

**Important notes:**

1. The Equipments should be suitable for tropical use and now available in SriLanka.
2. The specification is the minimum expected
3. Bidders should clearly state the actual specification pertaining to the offer in respect of each of the items described in the specifications.
4. Deviations from the specifications if any should be stated clearly.
5. Manufacturers printed specifications should be annexed to the offer, photo copies are not considered for evaluation.
6. Bidders are advocated to read "Information's and instructions to Bidders and Terms and Conditions of Procurement Method" attached herewith, before furnishing this document

**LOT 01 (a) : SPECIFICATION FOR 60 FEET LONG REACH CRAWLER EXCAVATOR (QTY - 02 Nos.)**

Item	Description	Minimum Specification Required	Bidders Response		Remarks
			Yes	No	
<b>1</b>	<b>GENERAL</b>				
1.1	Make / Brand	Please specify			
1.2	Model	Please specify			
1.3	Country of origin	Please specify			
1.4	Country of manufacture	Please specify			
1.5	Year of manufacture	<b>2019</b>			
1.6	Machine should be of manufacture's current standard model and should be new & unused				
1.7	Machine should be brand new long reach hydraulic crawler excavator				
1.8	Adequate access by providing large doors should be available to attend all preventive maintenance works.				
1.9	All safe operational limits to be indicated using a user friendly TFT LCD colour display. The system should provide full access to machine setting and maintenance data.				
1.10	Manufacture standard and factory fitted Satellite Communication Remote Monitoring				

57 ✓

				System should be available to monitor the information of operating hours, location records, fuel consumption status, maintenance data, etc... No additional cost to the purchaser for maintaining remote monitoring system. (Optional features will have added qualification)			
1.11	Machines which are used/with defects/assembled in Srilanka are not acceptable						
1.12	Operating weight			Not more than 32,000 kg			
1.13	Ground contact pressure / kPa			Should not exceed 44 kPa (for 800 mm shoe)			
<b>2</b>	<b>ENGINE</b>						
2.1	Make / Brand			Please specify			
2.2	Model			Please specify			
2.3	Country of origin			Please specify			
2.4	Country of manufacture			Please specify			
2.5	Year of manufacture			2019			
2.6	Engine should be common rail, water cooled, diesel, direct injection, turbo charged and after cooled off modern design and in current production.						
2.7	Air filter			Should be double element type with monitor panel dust indicator and dust evacuator			
2.8	Gross horse power / hp			Should be between 180 – 210 hp at rated engine rpm. Please specify rated rpm & power rating			
2.9	Maximum Torque / Nm			Should be between 600 - 950 Nm at rated engine rpm. Please specify rated rpm & torque rating			
2.10	Emission standard			Euro 3 / Tier 3			
<b>3</b>	<b>FUEL SYSTEM</b>						
3.1	Fuel tank			Should consist of drain plug with a lockable cap			
3.2	Fuel tank capacity / ltr.			Not less than 350 liters			
3.3	Fuel filtration			Should consist of fuel filters and water separator with adequate filtration capacity. Must be compatible with			

4	<b>24 V ELECTRICAL SYSTEM</b>	local diesel fuel.	
4.1	Battery	Should be maintenance free type and 12 V two battery system with the capacity not less than 90 Ah.	
4.2	Working lights for night operation including rear lamps (minimum requirement)	Lights should be 2 nos. for cab front, 2 nos. for cab rear, 2 nos. for boom front and 1 no. for boom rear.	
4.3	Electrical horn	Should be available	
5	<b>HYDRAULIC SYSTEM</b>		
5.1	All bucket, boom swing, travelling, etc... are to be operated with pump assisted hydraulic system incorporate with centrally control valve system, with operating lever / paddle system from operator's cabin		
5.2	Hydraulic pumps, valves, cylinders are designed to provide maximum output with minimum pressure drop of the equipment.		
5.3	Should have adequate hydraulic oil tank capacity to perform all operations.		
5.4	Should consist of relief valve system to protect hydraulic system.		
5.5	Should consist in built hydraulic oil pressure Indicator		
5.6	Should indicate the hydraulic reservoir level		
5.7	Hydraulic cylinders	Large heavy duty boom and arm cylinder should ensure the smooth powerful operation	
6	<b>TRAVEL SYSTEM</b>		
6.1	Travel speed / (km/h)	Not less than 5.0 km/h	
6.2	Draw-bar pulling force / kN	Should not less than 220 kN	
6.3	Gradeability / %	70 % (35°)	
6.4	Ground clearance / mm	Not less than 450 mm	
7	<b>CAB AND CONTROL</b>		
7.1	Standard for cab Roll Over Protection Structure (ROPS) / Fall Over Protection (FOPS)	Please specify.(Certificate shall be provided)	
7.2	Steel cab with safety glasses to see all side views (360° visibility).		
7.3	Overhead visibility	Large sunroof should be provided	

