

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	DECLARATION	i
	DEDICATION	iii
	ACKNOWLEDGMENTS	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	x
	LIST OF FIGURES	xii
	LIST OF SYMBOLS	xiii
	LIST OF APENDICES	xv
1.	INTROUDUCTION	
	1.1. Background of study	1
	1.2. Statement of research problem	2
	1.3. Aim and objectives	2
	1.4. Scope of the research	3
	1.5. Significant of research	4
2.	LITERATURE RIVIEW	
	2.1. Preamble	5
	2.2. Boulder clay	6
	2.3. Slopes	7
	2.3.1. Cause of slope failures	8

2.3.1.1.	Triggering factors	9
2.3.1.2.	Contributory factors	10
2.3.2.	Mechanism of slope failure	11
2.3.3.	Slope mitigations	13
2.4.	Vegetation on slope	14
2.4.1.	Root system	15
2.4.2.	Mature lime tree(Tilia)	16
2.5.	Mechanical effect	17
2.5.1.	Root reinforcement	17
2.5.2.	Root area ratio	20
2.5.3.	Root tensile strength	21
2.5.4.	Anchorage, arching and buttressing	22
2.5.5.	Surcharging	22
2.5.6.	Wind loading	23
2.6.	Hydrological effect	23
2.6.1.	Rainfall interception	23
2.6.2.	Surface water runoff	24
2.6.3.	Infiltration	24
2.6.4.	Evaporation and transpiration	25
3.	RESEARCH METHODOLOGY	
3.1.	Research design and procedure	27
3.1.1.	Hydrological effect of vegetation	27
3.1.1.1.	Soil properties	28
3.1.1.2.	Numerical representation	28
3.1.2.	Mechanical effect of vegetation	30
3.1.3.	Combine the mechanical and hydrological effect of vegetation	31
3.2.	Operational framework	31
3.3.	Assumption and limitation	32
3.4.	Conclusion	32
4.	ANALYSIS AND RESULTS	
4.1.	Notation and Equations Used in SLIP4EX Spreadsheet	34

4.1.1. Assumption 1	35
4.1.2. Assumption 233	36
4.1.3. Other equation used in SLIP4EX	38
4.1.4. Effects of Reinforcement, Vegetation and Hydraulic Changes	39
4.1.5. Matric Suction Addition to SLIP4EX	41
4.2. SLIP4EX	43
4.2.1. SLIP4EX spread sheet 1	43
4.2.1.1. Enter slice information	44
4.2.2. SLIP4EX Spread Sheet 2 (Including the Effect of Vegetation)	45
4.2.2.1. Tensile Root Strength Contribution, T	46
4.2.2.1.1. Estimation of Available Root Reinforcement Force	48
4.2.2.1.2. Calculation of Available Root Force T, Acting on Each Slice	49
4.2.2.2. The Effective Angle between the Operational Roots and the Slip Surface, θ	50
4.2.2.3. Additional Effective Cohesion at Base of Slice due to Vegetation, $c'v$	51
4.2.2.4. The Mass of Vegetation, W_v	52
4.2.3. Results	52
4.2.3.1. Tree at the toe of slope	53
4.2.3.2. Tree at the middle of slope	55
4.2.3.3. Tree at the crest of slope	56
4.2.4. Summary of results	57
5. CONCLUSION AND SUGGESTION	
5.1. Conclusion	61
5.2. Suggestion	62
REFERENCES	63
APPENDICES A-H	70-85

LIST OF TABLES

TABLE NO.	TITLE	PAGE
3.1	Material properties	28
4.1	Slice data	44
4.2	Tensile root strength	50
4.3	Comparisons different factor of safety calculated with different methods with and without effect of the tree when tree located at the toe of the slope	54
4.4	Comparisons different factor of safety calculated with different methods with and without effect of the tree when tree located at the middle of the slope	55
4.5	Comparisons different factor of safety calculated with different methods with and without effect of the tree when tree located at the crest of the slope	56
4.6	Comparisons different factor of safety and their differences with the no effect of tree condition calculated with Greenwood general method with the different place of tree	57
4.7	Comparisons different factor of safety and their differences with the no effect of tree condition calculated with Greenwood general (k as input) method with the different place of tree	58

