DETAILED STUDY OF THE HILLSIDE AREA BELOW SHA TIN HEIGHTS ROAD

GEO REPORT No. 143

Fugro Maunsell Scott Wilson Joint Venture

GEOTECHNICAL ENGINEERING OFFICE

CIVIL ENGINEERING DEPARTMENT

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

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PREFACE

In keeping with our policy of releasing information which may be of general interest to the geotechnical profession and the public, we make available selected internal reports in a series of publications termed the GEO Report series. The GEO Reports can be downloaded from the website of the Civil Engineering Department (http://www.ced.gov.hk) on the Internet. Printed copies are also available for some GEO Reports. For printed copies, a charge is made to cover the cost of printing.

The Geotechnical Engineering Office also produces documents specifically for publication. These include guidance documents and results of specific review. These publications and the printed GEO Reports may be obtained from the Government's Information Services Department. Information on how to purchase these documents is given on the last page of this report.

R.K.S. Chan
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June 2004

FOREWORD

This report presents the findings of a detailed study of the hillside area at Sha Tin Heights. In 1997, six landslides (GEO Incident Nos. MW97/6/12, MW97/6/23, MW97/7/15, MW97/7/25, MW97/7/90A, MW97/7/90B) occurred on the hillside at Sha Tin Heights, Sha Tin. The debris of three landslides that occurred in June and July 1997 and involving a total volume of 520 m^3 travelled downslope and encroached onto Woodcrest Hill (No. 8006 Tai Po Road) and K. K. Terrace (No. 8004 Tai Po Road) at the toe of the hillside. There were no casualties as a result of the 1997 landslides.

The key objectives of the study were to assess the landslide risk, evaluate the acceptability of the assessed risk levels and examine the cost-effectiveness of the various risk mitigation options.

The report was prepared as part of the 1999 Landslide Investigation Consultancy (LIC), for the Geotechnical Engineering Office (GEO), Civil Engineering Department (CED), under Agreement No. CE 101/98. This is one of a series of reports produced during the consultancy by Fugro Maunsell Scott Wilson Joint Venture (FMSW).

Y C Koo
Project Director
Fugro Maunsell Scott Wilson Joint Venture

Agreement No. CE 101/98
1999 Landslide Investigation Consultancy

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1. INTRODUCTION

In 1997, six landslides (GEO Incident Nos. MW97/6/12, MW97/6/23, MW97/7/15, MW97/7/25, MW97/7/90A, MW97/7/90B) occurred on the hillside at Sha Tin Heights, Sha Tin (Figure 1). The debris of three landslides that occurred in June and July 1997 and involving a total volume of 520 m^3 travelled downslope and encroached onto Woodcrest Hill (No. 8006 Tai Po Road) and K.K. Terrace (No. 8004 Tai Po Road) at the toe of the hillside. There were no casualties as a result of the 1997 landslides.

To assess the risk of future landslides from the hillside to the downslope developments (viz Woodcrest Hill and K.K. Terrace), Fugro Maunsell Scott Wilson Joint Venture (FMSW), the 1999 Landslide Investigation Consultants, commenced an area study of the hillside for the Geotechnical Engineering Office (GEO), Civil Engineering Department (CED), under Agreement No. CE 101/98. This is one of a series of reports produced during the consultancy by FMSW.

The key objectives of the study were to assess the landslide risk, evaluate the acceptability of the assessed risk levels and examine the cost-effectiveness of the various risk mitigation options.

This report presents the findings of the study, which comprised the following key tasks:

(a) desk study, including a review of previous ground investigation data and landslide records,

(b) aerial photograph interpretation (API),

(c) topographic survey and site reconnaissance along the hillside,

(d) ground investigation and laboratory testing, and

(e) assessment of landslide risk and various risk mitigation options.

2. DESCRIPTION OF THE SITE

The extent of the study area is shown in Figure 1. It covers much of the southeast-facing hillside at Sha Tin Heights and has a total area of about 3.2 hectares. Sha Tin Heights Road and Tai Po Road are at the crest and toe of the hillside respectively.

The crest of the hillside is a ridge. Sha Tin Heights Road generally follows the ridgeline and at the northeastern end descends to Tai Po Road. Along the crest of the hillside, there are a number of low-rise residential buildings (Plate 1). Woodcrest Hill and K.K. Terrace are located at the toe of the hillside bordering Tai Po Road (Plates 2 to 7). Adjacent to the existing developments, the hillside has been modified locally by man-made slopes and retaining walls.

The hillside comprises alternating spurs and gullies. The gullies form ephemeral drainage lines connecting to the drainage systems at the toe of the hillside. The height of the hillside is about 62 m on the northeastern study boundary, increasing to about 72 m on the southwestern boundary. The slope angle generally varies from 24° to 42°, but the majority is between 30° and 40°.

For the most part, the hillside is vegetated with bushes, vines and small trees. Large areas of shotcrete have been applied along most of the drainage lines as urgent slope repair works following the 1997 landslides. In some areas, the hillside has been terraced, apparently associated with cultivation in the past (Figure 3).

3. HISTORY OF THE SITE

3.1 General

The development history of Sha Tin Heights and the past landslides have been evaluated by aerial photograph interpretation (API), which was corroborated by site reconnaissance and review of documentary records, where available.

3.2 Development History

In the earliest aerial photographs, taken in 1924, Sha Tin Heights generally comprised natural terrain. Some platforms linked by a footpath were formed along the ridge crest, but no structures could be identified. The vegetation cover on the hillside was relatively thin. By 1963, some possibly cultivation terraces existed over different parts of the hillside, but the southwestern side appeared to be the most active area.

The residential development along the crest of the hillside began in mid-1950s. By 1963, extensive site formation works primarily along Sha Tin Heights Road were either completed or in progress resulting in the deposition of a significant amount of fill material below the ridge crest. Severe gully erosion was apparent on some of the larger fill slopes suggesting that the fill slopes could have been relatively loose and unprotected. The construction of K.K. Terrace was completed in 1969 and Woodcrest Hill was completed in 1984.

3.3 Past Landslides

The study area and its adjacent hillside have a history of landslides. In this study, a total of 27 landslides were identified by API in conjunction with a review of GEO's landslide records. Five of them were relict scars that had existed before 1963 and 22 occurred after 1963. The identified landslides are noted to generally spread across the entire southeast facing hillside of Sha Tin Heights. Relict scars of landslides that occurred before 1963 were observed on the earliest low-level aerial photographs (taken in 1963). Thereafter, landslide(s) occurred almost every 3 to 5 years. Most of the landslides involved a debris volume of less than 150 m^3. One landslide (Landslide Card No. 9/7) that occurred in 1981 involved a volume of 250 m^3, and three failures in 1997 (Incident Nos. MW97/6/12, MW97/6/23 and MW97/7/15) involved volumes between 150 m^3 and 200 m^3. Two of the 1997 failures

(Incident No. MW97/6/12 and MW97/6/23) were the subject of a Landslide Investigation by the 1997 Landslide Investigation Consultancy (GEO, 1998a).

The locations of the past landslides are shown in Figure 2 and their basic information is summarised in Table 1. A summary of their characteristics is given in Table A1 of Appendix A.

4. SURFACE CONDITIONS

4.1 General

The general hillside was inspected at a site reconnaissance level of detail by FMSW between November 1999 and January 2000, given the general difficulties of access associated with steep terrain and dense vegetation. The findings are shown in Figure 3. The key observations are presented below.

4.2 Slope Drainage

The drainage of the hillside was dominated by eight ephemeral drainage lines (Figure 2), which were generally smooth and broad. Except for the one southwest of Woodcrest Hill, the beds of the drainage lines were mostly covered by large areas of shotcrete after the 1997 landslides (Figure 3).

Surface drainage channels and catchpits were noted at or around some ephemeral drainage lines, but many of them were either damaged or blocked with soil and vegetation. The notable ones found during the site reconnaissance are shown in Figure 3.

4.3 Discharges onto Hillside

Stormwater drainage outlets from the building platforms along the crest of the hillside were observed during the site reconnaissance. These included the stormwater drainage outlets at Golden Time Villas, Albert Villa, Happy View House, Lower Pink House and Mount Pleasure (Figure 2 and Plates 8 to 13). Since the site reconnaissance was carried out mainly in dry weather, the amount of water discharged from these outlets during rain was uncertain.

Seepage of foulwater was observed on the slope faces below Ascot Villa, the western end of Golden Time Villas and Happy View House. Signs of periodic discharge of foulwater were also observed from a pipe associated with Golden Time Villas.

Elsewhere over the hillside, numerous pipes, probably for previous irrigation of cultivation, were observed. On the slope below Mount Pleasure, a pipe was seeping almost continuously during site reconnaissance and resulted in a small area of saturated ground.

4.4 Landslide Scars

The observations from the site reconnaissance generally confirmed the past landslide information interpreted from the aerial photographs, and provided supplementary information for the study.

4.5 Rock Outcrops and Boulders

Rock outcrops were found mostly within the spur below Peak View House with smaller isolated outcrops below Albert Villa and Greenheight Villa (Figure 3). The pattern of the recorded joints on the rock outcrops was mostly not adversely orientated.

Many surface boulders, mostly less than 0.1 m^3, were observed within the area below Peak View House (Figure 3). However, the potential for these boulders moving downhill and reaching Woodcrest Hill was considered to be low given the existence of the terraces below.

5. SUBSURFACE CONDITIONS

5.1 Geology

Sheet 7 of the Hong Kong Geological Survey 1:20,000 Map Series (GCO, 1986) indicates that the study area is predominantly underlain by coarse-grained granite. An extract from the geological map is shown in Figure 4. A narrow zone of fine-grained granite is shown adjacent to Tai Po Road. Basalt and feldsparphyric rhyolite dykes are shown within the coarse-grained granite west of the study area.

The northeast-southwest trending Tolo Channel fault zone that describes a line through Sha Tin Valley is shown just south of, and parallel to, Tai Po Road. The southeast portion of a northwest-southeast trending fault that extends through the Lower Shing Mun reservoir is shown in the southeast portion of the study area. This fault projects through the Golden Time Villas and just southwest of Woodcrest Hill. Minor faults are also shown just northeast and east of the study area.

5.2 Previous Ground Investigations

There were nine previous ground investigations carried out in and adjacent to the Sha Tin Heights study area. These comprised a total of 49 drillholes, 8 trial pits, 6 slope surface strips and 31 standpipes. The locations and associated projects of these ground investigation stations are presented in Figure 5 and Table 2 respectively. Most of these ground investigation stations were located at the crest or at the toe of the hillside.

5.3 Ground Investigation for this Study

Ground investigation for this study, comprising six vegetation-strips (VS1 to VS6) and 28 trial pits (TP1 to TP28) was carried out between November 1999 and January 2000. The locations of these ground investigation stations are shown in Figure 6.

5.4 Inferred Ground Conditions

Fill was found mostly in the upper part of the hillside with thickness ranging from 2.4 m to 3 m. It consisted of a heterogeneous mixture of loose to medium dense silt, sand, gravel and boulder-size rocks locally with building debris including brick, concrete and miscellaneous trash materials such as glass, metal, wood, etc.

Colluvium was found over much of the hillside with thickness generally varying from about 0.5 m at spurs to about 2.8 m at the valleys and the slope toes. It consisted of medium dense to dense, yellowish to reddish brown, clayey sandy, silt to gravelly clayey silt with scattered angular to sub-rounded clasts of moderately to highly decomposed granite up to 0.25 m.

Residual soil was found in scattered locations and mostly less than 2 m thick. It consisted of medium dense to dense, light brown to yellowish and reddish brown, silty sandy clay to sandy clayey silt.

Underlying the fill, colluvium and residual soil layers was the completely to highly decomposed granite, which comprised medium dense to very dense, yellowish brown clayey, sandy silt to silty sandy gravel containing occasional medium to closely spaced, manganese oxide coated relict joints. These relict joints were generally discontinuous. Their orientations were generally random with no prevailing joint set dipping out of the slope face.

The bedrock generally comprised moderately strong, yellowish brown and pinkish grey, moderately to slightly decomposed granite.

5.5 Groundwater Conditions

Records of the 31 piezometers installed in the previous ground investigations (with monitoring periods ranging from 7 days to 3 months) suggested that the base groundwater table was generally low and within bedrock.

Groundwater was not encountered in any of the trial pits excavated for the present study, nor was groundwater seepage observed on the slope face during the site reconnaissance. However, seepage of foulwater was found at a number of locations on the upper part of the hillside, apparently due to leakage from existing septic tanks or foulwater drains immediately above (Figure 3). These included the slope faces below Ascot Villa and the western end of Golden Time Villas, and trial pit TP14 below Happy View House (Figures 3).

6. QUANTITATIVE RISK ASSESSMENT

6.1 General Approach

The overall approach adopted in the Quantitative Risk Assessment (QRA) is illustrated in Figure 7. The QRA essentially consisted of 3 parts, viz hazard assessment, consequence assessment and risk assessment. The purpose of hazard assessment was to delineate how often the different types of landslides would occur within the study area (i.e. the frequency of failures). The consequence and risk assessments utilized the landslide frequencies to calculate the risk levels of the developed areas in Woodcrest Hill and K.K. Terrace. The assessed risk levels were then compared with the established interim risk criteria for hillsides (GEO, 1998b) and the mitigation strategy was considered.

6.2 Hazard Assessment

The term hazard in this QRA specifically refers to landslides potentially affecting Woodcrest Hill and K.K. Terrace.

The detailed hazard assessment of the study area is presented in Appendix A and a brief discussion is presented in the following sections.

6.2.1 Hazard Identification

Due regard has been given to five types of potential landslide hazards, viz shallow landslides, massive (deep-seated) landslides, surface erosion, retaining wall failures and boulder falls. As discussed in Appendix A, only shallow landslides were considered to be significant for the present study and hence these were assessed in detail in this QRA.

6.2.2 Landslide Classification

Shallow landslides were classified according to their mechanisms and scales of failure as follows:

Failure Mechanisms

(a) Open hillslope landslide - landslide in which debris was not channelized along a drainage line.

(b) Channelized debris flow - landslide in which the debris had become channelized in a drainage line and elongated.

Failure Scales

(a) Small - landslide involving failure volume < 50 m^3

(b) Medium - landslide involving failure volume $\geq$ 50 m^3 and < 200 m^3

(c) Large - landslide involving failure volume $\geq$ 200 m^3 and < 1,000 m^3

Consequently, six classes of landslide hazards were included in this QRA study (see Section A2 of Appendix A). They were Small Open Hillslope Landslide (SOHL), Medium Open Hillslope Landslide (MOHL), Large Open Hillslope Landslide (LOHL), Small Channelized Debris Flow (SCDF), Medium Channelized Debris Flow (MCDF) and Large Channelized Debris Flow (LCDF) respectively.

6.2.3 Base-line and Present-day Landslide Frequencies

Having identified and classified the landslide hazards, the next step was to predict the overall frequency and spatial distribution of future landslides (Section A3 of Appendix A).

The hillside has been subjected to a history of failure (27 landslides identified from desk study). In view of this, it is considered reasonable to evaluate the frequency of failure by reference to the past landslide data.

Among the 27 landslides identified by API, five were relict scars that had existed before 1963 and 22 were landslides identified between 1963 and 1997. The overall landslide frequencies for the different classes of landslide hazards were calculated based on the 22 landslides identified between 1963 and 1997, and the results are presented in Table 3.

The five relict scars that had existed before 1963 were generally small to medium with failure volume ranging from 45 m^3 to 100 m^3. These relict scars were not included in the frequency calculation as their times of failures were unknown.

The overall landslide frequency was then spatially distributed with respect to individual sub-areas on the hillside (Figure 8). Probabilistic slope stability analysis was carried out. The distribution was made pro-rata to the analysed probability of failure of each sub-area. The higher the probability of failure of a sub-area, the higher was its distributed landslide frequency. The spatial distribution of landslide frequencies thus obtained was referred to as the “spatial distribution of landslide frequencies based on analysis data”, the results of which are given in Table A4 of Appendix A.

To supplement the analytical values above, due regard has been given to the spatial distribution of landslide frequencies based on the observed locations where landslides actually occurred. The landslide frequency thus obtained was referred to as the “spatial distribution of landslide frequencies based on observed data”, the results of which are presented in Table A4 of Appendix A.

The observed landslide frequency data was updated with analysis data using the Bayesian Approach. The updated landslide frequency distribution was adopted as the spatial distribution of landslide frequency in the study. The resulting spatially-distributed landslide frequencies for the different sub-areas are presented in Table A4 of Appendix A.

The past instability information only relates to landslide incidents that occurred between 1963 (the earliest year when the low-level aerial photographs were available) and 1997 (thereafter, no landslide incidents were noted). Since the 1997 landslides, large areas of shotcrete have been applied at different parts of the hillside, resulting in a major change to the hillside condition around these areas. This has been taken into account in assessing the landslide frequencies (i.e. overall and spatially-distributed landslide frequencies). The condition before the 1997 landslides represented the hillside condition under which the past landslides occurred and was referred to as the "base-line" condition. The condition after the 1997 landslides was referred to as the "present-day" condition, which provided the basis for assessing the current landslide risk.

In this study, the "base-line" landslide frequencies (overall and spatially-distributed) were first established and then adjusted to reflect the present-day hillside conditions with local areas of shotcrete cover. The approach adopted in adjusting the baseline landslide frequencies to the present-day landslide frequencies is explained in Appendix A. The adjusted present-day frequencies are given in Table A5 of Appendix A.

The general methodology for determining the landslide frequencies is shown as a flowchart in Figure A1 of Appendix A.

6.3 Landslide Consequence Assessment

Detailed assessment of the landslide consequence is presented in Appendix B. A brief discussion is given in the following sections.

6.3.1 Landslide Consequence Model

The landslide consequence was expressed in terms of the expected number of fatalities at a given facility when subjected to a landslide hazard. The following model has been developed for the landslide consequence assessment:

$$\text{Landslide consequence} = \text{Vulnerability factor} \times \text{Expected number of vulnerable people in a given facility directly hit by a landslide}$$

where Vulnerability factor is the probability of an individual losing his life when subjected to a given landslide, and

Expected number of vulnerable people in a given facility directly hit by a landslide corresponds to the average number of people in a facility exposed to the risk of a landslide (see further discussions in Appendix B).

6.3.2 Vulnerability Factor

The vulnerability factor, defined as the probability of an individual losing his life when subjected to a given landslide, has been assessed by reference to the location of the facility relative to the credible range of debris runout distances. The derivation of vulnerability factors is explained in detail in Appendix B. Due regard has been given to the differing probabilities of escape in the event of landslides of different scales and whether the facility under consideration is protected or not. Specifically, the assessment involved the initial consideration of the vulnerability factor for an unprotected facility subjected to a large landslide (Table B1). The vulnerability factors for a smaller landslide and/or a protected facility were then obtained by application of a scaling factor based on expert judgement (Table B2).

The assessed vulnerability factors for all the sub-areas are summarised in Table B4 of Appendix B.

6.3.3 Expected Number of Vulnerable People in a Given Facility Directly Hit by a Landslide

The expected number of vulnerable people in a given facility directly hit by a landslide are shown in Table 4. These were estimated based on expert judgement taking into account the scales of landslides, the types of facilities within the study area, their density of occupation and their degree of usage (i.e. temporal presence of people).

6.3.4 Landslide Consequence

The landslide consequence was obtained by multiplying the vulnerability factor (Section 6.3.2) with the expected number of vulnerable people in a given facility directly hit by a given landslide (Section 6.3.3). The results for the different types of facilities with respect to each class of landslide are given in Table B7 of Appendix B.

6.4 Landslide Risk Assessment

In this study, consideration has been given to both individual landslide risk and societal landslide risk (as far as the facilities in Woodcrest Hill and K.K. Terrace are concerned). Detailed assessment of the landslide risk is presented in Appendix C, and a brief discussion is given in the following sections.

6.4.1 Individual Landslide Risk Criteria

Landslide risk to individuals can be broadly classified as follows:

(a) Individual Risk (IR), which is the frequency of harm per year to a theoretical individual who is exposed to a hazard or hazards from a facility for 100% of the time (GEO,

1998b). In this study, the harm refers to annual potential fatality.

(b) Personal Individual Risk (PIR), which is the frequency of harm per year to an actual individual who is exposed to a hazard or hazards from a facility, with account taken of temporal factors which expose the individual to the hazard(s), and with account also taken of the probability of escape or protection from the hazards (GEO, 1998b). Similarly, the harm refers to annual potential fatality in this study.

GEO (1998b) proposes that "for existing developments the maximum individual risk to which any member of the public should be exposed from natural terrain landslides and boulder falls is taken to be 10^{-4} per year".

GEO (1998b) further elaborates that the individual risk acceptability criterion "is actually for Personal Individual Risk (PIR), and tends to be calculated for an average member of an exposed population".

In this study, the tolerable limit of 10^{-4} per year for PIR of an average person was therefore adopted.

6.4.2 Societal Landslide Risk Criteria

Societal risk is a measure of the overall risk for the affected community. It accounts for the likely impact of all accidental events, not just a particular type of individuals, as in the case of individual risk, but all the individuals who may be exposed to the risk, and it reflects the number of people exposed (GEO, 1998b).

Societal risk can be measured in terms of Potential Loss of Life (PLL) per year, which is the predicted number of fatalities per year as far as the affected community is concerned.

Societal risk can also be measured by calculating the frequency of N or more fatality per year, F, and the associated number of fatality, N. These data are usually plotted on a double-logarithmic graph, known as the F-N curve.

The established F-N curve can be compared against the societal risk criterion (Figure 9) proposed in GEO (1998b). As the study area considered in this QRA is reasonably close to the reference toe length of GEO (1998b), viz 500 m length of natural terrain which presents risk to the community, no scaling up or down of the societal risk criterion is necessary.

6.4.3 Landslide Risk Model

The landslide risk was evaluated by integrating the results of the hazard assessment in terms of landslide frequency (Appendix A) and the consequence assessment (Appendix B).

The individual landslide risk, expressed in terms of PIR, was calculated using the following formula:

$$\text{PIR} = \underset{\substack{\uparrow \\ \text{All associated sub-areas} \\ \text{All corresponding landslide hazards}}}{\Sigma} \left[\text{Landslide frequency} \times \text{Vulnerability factor} \times \begin{array}{c}\text{Hazard exposure of} \\ \text{an average person}\end{array}\right]$$

The hazard exposure of an average person was defined as the average time of presence of an individual in a given facility (Table C1 of Appendix C). The PIR thus calculated was compared with the tolerable limit of 10^{-4}, as discussed in Section 6.4.1.

The societal risk was calculated using the following formula:

$$\text{Societal risk} = \underset{\substack{\uparrow \\ \text{All associated sub-areas} \\ \text{All corresponding landslide hazards}}}{\Sigma} \left[\text{Landslide frequency} \times \text{Landslide consequence}\right]$$

The calculated societal risk (in terms of PLL) was converted into a F-N curve, using a methodology generally following that outlined in Wong *et al* (1997). Due regard has been given to the specific temporal presence of population in a given facility under the different scenarios of landslides (i.e. small, medium and large). The established F-N curve was then compared with the societal landslide risk criteria, as discussed in Section 6.4.2 and shown in Figure 9.

6.4.4 Base-line Individual Landslide Risk Level

As mentioned in Section 6.2.3, the base-line condition refers to the hillside condition before the 1997 landslides. Since then, shotcrete has been applied at different parts of the hillside. The base-line condition represents the pre-existing condition of the hillside and the corresponding landslide risks were calculated.

A summary of the assessed base-line PIR is summarised in Table 5 and plotted as risk contours in Figure 11. Detailed PIR calculations are shown in Table C3 of Appendix C.

It can be seen that the base-line PIR of an average person staying in most of the affected facilities was below the tolerable limit of 10^{-4} and hence may be taken as acceptable.

The base-line PIR of an average person in the residential flats on the 1/F of Block 10 at Woodcrest Hill, the residential flats on the 1/F of K.K. Terrace and the G/F lobby of K.K. Terrace was 7.39×10^{-4}, 1.36×10^{-4} and 1.44×10^{-4} respectively, which are higher than the tolerable limit. It should be noted that the G/F of Block 10 is a semi-basement carpark sheltered from landslide debris and therefore needs not be considered in this QRA.

6.4.5 Base-line Societal Landslide Risk Level

A summary of the assessed base-line societal landslide risks is given in Table 6, and the corresponding calculations are shown in Table C5 of Appendix C. A summary of the F-N points is shown in Table C7 of Appendix C.

The derived F-N curve is presented in Figure 10. It can be seen that the majority of the F-N curve (i.e. for number of fatality N > 1) is within the ALARP region which means that cost-effective risk mitigation measures should be implemented to reduce the risks to as low as reasonably practicable. For the single-fatality event, which is the only portion within the unacceptable zone, the risks should be reduced to a level below the unacceptable region. As mentioned in Section 6.4.4, the base-line condition represents the pre-existing condition of the hillside and the corresponding landslide risks were calculated only for reference in this study.

The assessed base-line societal landslide risk is 7.45×10^{-3} PLL per year.

6.4.6 Present-day Individual Landslide Risk Level

As mentioned in Section 6.2.3, the present-day condition refers to the current hillside condition with areas of shotcrete applied at different parts of the hillside following the 1997 landslides.

A summary of the assessed present-day PIR is summarised in Table 5 and plotted as risk contours in Figure 12. Detailed PIR calculations are shown in Table C3 of Appendix C.

It can be seen that the present-day PIR of an average person staying in most of the facilities was well below the tolerable limit of 10^{-4} and hence may be taken as acceptable.

The present-day PIR of an average person in the residential flats on the 1/F of Block 10 at Woodcrest Hill was 6.30×10^{-4}, which is higher than the tolerable limit. Mitigation measures to reduce landslide risk would therefore be required.

6.4.7 Present-day Societal Landslide Risk Level

A summary of the assessed present-day societal landslide risks is given in Table 6, and the corresponding calculations are shown in Table C5 of Appendix C. A summary of the F-N points is shown in Table C7 of Appendix C.

The derived F-N curve is presented in Figure 10. As can be seen, the majority of the F-N curve is within the ALARP (as low as reasonably practicable) region under the present-day condition, except that the single-fatality portion is still within the unacceptable zone.

The assessed present-day societal landslide risk is 5.67×10^{-3} PLL per year.

7. FORTHCOMING MEASURES

The results presented in Section 6 correspond to the present-day situation. It is expected that measures will be undertaken to reduce part of the landslide hazards within the study area. These include:

(a) carrying out detailed geotechnical studies and if necessary upgrading works to selected man-made slope features (including the previously unregistered fill on the hillside) under the Landslip Preventive Measures (LPM) Programme,

(b) registering the areas with shotcrete surfacing applied after the 1997 landslides as Disturbed Terrain in the New Catalogue of Slopes and implementing a regular maintenance programme for these areas, and

(c) issuance of Drainage Orders where appropriate to address uncontrolled discharges.

Within the study area, there are five existing man-made slope features (namely slopes Nos. 7SW-D/F444, 7SW-D/F443, 7SW-D/F3, 7SW-D/R2, 7SW-D/FR99) that have been placed under the LPM Programme (Figure 13) In this study, it has been assumed that these man-made slope features would be brought to the required safety standards and that their annual probabilities of failure would be reduced to 0.001, based on the statistics presented in the GEO's landslide study reports LSR 15/99 (GEO, 1999) and LSR 8/2000 (GEO, 2000c).

The areas with shotcrete applied after the 1997 landslides are shown in Figure 3. In this study, it has been assumed that a regular maintenance programme will be implemented to prevent deterioration of the existing shotcrete surfacing as the affected portions would have been registered as Disturbed Terrain in the New Catalogue of Slopes. This is necessary to sustain the assessed risks for the present-day hillside condition (Sections 6.4.6 and 6.4.7), which has assumed that the existing shotcrete surfacing in this areas will continue to be effective to prevent direct infiltration of surface water.

The PIRs that represent the individual landslide risk level after the forthcoming measures are summarised in Table 5 and plotted as risk contours in Figure 14. Detailed PIR calculations are shown in Table C3 of Appendix C. As indicated, the assessed PIR for the residential flats on the 1/F of Block 10 at Woodcrest Hill would be reduced to 5.05×10^{-4} after the forthcoming measures. This is however still above the tolerable limit of 1×10^{-4} and some risk mitigation measures will be required.

The societal landslide risks after the forthcoming measures are summarised in Table 6. It can be seen that the societal landslide risk will be reduced from 5.67×10^{-3} to 4.44×10^{-3} PLL per year after the forthcoming measures. The corresponding F-N curve is presented in Figure 10. Detailed calculations are given in Appendix C.

8. UNCERTAINTY IN RISK ANALYSIS

8.1 Uncertainties

Morgenstern (1995) identified that landslide risk analysis comprises parameter uncertainty, model uncertainty and human uncertainty. Whilst attempts have been made in this QRA to reduce the uncertainty as much as possible, it should be recognised that uncertainties are inevitable.

One of the major uncertainties relating to this study lies with the adopted QRA model. The use of historical landslide data as a basis for predicting future landslide frequency may be considered to be the most uncertain assumption by some practitioners. Nonetheless, the adopted model is considered to be a reasonable approach as all the available information has been consistently addressed and accounted for by a panel of experienced geotechnical engineers.

Other areas of potential uncertainties relate to parameter and human uncertainties. In the present QRA, parameter uncertainty has been reduced by adopting probability distribution functions for the key parameters (e.g. soil strength, water table parameters, etc.). Human uncertainty has been reduced as much as possible by invoking the judgement of a panel of experienced geotechnical engineers.

Although the quantification of risk is inevitably approximate because of the inherent limitations of QRA, overall the results are considered to be representative and have provided a meaningful basis for decision-making and managing the risk posed to the existing developments below the hillside. In view of the uncertainties, the assessment has tended to err on the safe side where appropriate.

8.2 Sensitivity Analysis

The future landslide frequency has been assigned based on the observed failure frequencies and the calculated probabilities of failure using the infinite slope stability model. The best estimated future landslide frequencies are obtained based on Bayesian approach. The Bayesian approach is appropriate as the analytical and the observed data are considered to be of equal importance. It is noted that along Slope Segments 3, 5 and 7, which contribute most to the total landslide risk in the study area (Section 9.2), the observed past failure frequencies are generally higher than those obtained after adjustment for the predicted failure frequencies, based on analysis assuming prevailing conditions and taking account of results of back analysis of the past failures. This reflects that there could be a potential increase in landslide risk along these slope segments, if the distribution of the past failure frequencies was to remain unchanged.

