

Civil Engineering and Development Department

**Landslip Prevention and Mitigation
near Bride's Pool Road, Tai Po
– 3SE-D/SA2**

**Landscape Mitigation Plan
Environmental Permit No.: EP-607/2022**

Prepared by Jacobs China Limited

18 December 2023

Table of Contents

1.0 Introduction.....	1
2.0 Minimization Measures	1
2.1 Minimization Measures for Flora Species of Conservation Importance.....	1
2.2 Minimization Measures for All Retained Vegetation and the Root System.....	1
3.0 Revegetation measures.....	4
4.0 Landscape Implementation Schedule.....	5
5.0 Reference	6

LIST OF FIGURES

Figure 1 Plan of Compensation Trees

LIST OF APPENDICES

Appendix A Landscape Plan

1.0 Introduction

This Landscape Mitigation Plan aims to outline the landscape mitigation measures regarding the landscape impacts resulted from construction activities such as tree felling and vegetation clearance.

2.0 Minimization Measures

2.1 Minimization Measures for Flora Species of Conservation Importance

Plant species of conservation importance growing in the vicinity of the construction work areas, including *Aquilaria sinensis* and *Canthium dicoccum*, may be prone to accidental damage during construction work.

The minimization measures included:

- Surround the species of conservation importance with bright-coloured robust fencing to create a no-entry zone.
- Apply temporary tags to Flora Species of Conservation Importance to remind on-site workers.
- Create a 1m setback from the saplings of species of importance.

2.2 Minimization Measures for All Retained Vegetation and the Root System

In the best situation, works within tree canopy dripline shall be avoided for better protection of trees. However, total avoidance is impossible as majority of the site falls within the woodland. Damage to retained vegetation should also be minimized as far as possible by adopting the following protection measures:

- The alignments, locations and extents of hoardings, scaffolding, working platforms, maintenance access, storage areas, excavation pits, soil nails and flexible barrier should be adjusted locally on site where necessary to avoid damage to existing trees including major branches and major tree roots.
- In order to minimize potential adverse impact to existing trees, installation of scaffolding, temporary access / platform to go across extensive tree roots on slope can be erected and

adjusted wherever practical. This helps to avoid direct encroachment upon tree roots of any existing trees in the soil nailing area.

- Where existing cover is to be removed, care should be taken to avoid disturbing major tree roots lying immediately beneath the surface.
- During construction, the tree trunks shall be protected with porous and non-water holding material cover and pallet timbers or polyethylene mat against abrasion or determined on site by the *Service Manager*'s delegate.
- At least 500mm clear spacing from the existing tree trunks should be maintained to any proposed concrete elements and the exact location of the proposed concrete works (including the construction of drainage channel) should be adjusted on site.
- Site staff should be alerted of the location of plant species of conservation importance within or near the Project Site.
- All plant species of conservation importance within or near the works area will be preserved onsite by erection of robust fencing or the like, with height of at least 1.5m. Construction works within the Tree Protection Zones (TPZ) of all retained trees, including the species of conservation importance, should be avoided as far as possible.
- The TPZ of is defined as follows with reference to “Guidelines on Tree Preservation during Development”:
 - For common trees, the ‘Trunk diameter method’, i.e. multiply the trunk diameter at 1.4 m by 6 to determine the radius of the TPZ, will be adopted
 - For trees with ecological importance, the ‘Dripline method’, i.e. the tree canopy dripline is used to define the boundary of the TPZ, will be adopted
- If there is no way to avoid soil nailing in TPZ due to engineering requirement, the drill holes should be adjusted on site to locate away from the tree trunk by at least 500mm and away from major tree roots (especially anchoring root) of the retained trees to minimise the impact. Drilling works (including drilling for insertion of soil nail) within tree protection zone will be conducted according to Clause 26.12 of the General Specification for Civil Engineering Works (2006 Edition).
- On site adjustments of drill hole location will be made to avoid damaging *Gnetum luofuense* on ground and eye level.
- Elevated steel access above root system will be constructed instead of concrete access.

Gabion Boxes

- Excavation and gabion boxes placement should avoid damaging the major root system of nearby incense trees *Aquilaria sinensis* and all retained trees.
- The shape of the gabion barrier can be irregular to fit the topography of the watercourse to minimize excavation volume and to avoid conflict with nearby tree crown in case the tree crown is low in height.
- Gabion boxes are constructed to be porous and no compaction operation is involved.
- If major roots are in conflict with the works, the gabion boxes will be tailor-made to avoid cutting of these roots.
- Regarding the *Aquilaria sinensis* near the gabion barrier (T746, T741 and T723),
 - As the TPZs of the *Aquilaria sinensis* near the gabion barrier are in conflict with the gabion barrier, the temporary protective fence will be adjusted to avoid obstruction to the construction of the proposed gabion barrier whilst provide maximum protection to these trees.
 - The actual extent of the temporary protective fence will also be adjusted on site particularly for T723 which may conflict with nearby preserved tree.
 - In addition, the height of the temporary protective fence should be adjusted on site to avoid conflict with the tree crown in case the tree crown is low in height.
- 2 *Aquilaria sinensis* saplings found at gabion boxes area will be transplanted to the edge of the gabion boxes. 3 additional *Aquilaria sinensis* saplings will also be planted.

Flexible barriers

- Flexible barriers shall be adjusted on-site to avoid major roots of all plant species, including climber *Gnetum luofuoense* and the major root system of the retained trees (including *Aquilaria sinensis*). If partial/ complete felling of *Gnetum luofuoense* is unavoidable, major roots of *Gnetum luofuoense* will be avoided so that *Gnetum luofuoense* can regenerate.

3.0 Revegetation measures

To promote growth and regeneration of secondary woodland and shrubland, the following measures will be implemented.

- Hydroseed and apply biodegradable erosion control mat (except steep slopes) on disturbed ground
- Adopt soil nail head size of 600mm instead of 800mm and place soil bag above for planting work
- Provide soil bags to facilitate regeneration of vegetation on soil nail head.
- Native shrubs such as *Rhaphisolepis indica*, *Psychotria asiatica* and native climbers such as *Ficus pumila* will be planted to encourage vegetation regeneration (Detailed planting schedule can be referred to the landscape plans in Appendix A)
- Provide compensation trees as shown in **Figure 1**.
- Plant saplings of incense tree *Aquilaria sinensis* in Catchment A as an additional enhancement measure
- Dead plants shall be replaced by the same species



Figure 1 Plan of Compensation Trees

4.0 Landscape Implementation Schedule

The implementation schedule is tentatively as follows.

Measures (Type of vegetation)	Implementation Party	Location	Implementation Time
Protective measures to preserved trees	The Contractor	Whole site	January 2024
Provision of robust fencing or the like to all plant species of conservation importance within or near the works area	The Contractor	Whole site	January 2024
Transplantation of <i>Aquilaria sinensis</i> saplings	The Contractor	From gabion wall area to edge of gabion wall	January 2024
Planting of <i>Aquilaria sinensis</i> saplings	The Contractor	Edge of gabion wall	November 2024
Hydroseeding on erosion control mat and planting of shrubs	The Contractor	Catchment nos. 3SE-D/OH7 & 3SE-D/DF2 (i.e. soil nailing area and flexible barrier area)	November 2024
Planting of climbers	The Contractor	In front of flexible barrier	December 2024
Planting of compensation trees	The Contractor	Catchment nos. 3SE-D/OH7 & 3SE-D/DF2	December 2024
Planting of shrubs, climbers and hydroseeding	The Contractor	At gabion wall	January 2025

5.0 Reference

The Government of the Hong Kong Special Administrative Region (2022). *General Specification for Civil Engineering Works, 2006 Edition (Continuously updated e-version released on 2 June 2022)*

Greening, Landscape and Tree Management Section, Development Bureau, The Government of the Hong Kong Special Administrative Region (2015). *Guidelines on Tree Preservation during Development*

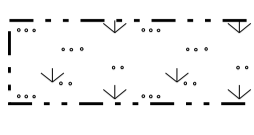
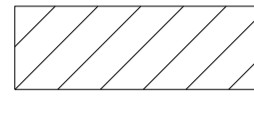


