

PROJECT EXPRESSION OF INTEREST	
<b>Project Title.</b>	Snowy 2.0 – Future Generation Joint Venture.
<b>Project Description.</b>	<p>Salini Impregilo, Clough and Lane have formed Future Generation Joint Venture (Future Gen) to provide the EPC package for SHL on the Snowy 2.0 Project.</p> <p>The Project is a pumped hydro project that will increase the generation capacity of the Snowy Mountains Scheme by up to 2,000MW and at full capacity will provide approximately 350,000MW/h of energy storage. The project includes all activities associated with the requirements for the Snowy 2.0 Pumped Hydro-electric Scheme.</p>
<b>Opportunity Title.</b>	PPK- 436 Marica Shaft Pad Excavation Works & Slope Stabilization.
<b>Opportunity Description.</b>	<p>Scope of Work includes:</p> <p>Excavation, Erosion &amp; Sedimentation Controls, construction of drainage channels, slope treatment and stabilization;</p> <ul style="list-style-type: none"> <li>- All excavation to cover the Pad (including necessary drill and blast activities);</li> <li>- Slope treatments as detailed (Shotcrete, Steel Wire Mesh &amp; Diagonal Strip Drain); Rockbolt &amp; Subhorizontal Drainage;</li> <li>- Tecco System (Erosion Control Matting &amp; Tecco Steel Wire Mesh);</li> <li>- Drainage channels on benches;</li> <li>• Yard Surface Drainage excavation (AS AN OPTION)</li> <li>• Yard Surface Drainage construction (AS AN OPTION).</li> <li>• Settlement Pond construction (AS AN OPTION)</li> <li>• Survey and setting out (AS AN OPTION)</li> <li>• Fixed surveying points Installation</li> </ul> <p>As part of the works the subcontractor must:</p> <p>Provide methods statement(s) that describe the job to be performed for the approval of the contractor and client. These methods statements must be done in accordance to FGJV environmental and safety procedure and they must be issued to FGJV for approval prior the work begin.</p> <ul style="list-style-type: none"> <li>• Provide a program of works, based on the commencement date and end date given in this Scope of Work, as well as supporting program provided.</li> <li>• Provide a staging plan of the excavation, based on the preliminary staging given in this Scope of Work and in accordance with the programme detailed above.</li> <li>• Prepare and submit inspection and test plans for the activities and ensure the preparation and submissions of the relevant quality Lots, all for the approval of the contractor and client.</li> <li>• Prepare and submit daily and weekly progress reports (the extent and the content shall be defined before the commencement). The subcontractor may be asked to load daily and weekly data in FGJV's Envision system, for which the subcontractor might be granted access to the system. In such case the Subcontractor should load personnel, equipment and progress data as will be instructed before the beginning of the works.</li> <li>• Provide all materials necessary for the execution of works, including all temporary materials needed and not mentioned in the designs. This could include but is not limited to: explosives, temporary fencing, temporary diversion drainages, temporary</li> </ul>

	<p>erosion control, earth-bunds, signages, safety cones, new-jersey safety barrier. Provide plans as part of the Method statement on how these materials are to be utilised and managed.</p> <ul style="list-style-type: none"> <li>• Work with the Contractor to attain all permissions necessary to perform the job on site.</li> <li>• Provide monthly work progress reports indicating quantity of the works performed (including inclusion of suitable plans from an approved Survey Contractor) to support the payment claim for the contractor to review, prior to issue of each payment certificate.</li> <li>• Provide final work report including quantity, quality documents, pictures, etc.</li> <li>• Provide surveyor to set out and provide progress qualities (AS AN OPTION). Note: The Contractors surveyor will also undertake periodic checks during construction to guarantee the correct alignment of the works performed and quantities.</li> <li>• Provide noise and dust monitoring during construction to assure we respect the EIS limits constraints.</li> <li>• Haul material to local stockpile area or designated areas. <ul style="list-style-type: none"> <li>○ Spoil Area– around 2.0 km (SPOIL DISPOSAL)</li> </ul> </li> </ul> <p>Consider 30 km/h maximum speed limit in the working area.</p> <ul style="list-style-type: none"> <li>• Provide accommodation and transfer to the Works as separate item</li> <li>• Provide fuel and other consumables as separate item</li> <li>• Ensure equipment breakdowns are less than 5% total of the job duration. This may include spare parts or spare equipment for all program critical equipment are available on site, fitters are available and other arrangements in place as required.</li> </ul> <p>SoW S2-FGJV-TEC-SOW-436 Draft Attached.</p> <p>Prior to access to FGJV worksites all plant, vehicles and machinery must be clean and in good working order.</p>
<p><b>Supplier Requirements.</b></p>	<ul style="list-style-type: none"> <li>• Future Gen require suppliers that:</li> <li>• Have a demonstrated track record of Supply and Installation testing and commissioning of overhead Gantry Cranes.</li> <li>• Have the required government or industry certifications, licenses, associations and/or insurances to deliver the opportunity.</li> <li>• Subcontractor shall comply with all Safety and Environmental Management requirements for the Project. Site Specific Environmental Management Plans will be prepared by FGJV and approved by the NSW Department of Planning, Industry and Environment (DPIE). The subcontractor must comply with these plans once approved by DPIE.</li> <li>• All vehicles need to be fitted with In Vehicle Monitoring System, as per FGJV requirements.</li> <li>• Have an exemplary safety record and a documented management system for tracking safety performance.</li> <li>• Are financially viable and can demonstrate commercial value.</li> <li>• Can demonstrate a strong commitment to training and retaining a local workforce.</li> <li>• Have an excellent track record in employing and progressing the careers of Indigenous people.</li> <li>• Are progressively finding ways to develop the careers of women, veterans and people with disabilities.</li> </ul>

- Treat the environmental they are working in with respect and consideration.