Sensitivity analyses have been carried out to assess the sensitivity in the landslide frequency parameters associated with adjusting the analytical and the observed failure frequencies based on the Bayesian approach. The landslide risks have been re-assessed firstly solely based on the observed failure frequencies, and secondly solely based on the analytical failure frequencies. It was found that the overall calculated landslide risk may increase by 28% if the observed failure frequencies were used alone, while it may decrease by

22% if the analytical failure frequencies were used alone. This variation is well within an order of magnitude in the calculated risk and is comparable to other conventional QRA.

To consider uncertainties in the debris runout distance, a triangular-shaped probability distribution function has been adopted in the present QRA study to quantitatively describe the chance of occurrence for the different runout zones of the debris. To assess the sensitivity in this assumption, the landslide risks have also been re-analysed for the case of a normal probability distribution function with an assumed standard deviation equal to 1/6 of the maximum runout distance. It was found that the landslide risk may decrease by 30% if a normal probability distribution function is adopted for the debris runout distance. This suggests that the risk results are not particularly sensitive to the probability distributions adopted.

9. ADDITIONAL RISK MITIGATION MEASURES

9.1 General

As the societal risk level after the forthcoming measures (Section 7) is within the ALARP region, it is necessary that additional risk mitigation measures be examined in the context of a cost-benefit analysis.

9.2 Facilities Subjected to Notable Landslide Risk

The mitigation strategy has been formulated with focus on those facilities that are subjected to notable landslide risk (based on the condition after the forthcoming measures). Three areas, which together contributed to 99.5% of the total PLL, have been identified. They are:

(i) Carpark and sitting out area near Block 12 of Woodcrest Hill (below Slope Segment 3),

(ii) 1/F residential flats/patio of Block 10, and garden area between Blocks 9 and 10 of Woodcrest Hill (below Slope Segment 5), and

(iii) 1/F residential flats and G/F lobby of K.K. Terrace (below Slope Segment 7).

9.3 Candidate Risk Mitigation Measures

The additional risk mitigation measures can be preventive (by reducing the landslide hazard) or protective (by controlling the landslide debris) in nature. In this study, the following candidate risk mitigation measures have been considered:

Preventive

(i) stabilising the slope,

Protective

(i) barrier wall at slope toe, and

(ii) check dams along drainage line.

Where applicable, these measures have been included as the various risk mitigation options for Slope Segments 3, 5 and 7 (Table 7). The locations and layouts of some of the risk mitigation options are shown in Figures 16 to 21.

In general, the preventive-type option (i) will reduce the landslide hazard from the hillside and the protective-type options (ii and iii) will reduce the landslide consequence to the toe facilities. The reduction in PLL achieved by each risk mitigation option is summarised in Table 7.

9.4 Design Landslide Debris Volume

The design landslide debris volumes from Slope Segments 3, 5 and 7 were estimated based on the site-specific landsliding frequency-debris volume method described in the GEO's Special Project Report SPR 1/2000 (GEO, 2000a).

For each of the three slope segments, a cumulative frequency-volume (CF-V) curve was constructed using the site-specific landslide frequency data derived as described in Section 6.2. In constructing the CF-V curves, both the data from the two major types of landslide hazards identified for the study area, viz open hillslope landslides and channelized debris flows, have been considered. However, the CF-V curves for channelized debris flows are consistently higher than those for open hillslope landslides, implying that the former would yield a more conservative landslide debris volume. Therefore, the CF-V curves for channelized debris flows have been adopted (Figure 15).

The debris volume for a landslide with a return period of 1,000 years, corresponding to the Worst Credible Event (WCE) as described in GEO (2000b) was estimated by extrapolation of the CF-V curve. Based on these CF-V curves, the debris volumes for a WCE were estimated to be 600 m^3, 500 m^3 and 500 m^3 for Slope Segments 3, 5 and 7 respectively (Figure 15).

9.5 Cost-benefit Analysis

In order to assess the cost-effectiveness of the various risk mitigation options, a cost-benefit analysis has been carried out. This involved a comparison of the costs of implementation of the measures (inclusive of design, construction and maintenance costs) with the associated benefit (i.e. reduction in risk).

9.5.1 Maximum Justifiable Expenditure

According to the Interim Risk Guidelines (GEO, 1998b), the maximum justifiable expenditure on risk mitigation can be calculated as follows:

Maximum Justifiable Expenditure = Total PLL × Value of Life × Aversion Factor

where Total PLL = 4.44×10^{-3} (Section 7)

According to the Interim Risk Guidelines (GEO, 1998b), the recommended value of life for the purposes of cost-benefit calculations is HK$24M. It is also stated in the same document that the value would be about HK$33M, taking into consideration inflation. It is noted that a WSD project on re-assessment of chloride hazards has adopted a value of HK$33M (GEO, 1998b). For this study, the maximum justifiable expenditure on risk mitigation is calculated with a value of life ranging from HK$24M to HK$33M, and

Aversion Factor = 1 (this is based on the fact that the F-N curve is not within the "intense scrutiny" region and the F-N points corresponding to multiple fatality events are not within one order of magnitude of the "unacceptable" or "intense scrutiny" region (GEO, 1998b).

Therefore,

Maximum Justifiable Expenditure = $4.44 \times 10^{-3} \times$ (HK$24M to HK$33M)
= HK$106,560 to HK$146,520

Assuming the risk mitigation measures are effective for up to 50 years, then:

Maximum Justifiable Cost = (HK$106, 560 to HK$146,520) × 50
= HK$5.3M to HK$7.3M

If the risk mitigation measures are effective for up to 100 years, then:

Maximum Justifiable Cost = (HK$106, 560 to HK$146,520) × 100
= HK$10.7M to HK$14.7M

9.5.2 Implied Cost of Averting a Fatality

The Implied Cost of Averting a Fatality (ICAF) provides a means of ranking and selecting the risk mitigation options according to their benefit in terms of cost. The ICAF for each risk mitigation measure is calculated as follows:

$$\text{ICAF} = \frac{\text{Cost to Implement Measure}}{(\text{PLL Risk Reduction}) \times (\text{Lifetime of Measure})}$$

For each risk mitigation option, the PLL reduction, total implementation cost and ICAF have been calculated and are summarised in Table 7. Within each of the 3 slope segments under consideration, the comparatively less cost-effective measures were not reviewed further based on a comparison of the ICAFs. Accordingly, the more cost-effective measures comprise:

(i) a series of small check dams tied back by soil nails for Slope Segment 5 which is above the 1/F residential flats/patio of Block 10, and garden area between Blocks 9 and 10 of Woodcrest Hill (this is a hybrid solution involving both preventive measure for deeper-seated failure and protective measure for shallow failure (see Table 7). The other option involving a 7 m high barrier wall on pile foundation at mid slope is not desirable considering its major visual impact and significantly higher implementation cost as shown in Table 7),

(ii) check dams along drainage line for Slope Segment 7 which is above the 1/F residential flats and G/F lobby of K.K. Terrace, and

(iii) barrier wall at slope toe for Slope Segment 3 which is above the carpark and sitting out area near Block 12 of Woodcrest Hill.

9.6 Proposed Additional Risk Mitigation Measures

Assuming the risk mitigation measures are effective for up to 50 years, the maximum justifiable cost (i.e. HK$5.3M to HK$7.3M) will be comparable to the total estimated costs (including maintenance cost) to implement mitigation measures for Slope Segments 3, 5 and 7 (i.e. HK$6.5M).

If the risk mitigation measures are effective for up to 100 years, the maximum justifiable cost will be in the range from HK$10.7M to HK$14.7M, which is above the total estimated costs of the proposed mitigation measures for Slope Segments 3, 5 and 7 (i.e. HK$6.5M).

The assessment of the additional risk mitigation measures demonstrates that the choice of a 1 in 1,000 years return period for the design of landslide debris volume is broadly consistent with the assessment from a cost-benefit point of view and that it is justifiable in overall terms based on the QRA study for this site.

It should be noted that the mitigation measures presented in this study are preliminary and conceptual in nature and are based on desk study information and limited ground investigation data. The design requirements would need to be verified and ascertained when more information is available at the detailed design stage.

After implementation of the additional risk mitigation measures, the maximum PIR at the residential flats on the 1/F of Block 10 at Woodcrest Hill would be reduced from 5.05×10^{-4} (situation after the forthcoming measures discussed in Section 7) to 6.48×10^{-5} which is generally acceptable. The PIR after implementation of additional risk mitigation measures is summarised in Table 5 and plotted as risk contours in Figure 22.

The societal landslide risks after the implementation of additional risk mitigation measures are summarised in Table 6. It can be seen that the societal landslide risk will be reduced to 5.81×10^{-4} PLL per year. The F-N curve that represents the societal risk level after implementation of the additional risk mitigation measures is presented in Figure 10. As shown in Figure 10, the F-N curve has been shifted down within the ALARP region by about an order of magnitude as compared with the present-day condition. Also, the risk for the single-fatality event has been reduced to a level below the unacceptable region.

10. CONCLUSIONS

The risk of future landslides from the hillside below Shatin Heights Road to Woodcrest Hill and K.K. Terrace has been quantified. The results have been evaluated against the Interim Risk Guidelines recommended by GEO (1998b). It has been found that the present-day individual risk (expressed in terms of PIR) for the residential flats on the 1/F of Block 10 at Woodcrest Hill is 6.3×10^{-4} per year, which is higher than the tolerable limit of 1×10^{-4}. Elsewhere, the present-day PIR is below the tolerable limit and hence may be taken as generally acceptable. The majority of the present-day societal risk level (expressed as an F-N curve) is within the ALARP region. The only exception is the single-fatality portion of the F-N curve which lies within the unacceptable zone.

It is expected that measures will be undertaken in the near future to reduce part of the landslide hazards within the study area. This will include:

(i) carrying out detailed geotechnical studies and if necessary upgrading works (including improvement of surface drainage provisions) to selected man-made slope features under the LPM Programme,

(ii) registering the areas with shotcrete surfacing applied after the 1997 landslides as Disturbed Terrain in the New Catalogue of Slopes and implementing a regular maintenance programme for these areas, and

(iii) issuance of Drainage Orders where appropriate to address uncontrolled discharges.

Given the above, the PIR of the residential flats on the 1/F of Block 10 at Woodcrest Hill would be reduced to 5.05×10^{-4}, which is still above the tolerable limit of 1×10^{-4}. The F-N curve representing the societal risk level after the forthcoming measures will remain within the ALARP region.

In this study, a cost-benefit analysis has been carried out and the maximum justifiable expenditure calculated. The following risk mitigation measures are proposed to reduce the landslide risk:

(i) a series of small check dams tied back by soil nails along Slope Segment 5 which is above the 1/F residential flats/patio of Block 10, garden area between Blocks 9 and 10 of Woodcrest Hill (as shown in Figure 18 with an estimated implementation cost of HK$3M),

(ii) provision of check dams along the drainage line for Slope Segment 7 above the 1/F residential flats and G/F lobby of K.K. Terrace (as shown in Figure 21 with an estimated implementation cost of HK$2.5M), and

(iii) provision of barrier wall at toe of Slope Segment 3 which is above the carports and sitting out area near Block 12 of Woodcrest Hill (as shown in Figure 16 with an estimated implementation cost of HK$1M).

In addition, the designer of the mitigation works may wish to assess whether the existing shotcrete cover within the areas above the proposed mitigation works can be replaced with vegetation cover to improve the aesthetic aspect of the natural terrain, yet without imposing additional risk to the existing developments.

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Table 1 - Summary of Past Landslides

Landslide No.	GEO Landslide Record	Estimated Date of Failure	Estimated Volume of Failure (m^3)	Failure Mechanism
1963-A	-	Pre 1963 (relict)	75	OHL
1963-B	-	Pre 1963 (relict)	45	OHL
1963-C	-	Pre 1963 (relict)	100	OHL
1963-D	-	Pre 1963 (relict)	75	CDF
1963-E	-	Pre 1963 (relict)	50	OHL
1969-A	-	1969	25	CDF
1973-A	-	1973	25	OHL
1973-B	-	1973	25	OHL
1973-C	-	1973	55	OHL
1973-D	NTLI 7SW-19D-78	1973	25	OHL
1974-A	NTLI 7SW-19D-80	1974	25	Surface Erosion
1977-A	-	1977	25	OHL
1981-A	-	1981	50	OHL
1981-B	-	1981	25	OHL
1981-C	Landslide Card-9/7	29 Sep 1981	250	CDF
1982-A	Landslide Card-25/7	Mid 1982	50	CDF
1987-A	-	1987	20	OHL
1987-B	-	1987	30	OHL
1991-A	-	1991	10	OHL
1993-A	MW93/6/51	16 Jun 1993	20	OHL
1993-B	-	1993	20	OHL
1997-A	MW97/6/12	4 Jun 1997	150	CDF
1997-B	MW97/6/23	4 Jun 1997	170	CDF
1997-C	MW97/7/15	2 Jul 1997	200	CDF
1997-D	MW97/7/25	2 Jul 1997	10	OHL
1997-E	MW97/7/90A	Uncertain	30	CDF
1997-F	MW97/7/90B	Uncertain	30	CDF

Notes:
(1) See Figure 2 for locations of landslides.
(2) OHL - Open hillslope landslide, CDF - Channelized debris flow.
(3) Information shown in this table is based on interpretation from aerial photographs, site reconnaissance and the GEO's landslide records (where available).
(4) Landslide Nos. 1963-A to 1963-E (inclusive) were identified on the earliest low-level aerial photographs taken in 1963. Due to uncertainty in their dates of failure, these landslide events have not been included for frequency calculation. However, the characteristics of these relict landslides have been used for establishing the debris runout model in Figure B1.

Table 2 - Previous Ground Investigation Data

Ground Investigation Stations No.		Associated Project	Ground Investigation Contractor	Date of Works
Boreholes :	D1 - D18, D20, D21	Proposed Residential Complex at STTL 117, Sha Tin (Woodcrest Hill)	Not Indicated (Supervised by Fugro (HK) Ltd)	Jul-1979
Boreholes : Surface Strips :	DH14 S33	WO 7/2/11.4, Tai Po Road Improvement - Sha Tin to Tai Wo Ping Interchange	Gammon (Hong Kong) Ltd	Dec-1983
Boreholes :	DH33	PW 7/2/11.34, Tai Po Road Improvement Supplymentary Works	Gammon (Hong Kong) Ltd	Jun-1985
Boreholes :	BHTL1	WO 7/2/15.83, Sha Tin - Kwai Chung Rail Spur	Gammon Construction Ltd	Jul-1987
Boreholes : Trial Pits : Surface Strips :	DH129, DH131 - DH133 TP120 S118 - S119	PW7/2/22.44, Tai Po Road Improvement near Sha Tin Heights	Lam Geotechnics Ltd	Feb-1988
Boreholes : Surface Strips :	DH121 - DH128 S113 - S115	PW7/2/22.45, Tai Po Road Improvement near Woodcrest Hill	Lam Geotechnics Ltd	Mar-1988
Boreholes : Trial Pits :	1 - 9 1(A), 2(A)	Proposed Residential Re-development at 1 - 3 Sha Tin Heights Road	Boring Engineering Ltd	May-1988
Boreholes :	W16C, W17, W18, SL20	Sha Tin New Town - Stage II Trunk Road T3 (Tai Wai - Phase 3 of 3)	Enpack (Hong Kong) Ltd	Aug-1997
Boreholes : Trial Pits :	BH1 TP1 - TP5	CE 84/95, Improvement Design & Supervision Work for Default Case No 14 - Feature No. 7SW-D/R2 at 19-23 Sha Tin Heights Road, Sha Tin	Enpack (Hong Kong) Ltd	Nov-1997

Table 3 - Past Landslide Frequencies over 35-year Period from 1963 - 1997

Open Hillslope Landslide	Number Identified	Recognition Factor (See Note 3)	Corrected Number	Annual Frequency
Small ($V < 50\ m^3$)	11	30%	36	1.03
Medium ($50\ m^3 \leq V < 200\ m^3$)	2	90%	2	0.06
Large ($200\ m^3 \leq V < 1000\ m^3$)	0	100%	0	0.006 (See Note 2)
Total annual frequency of open hillslope landslides = 1.096				
Channelized Debris Flow	**Number Identified**	**Recognition Factor (See Note 3)**	**Corrected Number**	**Annual Frequency**
Small ($V < 50\ m^3$)	3	30%	10	0.29
Medium ($50\ m^3 \leq V < 200\ m^3$)	3	90%	3	0.09
Large ($200\ m^3 \leq V < 1000 m^3$)	2	100%	2	0.06
Total annual frequency of channelized debris flows = 0.44				

Notes:
(1) See Table A1 for characteristics of individual landslides.
(2) There was no large open hillslope landslide over the 35-year period between 1963 and 1997. The assigned frequency of 0.006 was based on expert judgement (notionally one order of magnitude less compared to the frequency of medium open hillslope landslide).
(3) The recognition factor was applied to allow for the inefficiency of recognition resulting from the small scale of the aerial photography.

Table 4 - Expected Number of Vulnerable People in a Given Facility Directly Hit by a Landslide

Scale of Landslide		Type of Facility			
		Residential Building	Guard House	Car Park	Open Space
Small	($V < 50\ m^3$)	1.5	0.25	0.05	0.015
Medium	($50\ m^3 \leq V < 200\ m^3$)	3	0.5	0.1	0.03
Large	($200\ m^3 \leq V < 1000\ m^3$)	6	1	0.2	0.06
Note:	The above values are applicable to both open hillslope landslides and channelized debris flows.				

Table 5 - Summary of Personal Individual Risk

Facilities Affected	Personal Individual Risk (PIR) (Probability of Landslide Fatality to an Average Person per Year)			
	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
Woodcrest Hill				
Residential flats of Block 13-18	9.93E-8	9.93E-8	9.93E-8	9.93E-8
Garages & driveway of Bk. 13-18	2.04E-8	2.04E-8	2.04E-8	2.04E-8
Carports adjacent to Block 12	1.20E-5	9.91E-6	9.89E-6	9.89E-6
Sitting out area behind Bk. 12	2.69E-5	2.26E-5	2.25E-5	2.25E-5
1/F residential flats of Bk. 11	3.13E-6	3.13E-6	3.13E-6	3.13E-6
Patio of Block 11	2.24E-7	2.24E-7	2.24E-7	2.24E-7
1/F residential flats of Bk. 10	**7.39E-4**	**6.30E-4**	**5.05E-4**	6.48E-5
Patio of Block 10	3.61E-5	3.25E-5	2.25E-5	5.47E-6
Garden area between Bk. 9 & 10	9.34E-5	8.01E-5	6.34E-5	6.66E-6
1/F residential flats of Bk. 9	2.55E-8	2.55E-8	2.55E-8	2.55E-8
Patio of Block 9	4.28E-9	4.28E-9	4.28E-9	4.28E-9
G/F residential flat of Bk5	3.47E-7	3.47E-7	3.47E-7	3.47E-7
Patio of Block 5	1.58E-8	1.58E-8	1.58E-8	1.58E-8
Driveway near main entrance	5.48E-10	5.48E-10	5.48E-10	5.48E-10
Guardhouse near main entrance	5.97E-10	5.97E-10	5.97E-10	5.97E-10
K.K. Terrace				
G/F carports & driveway	1.61E-10	1.61E-10	1.61E-10	1.61E-10
1/F residential flats	**1.36E-4**	5.26E-5	3.38E-5	8.77E-6
G/F lobby	**1.44E-4**	4.88E-5	3.29E-5	7.25E-6
Patio at 1/F level	1.11E-10	1.11E-10	1.11E-10	1.11E-10

Table 6 - Summary of Societal Risks

Facilities Affected	Potential Loss of Life (PLL) Per Year			
	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
Woodcrest Hill				
Residential flats of Block 13-18	5.73E-7	5.73E-7	5.73E-7	5.73E-7
Garages & driveway of Bk. 13-18	6.35E-8	6.35E-8	6.35E-8	6.35E-8
Carports adjacent to Block 12	5.76E-5	4.71E-5	4.70E-5	1.07E-5
Sitting out area behind Bk. 12	7.51E-5	6.30E-5	6.28E-5	1.15E-5
1/F residential flats of Bk. 11	1.54E-5	1.54E-5	1.54E-5	1.54E-5
Patio of Block 11	4.35E-7	4.35E-7	4.35E-7	4.35E-7
1/F residential flats of Bk. 10	5.57E-3	4.73E-3	3.76E-3	4.25E-4
Patio of Block 10	8.69E-5	7.75E-5	5.22E-5	8.49E-6
Garden area between Bk. 9 & 10	2.06E-4	1.76E-4	1.36E-4	1.45E-5
1/F residential flats of Bk. 9	1.62E-7	1.62E-7	1.62E-7	1.62E-7
Patio of Block 9	8.36E-9	8.36E-9	8.36E-9	8.36E-9
G/F residential flat of Bk5	2.97E-6	2.97E-6	2.97E-6	2.97E-6
Patio of Block 5	4.16E-8	4.16E-8	4.16E-8	4.16E-8
Driveway near main entrance	1.79E-9	1.79E-9	1.79E-9	1.79E-9
Guardhouse near main entrance	1.19E-9	1.19E-9	1.19E-9	1.19E-9
K.K. Terrace				
G/F carports & driveway	8.05E-10	8.05E-10	8.05E-10	8.05E-10
1/F residential flats	1.17E-3	4.59E-4	2.94E-4	7.69E-5
G/F lobby	2.59E-4	9.44E-5	6.28E-5	1.45E-5
Patio at 1/F level	2.97E-10	2.97E-10	2.97E-10	2.97E-10
Total PLL (per year)	**7.45E-3**	**5.67E-3**	**4.44E-3**	**5.81E-4**

Table 7 - Option Assessment for Additional Risk Mitigation Measures

Facilities Affected and Associated Slope Segment	Car parks and sitting out area near Block 12 of Woodcrest Hill (below Slope Segment 3)		1/F residential flats/patio of Bk. 10, garden area between Bk. 9 & 10 of Woodcrest Hill (below Slope Segment 5)		1/F residential flats and G/F lobby of K.K. Terrace (below Slope Segment 7)	
Estimated Debris Volume (m^3)	600		500		500	
Options of Additional Risk Mitigation Measures	**(1a)** Barrier wall near slope toe	**(1b)** Check dams along drainage line	**(2a)** Check dams tied back by soil nails	**(2b)** Barrier wall on pile foundations near hillside/ cutslope interface	**(3a)** Barrier wall on pile foundations near slope toe	**(3b)** Check dams along drainage line
Environment Impact a) Permanent Work	Minor visual impact	Minor visual impact	Minor visual impact (consideration may be given to re-provision of vegetation)	Major visual impact	Major visual impact	Minor visual impact
b) During Construction	Noise & dust may cause disturbance to residents	Noise & dust may cause disturbance to residents	Noise & dust may cause disturbance to residents	Noise & dust may cause disturbance to residents	Noise & dust may cause disturbance to residents	Noise & dust may cause disturbance to residents
Location of Risk Mitigation Measure	Within government land	Partly within government land and partly within private lot	Within government land	Partly within government land and partly within private lot	Within government land	Within government land
Risk Before Additional Risk Mitigation Measures (PLL/ Year)	1.10E-4		3.95E-3		3.57E-4	
Risk After Additional Risk Mitigation Measure (PLL/ Year)	2.22E-5	2.22E-5	4.48E-4	9.75E-5	1.44E-8	9.15E-5
Risk Reduction by Additional Risk Mitigation Measure (PLL/ Year)	8.76E-5	8.76E-5	3.50E-3	3.85E-3	3.57E-4	2.66E-4
Estimated Design and Construction Cost	$750,000	$950,000	$2,650,000	$4,250,000	$3,550,000	$2,150,000
Estimated Maintenance Cost (per year)	$6,000	$8,000	$8,000	$10,000	$7,000	$8,000
Total Implementation Cost	**$990,000**	**$1,270,000**	**$2,970,000 (See note 3 below)**	**$4,650,000**	**$3,830,000**	**$2,470,000**
Implied Cost of Averting a Fatality (ICAF)	$283M	$363M	$21M	$30M	$268M	$232M
Preferred Options	**(1a)** In view of (i) lower cost (ii) works within government land		**(2a)** In view of (i) lower cost (ii) minor visual impact (iii) works within government land		**(3b)** In view of (i) lower cost (ii) minor visual impact (iii) works within government land	

Notes:
(1) Figures 16 to 21 show the details of the mitigation options.
(2) The maintenance cost for a period of 40 years is assumed in deriving the total implementation cost.
(3) This cost estimate is based on the consideration that the soil nails to hold the check dams in place would also adequately stabilise the terrain immediately upslope against deeper seated failure. Therefore, the check dams are only to contain the debris from the unreinforced parts of subareas 5c and 5e with an estimated debris volume of 100 m^3.
(4) Adequate access for maintenance of check dams/ barrier wall will be an integral part of the design of the landslide mitigation works.

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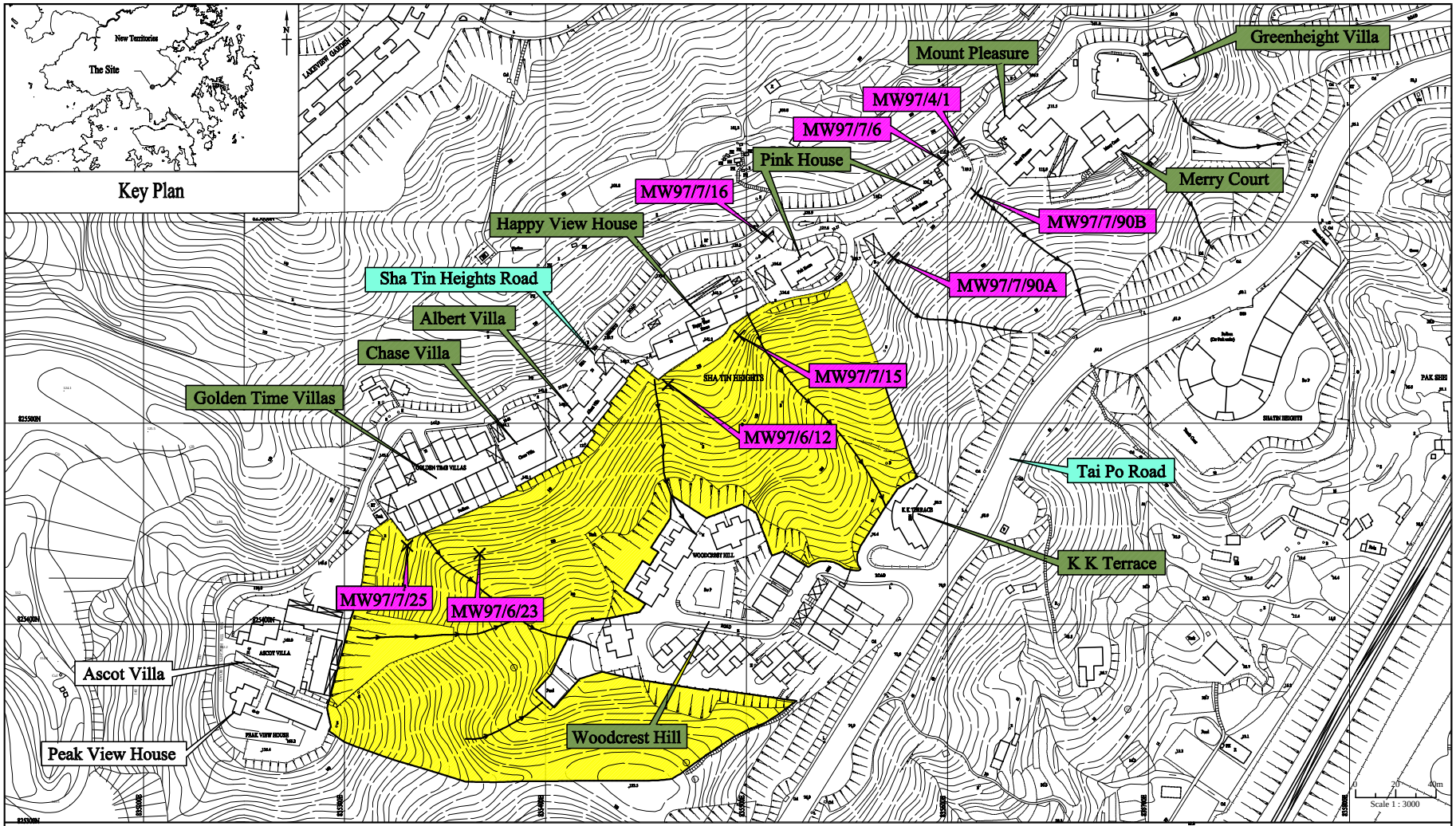
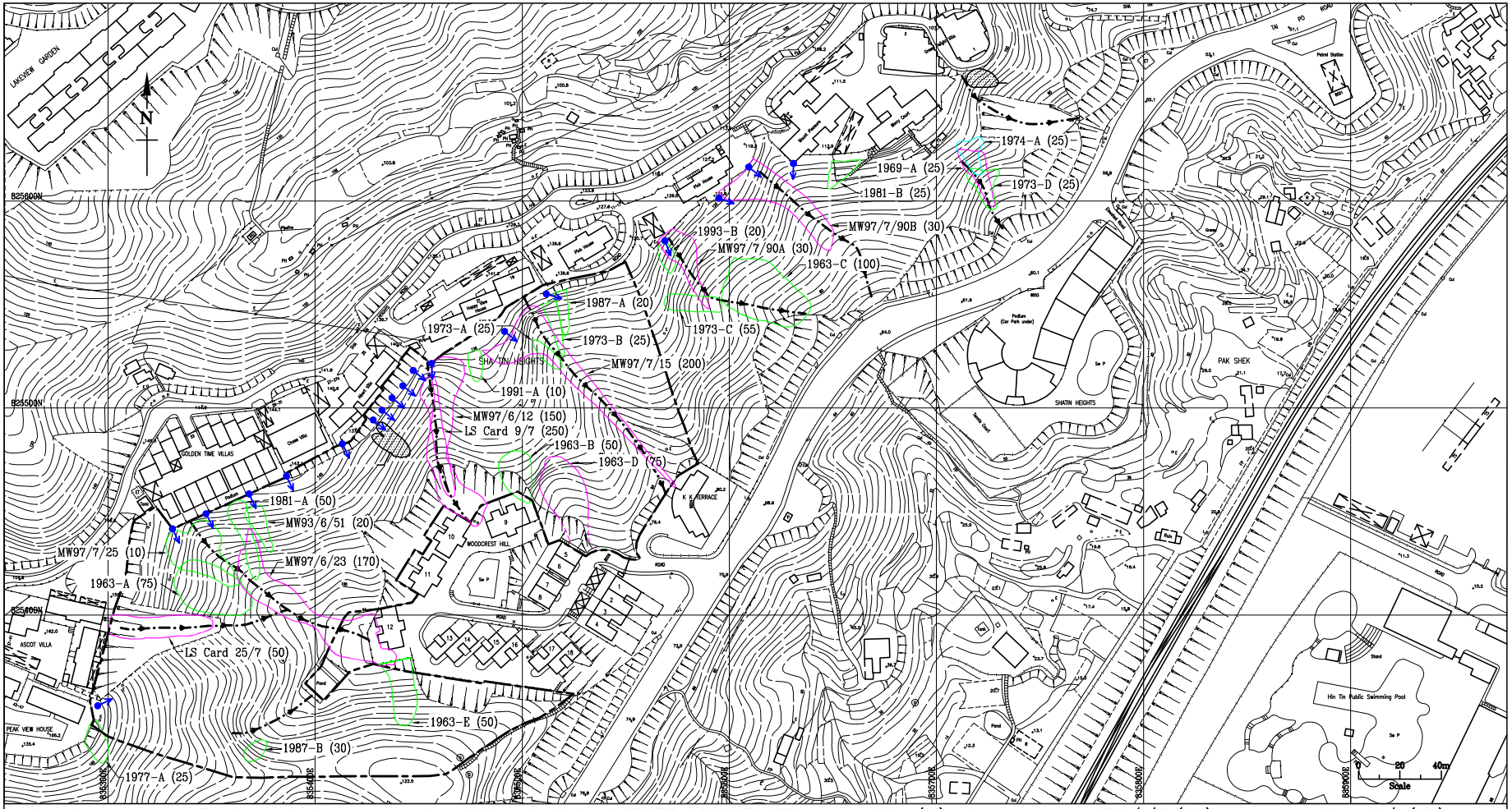


Legend: Study Area | Landslides Incident in 1997 | Developments/Buildings | Roads

Notes:
(1) Base map is extracted from Survey Sheet No. 7SW-19D dated October 1998 (Original scale 1 : 1000).
(2) × MW97/7/25 denotes location of main scarp and the GEO Incident No. of the 1997 landslides in the area.