✓ ✓ ✓

✓

7.4	Straight travel pedal	Should be provided		
7.5	All operating levers and instruments	Should be joystick and switch integrated in the control stand for precise operation. All switches should be ergonomically positioned.		
7.6	Adjustable and comfortable seat with back rest	Should be available		
7.7	Wipers, glass washers	Should be available		
7.8	Doors	Should be lockable		
7.9	Operator cabin	Should be air conditioned		
7.10	Interior and side mirrors	Should be available		
<b>8</b>	<b>INDICATORS &amp; INSTRUMENTS</b>			
8.1	Indicator and gauge for fuel	Should be available		
8.2	Indicator and gauge for engine oil	Should be available		
8.3	Indicator and gauge for hydraulic oil	Should be available		
8.4	Pressure gauges	Should be indicate the minimum level of engine oil		
8.5		Should be indicate the minimum level of hydraulic oil, etc...		
8.6	Temperature gauges	Should show safe working temperature of engine oil		
8.7		Should show safe working temperature of hydraulic oil		
8.8		Should show safe working temperature of coolant, etc...		
8.9	Hour meter	Should show engine out put		
<b>9</b>	<b>BOOM, ARM AND BUCKET</b>			
9.1	Bucket capacity, SAE heaped / m <sup>3</sup>	Should not less than 0.4 m <sup>3</sup>		
9.2	Bucket weight / kg	Not less than 300 kg		
9.3	No. of bucket teeth	Not less than 5 nos.		
9.4	Boom and Arm	Should be heavy duty and reinforced		
9.5	Weight with bucket at the maximum reach and at the ground level	Shall be not less than 1.0 ton		

<b>10</b>	<b>TRACK &amp; UNDERCARRIAGE</b>			
10.1	Track length / mm	Should not less than 4400 mm		
10.2	Track width / mm	Should not less than 3000 mm		
10.3	Track gauge / mm	Should not more than 2800 mm		
10.4	Track shoe width / mm	Should be 800 mm (Standard)		
10.5	Sealed lubricated type track and carrier rollers with accessible lubricating points			
10.6	Should have cast steel, surface hardened, sealed lubricated type idler wheels			
10.7	Sprocket wheels	Should be heavy duty casted.		
<b>11</b>	<b>SWING SYSTEM</b>			
11.1	Hydraulically operated swing motor with 360° of rotation			
11.2	Maximum swing speed / RPM	Swing speed not less than 10 RPM		
11.3	Swing Brake	Hydraulic, locking automatically when the swing control lever is in neutral position		
<b>12</b>	<b>WORKING RANGE</b>			
12.1	Maximum digging depth / m	Not less than 14.5 m		
12.2	Maximum digging height / m	Not less than 14.0m		
12.3	Reach at ground level / m	Not less than 18.0 m		
12.4	Dump height / m	Not less than 12.0 m		
<b>13</b>	<b>TRANSPORT DIMENSIONS</b>			
13.1	Transport length / m	Should not more than 15 m		
13.2	Transport height / m	Should not more than 3.4 m		
13.3	Transport width / m	Should not more than 3.3 m		
<b>14</b>	<b>TOOLS</b>			
14.1	All standard tools, including heavy duty grease gun, day to day maintenance tool kit should be provided with lockable tool box. (all tools should be branded)			
<b>15</b>	<b>MANUALS</b>			
15.1	Spare parts manual	Shall be provided		
15.2	Operation and maintenance manual	Shall be provided		
15.3	Workshop manual	Shall be provided		
<b>16</b>	<b>SPARE PARTS</b>			
16.1	03 sets of oil, air and fuel filters necessary for first three consecutive services			
16.2	01 set of whole hydraulic filters			

✓ ✓ ✓

17	<b>WARRANTY</b>
17.1	The successful bidder should provide the comprehensive warranty for equipment for a period of 24 months or 2500 meter hours, whichever occurs first from the date of acceptance of goods by the purchaser. All defects on manufacturer found in the equipment during the guarantee period should be made good such defects by the supplier at his own cost. During the warranty period, the recommended free services should be done by the supplier at own expenses (Labor Free).
<b>18</b>	<b>TRAINING</b>
18.1	A training of two days for the operators should be provided

We certify that the above particulars are correct and we agree to supply same if we are awarded the Contract.

Bidders Name : .....

