Principal’s Project Requirements
AS4300

LG314/1211/18/012

Design and Construction of an Odour Control Facility and Asbestos Pipe Replacement at Sewerage Pump Station B47 Burleigh Heads
# Table of Contents

## General

1. Interpretation ........................................................................................................................................... 5
2. Definitions ............................................................................................................................................... 5
3. Plant, equipment and materials ............................................................................................................. 7
4. Relations with others ............................................................................................................................. 8
5. Continued operation of existing facilities .......................................................................................... 8
6. Notification of proposed works or disruption to service ................................................................. 8
7. Supervision ............................................................................................................................................ 9
8. Inspection ............................................................................................................................................. 9
9. Daywork records .................................................................................................................................. 9
10. Status program ................................................................................................................................... 9
11. Dimensions and levels ......................................................................................................................... 10
12. Traffic control ..................................................................................................................................... 10
13. Road closure approval ....................................................................................................................... 10
14. Access to private property ............................................................................................................... 11
15. Access to site ..................................................................................................................................... 11
16. Impact on properties from Works ..................................................................................................... 11
17. Encroachments ................................................................................................................................. 11
18. Contractor’s site area .......................................................................................................................... 11
19. Environmental control ..................................................................................................................... 12
20. Construction and environmental management ............................................................................... 12
21. Storage on site ................................................................................................................................... 13
22. Asbestos ............................................................................................................................................ 13
23. Disposal of refuse .............................................................................................................................. 13
24. Disposal of spoil ............................................................................................................................... 13
25. Transport of materials ....................................................................................................................... 13
26. Existing services and public utilities .............................................................................................. 14
27. Temporary Works ............................................................................................................................. 14
28. Stormwater drainage ........................................................................................................................ 14
29. Joining up .......................................................................................................................................... 15
30. Temporary fence ............................................................................................................................... 15
31. Temporary services ........................................................................................................................ 15
32. Communications ............................................................................................................................... 15
33. Trades and Best Practice ................................................................................................................ 15
34. Standards .......................................................................................................................................... 16
35. Worker’s compensation insurance ................................................................................................. 16
36. Site meetings ....................................................................................................................................... 16
37. Quality Assurance ............................................................................................................................ 16
38. Commissioning equipment .............................................................................................................. 16
39. Manufacturer’s recommendations .................................................................................................. 16
40. Samples ............................................................................................................................................ 16
41. Sealed containers ............................................................................................................................ 16
Part C: Technical Specifications .............................................. 62
1. Odour Control Unit Technical Specification ........................ 62
2. GCWW Mechanical and Electrical Specification September 2017 V1.04 .... 62
4. City of Gold Coast Standard Drawings DRG 02-602 ................. 62

Part D: Attachments ................................................................. 63
1. Site Locality Plan ................................................................. 63
2. SPSB47 Key Features ......................................................... 63
<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Functional Scope of Work</td>
<td>63</td>
</tr>
<tr>
<td>4</td>
<td>Site services layout</td>
<td>63</td>
</tr>
<tr>
<td>5</td>
<td>SPSB47 OCF Airflow Analysis</td>
<td>63</td>
</tr>
<tr>
<td>6</td>
<td>SPSB47 Hydrogen Sulfide Monitoring and Species Sampling</td>
<td>63</td>
</tr>
<tr>
<td>7</td>
<td>Odour Impact Assessment- Airlabs Environmental 2017</td>
<td>63</td>
</tr>
<tr>
<td>8</td>
<td>As Constructed Drawings</td>
<td>63</td>
</tr>
<tr>
<td>9</td>
<td>GCWW SPS A03 wet well AC pipe removal photos</td>
<td>63</td>
</tr>
<tr>
<td>10</td>
<td>Gold Coast 2018 Commonwealth Games impact zone</td>
<td>63</td>
</tr>
<tr>
<td>11</td>
<td>GCWW Key Entry Form</td>
<td>63</td>
</tr>
<tr>
<td>12</td>
<td>Safety Management Plan (SMP) – Minimum requirements</td>
<td>63</td>
</tr>
<tr>
<td>13</td>
<td>Quality Management Plan (QMP) – Minimum requirements</td>
<td>63</td>
</tr>
<tr>
<td>14</td>
<td>Acid Sulfate Soils Mapping</td>
<td>63</td>
</tr>
<tr>
<td>15</td>
<td>Permits and Approvals</td>
<td>63</td>
</tr>
</tbody>
</table>
General

1. Interpretation

Except where the context otherwise requires, the following are applicable:

- ‘approved’, ‘directed’, ‘required’, ‘rejected’ and similar expressions means approved, directed, required, rejected and the like by the Superintendent.
- ‘environmental laws’ means in respect of the land and buildings the subject of Contract and the use to be conducted by the Contractor in accordance with the Contract, any Legislative Requirements, orders, notices and authorisations 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; and
  - The remediation of land.
- ‘give notice’, ‘submit’, ‘furnish’ and similar expressions means give notice, submit, furnish and the like to the Principal or the Superintendent (as the case may be).
- ‘responsible authority’ means a local government or any government (state or federal) department or other agency charged with the responsibility of administering or enforcing a Legislative Requirement; and
- ‘Works Inspector’, ‘Principal’s Inspector’ and ‘Job Inspector’ means a duly authorised person required to enter onto the Site to inspect and/or measure some aspect associated with or effected by the Works on behalf of a government or statutory authority or organisation approved by the Superintendent.

The purpose of this document is to establish the performance requirements and associated technical criteria to be achieved by the Contractor in the delivery of the project.

The requirements and criteria in this document are minimum criteria and requirements, including technical, management, operational and performance requirements for the Works, which the Contractor must satisfy to fulfil its obligations under the Contract. Unless and to the extent that this document expressly nominates the Principal to carry out any work, the requirements and criteria set out in this document must be fulfilled by the Contractor as part of the work under the Contract.

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

If more than one criterion applies in respect of any part of the work under the Contract then all criteria must be satisfied. If there are criteria which are mutually exclusive, then the criterion which delivers the greatest level of service, or is the highest standard, must apply, unless otherwise agreed by the Principal.

Reference to any work includes any additional activities necessary for the satisfactory completion and performance of that work and full compliance with these criteria.

2. Definitions

In this document, except where the context otherwise requires:

AC: Asbestos Cement

ADAC: Asset Design As-constructed.
AHD: Australian Height Datum.
AV: Air valve
BAC: Blood Alcohol Concentration.
CBD: Central Business District.
CCR: the Principal’s Contract Representative, being the person nominated by the Principal to exercise the functions of the Principal relating to the Contract, or other person nominated from time to time by the Principal.
CEMP: Construction and Environmental Management Plan
CMP: Construction management plan
DEHP: Department of Environment and Heritage Protection.
DICL: Ductile Iron Cement Lined
DLP: Defects Liability Period
draft: the stage where a task has been completed and the results submitted for approval (not for checking or verification) by the Principal or the Superintendent (as the case may be), and where the originator is satisfied that it is a fair representation of the intended outcome
equipment: any tools, items of plant, apparatus or machinery used to carry out and complete the scope of work
experienced: trained, competent, and having a minimum of 1000 hours of on-the-job current industry experience
FAT: Factory acceptance testing
GAC: Granulated activated carbon
GCRT: Gold Coast Rapid Transit.
H2S: Hydrogen sulfide
HDPE: High-density polyethylene
Hold Point: the stage that the Works has reached, such that it requires a review, comments, action or instruction from the Principal or the Superintendent (as the case may be) prior to work continuing.
maintenance: is the repair, replacement and upkeep of existing assets. Maintenance work keeps an asset functioning in its current operational state and does not enhance or change the initial design or function of the asset without extending its useful life.
materials: any consumables used to carry out and complete the scope of work.
MH: Maintenance hole
NATA: National Association of Testing Authorities.
OCF: Odour Control Facility
O&M: Operation and Maintenance
P&ID: Piping and instrumentation diagrams
PE: Polyethylene
PLC: Programmable logic controller
3. **Plant, equipment and materials**

Ensure that all items of plant, equipment, materials, machinery, vehicles and tools used in the performance of the services or additional services comply with all Legislative Requirements, relevant Australian Standards and the manufacturer’s specification.

The Superintendent may prohibit the use of any item that, in the Superintendent’s opinion, may cause danger, nuisance and environmental harm or does not produce satisfactory results. This will not relieve the Contractor from the responsibility to carry out and complete the work under the Contract in accordance with the Contract (including this document).

Do not use items in a manner that causes debris or substances to be projected in a dangerous manner, where it may cause property damage or personal injury.

Allow the Superintendent to inspect any maintenance record of any item. When an inspection is required, the Superintendent will notify the Contractor in writing. Within one Business Day of receiving such notice, make the requested records available for inspection by the Superintendent at the Site or the Contractor’s business premises.

Ensure PPE is supplied to those persons actually performing the Works, as required by any Work Health and Safety Law.

Provide copies of materials safety data sheets to the Superintendent.
Part A: General

Ensure that only individuals with the appropriate licences necessary to operate an item of Contractor’s plant and equipment, operate that item in accordance with any Legislative Requirements and any relevant Australian Standards.

Any item (whether owned, hired, leased or supplied by the Contractor) which is used in the performance of the Works will be considered to be the Contractor’s equipment for the purposes of the Contract.

All Digital City projects must comply with the Digital City Data Policy standards and procedures.

4. Relations with others

The Contractor must work on the Site while other contractors/workers (whether engaged by the Principal or others) are present on the Site, but not directly involved with the Works. In addition, the Contractor must work while members of the public are in the same general location.

Ensure that the other contractors’/workers’ works are not affected in any way by the Works being performed by the Contractor.

5. Continued operation of existing facilities

Whilst every attempt will be made to roster ongoing operations and functions such that they will be independent of the Works, some unavoidable overlap or interference may result. Report these to the Superintendent, and work around these situations until the potential for conflict has been resolved. Ensure that minimal disruption to existing services and to the operation of the Site occurs. Liaise with the Superintendent to be proactive in avoiding disruption, and reactive in attending to conflict situations.

6. Notification of proposed works or disruption to service

Liaise with the Superintendent in relation to public relations prior to commencement of the Works and prior to commencement of any specific activities likely to involve a disruption of service to the Principal’s customers or the general public.

All residents and businesses in the vicinity of the Works who will be, or have the potential to be, affected by the Works, including being affected by the noise of the Works, must be notified by a ‘Notification of Proposed Works Notice’.

Pursuant to Part B: Project Specific, where the Superintendent permits works to be undertaken involving a disruption to the provision of a service to the Principal’s customers or the general public, all residents and businesses who will be affected by the Works must be notified by a ‘Shutdown Notice’.

Through the Superintendent, the form and content of the proposed notice must be approved by the Principal. Details of the works and format of the proposed notice must be forwarded in writing to the Superintendent no less than 14 Business Days in advance of the intended date for commencement of the relevant Works. The draft notice must as a minimum include details of the following:

- description of work to be done
- expected date(s) and times for the work to be undertaken
- details of service expected to be disrupted, and duration of disruption
- access requirements to site if interfacing with public or private areas; and
- Contractor’s contact name and telephone number.

The proposed notice must be finalised no less than 10 Business Days prior to the commencement of the relevant work, together with agreement on the distribution area, number of copies and proposed distribution date, prior to delivery of the notice.

The Superintendent will arrange for the production of letters on the Principal’s letterhead and will advise when the copies of the notice are available for pick-up, at least three days prior to the proposed notice distribution date.

Notices are required to be distributed not less than 48 hours prior to the proposed commencement of the works referred to within the notice.
Within 24 hours of the completion of the distribution of the notices submit to the Superintendent, a statement confirming:

- the date and time of completion of the distribution of the notice
- the date or dates upon which the notices were distributed
- the number of notices issued and distribution area; and
- any issues arising during the process of the distribution of notices and processes proposed to improve distribution of any future notices.

Do not change any of the details within the notice without the prior agreement of the Superintendent. Should the proposed works be rescheduled for any reason and the rescheduled date of works be agreed by the Superintendent, a new notice will be required and the process and associated timelines as described above will recommence.

7. Supervision

Provide a full time competent and experienced technical site representative (Supervisor) and project manager, for the duration of the Contract. Full details, including name and telephone numbers, of the proposed site representative and project manager must be supplied in writing to the Superintendent prior to commencement of the Works.

The above requirements do not prejudice or otherwise affect the Contractor's obligations under Clause 25 of the General Conditions of Contract.

8. Inspection

Further to Clause 31 of the General Conditions of Contract, no claim for delay will arise from the giving of insufficient or unreasonably short notice in respect of inspections. The minimum notice considered to be reasonable by the Superintendent to undertake an inspection is two Business Days.

9. Daywork records

Further to Clause 41 of the General Conditions of Contract, records of daywork must be kept that include the following:

- date of work and location
- plant used - description, fleet or registration number, ownership, hours worked (also on ‘stand by’, under maintenance, in transit, or in any other mode)
- labour used - names and classification of personnel, and hours worked
- materials used - type, size manufacturer/supplier, quantity, intended use, and any other relevant details; and
- general - notes concerning weather, operating conditions, constraints, progress and any other relevant details.

10. Status program

Status Contractor’s Programs must be submitted in accordance with Clause 33.2(m) of the General Conditions of Contract.

Status Programs are to contain the following information:

- reporting period
- major activities achieved during the report period
- actual progress versus scheduled progress
- health, safety and environmental issues/incidents
- non-conformances addressed
- complaints
- arising issues and/or outstanding actions, including requests for information from:
Develop a Status Contractor’s Program template to include each section above for the Status Contractor’s Program which is required to be completed and is not to be left blank. Status Contractor’s Programs are to be issued by email, or otherwise as agreed to by the Superintendent.

Status Contractor’s Program meetings involving the Superintendent, the Contractor and appropriate subcontractors are required to occur monthly, or as required by the Superintendent. The updated Status Contractor’s Program is required to be submitted at least two Business Days prior to the progress meeting. Minute the progress meeting and forward to the Superintendent for confirmation. The agenda framework for the project meeting may be subject to change and be along the lines of:

- actual progress versus scheduled progress
- scope changes/variations
- non-conformances
- construction related issues
- complaints/incidents (safety, environmental, and/or otherwise); and
- other business.

At the first progress meeting submit the names and telephone numbers of all responsible persons who may be contacted after hours during the course of the Contract.

### 11. Dimensions and levels

Do not rely on dimensions and levels undertaken by the Principal. Obtain or check all measurements before commencing the Works. Verify details of existing work before altering or adding to it. Report any discrepancies to the Superintendent. If individual (spot) levels are shown on any drawings, these take precedence over contour lines and ground profile lines.

### 12. Traffic control

Provide for continuous operation of normal traffic along all public and private roads, walkways and pedestrian and vehicular access to properties or intersected by roads or drains included in the Contract. Be entirely responsible for the control and safety of all pedestrian and vehicular traffic at or near the worksite.

All signs, barriers, lights and other devices used must, as a minimum, conform to the requirements of the current MUTCD. Engage licensed traffic controllers to manage and provide temporary traffic sign posting to ensure the safety of the Works, pedestrians and traffic.

Obtain and comply with the requirements of all Legislative Requirements necessary for traffic control.

For works located within any of the Principal’s sites or property, arrange and ensure safe and controlled use of any plant access roads where necessary for the Works within the relevant sites or property.

### 13. Road closure approval

Where the Works will impact on traffic flow, such as requiring a partial or full road closure, prepare a TMP with the proposed dates and times of operation.

Submit the TMP to the Superintendent. The TMP must include:

- the Contractor’s name, telephone number and address
- type of closure (e.g. temporary or permanent to specific type of traffic)
- address and details of the area affected (e.g. street name, suburb, cross streets etc.)
- date and start and finish times of closure
- details of closure (e.g. closure of a lane, half road, full road, footpath, parking or a combination of these); and
Part A: General

- description of work being undertaken (e.g. indicate part of the road to be closed, provision for pedestrians, affected bus stops/zones, affected schools/CBD areas/traffic signals).

Such acceptance will be in respect of the TMP (the impact of any closures on traffic conditions, and proposed provisions to lessen the effects for all road users); not the TCP or Traffic Guidance Scheme. Allow up to 10 Business Days for acceptance of the TMP.

Do not commence the Works which may impact the traffic flow until the acceptance of the TMP has been issued by the Superintendent. Keep a copy of this acceptance along with the TMP on the Site.

Any proposed closure of a roadway, either in total or any part thereof, is subject to lodging all appropriate road closure applications forms with the relevant department, and arranging the preparation and lodgement of any supplementary information requested by each department to support the proposed road closure. All fees associated with the administration of road closure applications must be paid by the Contractor.

14. Access to private property

Further to Clause 27.5A of the General Conditions of Contract, some of the works under the Contract may require access to private property. Do not enter the private property unless:

- the Superintendent has been given four Business Days’ notice of the requirement to access the private property
- the person proposing to enter onto private property has been appointed by the Principal as an authorised person in accordance with the Local Government Act 2009 (Qld); and
- entry is necessary in order to undertake work on that property.

