

**BOQ & COST ESTIMATION OF DETAILED DESIGN / PREVENTIV PUNIMESH - FAZE PROJEKT ZBATIMI**  
**"PUNIME PER MBROJTJEN E SHPATULLES SE DJATHTE MES VEPRES SE MARRJES DHE KRESHTES SE DIGES NE HEC KOMAN"**

No./Nr.	An	Item description / Pershkrimi i punimeve	Unit / Njesia	Quantity / Sasia	Rate / Cmimi (Leke)	Amount / Shuma (Leke)
<b>PROTECTIVE ENGINEERING MEASURES / MASAT MBROJTJESHE INXHINIERIKE</b>						
<b>1- Engineering Protective Measure No.3/ Masa Mbrojtjese Inxhinierike Nr.3</b>						
1		S.P of Heavy duty rock fall barrier 2000 kj / F.V I Barrieres me rrjete metalike me kapacitet te larte mbajtes 2000 kj, h=5m, $\alpha=50-60^\circ$	m l	380.00		ALL 0.00
<b>1- Total : Engineering Protective Measure No.3/ Masa Mbrojtjese Inxhinierike Nr.3</b>						<b><u>ALL 0.00</u></b>
<b>2 - Permanent Floating Platform ( INTAKE AREA - No.8) / Platforme Pluskuese Permanente (ZONA E VEPRES SE MARRJES - Nr.8)</b>						
1		S.P of Floating Platform / -F.V Platforme Pluskuese	pcs/cope	1.00		ALL 0.00
<b>2- Total : Permanent Floating Platform ( INTAKE AREA - No.8) / Platforme Pluskuese Permanente (ZONA E VEPRES SE MARRJES - Nr.8)</b>						<b><u>ALL 0.00</u></b>
<b>3 - Engineering Protective Measure No.12 / Masa Mbrojtjese Inxhinierike Nr.12</b>						
1		Loose stone removal / Largimi i masiveve te shkeputur	m <sup>3</sup>	10.00		ALL 0.00
2		Excavation with jackhammer / Germim me matrapik	m <sup>3</sup>	5.00		ALL 0.00
3		Transport of all material ( loose stone removal + excavation with jackhammer ) with vehicle up to 1 km / Trasport total ( largimi i masiveve te shkeputur + germime me matrapik ) me auto deri 1 km	m <sup>3</sup>	15.00		ALL 0.00
<b>3- Total : Engineering Protective Measure No.12 ( PORT AREA ) / Masa Mbrojtjese Inxhinierike Nr.12 ( PORT AREA )</b>						<b><u>ALL 0.00</u></b>
<b>4 - Engineering Protective Measure No.1 - Rock mass R 1<sup>b</sup> / Masa Mbrojtjese Inxhinierike Nr.1 - Masa shkembore R 1<sup>b</sup></b>						
1		-S.P of Anchors $\varnothing$ 40 l=9 m / F.V Ankerat $\varnothing$ 40 l=9 m $\alpha=10^\circ$	m l	216.00		ALL 0.00