Authorized Signature : .....

Date -----

**LOT 01 (b): - TECHNICAL SPECIFICATION FOR 50 FEET LONG REACH CRAWLER EXCAVATOR (QTY-01 No.)**

Item	Description	Minimum Specification Required	Bidders Response		Remarks
			Yes	No	
<b>1</b>	<b>GENERAL</b>				
1.1	Make / Brand	Please specify			
1.2	Model	Please specify			
1.3	Country of origin	Please specify			
1.4	Country of manufacture	Please specify			
1.5	Year of manufacture	2019			
1.6	Machine should be of manufacturer's current standard model and should be new & unused				
1.7	Machine should be brand new long reach hydraulic crawler excavator				
1.8	Adequate access by providing large doors should be available to attend all preventive maintenance works.				
1.9	All safe operational limits to be indicated using a user friendly TFT LCD colour display. The system should provide full access to machine setting and maintenance data.				
1.10	Manufacture standard and factory fitted Satellite Communication Remote Monitoring System should be available to monitor the information of operating hours, location records, fuel consumption status, maintenance data, etc... No additional cost to the purchaser for maintaining remote monitoring system. (Optional features will have added qualification)				
1.11	Machines which are used/with defects/assembled in Srilanka are not acceptable				
1.12	Operating weight	Not more than 25,000 kg			
1.13	Ground contact pressure / kPa	Should not exceed 40 kPa (for 800 mm shoe)			
<b>2</b>	<b>ENGINE</b>				
2.1	Make / Brand	Please specify			
2.2	Model	Please specify			
2.3	Country of origin	Please specify			
2.4	Country of manufacture	Please specify			
2.5	Year of manufacture	2019			

Handwritten signature and initials.

2.6	Engine should be common rail, water cooled, diesel, direct injection, turbo charged and after cooled off modern design and in current production.				
2.7	Air filter	Should be double element type with monitor panel dust indicator and dust evacuator			
2.8	Gross horse power / hp	Should be between 150 – 175 hp at rated engine rpm. Please specify rated rpm & power rating.			
2.9	Maximum Torque / Nm	Should be between 580 - 650 Nm at rated engine rpm. Please specify rated rpm & torque rating			
2.10	Emission standard	Euro 3 / Tier 3			
<b>3</b>	<b>FUEL SYSTEM</b>				
3.1	Fuel tank	Should consist of drain plug with a lockable cap			
3.2	Fuel tank capacity / ltr.	Not less than 300 liters			
3.3	Fuel filtration	Should consist of fuel filters and water separator with adequate filtration capacity. Must be compatible with local diesel fuel.			
<b>4</b>	<b>24 V ELECTRICAL SYSTEM</b>				
4.1	Battery	Should be maintenance free type and 12 V two battery system with the capacity not less than 90 Ah.			
4.2	Working lights for night operation including rear lamps (minimum requirement)	Lights should be 2 nos. for cab front, 2 nos. for cab rear, 2 nos. for boom front and 1 no. for boom rear.			
4.3	Electrical horn	Should be available			
<b>5</b>	<b>HYDRAULIC SYSTEM</b>				
5.1	All bucket, boom swing, travelling, etc... are to be operated with pump assisted hydraulic system incorporate with centrally control valve system, with operating lever / paddle system from operator's cabin				



5.2	Hydraulic pumps, valves, cylinders are designed to provide maximum output with minimum pressure drop of the equipment.			
5.3	Should have adequate hydraulic oil tank capacity to perform all operations.			
5.4	Should consist of relief valve system to protect hydraulic system.			
5.5	Should consist in built hydraulic oil pressure indicator			
5.6	Should indicate the hydraulic reservoir level			
5.7	Hydraulic cylinders	Large heavy duty boom and arm cylinder should ensure the smooth powerful operation		
<b>6</b>	<b>TRAVEL SYSTEM</b>			
6.1	Travel speed / (km/h)	Not less than 5.0 km/h		
6.2	Gradeability / %	70 % (35°)		
6.3	Ground clearance / mm	Not less than 400 mm		
<b>7</b>	<b>CAB AND CONTROL</b>			
7.1	Standard for cab Roll Over Protection (ROPS) / Fall Over Protection (FOPS)	Please specify. (Certificate shall be provided)		
7.2	Steel cab with safety glasses to see all side views (360° visibility).			
7.3	Overhead visibility	Large sunroof should be provided.		
7.4	All operating levers and instruments	Should be joystick and switch integrated in the control stand for precise operation. All switches should be ergonomically positioned.		
7.5	Adjustable and comfortable seat with back rest	Should be available		
7.6	Wipers, glass washers	Should be available		
7.7	Doors	Should be lockable		
7.8	Operator cabin	Should be air conditioned		
7.9	Interior and side mirrors	Should be available		
<b>8</b>	<b>INDICATORS &amp; INSTRUMENTS</b>			
8.1	Indicator and gauge for fuel	Should be available		
8.2	Indicator and gauge for engine oil	Should be available		