<p><b>General Information.</b></p>	<p>Future Gen will consider all ICN Registrations where:</p> <ul style="list-style-type: none"> <li>• The business demonstrates through their response a clear capability against the key requirements.</li> <li>• The business completes a response to all Future Gen questions and/or Future Gen documentation.</li> <li>• The businesses ICN profile is up to date and complete.</li> <li>• The registration is complete prior to any closing date.</li> </ul> <p>The business operates in Australia and is a registered Australian business.</p>
<p><b>Local and Regional Content</b></p>	<p>Future Gen strongly encourages businesses who have head offices and/or dedicated premises with the appropriate Local Government approvals from the following regions:</p> <ul style="list-style-type: none"> <li>• Snowy Monaro Regional Council Local Government Area.</li> <li>• Snowy Valleys Council Local Government Area.</li> <li>• Furthermore, Future Gen strongly encourages Aboriginal and Torres Strait Islander businesses to submit applications.</li> </ul>
<p><b>Notes</b></p>	<p>Future Gen will obtain ongoing reporting from ICN on a regular basis.</p> <p>Future Gen will review all registrations, noting that any incomplete registration will be excluded from consideration.</p> <p>Further involvement may range from a request for a follow up meeting; request to prequalify, through to request for tender.</p> <p>Submitting a registration of interest does not guarantee that the supplier will be selected for prequalification or tender opportunities.</p>

S2-FGJV-TEC-SOW-436 Rev. A



## Future Generation JV – Snowy 2.0 Scope of Work – Marica Shaft Pad Excavation Works & Slope Stabilisation

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Document Revision Table		
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## 1.0 Project Description

Salini Impregilo, Clough and Lane have formed Future Generation Joint Venture (the Contractor) to provide the EPC package for SHL on the Snowy 2.0 Project (the Project).

The Project is a pumped hydro project that will increase the generation capacity of the Snowy Mountains Scheme by up to 2,000MW and at full capacity will provide approximately 350,000MW/h of energy storage. The project includes all activities associated with the requirements for the Snowy 2.0 Pumped Hydro-electric Scheme.

Intake and outlet structures will be built at both Tantangara and Talbingo Reservoirs, which are in the Kosciusko National Park (KNP) in southern NSW. Approximately 27 km of concrete lined tunnels will be constructed to link the two reservoirs and a further 20 km of tunnels will be required to support the facility. The power station complex will be located almost one-kilometre underground.

The Project will deliver one of the largest pumped hydro schemes in the world and underscores the importance of the Snowy Scheme's role in the National Electricity Market (NEM).

Future Generation was conceived to deliver an integrated engineering, procurement, and construction management service for the Project. The joint venture is backed by the combined experience of Salini Impregilo, Clough and Lane, through their experience in the infrastructure, mineral and oil and gas sectors throughout Australia and the world.