Figure 1 - Site Location Plan



Legend :

- Boundary of Study Area
- Natural Drainage Line
- Stormwater Discharge Point
- Open Hillslope Landslide
- Channelized Debris Flow
- Surface Erosion

LANDSLIDE CATALOGUE CODE :

1973-A (25) — Estimated Volume
Landslide Reference No.

e.g. 1973-A (25) refers to Landslide A Identified in 1973 Aerial Photograph with an Estimated volume of 25 m^3 or MW97/7/15 (200) GEO incident No. MW97/7/15 with an Estimated volume of 200 m^3 or LS card 9/7 (250) GEO landslide card No. 9/7 with an Estimated volume of 250 m^3

Notes :

(1) Information shown in this figure is based on aerial photograph interpretation in conjunction with available records and site reconnaissance.
(2) The landslide volumes are based on estimation from aerial photograph interpretation in conjunction with GEO's records where they are available.
(3) Landslides identified in 1963 aerial photographs have been taken as relict events and not included in the failure frequency calculation.

Figure 2 - Locations of Past Landslides

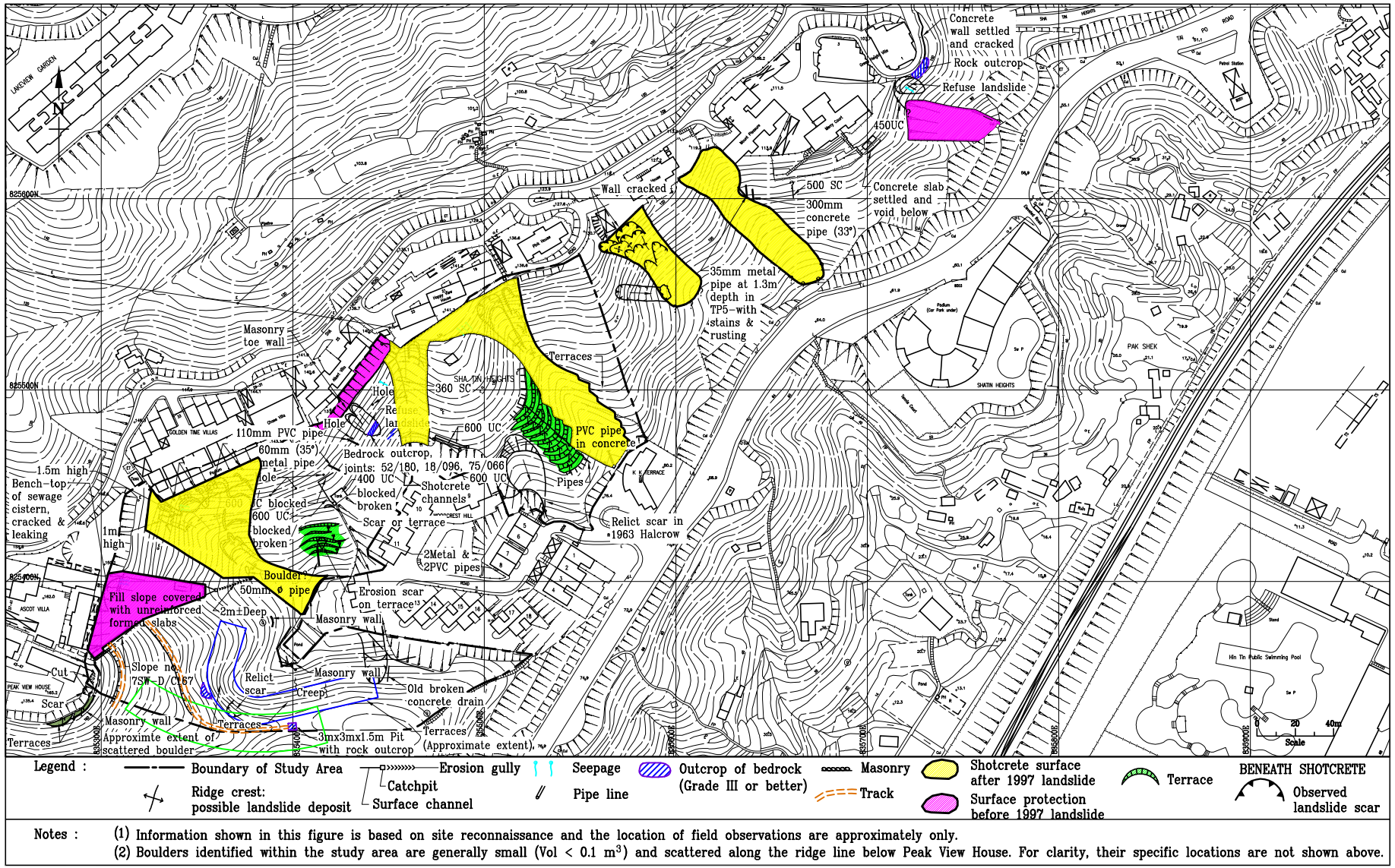
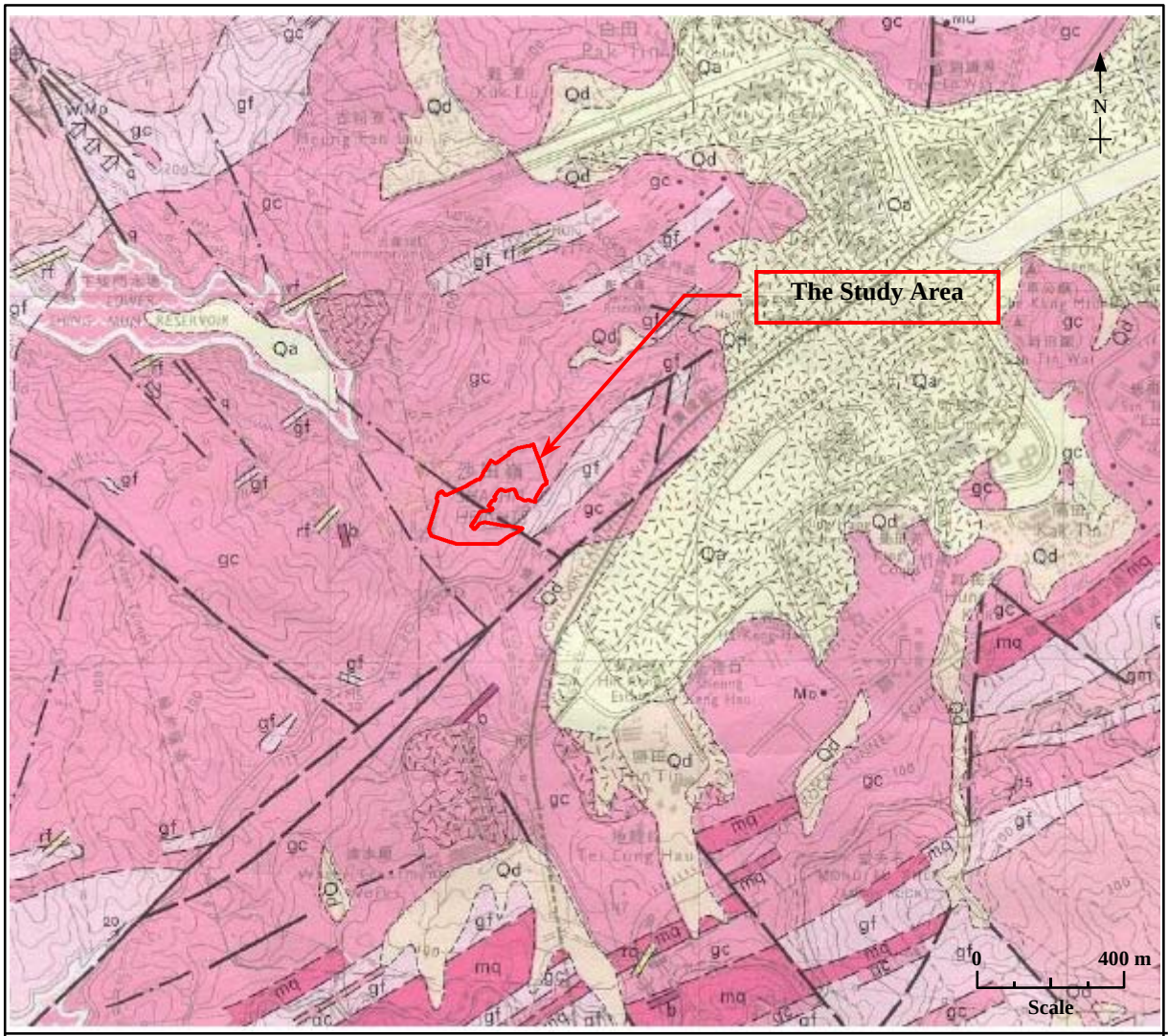


Figure 3 - Findings of Site Reconnaissance



LEGEND:

SUPERFICIAL DEPOSITS

- Fill; sanitary fill (Qfs)
- Qa — Alluvium
- Qd — Debris flow deposits

SOLID GEOLOGY

Inequigranular texture

- gf — Fine-grained granite, <2mm
- gm — Medium-grained granite, 2-6mm
- gc — Coarse-grained granite, >6mm
- mq — Quartz monzonite
- b — Basalt
- rf — Feldsparphyric rhyolite

GEOLOGICAL LINES

- Geological boundary, superficial deposits
- Fill boundary, with limit of reclamation at date shown
- Geological boundary, solid rock (* Broken lines denote uncertainty)
- Fault (crossmark indicates downthrow side)
- Mineral vein
- Photogeological lineament

Note: Extracted from Hong Kong Geological Survey Sheet 7 (1:20,000) Map Series HGM20 (GCO, 1986).

Figure 4 – Regional Geological Map

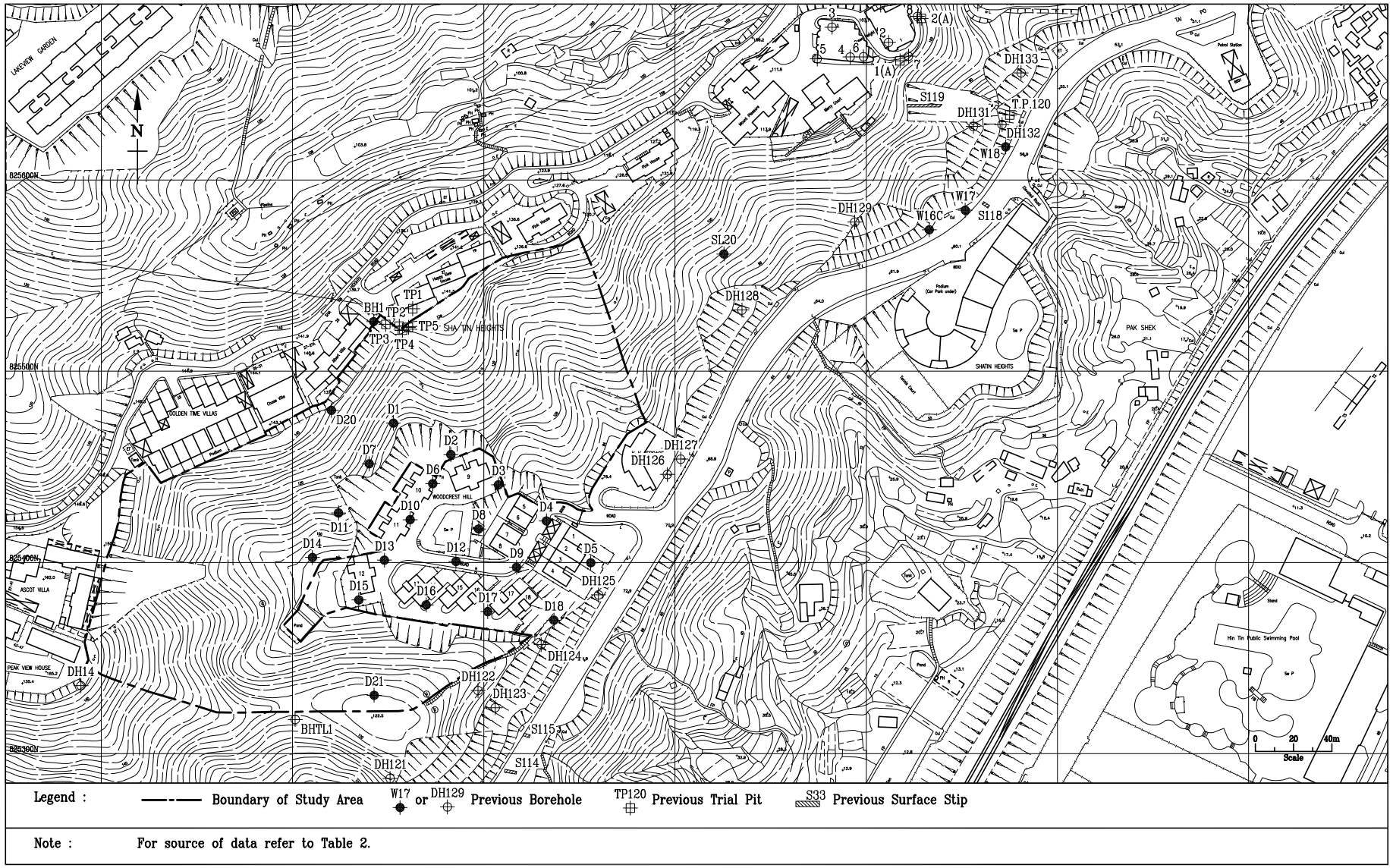


Figure 5 - Locations of Previous Ground Investigation Stations

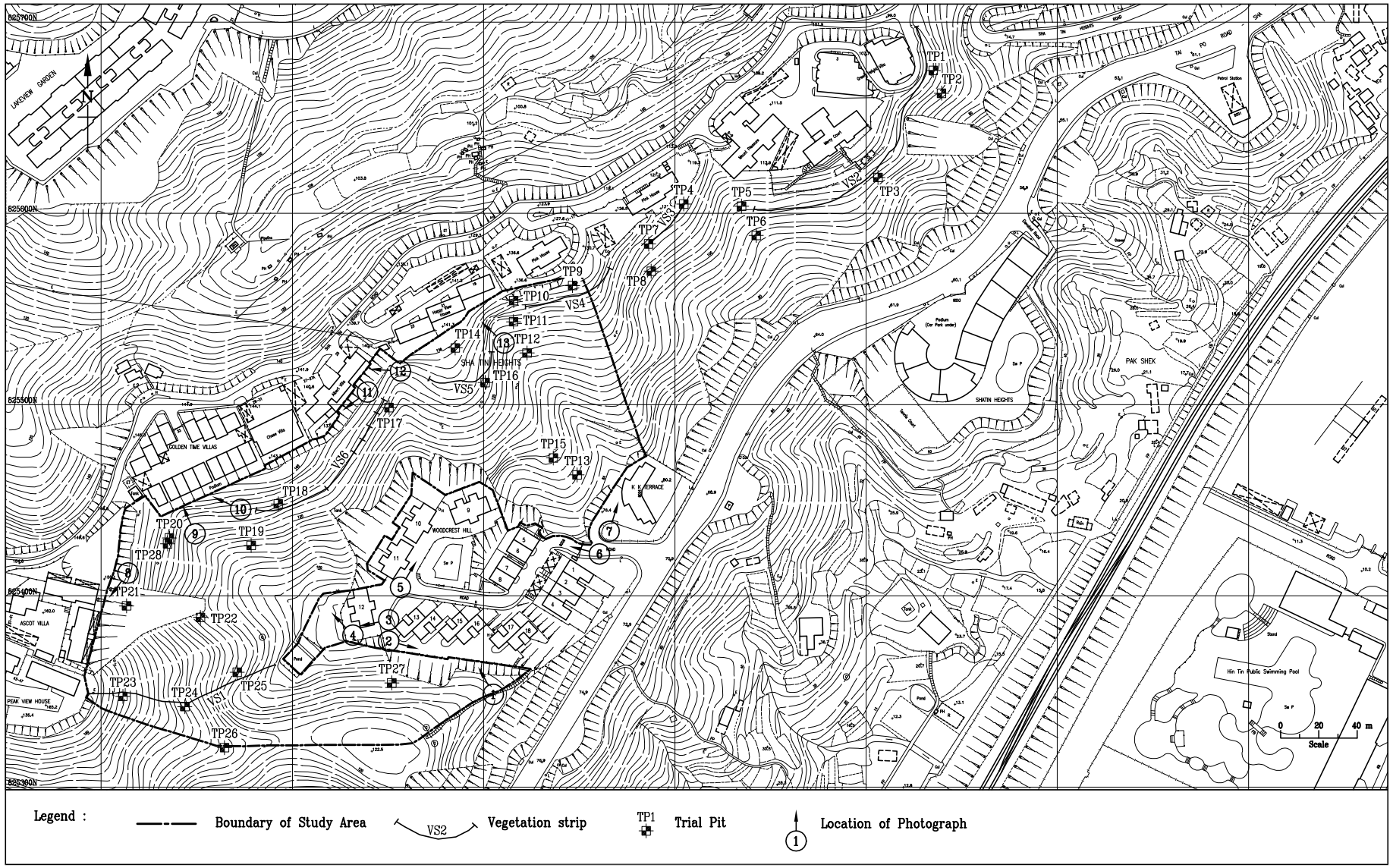


Figure 6 - Locations of Ground Investigation Stations for this Study

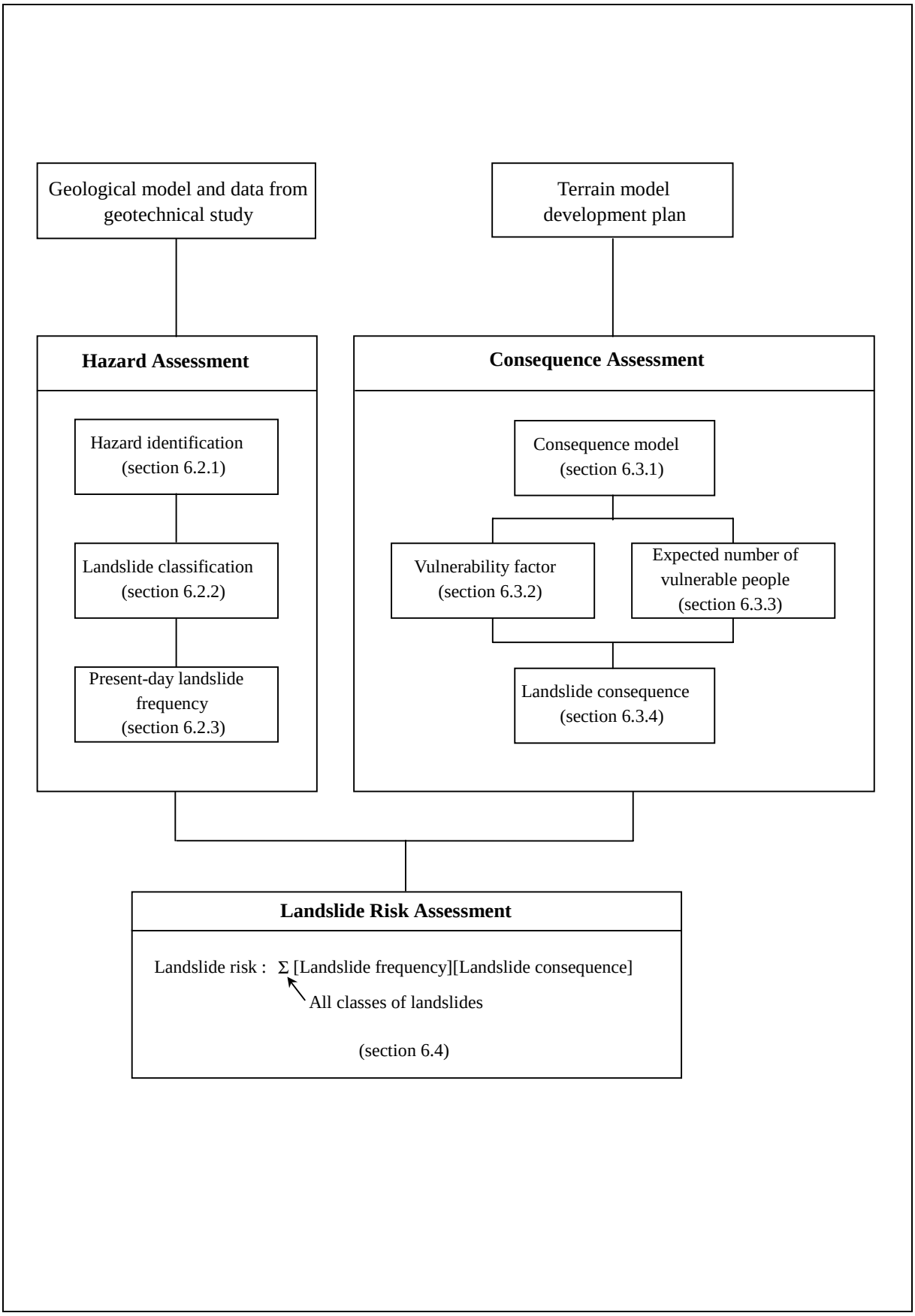
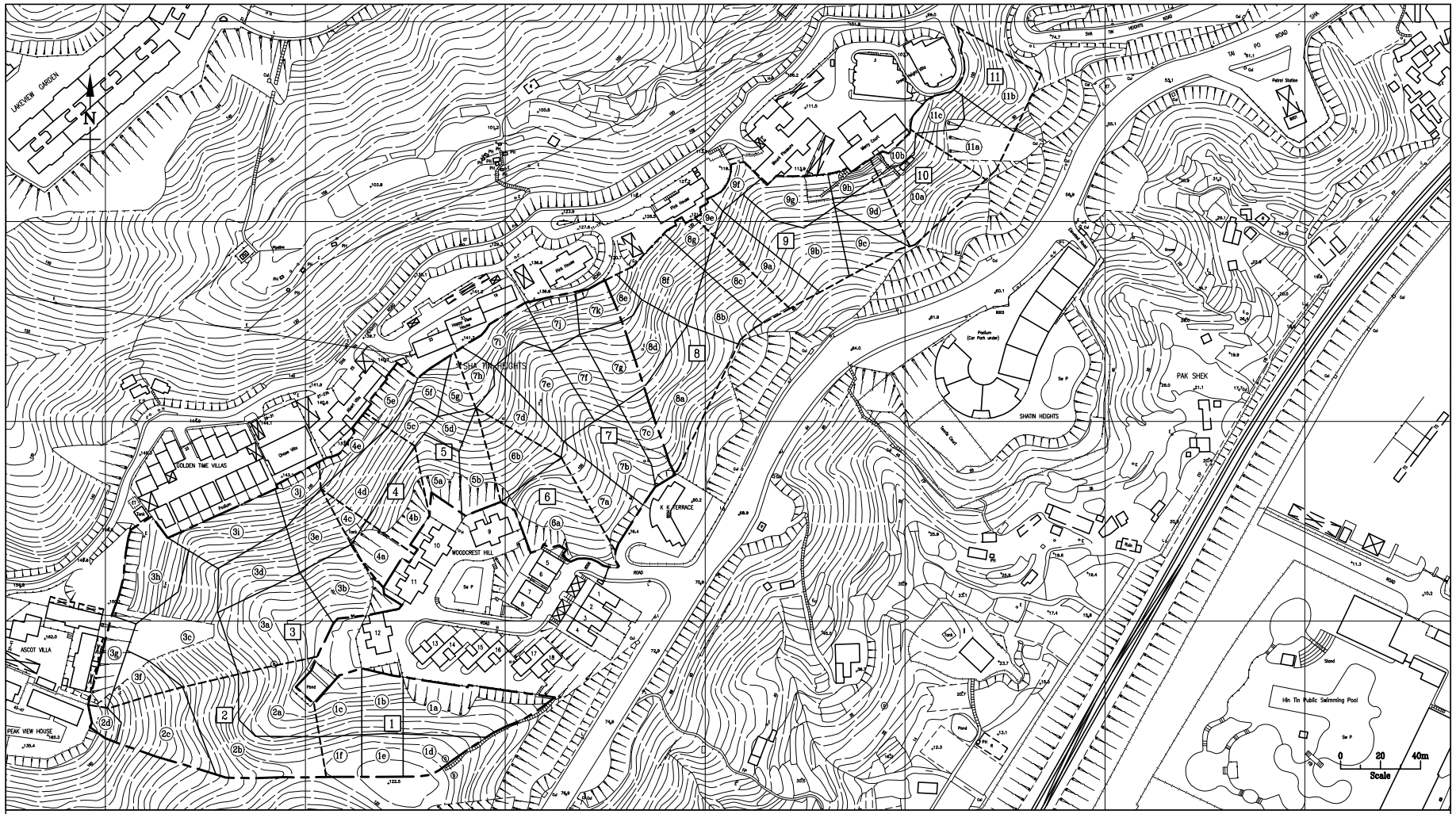


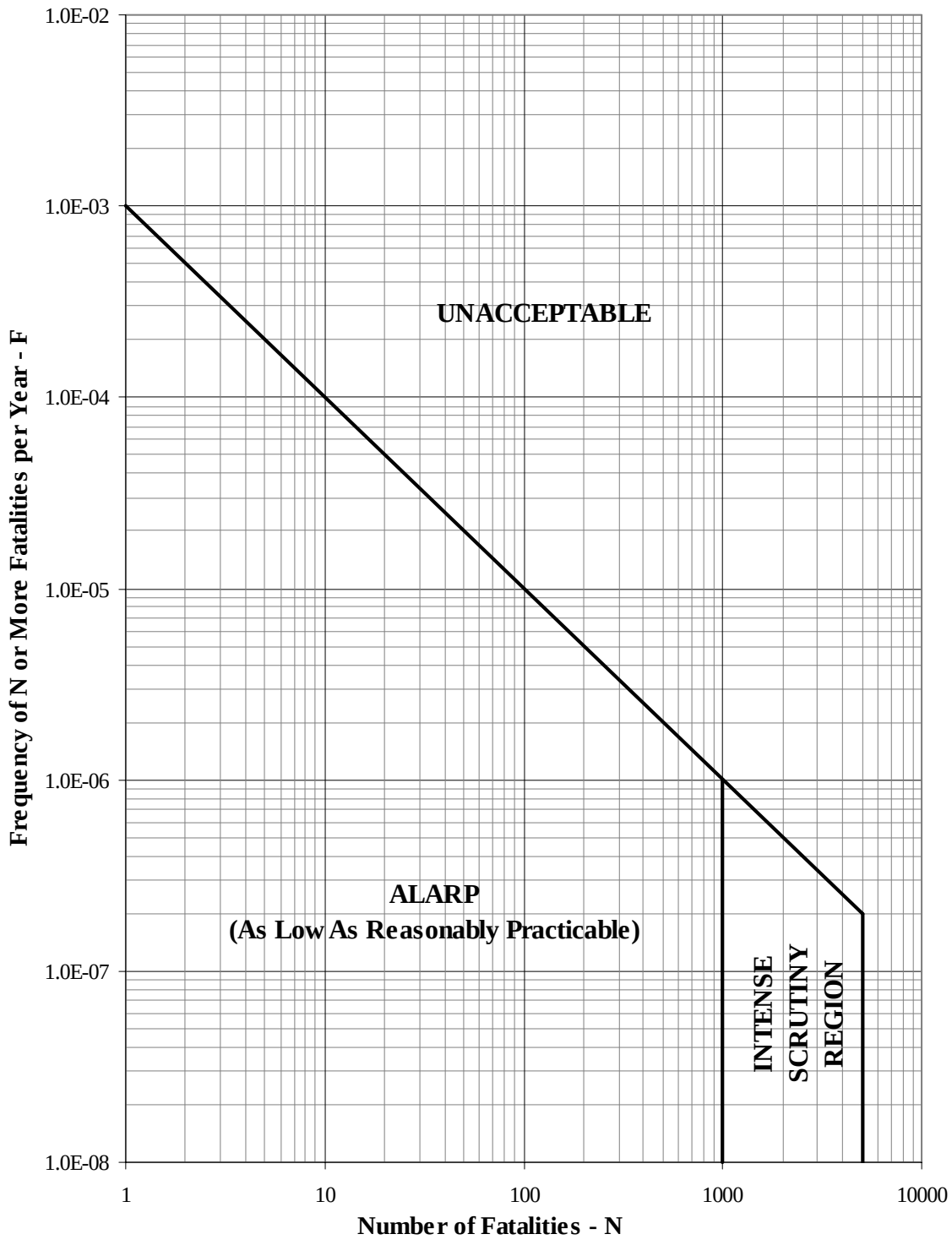
Figure 7 - Overall QRA Approach



Legend : Boundary of Study Area | 1 Slope Segment NB | (1a) Slope Segment No. | Slope Segment Boundary | Slope Subasea Boundary