VF W S

8.3	Indicator and gauge for hydraulic oil	Should be available		
8.4	Pressure gauges	Should be indicate the minimum level of engine oil		
8.5		Should be indicate the minimum level of hydraulic oil, etc...		
8.6	Temperature gauges	Should show safe working temperature of engine oil		
8.7		Should show safe working temperature of hydraulic oil		
8.8		Should show safe working temperature of coolant, etc...		
8.9	Hour meter	Should show engine out put		
<b>9</b>	<b>BOOM, ARM AND BUCKET</b>			
9.1	Bucket capacity, SAE heaped / m <sup>3</sup>	Should not less than 0.4 m <sup>3</sup>		
9.2	Bucket weight / kg	Not less than 300 kg		
9.3	No. of bucket teeth	Not less than 5 nos.		
9.4	Boom and Arm	Should be heavy duty and reinforced		
<b>10</b>	<b>TRACK &amp; UNDERCARRIAGE</b>			
10.1	Track length / mm	Should not less than 4000 mm		
10.2	Track width / mm	Should not less than 2750 mm		
10.3	Track gauge / mm	Should not more than 2400 mm		
10.4	Track shoe width / mm	Should be 800 mm (Standard)		
10.5	Sealed lubricated type track and carrier rollers with accessible lubricating points			
10.6	Should have cast steel, surface hardened, sealed lubricated type idler wheels			
10.7	Sprocket wheels	Should be heavy duty casted.		
<b>11</b>	<b>SWING SYSTEM</b>			
11.1	Hydraulically operated swing motor with 360° of rotation			
11.2	Maximum swing speed / RPM	Swing speed not less than 10 RPM		
11.3	Swing Brake	Hydraulic, locking automatically when the swing control lever is in neutral position		

<b>12</b>	<b>WORKING RANGE</b>			
12.1	Maximum digging depth / m	Not less than 11.5 m		
12.2	Maximum digging height / m	Not less than 12.5m		
12.3	Reach at ground level / m	Not less than 15.0 m		
12.4	Dump height / m	Not less than 10.0 m		
<b>13</b>	<b>TRANSPORT DIMENSIONS</b>			
13.1	Transport length / m	Should not more than 13.0 m		
13.2	Transport height / m	Should not more than 3.4 m		
13.3	Transport width / m	Should not be more than 3.3 m		
<b>14</b>	<b>TOOLS</b>			
14.1	All standard tools, including heavy duty grease gun, day to day maintenance tool kit should be provided with lockable tool box. (all tools should be branded)			
<b>15</b>	<b>MANUALS</b>			
15.1	Spare parts manual	Shall be provided		
15.2	Operation and maintenance manual	Shall be provided		
15.3	Workshop manual	Shall be provided		
<b>16</b>	<b>SPARE PARTS</b>			
16.1	03 sets of oil, air and fuel filters necessary for first three consecutive services			
16.2	01 set of whole hydraulic filters			
<b>17</b>	<b>WARRANTY</b>			
17.1	The successful bidder should provide the comprehensive warranty for equipment for a period of 24 months or 2500 meter hours, whichever occurs first from the date of acceptance of goods by the purchaser. All defects on manufacturer found in the equipment during the guarantee period should be made good such defects by the supplier at his own cost. During the warranty period, the recommended free services should be done by the supplier at own expenses (Labor Free).			
<b>18</b>	<b>TRAINING</b>			
18.1	A training of two days for the operators should be provided			

10/2 ✓ 8

We certify that the above particulars are correct and we agree to supply same if we are awarded the Contract.

Bidders Name : .....

Authorized Signature : .....