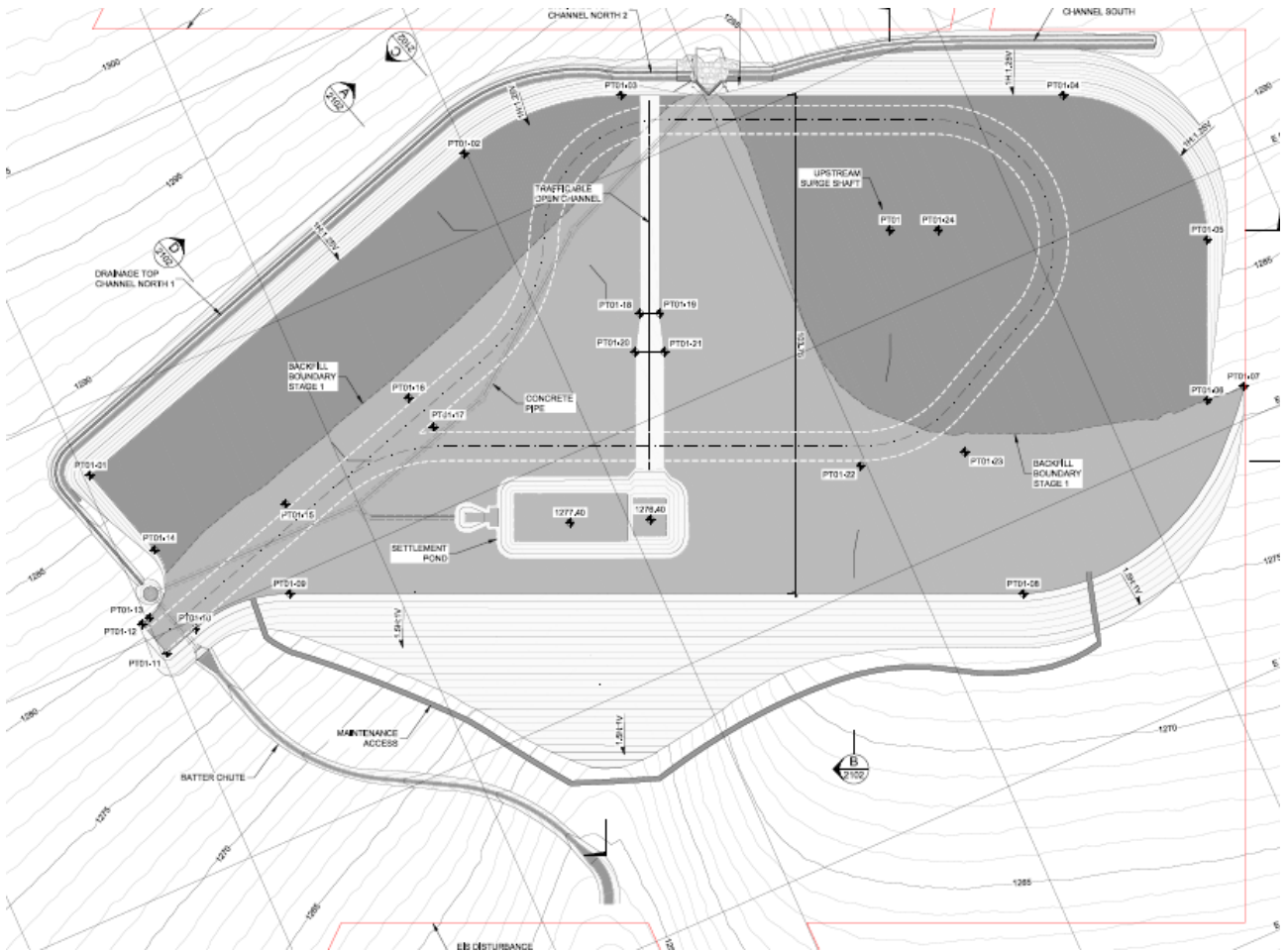


**Figure 1 – Map of Snowy 2.0 (the Project) in context to the wider Snowy Hydro system**

## 2.0 Scope of Work

### 2.1 Overview

A significant amount of open excavation is required on the entire Project. This scope of works covers the open excavation at Marica Upstream Surge Shaft. Figure 2 below shows Upstream Surge Shaft Yard Earthworks – Construction Stage 1



**Figure 2 – Marica US01-Upstream Surge Shaft Yard Earthworks – Construction Stage 1**

The excavation works are detailed within the drawing packages referred to in Table 1, with a summary of Earthworks – Construction Stage 1 provided in Figure 3.

**Table 1 - Works Design Package References**

Works Area	Design Drawing Package	Rev
US01 – Upstream Surge Shaft	S2-CIV-SS-HSS-DRG-2101	D

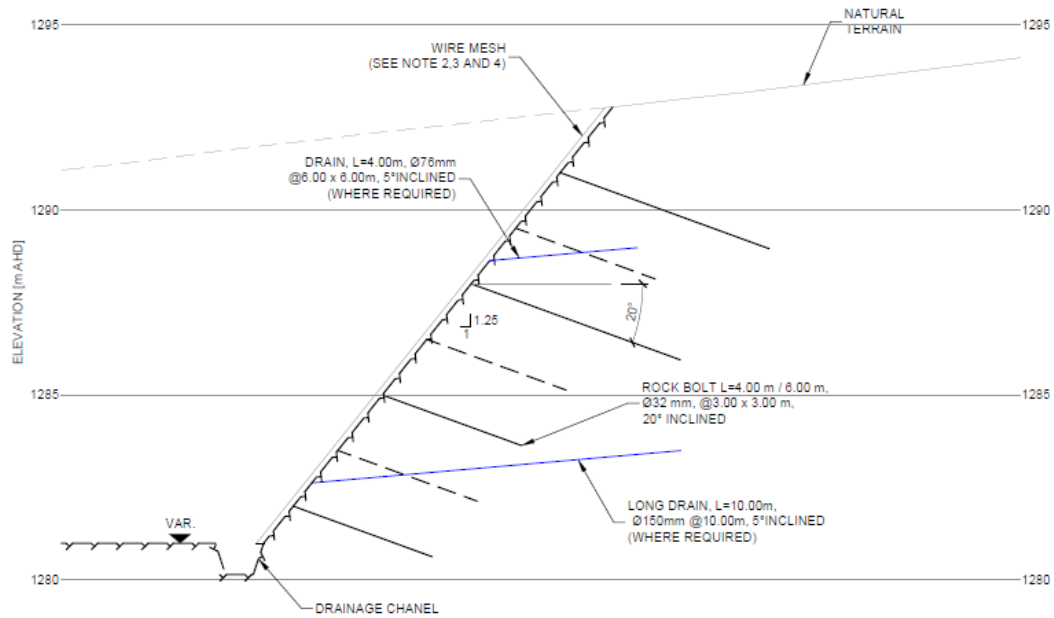
The slope treatment typical details can be seen in Figure 3 – Typical section of Slope support – 1.25:1(V:H) GSI  $\geq$  70





