

BAHAGIAN 3.4 : EARTHWORKS (CLASS F)

Kawasan Utara - Perlis, Kedah, Pulau Pinang dan Perak
 Kawasan Tengah - Wilayah Persekutuan Kuala Lumpur, Melaka, Negeri Sembilan,
 Selangor dan Johor
 Kawasan Timur - Pahang, Terengganu dan Kelantan

BIL	KETERANGAN KERJA	UNIT	KAWASAN UTARA		KAWASAN TENGAH		KAWASAN TIMUR		KESELURUHAN	
			PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)
1	<u>EXCAVATION</u> Stripping Strip top soil with turf to a depth not exceeding 150 mm thk. as directed by the S.O and stockpile for re-use.	m3			2.43	1.20 - 3.50			2.43	1.20 - 3.50
2	Excavate oversite to reduce level not exceeding 1.00m deep and get out, part return, fill in and ram, deposit, spread in making up levels where directed within the site and remainder load and cart away.	m3			14.06	6.00 - 18.50			14.06	6.00 - 18.50
3	Excavate surface to reduce level, average 300mm deep commencing from formation level, get out, load and remove from site as directed.	m2			4.50	2.00 - 10.00			4.50	2.00 - 10.00
4	Excavate oversite to reduce level not exceeding 2.50m deep and get out, part return, fill in and ram, deposit, spread in making up levels where directed within the site and remainder load and cart away.	m3			19.50	6.00 - 35.00			19.50	6.00 - 35.00

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5	General excavation and disposal of site surplus excavated material to contractor own dumping site.	m3			10.34	6.40 - 15.00			10.34	6.40 - 15.00
6	Excavate oversite to reduce level not exceeding 2.50m deep and get out, part return, fill in and ram, deposit, spread in making up levels where directed within the site and remainder load and cart away.	m3			19.50	6.00 - 35.00			19.50	6.00 - 35.00
7	Pit excavation for pile cap maximum depth not exceeding 2.0m deep commencing from reduce level, get out, part return, fill in and ram, deposit and spread in making up level including all necessary compaction where directed within the site and remove surplus excavated material off site.	m3			11.60	5.00 - 30.00			11.60	5.00 - 30.00
8	Pit excavation for pile cap maximum depth not exceeding 4.0m deep commencing from reduce level, get out, part return, fill in and ram, deposit and spread in making up level including all necessary compaction where directed within the site and remove surplus excavated material off site.	m3			14.00	6.50 - 40.00			14.00	6.50 - 40.00

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9	Trench excavation for ground beam maximum depth exceeding 0.25m but not exceeding 1.0m depth commencing from reduce level, get out, part return, fill in and ram, deposit and spread in making up level including all necessary compaction where directed within the site and remove surplus excavated material off site.	m3			11.40	5.00 - 25.00			11.40	5.00 - 25.00
10	Excavate below formation level to a depth of maximum 1.0m.	m3			3.44	2.30 - 5.00			3.44	2.30 - 5.00
11	General excavation and disposal from site surplus excavated material to contractor own dumping site.	m3			8.30	5.00 - 12.00			8.30	5.00 - 12.00
12	Bulk excavation from ground level to reduced site formation levels including cutting to slopes and disposal from site surplus excavated material to contractor own dumping site.	m3			10.70	5.00 - 20.00			10.70	5.00 - 20.00
13	Dispose excess material off site the striped top soil to contractor's own dumping ground.	m3			2.67	1.70 - 5.00			2.67	1.70 - 5.00
14	Disposal of unsuitable material to Contractor's own dump site.	m3			3.74	2.50 - 5.00			3.74	2.50 - 5.00

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			PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)
15	Excavation in cut including trimming and preparation of excavated surface and transportation from source to disposal.	m3			4.31	2.50 - 11.00			4.31	2.50 - 11.00
16	Excavate in earth material dispose to the designated dumping area within 6km approved by the S.O/Engineer.	m3	6.65	4.50 - 12.00					6.65	4.50 - 12.00
<u>EXCAVATION ANCILLARIES</u>										
17	Excavate in artificial hard material by hydraulic rock breaker to disposal site approved by the S.O/Engineer.	m3	28.89	15.00 - 48.00					28.89	15.00 - 48.00
18	Excavate in rock profile river channel and dispose off site the excavated rock to contractor's own dump site.	m3			31.64	20.00 - 36.95			31.64	20.00 - 36.95
<u>RIVER EXCAVATION/DREDGING</u>										
19	Allow for river excavation/dredging works include all dredging works and subsequent removal / disposal / cart away of the excess materials (spoil) to contractor's approved dumping / disposal sites as directed by S.O. (Rates quoted are deemed to be for excavation by using excavator and dredger).	m3			5.64	4.00 - 7.30			5.64	4.00 - 7.30