Date -----

**LOT-02- TECHNICAL SPECIFICATION FOR 7 Ton CRAWLER EXCAVATOR WITH PONTOON-(DREDGER) (QTY-02 Nos.)**

Item	Description	Minimum Specification Required	Bidders Response		Remarks
			Yes	No	
<b>1</b>	<b>GENERAL</b>				
1.1	Make / Brand	Please specify			
1.2	Model	Please specify			
1.3	Country of origin	Please specify			
1.4	Country of manufacture	Please specify			
1.5	Year of manufacture	2019			
1.6	Machine should be of manufacture's current standard model and should be new & unused				
1.7	Machine should be assembly of a Pontoon with a brand new crawler mounted hydraulic excavator with not less than 0.3 m <sup>3</sup> (SAE heaped) backhoe bucket capacity				
1.8	Adequate access by providing large doors should be available to attend all preventive maintenance works.				
1.9	All safe operational limits to be indicated using a user friendly TFT LCD colour display. The system should provide full access to machine setting and maintenance data.				
1.10	Machines which are used/with defects/assembled in Srilanka are not acceptable				
1.11	Operating weight	Not less than 7,000 kg			
1.12	Ground contact pressure / kPa	Should not exceed 40 kPa (for 450 mm shoe)			
<b>2</b>	<b>ENGINE</b>				
2.1	Make / Brand	Please specify			
2.2	Model	Please specify			
2.3	Country of origin	Please specify			
2.4	Country of manufacture	Please specify			
2.5	Year of manufacture	2019			
2.6	Engine should be water cooled, diesel, direct injection, turbo charged, modern design and in current production.				
2.7	Air filter	Should be double element type			

*(Handwritten signature/initials)*

			with monitor panel dust indicator and dust evacuator			
2.8	Gross horse power / kW		Should be between 35 – 50 kW at rated engine rpm. Please specify rated rpm & power rating			
2.9	Maximum Torque / Nm		Should be between 190 - 220 Nm at rated engine rpm. Please specify rated rpm & torque rating			
2.10	Emission standard		EURO 3 / Tier 3			
<b>3</b>	<b>FUEL SYSTEM</b>					
3.1	Fuel tank		Should consist of drain plug with a lockable cap			
3.2	Fuel tank capacity / ltr.		Not less than 120 liters			
3.3	Fuel filtration		Should consist of fuel filters and water separator with adequate filtration capacity. Must be compatible with local diesel fuel.			
<b>4</b>	<b>24 V ELECTRICAL SYSTEM</b>					
4.1	Battery		Should be maintenance free type and 12 V two battery system with the capacity not less than 60 Ah.			
4.2	Working lights for night operation including rear lamps (minimum requirement)		Lights should be 2 nos. for cab front, 2 nos. for cab rear, 2 nos. for boom front and 1 no. for boom rear.			
4.3	Electrical horn		Should be available			
<b>5</b>	<b>HYDRAULIC SYSTEM</b>					
5.1	All bucket, boom swing, travelling, etc... are to be operated with pump assisted hydraulic system incorporate with centrally control valve system, with operating lever / paddle system from operator's cabin					
5.2	Hydraulic pumps, valves, cylinders are designed to provide maximum output with					

	minimum pressure drop of the equipment.			
5.3	Should have adequate hydraulic oil tank capacity to perform all operations.			
5.4	Should consist of relief valve system to protect hydraulic system.			
5.5	Should consist in built hydraulic oil pressure indicator			
5.6	Should indicate the hydraulic reservoir level			
5.7	Hydraulic cylinders	Large heavy duty boom and arm cylinder should ensure the smooth powerful operation		
<b>6</b>	<b>TRAVEL SYSTEM</b>			
6.1	Travel speed / (km/h)	Not less than 4 km/h		
6.2	Gradeability / %	Should not be less than 60 %		
6.3	Ground clearance / mm	Not less than 300 mm		
<b>7</b>	<b>CAB AND CONTROL</b>			
7.1	Steel cab with safety glasses to see all side views (360° visibility).			
7.2	Overhead visibility	Large sunroof should be provided		
7.3	All operating levers and instruments	Should be joystick and switch integrated in the control stand for precise operation. All switches should be ergonomically positioned.		
7.4	Adjustable and comfortable seat with back rest	Should be available		
7.5	Wipers, glass washers	Should be available		
7.6	Doors	Should be lockable		
7.7	Operator cabin	Should be air conditioned		
7.8	Interior and side mirrors	Should be available		
<b>8</b>	<b>INDICATORS &amp; INSTRUMENTS</b>			
8.1	Indicator and gauge for fuel	Should be available		
8.2	Indicator and gauge for engine oil	Should be available		
8.3	Indicator for battery charging	Should be available		
8.4	Indicator and gauge for hydraulic oil	Should be available		
8.5	Pressure gauges	Should be indicate the minimum level of engine oil		