Make every effort to minimise obstruction to private property. Vehicular access may only be denied for a maximum of 12 hours. Provide temporary access if permanent access cannot be provided within this time.

Maintain safe and reasonable personal access to properties at all times.

15. Access to site

If access to the Site is required outside normal business hours, provide reasonable notification to the Superintendent.

The Contractor may be required to undertake Site specific inductions prior to being granted access to the Site if set out in Part B: Project Specific.

The inductions assist in informing potential hazards that may be encountered when undertaking the Works and outline specific safety requirements when on the Site.

16. Impact on properties from Works

Ensure minimal disruption and protect private or public property from potential damage during the Works.

Where relevant, arrange a joint inspection with the Superintendent of the adjoining/potentially affected properties. Arrange this for prior to commencement of the Works.

17. Encroachments

Do not demolish or damage adjoining property shown on any drawings as encroachments on to the Site.

Should the Works reveal encroachments of adjoining property on the Site or encroachments of existing Site structures on adjoining property, and should such encroachments not be referred to in the Contract, obtain instructions from the Superintendent immediately when such encroachments are revealed.

18. Contractor’s site area

Access onto and around the Site, and the use of the Site, for Temporary Works and Construction Plant, including working and storage areas, locations of offices, workshops, sheds, roads, parking and the like, must
be restricted to those areas shown on any drawings or approved by the Superintendent and subject to such conditions as are stated in the Contract or may be imposed by the Superintendent.

19. Environmental control

Comply with all environmental laws and protection provisions.

Do not form new tracks, alter existing tracks, erect camps, remove trees or shrubs, cut fences, water, sewerage or power lines or any other such things without the written approval of the Superintendent.

Restrict dust caused by the Works to a minimum. Take all practical steps to minimise noise resulting from the Works.

Dispose of litter and debris at an appropriately licensed waste disposal facility.

20. Construction and environmental management

The Principal requires the Works to meet the aims and objectives of the AS/NZS ISO 14001 standards in minimising the impact of the Works on the environment.


The Construction and Environmental Management Plan must comply with all environmental protection agency requirements for the Site.

Do not lop the branches of any trees or shrubs, either located on a public road, public area or privately owned land except with the approval of the Superintendent, and then only in accordance with such conditions as stipulated by the relevant approval or the Superintendent.

Any unauthorised damage to foliage outside the Site will be subject to full restoration by the Contractor and at the Contractor's cost, and be subject to the associated penalties of the relevant Local Government Authority and DEHP requirements.

All equipment and machinery (including generators, pumps and compressors) used outside normal working hours must be driven by electric power. If this requirement is considered not reasonable for a particular instance, apply to the Superintendent for permission to use other means of power. The Superintendent will grant such permission only if satisfied that it is not reasonable to insist on electric power and that all reasonable steps to minimise noise is taken.

No vehicles will be driven or parked on grassed areas, resident's lawns or driveways, unless it is within a construction area identified and approved by the Superintendent.

Where specified develop, implement, monitor and carry out corrective actions of a Construction and Environmental Management Plan (CEMP). A CEMP means a plan in accordance with the aims and objectives of ISO 14001 in minimising the impact of the works on the environment such that the Plan complies with all relevant legislation and successfully address at least the following aspects of the Works:

- Plan and maintain a program for the works for the Superintendent.
- Manage the Requirements of Principal Contractor where appointed as such otherwise manage and supervise safety requirements of the Workplace as an Independent Contractor in possession of the site.
- Maintain access and minimise disruption to residents and owners.
- Locate and avoid PUP conflict with Works and obtain owners permission and conditions for interference with PUP.
- Backfill trenches each day and remove spoil from site.
- Control soil erosion and prevent sediment in run off.
- Manage Acid Sulphate Soil as necessary and as advised (including a minimum requirement meeting the Principal’s policy).
- Identify and manage any asbestos product involved in the works by contacting the Superintendent and implementing a plan in compliance with applicable legislation.
- Contain and treat any contamination of run off.
• Minimise disruption to flora and avoid spread of any noxious weeds and disruption to fauna habitat.
• Restore habitat following works.
• Identify fauna species and arrange relocation.
• Manage collect and dispose of legally, all waste from the works.
• Manage air quality emissions from all equipment within legal limits.
• Manage noise level emissions from all equipment and works within legal limits and times.
• Manage materials handling and store dangerous goods off site and handle safely on site.
• Manage social impact by consulting with and informing affected residents / owners of works.
• Consult with traditional landowners and preserve cultural heritage sites and items if applicable.
• Undertake site induction training for safety and environmental aspects of the works.
• Manage full compliance with construction requirements.
• Maintain an incident register for non-compliance reporting and provide a copy to the Superintendent following any significant incidents during the Works.

The plan must be managed on site by an experienced and competent Project Manager to the satisfaction of the Superintendent. The Management of the Works must demonstrate ongoing compliance with requirements of the Contract. Failure to do so requires prompt revision of the plan and / or replacement of staff responsible for the non-compliance to rectify the situation.

21. Storage on site

Do not use roads, driveways, paths, hardstandings and the like forming part of the Works for access or storage unless prior written acceptance has been given by the Superintendent. Such acceptance will not be withheld unreasonably.

Store materials and equipment on the Site so as to prevent deterioration of materials and equipment, prevent damage to the Site and to minimise hazards to persons, materials and equipment. Keep storage areas neat and tidy.

22. Asbestos

Unless otherwise stated, if asbestos in any form is found on the Site, stop operations affected by the discovery immediately. Seek direction from the Superintendent, and await instructions.

23. Disposal of refuse

Further to Clause 38 of the General Conditions of Contract, remove from the Site refuse (including food scraps and the like) resulting from the Works. Handle refuse in a manner so as to confine the material completely and prevent any emission or spillage.

Store all food scraps and the like in suitable containers with a close fitting lid. The container is to be vermin proof and resistant to disturbance by dogs, cats and birds.

24. Disposal of spoil

Unless otherwise specified, remove all spoil not required as part of the Works from the Site. Pay all tipping fees at the waste disposal facilities. These fees are not refundable.

25. 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 the Site.
Be aware of legal obligations if moving restricted items from or within fire ant restricted areas. Refer to https://www.daf.qld.gov.au/data/assets/pdf_file/0007/167812/RIFA-restricted-area-SEQ.pdf. This includes understanding the risks of spreading fire ants and developing strategies to address these risks. Refer to 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 ARMP to prevent the spread of fire ants. A copy of the ARMP must be provided to the Superintendent prior to commencement of the Works.

26. Existing services and public utilities

Where services, public utilities or other Principal facilities, 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 with service authorities controlling facilities in the vicinity of the Works. These authorities include but are not limited to communications, gas and power.

Prepare a service plan for the information of the Superintendent 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 construction commencing within the Site to ensure protection.

In the case of any damage occurring to such utilities, the matter must be immediately reported to the department, public authority or company concerned and to the Superintendent. The cost of any necessary repairs and/or renewals will be borne entirely by the Contractor. 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 Contractor fails to arrange/undertake such repairs as required by the asset owner, then the Superintendent (on behalf of the Principal) may arrange for the repairs and the Superintendent has the right to deduct the costs incurred from monies or securities otherwise owing or held by the Principal.

Unless instructed otherwise, deal with existing services (such as drains, watercourses, public utility and other services) encountered or obstructed in the course of performing the Works, as follows:

- if the service is to be continued, repair, divert, and relocate as required; and
- if the service is to be abandoned, cut and seal, or disconnect and make safe.

In the event of any discrepancy between location drawing information and physical location of the existing underground services, the service provider must be asked to attend the Site to confirm the accuracy of the location drawing information. Work with the service provider to locate/confirm the existing underground services. Under boring or excavation must not commence until approval documents and sign off is received from the service provider that work can continue.

27. Temporary Works

Alter, adapt and maintain Temporary Works as necessary and remove them in accordance with Clause 38 of the General Conditions of Contract or progressively as the work proceeds, unless otherwise specified or instructed.

Obtain the written approval of the Superintendent for the inclusion in the Works of any Temporary Works which it is proposed to leave in position at the completion of the Contract.

28. Stormwater drainage

In addition to precautions and measures required in respect of erosion and sedimentation control, be responsible for the proper drainage of the Site and of all the Works before Practical Completion. Provide sufficient materials, labour, pumps, equipment, cut-off drains and any other necessary facilities to protect the Works.

Any delays, repair of damage or restoration work resulting from flooding occurring as a result of normal rainfall, or from drainage inadequacies relative to such rainfall, will not be grounds for extension of time or for any other
Normal rainfall is defined as the average monthly total for each month and the average storm event occurring in that month, as recorded (over the past ten years prior to the closing of tenders) at the nearest rainfall station to the Site.

29. Joining up

Where required, carry out the joining of new work to existing work and any consequent cutting away, in a manner appropriate to the materials, and make good to existing work.

Provide a smooth, uniform and suitable grading of pavements and the like between existing and new work where level or alignment differences occur as the result of unavoidable mismatches. Seek directions from the Superintendent as to the limits of such gradings and the like.

30. Temporary fence

Where a temporary fence is shown on any drawings or required for safety or security, enclose the area with a fence with secure gates. Remove on completion and reinstate the Site.

31. Temporary services

Provide and maintain temporary services, including telecommunications, necessary for the execution of the Works. Install such services in accordance with the requirements of the relevant authorities. Connect to existing services if these are present and available for use. Make all arrangements for such connections and disconnections including full reinstatement of the site affected by these connections. Pay charges in connection with the installation and use of such services. On completion, disconnect temporary services and clear away all traces.

If available, water for construction purposes may be drawn from the existing metered supply. If in the opinion of the Superintendent, water is being wasted or more water than is necessary is being used, the Superintendent, in its absolute discretion, may curtail supply or impose a water charge.

If there is a water reticulation system, but no existing metered connection, arrange for a metered standpipe from the Principal. Phone the Customer Service Centre on 1300 000 928 for information on security deposits, hire charges, cost of water, payment arrangements, and to arrange for standpipe(s) as required.

Pay for water used from the Principal’s supply reticulation system for the Works at the current rate stipulated in the register of general charges. Be responsible for the adequacy of quality and flow quantities for the intended use.

Supply may be drawn from the existing supply at locations as/if indicated on any drawings. Otherwise determine the location and delivery method for water required for the Works direct from the Principal.

Comply with requirements of the Principal for taking of water from fire hydrants.

32. Communications

Supply and maintain a method of communications between the office and Site crews that is acceptable to the Superintendent.

Provide mobile telephones or equivalent modes of communication for on Site communications with the Superintendent.

Supply and maintain an email address, which must be contactable by the Superintendent at all times.

33. Trades and Best Practice

Undertake all specialised work in accordance with Legislative Requirements and the requirements of the relevant trade involved, and in accordance with accepted best practice.

Liaise with the Superintendent should any doubts arise as to the standard of equipment or installation required.
34. Standards

Current Editions: An Australian Standard or other standard applicable to the Works will be the edition last published not later than one month prior to the closing date for tenders.

Site Copies: Keep on the Site a copy of each standard referred to in this document which specifies Site operations or Site codes of practice.

35. Worker’s compensation insurance

In cases where the *Workers’ Compensation and Rehabilitation Act 2003* (Qld) does not require the Contractor to effect a policy of insurance (by virtue of all work being carried out by sub-contractor for any other reason), effect a minimum premium Queensland Workers’ Compensation Policy nevertheless.

36. Site meetings

Site meetings attended by the Contractor, appropriate subcontractors and the Superintendent, will be held throughout the duration of the Contract at a frequency determined by the Superintendent.

Keep minutes of such meetings and provide copies to each party within three Business Days after each meeting.

At the first site meeting, submit the names and telephone numbers of all responsible persons who may be contacted after hours during the course of the Contract.

37. Quality Assurance

If a quality system elements category is specified for any part of the Works, implement the procedures necessary to satisfy the requirements of that category.

38. Commissioning equipment

Ensure that all equipment and features are commissioned and tested with the knowledge of the Superintendent. Give the Superintendent at least two Business Days’ notice of any inspection or commissioning requirements.

Ensure that qualified personnel (preferably from the supplier or manufacturer) are present at the commissioning stage, so that the Superintendent and/or operating staff may receive thorough knowledge of the operating system, including the maintenance requirements.

39. Manufacturer’s recommendations

Use manufactured items in the Works in accordance with the current published recommendations of the manufacturer relevant to such use.

40. Samples

Items in respect of which samples are specified must be in accordance with an approved sample, or within a range defined by approved samples. Keep approved samples in good condition on the Site until the issue of the Certificate of Practical Completion.

Where the Contract requires the Contractor to provide samples, be solely responsible for any delay resulting from a failure to allow reasonable time for the assessment and approval of the samples, or from the rejection of samples which do not comply with the specification.

41. Sealed containers

Materials and products supplied by the manufacturer in closed or sealed containers or packages must be brought to the point of use in the Works in the original unbroken container or package, otherwise they will be liable to rejection.
42. Testing

Any sampling and testing required to be by an independent testing authority must be carried out by an authority registered with the NATA to perform the specified sampling and testing. Arrange and pay for such testing as required.

43. Maintenance

Before applying for a Certificate of Practical Completion, provide instructions and a recommended maintenance schedule for all items supplied and installed, along with details of model (reference numbers or similar), manufacturer and/or supplier.

44. Information supplied by the Principal

Subject to Clause 8.3A of the General Conditions of Contract, where information is supplied by the Principal, the following is applicable:

- the provision is on a one-time basis only, and does not imply or infer maintenance or the issue of updates/addendum
- do not supply, use or on-sell this to any third party, either in part or in total
- allow the information to be used for internal use for the Contract only, by an employee in any location in any appropriate manner; and
- take all responsible steps to maintain and safeguard the confidentiality of the information.

Where cadastral information is supplied in digital form, the following is applicable:

- Execute a ‘Standard Licence Deed for Consultants Use of Licensed Data Products’ - Schedule E of the Digital Cadastral Data Standard Licence Agreement for Distribution / Value Adding between The State of Queensland and the Principal; and
- Negotiate direct with DEHP to facilitate the execution of the licence.

45. Proprietary items

A proprietary item is any item identified by graphic representation on any drawings, or by naming one or more of the following: manufacturer, supplier, installer, trade name, brand name, catalogue or reference number and the like.

The identification of a proprietary item must not necessarily imply exclusive preference for the item so identified, but must be deemed to indicate the required properties of the item. An alternative item with the required properties may be considered for acceptance at the Superintendent's discretion.

When submitting an alternative item for approval, submit sufficient information to permit evaluation of the proposed alternatives, including evidence that the performance is equal to or greater than that specified. If requested, obtain and submit reports on relevant tests by an independent testing authority. State whether the use of the alternative will require alteration to any other part of the Works.

All Digital City projects must comply with the Digital City Data Policy standards and procedures.

46. Use of Specifications from TMR

When Standard Specifications from TMR are included in this document, references in MRS01 are to be deleted and replaced as follows:

- Delete references to ‘Conditions of Contract’ and replace with ‘General Conditions of Contract’; and
- In Clause 2.1.7 (Provisional Quantities and Provisional Items) of MRS01, delete the entire 4th, 5th and 6th paragraphs and replace with 'The provisions of Clause 11 of the General Conditions of Contract will apply to Provisional Items'.

The Annexure(s) and Supplementary Specifications to TMR Standard Specifications do not form part of this document unless specifically provided by the Principal in Part B: Project Specific.
47. Energex electrical inspections – lighting and power supplies

If metering or power supply changes are made, complete ‘Form 2’, obtainable from Energex direct or online (www.energex.com.au). Submit this form to Energex to arrange an inspection.

48. Certification of the design

Where the Contract requires design to be carried out which would require the designer to be registered under the Professional Engineers Act 2002 (Qld), the following is applicable:

- ensure that the design of the Works is supervised at all relevant times by a designer who is a RPEQ and experienced in work similar to the Works; and
- provide RPEQ certification in a form acceptable to the Principal in respect of the adequacy and suitability of the design of the specified parts of the Works.

The Contractor:

- warrants that the designer must in carrying out its obligations under the Contract perform the design services to a standard of care, skill, judgement and diligence commensurate with that which would be expected of an experienced professional engineer with expertise in the provision of similar services for projects of the nature of the Works; and
- indemnifies the Principal for any damage, loss, cost, expense or liability (whether direct, indirect or consequential, present or future, fixed or unascertained, actual or contingent) arising out of a breach of obligations under this Clause.

If the Contractor proposes to appoint an external consultant to act as designer, rather than a suitably qualified employee of the Contractor, the following is applicable:

- obtain the Principal’s prior written approval of the nominated person
- do not replace the nominated person without the Principal’s prior written approval
- ensure that the terms of engagement include that the designer provides:
  - a duly executed written deed of warranty and indemnity in favour of the Principal in a form acceptable to the Principal on the same terms as set out in this Clause; and
  - evidence to the Principal of the existence and currency of a policy of professional indemnity insurance as required by the Contract
- accept vicarious liability for the acts and omissions of the external designer as if they were acts or omissions of the Contractor
- accept any obligation under the Contract by virtue of an approval to subcontract design services; and
- accept that no payment under this Contract will be made until you have complied with your obligations.

