measures and KPIs for each package is not considered to be a practical approach to incentivisation and alternative mechanisms based upon cumulative outcomes will need to be developed a part of the partnership establishment phase.

Once agreed, the Consultant's performance will be assessed against the performance objectives and KPI's and will form the basis for considering incentive payments, future works packages and Contract extensions available under the Contract.

3. Other Partnership Framework Issues

The partnership issues already outlined in the preceding sections do not cover the full scope of issues needing to be addressed in the negotiation of a long term partnering arrangement. Other issues include, but not limited to, the following:

- Value for money
- Partnership start up and transition plans including change management
- Innovation and continuous improvement
- Quality assurance
- Information and reporting
- Framework change processes
- Stakeholder management
- Accountability, risk sharing, liabilities and indemnities
- Insurances
- Communications and notices
- Copyright, moral rights and intellectual property
- Assignment and change of control
- Resolution of issues and disputes
- Termination

The Client is seeking details of the Consultant's preferred approach and proposals to key issues in the above list in the Methodology Non Price Response Form.

4. Reference Documentation / Attachments

The following documents and attachments are referenced to provide information relevant to the Services:

- SPB1 W&W Organisational Structure
- SPB2 W&W Fast Fact Sheet
- SPB3 Solid Waste Strategy 2024
(http://www.goldcoast.qld.gov.au/documents/bf/solid_waste_strategy2014-2024.pdf)
- SPB4 Draft Water Strategy
- SPB5 City of Gold Coast : City Plan (old LDG specs)
(<http://cityplan.goldcoast.qld.gov.au/pages/plan/viewer.aspx?vid=10133>)
- SPB6 SEQ Water Supply and Sewerage Design and Construction Code
(<http://www.seqcode.com.au/standards/>)
- SPB7 Water and Waste, QP22-01-01 Project Delivery Methodology Lifecycle for Medium and Large Projects
- SPB8 Extract of Water and Waste 10 year capital works program financial forecast (available on request from the Client)
- SPB9 Extract of Water and Waste 10 year operational works program financial forecast (available on request from the Client)

Part D: General Requirements of Separable Portion A and B

Scope of Consultancy Services

1. Quality

Maintain a certified Quality Assurance System (QAS) for the duration of, and in accordance with, the Contract to ensure that prescribed quality outcomes are achieved throughout the Contract period. The QAS must be in accordance with AS/NZS ISO 9001.

The Client has sufficient resources to review deliverables, provided they are practical, well thought out, accurate and free of common mistakes. It is a Client expectation that prior to issuing deliverables to the Client for review, the Consultant will internally check all documents to ensure they are accurate and complete.

In particular, draft and final documents are to be checked by the Consultant's Principal or Senior Engineer and also the Consultant's Project Manager prior to submission to the Client for review.

2. Work Health and Safety

General

Undertake all activities in accordance with the Work Health and Safety Act 2011 (Qld) and Work Health and Safety Regulation 2011 (Qld) (collectively known as 'the Act'). Have a documented WHS management system in place.

Management of Field Investigations

The Consultant and nominated sub-contractors will be PCBU for field and site investigation Services and will control and manage the Services in accordance with the Act. This contract requires the Consultant to provide a Safety Management Plan and SWMS for any high risk activity as per the requirements of the Act.

Inductions

Prior to attending a Client's site, all Personnel must complete inductions as appropriate for the specific work site. Any worker arriving on a W&W site must have completed the relevant site safety inductions and have the correct personal protective equipment.

The Online Induction System is self-managed and the majority can be undertaken online at the below website:

<https://www.onlineinduction.com/goldcoast/>

The following specific inductions are required and available online:

- General Induction to Water and Waste
- Induction to Sewage Treatment Plants
- Sewage and Recycled Water Spill Training
- Induction to Reservoirs, Pumps Stations and Other Sites

Inductions for Landfills and Waste and Recycling Centres are currently only available under a face-to-face process.

Known Hazards

In accordance with the Act, the known hazards for this project identified by the Client are listed below. This assessment is not exhaustive and may exclude risks that are typical of work practices. Perform a risk assessment and subsequent safe work method statement of the hazards at the Site prior to performing the Services.

- Animals including insects, snakes and spiders that bite or sting.
- Extremes of heat, or cold (extreme in temperature caused by operating machinery or artificial environments such as cold rooms).
- UV radiation exposure longer than 15 minutes.
- Biological hazards (substances which consist of, or which may contain micro-organisms or non-viable products of living matter, which can create a risk to health eg. virus, bacteria. Examples – HIV, Hepatitis (A, B and C), Avian Influenza (Bird Flu), tetanus, typhoid fever, Q fever, Hendra Virus, dermatitis etc).

