**CONTRACT SPECIFIC REQUIREMENTS**

**CH10 WORKS GENERAL PROVISIONS**

1. **CONTRACTOR'S COMPOUND AND SUPERINTENDENT'S REQUIREMENTS**

*Information to be included in this section:*

*Sketch of location(s) of land available to Contractor if Principal making land available for use by the Contractor.*

*Planning requirements (approvals in Hills Face Zone, etc.)*

*Details of the Superintendent's requirements:*

*Buildings*

*Telephone, Power, Fax, Furniture, etc.*

*Lunch room and toilet facilities*

*Meeting Room (6 m x 3 m minimum)*

*Examples:*

*The area shown on Sketch CH10 is available for the Contractor's use during the Contract. If not submitted previously the Contractor must submit information on the proposed usage of the allocated area.*

*The Contractor must obtain a written agreement with the landholder and local Council to establish a compound or any area used for the storage of plant or materials. Copies of these agreements must be submitted to the Superintendent prior to establishment of the compound. A written release must be obtained from the landholder after de-establishment.*

*Example of Superintendent's Site Compound:*

*The Contractor must allow for the unloading (at the commencement of the Contract) and loading (at the completion of the Contract) of the Superintendent's site office.*

*Within the main compound the Contractor must provide an area for the Superintendent's site office (12 m x 3 m) and an adjacent area (12 m x 6 m) for vehicles.*

*These areas must be enclosed by a 2.15 metre high galvanised chain link security fence installed on outward cranked posts topped with three (3) strands of barbed wire (or similar and approved) and must be provided with a hard standing area of a minimum of 100 mm of rubble in front of the site office and for the vehicle parking area.*

*The following must be provided and connected to the site office with all connection charges at the Contractor's expense:*

1. *Power supply 240 V, 45 amps.*
2. *Connection of power to the Superintendent's site office must comply with AS 3000 "SAA Wiring Rules" and must be carried out by an electrical worker who is licensed to perform any electrical works.*
3. *The connection must include an operational check of the site office residual current device (RCD) in accordance with AS 3760 "In-service Safety Inspection and Testing of Electrical Equipment".*
4. *The Contractor must issue a Certificate of Compliance for the connection of electricity including the RCD check.*
5. *Two telephone lines.*
6. *Water supply and waste connections to one toilet, one hand basin and one kitchen sink.*

*The Principal will pay only the operating costs of telephones for the duration of the Contract and accounts for these costs must be made out in the name of the Principal.*

*Prior to completion of the Contract, the Contractor must clean up all compound areas and leave them in a condition comparable to that encountered at the time of Possession ofSsite. Payment for the establishment of the Superintendent's site office will be made under "Establishment Charges" in the Schedule of Rates.*

1. **SUPPLY OF WATER**

*Details for rural projects to be included.*

1. **EXPLOSIVES**

Blasting is permitted / not permitted

1. **DPTI INTERVENTION LEVELS**

*Intervention levels for:*

*Pavement potholes*

*Individual pot hole of:*

*either depth of 50 mm and diameter of 300 mm in traffic lanes, or*

*depth of 30 mm and diameter of 300 mm in bicycle lanes or pedestrian crossing / walk through.*

*Minor Pavement repairs (digouts)*

*Any individual areas of distressed pavement ≤ 20 m2 with:*

*either deformation of 50 mm under a 1.2 m straight edge in traffic lanes, or*

*deformation of 30 mm under a 1.2 m straight edge in bicycle lanes or pedestrian crossings.*

*Pavement edge break*

*Pavement edge break of 200 mm into the pavement from the nominal edge of seal.*

*Shoulder edge drop*

*Shoulder edge drop of 75 mm.*

*Maintenance of signs*

* *Missing signs must be replaced.*
* *Signs must be cleaned or replaced when legibility of the sign is ≤50%.*
* *Sign supports must be straightened when greater than 10% from the vertical.*

*Sweeping*

*Pavement must be swept where skid resistance is affected.*

1. **PAYMENT FOR EARTHWORKS AND STORMWATER DRAINAGE**
	1. **Definitions**

For the installation of stormwater drainage, “Rock” is defined as material which cannot be excavated by a Class 20 excavator. Refer to Part R10 “Earthworks” for definitions applicable to earthworks.

* 1. **Unsuitable Material and /or Rock**

The Contractor is only entitled to separate additional payment for the treatment of unsuitable material and /or excavation in Rock if:

1. these are a latent condition and the Contractor is entitled to payment for latent conditions; and/or
2. a Provisional Sum or Provisional Quantity for this work has been included in the payment schedules.

The following will apply to the payment:

1. payment will be made at the rates in the Schedule of Rates or Schedule of Rates for Daywork where appropriate;
2. payment will be made for excavation of unsuitable material / Rock, loading, hauling, backfill and
supply / installation of geotextile as appropriate;
3. only “extra over” costs will be paid for; and
4. volumes will be calculated on the basis of cubic metres – solid.
	1. **Proof Rolling**

Separate payment for proof rolling will only be made if a Provisional Sum or Provisional Quantity has been included in the schedules which provides for payment for proof rolling, in which case proof rolling will be paid for at rates in the Schedule of Rates for Daywork as appropriate.

If no Provisional Sum or Provisional Quantity for proof rolling is included in the schedules, no separate payment will be made for this work.

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**CH40 UTILITY SERVICES**

1. **SPECIAL REQUIREMENTS AND CONTACT PERSONS OF SERVICE AUTHORITIES**
	1. **Special Requirements**

*Any special conditions/requirements must be identified with the service authority during development of the specification and be included in this area. Removal of hazardous items or substances, such as asbestos conduits/pipes and pits require a special payment item in the Schedule.*

* 1. **Contact Persons**

**(a) Telecommunications:**

Mr / Ms .....................................

........................................

........................................

Telephone: .........................

**(b) Water Supply Authority:**

Mr / Ms .....................................

.........................................

.........................................

Telephone: ...........................

**(c) Electricity Authority:**

Mr / Ms .....................................

........................................

........................................

Telephone: ..........................