49. Survey

Standard AHD and Geocentric Datum of Australia (GDA94) is the basis of all levels and coordinates associated with the Works unless otherwise indicated.

Be responsible for setting out of the Works from the PSM’s and a qualified Surveyor is to be engaged to do the set out.

Rely on set out points placed by the Principal.
Part B: Project Specific

1. Scope of the Works

The scope of the Works under this Contract are, but not limited to, as follows:

**Odour Control Facility**

- Be responsible for the detailed design including all necessary investigations, fabrication / construction, installation, commissioning and ensuring performance criteria fully comply with the requirements in this document and provide a complete functional OCF, which meets all the necessary Standards, Codes of Practice, Industry Standards, and all statutory requirements. Sections within the Principal’s Project Requirements will as a minimum address each of the following phases of delivery:
  - Design
  - Fabrication
  - Installation and construction
  - Commissioning
  - Asset Acceptance

- Provide all materials with associated works, including all manufacturer’s compliance requirements, guarantees, storage, delivery, disposal and treatment of spoil, installation, connection of utilities / services, testing and commissioning as necessary.

- The complete systems must include all pipework, fittings, fans, filters, instruments, and controls, from the point of foul air extraction located within the SPS B47 wet well to the point of treated air exhaust. In addition provide the following, including, but not limited to:
  - Additional equipment as may be necessary for the operation and maintenance of the particular odour treatment system;
  - Stairs, ladders and walkways, where appropriate, to allow ease of access for changing of media, access sampling points and monitoring equipment, power and control panel. All such stairs, ladders and walkways must be constructed of appropriate corrosion resistant materials;
  - Any recommended safety facilities (e.g. such as safety shower, eyewash station, etc.) access infrastructure (e.g. platforms, ladders, guard rail etc.) to be included as recommended by Contractor so that all required operations and maintenance activities can be undertaken in safe manner complying with WHS regulations.
  - Tags, labels, signs, and other markings, for all these systems which clearly indicate the individual system, chemical contents, hazards, warnings, and any other pertinent information in accordance with the requirements of the relevant Standards, Codes of Practice and statutory authorities, or from equipment in which the O&M manuals reference for operations and maintenance;
  - O&M manuals, unit process guidelines, As-constructed drawings, copies of PLC software programs and P&ID’s as applicable and any other documents necessary for the optimal operation and maintenance of the OCF;
  - Re-location or diversion and connection of all required services (i.e. water, power, wastewater drainage, inlet vent duct etc.)
  - Provide operational lighting fixed to the existing SPS B47 building adjacent to the OCF
  - A system that is immune to the 1:100 year flood for all electrical and control equipment.
  - A system that fully considers and facilitates the operational requirements as per the Principal’s Project Requirements.
  - A system that is safe to operate and considers the environmental obligations associated with the operation of the asset

**Decommissioning of existing OCF, existing asbestos vent stacks and replacement with PVC**

Be fully responsible for the removal and disposal at a suitable waste facility of the existing OCF, spent media, associated infrastructure and electrical cabling and existing wet well 425 OD asbestos cement vent stack
located within the SPS B47. If directed by the Superintendent, remove and replace two independent dry well 425 OD vent stacks. The stacks act to extract air from the wet well and dry well.

The scope of work will generally include:

- Decommission of existing OCF located within SPS B47 including the electrical cabling back to the switchboard. Dispose of the OCF and spent carbon at a suitable waste facility
- Be responsible for the management of nuisance odour and the elevated levels of hydrogen sulphide from the time the existing OCF is decommissioned to the time the new OCF is commissioned through a suitable bypass configuration to the new OCF or approved equivalent approach
- Removal of the wet well asbestos vent stack (pipe) and associated fittings and brackets within the wet well floor cavity, main building, roof cavity and above the SPSB47 roof by a suitably qualified person.
- Develop a works method for the extraction of AC vent stack that fully maintains the operation of the SPSB47 pump station. The works method must integrate contingency planning.
- Be responsible for the installation of all enabling works required to carry out the Works and install all safety controls necessary to manage the safety aspects of the Works
- Replace the wet well vent stack with PVC ductwork and configure as the foul air extraction between the wet well and the new OCF.
- If directed by the Superintendent remove and replace the dry well vent stack directly adjacent to the wet well stack with a “like for like” configuration. The stack will be PVC, fully sealed, with fittings, bends, brackets and “whirly bird”. Replacement will include the structural concrete penetrations and reinstatement through the existing building floor and roof. Reinstatement will be RPEQ certified, paint matched and protected with a suitable concrete protective agent such as approved 2 coat epoxy.
- If directed by the Superintendent remove and replace the previously refurbished AC dry well vent stack with a “like for like” configuration with a fully sealed PVC stack or approved equivalent. Stack to include tie in details connecting the existing AC pipework with the inline extraction fan, fittings, bends, brackets, 2 x structural concrete penetration and reinstatement through the existing building floor and concrete support at the base of the dry well. Reinstatement will be RPEQ certified, paint matched and protected with a suitable concrete protective agent.
- Be responsible for the handling, decommissioning, removal and transport of asbestos in line with the relevant legislation, guidelines and approvals necessary for the management of asbestos at a suitable waste facility.

DN450 DICL Air-valve HDPE Foul Air Diversion

- Design and install a foul air diversion (PE100 SDR 11 90mm OD HDPE) between an existing rising main air-valve currently locked shut located at the entrance of the site to release the foul air into the SPS B47 wet well.
- Include all AV connection fittings, sealed penetration through the existing MH located in the SPSB47 driveway (Refer Part D Attachment 3.5), the wet well wall, trenching, backfill, reinstatement of pavement.
- Provide all pedestrian and traffic management and dispose of all waste materials

1.1 Work Milestones

The Works will be based on Work Milestones as described below. The Superintendent will determine the progress of the Works and milestones achieved in respect to the claims made under the Contract, with progress payments only made for the Works performed and milestones achieved.

For payment purposes, each progress claim milestone is initially claimable for 80 per cent of its value unless specified otherwise.

Work Milestones include:

- Work Milestone Number One – Preliminary Works
- Work Milestone Number Two – Investigation and Design
- Work Milestone Number Three – Supply and Installation of OCF
- Work Milestone Number Four – Decommissioning of Existing OCF and Wet-well Vent Asbestos Pipework Extraction and Replacement
- Work Milestone Number Five – DN450 DICL Air-Valve HDPE Foul Air Diversion
- Work Milestone Number Six – Commissioning, Testing and Reinstatement
- Work Milestone Number Seven – Defects Liability and Proving Period
- Work Milestone Number Eight – Provisional Items

1.1.1 Work Milestone Number One – Preliminary Works

This milestone must include the following aspects of the Works associated with Work Milestone One. The Contract Sum must include all Work required to complete Work Milestone One including but not limited to:

- In addition to the requirements of General Specifications Part A Clause 36, attend a prestart meeting at the City of Gold Coast Nerang Office as directed by the Superintendent. The meeting will reaffirm the basis of design and key design considerations. The Contractor may be extended the opportunity to visit site with the Superintendent and the Principal following the meeting.
- Undertake Principal’s site inductions of all persons undertaking Works on site including subcontractors. Refer to Part B Clause 2.2 Principals Site Inductions.
- Preparation of detailed project program. Program to comply with the requirements of Project Specification Part B Clause 1.4 Program
- Provide monthly project reporting in line with General Specification Part A Clause 10 Status program
- Review and comply with all permits outlined in Part D: Attachment 15 Permits and approvals
- Provide a forecast monthly cash flow. The forecast will be provided in a PDF and Microsoft excel format and will outline as a minimum:
  - Monthly forecast project spend
  - Monthly forecast against project milestones
  - Provided in-line with the Contractors proposed works methodology
  - Update the forecast cash flow at any time requested by the Superintendent
- Undertake a detailed preconstruction dilapidation survey. Submit a site specific detail dilapidation survey specific to the Works. The extent of works will include but not be limited to all assets impacted by the works. The Contractor will make their own determination of the extent of works but will include as a minimum:
  - Roadway, footpath and kerb 40 meters either side of the Lemana Lane access point
  - Footpath
  - SPS Access
  - Fencing
  - Handrails
  - SPS internal fixtures including pipework, paint, switchboards, gantry crane, roof and supporting beams
  - SPS pavement and kerbing
  - Grassed areas
  - Any other item identified by the Contractor or requested by the Superintendent
- The format of the survey will be a combination of video camera with adequate definition photographs Provided in a sequential approach
Prior to commencement of any physical work, the Contractor is to notify the Superintendent of any additional requirements determined as a result of the pre-construction site investigation activities.

Preparation and submission of site specific Works documentation including but not limited to the following:

- Construction Environmental Management Plan as defined in Part A: Clause 20 Construction Environmental Management (CEMP) must be approved 10 working days prior to the commencement of the Works.
- SMP for design and construction phases in line with required legislation. A guide for minimum requirements of the SMP is outlined in Part D. Attachment 12 Safety Management Plan Minimum Requirements. Must be approved 10 working days prior to the commencement of the works.
- PMP and where required a TMP as defined in Part B: Clause 1.3 Traffic Management and Pedestrian Management.
- QMP as outlined in Part D: Attachment 13 Quality Management Plan Minimum Requirements. The QMP must be approved 10 working days prior to the commencement of the works and include as a minimum the following:
  o Inspection and Test Plan
  o Commissioning Plan (FAT & SAT and DLP proving period)
  o Minimum testing requirements are outlined in Part C: Attachment 1 Odour Control Facility Specification – Design, Fabrication, Supply, Installation and Commissioning
- High level construction sequencing plan. High level, neat red pen marked sketch on A3 for the purpose of communicating the key phases of work to stakeholders.
- Provide all relevant licensing, permits and approvals to the Superintendent within 7 days of award. Ensure that all Works under contract are carried out in compliance with all legislative requirements, including but not limited to, the Plumbing Act and Regulations, Building Act and Regulations, QBCC Act and regulations, Electrical Safety Act Australian Standards and any other relevant legislation.

This milestone is not to exceed 5% of the contract sum.

1.1.2 Work Milestone Number Two – Investigation and Design

This milestone must include all Works required to complete Work Milestone Two including but not limited to the following:

1.1.2.1 Investigation

- Provide all safe work method statements and associated risk assessments aligned with the Contractors SMP associated with design and investigation activities. Provide all safety controls necessary to undertake investigations. Refer Project Specification Part B Clause 12 Workplace Health and Safety.
- Undertake all testing that the Contractor deems necessary of existing odour composition or concentration (incl. H2S) from the wet well or existing stack as required in order to confirm that the proposed OCF detailed design will meet conditions experienced at the site and meets the acceptance performance levels over the life of the asset.
- Review Principal supplied design airflow calculations with consideration of the 2017 to 2036 design horizon and make recommendations to the Principal at the 30% design review as specified in Project specification Part B Clause 1.5 Design Documentation. Airflow calculations are provided in Project specification Part D Attachment 5 OCF Airflow analysis.
- Undertake all applicable investigations the Contractor deems necessary to execute the Works. Investigations may include:
  - Site measurements / survey of surrounding infrastructure and terrain.
- Geotechnical investigations
- Structural investigations including the concrete SPSB47 roof and floor
- Existing services / utilities locations and connections
- Electrical infrastructure connections and SCADA fault alarm connection

- Undertake all site investigations necessary to finalise a work method to facilitate the removal of the AC pipework located within the wet well.
- Become familiar with the operational limitations and considerations on the site.
- Review SPS B47 odour bypass options and H2S management as detailed in Part B Clause 1.2.3 Management of Odour.
- Undertake site investigation into the alignment of the foul air diversion and connections from the existing AV on the 450 DICL rising main located in the driveway of 31 Lemana Lane to the wet well of SPS B47 including all necessary service locations if required.

1.1.2.2 Design

General

- Comply with design requirements in line with Part B: Clause 1.5 Design Deliverables and / or Part C: Attachment 1 Odour Control Facility Specification – Design, Fabrication, Supply, Installation and Commissioning
- Complete a Safety in Design Risk assessment and report compliant with the QLD Workplace Health and Safety 2011 Act. Maintain and update the risk register throughout the design phase.
- Approved IFC drawings must be completed prior to the commencement of works
- Request drawings numbers from the Superintendent and the format of the GCWW Standard drawing template

Design – OCF

- Design a new OCF at SPSB47 to the specifications outlined in Project Specification Part C: Attachment 1 Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning and other pertinent specifications outlined in the contracted Works

Asbestos vent stack removal and replacement work method

- Detail a work method for the replacement of:
  - One wet well AC vent stack with a new wet well foul air extraction duct between the wet well and the new OCF as described in Part D Attachment 3.3 Removal and Replacement of AC wet well vent stack and Project Specification Part C: Attachment 1 Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning.
  - If directed by the Superintendent develop a work method to remove two dry well vent stacks as specified in Work Milestone 8 Provisional Items.
- Develop a method that addresses the requirements of Part B Clause 2.5 Dry well and wet well vent asbestos pipework extraction and replacement.
- RPEQ the design as a function of the proposed construction method.
- Develop a method for the removal of the AC vent stack within the wet well that addresses the requirements of Part B Clause 1.2.3 Management of Odour.
- Develop a method that maintains the operation of the pump station at all times and is completed from above the floor without impact to the wet well as described in Clause 1.2.1 Removal of AC pipework and installation of ductwork.
- Develop a work method that manages the constraints associated with the physical location of each of the asbestos vent stacks including but not limited to hydrogen sulphide levels, confined space,
physical location of the pipes, working at heights, configuration of the building while minimising odour nuisance to surrounding properties.

- Develop a work method that includes risk based contingency planning within the work method to ensure the risks associated with AC pipework or fragments falling into either the dry well or wet well is removed.
- Present the work method to the operational team at the 30% design gate workshop. Refer Part B Clause 1.5 Design Documentation
- Should the Contractor seek to adopt the use of a gantry crane in the contractors work method Part B Clause 17.3 Use of gantry crane
- Consider Part D: Attachment 9 Example AC pipe removal as PSA03. Do not rely on the concept. It is provided for information only.

### Design – Existing DN450 DICL Air Valve HDPE Foul Air Diversion

- Develop a design to divert foul air from the SRM DN450 DICL PN35 AV located within the driveway of 31 Lemana Lane adjacent to the property boundary to the SPS B47 wet well
- Design adopting a PE100 SDR11 90mm OD HDPE (sewerage) pipework (or approved equivalent) between the existing 450 DICL AV four air discharge and the SPS B47 pump station wet well. Design to include AV connection detail, full sealed MH penetration if applicable, trenching detail, pavement reinstatement and sealed PS wet well connection detail
- Refer to Part D: Attachment 8 As-Constructed Drawings for the AV location and details
- Design to include functional requirements stated in Part D Attachment 3.5 Function Design Requirements of foul air diversion.
- Design to comply with Part B: Clause 1.5 Design Documentation
- Provide a RPEQ certification for the design

This milestone must not exceed 10% of the total lump sum amount.

### 1.1.3 Work Milestone Number Three – Supply and Installation of new OCF

This work milestone must include all Works required to complete the milestone including the requirements set out in Part C: Attachment 1: but not limited to the following:

- Update approved CMP’s outlined in Project specification Part B Clause 1.1.1. Allow 10 working days for the management plans to be reviewed by the Principal prior to the commencement of works should any changes be deemed necessary following the design process. Supply all necessary environmental and safety controls.
- Establish on site
- Install all necessary foundation / concrete slab extension or parking extensions or any other civil works as required by the OCF design. Ensure civil works are completed prior to transportation unless a suitable laydown is agreed to by the Superintendent.
- Fabricate and undertake FAT and provide results prior to the OCF being freighted
- Deliver OCF to site and set level in site as required
- Be responsible for traffic management and pedestrian management through the implementation of an approved TMP and PMP as specified in Part B Clause 1.3 Traffic Management & Pedestrian Management
- Construct and complete all Service / Utility connections as required by the design including:
  - Power to the OCF and control panel
  - SCADA fault alarm
  - Drain/s to wastewater connection points
- Water
- Lighting

- Install the OCF including all mechanical/structural works if applicable to the design including the vent stack
- Install all operational and maintenance safety equipment so that all potential operational and maintenance activities can be undertaken in a safe manner complying with WHS regulations
- Fill OCF filters / vessels with all required media ready for use;
- Implement approved Commissioning Plan
- Compile and supply progressive as-constructed information for this milestone.

1.1.4 Work Milestone Number Four – Decommissioning of Existing OCF and Drywell and Wet-well Vent Asbestos Pipework Extraction and Replacement

1.1.4.1 General

This milestone must include all works required to complete the milestone including but not limited to the following.