**SLOPE SUPPORT - 1.25:1.0 (V:H) -  $40 < GSI \leq 70$  - TYPICAL SECTION**

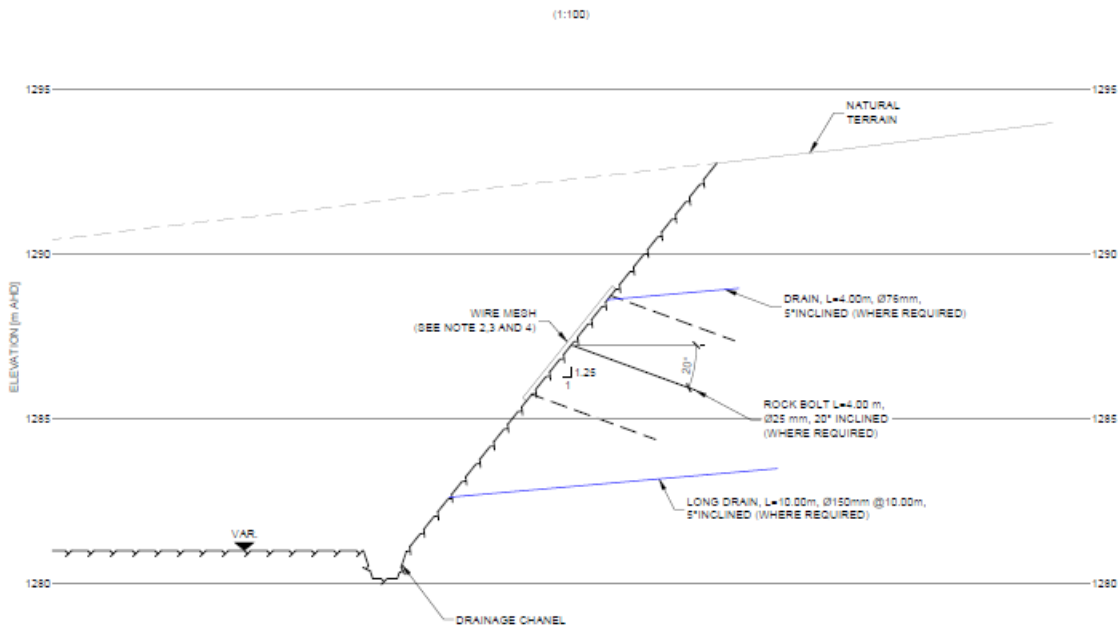
(1:100)



and Figure 4.