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			PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)	PURATA (RM)	JULAT (RM)
	<u>RIVER EXCAVATION/DREDGING</u>									
20	Excavate existing river to the required bed levels and dimension and deposit spoil as directed by the S.O.	m3	3.10	2.80 - 4.00					3.10	2.80 - 4.00
21	Excavate existing ground level to construct river channels to the alignment, levels, width and slopes as shown in the Contract plan and stockpile suitable excavated material for the construction of river bund within the limit of works.	m3			3.13	1.85 - 4.05			3.13	1.85 - 4.05
22	Excavation of river for material other than rock and dispose off the excavated material to contractor's own dumping site or as approved by the S.O.	m3			11.20	6.00 - 19.80			11.20	6.00 - 19.80
23	Dispose off the surplus excavated material to contractor's own dump site. Contractor to get an approval from relevant authorities and S.O for dump site.	m3			3.94	2.50 - 5.15			3.94	2.50 - 5.15
24	Dredging of riverbed material by means of hydraulic pumping method to dredge the riverbed material including pumping for disposal into approved dewatering container placed in a selected areas (dewatering cell) as per approval of the S.O.	m3			11.55	8.00 - 14.00			11.55	8.00 - 14.00

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25	Dredging of river sludge material's (desilting) and pump into approved dewatering container (Geotube) placed in selected areas (dewatering cell) as per approval of the S.O.	m3			11.70	8.00 - 18.00			11.70	8.00 - 18.00
	<u>Supply and Deliver Dewatering Container</u>									
26	Supply and deliver of dewatering container size 18.3m x 61.4m for dewatering.	no.			30,233.00	18,000.00 - 42,000.00			30,233.00	18,000.00 - 42,000.00
27	Supply and deliver of dewatering container size 18.3m x 30.6m for dewatering.	no.			27,977.00	19,000.00 - 40,000.00			27,977.00	19,000.00 - 40,000.00
28	Supply and deliver of dewatering container size 13.7m x 30.6m for dewatering.	no.			27,428.00	15,000.00 - 40,000.00			27,428.00	15,000.00 - 40,000.00
29	Disposal of dredged dewatered sludged material from the dewatering container (Geotube) to the contractor's own dumping site or as directed by the S.O.	m3			10.30	8.00 - 13.50			10.30	8.00 - 13.50
	<u>Dewatering Conditioning Aid (POLYMER)</u>									
30	Supply and deliver Polymer Raestol or equivalent to be pumped into the dewatering container.	kg.			28.13	12.00 - 37.00			28.13	12.00 - 37.00
31	Disposal of dewatered excavated riverbed material from the dewatering container (Geotube) to the contractor's own dumping site or as directed by the S.O.	m3			9.50	4.00 - 13.50			9.50	4.00 - 13.50

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	<u>FILLING</u> Excavated Material									
32	Earth filling to forming the river bank	m3			4.16	2.00 - 10.00			4.16	2.00 - 10.00
33	Construction of river spoil heaps using excavated material	m3			2.00	1.30 - 3.00			2.00	1.30 - 3.00
34	Construction of road embankment using excavated material or surplus material to be compacted to a minimum compaction fo 95% MDD.	m3			3.09	1.70 - 5.00			3.09	1.70 - 5.00
	Imported Material									
35	Filling with approved imported earth to form level as directed by the S.O.	m3			25.46	10.00 - 45.00			25.46	10.00 - 45.00
36	filling approved imported good soil to form the river bank. (within 50km radius from the site area).	m3			15.41	10.00 - 23.00			15.41	10.00 - 23.00
37	Filling imported red earth for widening and topping up new perimeter bund.	m3	15.12	12.30 - 17.50					15.12	12.30 - 17.50
38	Construction of Lay - By using approved imported red earth as directed by the S.O.	m3	15.25	12.30 - 17.50					15.25	12.30 - 17.50
39	Backfilling using the imported red earth.	m3	14.92	12.30 - 16.00					14.92	12.30 - 16.00
40	Filling with suitable sand material.	m3			47.26	35.00-60.00			47.26	35.00-60.00