- Execute the works in line with the approved Work methods
- Implement all safety systems necessary to complete the works addressing the site hazards including but not limited to those specified in Part B Clause 12 Work Health and Safety
- Implement all enabling works and contingency works to facilitate the extraction and installation of pipework in line with the approved work method
- Implement all environmental controls in line with the approved CEMP
- Seek approval from the Superintendent should the Contractor propose to deviate from any approved approach and allow a minimum of two working days for the Superintendent to liaise with operational team members to confirm the approach.
- Where the Contractor proposes to adopt the use of the existing gantry crane comply with the requirement of Part B Clause 17.3 Use of Gantry Crane

1.1.4.2 Hydrogen Sulfide Bypass and Odour Nuisance Management

Prior to the decommissioning of the existing OCF or wet well AC vent stack install and maintain a temporary odour bypass works method that;

- Minimises odour nuisance to adjoining property owners
- Minimises operational noise to adjoining property owners
- Increases safety of those undertaking the Works within the Pump Station including the Contractor and the Principal's operational staff should routine maintenance be required.
- Where possible use the newly installed OCF and install temporary bypass connections and extraction fans between the wet well / incoming sewer manhole / SPSB47 building or approved equivalent
- Comply with the requirements of Clause 1.2.3 Management of Odour
- Notify the Superintendent that the bypass system is in place and operational prior to the decommissioning of the existing OCF or removal of the wet well AC pipework

1.1.4.3 Decommissioning of Existing OCF

- Notify the Superintendent two weeks prior to the commencement of works that the existing OCF is to be decommissioned.
- Decommission the existing OCF located within SPS B47 as described within Part D Attachment 3.4 Existing OCF and electrical equipment to be decommissioned.
Part B: Project Specific

- The existing OCF is an ACRON odour unit.
- Be responsible for the removal and disposal of the OCF activated carbon and dispose of at a suitable trade waste facility and pay all fees and charges.
- Allow for up to 540 kg of GAC inside the existing ACRON odour unit. Assume the GAC will be spent.
- Be responsible for the safe handling and transport of the GAC and decommissioned OCF.
- Undertake the works compliant with Part B Clause 15 Waste tracking
- Decommission the existing electrical cabling between the existing OCF and the switchboard. Use a licenced electrician.
- Dispose of and pay all fees for the decommissioned OCF including the OCF structure, fans, PVC pipework, control panel and electrical cabling
- Review the condition of the concrete floor below the existing OCF with the Superintendent. If required and directed by the Superintendent agree on a cleaning method or suitable reinstatement or protective treatment. Refer to Milestone 8 Provisional Items.

1.1.4.4 Wet well and dry well pipe extraction and replacement

General

- Undertake all tasks associated with this milestone in line with an approved Safety Management Plan and SWMS. This milestone includes high risk activates including but not limited to working at heights, working in a confined space, working with asbestos, working in an explosive atmosphere.

Wet Well AC Pipe Extraction

- Engage a suitably qualified and licensed asbestos professional/s to safely manage and remove asbestos associated with the Works in-line with the legislation and QLD Workplace Health and Safety Act 2011 and Part B Clause 12 Work Health and Safety.
- Use experienced sub-contractors in the handling of asbestos and in the management of pump station pipe removal.
- Safely remove 1 x 425 OD AC wet well vent stack. Wet well vent stack is defined as all the 425 OD asbestos pipework located within the wet well, building structural floor, between the floor and the roof, structural roof cavity and above the roof including all fixtures, fittings, brackets, supports and the rain ingress “hat” located at the top of the stack. Total approximate length to 6.2 metres (+/- 1.0 metres).
- The wet well stack is described in Part D: Attachment 3.3 Removal and replacement of AC wet well vent stack.
- Install all temporary works required to complete the task in line with the approved work method
- Be responsible for all the removal of all asbestos through all structural penetrations including the roof of the wet well and the roof of the building
- Transport and dispose of the asbestos and associated materials at a suitable waste facility and pay all associated fees. Ensure the transport of asbestos is covered and safe for transport compliant with the relevant statutory obligations for the transport of asbestos
- The Pump station must not be shut down for any reason in the undertaking of this task and any and all costs (direct and indirect) associated with the requirement of an emergency or planned shut-down will be paid by the Contractor. This applies to either the removal of asbestos or installation of PVC ducting.
Wet Well Pipe (Ducting) Replacement

- Supply and install one wet well PVC or approved equivalent sealed foul air connection (ducting) from the SPSB47 wet well to the new OCF compliant with the RPEQ certified design.

- Install all brackets, fittings, supports compliant with RPEQ certified design. Pipework must be fully supported and comply with the requirements of Part C: Attachment 1 “Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning” or GCWW Mechanical and Electrical Specification 2017 (in that order).

- Reinstate the structural penetration of the SPSB47 building floor (penetration 1/2), building roof or wall (penetration 2/2) as specified in the RPEQ certified design.

- Gaps between the new PVC pipe and concrete penetration must be sealed with Megapoxy P1 or approved equivalent. High strength non shrink grout such as a “Sika” approved product, guaranteed by the manufacturer for the purpose it is used (or approved equivalent), may be adopted in line with the approved design to fill the penetration in areas where the gap exceeds the manufacture’s specification. Apply such products in line with the manufacture’s specification including surface preparation.

- Finish the sealed penetrations flush and tie into the surrounding floor or roof. Reseal with an approved “Sika” 2 part epoxy product guaranteed by the manufacturer for the purpose it is used (or approved equivalent). Comply with the manufacturer’s surface preparation and installation specification.

- Ensure the contractors method protects the roof of the wet well through a sealed 316 stainless steel sacrificial plate or an approved method that will not impact the structural integrity of the roof of the wet well.

- Repaint any area impacted with 2 coats of a “like for like” paint.

- All PVC pipework subject to UV light must be specified as UV resistant.

- All steel work and fittings must be 316 grade stainless steel or approved equivalent and fit for the environment in which is located.

- Safely pressure clean the works area where the existing wet well AC vent stack is failing (adjacent to the existing OCF base) to ascertain the condition of the concrete (approximately two square meters).

- Review the condition of the concrete floor below the existing OCF with the Superintendent. If required and directed by the Superintendent agree on a cleaning method or suitable reinstatement or protective treatment. This applies to areas not impacted by the Works only. Refer to Milestone 8 Provisional Item 1.1.8.2 SPS floor reinstatement.

1.1.4.5 Dry well Asbestos Pipe Vent Stack Removal and Replacement – Provisional Item

- If directed by the Superintendent, remove and replace the two existing AC vent pipes to the requirements of Milestone 8 Provisional Items Clause 1.1.8.4.

1.1.5 Work Milestone Five - DN450 DICL Air-Valve HDPE Foul Air Diversion

- Locate and protect services impacted by the Work.

- Supply and install a PE100 SDR11 90MM HDPE foul air diversion between the existing AV located DN450 DICL PN35 rising main to SPSB47 wet well including all connection fittings, sealed penetration through the existing wet well wall, trenching, backfill reinstatement and pavement.

- Refer to Project Specification Part D: Attachment 8 As-constructed drawings for AV location and details.

- Comply with the approved design.
Part B: Project Specific

- Undertake task in line with the approved PMP. Where, due to the Contractor's works method, the contractor impacts to the movement of traffic or the need to traverse pedestrians across Lemana Lane, implement a TMP.
- Work with the Principal to facilitate SPS site operational access and co-ordinate with the Superintendent where access will be reduced for any reason.
- Reinstatement of pavement to comply with Latest Version of COGC STD DRG 02-602 as specified in Part C: Attachment 4.
- Re-engage the AV at the completion of the works to commission the newly installed diversion.

1.1.6 Work Milestone Number Six – Commissioning, Testing and Reinstatement

This milestone must include the following aspects of the Works with reference to the Project Specification Part C: Attachment 1 - Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning unless otherwise noted. The contract sum must include all works required to complete the milestone including but not limited to the following.

1.1.6.1 Commissioning and Testing

Comply with the requirements of Project Specification Part C: Attachment 1 - Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning

- Formal SAT and Pre-Commissioning;
- Training held for Gold Coast Water operator/s;
- Commissioning including performance testing by an approved third party NATA accredited company (Project Specification Part C: Attachment 1 - Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning Clause 9.5 Final Commissioning – Practical Completion);

1.1.6.2 Demobilisation and Reinstatement

- Reinstall all areas impacted by Works to the original condition or better to the satisfaction of the Superintendent.
- Remove all waste material to a suitable facility and pay all fees.
- Ensure all defects identified by the Superintendent are rectified.
- Demobilise from site

1.1.6.3 Project Completion Report

Consolidate all information into a single bound document and submit to the Superintendent. The document will include but not limited to:

- All final as-constructed drawings and data;
- Operational and maintenance manuals;
- Datasheets, guarantees and or warranties
- Signed ITPs including SAT and FAT and performance testing
- Any other pertinent information

This milestone must not be less than 10% of the total lump sum amount.

1.1.7 Work Milestone Number Seven – Defects Liability and Proving Period

Demonstrate the performance of the new OCF over a one year proving period following formal notification of Practical Completion from the Superintendent without modifying media or the normal operating conditions of the OCF. Comply with the requirements of Part C: Attachment 1 - Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning. As specified complete the following performance testing:
1.1.7.1 Six month performance testing

Undertake performance testing at six months following Practical Completion (Test 1 and 2) in line with Clause 10.0 Performance Monitoring and Asset Acceptance – DLP as Part C: Attachment 1- Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning. Test 3 will be performed at the discretion of the Superintendent. Submit all test results within three days of receipt of results from the third party NATA accredited facility.

1.1.7.2 Twelve month performance testing

Undertake performance testing at 12 months following Practical Completion (Test 1 and 2) in line with Clause 10.0 Performance Monitoring and Asset Acceptance – DLP as Part C: Attachment 1- Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning. Test 3 will be performed at the discretion of the Superintendent. Submit all test results within three days of receipt of results from the third party NATA accredited facility.

1.1.7.3 Asset Acceptance

Meet the requirements of Clause 10.2 Asset Acceptance as Part C: Attachment 1- Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning. Formally notify the Superintendent, along with supporting third party NATA results that the OCF meets the full requirements of the Contracted.

1.1.8 Work Milestone Number Eight – Provisional Items

Undertake the following tasks if directed by the Superintendent.

1.1.8.1 Dry well Asbestos Pipe Vent Stack Removal and Replacement – design and investigation (Provisional Item)

- Undertake all site investigations necessary to finalise a work method to facilitate the removal of 2 x 425 OD (approximate) AC vent stack located within the dry well and become familiar with the operational limitations and considerations on the site.
- Detail a work method for the replacement of:
  - One dry well vent stack with a fully sealed PVC vent stack or approved equivalent with a “like for like” configuration in terms of length, fittings, alignment, size and class as described in Part D Attachment 3.2 Removal and replacement of dry well vent stack
  - One dry well vent stack with a fully sealed PVC vent stack or approved equivalent with a “like for like” configuration in terms of length, fittings, alignment, size and class as described in Part D Attachment 3.7 Removal and replacement of refurbished AC dry well vent stack
- Develop a method that addresses the requirements of Part B Clause 2.5 Dry well and wet well vent asbestos pipework extraction and replacement
- Develop a method that maintains the operation of the pump station at all times
- Develop a method that manages the constraints associated with the physical location of each of the asbestos vent stacks including but not limited to hydrogen sulphide levels, confined space, physical location of the pipes, working at heights and configuration of the building and access to vent stacks within the dry well
- Develop a work method that includes risk based contingency planning within the work method to ensure the risks associated with AC pipework or fragments
- Present the work method to the operational team at the 30% design gate workshop. Refer Part B Clause 1.5 Design Documentation
- RPEQ the design for the removal and replacement of 2 dry well vent stacks “like for like” as a function of the proposed construction method
Part B: Project Specific

- Should the contractor seek to adopt the use of a gantry crane in the design comply with Part B Clause 17.3 Use of gantry crane
- Consider Part D: Attachment 9 Example AC pipe removal as PSA03. Do not rely on the concept. It is provided for information only.

1.1.8.2 Dry well Asbestos Pipe Vent Stack Removal and Replacement – Provisional Item

Dry Well Pipe Removal (two existing AC vent stacks)

- Safely remove two dry well asbestos vent stacks located in SPSB47
- Develop and implement all tasks associated with this milestone in line with an approved Safety Management Plan and activity specific SWMS. This milestone includes high risk activates including but not limited to working at heights, working in a confined space, working with asbestos, working in an explosive atmosphere.
- Engage a suitably qualified and licensed asbestos professional/s to safely manage and remove asbestos associated with the Works in-line with the legislation and QLD Workplace Health and Safety Act 2011 and Part B Clause 16 Work Health and Safety.
- Use experienced sub-contractors in the handling of asbestos and in the management of pump station pipe removal.
- Provide all enabling equipment to complete the task
- Safely remove 1 x 425 OD AC dry well vent stack. Dry well vent stack is defined as 425 OD asbestos pipework (diameter approximate) located adjacent to the gantry crane exit door and includes all AC pipework including the dry well, building structural floor (structural penetration 1/2), building between the floor and the roof, roof cavity (structural penetration 2/2) and above the roof including all fixtures, fittings, brackets, supports and the rain “whirly bird” located at the top of the stack. Total approximate length to 14.7 metres (+/- 1.0 metres).
- The above-mentioned dry well stack is described in Part D: Attachment 3.2 Removal and replacement of AC dry well vent stack
- Safely remove 1 x 425 OD AC previously refurbished dry well vent stack. Dry well vent stack is defined as all 425 OD asbestos pipework (diameter approximate) located adjacent to building entry adjacent to switchboard. Removal all asbestos cement pipework within the dry well, building structural floor (penetration 1 / 2), structural support at base of dry well (penetration 2/2) including all fixtures, fittings, brackets and tie into the base of the existing inline fan pipework. The pipework above the fan was previously refurbished with PVC.
- The above-mentioned dry well stack is described in Part D: Attachment 3.7 Removal and replacement of refurbished AC dry well vent stack.
- The existing fan and PVC pipework are to remain in place under the removal and replacement of refurbished AC dry well vent stack. The existing fan and PVC pipework may be temporary removed under the approval of the Superintendent to facilitate the Works and reinstated at the completion of the Works.
- Coordinate with the Superintendent and GCWW operational staff when working around power cables penetrating the SPS floor adjacent to fan / AC pipework on the previously refurbished AC vent stack.
- The cables provide power to the inline fan, dry well lighting, emergency pump stop and dry well float on/off. The cables must remain in place and must not be cut of disconnected without approval. Safely work around the cables.
- Work with GCWW operational staff to organise the de-energising of cables, if required, each morning and re-energise the cables at the end of each day where construction activities risk the safety of the Contractor. The cables are to remain in place and must be left online when not undertaking works in the pump station.
- Provide lighting and power when dry well lighting is disconnected to undertake the works including the provision of power if required.
Part B: Project Specific

- Provide a minimum of 10 working days notification where the Contractor requires GCWW operational staff to de-energise electrical cabling.
- Transport and dispose of the asbestos and associated materials at a suitable waste facility and pay all associated fees
- Use licenced and experienced subcontractors in the handling of asbestos and in the management of pump station pipe removal.

**Dry Well Pipe Replacement (two existing AC vent stacks)**

- Supply and install two dry well PVC vent stacks replacing the existing AC pipework with a “like for like” configuration in terms of alignment and pipe diameter and install compliant with the RPEQ certified design.
- PVC to be fully sealed through cement solvent spigot socket arrangement or approved equivalent and completed in line with the manufacturers specifications.
- Supply all brackets, fittings, and one whirly bird (like for like) fitted to the PVC pipework
- All steel work such as temporary formwork, brackets, grills and fittings must be 316 grade stainless steel or approved equivalent and fit for the environment in which it is located.
- Allow for the reinstatement of four concrete penetrations. Indicative penetration details are outlined in Part D Attachment 3.2 and 3.7.
- Gaps between the new PVC pipe and concrete penetration must be sealed with Megapoxy P1 or approved equivalent. High strength non shrink grout such as a “Sika” approved product guaranteed by the manufacturer for the purpose it is used (or approved equivalent) may be adopted in line with the approved design to fill the penetration in areas where the gap exceeds to manufacture’s specification.
- All PVC pipework subject to UV light must be specified as UV resistant
- Finish the sealed penetrations flush and tie into the surrounding concrete structure/s. Reseal with an approved “Sika” 2 part epoxy product guaranteed by the manufacturer for the purpose it is used (or approved equivalent). Comply with the manufacturer’s surface preparation and installation specification. All exposed concrete must be protected. Apply a 2 coat paint matched finish.
- Where the Contractor proposes to adopt the use of the existing gantry crane comply with the requirement of Part B Clause 17.3 Use of Gantry Crane
- The Pump station must not be shut down for any reason in the undertaking of this task and any and all costs (direct and indirect) associated with the requirement of an emergency or planned shut-down will be paid by the Contractor
- Provide a fit for purpose connection between the new PVC pipework and the existing fan. All bolts used to tie the new PVC into the existing fan are to be stainless steel 316.