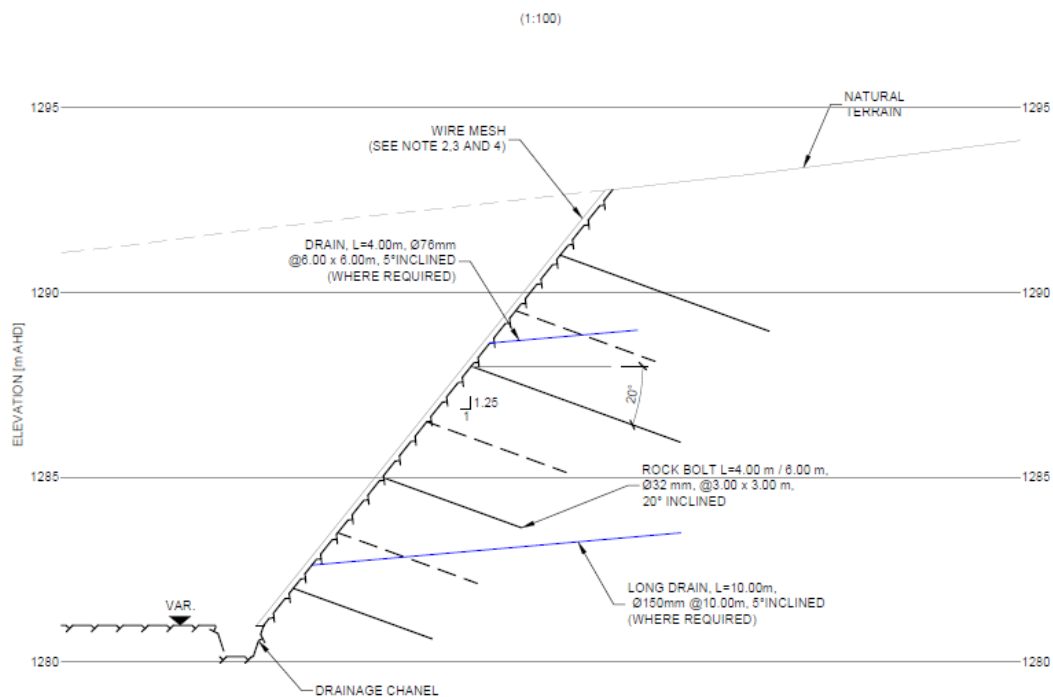


### SLOPE SUPPORT-1.25:1.0 (V:H) GSI $\geq 70$ - TYPICAL SECTION



**Figure 3 – Typical section of Slope support – 1.25:1(V:H) GSI  $\geq 70$**

### SLOPE SUPPORT - 1.25:1.0 (V:H) - 40 < GSI $\leq 70$ - TYPICAL SECTION



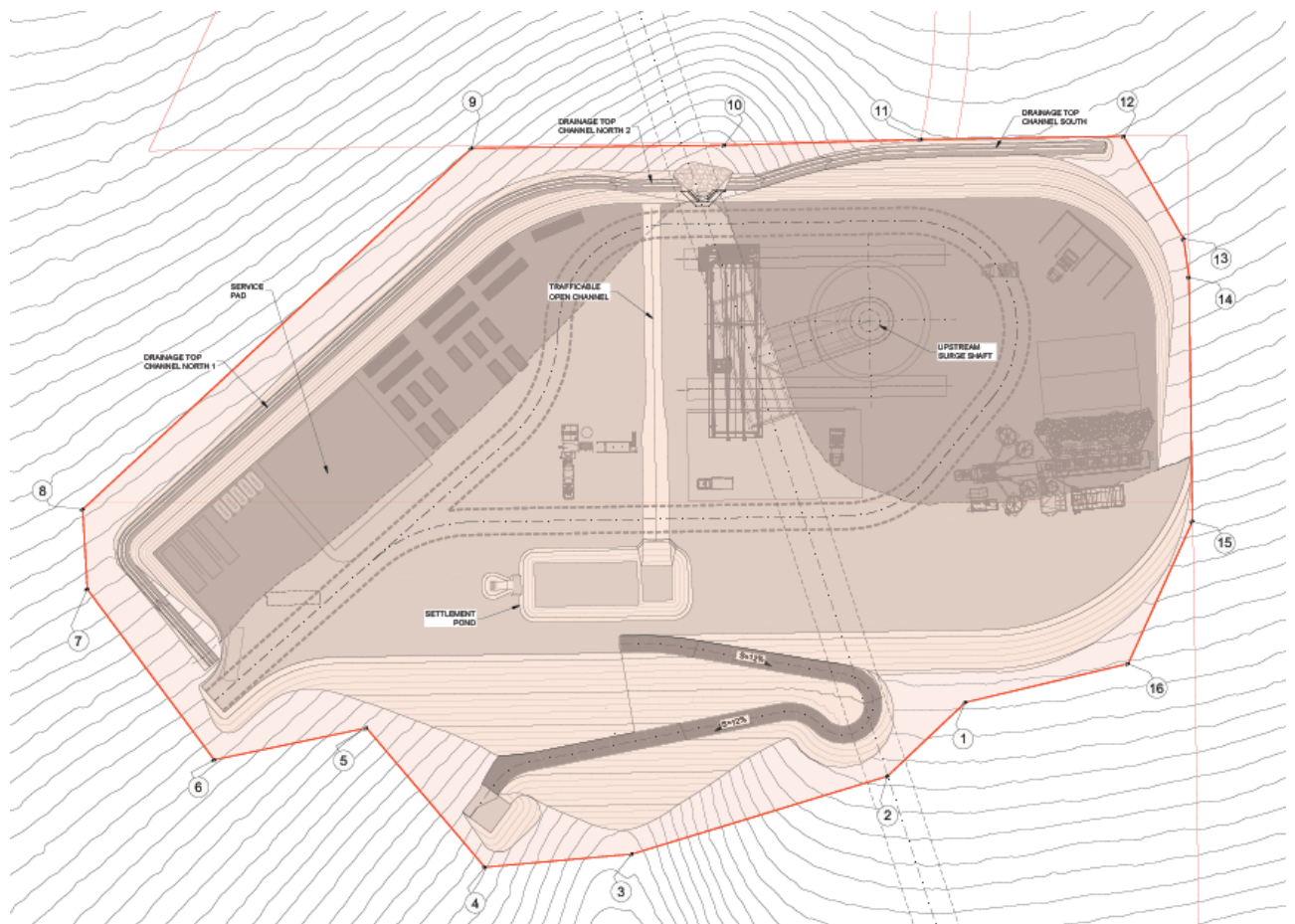
**Figure 4 – Typical section of Slope support – 1.25:1(V:H)- 40 < GSI  $\geq 70$**

## 2.2 Works Breakdown

The Subcontractor is required to submit a fee proposal for the execution of the following works:

### Work Area -:

- Clearing and Grubbing of the area (OPTIONAL – Subcontractor is required to quote it as option). Refer to the attached S4-CIV-SS-HSS-2116-B US01-Upstream Surge Shaft.
- Excavation and construction of Top Channels and other sediment and erosion controls necessary.
- Manage the dirty water accordingly to the Erosion Sediment Control Plan



**Figure 5 – Clearing and Grubbing plan**

- Topsoil strip and stockpiling (note that tree grubbing, and mulching is to be completed by another subcontractor).
- Subsurface drainage construction as per design. All the precast concrete pipe with headwall and pits shall be purchased by Subcontractor.
- All other excavation to cover the: Marica Shaft Area and Settlement Pond (including necessary drill and blast activities if required – just provide a rate).
- Load and fill from a stockpile area (2km distance)
- Slope treatments as detailed in design package, including:
  - Rockbolt & Sub-horizontal Drainage.
  - Tecco System (Erosion Control Matting & Tecco Steel Wire Mesh if required).

- Drainage channels on benches
- Fixed surveying point installation.
- Yard Surface Drainage construction
- Sediment basin construction

The subcontractor must provide a fee offer to provide materials, equipment, supervision and personnel in sufficient quantity to perform the excavation, earthmoving, supports, drainage and liner works according to the FGJV design (as referenced in Table 1). FGJV requires a unitary price (rate) offer based on the quantities provided in the Request for Quotation BoQ spreadsheet provided ([S2-FGJV-PK436-B US01 Pricing Schedule](#) where rates can be applied for the works. Other items not listed need to be considered and built into the rates. These will be confirmed/adjusted once the final design drawings are provided and an agreement has been reached.

Optional - The subcontractor can provide a fee offer to provide materials, equipment, supervision and personnel in sufficient quantity to perform the Clearing and Grubbing activity.

Concrete and shotcrete shall be supplied by the Contractor in front of work location. The Subcontractor must notify its request of concrete or shotcrete at least 7 days before the programmed date to allow the Contractor to plan it with other activities.