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2		-S.P of Anchors $\varnothing$ 32 l=1 m / F.V Ankeri $\varnothing$ 32 l=1 m	m l	24.00		ALL 0.00
3		Concrete structures C 20/25 for erosion protection / Beton C 20/25 per mbrojtje nga erozioni	m <sup>3</sup>	140.00		ALL 0.00
4		S.P Cables $\varnothing$ 20 /F.V Kavio $\varnothing$ 20	ml	500.00		ALL 0.00
<b>4- Total : Engineering Protective Measure No.1 - Rock mass R 1<sup>b</sup> / Masa Mbrojttese Inxhinierike Nr.1 - Masa shkembore R 1<sup>b</sup></b>						<b><u>ALL 0.00</u></b>
<b>5 - Engineering Protective Measure No.2 - Rock mass R 1<sup>e</sup> / Masa Mbrojttese Inxhinierike Nr.2 - Rock mass R 1<sup>e</sup></b>						
1		-S.P of Anchors $\varnothing$ 40 l=9 m / F.V Ankeri $\varnothing$ 40 l=9 m $\alpha=10^{\circ}$	m l	360.00		ALL 0.00
2		-S.P of Anchors $\varnothing$ 32 l=1 m / F.V Ankeri $\varnothing$ 32 l=1 m	m l	40.00		ALL 0.00
3		S.P Cables $\varnothing$ 20 /F.V Kavio $\varnothing$ 20	ml	130.00		ALL 0.00
<b>5 - Total :Engineering Protective Measure No.2 - Rock mass R 1<sup>e</sup> / Masa Mbrojttese Inxhinierike Nr.2 - Rock mass R 1<sup>e</sup></b>						<b><u>ALL 0.00</u></b>
<b>6 - Engineering Protective Measure No.5 - Rock mass R 1<sup>c</sup> ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.5- Masa Shkembore R 1<sup>c</sup> ( ZONA E VEPRES SE MARRJES )</b>						
1		S.P of Shotcrete 20 cm / F.V Beton i Sprucuar 20 cm	m <sup>2</sup>	1,445.00		ALL 0.00
2		-S.P of Anchors $\varnothing$ 40 l=9 m /F.V Ankeri $\varnothing$ 40 l=9 m (3 x 3) $\alpha=10^{\circ}$	ml	1566.00		ALL 0.00
3		S.P of Drainage pipes / F.V Tuba drenimi $\varnothing$ 50 L= 5 (6x6) m $\alpha=14^{\circ}$	ml	290.00		ALL 0.00
<b>6- Total :Engineering Protective Measure No.5 ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.5 ( ZONA E VEPRES SE MARRJES )</b>						<b><u>ALL 0.00</u></b>
<b>7 - Engineering Protective Measure No.6 -Rock mass R 1<sup>a</sup> ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.6 - Masa Shkembore R 1<sup>a</sup> ( ZONA E VEPRES SE MARRJES )</b>						
1		S.P of Double twisted wire mesh / F.V Rrjete metalike dopio torsion	m <sup>2</sup>	1080.00		ALL 0.00
2		-S.P of Anchors $\varnothing$ 40 l=9 m /F.V Ankeri $\varnothing$ 40 l=9 m (3 x 3) $\alpha=10^{\circ}$	ml	1170.00		ALL 0.00
3		S.P Cables $\varnothing$ 20 /F.V Kavio $\varnothing$ 20	ml	300.00		ALL 0.00

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4		-S.P of Anchors $\varnothing$ 40 l=9 m / F.V Ankerat $\varnothing$ 40 l=9 m $\alpha=10^\circ$	ml	180.00		ALL 0.00
<b>7 - Total :Engineering Protective Measure No.6 -Rock mass R 1<sup>a</sup> ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.6 - Masa Shkembore R 1<sup>a</sup>( ZONA E VEPRES SE MARRJES )</b>						<b><u>ALL 0.00</u></b>
<b>8 - Engineering Protective Measure No.7 ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.7 ( ZONA E VEPRES SE MARRJES )</b>						
1		S.P of Double twisted wire mesh / F.V Rrjete metalike dopio torsion	m <sup>2</sup>	1380.00		ALL 0.00
2		-S.P of Anchors $\varnothing$ 40 l=9 m /F.V Ankerat $\varnothing$ 40 l=9 m (3 x 3) $\alpha=10^\circ$	ml	1494.00		ALL 0.00
3		S.P Cables $\varnothing$ 20 /F.V Kavo $\varnothing$ 20	ml	1305.00		ALL 0.00
<b>8 - Total :Engineering Protective Measure No.7 ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.7 ( ZONA E VEPRES SE MARRJES )</b>						<b><u>ALL 0.00</u></b>
<b>9 - Engineering Protective Measure No.11 -Rock mass R 3a ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.11 -Masa Shkembore R 3a ( ZONA E VEPRES SE MARRJES )</b>						
		S.P of Heavy duty rock fall barrier 3000 kj / F.V Barriera me rrjete metalike me kapacitet te larte mbajtes 3000 kj, h= 5m, $\alpha=70^\circ$	ml	10.00		ALL 0.00
<b>9 - Total : Engineering Protective Measure No.11 -Rock mass R 3a ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.11 -Masa Shkembore R 3a ( ZONA E VEPRES SE MARRJES )</b>						<b><u>ALL 0.00</u></b>
<b>10 - Engineering Protective Measure No.13 ( DAM CREST AREA ) / Masa Mbrojttese Inxhinierike Nr.13 ( ZONA E KRESHTES SE DIGES )</b>						
1		S.P of Shotcrete 15 cm / F.V Beton I Sprucuar 15 cm	m <sup>2</sup>	2,476.80		ALL 0.00
2		S.P of Drainage pipes / F.V Tuba drenimi $\varnothing$ 50 L= 5 (6x6) m $\alpha=14^\circ$	ml	495.00		ALL 0.00
3		- S.P of Selfdrilling anchors $\varnothing$ 32 l=3 m / F.V Ankerat veteshpues $\varnothing$ 32 l=3 m (3x3) $\alpha=10^\circ$	ml	990.00		ALL 0.00
<b>10 - Total : Engineering Protective Measure No.13 ( DAM CREST AREA ) / Masa Mbrojttese Inxhinierike Nr.13 ( ZONA E KRESHTES SE DIGES )</b>						<b><u>ALL 0.00</u></b>
<b>11 - Engineering Protective Measure No.14 - Rock mass R 2<sup>a</sup>( DAM CREST AREA ) / Masa Mbrojttese Inxhinierike Nr.14 - Masa Shkembore R 2<sup>a</sup> ( ZONA E KRESHTES SE DIGES )</b>						