1.1.8.3 External safety shower

- Supply and install a RPEQ certified safety shower and eye wash station to AS4775.
- Installation must include all civil works and all necessary water and wastewater connections to the nearest connection including trenching, suitable service connections, backfill and pavement reinstatement to the nearest services connection or, if applicable, to the OCF service connections
- Safety shower and wash down will comply with relevant standards and be fit for the purpose it is installed
- Location of the shower must be approved by the Superintendent and adjacent to the operational risk in which it is installed.

1.1.8.4 SPS floor reinstatement

- Preparation of concrete attack around wet well AC pipe outside of the zone of impact by the pipe installation activities. Rate to scabble existing concrete floor with a “HILTI” bushing tool or approved equivalent method and / or
Part B: Project Specific

- Reinstatement of concrete attack around wet well AC pipe outside of the zone of impact by the pipe installation activities. Rate to supply and install Sika or equivalent 2 part epoxy product installed manufacturers specifications. Apply a 2 coat paint matched finish.

1.1.8.5 Specific Work

Subject to the requirements of the Contract, the Works must also include the following items:

- Any testing, that the Contractor deems necessary, of existing odour composition or concentration (incl. H2S or odour contributing species) from the wet well to confirm that the proposed OCF detailed design will meet conditions experienced at the site and needs to treat the odour;
- Any site survey requirements of existing infrastructure and site constraints required to complete detailed design and all requirements of the specification.
- Verification of site dimensions including access and available space directly east of the SPSB47 for the proposed OCF
- AV connection details. The Contractor must access the MH prior to the development of any design
- Location of services
- Concrete thickness of walls, floor slabs and roof slabs is the responsibility of the Contractor
- Enabling and temporary works required to facilitate the removal and installation of asbestos pipework

1.2  Project Specific

1.2.1 Removal of AC pipework and installation of the ductworks

The method in which the removal of AC pipework is removed and replaced is subject to the physical and operating constraints of the SPSB47. The Contractor must address the following key considerations in developing a Work method.

- Access to, and the setting up of temporary working platforms such as scaffolding is prohibited within the wet well
- Due to the nature of the Works the Contractor will need to address considerations such as, but not limited to;
  - Constructability constraints pertaining to the removal of, and replacement of pipework without access into the wet well
  - The requirement to remove and replace the AC pipework from above the floor of the wet well
  - Following the removal of the existing OCF and or wet well vent, elevated levels of H2S and other odour forming compounds are expected
  - Contingency planning to ensure no concrete, AC pipework or other falls into the wet well during extraction
  - Installation of formwork from above the wet well floor to re-install new PVC pipework
  - Extraction and transfer of dry well AC pipework within a confined space while working from heights
  - The physical location and associated access constraints of the dry well AC pipes within the well. The Contractor must consider the constraints around accessing and extracting the AC pipes and reinstalling with PVC in their current location with consideration of physical constraints of the well.
  - Managing the transfer of the AC dry well pipes to a safe exit alignment below the gantry crane of approved equivalent extraction method
  - Undertaking the works with consideration of the safety aspects of the works
  - Potential for an explosive atmosphere
Part B: Project Specific

- Maintaining the structural integrity of the concrete

A previous example is provided in Part D Attachment 9 for the removal of an AC pipe in a live wet well at SPS A03. This information is provided for information only. Do not rely on this information.

1.2.2 OCF Noise

The new OCF will be located within a suburban environment. Develop a design that is fit for the environment in which it is installed. Comply with as a minimum the specifications outlined in Part C: Attachment 1 Project Specification Part C: Attachment 1- Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning.

1.2.3 Management of Odour

Develop a work method in which hydrogen sulphide and odour nuisance will be managed for the duration of the Works.

Elevated hydrogen sulphide and odour will as result from decommissioning the existing OCF and the removal and replacement of the existing wet well vent stack and diversion to the new OCF.

Develop a method that manages the personal safety of the Contractor and the Principal's operational staff due to elevated levels of hydrogen sulphide and/or other gaseous parameters due to the Works. Develop a method that manages the odour nuisance to surrounding properties. An agreed management process must be in place prior to the decommissioning of the OCF until such time as the AC pipework is removed and replaced and the new OCF is commissioned and deemed functional and operational by the Superintendent.

1.3 Traffic Management and Pedestrian Management

In addition to Part A Clause 12 the following will apply.

1.3.1 General

Traffic must be controlled at all times, during construction, in accordance with the provisions of the MUTCD, Part 3, Supplement Part 3 and specific conditions detailed on traffic control permits issued by statutory authorities. A copy of the MUTCD can be found at the following link:


For the duration of the Works, where traffic control is implemented, the Contractor must inspect all traffic control devices and traffic control arrangements in accordance with the MUTCD Part 3 and Supplement Part 3. When traffic control is required on State-controlled roads, only companies registered with the TMR's traffic management registration scheme must be used.

1.3.2 Traffic Controller Accreditation

All traffic controllers must be an accredited person under Section 21 of the Transport Operations (Road Use Management) Act 1995 to perform the functions of a traffic controller as prescribed by the Transport Operations (Road Use Management – Accreditation and Other Provisions) Regulation 2005. Traffic controllers must carry their TMR issued Traffic Controller Accreditation Scheme identity card at all times while working as a traffic controller.

1.3.3 Traffic Crashes and Incidents

In the event of a traffic crash or incident within the site, record the date and take time and date stamped photographs of the signs/devices present in the vicinity of the crash. In the event of a traffic crash/incident that requires notification to Police and relevant emergency services, make the appropriate notifications.
Program

For the purposes of this Contract, the Works program is defined as an electronic Gantt chart that details the critical path and a baseline program. The supply of the Works program and the approval by the Superintendent of the program will not relieve the Contractor of any obligations and responsibilities under the Contract.

The program is to include the following aspects:

- program dates (including site establishment, earliest/expected start of works, practical completion, defects liability)
- work milestones and major tasks/activities within each milestone
- submission of materials specifications and related information for approval
- design and manufacture of new and/or replacement items
- supply and delivery of materials/equipment
- site installation and/or refurbishment activities, including but not limited to construction of structures, as applicable
- dependencies between activities
- diversion of services as required
- testing, connections, and commissioning
- drafting and submission of as-constructed information

Submit a detailed program of Works to the Superintendent for approval within 14 days of commencement. The program must address the following:

Design and Investigation Phase

- Approved IFC drawings eight weeks from award including investigation, 30% and 90% design submission and allowance for two five day review periods by the Principal
- Where not defined five working days as a minimum shall prevail for the review of design documentation

Construction

- Construction documentation 14 days prior to the commencement of Works
- Access to site
- OCF fabrication period, FAT and mobilisation to site
- Civil works prior to mobilisation of OCF
- Notification to superintendent of management of odour bypass equipment
- Decommissioning of the OCF and electrical equipment
- Removal of dry well and wet well AC pipework and installation of new PVC stacks and ductwork
- Commissioning and testing
- Program must allow for review periods by the Superintendent or Principal. Where not defined five working days as a minimum shall prevail.
- It is envisaged the construction Works will be completed within seven weeks of access to site and includes fabrication and FAT.

Design Construction Period

It is envisaged the Contractor will complete the design and construction within 15 weeks of award. 15 weeks excludes construction activities occurring within the Commonwealth Games shut down periods between the 1st March and the 25th April however the Contractor will identify all possible options for the undertaking low impact works within the Commonwealth Games period of 1 March 2018 and the 30th March 2018.
Part B: Project Specific

The program must include:

- Design and investigation
- Principal reviews
- Fabrication
- Supply, construction, installation and commissioning

The program must include, but is not limited to, the following aspects:

- program dates (including site establishment, earliest/expected start of works, practical completion, defects liability)
- work milestones and major tasks/activities within each milestone
- submission of materials specifications and related information for approval
- design and manufacture of new and/or replacement items
- supply and delivery of materials/equipment
- site installation and/or refurbishment activities, including but not limited to construction of structures, as applicable
- dependencies between activities
- diversion of services as required
- testing, connections, and commissioning
- drafting and submission of as-constructed information

Submit a detailed program of Works to the Superintendent for approval within 14 days of commencement. The program that addresses the following:

Design and Investigation Phase

- Design gates (30%, 90% IFC)
- 30% Workshop
- Principal design reviews (two five day review periods)
- Where not defined five working days as a minimum shall prevail for the review of design documentation

Construction

- Construction documentation 14 days prior to the commencement of Works
- Access to site
- OCF fabrication period, FAT and mobilisation to site
- Civil works prior to mobilisation of OCF
- Notification to superintendent of management of odour bypass equipment
- Decommissioning of the OCF and electrical equipment
- Removal of wet well AC pipework and installation of new PVC stacks and ductwork
- Removal and replacement of the two dry well vent stacks clearly identifying any impacts to program
- Commissioning and testing
- It is envisaged the construction Works will be completed within fifteen weeks of award

Defect Liability Period
Design Documentation

1.5.1 Design process, reviews and workshops

- Present the design solutions and associated documentation at a 30% design workshop to be held at the Gold Coast Nerang Office. Allow 1.5 hours.
- Provide all documentation to the Superintendent contributing to the 90% design gate.
- Design minimum requirements for OCF are outlined in Part C: Attachment 1.

1.5.2 Design Gate #01 Concept Design 30%

Design drawings are to include (but not limited to) the following with relevant level of information included for Concept and then Detailed Design.

- Site Layout;
  - Location and orientation of OCF on site with surrounding constraints;
  - Access for trucks and maintenance vehicles for maintenance and operations;
  - Foundation details showing existing concrete slabs and proposed extensions required (if any);
  - Footprint of proposed OCF on the overall slab;
  - Extension of services or utilities required for connection;
  - Extension of rising main air valve foul air diversion including connection and penetration details
  - Asbestos pipe removal sequencing and construction method including enabling works
- General Assembly;
  - Plan and elevation of OCF showing all components, control panel, pipework, valves, odour testing points, visual inspection locations, fans, exhaust vent stack arrangement, and media change out access provided.
  - Dimensions of footprint
- Piping and Instrument Diagram (P&ID);
  - Process flow with all valves, instruments, electrical and mechanical components including alarming, monitoring;
- Electrical
  - Control Panel and instruments, update the Principal’s wiring line diagram between the switchboard and the OCF, equipment; (load calculations if applicable)
- Services / utilities;
  - Details of services / utilities extensions, relocations, and connections.
- Sequential work method for the removal of the asbestos pipework and bypass arrangement will be provided in a neat sketch format for the 30% design workshop to a level of detail that does not require explanation
- Attend a 30% design workshop at the Principal’s Nerang Office with the project stakeholders
- Submit all design documentation five working days prior to the workshop
- Provide workshop meeting minutes
- The Principal will provide a single set of concise comments and drawing red pen mark-ups three working days following the workshop.
Part B: Project Specific

- Table the safety in design register with respect to operations and maintenance considerations at the workshop and address all concerns raised by the Principal.
- Provide all NATA accredited sampling results and reports to the Superintendent within five days of receipt of test results

1.5.3 Design Gate #02 Concept Design 90%

- Submit Design at 90%. Communicate any item that is missing from the drawings to the Superintendent.
- Submit final work methods incorporating comments from the Principal at the 30% design workshop for the removal of the AC pipework, decommissioning of existing OCF and by pass of odour
- Provide calculations as requested
- Allow five working days for the Principal review commencing the day after submission of the drawings to the Superintendent.
- Provide data sheets if requested

1.5.4 Design Gate #03 Issue for Construction

- Certify IFC drawings and
- Provide safety in design report / register

1.5.5 Design drawing format and content

The deliverables must be submitted in compliance with the following requirements:

- Request drawing numbers from the Principal at the commencement of Works
- Request GCWW drawing standard at the commencement of the Works
- Two paper copies and one electronic copy of draft reports, presentations, drawings and tender documentation, all unbound complete with all attachments and appendices.
- Two paper copies and one electronic copy final reports, drawings and tender documentation, all unbound complete with all attachments and appendices.
- Electronic files for all reports, presentations, working files, design drawings and tender documentation, in the format by which the respective documents were prepared (e.g. MS Word 20, MS Excel, MS PowerPoint, AutoCad 2010 or XML).
- One seamless electronic file in PDF format of each report, complete with all attachments and appendices.
- One original of all design drawings, as signed by the Contractor and quoting the RPEQ number.
- Completion of a Quality Compliance audit record in a format agreed to by the Principal, for Works undertaken by the Contractor as “External Works”. This Quality Compliance audit record is required to verify the implementation of the Contractor’s quality procedures, and interface with any Principal’s services to ensure the designs are to AS/NZSS/ISO9001 and AS/NZSS/ISO14001 standards.
- Do not include any security settings or password protection, so that electronic submissions are directly accessible by Principal’s personnel.

1.5.7 Certification of design:

Comply with the requirements of the Queensland Professional Engineers Act as follows:
2. Site

2.1 Location and Limits

The site of the works is at Gold Coast Water and Waste Sewerage Pump Station B47, referred to as “SPSB47” indicated by the aerial photo in Project Specification Part D: Attachment 1. The address of SPS B47 follows:

- No. 31 Lemana Lane Burleigh Heads 4220

The site of the works is restricted to the above. Activities including material storage areas within the pump station site are to be agreed with the Superintendent. Do not enter onto the Principal’s workplace other than to undertake the works assigned.

The commencement of any activities on site must not occur without first advising the Superintendent. In particular, no site excavation will be undertaken without first advising the Superintendent. Submit details outlining the extent of any excavation required.

The site works impact sewerage pumping stations and the Works are to be performed in a manner such as to minimise any disruption or hindrance to current operational or maintenance activities.

Access to the pump stations will be permitted by arrangement with the Superintendent. Protocol for access to the site will be determined and approved by the Superintendent prior to commencement of the Works. Pump station B47 is secured by means of electronic Cliq padlocks and door cylinders. Complete the Principal's electronic key application Part D Attachment 11 - Key Application Form, and apply for a “Cliq key” inclusive of a $200 deposit as specified in the application. Electronic keys are issued to an individual and are not transferable from person to person.

Prior to attending the Sewerage Pump Station site Contractor’s personnel, including subcontractors engaged by the Contractor, must undertake an online WHS induction. The online induction is organised by contacting the Superintendent who will arrange for access and password(s) to be issued. A separate password will be issued for each of the Contractor's employees / personnel required to enter the site. Upon completion of the induction and assessment, the inductee must print off the assessment material and present at the Sewerage Pump Station on arrival.

Maintain a list of personnel who have completed the induction, and ensure that throughout the term of the Contract, any new personnel also undergo induction with the relevant site safety and emergency evacuation plan and protocols prior to entering and / or undertaking any activities on site.

All roadways and access points to the pump stations are to be kept clear and accessible at all times. Parking of vehicles or equipment within existing roadways will only be permitted for short-term loading or unloading of equipment or facilities, and only with the prior approval of the Superintendent. All other vehicles, including vehicles used by personnel to commute to the site, must be parked in a manner such as to not obstruct roadways subject to the written agreement of the Superintendent.

2.2 Principal's site inductions

The Contractor will be required to undertake Site specific inductions prior to being granted access to the Site.

The inductions assist in informing potential hazards that may be encountered when undertaking the Works and outline specific safety requirements when on the Site.

- General Induction to Gold Coast Water (Compulsory for all of the Principal’s operational sites).
Part B: Project Specific

- Induction to Itinerant and Construction Sites (Principal controlled).
- Induction to Reservoirs, Pump Stations and other sites (i.e. re-pump stations, manholes and valve pits).

The inductions will inform workers of potential risks that they may encounter when undertaking work at a Principal's operational site. They also outline the required safety expectations and the responsibilities of workers when on a Principal's operational site.

To arrange the online induction process contact GCWtraining@goldcoast.qld.gov.au and provide them with the following information:

- Name of company.
- Name of primary company contact.
- Email of primary company contact.
- ABN of company.
- Names of people to be inducted.
- Contact in CCR or Superintendent.
- Sites inductees will be required to access.
- Name of induction/s to be completed of the following:
  - General Induction to Gold Coast Water
  - Induction to Itinerant and Construction Sites
  - Induction to Reservoirs, Pump Stations and Other sites

Individual passwords will be provided for each worker to complete the required inductions. A record of the inductions completed will be printable for each worker. It may be prudent for you to request access for all workers who could potentially attend an operational site, rather than the minimum number of workers who will attend site. This will facilitate a faster provision of access for your workers if your resourcing requirements suddenly change.

If the required inductions have not been completed and copies supplied to the Superintendent or the CCR where applicable prior to the date of access of site, access to the operational site may be restricted until the relevant inductions have been completed.

If requested individual workers must be able to present their individual induction cards while working on the site.