As part of the works the subcontractor must:

- Provide methods statement(s) that describe the job to be performed for the approval of the contractor and client. These methods statements must be done in accordance to FGJV environmental and safety procedure and they must be issued to FGJV for approval prior the work begin.
- Provide a program of works, based on the commencement date and end date given in this Scope of Work, as well as supporting program provided.
- Provide a staging plan of the excavation, based on the preliminary staging given in this Scope of Work and in accordance with the programme detailed above.
- Prepare and submit inspection and test plans for the activities and ensure the preparation and submissions of the relevant quality Lots, all for the approval of the contractor and client.
- Prepare and submit daily and weekly progress reports (the extent and the content shall be defined before the commencement). The subcontractor may be asked to load daily and weekly data in FGJV's Envision system, for which the subcontractor might be granted access to the system. In such case the Subcontractor should load personnel, equipment and progress data as will be instructed before the beginning of the works.
- Provide all materials necessary for the execution of works, including all temporary materials needed and not mentioned in the designs. This could include but is not limited to: explosives, temporary fencing, temporary diversion drainages, temporary erosion control, earth-bunds, signages, safety cones, new-jersey safety barrier. Provide plans as part of the Method statement on how these materials are to be utilised and managed.
- Work with the Contractor to attain all permissions necessary to perform the job on site.
- Provide monthly work progress reports indicating quantity of the works performed (including inclusion of suitable plans from an approved Survey Contractor) to support the payment claim for the contractor to review, prior to issue of each payment certificate.



- Provide final work report including quantity, quality documents, pictures, etc.
- Provide surveyor to set out and provide progress quantities (AS AN OPTION). Note: The Contractors surveyor will also undertake periodic checks during construction to guarantee the correct alignment of the works performed and quantities.
- Provide noise and dust monitoring during construction to assure we respect the EIS limits constraints.
- Haul material to local stockpile area or designated areas.
  - Spoil Area– around 2.0 km (SPOIL DISPOSAL)  
Consider 30 km/h maximum speed limit in the working area.
- Provide accommodation and transfer to the Works as separate item
- Provide fuel and other consumables as separate item
- Ensure equipment breakdowns are less than 5% total of the job duration. This may include spare parts or spare equipment for all program critical equipment are available on site, fitters are available and other arrangements in place as required.
- Allowance for any payment of the NSW Long Service Levy.

## 2.3 Method of measurement

As part of the deliverables described in 2.2 Works Breakdown the subcontractor must submit a monthly work progress activity indicating quantity of the elements performed with associated approved survey and quality records for the works claimed. This will be used to assess the subcontractor's monthly claims, for payment.

## 3.0 Construction Services

### 3.1 Project Reference Document

Employers Requirements:

- Volume 3.01. Key Project Functional and Performance Requirements
- Volume 3.02 Project Key Elements: Division of responsibility
- Volume 3.04 Particular Functional and Performance Requirements Civil
- Volume 3.04 Particular Functional and Performance Requirements E&M
- Volume 3.05 R1 Standard Technical Requirements – General
- Volume 3.05 R2 Standard Technical Requirements – Electrical
- Volume 3.05 R3 Standard Technical Requirements – Mechanical
- Volume 3.05 R4 Standard Technical Requirements – Civil
- Volume 3.06 Construction Requirements
- Volume 4 Employer's Requirements – Project Execution

See APPENDIX A for complete list of documents.

## 4.0 Planning Activity

The Works are required to be performed against the following preliminary dates and duration, which will be confirmed once agreement is reached:



- **Start Date:** 13/06/2021
- **Finish Date:** 08/10/2021
  
- **Total Duration:** 117 days.

For a detail program, please refer to the attached “US01 Upstream Surge Shaft Program SOW-389”.

Day and Night shifts to achieve above timeframes are expected.

## 5.0 Bid Deliverables

### 5.1 Tender Submission

Tenderers shall provide the following information

- 1) Company Details
- 2) Revised and detailed bill of quantities
- 3) Revised and detailed program of work
- 4) Detailed Methodology
- 5) Commercial offer
- 6) Inclusions & Exclusions
- 7) Updated responsibility matrix (refer to Appendix B)
- 8) Organisation chart for the Project including CV
- 9) Detailed list of machinery
- 10) Hourly rate for variations (machinery & personnel)
- 11) Provide Work Pack(s) and Method Statement(s) that describe the job to be performed.
- 12) Provide a staging of the excavation, based on the preliminary staging given in this Scope of Work

## 6.0 Deviations & Clarifications

If Subcontractor seeks any relaxation waiver or query of any requirement within this Scope of Work, they must complete a Technical Deviations List.

Subcontractor must clearly identify all elements of the proposed relaxation, waiver, or query in accordance with any applicable part of this SOW and shall detail any resulting technical, commercial and/or schedule impact.

If not otherwise stated, by submitting a bid, the Subcontractor confirms it is compliant with the conditions of this document and the ones which reference is made.

## 7.0 Health, Safety & Environment

Subcontractor shall comply with all Safety and Environmental Management requirements for the Project. Site Specific Environmental Management Plans will be prepared by FGJV and approved by the NSW Department of Planning, Industry and Environment (DPIE). The subcontractor must comply with these plans once approved by DPIE.

All vehicles need to be fitted with In Vehicle Monitoring System, as per FGJV requirements.

Attend weekly coordination meeting in relation to Health, Safety and Environmental.

Incident reporting within the FGJV timeline requirements to the FGJV Supervisor and HSE Advisor.

Weekly reporting of HSE activities on the FGJV reporting template.

Work under the FGJV HSSE plans, work instructions, procedures and PTW requirements for the project.

Have trained, experienced and competent HSE personnel at the regulatory requirements for high risk construction works of 1:50 on site.