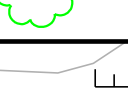
Appendix A

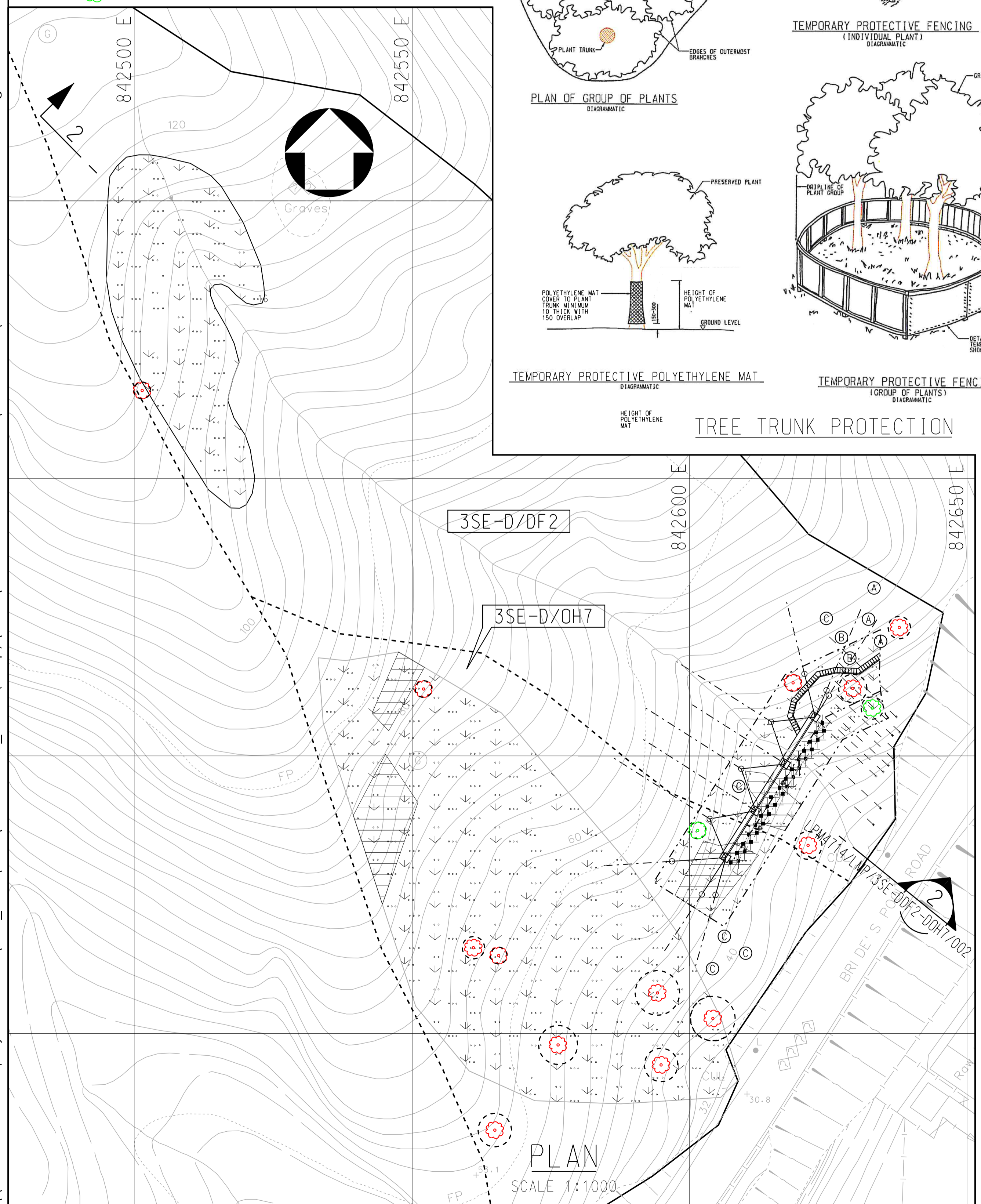
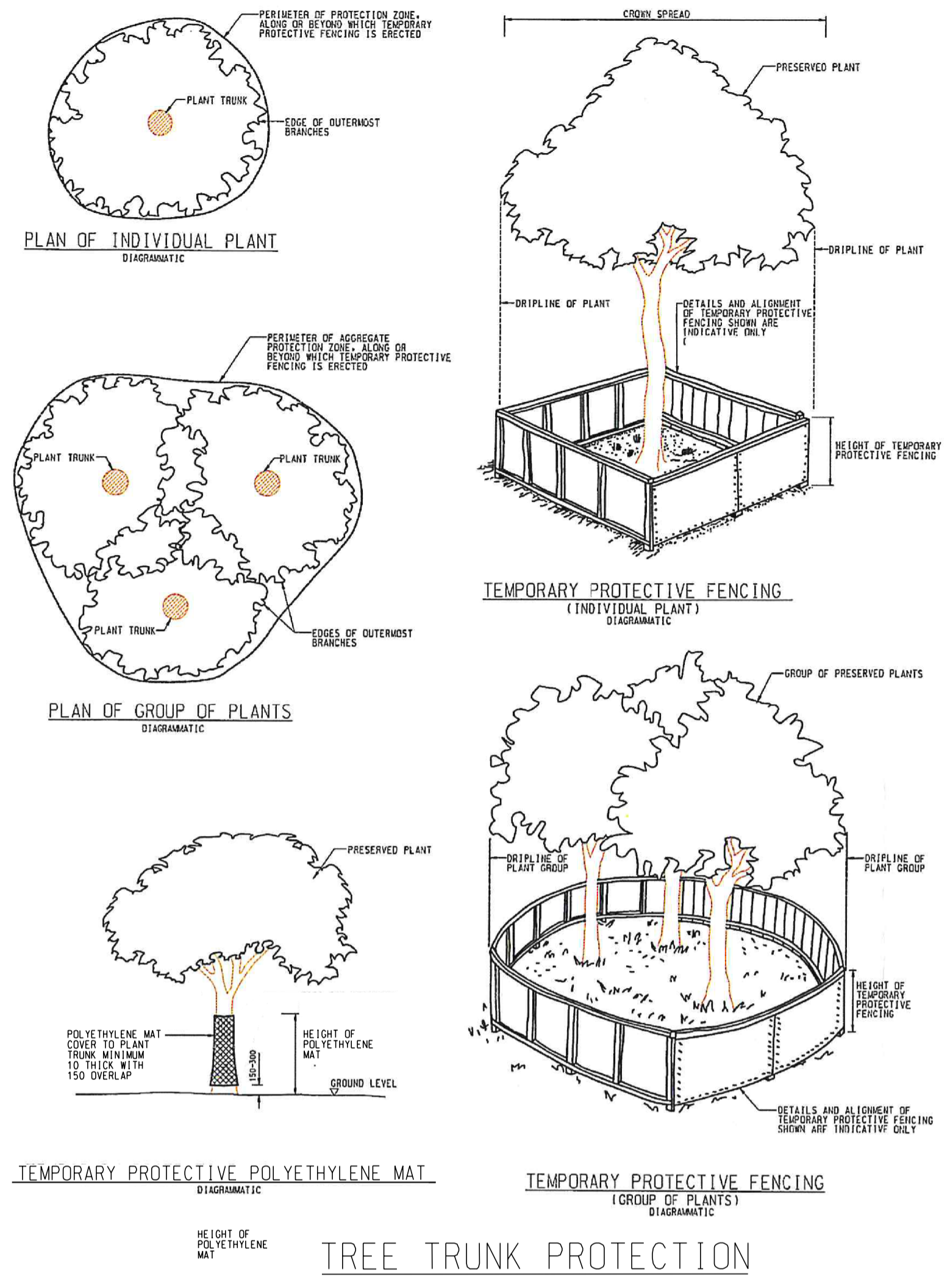
Detailed Landscape Mitigation Plan

Drawing List

Drawing no.	Drawing Title
LPM4714/LMP/3SE-DDF2-DOH7/001	Hillside Catchments B2 & B3 Landscape Plan Flexible Barrier and Soil Nailing Area
LPM4714/LMP/3SE-DDF2-DOH7/002	Catchment no. 3SE-D/DF2 Bride's Pool Road, Tai Po Landscape Details
LPM4714/LMP/3SE-DDF3/001	Hillside Catchment B1 Landscape Plan Gabion Barrier
LPM4714/LMP/3SE-DSA2/001	Hillside Catchments B1, B2 & B3 Plan of Works and Trees
LPM4714/LMP/3SE-DSA2/002	Hillside Catchments B1, B2 & B3 Plan of Works and Trees (Sheet 1 of 5)
LPM4714/LMP/3SE-DSA2/003	Hillside Catchments B1, B2 & B3 Plan of Works and Trees (Sheet 2 of 5)
LPM4714/LMP/3SE-DSA2/004	Hillside Catchments B1, B2 & B3 Plan of Works and Trees (Sheet 3 of 5)
LPM4714/LMP/3SE-DSA2/005	Hillside Catchments B1, B2 & B3 Plan of Works and Trees (Sheet 4 of 5)
LPM4714/LMP/3SE-DSA2/006	Hillside Catchments B1, B2 & B3 Plan of Works and Trees (Sheet 5 of 5)

\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369 CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DDF2-DOH7-001.dgn

- LEGEND:**
- BOUNDARY FOR STUDY AREA
 - - - - BOUNDARY FOR HILLSIDE CATCHMENT
 -  PROPOSED PLANTS IN HYDROSEEDING ON BIO-DEGRADABLE EROSION CONTROL MAT (DETAILS REFER TO DRAWING NO. LPM4714/LMP/3SE-DDF2-DOH7/002)
 -  PROPOSED PLANTS IN HYDROSEEDING ON NON-BIODEGRADABLE EROSION CONTROL MAT
 -  PROPOSED TEMPORARY PROTECTIVE FENCE
 -  AQUILARIA SINENSIS
 -  CANTHIUM DICOCCUM



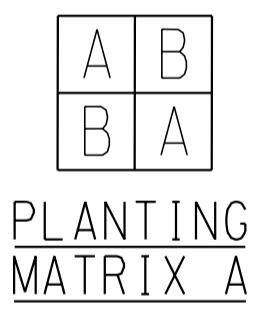
- COMPENSATION TREES :-
- (A) APOROSA DIOICA
 - (B) STERCLIA LANCEOLATA
 - (C) SCHEFFLERA HEPTAPHYLLA

PLANTING SCHEDULE: COMPENSATORY TREES

BOTANICAL NAME	SPACING (mm)	QUANTITY	SIZE
APOROSA DIOICA 銀柴	2500	3	LIGHT STANDARD
STERCLIA LANCEOLATA 假蘋婆	2500	2	
SCHEFFLERA HEPTAPHYLLA 鴨腳木	2500	5	

PLANTING SCHEDULE: SHRUBS AND GROUND COVER IN HYDROSEEDING ON EROSION CONTROL MAT (FOR FLEXIBLE BARRIER)

BOTANICAL NAME	SPECIFICATION	PLANT TYPE	SPACING (mm)	% MIX	QUANTITY	COMMENT
(A) RHODODENDRON SIMSII 紅杜鵑	300(H)x200(S)	SHRUBS	1000	50	418	PLANTING REFER TO PLANTING MATRIX A
(B) PSYCHOTRIA ASIATRICA 九節	300(H)x200(S)	SHRUBS	1000	50	418	



PLANTING SCHEDULE: CLIMBERS IN FRONT OF THE FLEXIBLE BARRIERS

BOTANICAL NAME	SPECIFICATION	SPACING (mm)	NO./m ²	% MIX	QUANTITY	COMMENT
FICUS PUMILA 薜荔	4 SHOOTS PER PLANT EACH SHOOT 600mm LONG	1500	-	-	10	PLANT IN ALTERNATIVE PATTERN IN FRONT OF THE BARRIERS
TRACHELOSPERMUM JASMINOIDES 絡石	4 SHOOTS PER PLANT EACH SHOOT 600mm LONG	1500	-	-	10	

PLANTING SCHEDULE: SHRUBS IN HYDROSEEDING ON EROSION CONTROL MAT (SOIL NAILING AREA)

BOTANICAL NAME	SPECIFICATION	SPACING (mm)	% MIX	QUANTITY	COMMENT
RHAPHIOLEPIS INDICA 石斑木	300(H) x 200(S)	500	20	4080	PLANT EACH SPECIES IN GROUP OF 5 TO 10 RANDOM SPECIES AND IN STAGGERED PATTERN
RHODOMYRTUS TOMENTOSA 桃金娘	300(H) x 200(S)	500	20	4080	
MELASTOMA CANDIDUM 野牡丹	300(H) x 200(S)	500	20	4080	
RHODODENDRON SIMSII 紅杜鵑	300(H) x 200(S)	500	20	4080	
PSYCHOTRIA ASIATRICA 九節	300(H) x 200(S)	500	20	4080	

- GENERAL NOTES (LANDSCAPING)**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. STANDARD DRAWINGS, THE SPECIFICATIONS AND INSTRUCTIONS ISSUED BY THE SERVICE MANAGER.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 - ALL LEVELS ARE IN METRES ABOVE P.D.
 - ALL MEASUREMENTS MUST BE CHECKED ON SITE, DO NOT SCALE FROM THE DRAWING.
 - NO TREE FELLING IS ALLOWED WITHOUT THE SERVICE MANAGER'S WRITTEN APPROVAL.
 - EXISTING/PROPOSED STEEL HANDRAILING AND BARRIER POSTS TO BE PAINTED TO BLEND WITH SURROUNDINGS. COLOUR: TO BE 12B25 OF BS4800 (WITH VEGETATION) OR 10C39 OF BS4800 (WITHOUT VEGETATION).
 - PROPOSED EXPOSED CONCRETE ELEMENTS TO BE PAINTED TO BLEND WITH SURROUNDINGS. COLOUR: TO BE 10B25 OF BS4800.
 - FOR PROTECTION OF EXISTING TREES REFER TO PARTICULAR SPECIFICATION -SECTION 26, CLAUSE 26.08A-26.11A1.
 - PROPOSED ANCHORS AND POSTS TO BE LOCATED TO AVOID DAMAGE TO EXISTING SURFACE ROOTS.
 - AS AGREED OR DIRECTED BY THE SERVICE MANAGER, ALIGNMENT OF HOARDING, FENCING, NEW CHANNELS AND MAINTENANCE STAIRWAY/WALKWAY SHALL BE ADJUSTED ON SITE TO AVOID DAMAGE TO EXISTING TREES.
 - THE EXACT ALIGNMENT AND EXTENT OF SLOPE SURFACE TO BE HYDROSEEDED WITH NON-BIODEGRADABLE OR BIODEGRADABLE EROSION CONTROL MAT SHALL BE DETERMINED ON SITE BY THE SERVICE MANAGER.
 - FIXING DETAILS FOR EROSION CONTROL MAT SHALL BE IN ACCORDANCE WITH STANDARD DRAWINGS C2511/1E AND C2511/2G.