**(d) Gas Authority:**

Mr / Ms .....................................

.........................................

.........................................

Telephone: ..........................

A Gas Authority representative must be on site during excavation near gas mains and any damage to the protective coating of the gas main must be reported immediately.

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**CH20 PROVISION FOR TRAFFIC**

1. **GENERAL**

*The amount submitted for the item for traffic provisions and control in the Schedule of Quantities and Prices / Schedule of Rates must not be less than 3% of the Contract Sum.*

1. **ADDITIONAL TRAFFIC PROVISIONS**
2. **CONSTRAINTS**

The Contractor must not detour traffic without the written approval of the Superintendent.

The Contractor must not detour traffic along council roads without the written approval of the relevant council. The Contractor must submit to the Superintendent a copy of the council approval for the detour no later than 24 hours prior to operation of the detour.

1. **ROAD SAFETY AUDITOR**

Endorsement of the Traffic Management Plan by a Road Safety Auditor (refer Clause CH20.4) is required.

1. **NOTIFICATION OF ROAD WORKS**

The Contractor must erect advance notice signs (TES 13004-1) at the locations listed below.

*Specify: location and number of signs required, dates applicable and whether the Principal will supply the signs. Detailed TES drawings for inclusion in contract documents are available from Statewide Operational Coordination Group,*

The Contractor must remove the signs upon completion of the Works.

1. **COUNCIL LIAISON**

*The Contractor must arrange a meeting with the Superintendent and relevant Council Contract Person (refer to Part  CH10).*

1. **NIGHT WORK**

The Contractor must undertake work at night only with the approval of the Superintendent. All night work must

be in accordance with DPTI Environmental Instruction No. 21.7 “Management of Noise and Vibration: Construction and Maintenance Activities”available from the following website: <http://www.dpti.sa.gov.au/standards/environment>

.

***Constraints***

*Specify Restrictions / limitations*

*Hours proximity to dwellings*

*Noise*

*Machinery*

*Specify Approvals required*

*Specify Notification requirements. To locals.*

1. **TEMPORARILY TRAFFICKED AREAS**

***Earthworks***

*Earthworks must be constructed in accordance with the requirements of Part R10 "Construction of Earthworks". All fill must have a Plasticity Index less than 18 when tested in accordance with TP 141. Batter slopes must be no steeper than 2 horizontal to 1 vertical.*

*When no longer required, temporarily trafficked areas must be rehabilitated and suitable excavated material incorporated in the permanent work.*

***Pavement***

***a) Subbase***

*200 mm minimum compacted thickness of PM2/20 20 mm pavement material placed in one layer and compacted to not less than 96%.*

***b) Base***

*150 mm minimum compacted thickness of PM1/20 20 mm pavement material placed in one layer and compacted to not less than 98%.*

*The minimum frequency of compaction testing must be one test per 300 square metres per layer.*

***c) Ramps***

*Must be shaped and span the access or egress point to allow restricted traffic movement.*

*Ramps to side streets must be constructed, from materials capable of meeting all traffic loadings, shaped and compacted to not less than 90%.*

*Ramps to residential or commercial premises must be from local fill or quarry rubble.*

***Drainage***

*The Contractor must adequately drain temporarily trafficked areas. This must include the installation of temporary culverts where necessary.*

***Surface Treatment***

*All temporarily trafficked areas must be sealed prior to opening to traffic.*

*The surface treatment must be a primerseal and a surface course of a minimum thickness of 30 mm of AC10 asphalt. (spray seal for rural jobs)*

*The constraints on asphalt work with respect to weather conditions (detailed in Clause R28.4 "Constraints to the Placement of Asphalt") do not apply to temporarily trafficked areas. All other aspects of sealing work must comply with Part R26 "Application of Sprayed Bituminous Surfacing" and Part R28 "Construction of Asphalt Pavements".*

***Pavement Marking***

*Temporary pavement marking must be applied to sealed temporarily trafficked areas prior to opening to traffic. Temporary pavement marking must consist of a minimum of 100 mm wide continuous separation line applied in accordance with Part R46 "Application of Pavement Marking".*

***Removal***

*The temporary pavement marking and temporarily trafficked areas must be removed when no longer required.*

*Where the shoulder has been sealed for the purpose of traffic management, the Contractor must remove the seal when no longer required and rehabilitate the shoulder to the standard specified.*

***Standard of Construction Of Temporarily Trafficked Areas***

*The standard of construction must be:*

|  |  |  |
| --- | --- | --- |
| *Width* |  | *12 m* |
| *Crossfall* |  | *3%* |
| *Minimum radius on a curve* |  | *300 m* |
| *Maximum grade* |  | *5%* |
| *Maximum change in grade without a vertical curve* |  | *1%* |

*Minimum length of vertical curve must be calculated using the formula L = KA*

 *where L = length of vertical curve,*

 *K = length required for each 1% change in grade = 15 m,*

 *A = change in grade %.*

1. **TEMPORARY PAVEMENT MARKINGS**

*All temporary road markings must be in accordance with Part R45 “Supply of Materials for Pavement Marking”.*

*The Contractor must supply and install temporary road markers where any pavement marking is completely removed. Temporary road markers must be placed on all separation lines, on the outlines of painted medians and on the edgelines of overtaking lines and intersections to assist with lane delineation, unless otherwise directed by the Superintendent.*

*For centreline delineation, temporary road markers must be installed at*

1. *24 metre spacing where the posted speed limit is 80 km/h; and*
2. *12 metre spacing where the posted speed limit is less than 80 km/h.*

*For the edge line delineation the temporary road markers must be installed at 24 metre spacing.*

*Stop bars and give way bars which require removal or will be covered must have their locations marked prior to commencing work. All stop bars and give way bars must be reinstated prior to opening to traffic as follows:*

1. *White road marking paint or similar product approved by the Superintendent.*
2. *Bar width to be 150 mm.*
3. **TEMPORARY BARRIERS**

*Temporary longitudinal barriers must comply with AS/NZS 3845 “Road safety barrier systems” and be approved for use by the Principal.*