Submit all SWMS/JHA to the FGJV Site HSE Manager for review and approval prior to the start of works.

## 8.0 Risk Management

Subcontractor must prepare a risk management plan that comply with ISO 31000:2018 Risk management principles and guidelines and with FGJV Risk Management Assessment Framework.

The Subcontractor shall consider different sources of risks in the risk assessments but not limited to such as Health and Safety, Environmental, Quality, Labour shortage, Access Issues, Reputation, Cost, Planning Issues, Natural Disasters, Construction issues...etc

Subcontractors must document the identified risks and their risk mitigations into a risk register and review them in a regular basis.

Subcontractor shall identify a risk representative within its site who will be responsible to review these risks in a regular basis.

## 9.0 System & Inspection

Subcontractor shall be responsible for the performance of all quality control and acceptance testing as specified under the Contract, including the provision of suitably qualified personnel, testing equipment and facilities.

- Subcontractor is required to comply with FGJV quality management system in place in compliance with ISO 9001 standard.
- Before 5 days of the Commencement Date, Subcontractor shall submit to FGJV QA/QC Department the following documents for review:



- Design management plan for all temporary works according FGJV procedures
- Method of statement for all the activities,
- Inspection and test plans according FGJV template for all the activities requiring tests and inspections,
- Forms and templates,
- List of all the measuring instruments or equipment's to use and the relevant updated calibration certificates.
- Activities cannot be commenced without FGJV QA/QC approval.
- The Subcontractor shall provide FGJV with all the documents and records related to the activities under their scope and directly linked with the construction/sub-construction packages certification.
- Subcontractor's PQP can be submitted to SHL for information by FGJV.
- The Subcontractor shall ensure a minimum 'quality' staffing to cover all the activities provided by the contract
- The list of all the quality personnel and the relevant CV shall be submitted together with the quality deliverables.
- The subcontractor shall provide and maintain at all stages of the work a Quality Control Register to identify the status of inspections, sampling and testing of the work, and all certificates. This register shall always be permanently updated as current and submitted for review to QA/QC at least on bi-weekly basis, unless otherwise specified.
- Subcontractor shall attend a bi-weekly meeting with QA/QC to discuss the outcomes of the monthly quality report and all other issues raised within this period.





## Appendix A: Reference Documents

US01 Package – Upstream Surge Shaft			
Ref	Document Number	Document Title	Rev.
1	S2-CIV-SS-HSS-DRG-2101	US01 Drawing Index	E
<b>Program</b>			
2	PROGR_US01	US01 Programme SOW-436	B
<b>Miscellaneous</b>			
3	S2-FGJV-TEC-MAR-0006	MAR-Rockbolt	-
4	S2-FGJV-TEC-MAR-0011	MAR-Fiberglass Bolt	-
5	S2-FGJV-TEC-MAR-0016	MAR- TECMAT	-
6	S2-FGJV-TEC-MAR-0017	MAR- MACMAT	-

GENERAL	
Document Number	Document Title
S2-FGJV-ENV-PLN-0022	Environmental Management Strategy
S2-FGJV-LOG-PLN-0006	Traffic Management Plan
S2-FGJV-HSA-PLN-0003	Emergency Plan (Bushfire)
S2-FGJV-ENV-PLN-0008	Biodiversity Management Plan
S2-FGJV-ENV-PLN-0010	Water Management Plan
S2-FGJV-ENV-PLN-0014	Heritage Management Plan
S2-FGJV-ENV-PLN-0050	Bushfire Management Plan
S2-FGJV-ENV-PLN-0019	Spoil Management Plan
S2-FGJV-ENV-PLN-0049	Contaminated Land Management Plan
S2-FGJV-ENV-PLN-0044	Noise and Vibration Management Plan
S2-FGJV-ENV-PLN-0045	Blast Management Plan
S2-FGJV-LOG-PLN-0008	Transport Management Plan
S2-FGJV-ENV-PLN-0009	Aquatic Habitat Management Plan
S2-FGJV-ENV-PLN-0047	Air Quality Management Plan
S2-FGJV-LOG-PLN-0011	Heavy Vehicle Salvage Plan
S2-FGJV-LOG-PLN-0010	Snow and Ice Traffic Management Plan
S2-FGJV-ENV-PLN-0090	Natural Hazard Management Plan
S2-FGJV-ENV-PLN-0039	Worker Recreation Management Plan
S2-FGJV-ENV-PLN-0036	Waste Management Plan
S2-FGJV-SA-PLN-0002	Emergency Response Management Plan
S2-FGJV-HSA-PLN-0001	Health and Safety Management Plan
S2-FGJV-HSA-PLN-0005	Security Management Plan
S2-FGJV-QUA-PLN-0001	Quality Management Plan
S2-SHL-SPC-000056	Volume 3.06 Construction Requirements
S2-SHL-SPC-000037	Volume 3.05 R1 Standard Technical Requirements (General)
S2-SHL-SPC-000111	Volume 3.05 R2 Standard Technical Requirements (Electrical)
S2-SHL-SPC-000112	Volume 3.05 R3 Standard Technical Requirements (Mechanical)
S2-SHL-SPC-000038	Volume 3.05 R4 Standard Technical Requirements (Civil)
S2-SHL-SPC-000036	Volume 3.04 Particular functional and performance requirements- Civil