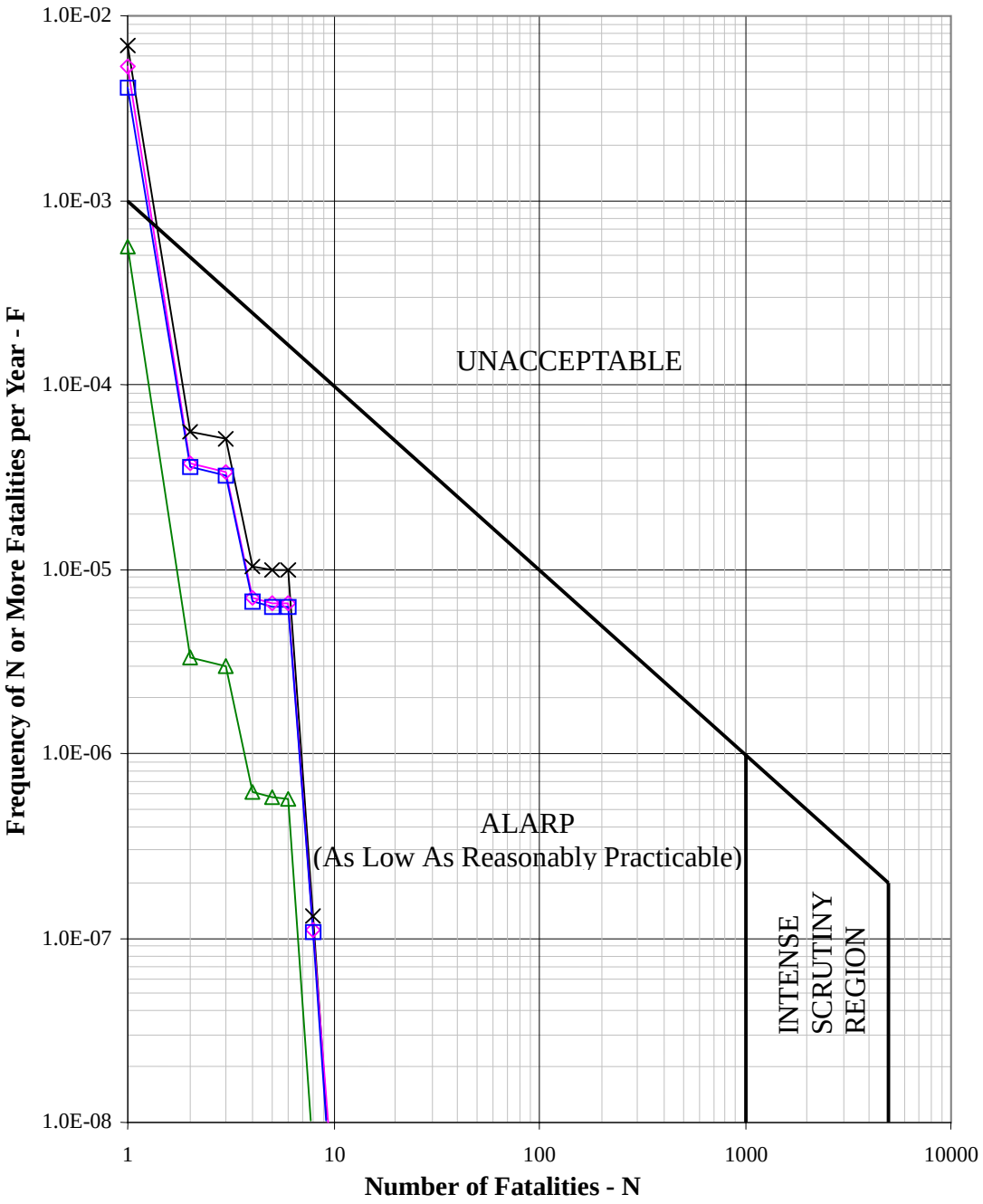
Note : Refer to Table A3 for details of each subarea.

Figure 8 - Locations of Slope Segments and Slope Subareas



Note: Extracted from landslides and boulder falls from natural terrain: Interim Risk Guidelines (GEO 1998b).

Figure 9 - Societal Risk Criteria



Legend:

- Base-line condition (Pre-existing condition before 1997 landslides - for reference only)
- Present-day condition current risk level
- After forthcoming measures
- After additional risk mitigation measures

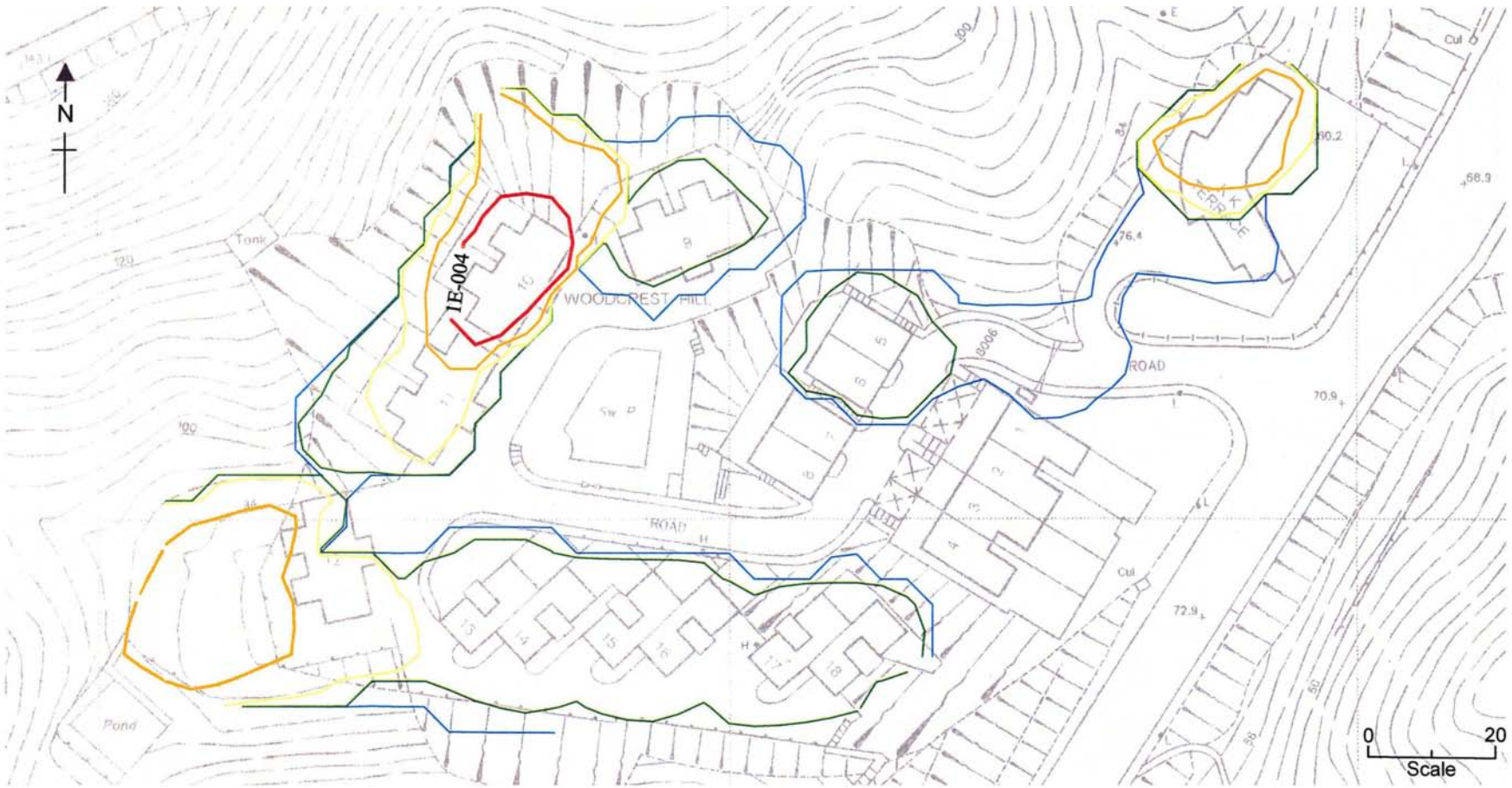
Note: As shown in Table 6, the forthcoming measures will reduce the societal risk from 5.67×10-3 PLL/year for the present-day condition to 4.44×10-3 PLL/year after the forthcoming measures (i.e. about 20% reduction).

Figure 10 - Calculated F-N Curves for the Study Area

Legend: Personal individual risk level 1.0E-4 1.0E-5 1.0E-6 1.0E-8 1.0E-10

Note: Personal individual risk of each facility is shown in Table 5.

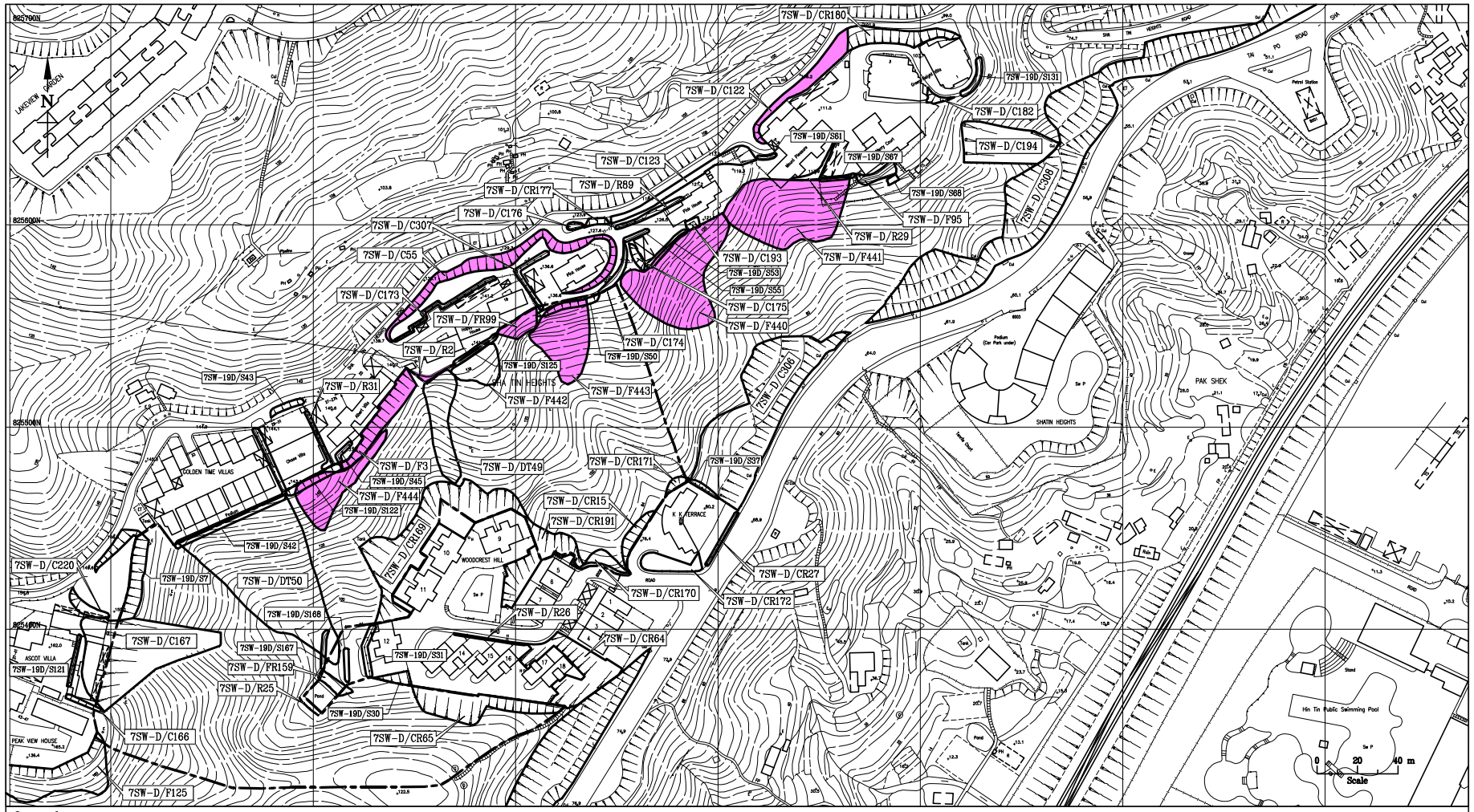
Figure 11 - Personal Individual Risk Contours for Base-line Hillside Condition



Legend:	Personal individual risk level	1.0E-4	1.0E-5	1.0E-6	1.0E-8	1.0E-10

Note: Personal individual risk of each facility is shown in Table 5.

Figure 12 - Personal Individual Risk Contours for Present-day Hillside Condition



Legend :

Boundary of Study Area | 7SW-D/R2 Registered Feature | 7SW-19D/S7 Feature shown in SIFT plan but not registered | Feature included in LPM programme

Notes :

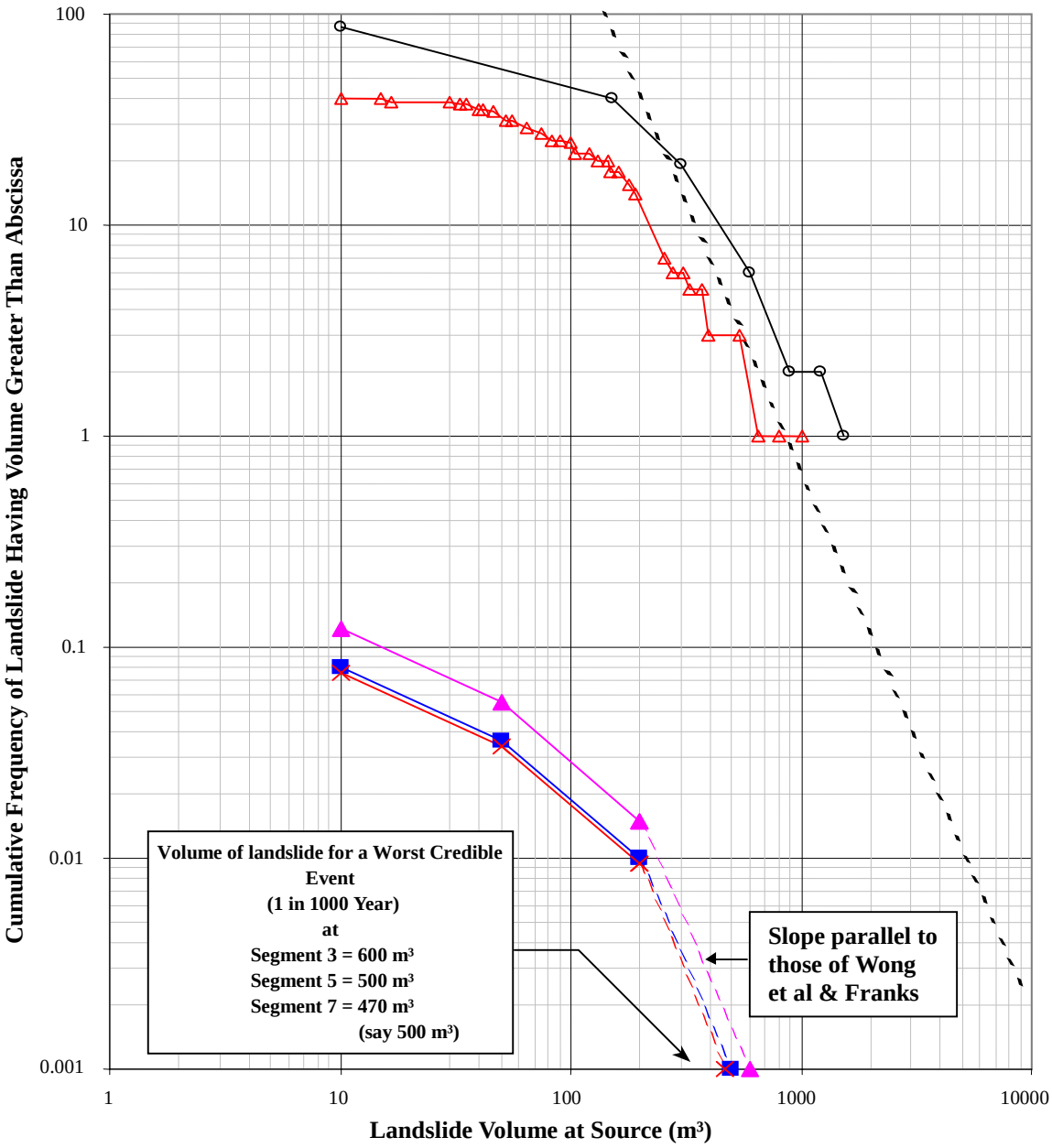
(1) All levels are in metre above principal datum (mPD) unless otherwise stated.
(2) Information shown on this drawing is based on Sift Report : 7SW-19D in conjunction with latest SIS record where they are available.

Figure 13 - Man-made Slope Features within the Study Area

Legend: Personal individual risk level 1.0E-4 1.0E-5 1.0E-6 1.0E-8 1.0E-10

Note: Personal individual risk of each facility is shown in Table 5.

Figure 14 - Personal Individual Risk after Forthcoming Measures



Legend:

- Landslide at Segment 3 of Sha Tin Heights
- Landslide at Segment 5 of Sha Tin Heights
- Landslide at Segment 7 of Sha Tin Heights
- Lantau (Wong et al 1998)
- Tung Chung (Franks 1998)

Notes:

(1) The landslide volumes from channelized debris flows invariably exceed those from open hillslope landslide and govern the CF-V curves above. For clarity, the CF-V data from open hillslope landslides are not shown in this graph.

(2) The data points for landslide volume greater than 50 m³ is based on the combined frequency of medium channelized debris flows (50 m³ < V < 200 m³) and large channelized debris flows (200 m³ < V < 1000 m³) arising from the respective slope segments.

(3) The data points for landslide volume greater than 200 m³ is based on the frequency of large channelized debris flows (200 m³ < V < 1000 m³) arising from the respective slope segments.