*The DPTI register of temporary longitudinal barrier systems that have been approved for use is available on request. The use of the barrier system selected by the Contractor must conform to the conditions imposed as part of the approval.*

*Specify:*

* *location*
* *extent*
* *type of temporary longitudinal barrier required for traffic separation,*

*From known Construction risks.*

*Opposing traffic movement. (high-speed and/or high traffic volumes are involved)*

*Hazardous locations*

*Work zone protection (OHS& W risks)*

*Pedestrian movements.*

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**CH30 SURVEY**

* + - 1. ***SURVEY SETTING OUT AND VERIFICATION CERTIFICATES - ROADWORKS***

***1.1 Setting Out***

*The Surveyor must set out the following works:*

* + 1. *Drains and drainage structures other than the culverts at property accesses.*
		2. *Light pole footings.*
		3. *Levels for asphalt overlay, refer Clause R286.1 "Overlay placed to Specified Design Levels".*
		4. *................*
	1. ***Verification Certificates***

*The Contractor must provide the following verification certificates vide Clause 2.2 "Verification Certificates":*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***String label chainage at interval of reference string*** | ***Offset from reference string*** | ***Design level*** | ***Actual level*** | ***Difference between actual and design levels*** | ***Displacement from horizontal position*** |
| *Stripping Topsoil* | *yes* | *yes* | *-* | *-* | *-* | *-* |
| *Fills* | *yes* | *yes* | *-* | *?* | *?* | *-* |
| *Subgrade* | *yes* | *yes* | *yes* | *yes* | *yes* | *-* |
| *Subbase* | *yes* | *yes* | *yes* | *yes* | *yes* | *-* |
| *Base* | *yes* | *yes* | *yes* | *yes* | *yes* | *-* |
| *Earth Drains* | *yes* | *yes* | *yes* | *yes* | *yes* | *yes* |
| *Kerb and Gutter* | *yes* | *yes* | *yes* | *yes* | *yes* | *yes* |
| *Median Kerb type 2, 3, 4, 4A* | *yes* | *yes* | *yes* | *yes* | *yes* | *yes* |
| *Median Kerb type 1, 5, 6, 7, 8* | *yes* | *yes* | *-* | *-* | *-* | *yes* |
| *Pipes and box culverts* | *-* | *-* | *yes* | *yes* | *yes* | *yes* |
| *Drainage structures* | *-* | *-* | *yes* | *yes* | *yes* | *yes* |
| *Lighting* | *yes* | *yes* | *yes* | *yes* | *yes* | *yes* |

*Additional information provided for:*

***Stripping Topsoil***

*The verification certificate must confirm that stripping of topsoil was confined to the chainages set out in the Geometric Details applicable to the Reference String, top of batter and batter interface string.*

*Additional strings must be taken as necessary to define the stripped surface, but must not be spaced at distances exceeding 20 m.*

***Cuts / Fills***

*The verification certificate must confirm that fills are located within the horizontal tolerances specified in accordance with the chainages set out in the Geometric Details applicable to the Reference String, top of batter and batter interface string.*

*Where the length of batter exceeds 15 m additional data must be obtained at the batter mid-point.*

*Verification certificates must be accompanied by cross section plots on transparent or translucent film. The plots must be to the same scale and must reference the same datum and chainages as those shown on the Drawings. In each case the reference string locations must be indicated.*

***Subgrade, Subbase, Base and Earth Drains***

*The verification certificate must confirm that pavement layers are located within the horizontal tolerances specified in accordance with the chainages set out in the Geometric Details for the applicable reference string and:*

*Edge of shoulder strings for subgrade and subbase,*

*Edge of bitumen strings for base, except for unsealed roads where the edge of shoulder string must be referenced.*

*Drainage string for earth drains. This must be verified every 10 m.*

***Kerb, Kerb and Gutter, Side Drains, Property Crossovers and Dish Drains***

*The verification certificate must confirm that kerb, kerb and gutter, side drains, property crossovers and dish drains are set out at the chainages listed in the Geometric Details in accordance with the applicable strings indicated on the Drawings for those elements of work.*

***Culverts and Drainage Structures***

*The verification certificate must confirm that culverts and drainage structures are located within the horizontal tolerances specified in accordance with the chainages set out in the Geometric Details applicable with the strings indicated on the drawings for those elements of work.*

*For culverts, levels must be taken at the inlet and outlet and at intervals not exceeding ... m (e.g. 50 m) along the length of the* culvert. For drainage structures, an invert level is required.

1. ***SURVEY SETTING OUT AND VERIFICATION CERTIFICATES - STRUCTURAL***
	1. ***Setting Out***

*The Surveyor must provide the following:*

1. *Prior to commencement of construction, a certificate showing details of setting out points for the construction of the bridge.*
2. *Certification for the following items:*
	1. *Setting out of pile locations prior to pre-drilling and/or driving.*
	2. *Setting out and levels of footings prior to placing concrete.*
	3. *Setting out and levels of piers prior to placing concrete.*
	4. *Setting out and levels of abutment sill prior to placing concrete.*
	5. *Setting out and levels of deck prior to placing of concrete.*
	6. *Setting out and levels of kerb and gutter prior to placing concrete.*
	7. *Setting out and levels of bearing pedestals.*

*For (v) the following must apply:*

 *(hogs in beams, allowance for deflections, adjustment of design levels??? - to be followed up with Structural Services).*

* 1. ***Verification Certificates***

*The Surveyor must provide the following verification certificates:*

1. *Alignment and spacing of piles on completion of driving.*
2. *Span lengths and location and levels of bearing pedestals.*
3. *Alignment and levels of deck after placing concrete.*
4. *Alignment and levels of kerb and gutter after placing of concrete.*
5. *Alignment and position of Reinforced Soil Structures (vide Clause 420.5.4).*

*These verifications must be accompanied by sketches showing relevant details. For items (c) and (d), the sketches must show design levels (amended as necessary to compensate for hogs in beams) and actual levels.*

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**CH50 ENVIRONMENTAL PROTECTION ISSUES**