✓ ✓ ✓

8.6		Should be indicate the minimum level of hydraulic oil, etc...		
8.7		Should show safe working temperature of engine oil		
8.8	Temperature gauges	Should show safe working temperature of hydraulic oil		
8.9		Should show safe working temperature of coolant, etc...		
8.10	Hour meter	Should show engine out put		
<b>9</b>	<b>BOOM, ARM AND BUCKET</b>			
9.1	Bucket capacity, SAE heaped / m <sup>3</sup>	Should not less than 0.3 m <sup>3</sup>		
9.2	Boom and Arm	Should be heavy duty and reinforced		
<b>10</b>	<b>TRACK &amp; UNDERCARRIAGE</b>			
10.1	Overall length of crawler (Track length) / mm	Should not less than 2500 mm		
10.2	Overall width of crawler (Track width) / mm	Should not less than 2000 mm		
10.3	Track gauge / mm	Should not more than 1900 mm		
10.4	Track shoe width / mm	Should be 450 mm (Standard)		
10.5	Sealed lubricated type track and carrier rollers with accessible lubricating points			
10.6	Should have cast steel, surface hardened, sealed lubricated type idler wheels			
10.7	Sprocket wheels	Should be heavy duty casted.		
<b>11</b>	<b>SWING SYSTEM</b>			
11.1	Hydraulically operated swing motor with 360° of rotation			
11.2	Maximum swing speed / RPM	Swing speed not less than 10 RPM		
<b>12</b>	<b>WORKING RANGE</b>			
12.1	Maximum digging depth / m	Not less than 4.00 m		
12.2	Reach at ground level / m	Not less than 6.00 m		
12.3	Dump height / m	Not less than 4.9 m		
12.4	Bucket digging force / kN	Not less than 50.0 kN		
<b>13</b>	<b>TRANSPORT DIMENSIONS</b>			
13.1	Transport length / m	Should not more than 6.50 m		
13.2	Transport height / m	Should not more than 3.0 m		



13.3	Transport width / m	Should not be more than 2.5 m		
<b>14</b>	<b>Barge (Pontoon)</b>			
<b>14.1</b>	<b>General</b>			
14.1.1.	Drawing	Detailed assembly drawing with all coupling arrangements, dimensions should be forwarded with the offer.		
14.1.2	Type	Should be Heavy duty non self-propelling Floating platform.		
14.1.3	Barge (Pontoon)	Should be Easy assembly and disassembly of several sections of portable and light Weight. Should be able to disassemble & assemble by using the above hydraulic excavator.		
14.1.4	Number of sections of barge (Pontoon)	Should be seven or more air tight sections assembled together.		
14.1.5	Overall length of barge	Should not exceed 7.0 m.		
14.1.6	Overall width of barge	Should not be more than 5.5 m.		
14.1.7	Overall width of each compartment	Should not exceed 2.5 m		
14.1.8	Weight of each section	Should not exceed 1500 kg		
14.1.9	Minimum hull plate thickness	6 mm and Yield strength Up to 345 MPa (High tensile steel) 8 mm and Yield strength Up to 235 MPa (Mild steel)		
14.1.10	Mill certificate	Original certificate from issuing agency should be provided with the Barge (Pontoon)		
14.1.11	Maximum draft of the loaded pontoon	Should not exceed 750 mm		
14.1.12	Pump out water from compartment barge (pontoon).A pump with accessories shall be provided	Provision should be made (Please specify)		
<b>14.2</b>	<b>Fabrication of Pontoon</b>			

✓ ✓ ✓

14.2.1	Ramp	Should be detachable Should be suitable for manual handling to moving the excavator in & out of the pontoon.			
14.2.2	Winches	Should be provided two hand operated geared winches with anchor Should be installed at each corner of barge for maneuvering the dredger.			
14.2.3	Cable	Should be provide 10 mm diameter, 25 m long hot dipped galvanized cable for each and every winches at each corner			
14.2.4	Nylon rope-polypropalene	Should be 50 mm diameter, 25 m long Should be provide with each pontoon.			
14.2.5	Bollards	Should be fitted on board			
14.2.6	Number of bollards	Should not be less than 08 nos.			
14.2.7	Suitable anchorage	Should be provided in the pontoon to anchor the excavator while working.			
14.2.8	Stability	Supplier shall ensure the stability of the Pontoon during any operation of the Dredger for given dimension by purchaser. (Payment is released after getting the confirmation of the stability during any operation of the dredger)			