Figure 15 - Cumulative Frequency Vs Landslide Volume

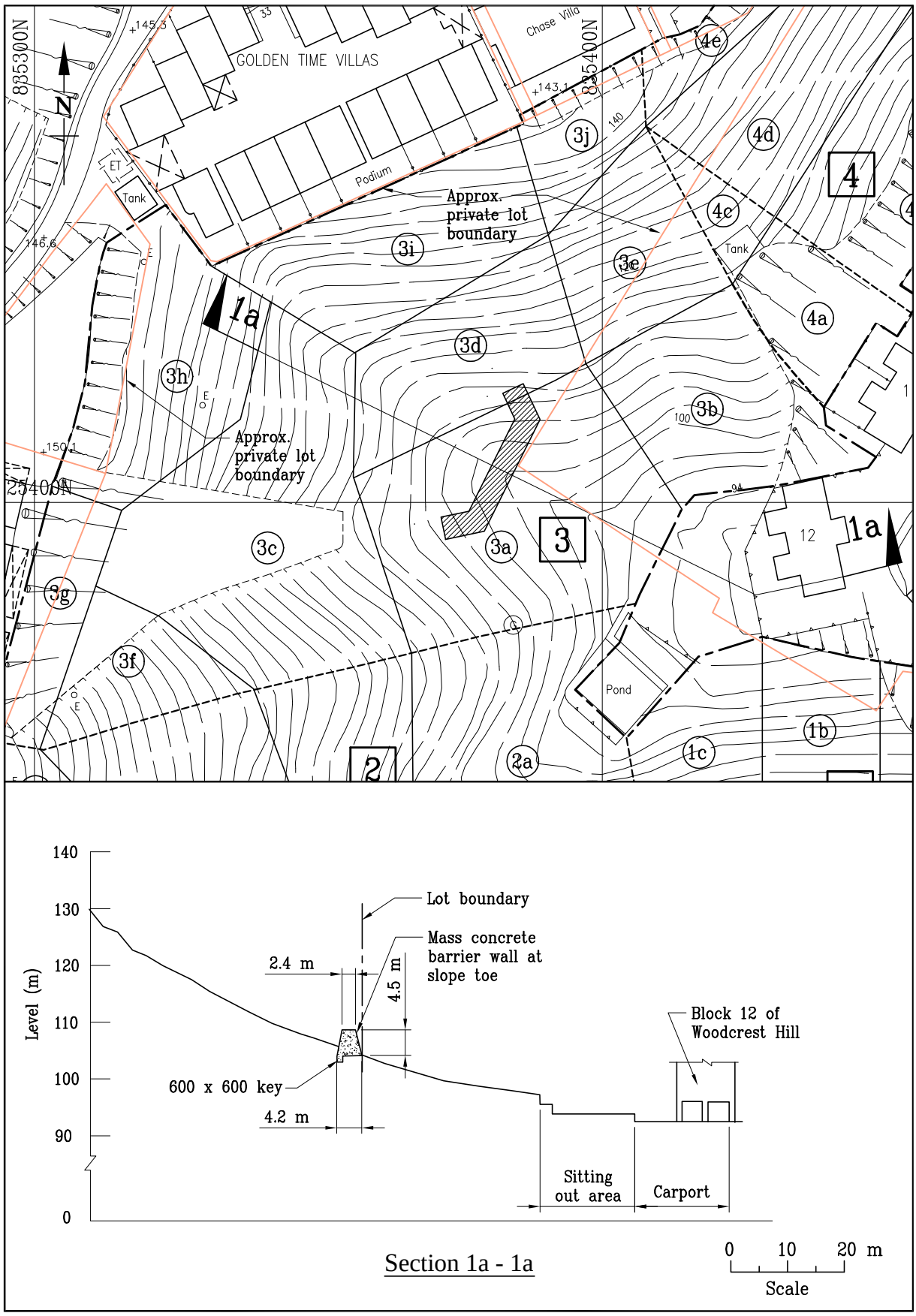


Figure 16 - Proposed Mitigation Measures for Segment 3 - Option 1a

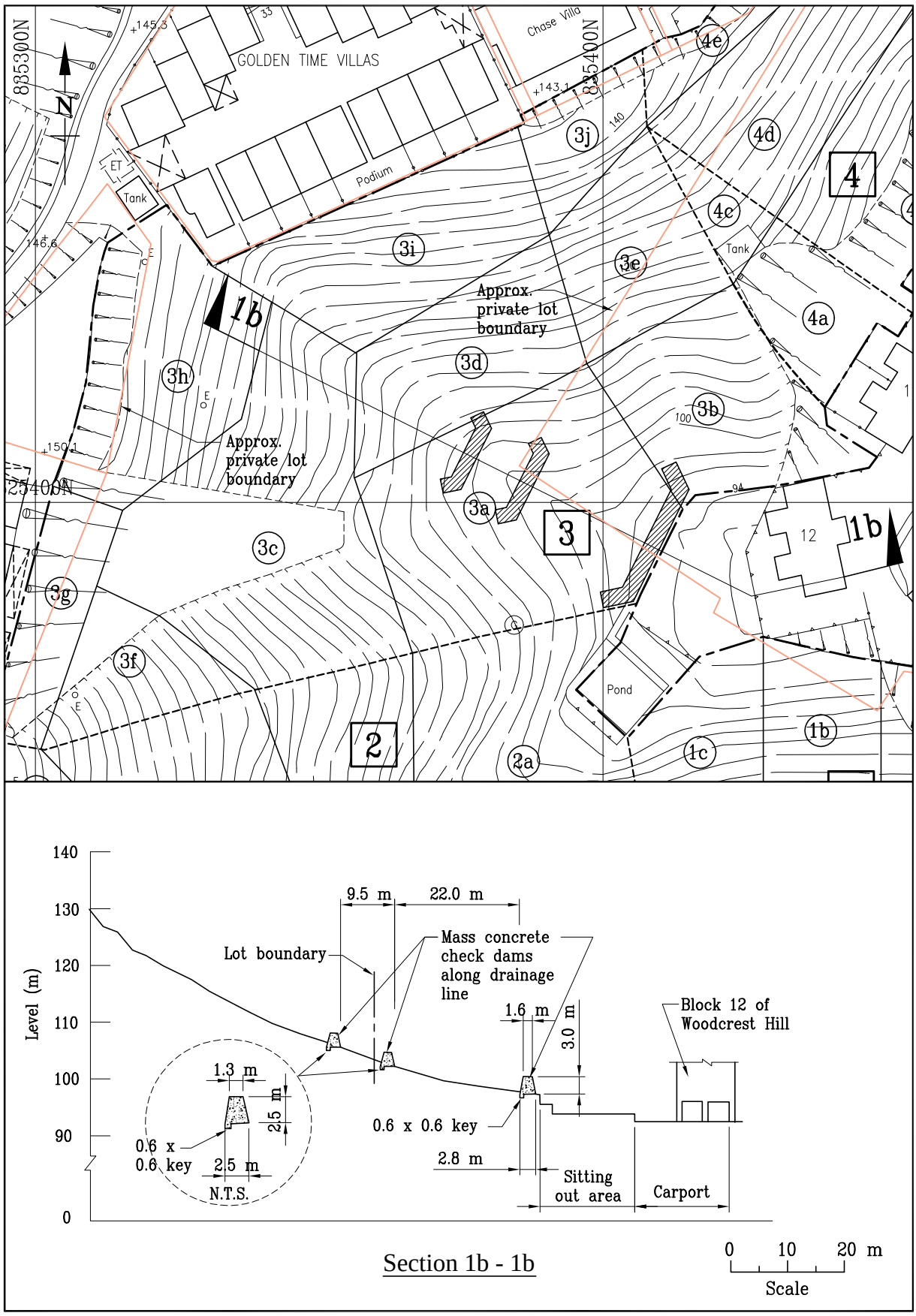


Figure 17 - Proposed Mitigation Measures for Segment 3 - Option 1b

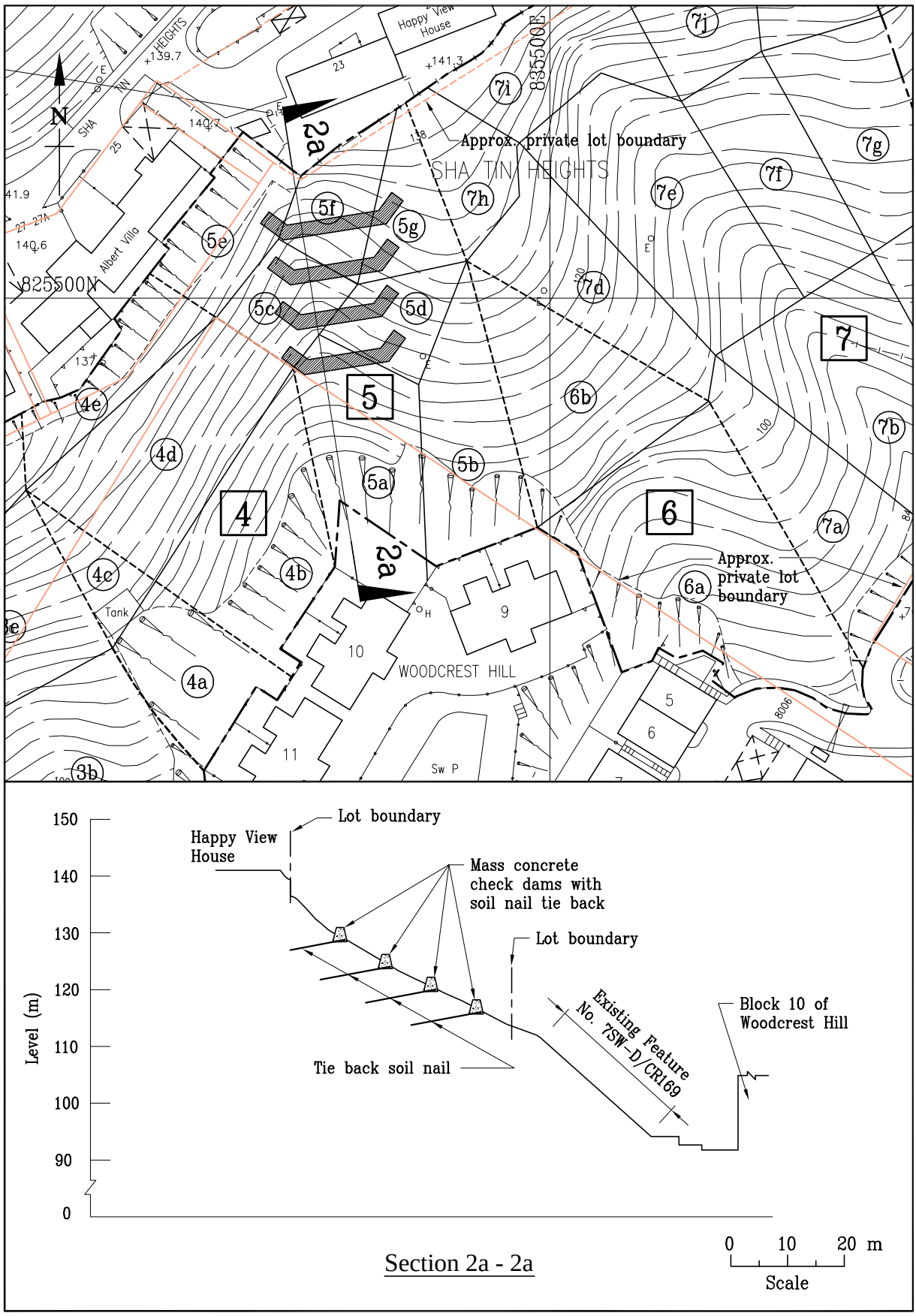


Figure 18 - Proposed Mitigation Measures for Segment 5 - Option 2a

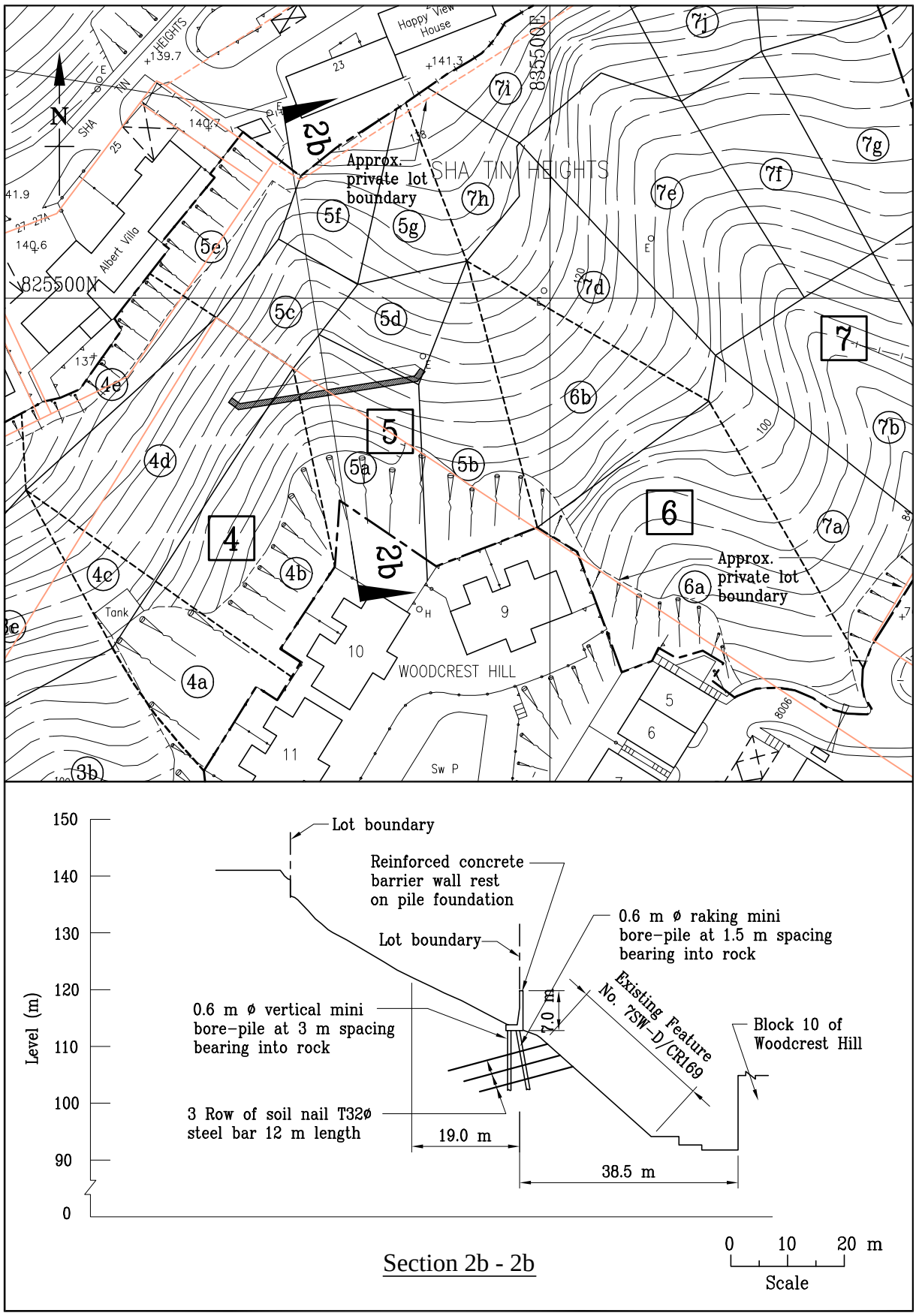


Figure 19 - Proposed Mitigation Measures for Segment 5 - Option 2b

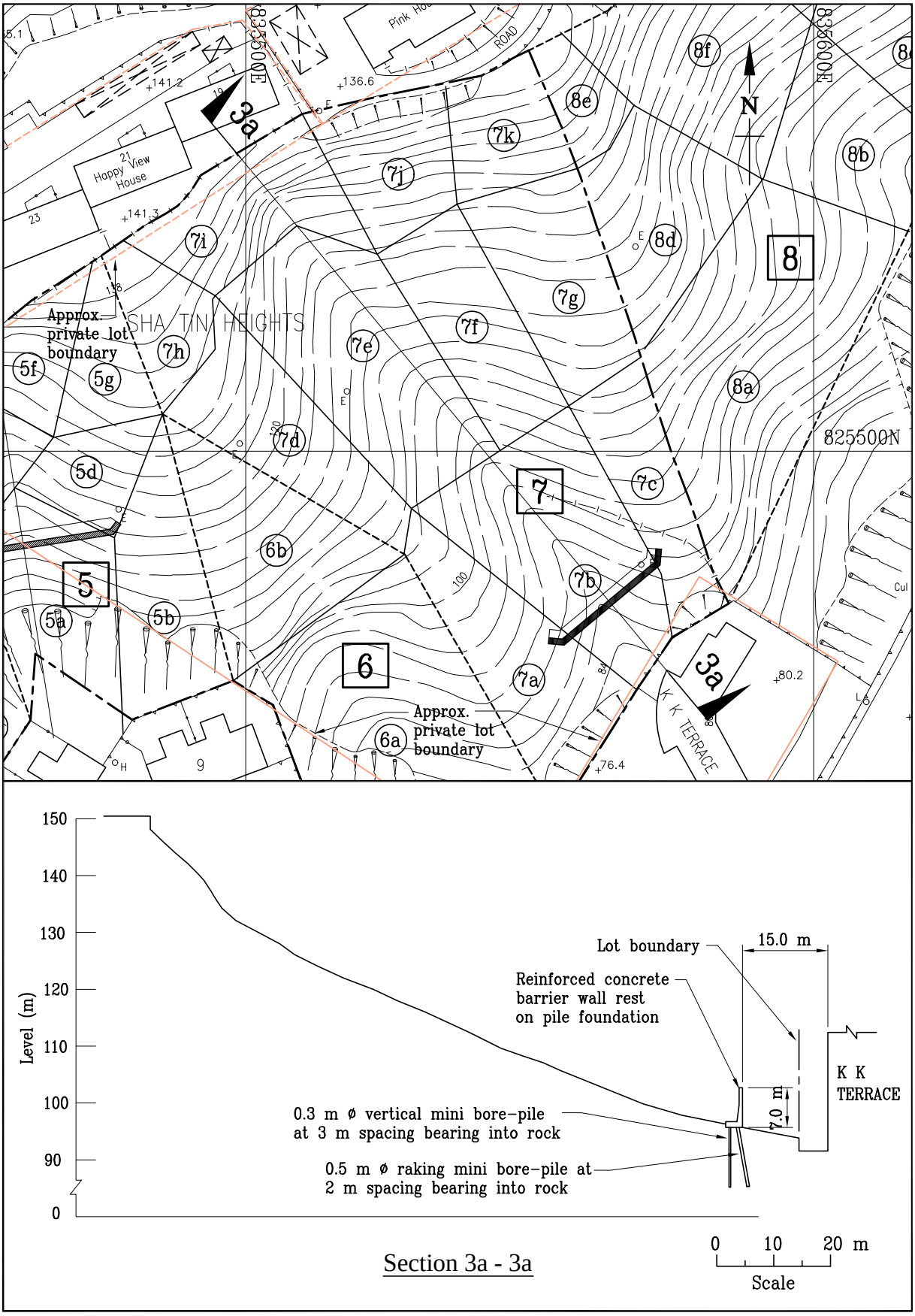


Figure 20 - Proposed Mitigation Measures for Segment 7 - Option 3a

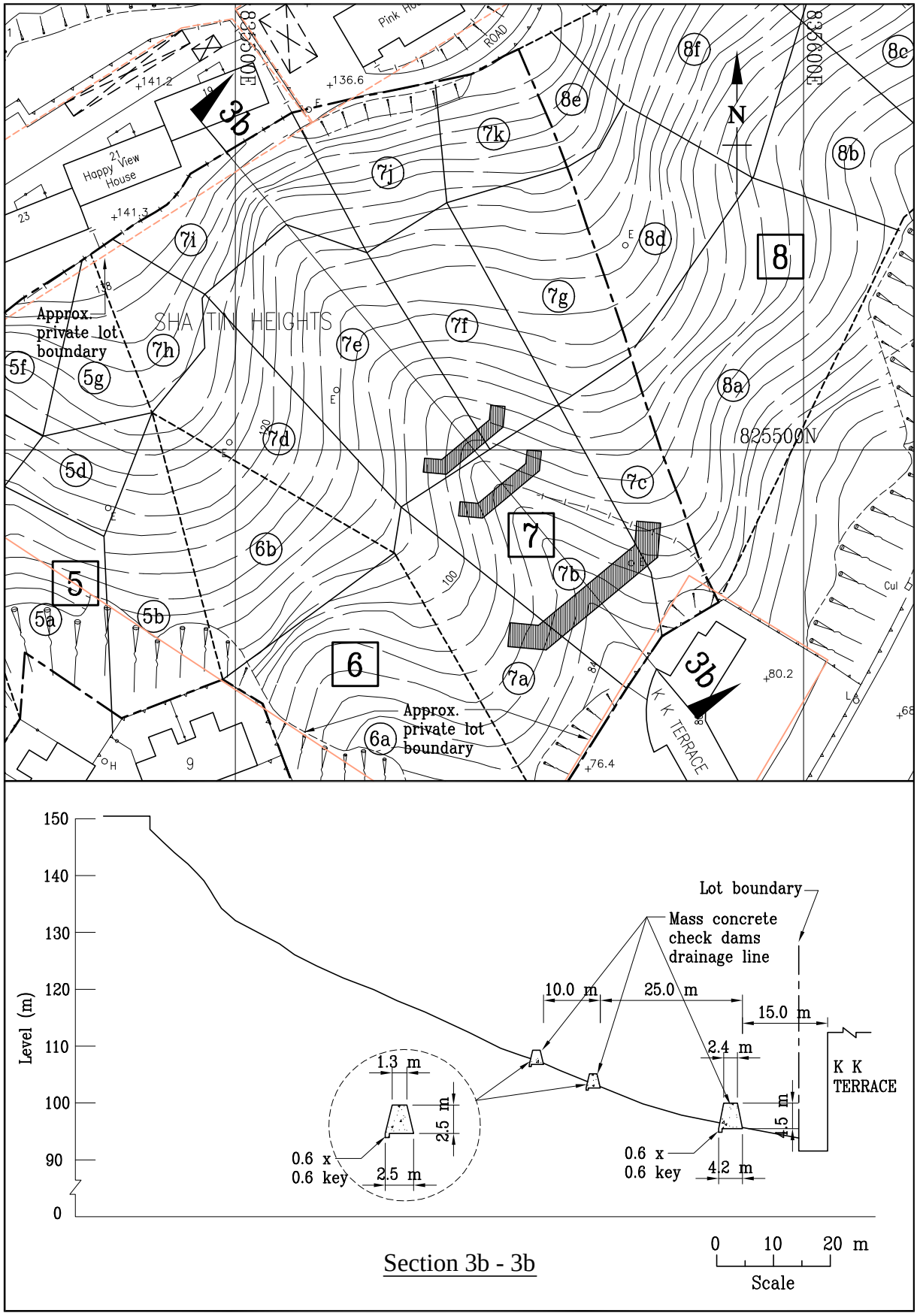


Figure 21 - Proposed Mitigation Measures for Segment 7 - Option 3b

Legend:	Personal individual risk level	1.0E-4	1.0E-5	1.0E-6	1.0E-8	1.0E-10

Note: Personal individual risk of each facility is shown in Table 5.

Figure 22 - Personal Individual Risk Contours after Additional Risk Mitigation Measures

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Plate 1 - General View of Sha Tin Heights (Part of Study Area)
(Photographs Taken on 14 January 2000)

Note: See Figure 6 for photograph location.

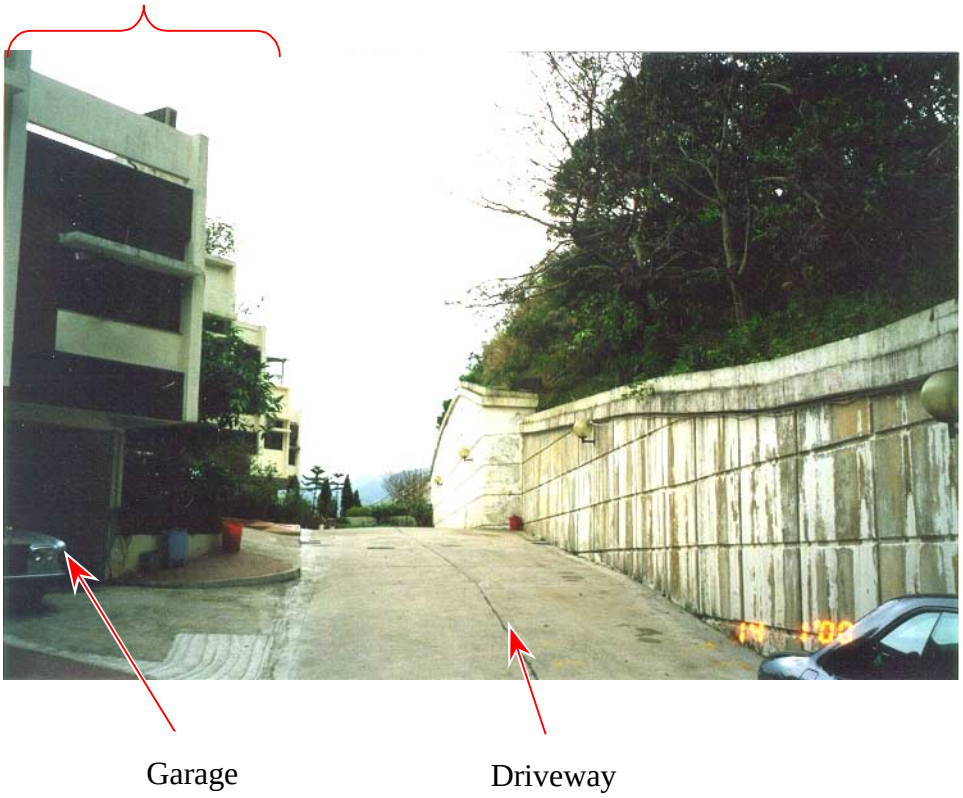

Plate 2 - Residential Flats, Garages and Driveway of Blocks 13 to 18, Woodcrest Hill (Photograph Taken on 14 January 2000)

Note: See Figure 6 for photograph location and direction.

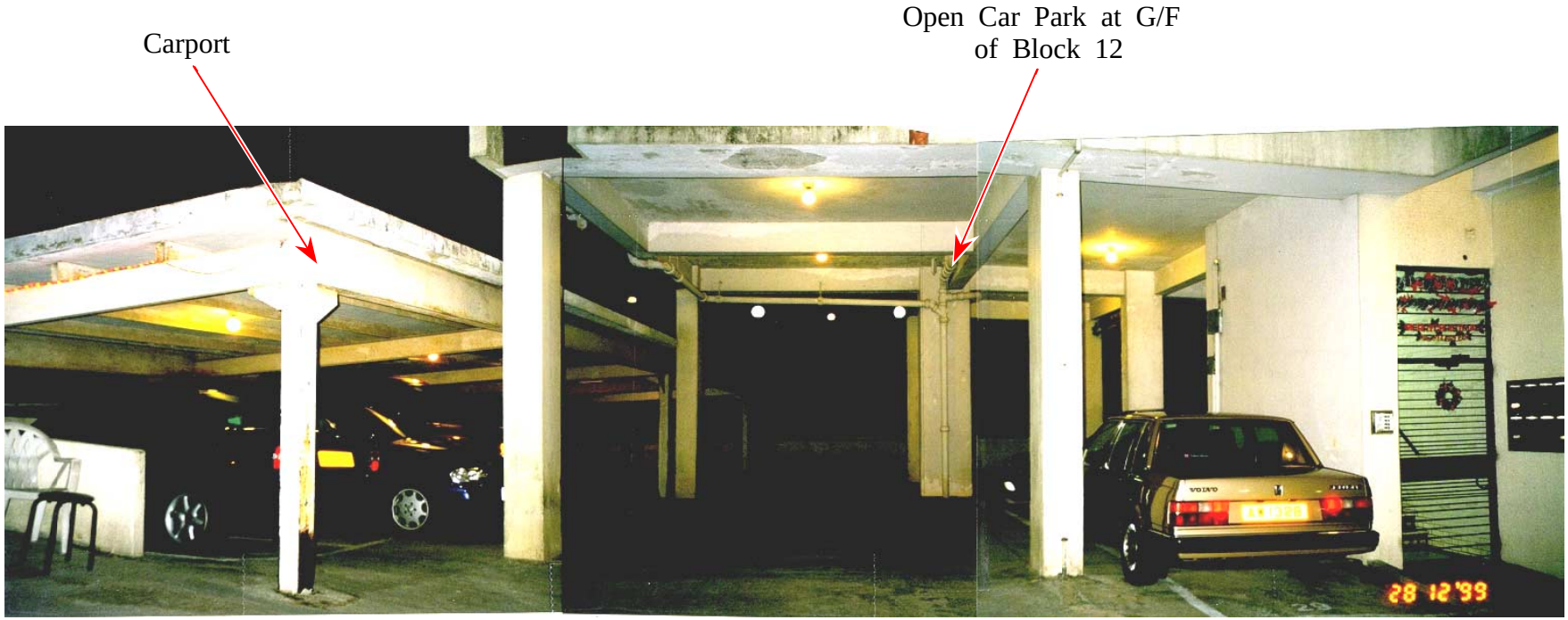

Plate 3 - Open Car Park Adjacent to Block 12 of Woodcrest Hill
(Photograph Taken on 28 December 1999)

Note: See Figure 6 for photograph location and direction.

Plate 4 - Open Area behind Block 12 of Woodcrest Hill
(Photograph Taken on 22 November 1999)

Note: See Figure 6 for photograph location and direction.

Plate 5 - Residential Buildings Block 9 to 11 of Woodcrest Hill
(Photographs Taken on 14 January 2000)

Note: See Figure 6 for photograph location and direction.

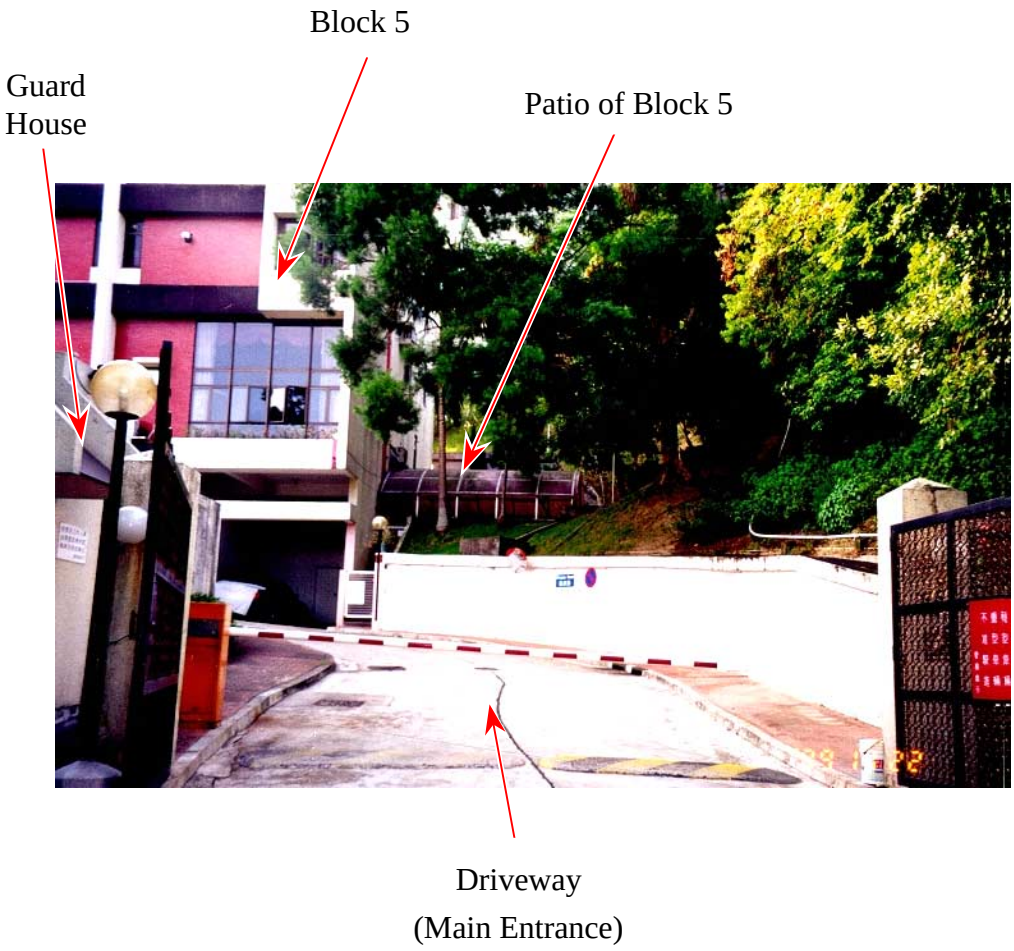

Plate 6 - Residential Building Block 5, Guard House and Driveway near Main Entrance of Woodcrest Hill (Photograph Taken on 22 November 1999)

Note: See Figure 6 for photograph location and direction.

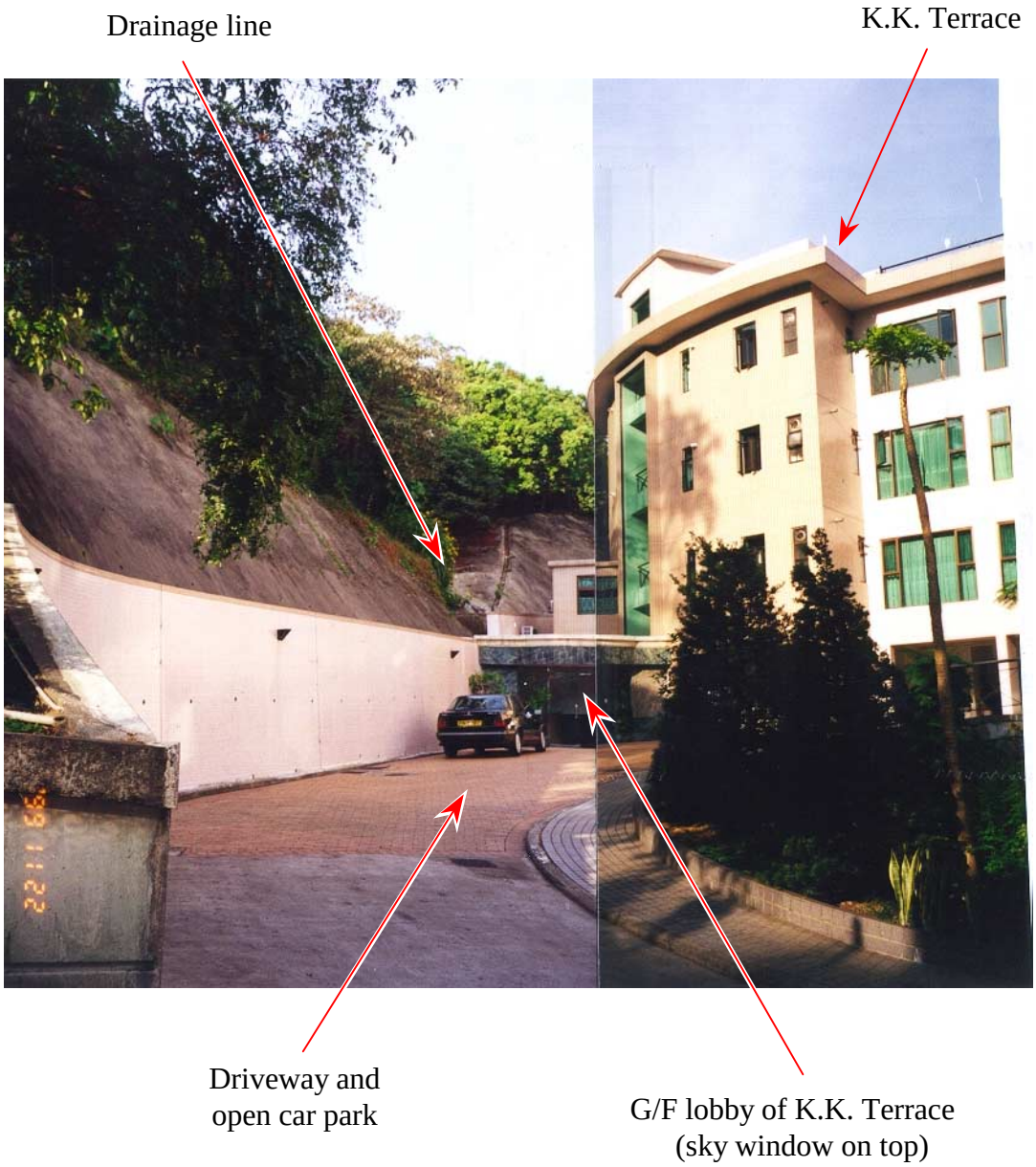

Plate 7 - Open Car Park and Residential Building of K.K. Terrace
(Photograph Taken on 22 November 1999)

Note: See Figure 6 for photograph location and direction.

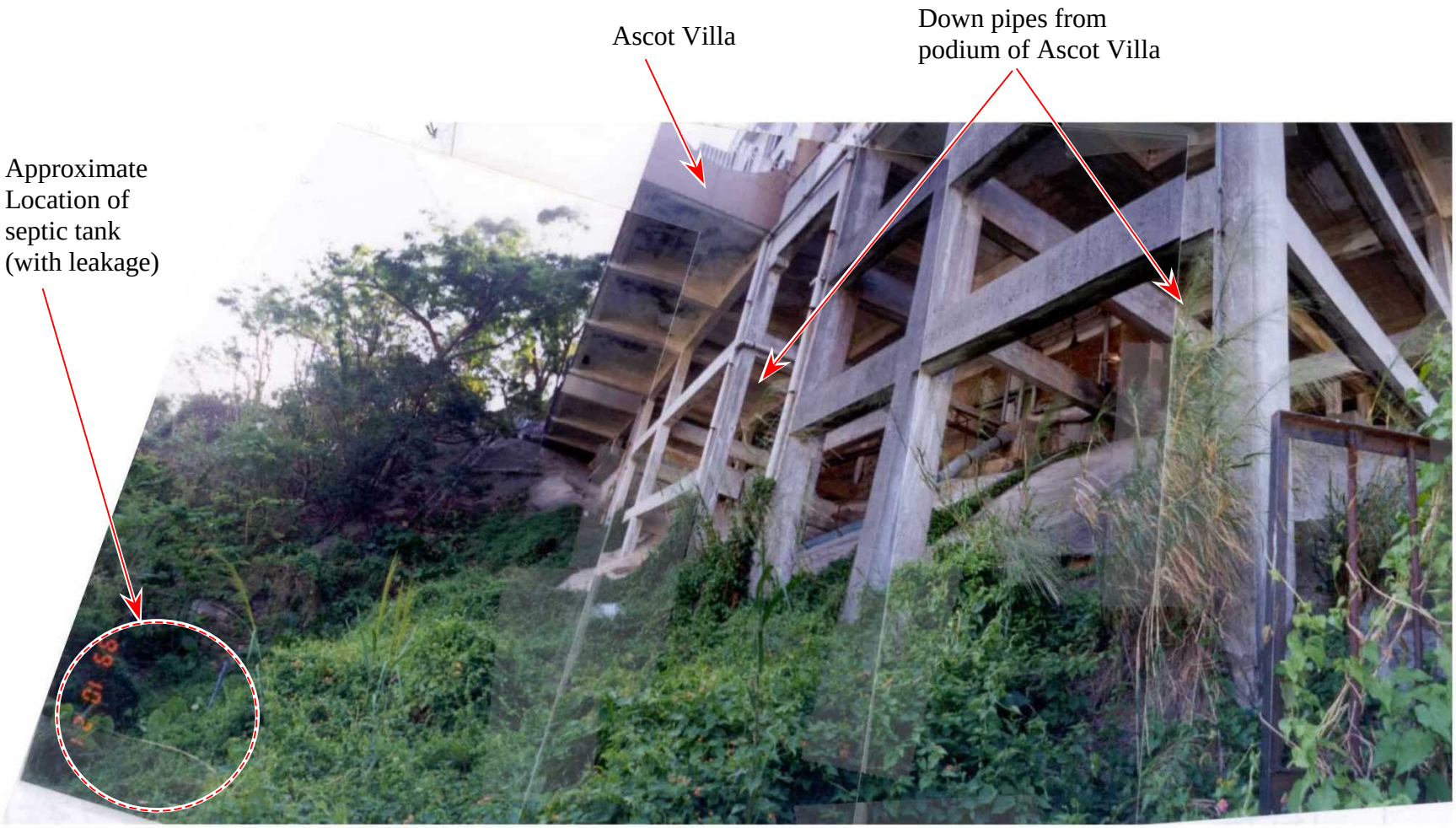

Plate 8 - Discharge from Ascot Villa
(Photographs Taken on 21 October 1999)

Note: See Figure 6 for photograph location and direction.

Plate 9 - Discharge Pipes below Podium of Golden Time Villas
(Photograph Taken on 21 October 1999)

Note: See Figure 6 for photograph location and direction.