**CONTRACT SPECIFIC REQUIREMENTS**

**CH50 ENVIRONMENTAL PROTECTION ISSUES**

1. **FLORA PROTECTION**
	1. ***Vegetation Clearing and Pruning***

*At the completion of vegetation removal works the Contractor must provide the Superintendent with a register and plan of all vegetation (including individual significant trees) that has been removed as a result of the construction works.*

*OR*

*Every three months the Contractor must provide to the Principal a register and plan of all vegetation (including individual areas of native and regulated/significant trees) that has been removed as a result of the works. The register and plan must show all vegetation removed using the associated number in the vegetation survey(s) It must include a summary of vegetation impacted during the reporting period as well as cumulative impact since commencement of the Contract and for native vegetation the offset required to achieve a Significant Environmental Benefit under the Native Vegetation Act.*

* 1. ***Care of Remaining Vegetation***

*The following trees have been identified as [insert special characteristic of trees, eg, having local heritage significance, Regulated Trees]:*

1. *[identify trees]*

*The Contractor must contact the Superintendent 5 working days prior to works occurring within the vicinity of these trees, to allow for agreement on the work activity zone and methods.*

*[Insert any revegetation requirements]*

1. **FAUNA PROTECTION**

*The Contractor must coordinate a fauna inspection of the construction area with the aid of suitably qualified persons (i.e. a zoologist or person with tertiary qualifications in natural resource management), before vegetation clearance is undertaken. Any fauna located within the construction area must be either relocated or dealt with in accordance with the recommendations made by the qualified persons.*

*The Contractor must provide 5 working days notice prior to removing the hollows:*

1. *[identify hollows]*

*The Contractor must remove these hollows under the supervision of the Superintendent and store them in an approved secure storage area until required. Additional hollows discovered during the tree removal works must also be retained and stored within the secure storage area.*

*The Contractor must place the hollows in agreed locations as directed by the Superintendent.*

*In the event that hollows are discovered during the tree removal works, the Contractor must remove the hollows carefully and notify the Superintendent. The Contractor must store the hollows within a secure storage area until instructed by the Superintendent.*

1. **WEED, PEST AND DISEASE CONTROL**
	1. ***General***

*The Contractor must be responsible for removing and destroying all declared weed species within the Contractor’s Activity Zone prior to construction, and undertaking monitoring and control after construction to control the re-establishment of these species. See details below / attached weed management plan.*

*The following species, which are known to exist at the project site, are declared weeds under the Natural Resources Management Act 2004:*

1. *[list species]*
2. *[list species]*
3. *[list species]*

*The Contractor must be responsible for property maintenance (including vegetation slashing) required by the Fire and Emergency Services Act 2005.*

*All weeds at a height greater than 400 mm must be slashed and weed control must be carried out in accordance with Part L48 “Herbaceous and Woody Weed Control”.*

*Weed identification material must be made available on site, to all the Contractor’s employees. Weed identification must be included in the Contractor’s induction procedure.*

*Any feral/pest fauna species found on the site that need to be removed due to construction works must be taken to the RSPCA or the Animal Welfare League for action at the Contractor’s cost.*

* 1. ***Phytophthora***

*Phytophthora has been identified as being present within or adjacent to the Contract site.*

*OR*

*The Contract site has been identified as being a high risk Phytophthora site in accordance with the DPTI Environmental Instruction 21.3 Phytophthora (Dieback) Control.*

1. **WATER QUALITY PROTECTION**
	1. ***Water Quality Monitoring***

*The Contractor must prepare and implement a Level [insert appropriate level] Water Quality Monitoring Program (WQMP), in accordance with DPTI’s Water Quality Monitoring Manual for Construction Sites. Water Quality Monitoring must be undertaken by the Contractor at the nominated level until Practical Completion or until such time that a negotiated lower level or cessation of monitoring is agreed between the Principal and the Contractor. The WQMP must be submitted with the SEDMP.*

*Where fixed water quality monitoring devices are to be installed on land not owned by the Principal, the Contractor must obtain approval from relevant landowner in advance, to ensure that monitoring devices are in place prior to the commencement of construction.*

*Stormwater retained in any basin or storage device must be treated prior to discharge (including discharge to groundwater) to the following standard:*

1. *[insert desired standard]*

*The WQMP will detail proposed treatment methods.*

*Works undertaken within a watercourse must comply with the following requirements:*

1. *works must not cause destabilisation of the bed and banks of the watercourse*
2. *all excavated material must be removed from the watercourse and securely stored away from the watercourse to ensure that it does not return to the watercourse*
3. *any material placed in and around the bed and banks of the watercourse must be compacted to prevent the movement of loose material and downstream sedimentation.*

*Should the proposed construction methodology involve dredging or earthworks drainage, the Contractor is responsible for obtaining any licences required under the Environment Protection Act 1993.*

1. **EROSION AND SEDIMENT CONTROL**
	1. ***Soil Erosion and Drainage Management Plan***

*The SEDMP will specifically detail how intercepted groundwater collected during the course of the construction activities will be managed and treated prior to release.*

*The Contractor is to prepare a Detailed / Medium level / Simple SEDMP. Refer to the DPTI Protecting Waterways Manual, Section 5.4.2 Construction Phase Mitigation Measures and Section 7.3 Soil Erosion & Drainage Management Plan, for details on what to include in a Detailed / Medium level / Simple SEDMP.*

* 1. ***Inspection and Reporting***

*In addition to the inspection frequency in Part CH50 Clause 5.3 “Inspection and Reporting”, the Contractor must inspect temporary and permanent siltation and erosion control devices at the following intervals:*

1. *within the first hour of a storm event during daylight periods;*
2. *as soon as practicable following storm events outside working hours and not later than the following day; and*
3. *twice during daylight periods of continuous rain events.*

*The Contractor must ensure that monitoring equipment provides water quality information in such a way that allows the Contractor to identify and respond to deficiencies in sediment control devices in a timely manner.*

*The Contractor must maintain a register documenting all relevant information, recording inspection dates, names of personnel performing the inspections, corrective actions, and performance of siltation control devices. In addition to the inspection frequency in Part CH50 Clause 5.3 “Inspection and Reporting”, the register must include:*