<b>15</b>	<b>Painting</b>				
15.1	All steel parts (more than 6 mm thickness)	All steel parts (more than 6 mm) should be blast cleaned as per SA 2.4 or equivalent standards			
15.2	All steel parts	Zinc rich primer shall be applied before fabrication.			
<b>15.a</b>	<b>Exterior Hull</b>				
15.a.1	Surface preparation	Should be shot blasted to the SA 2.4 or equivalent standards.			
15.a.2	Primer coat	Zinc rich Primer coat DFT 80 microns. Airless Spray			
15.a.3	Paint	Should be done by airless spray. Epoxy CoalTar - Total DFT 400 Microns			
15.a.4	Final average DFT	Not less than 480 microns.			
<b>15.b</b>	<b>Interior Hull</b>				
15.b.1	Surface preparation	Should be according to the SA 2.4 or equivalent standards.			
15.b.2	Primer two coats	Zinc rich Primer coat DFT 80 microns. Airless Spray			
15.b.3	Paint	Should be done by airless spray. Epoxy CoalTar - Total DFT 200 Microns			
15.b.4	Final average DFT	Should be more than 280 microns.			
<b>15.c</b>	<b>INSPECTION</b>				
	<b>Bidder shall arrange following inspection</b>				
15.c.1	Fabrication stage				
15.c.2	Immediately after sand blasting before applying primer				
15.c.3	stability				
<b>16</b>	<b>TOOLS</b>				
16.1	All standard tools, including heavy duty grease gun, day to day maintenance tool kit should be provided with lockable tool box. (all tools should be branded)				

✓ ✓ ✓

<b>17</b>	<b>MANUALS</b>			
17.1	Spare parts manual		Shall be provided	
17.2	Operation and maintenance manual		Shall be provided	
17.3	Workshop manual		Shall be provided	
<b>18</b>	<b>SPARE PARTS</b>			
18.1	03 sets of oil, air and fuel filters necessary for three consecutive services			
18.2	01 set of whole hydraulic filters			
<b>19</b>	<b>WARRANTY</b>			
19.1	The successful bidder should provide the comprehensive warranty for equipment for a period of 24 months or 2500 meter hours, whichever occurs first from the date of acceptance of goods by the purchaser. All defects on manufacturer found in the equipment during the guarantee period should be made good such defects by the supplier at his own cost. During the warranty period, the recommended free services should be done by the supplier at own expenses (Labor Free).			
<b>20</b>	<b>TRAINING</b>			
20.1	Operator training for the machines should be provided free of cost			

We certify that the above particulars are correct and we agree to supply same if we are awarded the Contract.

Bidders Name : .....

Authorized Signature : .....

Date \_\_\_\_\_

**LOT 03- Technical Specification for Backhoe Loader (Qty-02 Nos.)**

Item	Description	Bidders Response Mark (x) where necessary		Remarks
		Yes	No	
<b>1</b>	<b>General</b>			
1.1	Make / Brand			
1.2	Model			
1.3	Country of Origin			
1.4	Year of Manufacture - 2019			
1.5	Country of Manufacture			
1.6	Machine should be of manufacturer's current standard model and should be new & unused. Items which are used/with defects/assembled in Srilanka are not acceptable			
1.7	Machine should be brand new backhoe loader			
1.8	Machine should be fully hydraulically operated, four wheel drive, two wheel steering facility having rear mounted, side shifting type backhoe unit with a front mounted multipurpose bucket			
1.9	Operating Weight not less than 8.0 ton			
1.10	Machines which are used/with defects/assembled in Srilanka are not acceptable			
<b>2</b>	<b>Engine</b>			
2.1	Make / Brand			
2.2	Model			
2.3	Country of Manufacture			

LDZ J Q

2.4	Year of Manufacture (Should be year 2019)			
2.5	Should be 4 cycle, turbo charged, direct-injecting, water cooled in line diesel engine			
2.6	Gross Power should be more than 90 hp - 100 hp at rated rpm			
2.7	Engine torque should be more than 390 Nm			
2.8	Engine displacement -Not less than 4000 cc			
2.9	Fuel tank capacity should not less than 150 lts			
2.10	Air, oil and fuel filters should have disposable elements			
<b>3</b>	<b>Transmission</b>			
3.1	Should be power shift transmission			
3.2	Should have four forward and four reverse speed.			
3.3	Minimum travel speed should be not less than 35 km/h			
<b>4</b>	<b>Hydraulic System</b>			
4.1	Backhoe bucket and multi bucket are to be operated with pumps/Gear Pumps assisted hydraulic system incorporated with centrally control valve system, with operating lever/paddle system from operator's cabin.			
4.2	Should consist of relief valve system to protect hydraulic system			
4.3	Tank Capacity -Not less than 100 litres (please specify)			
<b>5</b>	<b>Cab &amp; Structure</b>			
5.1	Should be Roll Over / Fall Over protection standard (ROPS / FOPS) cab with lockable doors. Certificate shall be provided			
5.2	Steel cab with safety glasses to see all side views (360° visibility)			