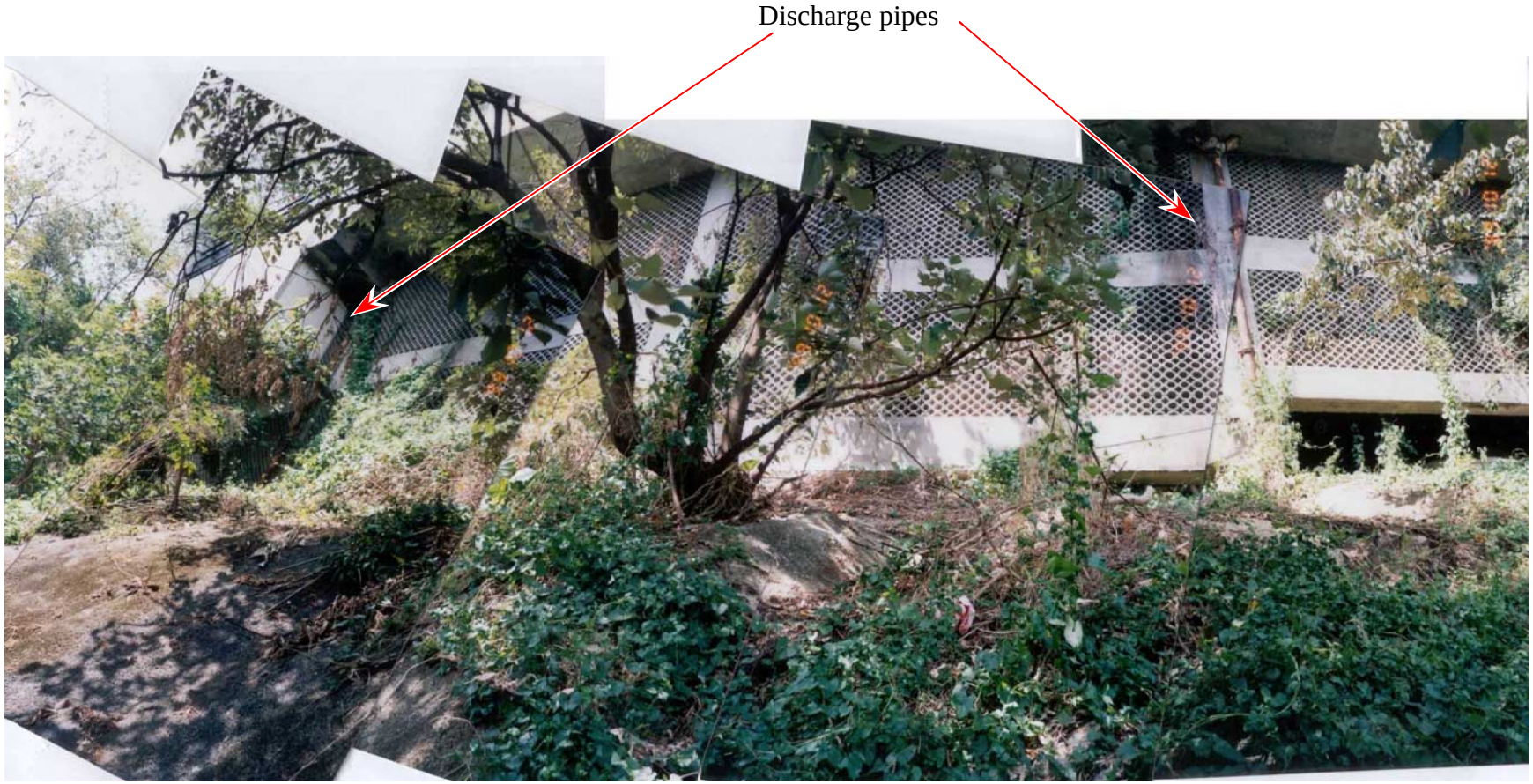

Plate 10 - Discharge Pipes below Podium of Golden Time Villas (Middle Portion)
(Photograph Taken on 21 October 1999)

Note: See Figure 6 for photograph location and direction.

Plate 11 - Discharge Pipes from Platform of Albert Villa Discharged Directly to Hillside
(Photograph Taken on 21 October 1999)

Note: See Figure 6 for photograph location and direction.

Plate 12 - Stormwater Outlet from Albert Villa
(Photograph Taken on 12 October 1999)

Note: See Figure 6 for photograph location and direction.

Plate 13 - Stormwater Outlet from Happy View House (Photograph Taken on 12 October 1999)

Note: See Figure 6 for photograph location and direction.

APPENDIX A

LANDSLIDE HAZARD ASSESSMENT

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A1 LANDSLIDE HAZARD IDENTIFICATION

Regard has been give to five types of landslides, viz shallow landslides, massive (deep-seated) landslides, surface erosion, retaining wall failures and boulder falls. A discussion on each of them is given below.

A1.1 Shallow Landslides

In this study, shallow landslides refer to those near-surface landslides involving the surficial materials (i.e. fill / colluvium / residual soil) in approximately the top 3 m.

The past landslides identified on the hillside (Table A1) involved predominantly shallow landslides with failure volumes ranging from 10 m^3 to 250 m^3. The majority of these landslides were open hillslope landslide that remained wholly on the open hillside and were not channelized along a drainage line, or channelized debris flows in which the debris had become channelized in a drainage line and elongated. The former had a higher failure frequency, whereas the latter generally had a longer debris runout distance. Both types of shallow landslides pose a hazard within the study area.

A1.2 Massive (Deep-seated) Landslides

In this study, massive (deep-seated) landslides refer to those landslides with a major part of the failure surface being through saprolite or less decomposed rocks. Based on the following observations, massive (deep-seated) landslides were judged not warranted for consideration in this QRA study:

(a) the relict joints of decomposed granite encountered in the trial pits excavated for this study were not adversely orientated and were generally discontinuous,

(b) the decomposed granite observed was generally dense to very dense,

(c) there were no records of massive (deep-seated) landslides within the aerial photograph coverage and no geomorphological evidence of any large-scale deep-seated relict failures,

(d) large-scale relict scars were not evident in the earliest low-level aerial photographs taken in 1963, and

(e) large-scale debris accumulation or significant tension cracks were not observed during the site reconnaissance.

A1.3 Surface Erosion

Only one surface erosion event was identified within the study area (Landslide No. 1974-A, see Table A1). The debris of this erosion had a volume of 25 m^3 and did not reach the development at the toe of the hillside. In view of this, surface erosion was judged unlikely to pose a significant hazard to the study area and therefore was not considered in this QRA study.

A1.4 Retaining Wall Failures

Retaining walls exist along the crest of the hillside. However, all the significant retaining walls within the study area were registered, and have been or would be processed by the slope safety system under the LPM Programme. Therefore, this type of failure was not considered in this QRA study.

A1.5 Boulder Falls

No discernible boulders or major unstable rock outcrops were observed within the study area. The sizes of those observed within the area below Peak View House (Figure 3) were mostly less than 0.1 m^3, and the potential for them moving downhill and reaching the development was considered to be low given the existence of the terraces below. Boulder falls were hence not considered in this QRA study.

A2 LANDSLIDE CLASSIFICATION

As discussed in Section A1, only shallow landslides are considered in this QRA study. The shallow landslides have been classified according to their mechanisms and scales of failure as follows:

A2.1 Failure Mechanisms

(a) Open hillslope landslide - landslide in which debris was not channelized along a drainage line.

(b) Channelized debris flow - landslide in which the debris had become channelized in a drainage line and elongated.

A2.2 Failure Scales

(a) Small - landslide involving failure volume < 50 m^3

(b) Medium - landslide involving failure volume $\geq$ 50 m^3 and < 200 m^3

(c) Large - landslide involving failure volume $\geq$ 200 m^3 and < 1,000 m^3

Consequently, six classes of landslide hazards were included for the QRA. They were Small Open Hillslope Landslide (SOHL), Medium Open Hillslope Landslide (MOHL), Large Open Hillslope Landslide (LOHL), Small Channelized Debris Flow (SCDF), Medium Channelized Debris Flow (MCDF) and Large Channelized Debris Flow (LCDF).

A3 LANDSLIDE FREQUENCIES (PRE YEAR)

Having identified and classified the landslide hazards, the next step was to predict the frequency and spatial distribution of future landslides.

The hillside has been subjected to a history of failures (27 landslides identified from API). In view of this, it is considered reasonable to evaluate the frequency of failure by reference to the past landslide data.

The overall landslide frequency was then spatially distributed to individual sub-areas on the hillside (Figure A2). Probabilistic slope stability analysis was carried out (Annex A of Appendix A). The distribution was then made pro-rata to the analytical probability of failure of each sub-area. The higher the probability of failure of a sub-area, the higher was its distributed landslide frequency. The spatial distribution of landslide frequencies thus obtained was referred to as the spatial distribution of landslide frequencies based on analysis data, the results of which are given in Table A4.

To supplement the analytical values above, due regard has been given to the spatial distribution of landslide frequencies based on the observed locations where landslides actually occurred. The landslide frequency thus obtained was referred to as the "spatial distribution of landslide frequencies based on observed data", the results of which are presented in Table A4. The "observed" landslide frequency data was updated with analysis data using the Bayesian Approach. The updated landslide frequency distribution was adopted as the spatial distribution of landslide frequency in the study. The resulting spatially distributed landslide frequencies for the different subareas are presented in Table A4.

The past instability information only relate to landslide incidents that occurred between 1963 (the earliest year when the low-level aerial photographs were available) and 1997 (thereafter, no landslide incidents were noted). Since the 1997 landslides, large areas of shotcrete have been applied at different parts of the hillside, resulting in a major change to the hillside condition around these areas. This has been taken into account in assessing the landslide frequencies (i.e. overall and spatially-distributed landslide frequencies). The condition before the 1997 landslides represented the hillside condition under which the past

landslides occurred and was referred to as the "base-line" condition. The condition after the 1997 landslides was referred to as the "present-day" condition, which was the basis for the current landslide risk.

In this study, the "base-line" landslide frequencies (overall and spatially-distributed) were first established and then adjusted to reflect the present-day hillside surface conditions (Present-day Landslide Frequencies in Section A3.3).

The general methodology for determining the landslide frequencies is shown as a flowchart in Figure A1. The process involved is discussed below.

A3.1 Past Landslides

The past landslides on the hillside were identified by low-level aerial photographs (available since 1963), together with the GEO's landslide records (Table A1). The relict landslide scars that were observed in the 1963 aerial photographs were not included in the frequency calculation as their times of failures were unknown.

Although it was possible to count the number of past landslides directly from aerial photographs, this could be biased because of the potential inability to recognise some of the smaller landslides. It was therefore necessary to adjust the number of landslides (observed from aerial photographs) by dividing it with a "recognition factor". A factor of 30% and 90% respectively were adopted for small and medium scale landslides in this study. No correction was considered necessary for large landslides. The number of landslides thus counted are shown in Table A2.

A3.2 Base-line Landslide Frequencies

The condition before the 1997 landslides, representing the hillside conditions under which the past landslides occurred, was referred to as the base-line condition. The process of determining the base-line failure frequencies is explained below.

A3.2.1 Overall Landslide Frequencies

The overall landslide frequency refers to the annual frequency of occurrence for each landslide class over the whole hillside. It was calculated by dividing the total number of past landslides, after adjustment for recognition (see Section A3.1), by the observation period.

The overall landslide frequencies calculated for the different classes of landslides are summarised in Table A2, which were taken to be the base-line values. Neither the API nor the GEO's landslide records revealed any LOHL over the 35-year period from 1963 to 1997. Based on expert judgement, a nominal frequency of 0.006 was assigned for LOHL.

A3.2.2 Spatial Distribution of Landslide Frequencies Based on Analysis Data

A3.2.2.1 Hillside Subdivision

As the landslide hazard was not uniform throughout the whole hillside, it was necessary to spatially distribute the overall landslide frequencies according to the geological and topographical conditions at different parts of the hillside. The hillside was subdivided into slope segments and sub-areas as shown in Figure A2.

Slope segments were taken as catchments from which landslide debris could potentially reach the different facilities along the toe of the hillside, as determined by the topographical condition. Each slope segment was further zoned into slope sub-areas based on the predominant material in the surficial soils (viz fill, colluvium or residual soil), the likely failure mechanism (viz Open Hillslope Landslide or Channelized Debris Flow), and the topography of the hillside (i.e. sub-areas zoned with similar slope angle).

A summary of the above slope attributes (i.e. slope angle, depth of surficial soils, predominant material and likely failure mechanism) is given in Table A3.

A3.2.2.2 Analytical Probability of Failure of Individual Sub-areas

The analytical probability of failure of individual sub-areas was required as a basis for distributing the overall landslide frequencies (corresponding to the base-line condition).

For each sub-area, the probability of failure was calculated using Monte-Carlo simulation whereby the likelihood of failure was determined statistically by repeatedly calculating the slope stability 10,000 times, each time using a different randomly selected set of input variables. The Monte-Carlo simulations were performed with the use of the @RISK programme (commercial add-in software for random generation of input parameters) linked to a spreadsheet program for slope stability calculations assuming infinite slope condition. Details of the probabilistic analysis are given in Annex A (of Appendix A). The failure probabilities for the base-line condition are presented in Table A4.

A3.2.2.3 Distribution of Overall Landslide Frequencies to Sub-areas

Based on the analytical probabilities of failure determined in Section A3.2.2.2 and the sizes of the different sub-areas, overall landslide frequency of each landslide class was distributed spatially to the different sub-areas as follows:

$$f_i = f \times (a_i \times p_{fi}) \div (\underset{\substack{\uparrow \\ \text{For all sub-areas}}}{\Sigma} a_i \times p_{fi})$$

where f_i =Landslide frequency distributed to sub-area i
f = Overall frequency of a particular landslide hazard
a_i = Size of sub-area i
p_{fi} = Failure probability of sub-area i

The overall landslide frequencies for open hillslope landslides were distributed to all sub-areas in the hillside. The overall landslide frequencies for channelized debris flows were distributed only to sub-areas within the drainage lines. Results of the spatial distribution of landslide frequencies based on analysis data are given in Table A4.

A3.2.3 Spatial Distribution of Landslide Frequencies Based on Observed Data

The past occurrence of landslide (or landslides) within certain parts of the hillside provided an important indicator of the likelihood of potential failures at about the same area in the future. It was considered important to take into account the spatially-distributed landslide frequencies based on observed data, which were calculated based on the proportions of landslides that occurred at the different sub-areas. Results of the spatial distribution of landslide frequencies based on observed data are given in Table A4.

A3.2.4 Adopted Spatially-distributed Landslide Frequencies

The spatial distribution of landslide frequencies based on analysis data (Section A3.2.2) and observed data (Section A3.2.3) are complementary to each other. In certain cases, the observed data were considered to be more representative due to factors that could not be readily reflected in the probabilistic slope stability analysis. In other cases, the analysis data were considered to be more accurate given the unfavourable slope attributes noted, notwithstanding the lack of past landslides between 1963 and 1997.

The "observed" landslide frequency data was updated with analysis data using the Bayesian Approach. The updated landslide frequency distribution was adopted as the spatial distribution of landslide frequency in the study. The results are presented in Table A4.

A3.2.5 Example Calculations on Spatially-distributed Landslide Frequencies

The calculations on spatial distribution of landslide frequencies are illustrated in the following:

(a) Open Hillslope Landslide Failure for Sub-area 5e

Failure probability of sub-area 5e (p_f)	=	0.8568 (Annex A)
Area of sub-area 5e (a)	=	490 m² (Table A4)
Σ ($a_i \times p_{fi}$) for all sub-areas	=	16910 m² (Table A4)
Analytical frequency of Sub-area 5e (θ_a)	=	2.48% of overall landslide frequency

No previous open hillslope landslide failure was noted from sub-area 5e

Observed frequency (θ_h) = 0% of overall landslide frequency

Adopted landslide frequency = 1.24% $\times$ overall landslide frequency

(b) Channelized Debris Flow Failure for Sub-area 5e

Failure probability of sub-area 5e (p_f) = 0.8568 (Annex A)
Area of sub-area 5e (a) = 490 m² (Table A4)
Σ ($a_i \times p_{fi}$) for sub-areas within drainage lines = 12833 m² (Table A4)
Analytical frequencies of sub-area 5e (θ_a) = 3.27% of overall landslide frequency

Total channelized debris flows landslide observed = 8 (Table A2)
No. of channelized debris flows occurred in sub-area 5e = 0.3
(proportion within sub-area 5e)

Observed frequency (θ_h) = 3.75% of overall landslide frequency

Adopted landslide frequency = 3.51% $\times$ overall landslide frequency

The calculations leading to the base-line landslide frequencies at sub-area 5e for the six classes of landslides were as follows:

Table A4a - Base-line Frequencies for Sub-area 5e (Extracted from Table A4)

	Type of Failure	SOHL	MOHL	LOHL	SCDF	MCDF	LCDF
(I)	Overall landslide frequency (From Table A2)	1.03	0.06	0.006	0.29	0.09	0.06
(II)	Proportion of overall landslide frequency distributed to sub-area 5e	1.24%			3.51%		
(III)	Base-line landslide frequencies in sub-area 5e (III) = (II) $\times$ (I)	1.28E-2	7.45E-4	7.45E-5	1.02E-2	3.16E-3	2.11E-3

A3.3 Present-day Landslide Frequencies

The shotcrete applied at different parts of the hillside after the 1997 landslides represented a major change to the hillside condition. It was necessary to adjust the base-line frequencies (discussed in Section A3.2) to reflect the present-day surface condition of the hillside.

The effects of the shotcrete cover were related to the changes in the condition of surface protection against infiltration and recharge into the hillside. To reflect this changes, the analytical probability of failures (Section A3.2.2.2) was re-calculated using the updated infiltration and recharge rates pertaining to the present-day condition. The failure probabilities for the present-day condition are presented in Table A5.

Based on the ratio of the failure probabilities between the base-line condition and the present-day condition, the base-line frequencies (Table A4) were adjusted for each sub-area to become the present-day frequencies (Table A5) as follows:

$$f' = f \times (p_f' \div p_f)$$

where f' = Present-day frequency of a particular landslide class
f = Base-line frequency of the corresponding landslide class
p_f' = Failure probability for present-day condition (after 1997 landslides)
p_f = Failure probability for base-line condition (before 1997 landslides)

A3.3.1 Example Calculations on Adjusting Base-line Frequencies to Present-day Frequencies

The calculations relate to the six classes of landslides in Sub-area 5c.

Table A5a - Present-day Frequencies for Sub-area 5c (Extracted from Table A5)

	Type of Failure		SOHL	MOHL	LOHL	SCDF	MCDF	LCDF
(I)	Overall landslide frequency in sub-area 5c (From Table A4a)		8.05E-3	4.69E-4	4.69E-5	1.02E-2	3.18E-3	2.12E-3
(II)	Failure probability	Base-line condition	0.4892 (Table A4)					
(III)		Present-day condition	0.3942 (Table A5)					
(IV)	Present-day landslide frequency in sub-area 5c (IV) = (I) × [(III) ÷ (II)]		6.48E-3	3.78E-4	3.78E-5	8.25E-3	2.56E-3	1.71E-3

The present-day frequencies for different sub-areas and corresponding classes of landslides are shown in Table A5.

A3.4 Landslide Frequencies after Forthcoming Measures

The landslide frequencies after the forthcoming measures for different sub-areas and corresponding classes of landslides are shown in Table A6. Their calculations resemble the approach described above with modifications as described below.

A3.4.1 LPM Programme on Selected Slopes

It has been assumed that the selected slopes after the LPM Programme would be brought to the required safety standards and that their annual probabilities of failure would be reduced to 0.001, based on the statistics reported by landslide study reports LSR 15/99 (GEO, 1999) and LSR 8/2000 (GEO, 2000b).

A3.4.2 Regular and Proper Maintenance of Existing Shotcrete Surfacing

It has been assumed that a regular and proper maintenance programme will be implemented to prevent deterioration of the existing shotcrete surfacing (applied following the 1997 landslides). This is necessary to sustain the assessed risks for the present-day hillside condition, which has assumed that the existing shotcrete surfacing in these areas will continue to be effective to prevent direct infiltration of surface water.

A3.5 Landslide Frequencies after Additional Risk Mitigation

The additional risk mitigation measures can be preventive (by stabilising the slope) or protective (by controlling the landslide debris).

The preventive-type option (e.g. stabilising the slope) will mitigate the landslide risks by reducing the landslide frequencies. After slope stabilisation, the annual probabilities of failure of the relevant sub-areas are assumed to be reduced to 0.001 similar to LPM slope upgrading works.

The protective-type options (e.g. barrier wall at the slope toe or a series of check dams along the drainage line) will mitigate the landslide risks by reducing the potential consequences to the relevant facilities as discussed in Section B6 of Appendix B. The landslide frequencies of the sub-areas would not be changed.

The landslide frequencies after the additional risk mitigation measures are given in Table A7.

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Table A1 - Characteristics of Past Landslides

Landslide No.	GEO Landslide Record	Estimated Date of Failure	Scarp Width (m)	Scarp Length (m)	Estimated Volume of Failure (m^3)	Failure Mechanism (see Note 2)	Travel Angle (°)	Runout Distance (m)
1963-A	-	Pre 1963 (relict)	15	10	75	OHL	34	46
1963-B	-	Pre 1963 (relict)	10	10	45	OHL	31	31
1963-C	-	Pre 1963 (relict)	10	20	100	OHL	30	52
1963-D	-	Pre 1963 (relict)	15	10	75	CDF	29	51
1963-E	-	Pre 1963 (relict)	10	10	50	OHL	31	41
1969-A	-	1969	10	5	25	CDF	36	37
1973-A	-	1973	5	5	25	OHL	27	22
1973-B	-	1973	5	5	25	OHL	36	31
1973-C	-	1973	9	12	55	OHL	38	36
1973-D	NTLI 7SW-19D-78	1973	5	5	25	OHL	35	24
1974-A	NTLI 7SW-19D-80	1974	5	5	25	Surface Erosion	36	23
1977-A	-	1977	10	5	25	OHL	26	17
1981-A	-	1981	8	10	50	OHL	38	44
1981-B	-	1981	10	5	25	OHL	28	17
1981-C	Landslide Card-9/7	29 Sep 1981	10	15	250	CDF	26	67
1982-A	Landslide Card-25/7	Mid 1982	10	10	50	CDF	34	60
1987-A	-	1987	5	5	20	OHL	36	27
1987-B	-	1987	10	5	30	OHL	37	21
1991-A	-	1991	3 - 4	3	10	OHL	28	17
1993-A	MW93/6/51	16 Jun 1993	10	5	20	OHL	36	19
1993-B	-	1993	5	5	20	OHL	34	18
1997-A	MW97/6/12	4 Jun 1997	20	20	150	CDF	26	100
1997-B	MW97/6/23	4 Jun 1997	15	30	170	CDF	21	96
1997-C	MW97/7/15	2 Jul 1997	10 x 2	10	200	CDF	30	69
1997-D	MW97/7/25	2 Jul 1997	5 x 2	5	10	OHL	33	42
1997-E	MW97/7/90A	Uncertain	10	5	30	CDF	37	50
1997-F	MW97/7/90B	Uncertain	10	5	30	CDF	34	65

Notes:
(1) See Figure 2 for locations of landslides.
(2) OHL - Open hillslope landslide, CDF - Channelized debris flow.
(3) Information shown in this table is based on interpretation from aerial photographs, site reconnaissance and the GEO's landslide records (where available).
(4) Landslide Nos. 1963-A to 1963-E (inclusive) were identified on the earliest low-level aerial photographs taken in 1963. Due to uncertainty in their dates of failure, these landslide events have not been included for frequency calculation. However, the characteristics of these relict landslides have been used for establishing the debris runout model in Figure B1.

Table A2 - Past Landslide Frequencies over 35-year Period from 1963 - 1997

Open Hillslope Landslide		Number Identified	Recognition Factor	Corrected Number	Annual Frequency	Proportion of Total Annual Frequency
Small	($V < 50\ m^3$)	11	30%	36	1.03	94.0%
Medium	($50\ m^3 \leq V < 200\ m^3$)	2	90%	2	0.06	5.5%
Large	($200\ m^3 \leq V < 1000\ m^3$)	0	100%	0	0.006 (See Note 2)	0.5%
Total annual frequency of open hillslope landslides = 1.096						
Channelized Debris Flow		Number Identified	Recognition Factor	Corrected Number	Annual Frequency	Proportion of Total Annual Frequency
Small	($V < 50\ m^3$)	3	30%	10	0.29	65.9%
Medium	($50\ m^3 \leq V < 200\ m^3$)	3	90%	3	0.09	20.5%
Large	($200\ m^3 \leq V < 1000 m^3$)	2	100%	2	0.06	13.6%
Total annual frequency of channelized debris flows = 0.44						

Notes:
(1) See Table A1 for characteristics of individual landslides.
(2) There was no large open hillslope landslide over the 35-year period between 1963 and 1997. The assigned frequency of 0.006 was based on expert judgement (notionally one order of magnitude less compared to the frequency of medium open hillslope landslide).
(3) The recognition factor was applied to allow for the inefficiency of recognition resulting from the small scale of the aerial photography.

Table A3 - Summary of Slope Sub-area Data for Probabilistic Slope Stability Analysis

Slope Segment No.	Slope Sub-area No.	Slope Attributes				Infiltration & Recharge Scores (See Note 2)					
		Slope Angle	Depth of Surficial Soils	Predominant Material (see Note 1)	Channelised	Baseline condition		Present-day condition		Mitigating Discharge as Additional Mitigation (Options 1c, 2c & 3c)	
						Shotcrete not in Place before 1997 Landslides		Shotcrete applied at different areas following 1997 Landslides		Mitigating discharge from crest development of segment 3, 5 & 7	
		(°)	(m)	(F/C/R)	(Y/N)	Total Score	r_u	Total Score	r_u'	Total Score	r_u''
1	1a	29	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	1b	36	3.2	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	1c	36	3.2	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	1d	28	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	1e	29	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	1f	29	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
2	2a	32	1.5	C	Y	8	**0.17**	8	**0.17**	8	**0.17**
	2b	42	1.5	C	Y	8	**0.17**	8	**0.17**	8	**0.17**
	2c	35	2.2	R	Y	8	**0.17**	8	**0.17**	8	**0.17**
	2d	35	1.0	F	Y	8	**0.17**	8	**0.17**	8	**0.17**
3	3a	26	1.5	C	Y	12	**0.26**	11	**0.24**	7	**0.15**
	3b	32	1.3	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	3c	36	1.4	C	Y	10	**0.22**	8	**0.17**	6	**0.13**
	3d	38	1.4	C	Y	11	**0.24**	5	**0.11**	2	**0.04**
	3e	36	1.3	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	3f	36	1.8	R	Y	9	**0.20**	6	**0.13**	5	**0.11**
	3g	36	1.3	F	Y	10	**0.22**	2	**0.04**	0	**0.00**
	3h	35	1.4	F	Y	8	**0.17**	5	**0.11**	5	**0.11**
	3i	38	1.5	F	Y	11	**0.24**	3	**0.07**	0	**0.00**
	3j	38	1.5	F	N	8	**0.17**	8	**0.17**	8	**0.17**
4	4a	36	1.0	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	4b	36	1.0	C	N	10	**0.22**	10	**0.22**	10	**0.22**
	4c	36	2.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	4d	36	2.5	C	N	10	**0.22**	10	**0.22**	10	**0.22**
	4e	30	2.5	F	N	5	**0.11**	5	**0.11**	5	**0.11**
5	5a	34	1.7	C	Y	10	**0.22**	8	**0.17**	6	**0.13**
	5b	30	1.1	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	5c	38	1.7	C	Y	10	**0.22**	7	**0.15**	5	**0.11**
	5d	31	1.7	C	Y	8	**0.17**	4	**0.09**	4	**0.09**
	5e	30	3.6	F	Y	5	**0.11**	5	**0.11**	4	**0.09**
	5f	33	2.7	F	Y	8	**0.17**	0	**0.00**	0	**0.00**
	5g	34	1.0	F	Y	8	**0.17**	6	**0.13**	6	**0.13**
6	6a	32	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	6b	28	1.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	6c	35	0.5	C	N	8	**0.17**	8	**0.17**	8	**0.17**
7	7a	28	0.7	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	7b	33	2.6	C	Y	11	**0.24**	3	**0.07**	0	**0.00**
	7c	28	0.7	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	7d	30	1.1	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	7e	42	2.6	C	Y	10	**0.22**	5	**0.11**	3	**0.07**
	7f	33	2.6	C	Y	9	**0.20**	6	**0.13**	5	**0.11**
	7g	29	1.1	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	7h	34	1.0	F	N	10	**0.22**	10	**0.22**	8	**0.17**
	7i	43	1.0	F	Y	10	**0.22**	2	**0.04**	0	**0.00**
	7j	39	1.8	F	Y	9	**0.20**	3	**0.07**	2	**0.04**
	7k	39	1.0	R	N	8	**0.17**	8	**0.17**	8	**0.17**
8	8a	35	1.6	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	8b	28	1.6	C	Y	8	**0.17**	4	**0.09**	4	**0.09**
	8c	35	1.6	C	N	9	**0.20**	9	**0.20**	9	**0.20**
	8d	45	1.8	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	8e	39	1.0	R	N	8	**0.17**	8	**0.17**	8	**0.17**
	8f	39	1.8	F	Y	8	**0.17**	4	**0.09**	4	**0.09**
	8g	36	1.4	F	N	9	**0.20**	7	**0.15**	7	**0.15**
9	9a	31	1.6	C	N	9	**0.20**	9	**0.20**	9	**0.20**
	9b	36	1.2	C	Y	10	**0.22**	5	**0.11**	5	**0.11**
	9c	31	2.0	C	N	8	**0.17**	8	**0.17**	8	**0.17**
	9d	32	1.2	F	N	9	**0.20**	9	**0.20**	9	**0.20**
	9e	40	1.2	F	Y	9	**0.20**	1	**0.02**	1	**0.02**
	9f	34	1.5	F	Y	10	**0.22**	7	**0.15**	7	**0.15**
	9g	35	1.5	F	N	8	**0.17**	8	**0.17**	8	**0.17**
10	10a	42	1.8	C	Y	8	**0.17**	8	**0.17**	8	**0.17**
	10b	34	1.3	F	Y	8	**0.17**	8	**0.17**	8	**0.17**
11	11a	38	1.3	R	Y	5	**0.11**	5	**0.11**	5	**0.11**
	11b	40	1.0	R	N	8	**0.17**	8	**0.17**	8	**0.17**
	11c	40	1.3	F	Y	8	**0.17**	8	**0.17**	8	**0.17**

Notes:
(1) Predominant Material: F = Fill, C = Colluvium, R = Residual Soil.
(2) Refer to Annex A of Appendix A for details of Infiltration & Recharge Rating System and the breakdown of infiltration and recharge scores.
(3) The reference r_u value (0.24) at subarea 3i was based on that back-calculated from MW97/6/23, see Annex A of Appendix A for details.
(4) For ease of reference, scores that have been adjusted to reflect changes in infiltration & recharge conditions after 1997 have been highlighted.