1. *instantaneous turbidity readings from waterways.*
	1. ***Temporary Creek Crossings***

*The design of temporary creek crossings must be assessed by an appropriately qualified drainage engineer to ensure appropriate materials and design, which minimises the risk of erosion to the crossing and the creek.*

* 1. ***Water Affecting Activities Permit***

*The Principal has a Water Affecting Activities Best Practice Operating Procedure which has been endorsed by the Adelaide and Mount Lofty Ranges, and Northern and Yorke Natural Resources Management Boards.*

*The Contractor must undertake a Water Affecting Activities Risk Assessment and if required following this assessment, must apply for a Water Affecting Activities (WAA) Permit from the Natural Resources Management Board. Prior to applying for the WAA Permit, the Contractor must confirm the findings of the risk assessment with the Superintendent.*

*The Contractor must negotiate with the [insert relevant NRM Board] and the Principal as early as practicable with regard to seeking appropriate WAA permits. A minimum of 40 working days is required between the receipt of WAA permit application and approval by [insert relevant NRM Board].*

1. **CONSTRUCTION NOISE AND VIBRATION CONTROL**
	1. ***General***

*The Contractor must prepare and implement a Construction Noise and Vibration Management Plan (CNVMP) in accordance with Environmental Instruction 21.7 “Management of Construction Noise and Vibration”.*

*Select from the following additional clauses, as applicable to the project:*

*The Construction Noise and Vibration Management Plan must be prepared by an appropriately qualified acoustic engineer (defined as a Member of the Australian Institute of Engineers and eligible for membership in the Australian Acoustical Society).*

* 1. ***Construction Noise***

*The Contractor must undertake appropriate community consultation regarding construction noise in areas where sensitive receptors are present as outlined in the TSD Environmental Instruction 21.7 or as required by the regulatory authority.*

*The Contractor must prepare a Blast Management Plan in accordance with AS 2187.2 – 2006 Explosives – Storage and Use of Explosives, where blasting activities are to occur within the project area. Submission of the Blast Management Plan must constitute a* ***HOLD POINT****. The Response Time for this Hold Point is 10 working days.*

* 1. ***Vibration Induced Damage***

*Heritage-listed items are located at [insert locations of heritage items or attach a schedule]. Heritage-listed items must be considered ‘sensitive structures’ for the purposes of determining upper vibration limits for damage to structures.*

*The Principal will undertake pre-construction dilapidation surveys of [insert structures] and will arrange follow-up surveys post-construction, if necessary, to ascertain whether the structures have sustained any damage as a result of construction activities.*

***OR***

*The Contractor must ensure that pre- and post-construction dilapidation surveys of [insert structures] are undertaken by an appropriately qualified consultant, to ascertain whether the structures have sustained any damage as a result of construction activities.*

*The Contractor must ensure that short-term vibration levels at properties are less than or equal to the velocity limits in DIN 4150, Part 3, Table 1. The Contractor must implement a monitoring regime to enable post construction verification that the limits in DIN 4150 were not exceeded at all sensitive locations, including State Heritage listed places. This may include Building Condition Inspections and on ground vibration monitoring.*

*If the Contractor has caused structural damage to a building or structure of heritage significance, the Contractor must arrange for the repairs of damage required in a manner that is consistent with the character and fabric of the item. Where approval under the Development Act is required, this must be obtained by the Contractor prior to any rectification or repairs of damage being undertaken. Repairs must be determined and documented by a suitably qualified heritage architect.*

1. **AIR QUALITY CONTROLS**

*In addition to those measures outlined in clause 2.6 of Part CH50, the Contractor must employ the following construction methods to minimise the disturbance caused by dust and other airborne pollutants to persons on and in the vicinity of the site (select from the list below):*

1. *establishing appropriate dust-screen fencing to minimise the transfer of airborne pollutants from within the site to adjacent areas*
2. *spraying stockpiles with suitable stabilising agents and/or erecting dust screens around stockpiles*
3. *progressively stabilising batter slopes and construction areas with a temporary cover crop or other soil stabilising material/technique*
4. *immediately establishing suitable cover crops over topsoil stockpiles or providing suitable alternative covering*

*The Contractor must prepare a Dust Monitoring Plan.*

*Continuous particulate matter monitoring (PM10) must be undertaken by the Contractor to ensure the Site* *does not compromise public health, nor cause an environmental nuisance. Monitoring must be undertaken in accordance with the requirements of any of the following Australian Standards (depending on equipment selected):*

1. *AS 3580.9.6 (high volume sampler)*
2. *AS 3580.9.7 (dichotomous sampler)*
3. *AS 3580.9.8 (TEOM analyser)*
4. *AS 3580.9.9 (low volume sampler*
5. *AS 3580.9.11 (beta attenuation monitor)*

*Monitoring equipment must be located in accordance with the requirements of AS 3580.1.1, and must be positioned in areas where air quality is likely to have the greatest impact on adjacent properties or create nuisance/ inconvenience to the public. Locations must be moved on an as needs basis to reflect the location of activities that create the most risk, such as earthworks.*

*PM10 concentrations should not exceed the National Environment Protection Measure (NEPM) for Ambient Air and the NEPM for Air Toxics. Where the PM10 method selected does not provide continuous readings, the monitoring program must be supplemented with equipment that provides real-time measurements or measurements for 1hr average concentrations. The Contractor’s site manager must be notified as soon as possible when PM10  1hr average concentrations are such that the NEPM allowed average limit may not be achieved (e.g. by programming the equipment to provide notice), to enable the Contractor to modify working methods or cease work if necessary.*

*In addition to PM10 monitoring, the Contractor must monitor Total Suspended Particulate Matter (TSP) in accordance with the following requirements:*

1. *TSP sampling must be conducted in accordance with Australian Standard 3580.9.3.*
2. *The concentration of TSP must be determined as a 24 hour average*
3. *TSP monitoring must be undertaken not less than every 3 days.*