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1		S.P of Double twisted wire mesh / F.V Rrjete metalike dopio torsion	m <sup>2</sup>	9424.00		ALL 0.00
2		S.P Cables Ø 20 /F.V Kavo Ø 20 ( 3x 3)	ml	9986.00		ALL 0.00
3		- S.P of Selfdrilling anchors ø 32 l=3 m / F.V Ankerat veteshpues ø 32 l=3 m (3x3) α=10°	ml	3951.00		ALL 0.00
<b>11 - Total :Engineering Protective Measure No.14 - Rock mass R 2<sup>a</sup>( DAM CREST AREA ) / Masa Mbrojttese Inxhinierike Nr.14 - Masa Shkembore R 2<sup>a</sup> ( ZONA E KRESHTES SE DIGES )</b>						<b><u>ALL 0.00</u></b>
<b>12 - Engineering Protective Measure No.15 ( INTAKE&amp; PORT AREA )- Rock mass R 3<sup>a</sup> / Masa Mbrojttese Inxhinierike Nr.15 - Masa Shkembore R 3<sup>a</sup>( ZONA E VEPRES SE MARRJES DHE PORTIT )</b>						
1		S.P of Double twisted wire mesh / F.V Rrjete metalike dopio torsion	m <sup>2</sup>	4830.00		ALL 0.00
2		- S.P of Selfdrilling anchors ø 32 l=3 m / F.V Ankerat veteshpues ø 32 l=3 m (3x3) α=10°	ml	2085.00		ALL 0.00
3		S.P Cables Ø 20 /F.V Kavo Ø 20 ( 3x 3)	ml	5420.00		ALL 0.00
<b>12 - Total : Engineering Protective Measure No.15 ( INTAKE&amp; PORT AREA )- Rock mass R 3<sup>a</sup> / Masa Mbrojttese Inxhinierike Nr.15 - Masa Shkembore R 3<sup>a</sup>( ZONA E VEPRES SE MARRJES DHE PORTIT )</b>						<b><u>ALL 0.00</u></b>
<b>13 - Engineering Protective Measure No.4 ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.4 ( ZONA E VEPRES SE MARRJES )</b>						
1		S.P of Shotcrete 15 cm / F.V Beton I Sprucuar 15 cm	m <sup>2</sup>	5,580.00		ALL 0.00
2		- S.P of Selfdrilling anchors ø 32 l=3 m / F.V Ankerat veteshpues ø 32 l=3 m (3x3) α=10°	ml	2256.00		ALL 0.00
4		S.P of Drainage pipes / F.V Tuba drenimi ø 50 L= 5 (6x6) m α=14°	ml	1120.00		ALL 0.00
<b>13 - Total: Engineering Protective Measure No.4 ( INTAKE AREA ) / Masa Mbrojttese Inxhinierike Nr.4 ( ZONA E VEPRES SE MARRJES )</b>						<b><u>ALL 0.00</u></b>
<b>14- Engineering Protective Measure No.9 (PORT AREA ) / Masa Mbrojttese Inxhinierike Nr.9 ( ZONA E PORTIT )</b>						