Table A4 - Base-line Landslide Frequencies for Different Hazards (Sheet 1 of 2)

Slope Segment No.	Slope Sub-area No.	Channelisation	Area - a (m^2)	Failure Probability - p_f	Open Hillslope Landslides						Channelized Debris Flows					
					Spatial Distribution (% of Overall Landslide Frequency)			Annual Frequency - f			Spatial Distribution (% of Overall Landslide Frequency)			Annual Frequency - f		
					Analytical - θ_a	Observed - θ_h	Adopted - θ	Small Total (1.03 /yr)	Medium Total (0.06 /yr)	Large Total (0.006 /yr)	Analytical - θ_a	Observed - θ_h	Adopted - θ	Small Total (0.29 /yr)	Medium Total (0.09 /yr)	Large Total (0.06 /yr)
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**	**(k)**	**(l)**	**(m)**	**(n)**	**(o)**	**(p)**	**(q)**
1	1a	N	920	0.0016	0.01%	0.00%	0.00%	4.48E-05	2.61E-06	2.61E-07	-	-	-	-	-	-
	1b	N	590	0.5530	1.93%	0.00%	0.96%	9.94E-03	5.79E-04	5.79E-05	-	-	-	-	-	-
	1c	N	600	0.5407	1.92%	0.00%	0.96%	9.88E-03	5.76E-04	5.76E-05	-	-	-	-	-	-
	1d	N	650	0.0005	0.00%	0.00%	0.00%	9.90E-06	5.77E-07	5.77E-08	-	-	-	-	-	-
	1e	N	420	0.0027	0.01%	0.00%	0.00%	3.45E-05	2.01E-06	2.01E-07	-	-	-	-	-	-
	1f	N	400	0.0016	0.00%	0.00%	0.00%	1.95E-05	1.14E-06	1.14E-07	-	-	-	-	-	-
2	2a	Y	1360	0.0542	0.44%	0.00%	0.22%	2.24E-03	1.31E-04	1.31E-05	0.57%	0.00%	0.29%	8.33E-04	2.58E-04	1.72E-04
	2b	Y	1770	0.5758	6.03%	8.20%	7.11%	7.33E-02	4.27E-03	4.27E-04	7.94%	0.00%	3.97%	1.15E-02	3.57E-03	2.38E-03
	2c	Y	1310	0.0517	0.40%	0.00%	0.20%	2.06E-03	1.20E-04	1.20E-05	0.53%	0.00%	0.26%	7.65E-04	2.37E-04	1.58E-04
	2d	Y	190	0.8140	0.91%	3.28%	2.10%	2.16E-02	1.26E-03	1.26E-04	1.21%	0.00%	0.60%	1.75E-03	5.42E-04	3.62E-04
3	3a	Y	1800	0.0010	0.01%	0.00%	0.01%	5.48E-05	3.19E-06	3.19E-07	0.01%	0.00%	0.01%	2.03E-05	6.31E-06	4.21E-06
	3b	N	870	0.0491	0.25%	0.00%	0.13%	1.30E-03	7.58E-05	7.58E-06	-	-	-	-	-	-
	3c	Y	2170	0.2982	3.83%	3.28%	3.55%	3.66E-02	2.13E-03	2.13E-04	5.04%	6.88%	5.96%	1.73E-02	5.36E-03	3.58E-03
	3d	Y	860	0.4168	2.12%	5.74%	3.93%	4.05E-02	2.36E-03	2.36E-04	2.79%	5.00%	3.90%	1.13E-02	3.51E-03	2.34E-03
	3e	N	770	0.2303	1.05%	0.00%	0.52%	5.40E-03	3.15E-04	3.15E-05	-	-	-	-	-	-
	3f	Y	520	0.0557	0.17%	0.00%	0.09%	8.82E-04	5.14E-05	5.14E-06	0.23%	0.00%	0.11%	3.27E-04	1.02E-04	6.77E-05
	3g	Y	390	0.9836	2.27%	0.00%	1.13%	1.17E-02	6.81E-04	6.81E-05	2.99%	5.63%	4.31%	1.25E-02	3.88E-03	2.58E-03
	3h	Y	1050	0.9379	5.82%	4.10%	4.96%	5.11E-02	2.98E-03	2.98E-04	7.67%	0.00%	3.84%	1.11E-02	3.45E-03	2.30E-03
	3i	Y	1150	0.9998	6.80%	11.48%	9.14%	9.41E-02	5.48E-03	5.48E-04	8.96%	7.50%	8.23%	2.39E-02	7.41E-03	4.94E-03
	3j	N	410	0.9997	2.42%	0.00%	1.21%	1.25E-02	7.27E-04	7.27E-05	-	-	-	-	-	-
4	4a	N	80	0.1733	0.08%	0.00%	0.04%	4.22E-04	2.46E-05	2.46E-06	-	-	-	-	-	-
	4b	N	710	0.2060	0.86%	0.00%	0.43%	4.45E-03	2.59E-04	2.59E-05	-	-	-	-	-	-
	4c	N	230	0.4376	0.60%	0.00%	0.30%	3.07E-03	1.79E-04	1.79E-05	-	-	-	-	-	-
	4d	N	560	0.5279	1.75%	0.00%	0.87%	9.00E-03	5.24E-04	5.24E-05	-	-	-	-	-	-
	4e	N	180	0.0910	0.10%	0.00%	0.05%	4.99E-04	2.91E-05	2.91E-06	-	-	-	-	-	-
5	5a	Y	450	0.2262	0.60%	0.00%	0.30%	3.10E-03	1.81E-04	1.81E-05	0.79%	0.00%	0.40%	1.15E-03	3.57E-04	2.38E-04
	5b	N	370	0.0054	0.01%	0.00%	0.01%	6.08E-05	3.54E-06	3.54E-07	-	-	-	-	-	-
	5c	Y	540	0.4892	1.56%	0.00%	0.78%	8.05E-03	4.69E-04	4.69E-05	2.06%	5.00%	3.53%	1.02E-02	3.18E-03	2.12E-03
	5d	Y	290	0.0251	0.04%	0.00%	0.02%	2.22E-04	1.29E-05	1.29E-06	0.06%	0.00%	0.03%	8.22E-05	2.55E-05	1.70E-05
	5e	Y	490	0.8568	2.48%	0.00%	1.24%	1.28E-02	7.45E-04	7.45E-05	3.27%	3.75%	3.51%	1.02E-02	3.16E-03	2.11E-03
	5f	Y	290	0.9934	1.70%	0.00%	0.85%	8.77E-03	5.11E-04	5.11E-05	2.24%	15.00%	8.62%	2.50E-02	7.76E-03	5.17E-03
	5g	Y	290	0.6869	1.18%	4.51%	2.84%	2.93E-02	1.71E-03	1.71E-04	1.55%	1.25%	1.40%	4.06E-03	1.26E-03	8.41E-04
6	6a	N	660	0.0040	0.02%	0.00%	0.01%	8.04E-05	4.68E-06	4.68E-07	-	-	-	-	-	-
	6b	N	640	0.0002	0.00%	0.00%	0.00%	3.90E-06	2.27E-07	2.27E-08	-	-	-	-	-	-
	6c	N	810	0.0675	0.32%	0.00%	0.16%	1.67E-03	9.70E-05	9.70E-06	-	-	-	-	-	-
7	7a	N	720	0.0006	0.00%	0.00%	0.00%	1.32E-05	7.66E-07	7.66E-08	-	-	-	-	-	-
	7b	Y	1070	0.2972	1.88%	0.00%	0.94%	9.68E-03	5.64E-04	5.64E-05	2.48%	0.00%	1.24%	3.59E-03	1.12E-03	7.43E-04
	7c	N	490	0.0002	0.00%	0.00%	0.00%	2.98E-06	1.74E-07	1.74E-08	-	-	-	-	-	-
	7d	N	720	0.0051	0.02%	0.00%	0.01%	1.12E-04	6.51E-06	6.51E-07	-	-	-	-	-	-
	7e	Y	990	0.9576	5.61%	9.84%	7.72%	7.95E-02	4.63E-03	4.63E-04	7.39%	7.50%	7.44%	2.16E-02	6.70E-03	4.47E-03
	7f	Y	680	0.2155	0.87%	0.00%	0.43%	4.46E-03	2.60E-04	2.60E-05	1.14%	0.00%	0.57%	1.66E-03	5.14E-04	3.43E-04
	7g	N	680	0.0012	0.00%	0.00%	0.00%	2.49E-05	1.45E-06	1.45E-07	-	-	-	-	-	-
	7h	N	330	0.7907	1.54%	3.69%	2.62%	2.69E-02	1.57E-03	1.57E-04	-	-	-	-	-	-
	7i	Y	650	1.0000	3.84%	6.56%	5.20%	5.36E-02	3.12E-03	3.12E-04	5.06%	5.00%	5.03%	1.46E-02	4.53E-03	3.02E-03
	7j	Y	570	1.0000	3.37%	8.20%	5.78%	5.96E-02	3.47E-03	3.47E-04	4.44%	0.00%	2.22%	6.44E-03	2.00E-03	1.33E-03
	7k	N	400	0.0001	0.00%	0.00%	0.00%	1.22E-06	7.10E-08	7.10E-09	-	-	-	-	-	-

Table A4 - Base-line Landslide Frequencies for Different Hazards (Sheet 2 of 2)

Slope Segment No.	Slope Sub-area No.	Channelisation	Area - a (m^2)	Failure Probability - p_f	Open Hillslope Landslides						Channelized Debris Flows					
					Spatial Distribution (% of Overall Landslide Frequency)			Annual Frequency - f			Spatial Distribution (% of Overall Landslide Frequency)			Annual Frequency - f		
					Analytical - θ_a	Observed - θ_h	Adopted - θ	Small Total (1.03 /yr)	Medium Total (0.06 /yr)	Large Total (0.006 /yr)	Analytical - θ_a	Observed - θ_h	Adopted - θ	Small Total (0.29 /yr)	Medium Total (0.09 /yr)	Large Total (0.06 /yr)
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**	**(k)**	**(l)**	**(m)**	**(n)**	**(o)**	**(p)**	**(q)**
8	8a	N	1710	0.2151	2.18%	0.00%	1.09%	1.12E-02	6.53E-04	6.53E-05	-	-	-	-	-	-
	8b	Y	700	0.0002	0.00%	0.00%	0.00%	4.26E-06	2.48E-07	2.48E-08	0.00%	2.50%	1.25%	3.63E-03	1.13E-03	7.50E-04
	8c	N	690	0.2497	1.02%	0.00%	0.51%	5.25E-03	3.06E-04	3.06E-05	-	-	-	-	-	-
	8d	N	670	0.8457	3.35%	7.38%	5.36%	5.52E-02	3.22E-03	3.22E-04	-	-	-	-	-	-
	8e	N	210	0.0001	0.00%	0.00%	0.00%	6.40E-07	3.73E-08	3.73E-09	-	-	-	-	-	-
	8f	Y	1040	1.0000	6.15%	9.02%	7.58%	7.81E-02	4.55E-03	4.55E-04	8.10%	10.00%	9.05%	2.63E-02	8.15E-03	5.43E-03
	8g	N	350	0.9849	2.04%	0.00%	1.02%	1.05E-02	6.12E-04	6.12E-05	-	-	-	-	-	-
9	9a	N	800	0.0468	0.22%	0.00%	0.11%	1.14E-03	6.64E-05	6.64E-06	-	-	-	-	-	-
	9b	Y	1340	0.2594	2.06%	0.00%	1.03%	1.06E-02	6.17E-04	6.17E-05	2.71%	5.00%	3.85%	1.12E-02	3.47E-03	2.31E-03
	9c	N	1070	0.0325	0.21%	0.00%	0.10%	1.06E-03	6.17E-05	6.17E-06	-	-	-	-	-	-
	9d	N	140	0.5474	0.45%	0.00%	0.23%	2.33E-03	1.36E-04	1.36E-05	-	-	-	-	-	-
	9e	Y	270	1.0000	1.60%	0.00%	0.80%	8.22E-03	4.79E-04	4.79E-05	2.10%	3.75%	2.93%	8.49E-03	2.63E-03	1.76E-03
	9f	Y	880	0.9216	4.80%	6.56%	5.68%	5.85E-02	3.41E-03	3.41E-04	6.32%	3.75%	5.03%	1.46E-02	4.53E-03	3.02E-03
	9g	N	310	0.9485	1.74%	1.64%	1.69%	1.74E-02	1.01E-03	1.01E-04	-	-	-	-	-	-
10	10a	Y	1440	0.6873	5.85%	6.56%	6.21%	6.39E-02	3.72E-03	3.72E-04	7.71%	12.50%	10.11%	2.93E-02	9.10E-03	6.06E-03
	10b	Y	210	0.8185	1.02%	0.00%	0.51%	5.23E-03	3.05E-04	3.05E-05	1.34%	0.00%	0.67%	1.94E-03	6.03E-04	4.02E-04
11	11a	Y	850	0.0002	0.00%	0.00%	0.00%	5.18E-06	3.02E-07	3.02E-08	0.00%	0.00%	0.00%	1.92E-06	5.96E-07	3.97E-07
	11b	N	1200	0.0002	0.00%	0.00%	0.00%	7.31E-06	4.26E-07	4.26E-08	-	-	-	-	-	-
	11c	Y	420	1.0000	2.48%	0.00%	1.24%	1.28E-02	7.45E-04	7.45E-05	3.27%	0.00%	1.64%	4.75E-03	1.47E-03	9.82E-04

Notes:

(1) The locations of slope segments (a) and slope sub-areas (b) are shown in Figure A2.

(2) The landslide debris is channelized (c) only for "Channelized Debris Flow" failure.

(3) The analytical failure probabilities (e) were determined from probabilistic slope stability analysis based on the base-line conditions. The details of calculations are given in Annex A.

(4) The analytical failure frequency, θ_a, for open hillslope landslide (f) in a particular sub-area is determined as follows:

$$\theta_a = (a_i \times p_{fi}) \div \sum (a_i \times p_{fi})$$

where a_i = area of slope subarea i (d)

p_{fi} = failure probability of slope subarea i (e)

(5) The observed failure frequency, θh, for open hillslope landslide (g) is the proportion of the total number of past failures at each slope subarea.

(6) The adopted failure frequency, θ (h) was obtained by averaging the analytical failure frequency θa (f) and the observed failure frequency, θ_h (g) which is based on the Bayesian approach, in this case, it happens to be an average.

(7) For each slope subarea, the annual frequencies for small open hillslope landslide (i), medium open hillslope landslide (j) and large open hillslope landslide (k) were obtained by multiplying the corresponding overall landslide frequencies (Table A2) with θ (h).

(8) (l) to (q) for channelized debris flows were determined using the same approach as for open hillslope landslide in (f) to (k) except that it is applicable to channelized sub-areas in (c) only.

Table A5 - Present-day Landslide Frequencies for Different Hazards (Sheet 1 of 2)

Slope Segment No.	Slope Sub-area No.	Failure Probability (p_f ')	Annual Frequency (f ')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
1	1a	0.0016	4.48E-05	2.61E-06	2.61E-07	-	-	-
	1b	0.5530	9.94E-03	5.79E-04	5.79E-05	-	-	-
	1c	0.5407	9.88E-03	5.76E-04	5.76E-05	-	-	-
	1d	0.0005	9.90E-06	5.77E-07	5.77E-08	-	-	-
	1e	0.0027	3.45E-05	2.01E-06	2.01E-07	-	-	-
	1f	0.0016	1.95E-05	1.14E-06	1.14E-07	-	-	-
2	2a	0.0542	2.24E-03	1.31E-04	1.31E-05	8.33E-04	2.58E-04	1.72E-04
	2b	0.5758	7.33E-02	4.27E-03	4.27E-04	1.15E-02	3.57E-03	2.38E-03
	2c	0.0517	2.06E-03	1.20E-04	1.20E-05	7.65E-04	2.37E-04	1.58E-04
	2d	0.8139	2.16E-02	1.26E-03	1.26E-04	1.75E-03	5.42E-04	3.62E-04
3	3a	0.0002	1.10E-05	6.39E-07	6.39E-08	4.07E-06	1.26E-06	8.42E-07
	3b	0.0491	1.30E-03	7.58E-05	7.58E-06	-	-	-
	3c	0.2430	2.98E-02	1.74E-03	1.74E-04	1.41E-02	4.37E-03	2.91E-03
	3d	0.2763	2.68E-02	1.56E-03	1.56E-04	7.49E-03	2.32E-03	1.55E-03
	3e	0.2303	5.40E-03	3.15E-04	3.15E-05	-	-	-
	3f	0.0062	9.82E-05	5.72E-06	5.72E-07	3.64E-05	1.13E-05	7.54E-06
	3g	0.7864	9.34E-03	5.44E-04	5.44E-05	9.99E-03	3.10E-03	2.07E-03
	3h	0.8968	4.89E-02	2.85E-03	2.85E-04	1.06E-02	3.30E-03	2.20E-03
	3i	0.9990	9.40E-02	5.48E-03	5.48E-04	2.38E-02	7.40E-03	4.93E-03
	3j	0.9997	1.25E-02	7.27E-04	7.27E-05	-	-	-
4	4a	0.1733	4.22E-04	2.46E-05	2.46E-06	-	-	-
	4b	0.2060	4.45E-03	2.59E-04	2.59E-05	-	-	-
	4c	0.4376	3.07E-03	1.79E-04	1.79E-05	-	-	-
	4d	0.5279	9.00E-03	5.24E-04	5.24E-05	-	-	-
	4e	0.0909	4.98E-04	2.90E-05	2.90E-06	-	-	-
5	5a	0.2262	3.10E-03	1.81E-04	1.81E-05	1.15E-03	3.57E-04	2.38E-04
	5b	0.0054	6.08E-05	3.54E-06	3.54E-07	-	-	-
	5c	0.3942	6.48E-03	3.78E-04	3.78E-05	8.25E-03	2.56E-03	1.71E-03
	5d	0.0251	2.22E-04	1.29E-05	1.29E-06	8.22E-05	2.55E-05	1.70E-05
	5e	0.8568	1.28E-02	7.45E-04	7.45E-05	1.02E-02	3.16E-03	2.11E-03
	5f	0.8116	7.17E-03	4.18E-04	4.18E-05	2.04E-02	6.34E-03	4.23E-03
	5g	0.5772	2.46E-02	1.43E-03	1.43E-04	3.41E-03	1.06E-03	7.06E-04
6	6a	0.0040	8.04E-05	4.68E-06	4.68E-07	-	-	-
	6b	0.0002	3.90E-06	2.27E-07	2.27E-08	-	-	-
	6c	0.0675	1.67E-03	9.70E-05	9.70E-06	-	-	-
7	7a	0.0006	1.32E-05	7.66E-07	7.66E-08	-	-	-
	7b	0.0310	1.01E-03	5.88E-05	5.88E-06	3.75E-04	1.16E-04	7.75E-05
	7c	0.0002	2.98E-06	1.74E-07	1.74E-08	-	-	-
	7d	0.0051	1.12E-04	6.51E-06	6.51E-07	-	-	-
	7e	0.8593	7.14E-02	4.16E-03	4.16E-04	1.94E-02	6.01E-03	4.01E-03
	7f	0.0948	1.96E-03	1.14E-04	1.14E-05	7.28E-04	2.26E-04	1.51E-04
	7g	0.0012	2.49E-05	1.45E-06	1.45E-07	-	-	-
	7h	0.7906	2.69E-02	1.57E-03	1.57E-04	-	-	-
	7i	1.0000	5.36E-02	3.12E-03	3.12E-04	1.46E-02	4.53E-03	3.02E-03
	7j	1.0000	5.96E-02	3.47E-03	3.47E-04	6.44E-03	2.00E-03	1.33E-03
	7k	0.0001	1.22E-06	7.10E-08	7.10E-09	-	-	-

Table A5 - Present-day Landslide Frequencies for Different Hazards (Sheet 2 of 2)

Slope Segment No.	Slope Sub-area No.	Failure Probability (p_f ')	Annual Frequency (f ')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
8	8a	0.2151	1.12E-02	6.53E-04	6.53E-05	-	-	-
	8b	0.0002	4.26E-06	2.48E-07	2.48E-08	3.63E-03	1.13E-03	7.50E-04
	8c	0.2497	5.25E-03	3.06E-04	3.06E-05	-	-	-
	8d	0.8457	5.52E-02	3.22E-03	3.22E-04	-	-	-
	8e	0.0001	6.40E-07	3.73E-08	3.73E-09	-	-	-
	8f	1.0000	7.81E-02	4.55E-03	4.55E-04	2.63E-02	8.15E-03	5.43E-03
	8g	0.9724	1.04E-02	6.04E-04	6.04E-05	-	-	-
9	9a	0.0468	1.14E-03	6.64E-05	6.64E-06	-	-	-
	9b	0.1117	4.56E-03	2.66E-04	2.66E-05	4.81E-03	1.49E-03	9.96E-04
	9c	0.0325	1.06E-03	6.17E-05	6.17E-06	-	-	-
	9d	0.5474	2.33E-03	1.36E-04	1.36E-05	-	-	-
	9e	0.9999	8.22E-03	4.79E-04	4.79E-05	8.49E-03	2.63E-03	1.76E-03
	9f	0.8363	5.31E-02	3.09E-03	3.09E-04	1.32E-02	4.11E-03	2.74E-03
	9g	0.9485	1.74E-02	1.01E-03	1.01E-04	-	-	-
10	10a	0.6873	6.39E-02	3.72E-03	3.72E-04	2.93E-02	9.10E-03	6.06E-03
	10b	0.8185	5.23E-03	3.05E-04	3.05E-05	1.94E-03	6.03E-04	4.02E-04
11	11a	0.0002	5.18E-06	3.02E-07	3.02E-08	1.92E-06	5.96E-07	3.97E-07
	11b	0.0002	7.31E-06	4.26E-07	4.26E-08	-	-	-
	11c	1.0000	1.28E-02	7.45E-04	7.45E-05	4.75E-03	1.47E-03	9.82E-04

Notes:

(1) The failure probabilities (c) were determined from probabilistic slope stability analysis based on the "present-day condition".

(2) For each slope subarea, the present-day frequencies for open hillslope landslide (d), medium open hillslope landslide (e) and large open hillslope landslide (f) were obtained by scaling the corresponding baseline frequencies (Table A4) with respect to the ratio of failure probability for the base-line condition and failure probability for the present-day condition as follows:

$$f' = f \times (p_f' \div p_f)$$

where f' = present-day frequency (d) to (f)
f = corresponding baseline frequency (Table A4)
p_f' = failure probability for the present-day condition (c)
p_f = failure probability for the base-line condition (Table A4)

(3) Columns (g) to (i) for channelized debris flows were determined using the same approach as for open hillslope landslide in columns (d) to (f) except that it is applicable to channelized sub-areas only.

Table A6 - Landslide Frequencies after Forthcoming Measures (Sheet 1 of 2)

Slope Segment No.	Slope Sub-area No.	% of LPM slope within subarea (r")	Annual Frequency (f ')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
1	1a	0%	4.48E-05	2.61E-06	2.61E-07	-	-	-
	1b	0%	9.94E-03	5.79E-04	5.79E-05	-	-	-
	1c	0%	9.88E-03	5.76E-04	5.76E-05	-	-	-
	1d	0%	9.90E-06	5.77E-07	5.77E-08	-	-	-
	1e	0%	3.45E-05	2.01E-06	2.01E-07	-	-	-
	1f	0%	1.95E-05	1.14E-06	1.14E-07	-	-	-
2	2a	0%	2.24E-03	1.31E-04	1.31E-05	8.33E-04	2.58E-04	1.72E-04
	2b	0%	7.33E-02	4.27E-03	4.27E-04	1.15E-02	3.57E-03	2.38E-03
	2c	0%	2.06E-03	1.20E-04	1.20E-05	7.65E-04	2.37E-04	1.58E-04
	2d	0%	2.16E-02	1.26E-03	1.26E-04	1.75E-03	5.42E-04	3.62E-04
3	3a	0%	1.10E-05	6.39E-07	6.39E-08	4.07E-06	1.26E-06	8.42E-07
	3b	0%	1.30E-03	7.58E-05	7.58E-06	-	-	-
	3c	0%	2.98E-02	1.74E-03	1.74E-04	1.41E-02	4.37E-03	2.91E-03
	3d	0%	2.68E-02	1.56E-03	1.56E-04	7.49E-03	2.32E-03	1.55E-03
	3e	15%	4.59E-03	2.68E-04	2.68E-05	-	-	-
	3f	0%	9.82E-05	5.72E-06	5.72E-07	3.64E-05	1.13E-05	7.54E-06
	3g	0%	9.34E-03	5.44E-04	5.44E-05	9.99E-03	3.10E-03	2.07E-03
	3h	0%	4.89E-02	2.85E-03	2.85E-04	1.06E-02	3.30E-03	2.20E-03
	3i	0%	9.40E-02	5.48E-03	5.48E-04	2.38E-02	7.40E-03	4.93E-03
	3j	84%	2.01E-03	1.17E-04	1.17E-05	-	-	-
4	4a	0%	4.22E-04	2.46E-05	2.46E-06	-	-	-
	4b	10%	4.01E-03	2.34E-04	2.34E-05	-	-	-
	4c	0%	3.07E-03	1.79E-04	1.79E-05	-	-	-
	4d	0%	9.00E-03	5.24E-04	5.24E-05	-	-	-
	4e	100%	5.48E-06	3.19E-07	3.19E-08	-	-	-
5	5a	0%	3.10E-03	1.81E-04	1.81E-05	1.15E-03	3.57E-04	2.38E-04
	5b	0%	6.08E-05	3.54E-06	3.54E-07	-	-	-
	5c	5%	6.16E-03	3.59E-04	3.59E-05	7.84E-03	2.43E-03	1.62E-03
	5d	0%	2.22E-04	1.29E-05	1.29E-06	8.22E-05	2.55E-05	1.70E-05
	5e	68%	4.10E-03	2.39E-04	2.39E-05	3.27E-03	1.01E-03	6.76E-04
	5f	30%	5.02E-03	2.92E-04	2.92E-05	1.43E-02	4.44E-03	2.96E-03
	5g	0%	2.46E-02	1.43E-03	1.43E-04	3.41E-03	1.06E-03	7.06E-04
6	6a	0%	8.04E-05	4.68E-06	4.68E-07	-	-	-
	6b	0%	3.90E-06	2.27E-07	2.27E-08	-	-	-
	6c	0%	1.67E-03	9.70E-05	9.70E-06	-	-	-
7	7a	0%	1.32E-05	7.66E-07	7.66E-08	-	-	-
	7b	0%	1.01E-03	5.88E-05	5.88E-06	3.75E-04	1.16E-04	7.75E-05
	7c	0%	2.98E-06	1.74E-07	1.74E-08	-	-	-
	7d	0%	1.12E-04	6.51E-06	6.51E-07	-	-	-
	7e	13%	6.21E-02	3.62E-03	3.62E-04	1.69E-02	5.23E-03	3.49E-03
	7f	19%	1.59E-03	9.29E-05	9.29E-06	5.91E-04	1.84E-04	1.22E-04
	7g	0%	2.49E-05	1.45E-06	1.45E-07	-	-	-
	7h	0%	2.69E-02	1.57E-03	1.57E-04	-	-	-
	7i	60%	2.15E-02	1.25E-03	1.25E-04	5.85E-03	1.81E-03	1.21E-03
	7j	100%	5.96E-05	3.47E-06	3.47E-07	6.44E-06	2.00E-06	1.33E-06
	7k	0%	1.22E-06	7.10E-08	7.10E-09	-	-	-

Table A6 - Landslide Frequencies after Forthcoming Measures (Sheet 2 of 2)

Slope Segment No.	Slope Sub-area No.	% of LPM slope within subarea (r'')	Annual Frequency (f ')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**
8	8a	0%	1.12E-02	6.53E-04	6.53E-05	-	-	-
	8b	0%	4.26E-06	2.48E-07	2.48E-08	3.63E-03	1.13E-03	7.50E-04
	8c	0%	5.25E-03	3.06E-04	3.06E-05	-	-	-
	8d	0%	5.52E-02	3.22E-03	3.22E-04	-	-	-
	8e	0%	6.40E-07	3.73E-08	3.73E-09	-	-	-
	8f	100%	7.81E-05	4.55E-06	4.55E-07	2.63E-05	8.15E-06	5.43E-06
	8g	100%	1.07E-05	6.21E-07	6.21E-08	-	-	-
9	9a	0%	1.14E-03	6.64E-05	6.64E-06	-	-	-
	9b	35%	2.98E-03	1.73E-04	1.73E-05	3.14E-03	9.76E-04	6.50E-04
	9c	0%	1.06E-03	6.17E-05	6.17E-06	-	-	-
	9d	0%	2.33E-03	1.36E-04	1.36E-05	-	-	-
	9e	100%	8.22E-06	4.79E-07	4.79E-08	8.49E-06	2.63E-06	1.76E-06
	9f	70%	1.60E-02	9.30E-04	9.30E-05	3.99E-03	1.24E-03	8.25E-04
	9g	100%	1.83E-05	1.07E-06	1.07E-07	-	-	-
10	10a	0%	6.39E-02	3.72E-03	3.72E-04	2.93E-02	9.10E-03	6.06E-03
	10b	0%	5.23E-03	3.05E-04	3.05E-05	1.94E-03	6.03E-04	4.02E-04
11	11a	0%	5.18E-06	3.02E-07	3.02E-08	1.92E-06	5.96E-07	3.97E-07
	11b	0%	7.31E-06	4.26E-07	4.26E-08	-	-	-
	11c	0%	1.28E-02	7.45E-04	7.45E-05	4.75E-03	1.47E-03	9.82E-04

Notes:

(1) The failure probabilities of man-made slope feature upon completion of LPM works would be reduced to 0.001 (as shown in the equation in Note 2), based on the statistics presented in GEO's landslide study reports LSR 15/99 (GEO, 1999) and LSR 8/2000 (GEO, 2000c).

(2) The landslide frequencies upon completion of forthcoming measures were calculated as follows:

$$f'' = f' \times [(1 - r'') + (0.001 \div p_f') \times r'']$$

where f' = landslide frequency upon completion of measures (d) to (f)
f = present-day landslide frequency (Table A5)
p_f' = failure probability for the present-day condition (Table A5)
r'' = % of LPM slope within the subarea (c)

(3) Columns (g) to (i) for channelized debris flows were determined using the same approach as for open hillslope landslide in columns (d) to (f) except that it is applicable to the channaelized sub-areas only.