*Results of Air Quality monitoring must be made available to the Principal and SA EPA upon request. Monitoring results must be compared to background levels at [insert closest BOM monitoring station] (available from* [*www.bom.gov.au*](http://www.dpti.sa.gov.au/__data/assets/word_doc/0006/163293/www.bom.gov.au)*) to assist in the interpretation of monitoring results. Any corrective action measures taken as a result of dust monitoring must be included in a weekly report to be submitted to the Principal.*

* 1. ***Requirements for the use of real-time dust monitors***

*The number of real-time dust monitors operating at any given time must be sufficient to effectively monitor works within the Contractor’s Activity Zone and at individual sensitive receptors, as required. The locations must be discussed and agreed with the Superintendent.*

*Real-time dust monitoring equipment must be maintained so that it is available at all times when required, including periods of dust generating activities and high wind speed. Monitoring equipment must be maintained and calibrated by the supplier on a regular basis in accordance with the manufacturer’s instructions. Person(s) deploying the monitoring equipment must be trained by the company providing the equipment and records supplied to the Principal.*

*A real-time dust monitor deployment procedure and checklist must be developed as part of the Construction Environmental Management Plan (CEMP).*

1. **MATERIALS, FUELS AND WASTE MANAGEMENT**
	1. ***Construction Water***

*The Contractor must keep a record of water use and must submit this record with each status report required under Clause CSRG50.8 “Reporting on Environmental Performance” or upon request.*

* 1. ***Recycling and Reuse of Materials***

*The Contractor must maintain a record of the use of recycled materials on the project, including steel, concrete, fill and pavement material. The record must be provided to the Principal upon completion of work, or at any other time upon request.*

*The risk assessment referred to in clause CH50.8.2 “Recycling and Reuse of Materials “must be undertaken by a qualified environmental consultant.*

* 1. ***Storage and Handling of Hydrocarbons and Hazardous Liquids***

*Refuelling or maintenance of plant and equipment, mixing of cutting oil with bitumen or any other mobile or stationary activity which may result in the spillage of a chemical, fuel or lubricant at any location with direct drainage to a waterway, is not permitted without appropriate temporary bunding being provided. Refuelling operations must not be left unattended while in progress.*

*The Contractor must ensure that chemical, fuel and lubricant storage areas are not located within 20 metres of natural or built drainage lines, or on slopes steeper than 1:10.*

1. **CONTAMINATION**
	1. ***Remediation Management Plan***

*If a Remediation Management Plan has been prepared, reference it here and place in an appendix.*

*The Contractor must adhere to the Remediation Management Plan provided by the Principal for the remediation/removal/disposal of contaminated material.*

*The Contractor must engage a contamination specialist eligible for membership of the Principal’s Panel to develop a Remediation Management Plan (RMP) to address contaminated material within the contract area, in accordance with the EPA Guidelines for Environmental Management of On-site Remediation (March 2006). The RMP must detail the nature, type and location of known contaminated material and describe the proposed method of remediation/removal/disposal (including verification) for each. Remediation should start with the preparation of a Remediation Action Plan (RAP) and an Environmental Management Plan (EMP) specific to site contamination. The RAP should detail the methods, processes and controls of the remediation activities. The EMP should address all the environmental management issues relating to contamination. These two plans combine to form the RMP.*

*Where soil will be removed from the contract site, further sampling and analysis may be required (depending on the requirements of the end user) and the RMP must include details of disposal options, end use and appropriate classification of this material.*

*The Contractor must implement the approved RMP during the course of the project.*

* 1. ***Stockpiling***

*If it becomes necessary to stockpile potentially contaminated material, the following management measures must be implemented:*

1. *Stockpiles will be located on a site approved by the Superintendent. The soil must not be stockpiled in a location on or near a gutter, drain or watercourse;*
2. *The soil must be placed on an impermeable surface and then covered in its entirety with an impermeable cover so as to prevent leaching and contamination of underlying soil and to prevent any contaminants becoming airborne;*
3. *Stockpiles must be no greater than 3.0m above existing ground level;*
4. *Soil must be wet down prior to movement to prevent soil dust particles becoming airborne;*

*Potentially contaminated materials must be kept separate from classified material and clean fill*

* 1. ***Environmental Management Plan***

*The Contractor must produce an ongoing Environmental Management Plan (EMP) for any sites which have known soil classification and/or have received waste soils during the contract. The EMP must, at a minimum:*

1. *provide information on the location and classification of waste soils, including the source of the soils and the key occupational and environmental risks associated with them*
2. *provide associated graphic documentation in the form of areal maps indicating areas of interest and/or as constructed cross sections of locations which have received waste soil*
3. *nominate a EMP manager responsible for ensuring compliance with the EMP by all employees and contractors to ensure that any activity on site involving exposure to potentially contaminated areas is undertaken in a controlled manner (including all necessary occupational health and safety (OH&S) and environmental requirements).*
4. *describe future ongoing management measures so the material does not pose a risk to site users or the environment. These may include:*
5. *construction requirements for any future works in the affected area, for example specific requirements for stockpiling and backfilling excavated material, restrictions on movement of soil, reinstatement requirements*
6. *OH&S requirements (for example induction/awareness procedures, appropriate PPE)*
7. *any ongoing monitoring requirements (for example, groundwater monitoring, visual inspections of the site to identify any areas of erosion, excavation or other damage to encapsulation etc)*
8. *reporting requirements.*

*The EMP must be prepared by a qualified contamination consultant within XX months of practical completion*

* 1. ***Acid Sulphate Soils***

*The uncovering of acid sulphate soils is likely if the existing ground profile is to be excavated below the water table, with or without dewatering. Where avoidance is not possible and some disturbance of acid sulphate soils occurs, measures to manage the associated risks are required.. Investigations into the presence of acid sulphate soils are to be completed in accordance with EPA Guideline: Site Contamination - Acid Sulphate Soils issued 2007. Detailed management measures must be incorporated into a Acid Sulphate Soils Management Plan as part of the overall Contractor’s Environmental Management Plan (CEMP) in consultation with the EPA and in accordance with EPA Guideline: Site Contamination - Acid Sulphate Soils and EPA Guideline: Environmental Management of On-site Remediation.*