3. Order of Work

3.1 Required sequencing of Works

The following considerations must be adhered to in the sequencing of the project:

- Approved detailed design IFC drawings must be approved by the Superintendent prior to the commencement of Works unless approved by the Superintendent.
- All CMPs outlined in Part B Clause 1.1.2 Preliminary Works must be approved prior to the commencement of Works unless agreed by the Superintendent.
- All work methods and operational response planning must be approved prior to the commencement of Works. Refer Project Specification Part B Clause 1.1.4 Wet well asbestos pipe extraction and replacement.
- Decommissioning and removal of the existing OCF will not commence until an approved odour bypass/management system in place or an approved method is agreed to by the Superintendent. Refer Project Specification Part B Clause 1.2.3 Management of odour.
- Sequencing of Works must comply with the limitations of the Commonwealth Games Project Specification Part B Clause 5.7 Gold Coast 2018 Commonwealth Games Impacts.
3.2 Proposed order of the works

The following sequence of work is proposed by the Principal. The Contractor is not bound to the sequencing of Works as long as project constraints are managed to the satisfaction of the Superintendent.

- Phase 1 Preliminaries and investigations
- Phase 2 Design and associated documentation
- Phase 3 Site civil works, mechanical and electrical works to facilitate new OCF
- Phase 4 Mobilise OCF to site and setup unit
- Phase 5 Bypass airflow to OCF or approved equivalent approach
- Phase 6 Decommission and remove existing OCF
- Phase 7 Remove asbestos pipework and replace with new PVC pipework or approved equivalent
- Phase 8 AV diversion (can be completed at any time following Phase 1 and 2)
- Phase 9 Commission OCF, documentation and as-constructed drawings
- Phase 10 Project completion report and as-constructed drawings
- Phase 11 Defects liability period 12 month proving period and proving testing at end of defects liability period

4. Site office

Before any major Site operations are started, provide an area for an office for the use of the Superintendent and the Contractor’s staff and personnel. Be responsible for the supply of potable water and waste facilities. Use the existing facilities available at the pump station only under the approval of the Superintendent.

5. Contract specific requirements/constraints

The Principal advised that the following requirements and/or constraints exist with respect to the execution of the Contract. This list should not be read as exhaustive:

5.1 Project site constraints

SPS B47 is located in a busy suburban street near existing residential houses, commercial properties fencing, underground and above ground services, substructures and super-structures.

Visit the project site to familiarise with the site conditions, environment, obstacles and constraints that can impact the Works.

Be aware of overhead powerlines constraining the access to the project site.

Consider the access limitations in conjunction with the Contractor’s obligations around traffic and pedestrian management

Plan and determine the appropriate method of construction relating to access, storage, excavation, shoring, trenching, protection, temporary or permanent relocation of services and infrastructure affected, diversions, reinstatement, etc. The Principal will not be liable for any claim on the ground of insufficient information by the Contractor

5.2 General Pump Station Operations

- Ensure that any person attending the SPS is under the control of the Contractor and has been approved by the Superintendent for the purpose of the intended entry. Access to pump station building to persons not associated with the Works is prohibited; All work operations must be consistent with the Superintendent approved work method.
- Existing sewerage pumping systems and associated sewerage infrastructure to remain operational at all times.
- Do not modify or operate any aspect of the pump station without approval of the Superintendent under an approved work method.
- Should the Contractor impact the operation of the pump station the Contractor will pay for all costs, including but not limited to tankering and Principal’s operational staff costs, associated with the shutdown of the pump station until such time as the impacts can be mitigated and the pump station can return to usual operational characteristics.
- The Principal’s personnel may propose to undertake routine maintenance of electrical and/or mechanical equipment and ancillary facilities within all areas of the Sewerage Pump Station and may require access to facilities at various times throughout the Contract period. Requests for access and agreement to undertake maintenance activities will be directed through the Contractor’s Site Representative and agreement to such requests are not to be unreasonably withheld;
- Existing surrounding infrastructure may constrain the installation, access, proposed set down location, orientation and maintainability of the proposed OCF; Be fully informed of these constraints associated with the design and construction of the asset.
- Existing termination point of utilities/services are to be ground truthed
- The SPSB47 contains heightened levels of odours substances including H2S. Be responsible for the safe management of H2S levels within the pump station.
- Ensure that any person attending a sewerage pumping station room/building or a fenced/secured pumping station, at any time, carries out the following procedure:
  - Where it is a planned event notify the Superintendent of the intended entry and advise the purpose for the entry;
  - Contact the Superintendent and obtain relevant authorisation before entering the pumping station;
  - Advise the Superintendent when final entry has been completed for that day or night time event;
  - Repeat the above procedure for each subsequent day or night entry.

Failure to carry out the above procedure will result in an ‘Intruder Alarm’ being activated and the Contractor being charged $400 for each day time infringement or $600 for each night time infringement. Payment for any infringements will be made through the Principal’s Recoverable Private Works Process.

5.3 Nuisance Odour
- Be responsible at all times for the management and minimisation of nuisance odours as a result of the Works including from the period in which the existing OCF is decommissioning and the new OCF is installed and commissioned through an approved bypass system.
- Use temporary equipment with fans and motors that are equipped with silencing mechanisms and the like that do not create noise nuisance to surrounding neighbours.

5.4 Flooding
The Principal has identified the following Flooding levels at SPSB47.
- 1 in 20yr = 3.24m AHD
- 1 in 50yr = 3.95m AHD
- 1 in 100yr = 4.18m AHD

All electrical and controls infrastructure is to be located 300mm above the 1:100 year flood to the relevant guidelines and specifications.

No obvious flooding levels were observed at SPSB47 and the Contractor must allow for the set out of the 1:100 year flooding level or an approved equivalent method.
5.5 Existing As Constructed Drawings

Limited existing as-constructed drawings exist at SPSB47. All relevant and available as-constructed drawings have been provided with this specification in Part D Attachment 8 As Constructed Drawings. Do not rely on additional information being available and allow for all necessary investigations to verify dimensions and quantities.

Visit the project site and become aware of the project site structure, its limitations in undertaking the Works. The Principal will not be liable for any claim on the ground of insufficient information collected by the Contractor.

5.6 SPSB47 Roof Anchor Points

In addition to Part B Clause 12 Work Place Health and Safety, there are no dedicated anchor points located on the roof of SPSB47.

5.7 Gold Coast 2018 Commonwealth Games Impacts

The City of Gold Coast will be hosting the 2018 Commonwealth Games in April 2018. It is anticipated that there will be disruptions to normal business activities in the periods around the Commonwealth Games event. Specifications Part D Attachment 10 Gold Coast 2018 Commonwealth Games Impact Zone shows the geographic extents of the areas that will be impacted in the lead-up, during and directly following the 2018 Commonwealth Games event.

Be advised as follows:

- The Works are to be undertaken within the GC 2018 Impacts Zone as shown in Part D Attachment 10: Gold Coast 2018 Commonwealth Games Impact Zone.
- There will be an increasing likelihood of traffic disruptions inside and adjacent to the GC 2018 Impacts Zone as described in Part D Attachment 10 Gold Coast 2018 Commonwealth Games Impact Zone between the period 1 January 2018 and the 18 May 2018.
- There will be additional approvals associated with any proposed works in the Impacts Zone during these periods. There is an increased likelihood that TMP / Works approvals may not be granted during this time due to impacts on event preparations. Expect delays in the processing of TMPs / works approvals during this period.
- Develop a Works program that facilitates the following:
  - Only limited low impact limited works may be extended to the Contractor between the 1 March and the 30th March where the Works can be demonstrated to be confined within the Principal's compound, do not impact or risk the operation of the pump station, do not require traffic or pedestrian management or increase construction traffic. The extend of works to be permitted during this period, if any, will be at the sole discretion of the Principal.
  - Excludes all construction activities between the 1 April 2018 and the 25 April.

Should the Works program extend into the periods described above through reasons latent conditions or Principal approved extensions of time then the Principal will not be responsible for any costs associated with delays to completion of the Works.

6. Hoardings

Construct and maintain hoardings in accordance with the requirements of the appropriate regulatory authorities.

Carry out any modification or extension of the hoardings which may be necessary for the proper performance of the Works. Modifications or extensions will be subject to the approval of the Superintendent and must match existing in form and construction.

Maintain the hoarding in a good state of repair throughout the duration of the Contract.
7. Signage and publicity

Approved signage must be displayed on Site for the duration of the Contract. An electronic signage template will be provided by the Principal on request. Submit to the Superintendent details of all signage for approval prior to any sign manufacturer or purchase.

Do not erect or display any signs or advertising other than an approved Project/Contractor signboard, to the following details:

<table>
<thead>
<tr>
<th>Size:</th>
<th>2m x 2m (maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name:</td>
<td>Name and Logo if relevant, Contractor telephone number including an after-hours telephone number and location of site offices if any.</td>
</tr>
<tr>
<td>Principal:</td>
<td>City of Gold Coast</td>
</tr>
<tr>
<td>Contractor:</td>
<td>Name and Logo if relevant</td>
</tr>
<tr>
<td>Client:</td>
<td>Gold Coast Water and Waste</td>
</tr>
<tr>
<td>Designer:</td>
<td>If applicable</td>
</tr>
</tbody>
</table>

All Site signage must be installed in accordance with Work Health and Safety Regulation 2011 (Qld), including regulation 308 identifying the details of the Principal Contractor.

Project signboards must be manufactured and installed by the Contractor, at no less than one locations to be determined by the Superintendent, no less than 14 days prior to the proposed date of commencement.

Erect signboard(s) at or near ground level at the extremities of the Site where directed. Maintain in good condition until a Certificate of Practical Completion is issued then dismantle and remove.

Be responsible for maintenance and regular inspection of all project signboards, progressively undertake any repairs to damaged signboards, and notify the Superintendent immediately in the event of vandalism or theft of any signboards.

Undertake dismantling and removal of signboards and associated fittings prior to demobilisation. Signs will remain the property of the Contractor.

8. Site climate conditions

All equipment supplied and installed as part of the Works must be designed to suit the following Site conditions:

<table>
<thead>
<tr>
<th>Location:</th>
<th>Gold Coast Queensland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 Lemana Lane Burleigh Heads QLD</td>
</tr>
<tr>
<td>Altitude:</td>
<td>+5 meters approx.</td>
</tr>
<tr>
<td>Environment:</td>
<td>Sewerage Pump Station</td>
</tr>
<tr>
<td></td>
<td>Surrounded by urban residential and light commercial</td>
</tr>
<tr>
<td>Ambient temperature:</td>
<td>Minimum 0°C</td>
</tr>
<tr>
<td></td>
<td>Maximum 45°C</td>
</tr>
<tr>
<td>Relative humidity:</td>
<td>Average maximum 65%</td>
</tr>
<tr>
<td></td>
<td>Average minimum 50%</td>
</tr>
<tr>
<td></td>
<td>Design maximum</td>
</tr>
</tbody>
</table>
All materials must be suitable for installation and operation in the environment and conditions as described above and must meet the Site climatic condition requirements.

The above conditions represent site climatic conditions but should not be considered to represent the conditions within the pumps station structure, wet well, or dry well.

9. Geotechnical Report

Undertake all necessary geotechnical investigations required to complete the Works.

10. Acid sulphate soils

Assessment of the potential for presence of acid sulphate soils (ASS) has not been undertaken during the period. The Works are to be undertaken on land at or below 5m AHD with low probability of ASS. Refer Project Specification Part D Attachment 14 Acid sulfate soil mapping. Where the Contractor proposes to excavate soils be fully responsible for the identification, management and treatment of ASS. Demonstrate compliance with the Queensland Acid Sulfate Soil Technical Manual: Soil management guidelines, prepared by the Department of Science, Information Technology, Innovation and the Arts, 2014. Be responsible for treatment and pay for all disposal fees. Include the management of ASS within the Contractors CEMP if applicable.

11. Salvaged items

11.1 Contractor’s property

Subject to the General Conditions of Contract materials, plant, equipment or other things salvaged from the Works will become the property of the Contractor, and must be removed from the Site.

12. Work Health and Safety

12.1 Status of Contractor in terms of Work Health and Safety

Upon accepting a tender by the Principal the Contractor is appointed as principal contractor in relation to the construction project under the Regulation.

For works not deemed a construction project under the Regulation the contractor is appointed to have management and control of the workplace, notwithstanding, the contractor must carry out and discharge the additional duties otherwise given to the “Principal Contractor” under Section 6.4 of the regulation, including a WHS management plan.

The Principal will lodge a Building and Construction Industry Notification and Payment form with the Building and Construction Industry (Portable Long Service Leave) Authority and will pay the prescribed fees.

Provide to the Superintendent, in accordance with the Act, a design report on the health and safety aspects of any designs, (including temporary works) carried out as part of this Contract, prior to the commencement of any construction works.

The Principal advises that maintenance and operational access is required to all new and existing infrastructure.

12.2 Known Hazards

In accordance with the Work Health and Safety Law, the known hazards for this project identified by the Principal 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 statements of the hazards at the Site prior to the execution of the Works.

- Animals including insects, snakes and spiders that bite or sting.
- UV radiation exposure longer than 15 minutes.
Part B: Project Specific

- During significant wet weather events, the surrounding assets may overflow and surcharge causing safety risks and environmental damage.
- Serious personal injuries may transpire if the Contractor on site does not install the equipment in accordance with the specific manufacturer's installation procedures.
- There may be physical injury and microbiological contamination of persons coming into contact with the wastewater if the works are not properly managed or controlled by the Contractor on site, or if personal hygiene procedures are not followed.
- There may be manual handling injuries to the Contractor’s employees if the Contractor on site does not comply with the Work Health and Safety Act 2011 and any specific manufacturer's installation procedures are not followed.
- There may be risk of asphyxiation or other serious injuries if the Contractor on site does not comply with ‘Safe Entry to Confined Spaces’ Regulations and adhere to standard operating procedures.
- PUP and other services exist at or adjacent to the Works site. The existence, location, alignment, depth, size or type of PUP or service must be confirmed by the Contractor. There may be risk of disruption to PUP and users of the PUP or service if the Contractor does not adequately undertake responsibility to locate existing PUP and other services in advance of construction.
- Site is located within a major sewerage pump station site with at times other operations and maintenance activities occurring in the vicinity of proposed works.
- Presence of biological contaminants.
- Pumping stations to remain in operation at all times.
- Electrical and / or mechanical services safety.
- Working with live utilities.
- Construction safety possibly including confined spaces (work that will be carried out in or near a confined space).
- Safety of ‘others’.
- 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).
- 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).
- Use, handling and storage of hazardous chemical / dangerous goods.
- Operation of high risk plant and equipment (eg. crane).
- Presence of hazardous airborne contaminants (eg. gases and vapours or dusts like lead, silica or pesticides).
- Pressure equipment operation (including circulation/nutrient pumps and associated pipe work, pressurised equipment associated with fans).
- Restricted walkways and working platforms (temporary structure specifically erected to support access or working platforms).
- 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).
- Work involving structural alterations or repairs that require temporary support to prevent collapse.
- Working near water or liquid that poses a risk of drowning.
- Working on or adjacent to moving traffic.
- Working with asbestos
- Risk of explosion
12.3 Safe Work

Diligent adherence is required to all Legislative Requirements relating to work health and safety for all persons on the Site at all times. For the Works, the Contractor must provide the Superintendent, as and when requested, safe work method statements and/or safe work procedures showing how all potential hazards will be mitigated for the safe completion of the Works.

12.4 Sun Protection Requirements

Maintain at all times the minimum work health and safety 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 Superintendent for acceptance.

12.5 Confined Space

SPSB47 wet well and dry well has been assessed and classified as a confined space, as a person with the management and control of the workplace you must ensure so far as is reasonably practicable, that a worker does not enter a confined space before all WHS obligations including the confined space code of practice 2011 have been complied with in relation to that space including managing health and safety risks associated with a confined space, including risks when entering, working in, on or near a confined space, as well as the risk of inadvertent entry. The Contractor may as a function of the work activities create a confined space throughout the SPSB47 building through the extraction of AC pipework and the decommissioning of the existing OCF and must be fully responsible for the safe management of this space in line with WHS confined space legislation.

12.6 Working with Asbestos

Asbestos of more than 10 square meters of non-friable ACM is contained within the SPSB47 and is located within the two existing vent stacks to be removed.

As a person with the management and control of the workplace you must ensure that all asbestos that is likely to be disturbed by the refurbishment is identified and so far as is reasonably practicable, and that the asbestos is removed before the refurbishment is commenced as per the requirements specified by the WHS legislation and Asbestos code of practice. The removal of ACM must be carried out by licensed asbestos contractors in compliance with the Asbestos Code of Practice.

12.7 Working at heights

SPSB47 contains fall hazards that may require the use of fall prevention devices, as a person with the management and control of the workplace you must ensure that you manage risks to health and safety associated with a fall by a person from one level to another that is reasonably likely to cause injury to the person or another person as per the requirements specified by the WHS legislation and Managing the Risk of Falls at Workplaces Code of Practice 2011

12.8 Risk of explosion

As a person with the management and control of the workplace you must ensure that an ignition source is not introduced into a confined space (from outside or within the space) if there is a possibility of the ignition source causing a fire or explosion in the space.

12.9 Biological hazards

Manage the risks through appropriate controls for 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.
13. Environmental Protection

13.1 Environmental control
Comply with the provisions of all environmental protection provisions in this Contract, and with the requirements of any Legislative Requirements related to environmental protection.