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17
Approved			

Stanley Chung
Date : _____

Contract no. GE / 2020 / 20
Agreement no. CE 47 / 2014 (GE)

Project AGREEMENT NO. CE47/2014(GE) LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2014, PACKAGE D, LANDSLIP PREVENTION AND MITIGATION WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

Drawing title
STUDY AREA NO. 3SE-D/SA2
CATCHMENT NO. 3SE-D/DF2
BRIDE'S POOL ROAD, TAI PO
HILLSIDE CATCHMENTS B2 & B3
LANDSCAPE PLAN
FLEXIBLE BARRIER AND
SOIL NAILING AREA

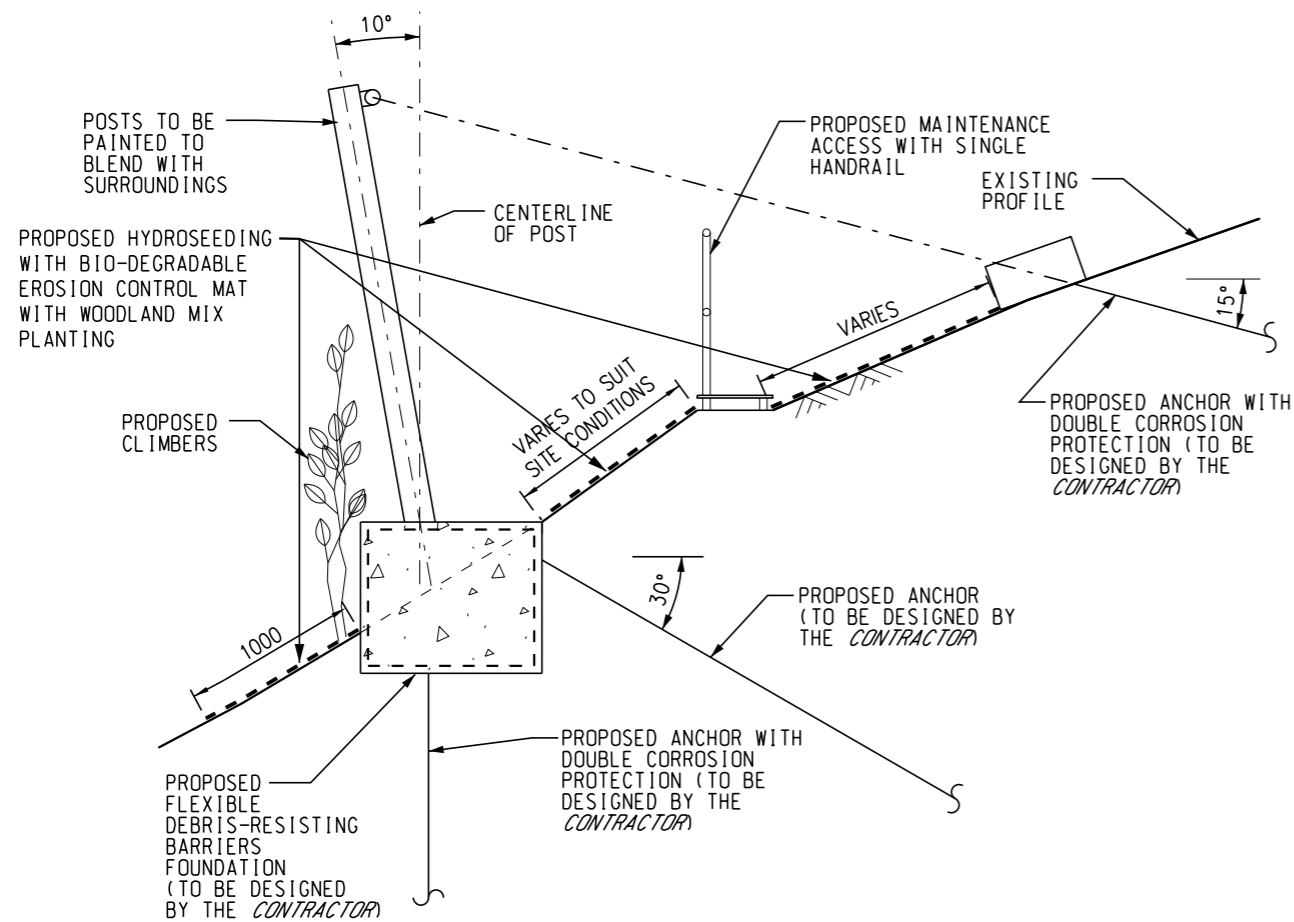
Drawing no. LPM4714/LMP/3SE-DDF2-DOH7/001
Scale 1:1000

JACOBS

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

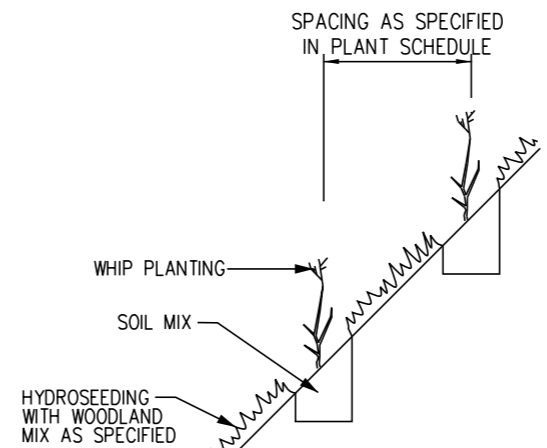
COPYRIGHT RESERVED

L:\ENV\3369 CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DDF2-DOH7-002.dgn



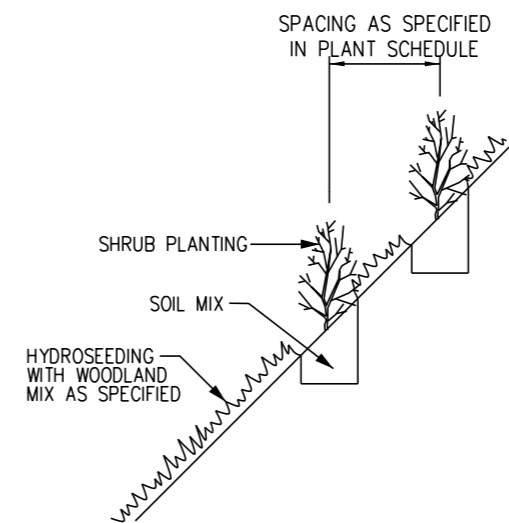
TYPICAL DETAILS OF PLANTING WORKS ON THE BARRIER

N.T.S



TYPICAL DETAILS FOR HYDROSEEDING AND WHIP PLANTING

N.T.S



TYPICAL DETAILS FOR HYDROSEEDING AND SHRUB PLANTING

N.T.S

GENERAL NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, STANDARD DRAWINGS, THE SPECIFICATIONS AND INSTRUCTIONS AS ISSUED BY THE SERVICE MANAGER.
- ALL EXISTING TREES WITHIN THE WORKS SITE AND WORKS AREA, UNLESS STATED OTHERWISE, SHALL BE PRESERVED FROM DAMAGES.
- WHERE TREES ARE TO BE PRESERVED, THEY SHALL BE PROTECTED DURING THE COURSE OF THE WORKS. NO TREES SHALL BE REMOVED WITHOUT THE APPROVAL OF THE SERVICE MANAGER IN WRITING. REMOVAL OF GRASS, BUSHES AND OTHER VEGETATION SHALL BE KEPT TO THE MINIMUM AS REQUIRED FOR THE EXECUTION OF THE WORKS.
- ALL AREAS TO RECEIVE WHIP TREE, SHRUB, CLIMBER AND GROUND COVER PLANTING SHALL BE HYDROSEEDED PRIOR TO PLANTING. THE CONTRACTOR SHALL ALLOW IN HIS PROGRAMMING SUFFICIENT TIME FOR THE HYDROSEEDING TO ESTABLISH AND PROVIDE 90% COVER TO THE SERVICE MANAGER'S SATISFACTION BEFORE PLANTING OPERATIONS COMMENCE.
- SHRUB SHALL BE PLANTED STAGGERED CENTRES AND AT THE SPACINGS INDICATED.
- ALL SHRUBS AND GROUND COVER SHALL BE PIT PLANTED AND BACKFILLED WITH SOIL-MIX AS SPECIFIED.
- SOIL-MIX SHALL CONSIST OF FRIABLE, COMPLETELY DECOMPOSED GRANITE AND SOIL CONDITIONER IN THE PROPORTIONS 3:1 BY VOLUME AND SHALL BE FREE FROM WEED GROWTH AND OTHER DELETERIOUS MATERIALS AS STATED IN G.S. CLAUSE 6.09(2) AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN P.S. THE NUTRIENT AND ORGANIC STATUS OF THE SOIL-MIX SHALL BE IN ACCORDANCE WITH G.S. CLAUSE 3.30 AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN THE P.S.
- SOIL CONDITIONER SHALL BE IN ACCORDANCE WITH G.S. CLAUSE 3.31 AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN THE P.S.
- STANDARD HYDROSEEDING MIX SHALL BE IN ACCORDANCE WITH G.S. CLAUSE 3.26 AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN P.S.
- ALL PLANTED MATERIAL SHALL BE MAINTAINED IN ACCORDANCE WITH G.S. CLAUSE 3.79 AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN P.S. FOR A PERIOD OF 12 MONTHS AFTER PLANTING IS COMPLETED.
- GROUND PREPARATION IN ACCORDANCE WITH G.S. CLAUSES 3.49 - 3.57 AND THE RELEVANT AMENDMENTS TO THE CLAUSES IN P.S. SHALL BE CARRIED OUT TO ALL PLANTING AREAS AS REQUIRED.
- ALL GRASS AND PLANTED AREAS DAMAGED DURING CONSTRUCTION SHALL BE REINSTATED TO THE SATISFACTION OF THE SERVICE MANAGER.
- ALL NECESSARY MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT SLOPES FROM EROSION INCLUDING TEMPORARY SLOPE PROTECTION DURING CONSTRUCTION.
- EROSION PROTECTION SHALL BE INSTALLED WHERE DIRECTED ON SITE BY THE SERVICE MANAGER.
- THE MAT FOR SOIL EROSION CONTROL SHALL BE AGREED BY THE SERVICE MANAGER.
- NO TREES SHALL BE FELLED UNLESS APPROVED BY SERVICE MANAGER.
- FOR SPECIFICATIONS OF GEOTEXTILE FILTER SEE GS CLAUSE 7.198(7).

