PROJECT TITLE: Filey Flat Cliffs

SUBJECT: PAR - Slope Stabilisation Cost Estimate PAGE NO: 1

PROJECT NO: PB3160 FILE REF: REV:

PREPARED BY: BJC DATE: 4/8/2015 REV DATE:

CHECKED BY: DATE:

(SEE CALC PAGE NO FOR ALTERNATIVE CALCULATIONS)

ROYAL HASKONING

Calculations

REF.

OUTPUT

PAR - Cost Estimate

Option 1 Soil Nailing, Horizontal Drains, Erosion Protection Matting

Refer to budget cost estimate provided by CAN Geotechnical:

Design, construction and testing of 12m long nails, facing system and horizontal drains over an area of 75m x 20m } SUB-TOTAL = £507,715.00 + VAT

say 15% CONTINGENCY £76,157.25

GRAND TOTAL £583,872.25

say £585,000

Note: the above budget cost estimate assumes the nails and drains would be installed by a combination of excavator under reaching and A frame winched into place (rope access techniques). The costs may be reduced if the slope can be accessed by conventional tracked drilling rigs.

PROJECT TITLE: Filey Flat Cliffs

SUBJECT: PAR Slope Stabilisation Cost Estimate PAGE NO: 2

PROJECT NO: PB3160 FILE REF: REV:

PREPARED BY: BJC DATE: 4/3/2016 REV DATE:

CHECKED BY: DATE:

(SEE CALC PAGE NO FOR ALTERNATIVE CALCULATIONS)

ROYAL HASKONING

Calculations

REF.		OUTPUT
Option 2	**Horizontal Drains and Erosion Protection Matting**	
	Refer to budget cost estimate provided by CAN Geotechnical:	
	Assume two rows of 63mm dia horizontal drains, 15m long at 6m horizontal centres plus installation of erosion protection matting over 75m x 20m area of slope.	
	Preliminaries, mobilisation and site preparation	£22,000
	Horizontal drains 25 x £1000	£25,000
	Additional drainage measures (crest drain, collector drain, carrier drain)	£25,000
	Supply and installation of erosion protection matting	£65,000
	SUB-TOTAL	£137,000
	say 25% CONTINGENCY	£34,250
	GRAND TOTAL	£171.25
	say	£175,000

PROJECT TITLE: Filey Flat Cliffs

SUBJECT: PAR - Slope Stabilisation Cost Estimate PAGE NO:

PROJECT NO: PB3160 FILE REF: REV:

PREPARED BY: BSC DATE: 4/5/2016 REV DATE:

CHECKED BY: DATE:

(SEE CALC PAGE NO FOR ALTERNATIVE CALCULATIONS)

ROYAL HASKONING

Calculations

REF.			OUTPUT
Option 3	**Retaining Wall**		
	Assume 15m long AZ28 sheet piles installed over 75m linear length.		
	Weight of section	= 166 kg/m²	
	Total weight of steel	≈ 166 × 15 × 75 × 1.05	(assumes 5% wastage)
		≈ 196 tonnes	
	Cost of steel	≈ £800 per tonne	
		≈ £156,800	
	Additional costs	≈ £40,000	
	SUB-TOTAL	≈ £196,800	
	25% CONTINGENCY	≈ £50,000	
	GRAND TOTAL	≈ £246,800	
		say £250,000	
	Note: Recent falls in the price of steel mean that the cost of steel provided above is currently conservative.		