4.8	Comparisons different factor of safety and their differences with the no effect of tree condition calculated with Greenwood simple method with the different place of tree	59
4.9	Comparisons different factor of safety and their differences with the no effect of tree condition calculated with Swedish method with the different place of tree	60

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
3.1	Slope geometry	27
3.2	Water Retention Curve for Boulder Clay	28
3.3	Hydraulic Conductivity for Boulder Clay	29
3.4	Finite Element Mesh	29
4.1	Limit equilibrium slope stability analysis by 'Method of Slices' – Dimensions and parameters assigned for each slice	34
4.2	Forces associated with each slice	35
4.3	Additional forces due to vegetation, reinforcement and hydrological changes	40
4.4	Limit equilibrium slope stability analysis by 'Method of Slices' – Dimensions and parameters assigned for each slice	43
4.5	Forces associated with each slice	44
4.6	Additional forces due to vegetation, reinforcement and hydrological changes	45
4.7	Root Zone of lime tree	53
4.8	Tree Located at the toe of slope	53
4.9	Tree located at the toe of slope	54
4.10	Tree located at the middle of slope	55
4.11	Tree located at the crest of slope	56

LIST OF SYMBOLS

Basic parameters and dimensions used in stability analysis by method of slices

B	-	width of slice (m)
c'	-	effective cohesion at base of slice (kN/m^2)
F	-	factor of safety (usually shear strength/shear force on slip plane)
F_f	-	factor of safety in terms of horizontal force equilibrium (ratio)
H	-	average height of slice (m)
h_w	-	average piezometer head at base of slice (m)
h_{w1}	-	height of free water surface at left-hand side of slice (m)
h_{w2}	-	height of free water surface at right-hand side of slice (m)
l	-	length (chord) along base of slice (m)
u	-	average water pressure on base of slice (kN/m^2)
U_1	-	water force on left-hand side of slice (kN)
U_2	-	water force on right-hand of slice (kN)
W	-	total weight of soil in slice (kN)
A	-	inclination of base of slice to horizontal (degree)
Γ	-	bulk unit weight of soil in slice (kN/m^3)
γ_w	-	unit weight of water (kn/m^3)
φ'	-	effective angle of friction at base of slice (degrees)

Vegetation, reinforcement and hydrological effect

c'_v	-	additional effective cohesion at base of slice (kN/m^2)
δh_w	-	increase in average piezometer head at base of slice (m)
δh_{w1}	-	increase in free water surface at left-hand side of slice (m)

δh_{w2}	-	increase in free water surface at right-hand side of slice (m)
δU_1	-	increase in water force on left-hand side of slice (kN)
δU_2	-	increase in water force on right-hand side of slice (kN)
δu_v	-	increase in average water pressure at base of slice (kN/m ²)
D_w	-	windthrow force (kN)
F_r	-	factor of safety applied to ultimate root force to reflect uncertainty in root distribution and assumptions made
T	-	tensile root or reinforcement force on base of slice (kN)
T_{rd}	-	available (design) root force per square meter of soil on a particular plane (kN/m ²)
T_{ru}	-	ultimate root force per square meter of soil (kN/m ²)
W_v	-	increase on weight of slice due to vegetation (or surcharge) (kN)
B	-	angle between wind direction and horizontal (degrees)
θ	-	angle between direction of T and base of slip surface (degrees)

LIST OF APPENDICES

APENDIX	TITLE	PAGE
A	Blank page of spread sheet 1 in SLIP4EX	70
B	Input data and output results of SLIP4EX analysis showing calculated forces on each slice of the analysis and comparisons of factor of Safety calculated by different methods	72
C	Blank page of spread sheet 2 in SLIP4EX	74
D	Input vegetation data and output results of SLIP4EX analysis showing calculated vegetation forces on each slice of the analysis and change to the factor of Safety calculated by different methods when tree located at the toe of slope	76
E	Input vegetation data and output results of SLIP4EX analysis showing calculated vegetation forces on each slice of the analysis and change to the factor of Safety calculated by different methods when tree located at the middle of slope	78
F	Input vegetation data and output results of SLIP4EX analysis showing calculated vegetation forces on each slice of the analysis and change to the factor of Safety calculated by different methods when tree located at the crest of slope	80
G	Notation for slope stability analysis by the method of slices	82

H	Notation for additional vegetation, reinforcement and hydrological effects	84
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