*The acid sulphate soils management plan should include as a minimum, proposed management strategies, monitoring requirements and verification testing requirements for both the short and long term.*

* 1. ***Groundwater Wells***

*The Contractor must maintain an accurate register of the location of all groundwater wells within the Site.*

*Where well decommissioning is required, the Contractor must decommission any operational, disused, abandoned or uncovered groundwater wells, known or discovered, within the Site in accordance with the Natural Resources Management Act 2004 unless these wells will be used for construction water or irrigation. Any appropriate approvals for groundwater use for construction water or irrigation will need to be obtained by the Contractor.*

* 1. ***Asbestos Removal***

*All buildings to be demolished will be subject to an asbestos audit. The contractor undertaking the removal of asbestos must be licensed by SafeWork SA and have an approval (from SafeWork SA) to undertake the removal activities. All asbestos removal must be undertaken in accordance with the current Code of Practice for the Safe Removal of Asbestos (2nd Edition) [NOSC: 2002(2005)].*

*All asbestos removed from buildings must be transported by an appropriately EPA licensed transporter and disposed of at an EPA licensed facility.*

1. **PROTECTION OF SITES OF CULTURAL AND NATURAL HERITAGE SIGNIFICANCE**

*Insert here any appropriate conditions from the Aboriginal Heritage Survey report, for example:*

*The Contractor must not undertake any ground disturbing works within the Aboriginal Heritage Monitoring Areas until Heritage Monitoring Area Clearance has been provided by the Superintendent.*

*The Contractor is required to carry out Aboriginal monitoring at the locations identified as Aboriginal Heritage Monitoring Areas (AHMA) in the Aboriginal Cultural Heritage Management Plan. The Contractor must be responsible for arranging and ensuring the appropriate number and presence of Aboriginal Heritage Monitors for all ground disturbing works within the AHMA. There are to be two Aboriginal Heritage Monitors per worksite while ground disturbing works are conducted.*

*The Contractor must be responsible for payment and arrangement of Aboriginal heritage monitors and to ensure the appropriate number and presence of monitors for all ground disturbing works within the identified monitoring areas. There are to be two Aboriginal heritage monitors per worksite while ground disturbing works are conducted.*

*The Contractor must provide [specify desired frequency, eg bi-monthly, monthly etc] updates of the project to the Aboriginal group representatives identified by the Principal.*

*The Contractor must bunt off the site from [specify location of sensitive area] and must ensure that no disturbance occurs within the bunted area.*

*Heritage items are located at [insert locations of heritage items or attach a schedule]. As per Part CH50 Clause 6.3 “Vibration Induced Damage” all costs associated with damage caused to existing structures, buildings and services as a result of any construction activity must be borne by the Contractor. If the Contractor has caused structural damage to a building or structure of heritage significance, the Contractor must arrange for the repairs of damage required in a manner that is consistent with the character and fabric of the item. Where approval under the Development Act is required, this must be obtained by the Contractor prior to any rectification or repairs of damage being undertaken.*

*When undertaking work that may affect a heritage site, the Contractor must comply with the requirements of the Conservation Plan for the site.*

1. **SUSTAINABILITY**

*The Contractor must, as a minimum, implement sustainability activities and actions identified in the Sustainability Implementation Plan. During the construction phase, the Contractor must provide the Principal with quarterly status/progress reports on the implementation of the actions/activities in the Sustainability Implementation Plan. Data must be made available at any time when requested by the Principal.*

* 1. ***Infrastructure Sustainability Council of Australia IS Rating***

*The Contractor must achieve a certified As Built Rating under the Infrastructure Sustainability (IS) rating scheme of “Excellent’ (i.e. rating score of 50) or greater.*

*A minimum Level 1 must be achieved for all Credits, unless otherwise scoped out (as verified through ISCA) or appropriate justification provided as to why Level 1 is unable to be achieved on the Project and approved by the Principal.*

*The Contractor must be responsible for obtaining an ISCA certified As Built rating from ISCA within three months of Completion, allowing for the appropriate timeframes for verification and certification.*

*The IS rating tool scorecard and all supporting evidence associated with the verification and certification process to achieve an As Built rating must be provided to the Principal within the above timeframes.*

*The IS rating tool scorecard and IS Technical Manual is available on the ISCA website* [*http://www.isca.org.au/*](http://www.isca.org.au/) *and general questions about the IS rating scheme can be referred to ISCA.*

*Where the Principal has provided information that can be used as supporting evidence to contribute to achieving various credits (full or partial) within the IS rating scheme these are provided in Appendix XX.*

*Refer to Part D20 for additional details on IS Design and As Built Rating requirements.*

* 1. ***Energy and Greenhouse emissions***

*The Contractor must implement fuel efficiency measures including, but not limited to:*

1. *adequately maintaining vehicles so they are operating efficiently*
2. *reducing idling time of construction vehicles and plant*
3. *using alternative or low emission fuels, such as LPG or biodiesel/biodiesel blends for construction vehicles and plant (e.g. 20% biodiesel – B20)*
4. *using efficient equipment including vehicles, plant and office equipment*

*Where practicable, the Contractor must use energy efficient office equipment and adopt energy efficient practices within the on-site contract offices.*

*The Contractor must consider purchasing electricity from a renewable energy source (e.g. GreenPower) for electricity to be used at all on-site project offices.*

*OR*

*The Contractor must purchase minimum 50% electricity from a renewable energy source (e.g. GreenPower) for electricity to be used at all on-site project offices.*

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**CH60 COMMUNITY ENGAGEMENT OBLIGATIONS**

1. ***COMMUNITY RELATIONS REPRESENTATIVE***

*The Contractor must provide a Community Relations Representative until the Date of Practical Completion.*

*The Community Relations Representative must:*

1. *ensure the Superintendent is provided with accurate and timely information;*
2. *be available for contact by local residents, businesses and community representatives at all reasonable times to answer any questions and to address any concerns in relation to the Contract, in particular:*
3. *provide information on planned traffic arrangements, including any temporary traffic switches, being sought by users of the Contract and adjacent road and rail network; and*
4. *provide information on planned construction operations being sought by affected and concerned residents, businesses and occupants.*