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1		S.P of 2 Heavy duty rock fall barrier 1000 kj / F.V te 2 Barrierave me rrjete metalike me kapacitet te larte mbajtes 1000 kj , h=4m, $\alpha=50 - 60^\circ$	m l	60.00		ALL 0.00
<b>14 - Total : Engineering Protective Measure No.9 (PORT AREA ) / Masa Mbrojtese Inxhinierike Nr.9 ( ZONA E PORTIT )</b>						<b><u>ALL 0.00</u></b>
<b>15 - Engineering Protective Measure No.10 ( PORT AREA ) / Masa Mbrojtese Inxhinierike Nr.10 ( PORT AREA )</b>						
1		S.P of Shotcrete 10 cm / F.V Beton i Sprucuar 10 cm	m <sup>2</sup>	473.00		ALL 0.00
2		S.P of Drainage pipes / F.V Tuba drenimi $\varnothing 50$ L= 5 (6x6) m $\alpha=14^\circ$	ml	95.00		ALL 0.00
3		- S.P of Selfdrilling anchors $\varnothing 32$ l=3 m / F.V Ankerat veteshpues $\varnothing 32$ l=3 m (3x3) $\alpha=10^\circ$	m l	171.00		ALL 0.00
<b>15 - Total : Engineering Protective Measure No.10 ( PORT AREA ) / Masa Mbrojtese Inxhinierike Nr.10 ( PORT AREA )</b>						<b><u>ALL 0.00</u></b>
<b>Helicopter / Helikopteri</b>						
1		Helicopter with rotary hook and bearing capacity 0.5 ton ( calculation for 4 months with working duration of 6 hours per day ) / Helikopter me kapacitet mbajtes 0.5 ton me ganxhe rotore ( llogaritur per 4 muaj me kohezgjatje pune 6 ore ne dite )	h/ore	720.00		ALL 0.00
<b>Total :Helicopter work / Helikopteri</b>						<b><u>ALL 0.00</u></b>
<b>TOTAL / TOTALI</b>						<b><u>ALL 0</u></b>
<b>CONTINGENCIES AND RISKS 5 % / KONTIGJENCA DHE RISKU 5 %</b>						<b><u>ALL 0</u></b>
<b>Joint Meter and Box Device for data Records / Sensor i matjes se carjeve dhe Pajisje per marrjen e te dhenave te carjeve</b>						
1		Joint Meter Sensor / Sensor i matjes se carjeve	psc/cope	2.00		ALL 0.00

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2		Box Device for data Records of Joint Meter Sensor with digital reader / Pajisje per marrjen e te dhenave nga Sensori i matjes se carjeve me lexues digital	psc/cope	1.00		ALL 0.00
<b>TOTAL + CONTINGENCIES AND RISKS + JOINT METER AND BOX DEVICE FOR DATA RECORDS / TOTALI + KONTIGJENCA DHE RISKU + SENSORI I MATJES SE CARJEVE DHE PAJISJE PER MARRJEN E CARJEVE</b>						<b><u>ALL 0</u></b>
VAT at 20% / TVSH 20%						<b><u>ALL 0</u></b>
<b>GRAND TOTAL / SHUMA TOTALE</b>						<b><u>ALL 0</u></b>
Exchange Rate according to Albanian Bank -Date 30.05.2018 / Kursi I Kembimit sipas Bankes se Shqiperise- <u>Date 30.05.2018</u>						<b><u>126.28</u></b>