Do not form new tracks, alter existing tracks, erect camps, remove trees or shrubs, cut fences, water, sewerage or power lines or any other such things without the written approval of the Superintendent.

Restrict dust caused by work under the contract to a minimum. Take all practical steps to minimise noise resulting from work performed under the Contract.

Dispose of litter and debris at an appropriately licensed waste disposal facility.

13.2 Erosion and sediment control
Prevent erosion of soil from lands used or occupied in the execution of the work under the Contract. Use methods to control flow velocity of stormwater run-off, to reduce erodibility of the underlying material, to reduce effects of winds, and to reduce the volume of run-off water.

Control sediment-laden run-off water from discharging direct to streams, ponds or any outfall system. Consider the use of silt fences, sedimentation ponds, silt traps or similar.

13.3 Disposal of contaminants or hazardous materials
Dispose of solid, liquid and gaseous contaminants or hazardous materials in accordance with Legislative Requirements, as follows:

- Solids - remove from Site to a recognised / approved location, or as approved or directed by the Superintendent.
- Liquid - subject to statutory and local requirements, dilute with water until an acceptable level of quality is achieved for discharge into the public sewer (wastewater) system. Provide the Superintendent with evidence that the key criteria for discharge have been met. Alternatively, store in approved vessels for disposal at approved locations.
- Gaseous - discharge to atmosphere such that they will be diluted with fresh air to reduce its toxicity to an acceptable and safe level.

13.4 Status of Contractor in terms of Environmental Protection Act
For this Contract, the Contractor will be considered independent, and not a servant or agent of the Principal, for the purposes of complying with the Environmental Protection Act 1994 (Qld).

13.5 Environmentally relevant activity
Some of the work to be undertaken under this contract will be an ‘environmentally relevant activity’ under the Environmental Protection Act 1994 (Qld), and is required to be undertaken under an environmental licence.

The Principal has obtained an environmental licence for this Work. Refer Part D Attachment 15 - EA EPVX01812014. Operate under the terms of this licence.

13.6 Environmental performance conditions
Compliance with environmental Legislative Requirements

- In addition to any other Clause of this Contract requiring compliance, comply with the requirements of all environmental Legislative Requirements relating to the Works.

Notification of Incidents and Compliance with orders and directions
Part B: Project Specific

- Notify the relevant administering agency immediately of any non-compliance with any environmental authority or other permit, licence or approval applying to the Works or any environmental Legislative Requirements relating to the Works or the Site.
- Notify the relevant administering agency immediately of any incident involving actual or potential serious or material environmental harm or environmental nuisance associated with the conduct of the Works. Provide such details of the incident as the Superintendent or CCR where applicable reasonably requires. In this Clause ‘serious or material environmental harm’ and ‘environmental nuisance’ have the same meanings they have in the Environmental Protection Act 1994 (Qld).
- Notify the Superintendent or the CCR where applicable immediately of any direction order or requirement being imposed on it by any agency responsible for administering environmental Legislative Requirements in respect of the Works or any aspect of the Contractor’s conduct in respect of the Works.

Indemnity - Environmental Harm

- Indemnify the Principal against all liability, loss arising from, and any costs, fines, charges or expenses incurred in connection with a breach by you of:
  - the conditions of any environmental authority or other approval or permit whatsoever pertaining to the Works; or
  - any relevant environmental Legislative Requirement arising out of or as a consequence of the carrying out by you of the Work under this Contract.

The Principal may inquire about compliance. The Contractor must:

- answer any reasonable request by the Superintendent or the CCR where applicable concerning your compliance with any environmental authority, or other approval, or any environmental Legislative Requirements concerning the Works; and
- respond to any reasonable direction of the Superintendent or the CCR where applicable concerning compliance with any environmental authority or other approval concerning the Works, in the case of you being an independent contractor working under the Principal’s environmental authority, or in the case of you being a dependent contractor.

The Contractor is aware of approvals obtained by Principal.

- The Principal will provide copies of the following environmental authorities and other approvals relating to the Works or provision of services which have been obtained by the Principal:
  - DEHP ERA EPVX01812014 Part D: Attachment 15 Permits and approvals
  - Odour Impact Assessment Airlabs Environmental has been prepared in line with the EHP Odour Guidelines refer to part D: Attachment 7.
  - The Contractor accepts that the terms and conditions of the above approvals have been read and understood and agree to be bound by them.

14. Quality Assurance System

Maintain a QAS for the duration of the Contract and ensure that appropriate Site conditions (both on-Site and off-Site as applicable) and plant requirements are provided and maintained to ensure that prescribed quality outcomes are achieved throughout the Contract period in accordance with AS/NZS ISO 9001.

Be responsible for the quality of all products and services supplied under the Contract, and provide all necessary facilities and resources to perform the inspection and tests required to achieve the specified quality.

The QAS must include ITPs and procedures and identify Hold Points appropriate to the deliverables specified in the Contract.

All inspection and test procedures must be submitted to the Superintendent within 21 days of the Date Acceptance of Tender, or not less than 14 days prior to any proposed testing whichever is the earlier, to allow
the Superintendent to comment. Any additional testing required will, as a result of the Superintendent’s comments, be reflected in the testing and at no additional cost to the Principal.

FAT and SAT procedures will at a minimum include the electrical test requirements and mechanical test requirements as per Attachment Part C: Attachment 1 Odour Control Facility Specification – design Fabrication, Supply, Installation and Commissioning together with relevant and current Australian Standard test requirements. Submit details and procedures for FAT and SAT testing as part of the ITP submission and within the time frames specified above.

The Principal specifies that the following are the minimum Hold Points that are required to be inspected by the Superintendent with respect to the execution of this contract (the following list is not comprehensive and it is subject to change by the Superintendent):

- Design documentation at nominated design gates or changes to design during construction
- Construction specific management plans outlined in Part B Milestone One Preliminaries
- Work methods
- Visual set out of proposed infrastructure
- Visual set out of temporary works infrastructure
- Demonstrated odour and H2S management system
- Manufacturer’s approved FAT prior to mobilisation of the OCF
- Compaction testing where applicable
- Placement of steel reinforcement where applicable
- Surface preparation prior to painting or bonding (such as epoxy or grout)
- Trenching is to be left open to facilitate visual inspection
- Placement and securing of formwork and/or false work
- All SAT including odour sampling

Inspection, testing and commissioning must include, but not be limited to, the satisfactory completion of the following activities:

- Visual inspections and physical testing or all materials and workmanship, during the execution of the works and at their completion to ensure that the works are to the specified standards and “fit for purpose”
- SAT and commissioning including the end of DLP
- Test results
- Submission of as-constructed drawings

Tests undertaken throughout the duration of the Contract must be submitted to the Superintendent not more than two Business Days following the date of testing. In the event that test results indicate non-compliance with quality targets, notification of non-compliances are to be notified to the Superintendent within not more than 24 hours of the time of the test.

Prepare and submit all necessary documentation and records as verification that installation, testing and commissioning has been successfully completed. All of the above requirements are to be satisfied before the issue of the Certificate of Practical Completion by the Superintendent for any portion of the Works.

In the event that any part of the Works performed under this Contract fail to meet the specified product or performance requirements, carry out all necessary remedial works at no further cost.

Give sufficient notice to the Superintendent to enable any materials or workmanship to be examined prior to incorporation into the finalised Works and must give sufficient notice to the Superintendent to enable sighting of any test results required by the Contract or ordering of any test results prior to incorporation of materials or workmanship into the finalised Works.
Unless otherwise specified, all testing to be carried out must be performed by an approved member of the NATA.

As part of commissioning and handover, issue the Superintendent three complete copies of the project QAS (i.e. all tests, certifications, signed ITP’s, FAT’s, SAT’s, test certifications).

**Inspection and Test Plans (ITPs) and Inspection Check Sheets (ICCs)**

The ITP must at all times be administered through the Contractor’s appointed Quality Manager and demonstrate through a documented process that the Works are installed to the requirements of the Principal’s Project Requirements. The ITP will define as a minimum;

- Activity
- Inspected By
- Method
- Acceptance Criteria
- Record Type including ICCs
- Pass Fail
- Signature of the Contractor’s Quality Manager

Support the ITP with records and project specific Inspection Check Sheets (ICCs). Records and ICCs are to be provided for justification for signoff of the Contractor’s ITP by the Contractor’s Quality Manager and may be requested at any time by the Superintendent.

### 15. Waste tracking

Legislative Requirements requires all handlers (being generators, transporters, and receivers) of trackable waste, as defined in Schedule 1 of the *Environmental Protection (Waste Management) Regulation 2000*, to record prescribed information about the waste.

Record the prescribed information about the trackable waste as detailed in Schedule 2 of the Regulation. Provide this information to DEHP on the approved form, or in any other prescribed manner.

DEHP’s approved form is available from all DEHP offices. Obtain approval from the Chief Executive of DEHP before using any other method to record and report the trackable waste.

Some examples of trackable waste are given below:

- Acidic solutions, or acids in solid form e.g. battery acid, hydrochloric acid.
- Basic (alkaline) solutions, or bases (alkalis) in solid form e.g. caustic soda, ammonia.
- Clinical and related wastes e.g. sharps (exemptions apply for sharps collected in public areas).
- Organic solvents e.g. white spirit, methyl ethyl ketone.
- Grease trap waste e.g. interceptor waste.
- Lead and lead compounds e.g. used lead/acid batteries.
- Mineral oils e.g. waste oil, oil filters, brake fluid, oily rags.
- Oil and water mixtures or emulsions, or hydrocarbon and water mixtures or emulsions.
- Sewerage sludge and residues including nightsoil and septic tank sludge.
- Surface active agents (surfactants) containing principally constituents and which may contain metals and inorganic material.
- Tyres.
- Waste from the manufacture, formulation or use of inks, dyes and pigments.
- Removal of asbestos.

The Contractor is to record and report all trackable waste to DEHP including the following as identified by the Principal.

- Removal of asbestos
- Activated carbon.
16. Interruption and/or diversion of services

The Principal discloses that aspects of these Works may impact on its ability to maintain required levels of service to the public and may impact adversely in respect to critical issues such as safety, environmental or other outcomes not acceptable to the Principal if not addressed adequately or if not appropriately coordinated with the Principal’s resources where they also need to be involved.

During the Works and further to the general information provided in the Construction and Environmental Management Plan for the Works (refer to Clause 20 of Part A), the Principal requires detailed disclosure of draft proposals for the following stages associated with interruptions and/or diversions of services or other critical Works:

- Management of odour nuisance during the decommissioning of the existing OCF
- Management of odour nuisance during the removal of the AC pipework located within the SPS wet well and installation with ducting between the wet well and the new OCF
- Extraction and replacement of AC ducting in the wet well and contingency planning required to ensure the risks to the operation of the Principals asset are mitigated

The following details are to be provided for the specified Works:

- a narrative of the Work and how the Work will be carried out with nominated staff roles and responsibilities (including any Principal roles), critical times nominated and a schedule of labour, materials, plant and sundries for each activity along with evidence of any possible preliminary work (e.g. location and levels for existing services, materials sourcing, prefabrication) in order to minimise service interruptions to less than five hours
- proposals for community consultation arrangements
- evidence of the competence and experience of the nominated key staff and/or sub-contractors proposed
- contingency plans based on risk assessment including relevant standby resources
- nomination of Principal/Contractor having access of site or nominated parts of the Site where the Principal is also involved in Work (for clarification of safety and environmental liability issues).

Details of the draft proposals are to be provided to the Superintendent for information and coordination aspects and until the Principal advises that it has no objection to the proposal, then this is a nominated Hold Point for the relevant Works.

These nominated Works then require the Superintendent’s direction permitting the Works to proceed in accordance with the Principal endorsement of the Contractor’s proposal (as modified where necessary to meet the Principal’s project objectives).

Allow for a minimum 10 Business Day consideration by the Principal for each proposal and for the costs of any reasonable requirements for the Works in the Contract Sum and Date for Practical Completion. Other requirements of the Principal, as determined by the Superintendent, may be claimed as a variation in accordance with the terms of the Contract or be valued as dayworks under the terms of the contract where so directed by the Superintendent.

The costs of providing any known diversion/interruption/temporary services must be included in the Contract.

Submit the final proposal, incorporating any comments from the Principal on the draft proposal, not less than 10 days prior to the planned commencement of the Works.

17. Work with the Principal

17.1 Operation of Sewerage Pump Station B47

Refer to Part A: General, Clause 6 for details on the expected notifications to disruption of service.

Sewerage Pump Station B47 is to remain fully operational at all times. No shutdown to the operation of the pumps, modification of the pumping characteristics or any other activity that impacts, or risks the operational philosophy of the pump station will be afforded without agreement of the Superintendent.
When undertaking works that may impact the operation of the pump station provide a Work Method Statement (WMS) outlining the method, timing and contingency planning to the Superintendent for approval two weeks prior to commencing the Works.

Afford access at all times to the Principal’s operational staff and will work with the Principal through the Superintendent to facilitate the requirements of each party.

Do not impede vehicle access to the pump station without agreement by the Superintendent and contingency planning in place.

Plan and submit to the Superintendent periods in which the SPSB47 access route will be closed for any reason.

17.2 AC Pipe Removal and Emergency Response Planning

Further to Part B Clause 17.1 Operation of Sewerage Pump Station B47, removal of AC pipework in an operation pump station presents a significant risk to the operation of the Principals asset.

Work with the Principal’s operational team to facilitate emergency response planning including the Principal’s operational staff should the Works impact the operation of the SPS B47 in any way. Discuss and agree a method at the 30% design workshop.

17.3 Use of Gantry Crane

The Principal provides in principle approval for the use of the SPS B47 gantry crane. Approval will be granted based on the following being demonstrated:

- An understanding in the use of the crane
- A work method to the satisfaction of the Superintendent

The Contractor must:

- Not exceed the working limits of the crane
- Operate the crane under an approved SWMS

17.4 Security of infrastructure

When there is a requirement to remove or alter any security infrastructure to enable delivery of the Works, supply to the Superintendent a detailed security/Site management plan for review not less than 14 days prior to commencement of the Works. The plan must detail how the implemented temporary security works ensure that the Site is rendered secure and how it interacts with the existing Principal’s 24 hour centre for the duration of the Works.

The temporary Site security must be in place for the duration of the Works or until such time that the proposed final security works has been implemented and accepted by the Superintendent.

18. Temporary power supply

Do not use private services, irrespective of whether approval to the use of such services.

Where portable power generation devices are used, such devices must be fitted with emission control devices to comply with local and/or statutory regulations and Legislative Requirements. The permitted times of use of such equipment may also be restricted by local and/or statutory regulations, comply with all such regulations and Statutory Requirements.

Upon request to the Superintendent and where available, the Principal may provide a limited power supply from existing facilities. The cost of providing this power will be to the account of the Contractor. Provide fused and earth leakage protected distribution board as the interface to the Principal’s power supply and the board will be installed by the Principal’s electricians who will establish the current load. Any costs associated with the installation and later disconnection of the board by the Principal’s electricians will be to the Contractor’s account.
The provision of this power is not guaranteed. Any inadequacy in supply e.g. interruptions, voltage, current does not relieve the Contractor of their responsibilities under this Contract.

19. **Temporary water supply**

Not applicable

20. **Water quality testing**

Not applicable

21. **Working in tidal areas**

Not applicable.

22. **Marine plants**

Not applicable.

23. **As-built documentation**

23.1 **General**

As-built documentation is required by the Principal to assure that the completed Works satisfy the following:

- Provide an accurate record of the As-built completed Works for location, level and attribute information.
- Ensure that the finished product is in accordance with the approved engineering and/or for construction drawings and applicable specifications.
- Ensure that the Principal is provided with an inventory of assets being handed over to the Principal for asset management purposes. The inventory must include, but is not limited to, item name, installed position/location, and assigned number.

Preparation and submission of As-built Documentation complying with the requirements of the Contract and in accordance with the Principal’s Requirements will expedite the process of acknowledgement of receipt and auditing of submitted As-built Documentation by the Superintendent.

23.2 **Format and content of As-built documentation**

Format and content of As-built documentation must comply with the following requirements and the requirements as stipulated within the Principal's Standard Specifications (refer to Part B: Project Specific) where such Standard Specifications apply to the Works. Should the requirements described herein differ from those contained within the relevant Standard Specifications. The requirements of the Standard Specification apply unless otherwise advised by the Superintendent.

23.3 **Work involving existing hard copy drawings only**

Where project drawings are not available electronically as AutoCAD or equivalent file format and only available in hard copy or scanned image PDF file format and the scope of the Works does not require preparation of new for construction drawings, the Contractor may be permitted, subject to the approval of the Superintendent, to amend a hard copy of the project drawings by adding As-built information onto these drawings. As-built information recorded in this manner will typically be provided on a hard copy of each drawing not smaller than A3 size, unless a larger size is requested by the Superintendent due to fine print or legibility concerns should smaller size drawing versions be utilised.