S2-SHL-SPC-000058	Volume 4 Employer's Requirements
AS 1289	Methods of testing soils for engineering purposes
AS 1319	Safety Signs
RMS G36	Environmental Protection
RMS G38	Soil and Water Management
RMS R44	Earthworks
RMS R57	Design of Reinforced Soil Wall
RMS R178	Topsoil
Sampling	AS1141 – Methods of Sampling and Testing Aggregates
Field Density	AS1289.5.8.1–2007 Nuclear Gauge Direct
Standard Compaction	AS 1289 5.1.1–2003 Dry Density / Moisture Content – Standard Method
Moisture Content	AS 1289 2.1.1–2005 Standard Method
Dry Density Ratio	AS 1289 5.4.1–2007 Compaction Control Test – Dry Density Ratio – Normal Method
Particle Size Distribution	AS 1289 3.6.1–2009 Standard Method of Analysis by Sieving
Atterberg Limits	AS 1289 3.1.1–2009 Liquid Limit, AS 1289 3.2.1–2009 Plastic Limit AS 1289 3.3.1–2009 Plasticity Index AS 1289 3.4.1–2008 Linear Shrinkage
Shrink/Swell Index	AS 1289 7.1.1-2003 Shrink-Swell Index
Emerson Class	AS 1289 3.8.1-2006 Determination of Emerson Class Number of a Soil
Swelling Soils	ASTM 4546 Standard test Methods for One-Dimensional Swell or Collapse of Cohesive Soils
Swell or Collapse of Soils	ASTM D5333 Standard Test Method for Measurement of Collapse Potential of Soils
SG-CS04-C-SKT-0001	Project Overview Plan

### Codes, Standards and Specifications

ISO 9001: Quality Management System (2015)
RMS Q6 Quality Management System
RMS R40 Horizontal Drains
RMS R63 Geotextiles
RMS R64 Soil Nailing
RMS B80 Concrete for Bridges
RMS B82 Shotcrete Work
RMS R68 Shotcrete without Fibres
The Work Health and Safety Act 2011 (NSW) and Work Health and Safety Regulation 2017
AS1442 – Carbon Steels and carbon-manganese steels – Hot rolled bars and semi-finished products



AS4671 – Steel Reinforcing Materials
AS2187.1 – Explosives – Storage, transport, and use. Part 1 – Storage
AS2187.2 – Explosives – Storage, transport, and use. Part 2 – Use of Explosives
AS4680 – Hot-dip Galvanized (zinc) Coatings on Fabricated Ferrous Articles
RMS D&C 3211 – Cements, Binders and Fillers
AS3972 -General Purpose and Blended Cement
BS EN 1542 – Products and systems for the protection and repair of concrete structures
ASTM C1609 – Standard Test Method for Flexural Performance of Fibre-Reinforced Concrete
BS EN 14651 – Concrete Tension Testing
AS1012 – Methods of Testing Concrete
AS 2758.1 – Aggregates and Rock for Engineering Purposes
AS 1379 – Specification and supply of concrete



## Appendix B: Responsibility Matrix

No.	Description	Provided by	
		Subcontractor	Contractor
<b>General</b>			
1	Accommodation	X	
4	Personnel transport from accommodation to worksites	X	
5	Medical and first aid facilities on site		X
6	Site emergency response		X
7	Recruitment, training, and medicals	X	
8	Site inductions	X	X
9	Personal protective equipment (PPE)	X	
<b>Site Establishment</b>			
10	Site access roads		X
11	Surface drainage	X	
12	Site offices (single office workstation)		X
13	Further office provision	X	
14	Cribs and ablutions (share of facilities for 30 – to enable mobilisation)		X
15	Further Cribs and ablutions	X	
16	Workshop / Warehouse	X	
17	Power supply	X	
18	Water source (bore supplied satellite tank and standpipe, finite supply)		X
19	Water supply/distribution (water carts)	X	
20	Temporary power and lighting	X	
21	Communications e.g. two-way UHF handheld radios, telephones etc.	X	
22	Bulk fuel supply at central fuelling station	X	
23	Fuel trucks / dispensing systems at work sites	X	
24	Skip bins and waste management	X	
<b>Services</b>			
25	Work methods and safety documentation	X	
26	ITP and quality records	X	
27	Testing of suitability & post-production ground support including soil nails, rock dowels, grout, shotcrete and thickness inspections	X	
28	Geotechnical investigations e.g. drilling, mapping etc.		X
29	Surveyor (as optional)	X	
30	Environmental coordinator	X	
31	Safety 1 @ 50	X	
<b>Materials</b>			
32	Sub-horizontal & sub-surface drainage	X	
33	Ground support supply - rock bolts, mesh etc.	X	



34	Steel wire mesh system	X	
35	Shotcrete & concrete supply		X
36	Shotcrete Reinforcement	X	
37	Grout supply	X	
38	Erosion Control Mat and U-Pins	X	
40	Geomembrane and other liners	X	
41	Oils and lubricants	X	
42	Small tools and all other materials required in the completion of the works defined in this scope of works, unless otherwise stated.	X	
<b>Construction</b>			
43	Road access to the PAD		X
44	Earthworks	X	
45	Drill and Blast if required	X	
46	Ground stabilisation including rock bolt installation and shotcreting	X	
47	Sub-horizontal and sub-surface drainage installation	X	
48	Shotcrete reinforcement	X	
49	Steel Wire Mesh	X	
50	Erosion Control Mat	X	
51	Open channel drainage on benches	X	
52	Erosion and sedimentation controls	X	
53	Spoil disposal and management	X	
55	Liner works	X	
56	All other construction required in the completion of the works defined in this scope of works, unless otherwise stated.	X	