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	MAR 16
Designed		SCC	APR 16
Drawn		AF	APR 16
Checked		MJL	APR 16

Approved

 Stanley Chung
 Date : _____

Contract no. GE / 2020 / 20

Agreement no. CE 47 / 2014 (GE)

Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND
 MITIGATION PROGRAMME, 2014,
 PACKAGE D,
 LANDSLIP PREVENTION AND
 MITIGATION WORKS
 - INVESTIGATION, DESIGN AND
 CONSTRUCTION

Drawing title
 STUDY AREA NO. 3SE-D/SA2
 CATCHMENT NO. 3SE-D/DF2
 BRIDE'S POOL ROAD, TAI PO
 LANDSCAPE DETAILS

Drawing no. LPM4714/LMP/3SE-DDF2-DOH7/002
 Scale AS SHOWN

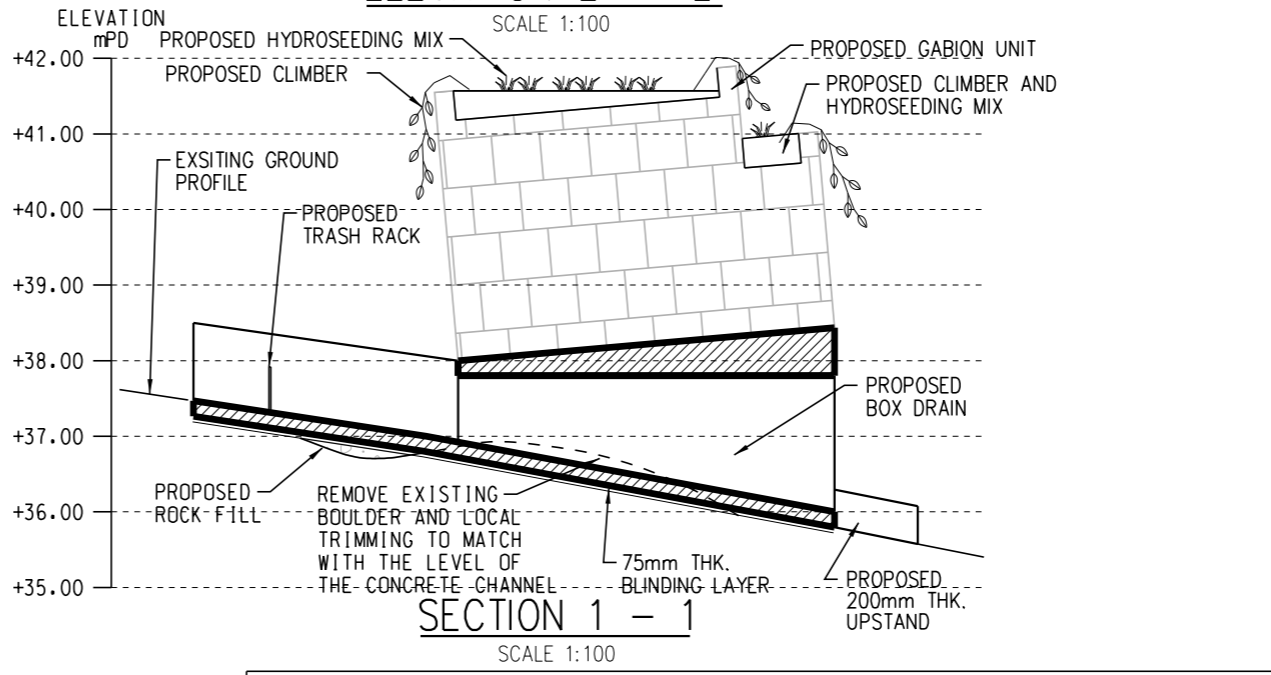
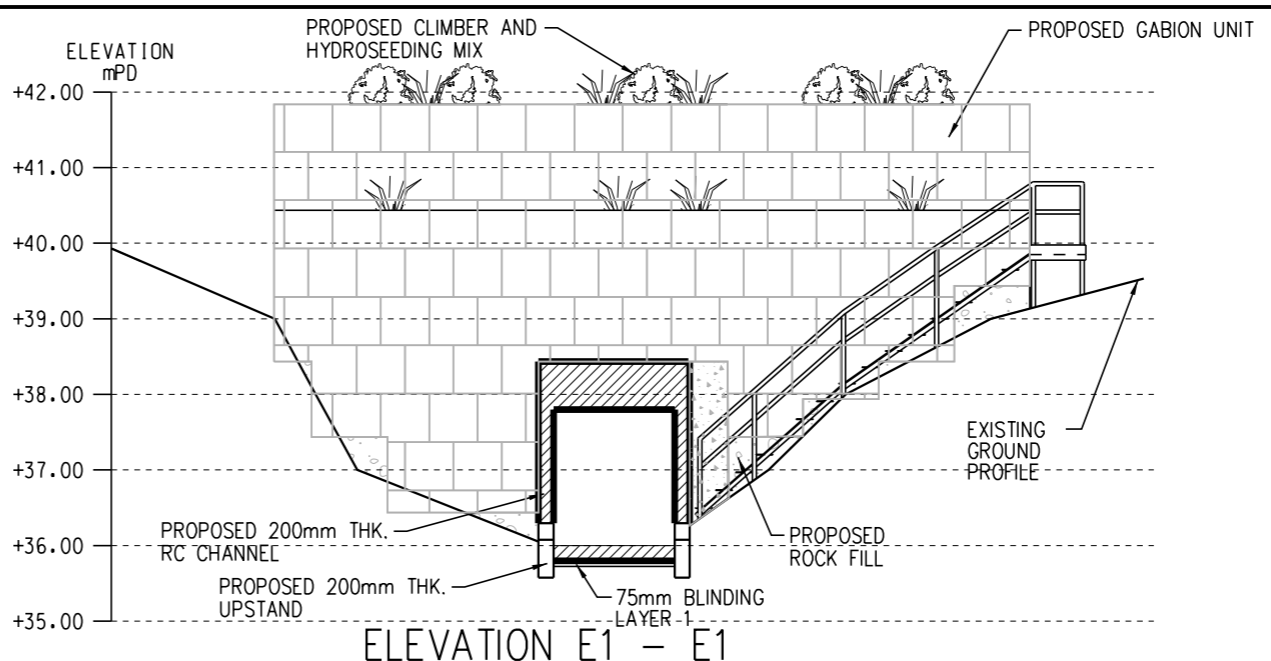
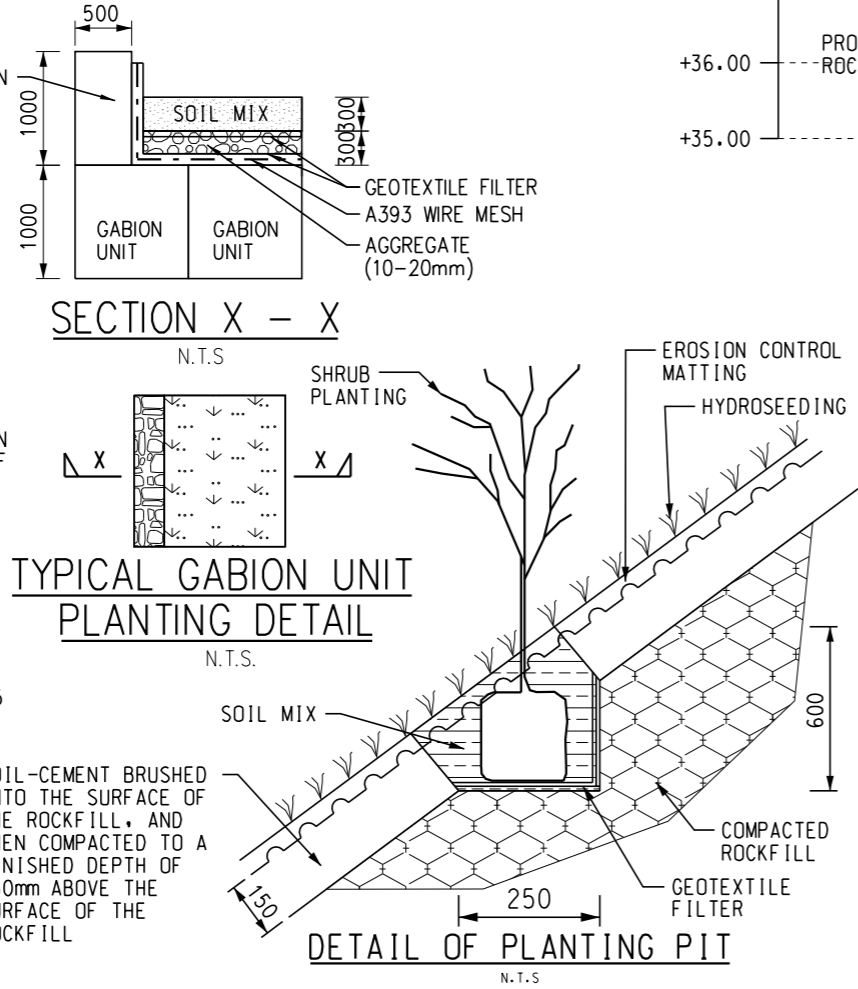
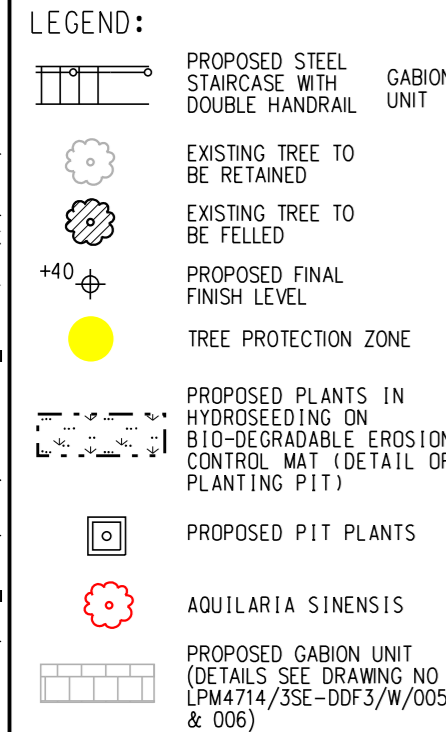
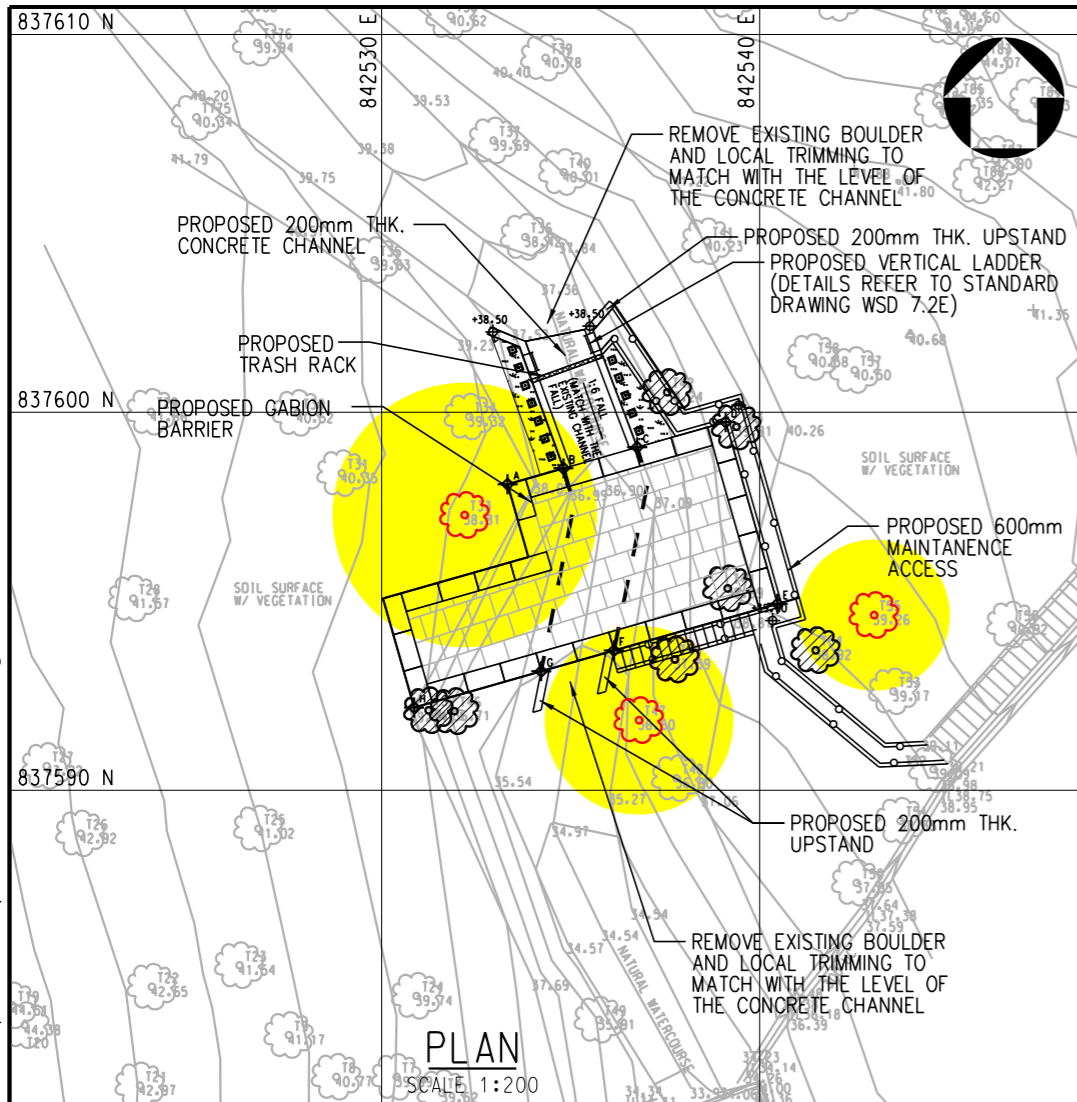
JACOBS



CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT

COPYRIGHT RESERVED

\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DDF3-001.dgn



PLANTING SCHEDULE: SHRUBS AND CLIMBERS IN HYDROSEEDING IN GABION BARRIER

BOTANICAL NAME	SPECIFICATION	PLANT TYPE	SPACING (mm)	% MIX	QUANTITY	COMMENT
FICUS PUMILA 薜荔	4 SHOOT PER PLANT EACH SHOOT 600mm LONG	CLIMBER	1500	-	20	PLANT AT THE EDGE OF THE BARRIER
PSYCHOTRIA ASIATRICA 九節	300(H)x200(S)	SHRUBS	500	-	12	PLANTING PIT

PROPORTION OF HYDROSEEDING MIX

SPECIES	APR - AUG RATE (g/sq.m.)	SEP - MAR RATE (g/sq.m.)
i) CYNODON DACTYLON 狗牙根	14	15
ii) PASPALUM NOTATUM 百喜草	10	10
iii) LOLIUM PERENNE 黑麥草	-	5
iv) EREMOCHLOA OPHIUROIDES 假儉草	1	-
TOTAL (MIN.)	25	30

NOTE:
THE CONTRACTOR MAY SUBJECT TO THE APPROVAL OF THE SERVICE MANAGER INCLUDE ALTERNATIVE SPECIES IN THE MIX.

- NOTE:
- FOR EVERY 200 x 200 x 100 THK. BAG OF SOIL MIX IN SOIL NAIL HEAD, IN CORPORA 50g OF PRE-PLANTING FERTILIZER AND 10g OF WATER RETAINING CRYSTALS.
 - COMPENSATORY PLANTING OF SEEDLING TREES AND LIGHT STANDARD TREES SHALL BE IN ACCORDANCE WITH G.S. CLAUSES 3.11 & 3.13 AND THE RELEVANT AMENDMENTS TO THE CLAUSE IN P.S.

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17
Approved			
			Stanley Chung
			Date : _____

Contract no. GE / 2020 / 20
 Agreement no. CE 47 / 2014 (GE)
 Project AGREEMENT NO. CE47/2014(GE) LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2014, PACKAGE D, LANDSLIP PREVENTION AND MITIGATION WORKS - INVESTIGATION, DESIGN AND CONSTRUCTION

Drawing title
 STUDY AREA NO. 3SE-D/SA2
 CATCHMENT NO. 3SE-D/DF3
 BRIDE'S POOL ROAD, TAI PO HILLSIDE CATCHMENT B1
 LANDSCAPE PLAN
 GABION BARRIER

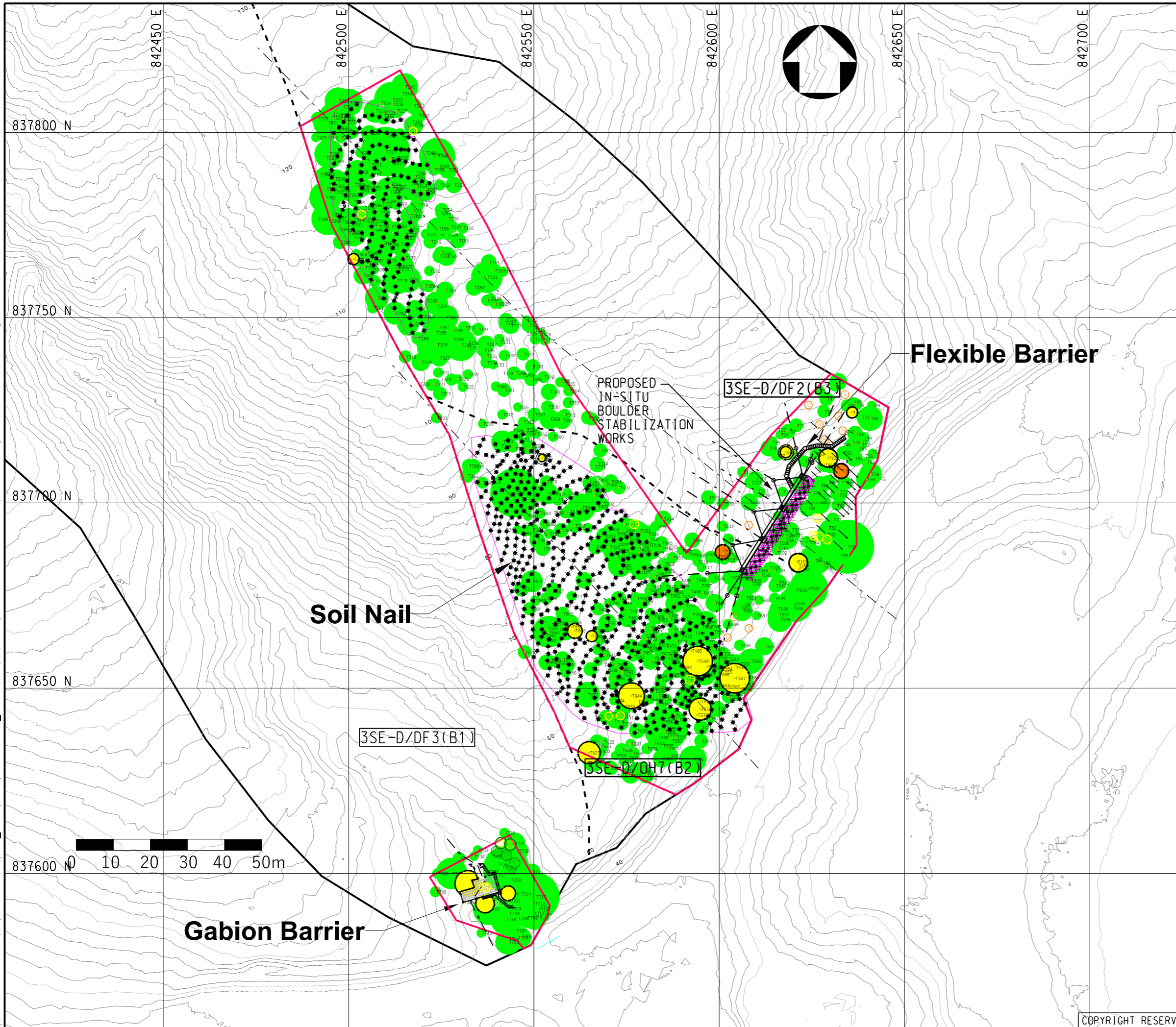
Drawing no. LPM4714/LMP/3SE-DDF3/001
 Scale AS SHOWN

JACOBS

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

COPYRIGHT RESERVED

\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-001.dgn



- LEGEND:**
- PROPOSED SOIL NAIL
 - PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - AQUILARIA SINENSIS*
 - AQUILARIA SINENSIS* SAPLING
 - WATERCOURSE
 - AQUILARIA SINENSIS* SAPLING TRANSPLANTATION
 - ADDITIONAL *AQUILARIA SINENSIS* SAPLING
 - CANTHIUM DICOCCUM*
 - SOIL NAILING AREA
 - TEMPORARY PROTECTIVE FENCE

NOTES:

- EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17

Approved

 Stanley Chung
 Date : _____

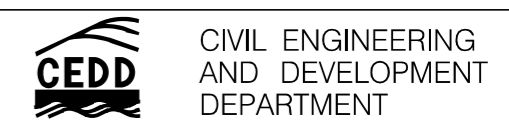
Contract no. GE / 2020 / 20

Agreement no. CE 47 / 2014 (GE)

Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2014, PACKAGE D,
 LANDSLIP PREVENTION AND MITIGATION WORKS
 - INVESTIGATION, DESIGN AND CONSTRUCTION