5.3	Noise level inside Cab should be less than 75 dB (A) (please specify)			
5.4	Noise level outside Cab should be less than 104 dB(A)(please specify)			
5.5	Should be adjustable and comfortable seat with back rest with ergonomically position control.			
5.6	Should be consist of viper			
5.7	Should be consist of rear view mirror			
6	<b>Gauge Instrument Panel</b> (Shall include the following (apart from any other standard terms)			
6.1	Charging/Battery Indicator			
6.2	Fuel level Indicator/Meter			
6.3	Engine coolant temperature indicator/gauge			
6.4	Hour meter			
6.5	Engine oil pressure indicator			
6.6	Transmission oil level			
6.7	Fully equipied instrument panel with audible warning system for main function			
7	<b>Brake System</b>			
7.1	Maintenance free self-adjusting multi disc, inboard mounted, hydraulically actuated for cool operation to be provided. Brakes can be operated individually for pivot turns or simultaneously for normal braking.			
7.2	The following three different braking modes should be provided. a. 2 WD with two wheel braking			

✓ ✓ ✓

	b. 2WD with four wheel braking			
	c. 4WD four wheel braking			
7.3	Parking brake should be mechanically applied through a hand lever			
<b>8</b>	<b>12 Volts Electrical System</b>			
8.1	Working Lights for Night Operation including 02 front and 02 Rear Lamps			
8.2	Electrical Horn			
8.3	A heavy-duty harness with secured sealed connectors protects against both water and dust.			
8.4	Signal - Front 02 Nos. Rear 02 Nos. Parking, Brakes and reverse lights			
<b>9</b>	<b>Steering</b>			
9.1	Hydraulically actuated steering on front wheel with steering cylinder and steering wheel.			
9.2	Emergency steering to be available in case of hydraulic failure.			
<b>10</b>	<b>Backhoe</b>			
10.1	Hydraulically operated side shift and extradig backhoe buckets each width not less than 540 mm bucket and not less than 270 mm bucket.			
10.2	Maximum digging depth of not less than 5.0 m			
10.3	Boom transport lock should be provided			
10.4	Swing angle of the backhoe 180 deg. (Left 90 deg., Right 90 deg.)			
10.5	Backhoe attachment should be able to shift both ways from the center position.			



<b>11</b>	<b>Loader</b>			
11.1	Standard multi purpose bucket with teeth.			
11.2	Hydraulically operated loader arms. Preferably parallel lift arrangement.			
11.3	Return to dig function facility.			
11.4	Bucket capacity -Not less than 1.0 m <sup>3</sup> .			
11.5	Width of the bucket-Not less than 2300 mm			
11.6	Lift capacity with multi purpose bucket not less than 3000 kg.			
11.7	Breakout force lift cylinder to be not less than 4700kg			
11.8	Breakout force bucket to be not less than 6500 kg			
11.9	Dump height not less than 2.6 m			
11.10	Load over height with multi purpose bucket to be not less than 3.0 m			
<b>12</b>	<b>Tyres</b>			
12.1	Traction type tyres			
<b>13</b>	<b>Tools</b>			
13.1	All standard tools, including heavy duty grease gun, day to day maintenance tool kit should be provided with lockable tool box. (All tools should be branded)			
<b>14</b>	<b>Manuals in English language covering the entire machine should be provided with each machine</b>			

VOT ✓ B

14.1	Spare Parts Manual				
14.2	Operation and Maintenance Manual (CD not allowed)				
14.3	Workshop Manual				
<b>15</b>	<b>Spare Parts</b>				
15.1	03 sets of oil,Air and fuel filters necessary for three consecutive services				
15.2	01 set of whole hydraulic filters				
<b>16</b>	<b>Warranty</b>				
16.1	The successful bidder should provide the comprehensive warranty for equipment for a period of 24 months or 2500 meter hours, whichever occurs first from the date of acceptance of goods by the purchaser. All defects on manufacturer found in the equipment during the guarantee period should be made good such defects by the supplier at his own cost. During the warranty period, the recommended free services should be done by the supplier at own expenses (Labor Free).				
<b>17</b>	<b>Training</b>				
17.1	A training of two days shall be provided for Operators				
<b>18</b>	<b>Registration</b>				

18.1	Registration of the vehicle from Department of Motor Traffic in Sri Lanka to be done by the supplier on purchaser's name (cost for vehicle registration shall be included in the unit price of the machine).			
------	--	--	--	--

We certify that the above particulars are correct and we agree to supply same if we are awarded the Contract.

Bidders Name : .....

Authorized Signature : .....

Date -----

Handwritten initials and a checkmark.

