

TA' ZWEJRA RESTORATION AND AFTERCARE - COST ESTIMATES

CODE	DESCRIPTION	QUANTITY	UNIT PRICE	TYPE OF COST	WHEN COSTS OCCUR	CALCULATION	TOTAL COST (LM)
AFTERCARE							
A 01	Maintenance of fencing	5% of 935 m	Lm1.25/m	ANNUAL	ANNUAL	935m x 0.05 x Lm1.25 x 30yrs	1,753
A 02	General maintenance of cap and restoration layers	40hr/month	Lm25.50/hr	ANNUAL	ANNUAL	40hrs x 12months x Lm25.50 x 30 yrs	367,200
A 03	Landscaping	20hr/month	Lm32.00/hr	ANNUAL	ANNUAL	20hrs x 12months x Lm25.50 x 30 yrs	183,600
RESTORATION							
R 01	Capping	4.2 ha	Lm47,000/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm47,000	197,400
R 02	Subsoil replacement	4.2 ha	Lm1,510/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm1,510	6,342
R 03	Top soil replacement	4.2 ha	Lm1,510/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm1,510	6,342
R 04	Seeding	4.2 ha	Lm250/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm250	1,050
R 05	Placement of intermediate cap below cap drainage system	4.2 ha	Lm750/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm750	3,150
R 06	Placing of liner	4.2 ha	Lm22,000/ha	ONE OFF	IN RESTORATION OF SITE	4.2ha x Lm22,000	92,400
LANDFILL GAS MANAGEMENT							
LG 01	Connecting up new well head chambers to existing passive abstraction wells	35 wells	Lm683/well	ONE OFF	IN RESTORATION OF SITE	35 x Lm683	23,905
LG 02	Installation of extraction pipework	500 m	Lm32/m	ONE OFF	IN RESTORATION OF SITE	500 x Lm32	16,000
LG 03	Installation of condensate traps	3	Lm800 each	ONE OFF	IN RESTORATION OF SITE	3 x Lm800	2,400
LG 04	Replacement of flare	1	Lm50,000	OCCASIONAL	ONCE OVER 30 YEAR PERIOD	1 x Lm50,000	50,000
LG 05	Replacement of well head chambers	25% of 35 wells	Lm683/well	OCCASIONAL	25% OF HEADS OVER 30 YEAR PERIOD	0.25 x 35 x Lm683	5,976
LG 06	Replacement of gas abstraction wells	25% of 35 wells	Lm1,250/well	OCCASIONAL	25% OF WELLS OVER 30 YEAR PERIOD	0.25 x 35 x Lm1,250	10,938
LG 07	Replacement of extraction pipework	25% of 500 m	Lm65/m	OCCASIONAL	25% OF PIPEWORK OVER 30 YEAR PERIOD	500m x 0.25 x 1 x Lm65	8,125
LG 08	Replacement of condensate traps	3	Lm800	OCCASIONAL	ONCE OVER 30 YEAR PERIOD	3 x Lm800	2,400
LG 09	Replacement of passive gas venting wells	25% of 35 wells	Lm683/well	OCCASIONAL	25% OF WELLS OVER 30 YEAR PERIOD	0.25 X 35 x Lm683	5,976
LG 10	Landfill gas abstraction			ANNUAL			
LEACHATE MANAGEMENT							
LM 01	Replace leachate abstraction wel	25% of 4 wells	Lm5,000/well	OCCASIONAL	25% OF WELLS OVER 30 YEAR PERIOD	0.25 x 4 x Lm5,000	5,000
LM 02	Replace leachate abstraction pump	1	Lm500	OCCASIONAL	TWICE OVER 30 YEAR PERIOD	2 x Lm500	1,000
LM 03	Removal of leachate from site	12 times/year	Lm25 per occurrence	MONTHLY	MONTHLY OVER 30 YEAR PERIOD	12 months x Lm25 x 30yrs	9,000
LM 04	Recirculation of leachate			ANNUAL			
LM 05	Leachate management			ANNUAL			
SPECIFIED OCCURRENCES - LANDFILL GAS							
SO 01	Increased monitoring		Lm2,000	OCCASIONAL		2,000	2,000
SO 02	Additional monitoring boreholes	1 BH	Lm520/BH	OCCASIONAL	ONCE OVER 30 YEAR PERIOD	1 x Lm520	520
SO 03	Connect to active gas extraction system early			OCCASIONAL			
SO 04	Re-balancing of wells			OCCASIONAL			
SO 05	Installation of additional gas abstraction wells	1 well	Lm650/well	OCCASIONAL	ONCE OVER 30 YEAR PERIOD	1 well x Lm650	650