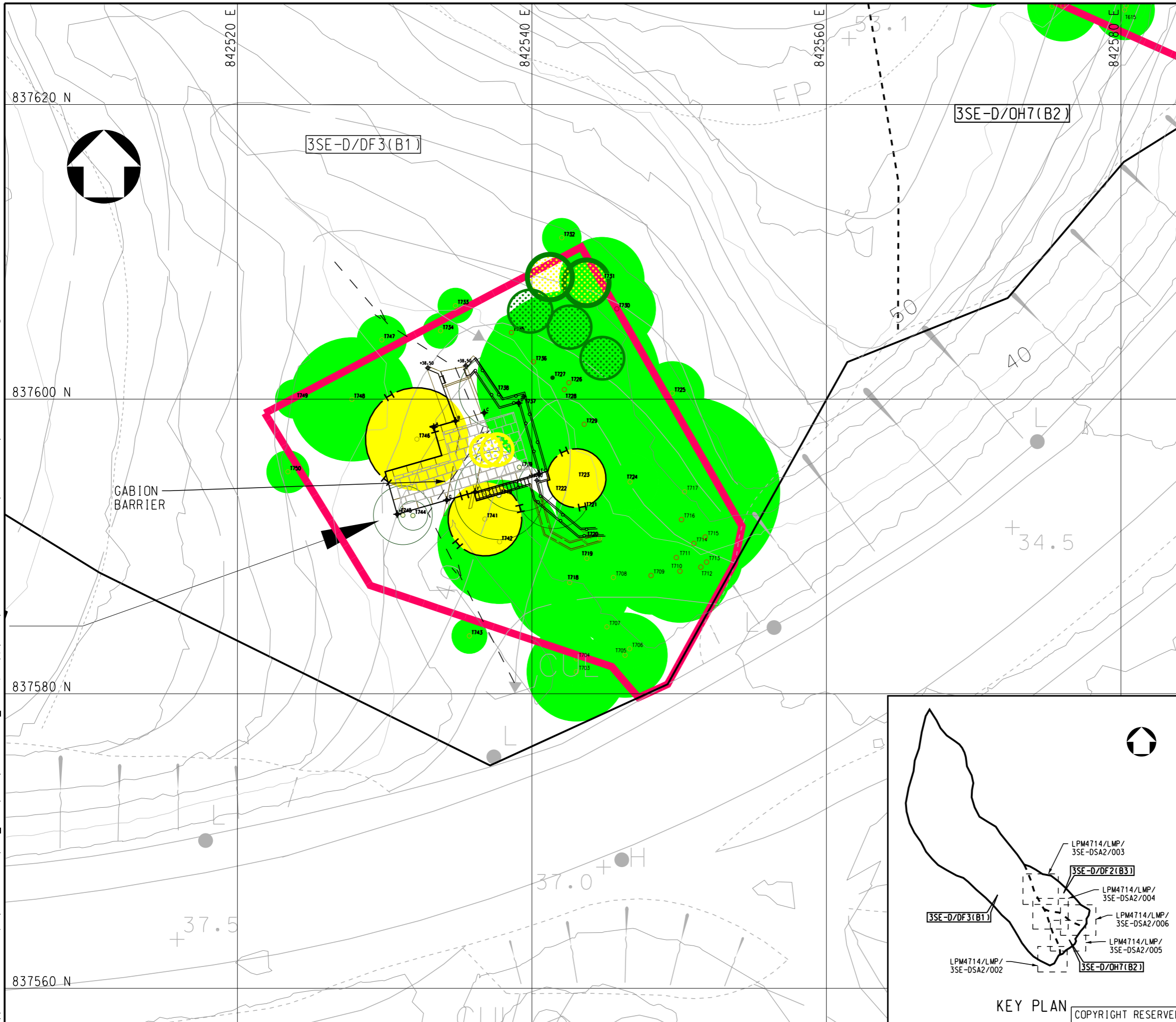
Drawing title
 STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES

Drawing no. LPM4714/LMP/3SE-DSA2/001
 Scale 1:1000



COPYRIGHT RESERVED

\\Hkco1vs01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-002.dgn



- LEGEND:**
- PROPOSED SOIL NAIL
 - PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - AQUILARIA SINENSIS*
 - AQUILARIA SINENSIS* SAPLING
 - WATERCOURSE
 - AQUILARIA SINENSIS* SAPLING TRANSPLANTATION
 - ADDITIONAL *AQUILARIA SINENSIS* SAPLING
 - SOIL NAILING AREA
 - TEMPORARY PROTECTIVE FENCE

NOTES:

- EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17
Approved			
		Stanley Chung	Date : _____

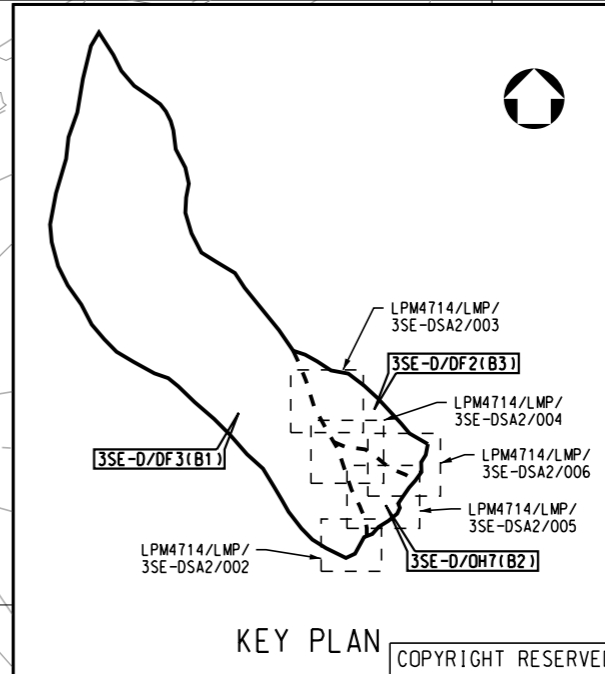
Contract no. GE / 2020 / 20
 Agreement no. CE 47 / 2014 (GE)
 Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2014, PACKAGE D,
 LANDSLIP PREVENTION AND MITIGATION WORKS
 - INVESTIGATION, DESIGN AND CONSTRUCTION

Drawing title
 STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES
 SHEET 1 OF 5

Drawing no. LPM4714/LMP/3SE-DSA2/002
 Scale 1:250

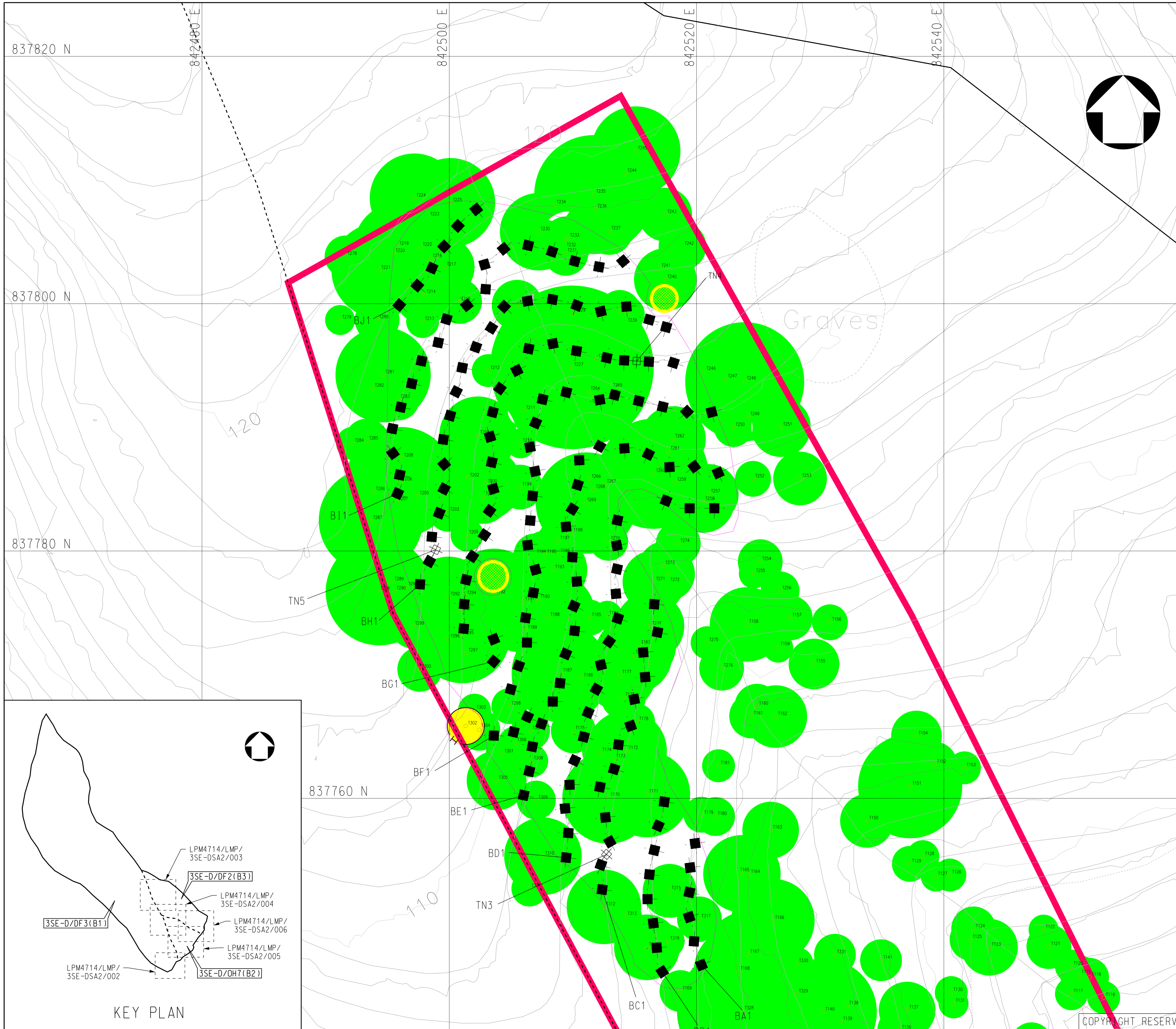
JACOBS

CEDD
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT



KEY PLAN
 COPYRIGHT RESERVED


\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369 CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-003.dgn



- LEGEND:**
- PROPOSED SOIL NAIL
 - TN1 ⊕ PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - *AQUILARIA SINENSIS*
 - *AQUILARIA SINENSIS* SAPLING
 - ▭ SOIL NAILING AREA
 - H — TEMPORARY PROTECTIVE FENCE

NOTES:

1. EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17
Approved		 Stanley Chung Date : _____	

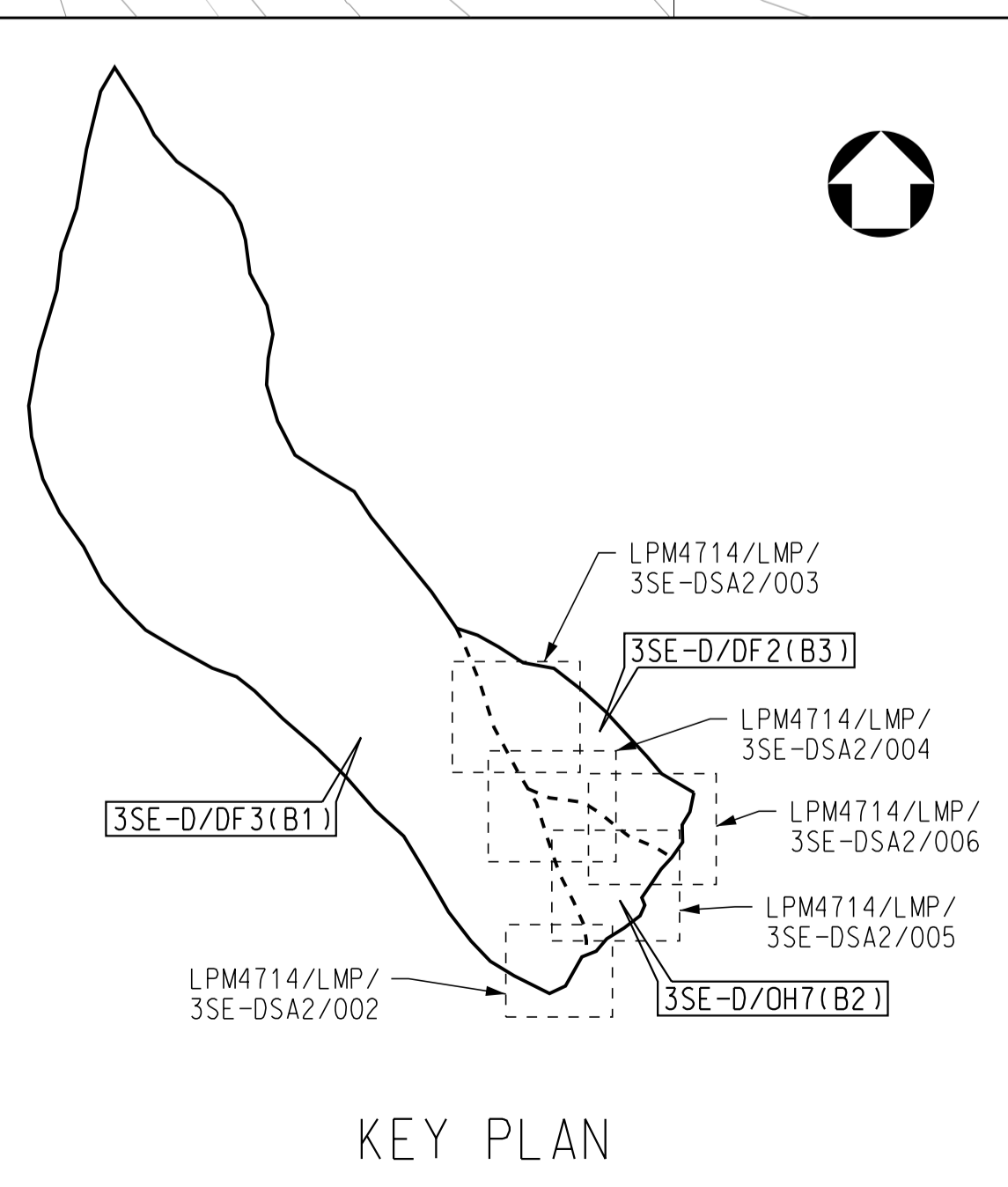
Contract no. GE / 2020 / 20
 Agreement no. CE 47 / 2014 (GE)
 Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND
 MITIGATION PROGRAMME, 2014,
 PACKAGE D,
 LANDSLIP PREVENTION AND
 MITIGATION WORKS
 - INVESTIGATION, DESIGN AND
 CONSTRUCTION

Drawing title
 STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES
 SHEET 2 OF 5

Drawing no. LPM4714/LMP/3SE-DSA2/003
 Scale 1:300

JACOBS

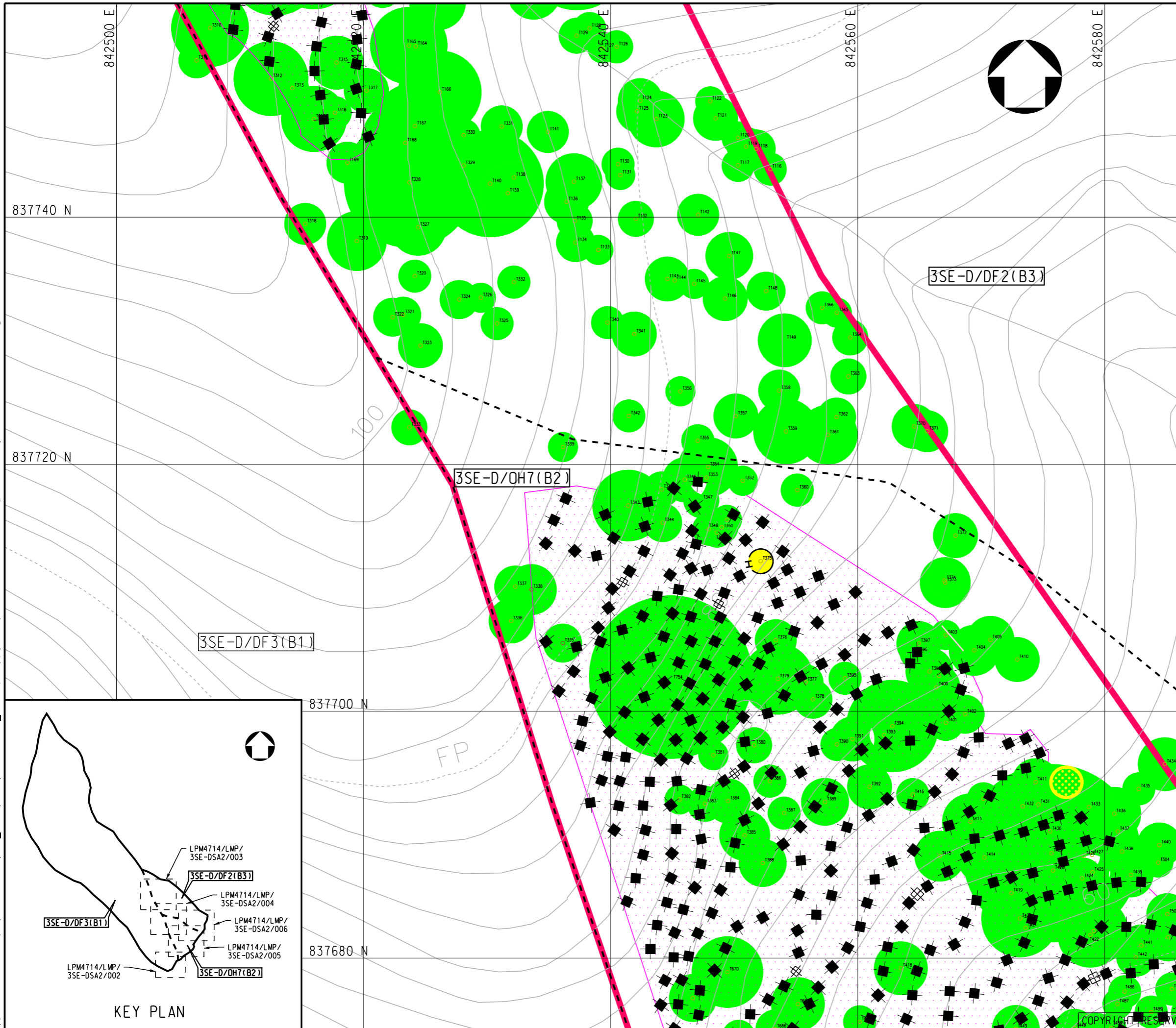
 **CEDD**
 CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT



KEY PLAN

COPYRIGHT RESERVED

\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-004.dgn



- LEGEND:**
- ⊠ PROPOSED SOIL NAIL
 - TN1 ⊠ PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - *AQUILARIA SINENSIS*
 - *AQUILARIA SINENSIS* SAPLING
 - ⋯ SOIL NAILING AREA
 - H — TEMPORARY PROTECTIVE FENCE

NOTES:

- EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17

Approved

 Stanley Chung
 Date : _____

Contract no. GE / 2020 / 20
 Agreement no. CE 47 / 2014 (GE)

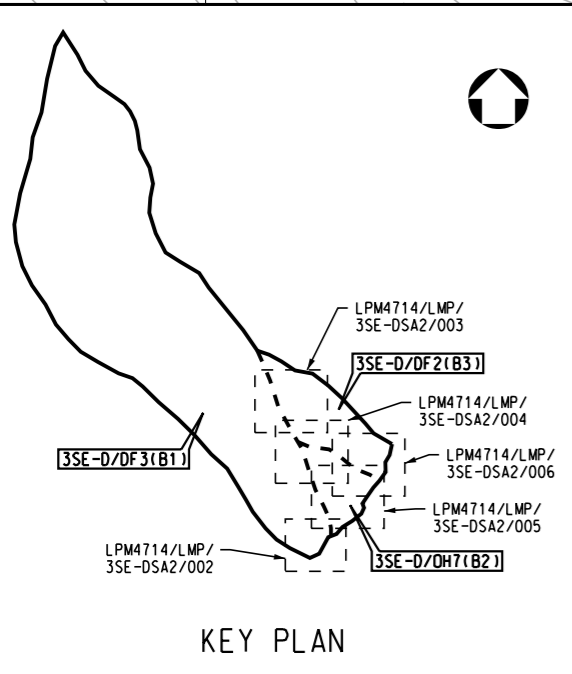
Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND
 MITIGATION PROGRAMME, 2014,
 PACKAGE D,
 LANDSLIP PREVENTION AND
 MITIGATION WORKS
 - INVESTIGATION, DESIGN AND
 CONSTRUCTION

Drawing title
 STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES
 SHEET 3 OF 5