*The Community Relations Representative must refer all questions and issues concerning the road network outside the Contractor’s Works to the Superintendent.*

1. ***TELEPHONE SERVICE***

*The Principal has established a 1300 project information telephone line for members of the community and broader public to seek information, register complaints or concerns.*

*The Contractor must establish a site-based telephone service with 24-hour answering machine for members of the community to register complaints or concerns. The telephone service must be connected prior to the commencement of construction, and remain operational until 3 months after the Date of Construction Completion. The telephone number must be quoted on all correspondence applicable to the Contract, including letter drops and other information issued to the community.*

1. ***PROJECT WEBSITE***

*A project website has been setup at* [*www.infrastructure.sa.gov.au*](http://www.infrastructure.sa.gov.au) *and the Contractor must provide information and data to the Superintendent for publication on the website including general project information, project plans, reports, submissions, photographs, local traffic management information and other communications material.*

*Any plans, drawings, photographs, submissions or reports provided by the Contractor for this purpose must be in a format which is suitable for direct incorporation into the website.*

*Information must be made available for the duration of the Contractor’s work and for up to 12 months after the Date of Practical Completion.*

1. ***MEDIA EVENTS***

*The Superintendent will manage any media events associated with the commencement of construction or opening of the project. The Contractor must coordinate site logistics associated with media events and provide reasonable cooperation with organising the event. The Contractor must not erect or display promotional banners during such media events.*

*The Contractor must provide 3 weeks written notice to the Superintendent of the date for opening.*

*Other opportunities for media events, including the achievement of project milestones must be notified to the Superintendent at least 3 weeks prior to the expected event.*

1. ***HANDLING OF COMPLAINTS AND ENQUIRIES***

*The Contractor must provide an information/complaints hotline to be available 24 hours a day as required by the Superintendent, which may take the form of a dedicated mobile number. The person receiving complaints must be appropriately trained in community engagement and/or customer service and should have the ability to action the complaint. This may include modification of the work site or a review of night activities.*

*A complaint management procedure must be developed for handling complaints in accordance with Clause 180.3.2 "Inquiries Received by the Contractor". At a minimum the procedure must contain the following steps:*

1. *Receive complaint and record details in a complaint register;*
2. *Provide or prepare a response to the complaint made including confirmation of the consultation and / or notification undertaken for the activity; and*
3. *Advise complainant of actions undertaken as required.*

*The Superintendent or persons nominated by the Superintendent has the discretion to contact members of the community to ascertain the level of satisfaction with the resolution of a dispute. Draft responses must be provided to the Superintendent in accordance with Clause 180.3.1 "General".*

1. ***SIGNS***

*The Contractor must erect and maintain the accuracy of advisory signposting that is required to provide information to Stakeholders.*

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**CH70 TRACK ACCESS: ADELAIDE METROPOLITAN PASSENGER RAILWAY PROVISIONS**

1. **LIQUIDATED DAMAGES FOR UNPLANNED DISRUPTION**

The Liquidated Damages for Unplanned Disruption are $xxx for the first hour of each Unplanned Disruption and $xxx for each following hour or delay (or part thereof).

*or*

The Liquidated Damages for Unplanned Disruption will be determined on the following basis:

For each substitute bus used as a consequence of the Unplanned Disruption:

Mobilisation and demobilisation: $200 (single amount)

For each hour that the bus is in use (i.e. time from leaving the depot to returning to the depot):

Standard Bus: $150 / hour

Articulated Bus: $200 / hour

The hourly rate applies once the bus has been mobilised and does not depend on the actual time that the Infrastructure is not functioning to the specified standard.

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**CH80 TRACK ACCESS: EXTERNAL RAIL TRANSPORT OPERATORS**

1. **SITE ACCESS LICENCE**
	1. **Definitions**

The definitions in the Access Licence have the same meaning in this Clause.

* 1. **General**

The Principal has or *will* enter into an Access Licence with an External Rail Transport Operator.

* 1. **Contractor’s Obligations**

When entering the Licensed Area, without limiting any of the Contractor’s other obligations under this Contract, the Contractor must perform all of the obligations on the Principal specified in the Access Licence, except:

1. *liability for those costs arising under Clauses 8, 12, 15 and 29.2, and;*
2. *in relation to Clause 6 of Schedule 2 (except that the Contractor must provide three delegates on behalf of the Principal to the steering committee);*

*as if the Contractor were named in the Access Licence as the "Minister".*

*For the purposes of the Contractor’s obligations, the Access Licence will be read as if:*

1. *the Associates (as defined in the Access Licence) of the Principal extended only to the Contractor and those persons who would be Associates of the Contractor if it were a party to the Access Licence in place of the Principal, and not to other persons who are Associates of the Principal; and*
2. *the words "as in force at the time the work is undertaken" in Clause 7.1.1 of the Access Licence were replaced by the words "as in force at the date of the Contract".*
	1. **Delay to the External Rail Transport Operator**

If, as a result of the Contractor’s failure to perform any of the its obligations under this Clause, the Principal incurs Delay Costs pursuant to the Access Licence, the Contractor must pay to the Principal the amount of the Delay Costs.

The parties must:

1. as soon as practicable, give the other party notice of any:
	* incident likely to result in a delay event; and/or
	* claim from a Rail Transport Operator for Delay Costs;
2. use their best endeavours to provide details regarding as to the nature of any incident;
3. use their best endeavours to mitigate the consequences of any incident (including the use of manual signalling of trains) and minimise Delay Costs; and
4. allow the other party reasonable opportunity to assist in the rectification of the incident or the mitigation of Delay Costs.

The Principal is required to provide reasonable evidence that any incident triggering the liability for Delay Costs is caused by a breach of Contract, act, omission or negligence by the Contractor. The Contractor’s liability for any further Delay Costs ceases upon the hand back of the relevant licensed area by the Contractor.

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*Other Contract Specific Requirements for other Divisions to be inserted here.*