Scope of Consultancy Services

- Confined spaces (work that will be carried out in or near a confined space).
- Demolition work.
- Fall from heights (by a person from one level to another that is reasonably likely to cause injury to the person or any other person).
- Falling, flying objects or debris (eg. demolition work).
- Hazardous atmospheres (eg. sites and confined spaces where gases, vapours or mist may be hazardous).
- Presence of hazardous airborne contaminants (eg. gases and vapours or dusts like lead, silica or pesticides).
- Use, handling and storage of hazardous chemical / dangerous goods.
- Inadequate lighting (including work completed at night as well as inadequate task lighting, inadequate access and stair lighting and inadequate emergency lighting).
- Excessive noise for long periods.
- Operation of high risk plant and equipment (eg. air conditioner).
- Pressure equipment operation (including pressurised hot-water boilers, air compressors, and equipment associated with surface preparation or abrasive blasting).
- Prolonged or excessive use of display screen equipment (extended periods viewing computer monitors etc).
- Restricted walkways and working platforms (temporary structure specifically erected to support access or working platforms).
- Rigging work (eg. structural steel erection, hoists, pre-cast concrete members of a structure and safety nets and static lines, mast climbing work platforms, perimeter safety screens and shutters).
- Scaffolding work including modular or pre-fabricated scaffolds, barrow ramps and sloping platforms.
- Slips, trips and falls (eg. unstable, wet, slippery surfaces, excavation, exposed reo bars and posts / pegs).
- The presence of asbestos.
- Under ground or overhead utilities (gas, water, electricity etc).
- Use of explosives or explosive tools (eg. explosive charged power tools used to fasten construction materials to brick, steel or concrete).
- Violence and aggression (verbal / physical abuse).
- Work completed outside of normal operational hours (work extending or scheduled outside core business hours that may lead to fatigue).
- Working in excavation or trenching.
- Work involving structural alterations or repairs that require temporary support to prevent collapse.
- Work on or near chemical, fuel or refrigerant lines.
- Working near water or liquid that poses a risk of drowning.
- Working on or adjacent to moving traffic.

Safe work

For Services under this Contract the Consultant must perform a risk assessment and provide the Client's Nominated Representative, as and when requested, SWMS and/or Safe Work Procedures showing how all potential hazards will be mitigated for the safe completion of the Services. The known hazards identified by the Client above may not be complete, so where the Consultant identifies any additional hazards these must be included. Comply with all applicable obligations and restrictions imposed by the Act to deal with any additional hazards.

Sun protection requirements

The Consultant is to maintain at all times the minimum WHS standard for UV exposure including suitable controls for any worker that is exposed to UV for greater than 15 minutes. PPE standards such as broad brimmed hats, long sleeves and trousers must be worn unless the Site specific risk assessment exempts this requirement. Copies of such must be supplied to the Client's Nominated Representative for acceptance.

3. Environmental Protection

Services must be performed in accordance with Federal, State and Local environmental legislative requirements.

Maintain a certified EMS for the duration of the Contract to ensure that prescribed environmental outcomes are achieved throughout the period. The EMS must be in accordance with AS/NZS ISO 14001.

It is highly likely ASS will be encountered during geotechnical site investigations. Disturbed soil must be treated as per state legislation and in accordance with the following state guidelines:

- <https://publications.qld.gov.au/storage/f/2014-09-01T07%3A37%3A45.276Z/queensland-ass-management-guideline-2014.pdf>

4. Local Office

The Client will provide the Consultant with limited desk space at their Nerang office for key senior management staff to facilitate continuous collaboration and maximise productivity. However, given current constraints at the Nerang office, the Consultant will also be required to make available desk space at a local office within the Gold Coast Region that is within 15km's of the Client's Nerang office to accommodate their own Personnel and up to five of the Client's staff.

The local office/desk availability for the Client's staff must be established and ready for use within three months of the commencement of Separable Portion A and six months within the commencement of Separable Portion B.

5. Travel and Accommodation

The following provisions are intended to apply in detail for the Separable Portion A works and provide guidance for the commercial framework for the Separable Portion B works.

Personnel located in the City

- No travel time, accommodation, travel expenses or vehicle costs will be accepted.

Personnel located in the greater Brisbane region

- A maximum of two hours per day travel time will be accepted. Travel time or expenses will be charged at half of the rate nominated in the Price Submission.
- No accommodation, travel expenses or vehicle costs will be accepted.

Construction Supervisors working on site during construction

- No travel time, accommodation, travel expenses or vehicle costs will be accepted.

Personnel located outside South East Queensland

The Client will reimburse expenses to attend Contract activities within the Gold Coast local government boundary on based on actual costs (with limits applying) and supply of a copy of validating receipts for the following items:

- Pre-approved airfares up to reasonable limits which are typically defined as economy flights available on the day. The Client appreciates that typical flight costs fall with the more notice it provides.
- Accommodation equivalent to 4 star accommodation on the Gold Coast, at commercially available room rates, estimated in 2018 at \$150-\$200 per day and subject to review with escalation.
- Transfers to and from Brisbane or Gold Coast airport.
- Taxi or car hire within the city.

Advise the Client of these expenses prior to the cost being incurred as per the General Conditions, Clause 10 and in accordance with the Reimbursement of Approved Expenses provisions of the General Conditions, Annexure Part B, Clause 10B.

6. Security

Ensure confidentiality of personal information and ensure security of confidential information.

The Consultant will be required to declare any conflicts of interest prior to engagement for Services.

7. Contact Officer

The Client Representative and Consultant Representative are nominated in Contract Header, Annexure Part A, Items 6 and 7.

For more information

P 1300 GOLDCOAST (1300 465 326)

W cityofgoldcoast.com.au

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GOLDCOAST.