Drawing no. LPM4714/LMP/3SE-DSA2/004
 Scale 1:300

JACOBS

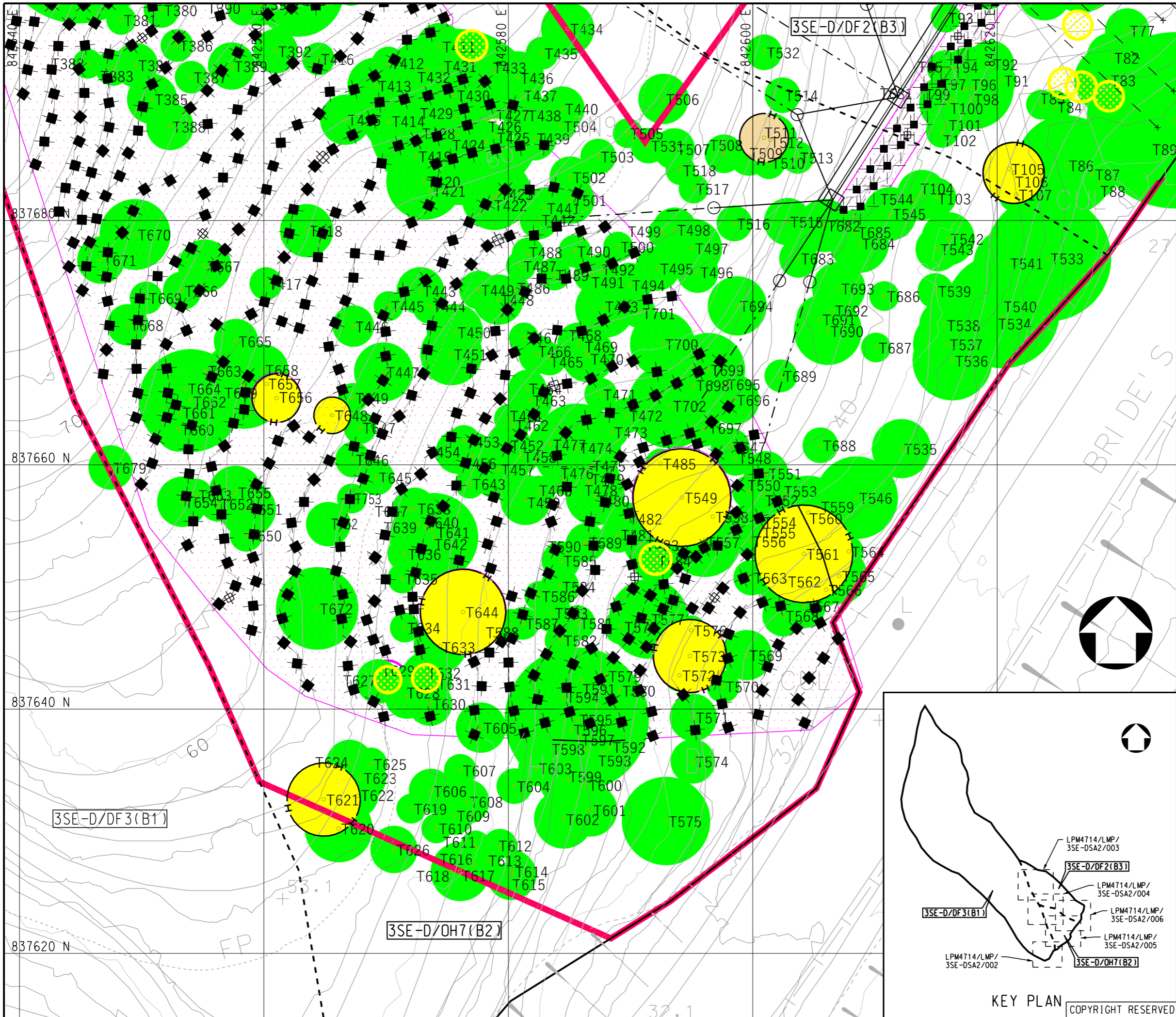
CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT



KEY PLAN

COPYRIGHT RESERVED

\\hkcoiv01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-005.dgn



- LEGEND:**
- ◆ PROPOSED SOIL NAIL
 - TN1 □ PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - *AQUILARIA SINENSIS*
 - *AQUILARIA SINENSIS* SAPLING
 - *CANTHIUM DICOCCUM*
 - SOIL NAILING AREA
 - H — TEMPORARY PROTECTIVE FENCE

NOTES:

- EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17
Approved			

Stanley Chung
Date : _____

Contract no. GE / 2020 / 20

Agreement no. CE 47 / 2014 (GE)

Project
 AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND MITIGATION PROGRAMME, 2014, PACKAGE D,
 LANDSLIP PREVENTION AND MITIGATION WORKS
 - INVESTIGATION, DESIGN AND CONSTRUCTION

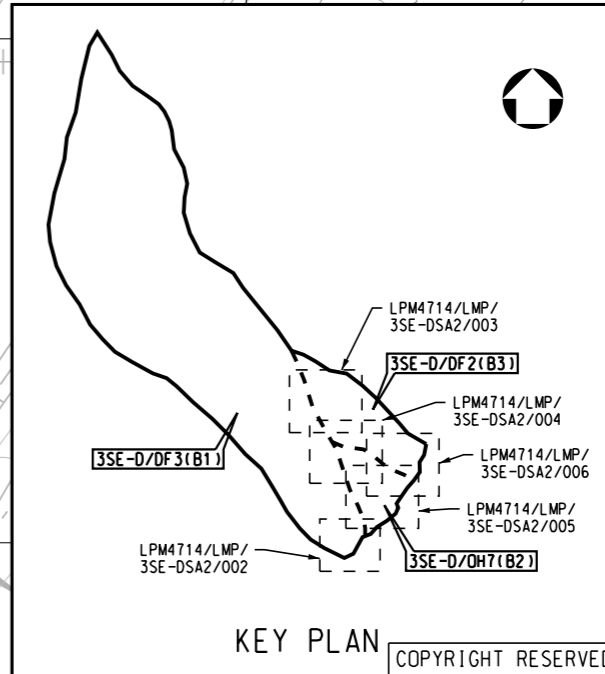
Drawing title
 STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES
 SHEET 4 OF 5

Drawing no. LPM4714/LMP/3SE-DSA2/005
 Scale 1:300

JACOBS

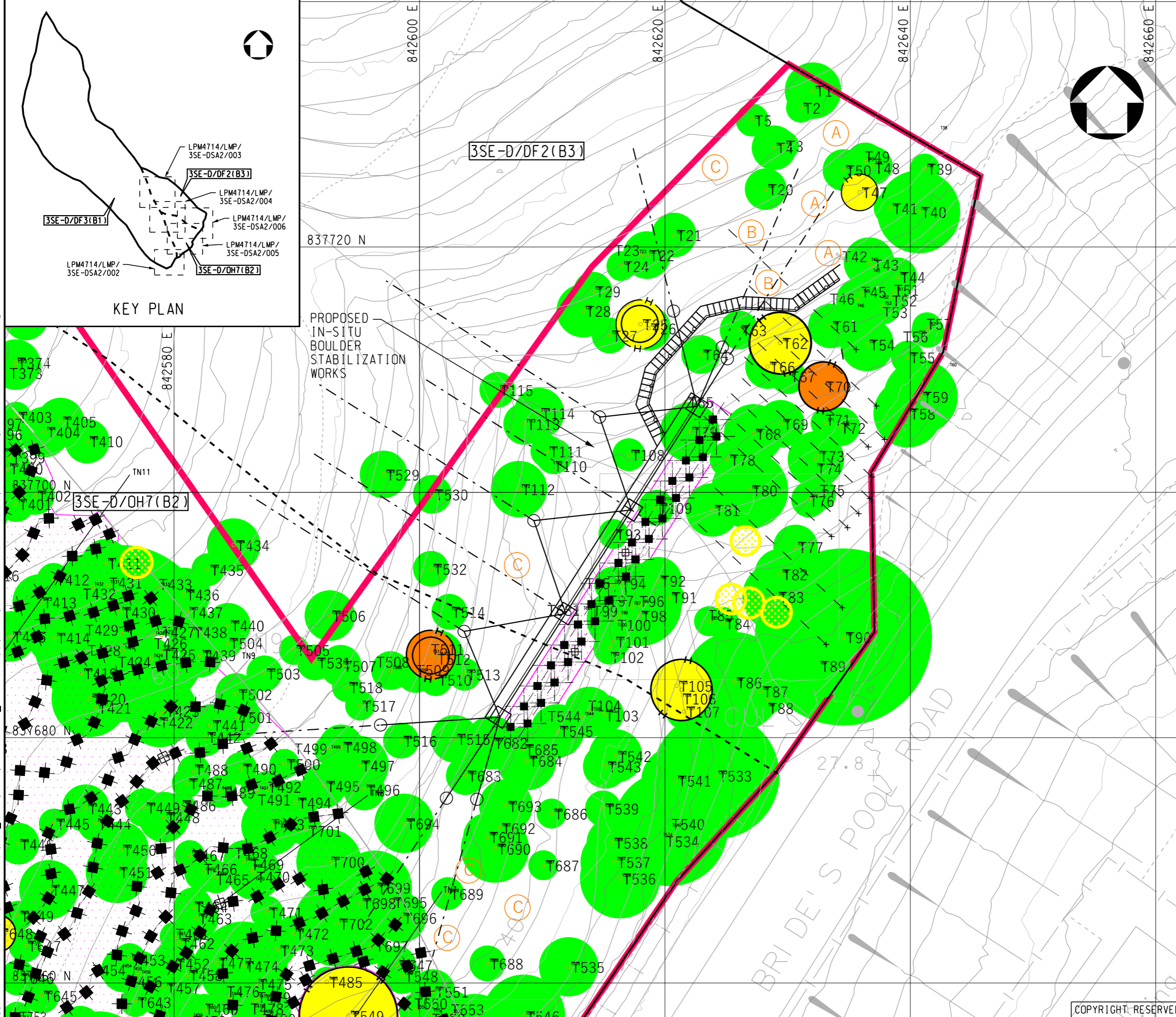


CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT



KEY PLAN
 COPYRIGHT RESERVED

\\hkco1vs01.europe.jacobs.com\cad_data\ENV\3369_CE28_2012 (temp)\3453\WORKING DRAWING\3SE-DSA2\LMP-3SE-DSA2-006.dgn



- LEGEND:**
- PROPOSED SOIL NAIL
 - PROPOSED PULL OUT TEST
 - TREE PROTECTION ZONE
 - AQUILARIA SINENSIS
 - AQUILARIA SINENSIS SAPLING
 - CANTHIUM DICOCCUM
 - SOIL NAILING AREA
 - TEMPORARY PROTECTIVE FENCE

NOTES:

- EXACT LOCATION OF SOIL NAILS TO BE DETERMINED ON SITE, WHICH SHALL BE LOCATED AWAY FROM TREE TRUNK BY AT LEAST 500MM, AND AWAY FROM MAJOR TREE ROOTS OF RETAINED TREES OR PLANTS

No.	Date	Description	Initial
REVISION			
		Name	Date
Surveyed		JOHN BARRETT	FEB 17
Designed		SCC	MAY 17
Drawn		YF	MAY 17
Checked		MJL	MAY 17

Approved

Stanley Chung

Date : _____

Contract no. GE / 2020 / 20

Agreement no. CE 47 / 2014 (GE)

Project

AGREEMENT NO. CE47/2014(GE)
 LANDSLIP PREVENTION AND
 MITIGATION PROGRAMME, 2014,
 PACKAGE D,
 LANDSLIP PREVENTION AND
 MITIGATION WORKS
 - INVESTIGATION, DESIGN AND
 CONSTRUCTION

Drawing title

STUDY AREA NO. 3SE-D/SA2
 BRIDE'S POOL ROAD, TAI PO
 HILLSIDE CATCHMENTS B1, B2 & B3
 PLAN OF WORKS AND TREES
 SHEET 5 OF 5

Drawing no. LPM4714/LMP/3SE-DSA2/006

Scale 1:300

JACOBS

CEDD
 CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT

COPYRIGHT RESERVED