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41	Back filling using imported sand to a depth of maximum 0.5m.	m3			36.28	27.75 - 60.00			36.28	27.75 - 60.00
42	Backfilling with suitable material and approved materials as specified in making up levels including spread, grade and compact to construct platforms, etc, to the required levels and gradient.	m3			10.70	8.00 - 25.00			10.70	8.00 - 25.00
43	Supply, fill, spread, level and compact suitable fill in middle of wall	m3			36.18	22.00 - 60.00			36.18	22.00 - 60.00
44	Supply, fill, spread, level and compact 20mm aggregate to specification.	m3			55.37	25.80 - 76.10			55.37	25.80 - 76.10
45	Supply, fill, spread, level and compact granular backfill to specification.	m3			46.14	22.00 - 60.00			46.14	22.00 - 60.00
46	Fill, spread, grade and compact imported suitable material from Contractor's own source.	m3			30.82	17.00 - 47.50			30.82	17.00 - 47.50
47	Filling with suitable imported material including compaction and trimming.	m3			19.99	15.00-34.00			19.99	15.00-34.00
48	Filling of suitable imported material including compaction and trimming.	m3			12.70	14.10 - 30.00			12.70	14.10 - 30.00
49	300mm thick Sand.	m3			37.00	30.00 - 65.00			37.00	30.00 - 65.00

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50	Supply and lay 300mm thick crusher run.	m2			57.02	49.00-70.00				
51	300mm thick Crusher Run for maintenance access with compacted quarry dust.	m3			78.50	66.00 - 100.00			78.50	66.00 - 100.00
52	Trim the slope to the required level and profile as indicated in the drawing or as directed by S.O.	m2	1.73	1.00 - 3.00					1.73	1.00 - 3.00
53	Compacted Clay Layer.	m3			17.10	8.00 - 30.00			17.10	8.00 - 30.00
54	Filling with hardcore to make up levels not exceeding 150mm thick as specified, spread, levelled, well ram, watered and blinded on top with sand to receive pad footing.	m3			88.50	28.00 - 180.00			88.50	28.00 - 180.00
55	Supply and lay 100 mm thick top soil	m2	26.20	15.00 - 35.00					26.20	15.00 - 35.00
56	200mm Top Soil.	m3			24.40	9.00 - 40.00			24.40	9.00 - 40.00
57	Spot turfing Supply and lay spot turfing (cow grass) as specified obtained from contractor's sources and to be approved by the S.O. including trimming, levelling and grading surfaces, 50mm top soil as specified, watering	m2			2.64	1.50 - 5.00			2.64	1.50 - 5.00
58	Spot turfing on bunds/ river section as directed by S.O.	m2			2.86	1.80 - 4.50			2.86	1.80 - 4.50

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59	Closed turfing Supply and lay close turfing	m2			4.50	2.50 - 10.00			4.50	2.50 - 10.00
60	Closed turfing on bund / river section as directed by S.O.	m2			3.76	2.50 - 5.35			3.76	2.50 - 5.35
61	Close turfing to flat and sloping surface complete with 50mm thick black vegetable soil including watering, rolling, weeding, tending additional fertilizer until satisfactorily established within the duration of the Contract.	m2	5.05	3.00 - 6.50					5.05	3.00 - 6.50
62	Hydroseeding on bund as directed by S.O.	m2			2.68	2.00 - 6.00			2.68	2.00 - 6.00
63	Woven mat	m2			16.46	9.00 - 23.00			16.46	9.00 - 23.00
	<u>PLACEMENT AND EXTENSION OF DRAINAGE BLANKET AND TOE DRAIN.</u>									
64	Coarse Filter.	m3	53.87	40.00 - 70.00					53.87	40.00 - 70.00
65	Fine Filter.	m3	57.35	45.00 - 75.00					57.35	45.00 - 75.00
	<u>Filling ancillaries</u>									
66	Supply and lay reinforced geotextile type PEC 200 or equivalent.	m2			13.41	9.00 - 17.30			13.41	9.00 - 17.30
67	Supply and lay geotextile fabric as shown in the drawing or as directed by S.O	m2	5.11	5.00 - 5.80					5.11	5.00 - 5.80

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68	Filter Geotextile KET 15 or oher approved and equivalent	m2			7.80	4.00 - 15.00			7.80	4.00 - 15.00
69	Geotextile KET 24 or oher approved and equivalent	m2			8.70	4.50 - 18.00			8.70	4.50 - 18.00
70	Supply and lay non woven geotextile type MX250 or oher approved and equivalent	m2			6.00	4.00 - 12.00			6.00	4.00 - 12.00
71	Supply and lay non woven geotextile TS-50 or equivalent.	m2			5.81	3.20 - 10.00			5.81	3.20 - 10.00
72	Supply and install geotextile separator Type 'A' according to the specification where directed by the S.O.	m2			11.22	5.00 - 30.00			11.22	5.00 - 30.00