As-built information is to only be added using red pen. Marked up As-built drawings and/or documents prepared in this way must be endorsed by signing and dating and submitted to the Superintendent in hard copy together with an electronic PDF scanned image of the As-built drawing and/or document.
23.4 Works involving existing or proposed electronic formation drawings

Unless otherwise approved in writing by the Superintendent, all aspects of the Works will require the preparation of electronic versions of As-built documentation and associated information.

As-built documentation must be submitted in accordance with the current SEQ D & C code (http://www.seqcode.com.au/) with the As-built data via an ADAC XML and a drawing file, unless specified otherwise or agreed in writing by the Superintendent.

Where AutoCAD versions of project drawings are available, the Superintendent, within two weeks of receiving a request from the Contractor, will supply to the Contractor an electronic file copy of all Principal supplied electronic drawings in the specified format for the preparation of for construction and/or As-built drawings.

Within two weeks of receiving a request the Superintendent will supply an electronic file copy of the Principal’s standard template for preparation of new drawings. This standard template will be utilised to compile new for construction drawings and in turn be used in the preparation of As-built drawings.

All additional drawings prepared associated with, and arising from, the Works must also be submitted in accordance with the current SEQ D & C code, unless specified otherwise or agreed in writing by the Superintendent.

As-built documentation must meet the following minimum criteria:

- Show approved street names and correct lot numbers (current at the time of the works).
- Must be north facing.
- Show all significant variations from the contract drawings, including tolerances outside those specified in Standard Specifications (refer to Part B: Project Specific).
- Where the Contract contains the decommissioning of any of the Principal’s assets, these assets must be clearly marked on the As-built drawing by labelling the asset ‘Decommissioned’ and displaying a ‘strike out’ with cross(es) on the drawing.
- All drawings prepared in addition to the Principal’s supplied drawings, including but not limited to As-built Documentation associated with or arising from changes in the Contract scope of works, must be prepared using the same layout and format (i.e. titles, logos, drawing numbers, etc.) as that provided in the Principal’s supplied drawings and standard template drawings. In the event that the format of the standard template drawings and Principal’s supplied drawings differ, all drawings must be prepared using the standard template drawings, unless otherwise approved by the Superintendent.
- Incorporate drawing numbers supplied by the Principal following a request for the list of drawing numbers.
- The naming convention of the electronic files must be in the following format:
  - ‘The Principal’s supplied drawing #’ – ASCON (sheet ‘x’ of ‘x’).dwg
  - ‘The Principal’s supplied drawing #’ – SITE PLAN (sheet ‘x’ of ‘x’).dwg
  - ‘The Principal’s supplied drawing #’ – DESIGN (sheet ‘x’ of ‘x’).dwg
  - ‘The Principal’s supplied drawing #’ – LONG SECTION (sheet ‘x’ of ‘x’).dwg
- Incorporating password lock or equivalent security measures preventing opening of the drawing file or files by the Principal will not be accepted.
- Following identification of non-compliance, the Superintendent will notify the Contractor of the non-compliance and the Contractor must immediately correct the affected drawing files and within five Business Days of the initial notification by the Superintendent will resubmit a complete set of the revised electronic drawing files.
- Each individual As-built drawing must be submitted as an individual and single self-contained file. Submissions of As-built drawings as drawing sets incorporating x-references to shape font files, other layers or other AutoCAD files will not be accepted.
- As-built drawings must contain an individual layer with no shared cells.
Part B: Project Specific

- For As-built drawings or information incorporating As-built survey data, be endorsed by a Registered Surveyor.
- All drawings, including those with As-built survey data endorsed by a Registered Surveyor, be endorsed by a RPEQ.
- In addition to the above, the for construction detailed design drawings will be provided to the Contractor in AutoCAD format, and are to be marked-up electronically in AutoCAD and clouded to clearly identify all As-built changes made from the final revision issue of the for construction design drawings.

As-built drawings provided in electronic format must be submitted on CD or DVD with each CD or DVD clearly labelled with the following minimum information:

- Name of Project.
- Name of Contractor.
- Contract Reference No.
- Principal’s supplied drawing No.
- Date of preparation of CD/DVD.
- Unique disc number (e.g. Disc 1 of ….).

Each CD or DVD must also be accompanied by a Transmittal Note or equivalent clearly listing the drawing file contents of the CD or DVD. In addition, a complete listing of drawings, in an excel spreadsheet consistent with the Principal’s Systems Information Management requirements must be provided by the Superintendent.

23.5 Progressive recording of As-built documentation

Retain a single set of approved for construction drawings as control drawings onto which As-built documentation will be progressively recorded.

These control drawings must be clearly stamped ‘As-built drawings – record’ in red colour. Keep accurate and reliable records of As-built documentation throughout the term of the Contract and regularly enter the As-built documentation onto the As-built drawings using red colour pens.

The As-built drawings must be stored in a secure and separate location to other project drawings and are not to leave the Site office at any time. The As-built drawings will be made available for review by the Superintendent at any time and during Site meetings at the request of the Superintendent.

Review and acceptance of As-built drawings

As-built versions of all drawings, specifications, product manuals and ancillary documentation must be submitted for the review and acceptance by the Superintendent. Should any amendments be required by the Superintendent to any of the submitted As-built documentation, the Superintendent will provide notification of the required amendments and/or revisions, and within five days of receipt of details of the required amendments from the Superintendent such amendments must be made and As-built documentation resubmitted.

Should the Superintendent consider the submitted As-built Documentation to be incomplete, the Superintendent must notify the Contractor who must immediately compile the outstanding As-built Documentation and submit details to the Superintendent for review.

As-built survey information and certification

As-built documentation incorporating the As-built survey details must, unless otherwise advised in writing, be prepared based on:

- AHD unless otherwise advised in writing
- Survey coordinate system converted to Mapping Grid of Australia 1994 Zone 56 (MGA 94).

The origin of all levels and details of all survey control points or survey coordination details or notes utilised in compiling the As-built survey drawings are to be noted on the As-built drawings.

All PSM must be submitted with MGA94 horizontal coordinates, of at least 4th order, Class D accuracy (as defined by the ICSM and Practices for Control Surveys) and 4th Order, Class D heights on AHD.

For all Works, excluding those where the Works are located entirely within the boundaries of existing water and/or sewage treatment plants, As-built documentation must include details of survey control comprising as a minimum:
Part B: Project Specific

- For Works comprising the construction of new or replacement pipelines (e.g. water mains, reclaimed water pipelines, pressure or gravity sewer mains and access chambers) totalling more than 400 metres in total length:
  - Three or more registered PSM’s; and
  - Connection to the defined points of cadastre adjacent to the Site of the new infrastructure.

- For Works comprising the construction of new reservoirs, pumping stations and ancillary facilities (water, wastewater or reclaimed water):
  - A minimum of two (three preferred) registered PSM’s; and
  - Connection to the defined points of cadastre for the Site, or adjacent to the Site, of the new infrastructure.

- For all other Works located within or adjacent to road reserves or public areas:
  - A minimum of two (three preferred) registered PSM’s; and
  - Connection to the defined points of cadastre adjacent to the Site of the new infrastructure.

For all Works located entirely within existing sewage or water treatment property and/or sites, As-built drawings for any new facilities, structures or infrastructure constructed as part of the Works must include details of survey control comprising as a minimum:

- Details of existing or newly constructed permanent reference marks from which the new infrastructure has been, and can be, referenced.
- Connection to the defined points of cadastre for the boundary of the treatment plant site.

Where agreed by the Superintendent and at the request of the Contractor, the Principal’s survey officers, through the Superintendent, may be available to discuss As-built survey data requirements with the Contractor. This may include, but not be limited to, clarification of survey conversion or adjustment factors applicable to the Gold Coast region and to ensure consistency of survey coordination with the Principal’s base data requirements.

As-built drawings incorporating As-built survey details must be certified by a Registered Surveyor under the provisions of the Surveyors Act 2003 (Qld) (as amended) using the following certification statement (or similar to the satisfaction of the Superintendent):

```
Registered Surveyors Certification

I, ................................................................. being a Registered Surveyor registered under
the provisions of the Surveyor’s Act 2003 (Qld) (as amended) hereby certify that the details,
vertical and horizontal locations, measurements and dimensions shown on this drawing are
a true and correct record of the As-built information, and that this drawing complies with the
drafting and format requirements of City of Gold Coast Council.

Signed: .................................................................................................................................
Registered No: .......................................................... Dated: ...........................................
```

Certification of As-built documentation
All As-built documentation must be certified by a RPEQ registered under the provision of the *Professional Engineers Act 2002* (Qld) using the following certification statement (or similar to the satisfaction of the Superintendent):

**Registered Professional Engineer of Queensland Certification**

I, .......................................................... being a Registered Professional Engineer registered under the provision of the Professional Engineers Act 2002 (Qld) (as amended) hereby certify that the As-built information shown on this drawing is a true and correct record of the Works performed.

Signed: ........................................................................................................................................

RPEQ No:........................................................ Dated: ...............................................................

All As-built drawings are to be submitted under cover of a certification sheet as follows:

### Consulting Engineer’s Certificate and As-built certification

<table>
<thead>
<tr>
<th>Project/Contract Name or Title:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Number:</td>
<td></td>
</tr>
<tr>
<td>Works to which Certification relates:</td>
<td></td>
</tr>
<tr>
<td>Project Location/Site Details Real property description (if applicable):</td>
<td></td>
</tr>
<tr>
<td>Name of street(s) where works located (include intersecting streets) at:</td>
<td></td>
</tr>
<tr>
<td>Relative humidity:</td>
<td></td>
</tr>
<tr>
<td>Company Name:</td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
</tr>
<tr>
<td>Phone Number:</td>
<td></td>
</tr>
</tbody>
</table>

I, ..................................................being a Registered Professional Engineer registered under the provision of the Professional Engineers Act 2002 (as amended) and a duly authorised representative of .......................... .......................................................... do hereby certify that the information shown on the as-built drawings and ancillary documentation as attached and listed in the following table is a true and correct record of the Works performed (including sizes, types, classes, materials etc.), and that we have exercised reasonable skill, care and diligence to ascertain that the Works described have been executed in accordance with:

- The approved Engineering Drawings, Specifications, Development Guidelines and relevant Australian Standard Code of Practice.
- Good engineering practice and to a satisfactory standard of workmanship.
- Relevant Local, State and Federal legislations, regulations and By-Laws.

### Document Details

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Drawing No. or Document No.</th>
<th>Revision</th>
<th>Title of Document or Drawing</th>
<th>Date of Issue</th>
<th>Signature of person authorising issue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We further certify that the as-built information submitted herewith (including survey information prepared by others) indicates to the best of our knowledge and belief that the completed Works represent a true and accurate record of what has been constructed within the specified tolerances required by the Principal.

We further certify that all significant variations from the approved Engineering Drawings (outside the specified tolerances) have been submitted to the Principal for approval and are incorporated in the ‘as-built’ information.
Amendment to As-built Documentation during Defects Liability Period

Should it be found, subsequent to the issue of a Certificate of Practical Completion for all or any part of the Works that any of the As-built Documentation fail to correctly represent the As-built conditions, the Superintendent will notify the Contractor of the identification of inaccurate information and be entitled to require amendments to the relevant As-built Documentation. Within 14 days from the receipt of notification, resubmit amended drawings for review by the Superintendent.

No additional costs will be deemed payable to the Contractor arising from or associated with activities, either on-Site or off-Site, to verify As-built details and undertake any required amendments to earlier versions of As-built Documentation.

Operations and maintenance manuals

Subject to the written approval of the Superintendent, draft operations and maintenance manuals are to be submitted to the Superintendent no later than 14 calendar days prior to the commissioning of each infrastructure facility and/or item of installed equipment (e.g. switchboard, pumping equipment, or valves/pipework) associated with each Milestone Separable Portion, or the Works, as applicable.

Preparation and submission of operations and maintenance manuals in a form complying with the requirements of the relevant Principal’s standard specifications will expedite the process of checking of submitted draft operations and maintenance manuals and ancillary information by the Superintendent and subsequently allow for prompt acceptance of the submitted information.

Test results from FAT, SAT and commissioning, including all other test results associated with the Works, must be included within the operations and maintenance manuals, in both hard copy and electronic.

During commissioning, or modification of the installed equipment as a result of commissioning outcomes, any modifications to the draft operations and maintenance manuals and/or As-built documentation must be marked onto three control copies of the draft operations and maintenance manuals and/or As-built documentation. Two sets of these marked up versions of the documents must be handed over to the Superintendent on the day of commissioning irrespective of whether or not the facility or item of plant or equipment is immediately put into operation by the Principal. The third set of the marked up versions of the documents be retained by the Contractor, who immediately proceeds to amend the electronic versions of the draft operations and maintenance manuals and/or As-built Documentation.

Submit final operations and maintenance manuals and/or As-built documentation, both electronic and hard copy versions in accordance with the requirements of the Contract.

The Superintendent will not grant Practical Completion for the Works until the final operations and maintenance manuals and As-built documentation applicable to the Works has been accepted by the Superintendent. Where the Contract comprises Separable Portions, the Superintendent will not grant Practical Completion for each Separable Portion until the final operations and maintenance manuals and As-built documentation applicable to that Separable Portion has been accepted by the Superintendent.

Where the nature of the Works required are upgrade of sewerage pump stations, air valves and odour control units etc, provide relevant operational and maintenance information of the new Works that has been undertaken and/or provided. If any new Works has effected, altered, or changed any function or operational procedure of pre-existing equipment (i.e. pump station) or components from its existing presence, provide the entire operational procedure that includes those changes unless the Superintendent instructs otherwise.
23.6 **Warranties and Manufacturer’s Guarantees**

Before applying for a Certificate of Practical Completion, provide the Superintendent with copies of all guarantees and/or manufacturers’ warranties or guarantees in respect of manufactured items of equipment or features.

Ensure the warranties or guarantees give the name of the Principal as the warrantee, and that these are furnished by the warrantor direct to the Principal.

24. **Interfaces with Gold Coast Rapid Transit**

Not applicable.

25. **Work within easements**

There are no easements located within the project footprint associated with the Works. All of the Works are located within the Principals own land with a small extent of the works extending past the property boundary to tie into existing AV manhole located within the site access.

26. **Cultural Heritage**

The Principal discloses the cultural heritage aspects of the Site have been reviewed in line with the Duty of Care guidelines gazetted with the *Aboriginal Cultural Heritage Act 2003* (Qld) and the Principal’s Indigenous Cultural Heritage Officer advises that the Sites are ‘Category 4 under the ‘Duty of Care Guidelines’ as it has been previously disturbed, no further assessment required’.

27. **Standard Specifications**

These specifications are supplemented by the following Standard Specifications and Standard Drawings.

Unless specifically amended in this document, all of the Works must be undertaken in accordance with the requirements of the current edition of the Principal’s Standard Specifications and Drawings:

- Project Specification Part C: Attachment 1 “Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning”; then
- GCWW Supplementary Mechanical and Electrical Specification 2017 Refer Project Specification Part C Attachment 2; then


Works not adequately covered by the above Standard Specifications must be delivered in accordance with the following standards:

- Australian Standards/British Standards/American National Standards/Institute Standards.
- Current Manufacturer’s Standards and Specifications.
- Water Services Associated of Australia (WSAA) Standard Specification and Drawings;
- City Assets specification for Current City Plan, Land development Guidelines Standard Specification and Drawings;
- Comply with the relevant guidelines and codes;
- All Digital City projects must comply with the Digital City Data Policy standards and procedures.

1. **Odour Control Unit Technical Specification**

Odour Control Facility must comply with "Odour Control Facility Specification - Design, Fabrication, Supply, Installation and Commissioning". Dispensations must be agreed to in writing by the Principal.

2. **GCWW Mechanical and Electrical Specification September 2017 V1.04**


4. **City of Gold Coast Standard Drawings DRG 02-602**
Part D: Attachments

1. Site Locality Plan
2. SPSB47 Key Features
3. Functional Scope of Work
   3.1 Functional Scope of Work – General
   3.2 Removal and replacement of AC dry well vent stack
   3.3 Removal and replacement of AC wet well vent stack
   3.4 Existing CF and electrical equipment to be decommissioned
   3.5 Functional design requirements – Foul Air Diversion
   3.6 Functional design requirements – New OCF
   3.7 Removal and replacement of refurbished AC dry well vent stack
4. Site services layout
5. SPSB47 OCF Airflow Analysis
6. SPSB47 Hydrogen Sulfide Monitoring and Species Sampling
7. Odour Impact Assessment- Airlabs Environmental 2017
8. As Constructed Drawings
9. GCWW SPS A03 wet well AC pipe removal photos
10. Gold Coast 2018 Commonwealth Games impact zone
11. GCWW Key Entry Form
12. Safety Management Plan (SMP) – Minimum requirements
13. Quality Management Plan (QMP) – Minimum requirements
14. Acid Sulfate Soils Mapping
15. Permits and Approvals
For more information

P  1300 GOLDCOAST (1300 465 326)
W  cityofgoldcoast.com.au