Table A7 - Landslide Frequencies after Mitigating Discharges from Crest Developments as Additional Mitigation Measure Options (Sheet 1 of 2)

Slope Segment No.	Slope Sub-area No.	Failure Probability after Mitigation of Discharges (pf ")	% of LPM slope within subarea (r")	Annual Frequency (f "'$_o$)					
				Open Hillslope Landslides			Channelized Debris Flow		
				Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**
1	1a	0.0016	0%	4.48E-05	2.61E-06	2.61E-07	-	-	-
	1b	0.5530	0%	9.94E-03	5.79E-04	5.79E-05	-	-	-
	1c	0.5407	0%	9.88E-03	5.76E-04	5.76E-05	-	-	-
	1d	0.0005	0%	9.90E-06	5.77E-07	5.77E-08	-	-	-
	1e	0.0027	0%	3.45E-05	2.01E-06	2.01E-07	-	-	-
	1f	0.0016	0%	1.95E-05	1.14E-06	1.14E-07	-	-	-
2	2a	0.0542	0%	2.24E-03	1.31E-04	1.31E-05	8.33E-04	2.58E-04	1.72E-04
	2b	0.5758	0%	7.33E-02	4.27E-03	4.27E-04	1.15E-02	3.57E-03	2.38E-03
	2c	0.0517	0%	2.06E-03	1.20E-04	1.20E-05	7.65E-04	2.37E-04	1.58E-04
	2d	0.8139	0%	2.16E-02	1.26E-03	1.26E-04	1.75E-03	5.42E-04	3.62E-04
3	3a	0.0000	0%	1.10E-06	6.39E-08	6.39E-09	4.07E-07	1.26E-07	8.42E-08
	3b	0.0491	0%	1.30E-03	7.58E-05	7.58E-06	-	-	-
	3c	0.1983	0%	2.43E-02	1.42E-03	1.42E-04	1.15E-02	3.57E-03	2.38E-03
	3d	0.1976	0%	1.92E-02	1.12E-03	1.12E-04	5.36E-03	1.66E-03	1.11E-03
	3e	0.2303	15%	4.59E-03	2.68E-04	2.68E-05	-	-	-
	3f	0.0020	0%	3.17E-05	1.85E-06	1.85E-07	1.18E-05	3.65E-06	2.43E-06
	3g	0.6557	0%	7.79E-03	4.54E-04	4.54E-05	8.33E-03	2.58E-03	1.72E-03
	3h	0.8968	0%	4.89E-02	2.85E-03	2.85E-04	1.06E-02	3.30E-03	2.20E-03
	3i	0.9782	0%	9.21E-02	5.36E-03	5.36E-04	2.34E-02	7.25E-03	4.83E-03
	3j	0.9997	84%	2.01E-03	1.17E-04	1.17E-05	-	-	-
4	4a	0.1733	0%	4.22E-04	2.46E-05	2.46E-06	-	-	-
	4b	0.1690	10%	4.01E-03	2.34E-04	2.34E-05	-	-	-
	4c	0.4376	0%	3.07E-03	1.79E-04	1.79E-05	-	-	-
	4d	0.4313	0%	9.00E-03	5.24E-04	5.24E-05	-	-	-
	4e	0.0481	100%	5.48E-06	3.19E-07	3.19E-08	-	-	-
5	5a	0.1669	0%	2.29E-03	1.33E-04	1.33E-05	8.49E-04	2.63E-04	1.76E-04
	5b	0.0054	0%	6.08E-05	3.54E-06	3.54E-07	-	-	-
	5c	0.3441	5%	5.38E-03	3.13E-04	3.13E-05	6.84E-03	2.12E-03	1.42E-03
	5d	0.0251	0%	2.22E-04	1.29E-05	1.29E-06	8.22E-05	2.55E-05	1.70E-05
	5e	0.8001	68%	3.83E-03	2.23E-04	2.23E-05	3.05E-03	9.47E-04	6.31E-04
	5f	0.8116	30%	5.02E-03	2.92E-04	2.92E-05	1.43E-02	4.44E-03	2.96E-03
	5g	0.5772	0%	2.46E-02	1.43E-03	1.43E-04	3.41E-03	1.06E-03	7.06E-04
6	6a	0.0040	0%	8.04E-05	4.68E-06	4.68E-07	-	-	-
	6b	0.0002	0%	3.90E-06	2.27E-07	2.27E-08	-	-	-
	6c	0.0675	0%	1.67E-03	9.70E-05	9.70E-06	-	-	-
7	7a	0.0006	0%	1.32E-05	7.66E-07	7.66E-08	-	-	-
	7b	0.0019	0%	6.19E-05	3.61E-06	3.61E-07	2.30E-05	7.13E-06	4.75E-06
	7c	0.0002	0%	2.98E-06	1.74E-07	1.74E-08	-	-	-
	7d	0.0051	0%	1.12E-04	6.51E-06	6.51E-07	-	-	-
	7e	0.7847	13%	5.67E-02	3.30E-03	3.30E-04	1.54E-02	4.78E-03	3.18E-03
	7f	0.0663	19%	1.12E-03	6.50E-05	6.50E-06	4.14E-04	1.29E-04	8.57E-05
	7g	0.0012	0%	2.49E-05	1.45E-06	1.45E-07	-	-	-
	7h	0.6920	0%	2.36E-02	1.37E-03	1.37E-04	-	-	-
	7i	1.0000	60%	2.15E-02	1.25E-03	1.25E-04	5.85E-03	1.81E-03	1.21E-03
	7j	1.0000	100%	5.96E-05	3.47E-06	3.47E-07	6.44E-06	2.00E-06	1.33E-06
	7k	0.0001	0%	1.22E-06	7.10E-08	7.10E-09	-	-	-

Table A7 - Landslide Frequencies after Mitigating Discharges from Crest Developments as Additional Mitigation Measure Options (Sheet 2 of 2)

Slope Segment No.	Slope Sub-area No.	Failure Probability after Mitigation of Discharges (pf ")	% of LPM slope within subarea (r")	Annual Frequency (f'''_o)					
				Open Hillslope Landslides			Channelized Debris Flow		
				Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**
8	8a	0.2151	0%	1.12E-02	6.53E-04	6.53E-05	-	-	-
	8b	0.0002	0%	4.26E-06	2.48E-07	2.48E-08	3.63E-03	1.13E-03	7.50E-04
	8c	0.2497	0%	5.25E-03	3.06E-04	3.06E-05	-	-	-
	8d	0.8457	0%	5.52E-02	3.22E-03	3.22E-04	-	-	-
	8e	0.0001	0%	6.40E-07	3.73E-08	3.73E-09	-	-	-
	8f	1.0000	100%	7.81E-05	4.55E-06	4.55E-07	2.63E-05	8.15E-06	5.43E-06
	8g	0.9724	100%	1.07E-05	6.21E-07	6.21E-08	-	-	-
9	9a	0.0468	0%	1.14E-03	6.64E-05	6.64E-06	-	-	-
	9b	0.1117	35%	2.98E-03	1.73E-04	1.73E-05	3.14E-03	9.76E-04	6.50E-04
	9c	0.0325	0%	1.06E-03	6.17E-05	6.17E-06	-	-	-
	9d	0.5474	0%	2.33E-03	1.36E-04	1.36E-05	-	-	-
	9e	0.9999	100%	8.22E-06	4.79E-07	4.79E-08	8.49E-06	2.63E-06	1.76E-06
	9f	0.8363	70%	1.60E-02	9.30E-04	9.30E-05	3.99E-03	1.24E-03	8.25E-04
	9g	0.9485	100%	1.83E-05	1.07E-06	1.07E-07	-	-	-
10	10a	0.6873	0%	6.39E-02	3.72E-03	3.72E-04	2.93E-02	9.10E-03	6.06E-03
	10b	0.8185	0%	5.23E-03	3.05E-04	3.05E-05	1.94E-03	6.03E-04	4.02E-04
11	11a	0.0002	0%	5.18E-06	3.02E-07	3.02E-08	1.92E-06	5.96E-07	3.97E-07
	11b	0.0002	0%	7.31E-06	4.26E-07	4.26E-08	-	-	-
	11c	1.0000	0%	1.28E-02	7.45E-04	7.45E-05	4.75E-03	1.47E-03	9.82E-04

Notes:

(1) The frequencies presented in this table is to illustrate the change in landslide frequency due to mitigation of discharge and further calculation of societal risk in cost benefit analysis.

(2) The failure probabilities (c) were determined from probabilistic slope stability analysis based on the condition upon completion of mitigation of uncontrolled discharges.

(3) The landslide frequencies upon completion of mitigation of uncontrolled discharges were calculated as follows:

$$f'''_o = f' \times [(p_f'' \div p_f') \times (1 - r'') + (0.001 \div p_f') \times r'']$$

where f'''_o = landslide frequency after mitigation of uncontrolled discharges (e) to (j)

f' = present-day landslide frequency (Table A5)

p_f'' = failure probability after mitigation of uncontrolled discharge (c)

p_f' = failure probability for the present-day condition (Table A5)

r'' = % of LPM slope within the subarea

The failure probabilities of man-made slope feature upon completion of LPM works would be reduced to 0.001, based on the statistics presented in GEO's landslide study reports LSR 15/99 (GEO, 1999) and LSR 8/2000 (GEO, 2000c).

(4) Columns (h) to (j) for channelized debris flows were determined using the same approach as for open hillslope landslide in columns (e) to (g) except that it is applicable to channaelized sub-areas only.

(5) For ease of reference, annual frequencies that have been adjusted to reflect changes in infiltration & recharge after mitigating the uncontrolled discharge have been highlighted.

Table A8 - Landslide Frequencies upon after Additional Risk Mitigation Measures (Sheet 1 of 2)

Slope Segment No.	Slope Sub-area No.	% of stabilized slope (inclusive of LPM slope within subarea) r '''	Annual Frequency (f ''')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(h)**	**(i)**	**(j)**
1	1a	0%	4.48E-05	2.61E-06	2.61E-07	-	-	-
	1b	0%	9.94E-03	5.79E-04	5.79E-05	-	-	-
	1c	0%	9.88E-03	5.76E-04	5.76E-05	-	-	-
	1d	0%	9.90E-06	5.77E-07	5.77E-08	-	-	-
	1e	0%	3.45E-05	2.01E-06	2.01E-07	-	-	-
	1f	0%	1.95E-05	1.14E-06	1.14E-07	-	-	-
2	2a	0%	2.24E-03	1.31E-04	1.31E-05	8.33E-04	2.58E-04	1.72E-04
	2b	0%	7.33E-02	4.27E-03	4.27E-04	1.15E-02	3.57E-03	2.38E-03
	2c	0%	2.06E-03	1.20E-04	1.20E-05	7.65E-04	2.37E-04	1.58E-04
	2d	0%	2.16E-02	1.26E-03	1.26E-04	1.75E-03	5.42E-04	3.62E-04
3	3a	0%	1.10E-05	6.39E-07	6.39E-08	4.07E-06	1.26E-06	8.42E-07
	3b	0%	1.30E-03	7.58E-05	7.58E-06	-	-	-
	3c	0%	2.98E-02	1.74E-03	1.74E-04	1.41E-02	4.37E-03	2.91E-03
	3d	0%	2.68E-02	1.56E-03	1.56E-04	7.49E-03	2.32E-03	1.55E-03
	3e	15%	4.59E-03	2.68E-04	2.68E-05	-	-	-
	3f	0%	9.82E-05	5.72E-06	5.72E-07	3.64E-05	1.13E-05	7.54E-06
	3g	0%	9.34E-03	5.44E-04	5.44E-05	9.99E-03	3.10E-03	2.07E-03
	3h	0%	4.89E-02	2.85E-03	2.85E-04	1.06E-02	3.30E-03	2.20E-03
	3i	0%	9.40E-02	5.48E-03	5.48E-04	2.38E-02	7.40E-03	4.93E-03
	3j	84%	2.01E-03	1.17E-04	1.17E-05	-	-	-
4	4a	0%	4.22E-04	2.46E-05	2.46E-06	-	-	-
	4b	0%	4.01E-03	2.34E-04	2.34E-05	-	-	-
	4c	0%	3.07E-03	1.79E-04	1.79E-05	-	-	-
	4d	0%	9.00E-03	5.24E-04	5.24E-05	-	-	-
	4e	100%	5.48E-06	3.19E-07	3.19E-08	-	-	-
5	5a	75%	7.85E-04	4.57E-05	4.57E-06	2.91E-04	9.04E-05	6.03E-05
	5b	0%	6.08E-05	3.54E-06	3.54E-07	-	-	-
	5c	100%	1.64E-05	9.58E-07	9.58E-08	2.09E-05	6.49E-06	4.33E-06
	5d	20%	1.79E-04	1.04E-05	1.04E-06	6.65E-05	2.06E-05	1.37E-05
	5e	100%	1.49E-05	8.69E-07	8.69E-08	1.19E-05	3.69E-06	2.46E-06
	5f	100%	8.83E-06	5.14E-07	5.14E-08	2.52E-05	7.81E-06	5.21E-06
	5g	0%	2.46E-02	1.43E-03	1.43E-04	3.41E-03	1.06E-03	7.06E-04
6	6a	0%	8.04E-05	4.68E-06	4.68E-07	-	-	-
	6b	0%	3.90E-06	2.27E-07	2.27E-08	-	-	-
	6c	0%	1.67E-03	9.70E-05	9.70E-06	-	-	-
7	7a	0%	1.32E-05	7.66E-07	7.66E-08	-	-	-
	7b	0%	1.01E-03	5.88E-05	5.88E-06	3.75E-04	1.16E-04	7.75E-05
	7c	0%	2.98E-06	1.74E-07	1.74E-08	-	-	-
	7d	0%	1.12E-04	6.51E-06	6.51E-07	-	-	-
	7e	13%	6.21E-02	3.62E-03	3.62E-04	1.69E-02	5.23E-03	3.49E-03
	7f	19%	1.59E-03	9.29E-05	9.29E-06	5.91E-04	1.84E-04	1.22E-04
	7g	0%	2.49E-05	1.45E-06	1.45E-07	-	-	-
	7h	0%	2.69E-02	1.57E-03	1.57E-04	-	-	-
	7i	60%	2.15E-02	1.25E-03	1.25E-04	5.85E-03	1.81E-03	1.21E-03
	7j	100%	5.96E-05	3.47E-06	3.47E-07	6.44E-06	2.00E-06	1.33E-06
	7k	0%	1.22E-06	7.10E-08	7.10E-09	-	-	-

Table A8 - Landslide Frequencies upon after Additional Risk Mitigation Measures (Sheet 2 of 2)

Slope Segment No.	Slope Sub-area No.	% of stabilized slope (inclusive of LPM slope within subarea) r '''	Annual Frequency (f ''')					
			Open Hillslope Landslides			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(h)**	**(i)**	**(j)**
8	8a	0%	1.12E-02	6.53E-04	6.53E-05	-	-	-
	8b	0%	4.26E-06	2.48E-07	2.48E-08	3.63E-03	1.13E-03	7.50E-04
	8c	0%	5.25E-03	3.06E-04	3.06E-05	-	-	-
	8d	0%	5.52E-02	3.22E-03	3.22E-04	-	-	-
	8e	0%	6.40E-07	3.73E-08	3.73E-09	-	-	-
	8f	100%	7.81E-05	4.55E-06	4.55E-07	2.63E-05	8.15E-06	5.43E-06
	8g	100%	1.07E-05	6.21E-07	6.21E-08	-	-	-
9	9a	0%	1.14E-03	6.64E-05	6.64E-06	-	-	-
	9b	35%	2.98E-03	1.73E-04	1.73E-05	3.14E-03	9.76E-04	6.50E-04
	9c	0%	1.06E-03	6.17E-05	6.17E-06	-	-	-
	9d	0%	2.33E-03	1.36E-04	1.36E-05	-	-	-
	9e	100%	8.22E-06	4.79E-07	4.79E-08	8.49E-06	2.63E-06	1.76E-06
	9f	70%	1.60E-02	9.30E-04	9.30E-05	3.99E-03	1.24E-03	8.25E-04
	9g	100%	1.83E-05	1.07E-06	1.07E-07	-	-	-
10	10a	0%	6.39E-02	3.72E-03	3.72E-04	2.93E-02	9.10E-03	6.06E-03
	10b	0%	5.23E-03	3.05E-04	3.05E-05	1.94E-03	6.03E-04	4.02E-04
11	11a	0%	5.18E-06	3.02E-07	3.02E-08	1.92E-06	5.96E-07	3.97E-07
	11b	0%	7.31E-06	4.26E-07	4.26E-08	-	-	-
	11c	0%	1.28E-02	7.45E-04	7.45E-05	4.75E-03	1.47E-03	9.82E-04

Notes:

(1) The failure probabilities after stabilizing selected area of hillside was assumed to be 0.001 as mentioned in note 1 of Table A6.

(2) The landslide frequencies upon completion of additional risk mitigation measures were calculated as follows:

$$f''' = f' \times [(1 - r''') + (0.001 \div p_f') \times r''']$$

where f''' = landslide frequency upon completion of additional risk mitigation measures (d) to (f)

f' = present-day landslide frequency (Table A5)

p_f' = failure probability for the present-day condition (Table A5)

r''' = % of stabilized slope (inclusive of LPM slope within subarea)

(3) Columns (g) to (i) for channelized debris flows were determined using the same approach as for open hillslope landslide in columns (d) to (f) except that it is applicable to channaelized sub-areas only.

(4) For ease of reference, annual frequencies that have been adjusted to reflect changes after additional mitigation measures have been highlighted.

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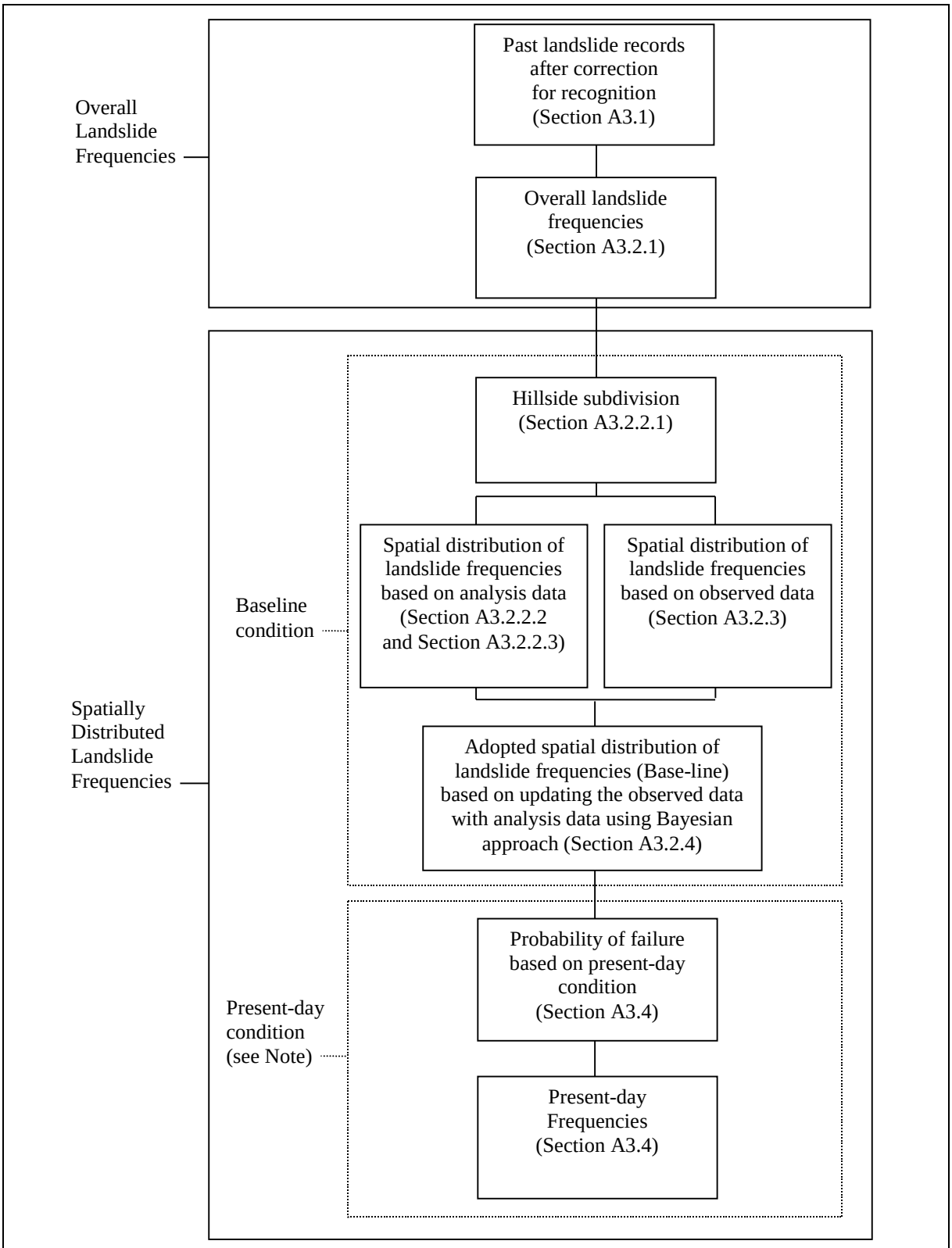

Note: Similar approach was followed to determine the landslide frequencies corresponding to the conditions after the forthcoming measures and after the additional risk mitigation measures.

Figure A1 - Flowchart Illustrating the Process of Determining Landslide Frequencies

Legend : Boundary of Study Area; 1 Slope Segment NB; 1a Slope Segment No.; Slope Segment Boundary; Slope Subasea Boundary

Note : Refer to Table A3 for details of each subarea.

Figure A2 - Locations of Slope Segments and Slope Subareas

ANNEX A (OF APPENDIX A)

PROBABILISTIC SLOPE STABILITY ANALYSIS

PROBABILISTIC SLOPE STABILITY ANALYSIS

(a) Introduction

The analytical probability of failure of individual sub-areas was required as a basis for distributing the overall landslide frequencies (corresponding to the base-line condition). The distribution was made in a pro-rata manner with respect to the analytical probabilities determined.

For each sub-area, the probability of failure was calculated using Monte-Carlo simulation whereby the likelihood of failure was determined statistically by repeatedly calculating the slope stability 10,000 times, each time using a different randomly selected set of input variables. The Monte-Carlo simulations were performed by @RISK (commercial add-in software for random generation of input parameters) linked to a spreadsheet program for slope stability calculations assuming infinite slope condition.

For each simulation in the slope stability calculation, slope attributes for the given sub-area were entered as constant value, while generalised geotechnical parameters of the corresponding predominant material and water table were generated randomly according to the specified ranges of values and probability distributions assigned. Failure was implied by the computed factor of safety, FOS, of being less than 1. The probability of failure was defined as the proportion of the total number of failures in 10,000 simulations.

(b) Slope Attributes

The slope attributes relate to the specific characteristics of the sub-area, which comprise the following: -

- Slope angle - (β);
- Depth of surficial soil - (z), and
- Predominant material (which governs the geotechnical parameters)

The slope attributes are summarised in Table A3.

(c) Geotechnical Parameters

The geotechnical parameters for the different materials (viz fill, colluvium and residual soil) comprise the following: -

- Cohesion intercept - (c'), and
- Angle of shearing resistance - (ϕ')

Their values were generated randomly by @RISK based on the specified ranges of values and probability distributions as shown in Table AA1.

(d) Water Table

The height of the water table, z_w for the probabilistic slope stability analyses, was defined by the pore pressure ratio, r_u, which was expressed in the form of a triangular probability distribution function in the probabilistic slope stability analyses. The minimum value of r_u was assumed to be 0 corresponding to the dry slope condition. The maximum value of r_u was assigned according to the specific infiltration and recharge condition of each sub-area. The concept involved the consideration of a reference r_u value (taken to be that back calculated from GEO incident No. MW97/6/23 below Golden Time Villas in 1997 with details documented in LSR 10/98 as shown in Table AA3). The r_u value was then scaled with respect to the relative scores of the Infiltration and Recharge Rating System (Table AA2) assigned based on expert judgement. The scaling is based on linear relationship between r_u and the Infiltration and Recharge Score as follows:

$$r_u' = r_{u\,o} \times (I' \div I_o)$$

where r_u' = r_u value adjusted for the sub-area
$r_{u\,o}$ = r_u value back-calculated from MW97/6/23 (Table AA3)
I' = Infiltration and recharge score for the sub-area
I_o = Infiltration and recharge score for MW97/6/23

The infiltration and recharge scores and the r_u values for the different sub-areas are summarised in Table A3. The breakdown of the infiltration and recharge scores are presented in Table AA4.

(e) Slope Stability Calculations

The slope stability calculations were based on infinite slope analyses. The factor of safety (FOS) is given by:

$$FOS = \frac{c' + (\gamma z - \gamma_w z_w) \cos^2\beta \tan \phi'}{\gamma z \sin\beta \cos\beta}$$

where c' = Cohesion intercept of soil
ϕ' = Angle of shearing resistance
z = Depth of surficial soils
z_w = Height of water table = $(r_u \gamma z) \div (\gamma_w \cos^2\beta)$
r_u = Pore pressure ratio
γ = Bulk unit weight of soil
γ_w = Unit weight of water
β = Slope angle

The results are presented as the probabilities of failure (Section A3.2.2.2) for the different sub-areas under the different conditions of the hillside as described in Appendix A. A set of sample calculation for sub-area 5e is also given in the following pages for reference.

Table AA1 - Generalised Geotechnical Parameters for Probabilistic Slope Stability Analysis

Superficial Soils Type	Input Parameters	Probability Distribution Functions	Ranges of Values	
Fill	Cohesion - c' (kPa)	Uniform	Minimum	0
			Maximum	2
	Friction Angle - ø' (°)	Triangular	Minimum	30
			Most Likely	33
			Maximum	35
Colluvium	Cohesion - c' (kPa)	Uniform	Minimum	0
			Maximum	8
	Friction Angle - ø' (°)	Triangular	Minimum	32
			Most Likely	35
			Maximum	38
Residual Soil	Cohesion - c' (kPa)	Uniform	Minimum	4
			Maximum	10
	Friction Angle - ø' (°)	Triangular	Minimum	30
			Most Likely	33
			Maximum	35
All	Soil Density - γ (kN/m^3)	Deterministic	Constant	18

Table AA2 - Infiltration and Recharge Rating System

Factors	Description	Scoring	
		Surface Protected	Surface Unprotected
Direct Rainfall Infiltration		0	4 (see Note below)
Stormwater Discharge (During Rain)	Severe	0	2
	Moderate	0	1
	Minor/None	0	0
Foul Water Leakage (Continuous discharge)	Severe	2	
	Moderate	1	
	Minor/None	0	
Recharge	Severe	4	
	Moderate	2	
	Minor/None	0	
		Max. Score =12	

Note: Intermediate score is assigned where the slope subarea is partially covered with surface protection.

Table AA3 - Back Calculation of r_u for Sub-area 3i

Input Parameters	Unit	Adopted Values
Slope Angle - ß	Degree	34.00
Depth of surfacial Soil - z	m	1.50
Cohesion Intercept - c'	kPa	4.00
Angle of shear resistance - ø'	Degree	35.00
Bulk unit weight of soil - γ	kN/m³	18.00
Unit weight of water - γ_w	kN/m³	9.81
z_w = 0.9483 m $\Rightarrow$ r_u = 0.2368		

Notes: (1) The back-calculation of r_u was based on the following equations:

$$ru = (zw\ gw \div gz) \times \cos^2 ß$$

where $z_w = (\gamma z - ((\gamma z \sin ß \cos ß - c') \div \cos^2 ß \tan ø')) \div \gamma w$

based on the infinite slope analysis.

(2) The slope angle and type of surficial soil (predominant colluvium) were based on the findings in report LSR 10/98, generalised soil parameters were given in Table AA1.

Table AA4 - Breakdown of Infiltration and Recharge Scoring for Individual Sub-areas

Slope Segment No.	Slope Sub-area No.	Infiltration & Recharge Scores (See Note 1)																	
		Baseline condition Shotcrete not in Place before 1997 Landslides						Present-day condition Shotcrete applied at different areas following 1997 Landslides						After Forthcoming Preventive Measures Mitigating discharge from crest development of segment 3, 5 & 7					
		Direct Rainfall Infiltration	Stormwater Discharge (During Rain)	Foul Water Leakage (During Dry Weather)	Recharge	Total Score	r_u	Direct Rainfall Infiltration	Stormwater Discharge (During Rain)	Foul Water Leakage (During Dry Weather)	Recharge	Total Score	r_u'	Direct Rainfall Infiltration	Stormwater Discharge (During Rain)	Foul Water Leakage (During Dry Weather)	Recharge	Total Score	r_u''
1	1a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	1b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	1c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	1d	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	1e	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	1f	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
2	2a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	2b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	2c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	2d	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
3	3a	4	2	2	4	12	**0.26**	3	2	2	4	11	**0.24**	3	0	0	4	7	**0.15**
	3b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	3c	4	0	2	4	10	**0.22**	2	0	2	4	8	**0.17**	2	0	0	4	6	**0.13**
	3d	4	2	1	4	11	**0.24**	0	2	1	2	5	**0.11**	0	0	0	2	2	**0.04**
	3e	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	3f	4	0	1	4	9	**0.20**	3	0	1	2	6	**0.13**	3	0	0	2	5	**0.11**
	3g	4	0	2	4	10	**0.22**	0	0	2	0	2	**0.04**	0	0	0	0	0	**0.00**
	3h	4	0	0	4	8	**0.17**	3	0	0	2	5	**0.11**	3	0	0	2	5	**0.11**
	3i	4	2	1	4	11	**0.24**	0	2	1	0	3	**0.07**	0	0	0	0	0	**0.00**
	3j	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
4	4a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	4b	4	2	0	4	10	**0.22**	4	2	0	4	10	**0.22**	4	2	0	4	10	**0.22**
	4c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	4d	4	2	0	4	10	**0.22**	4	2	0	4	10	**0.22**	4	2	0	4	10	**0.22**
	4e	2	1	0	2	5	**0.11**	2	1	0	2	5	**0.11**	2	1	0	2	5	**0.11**
5	5a	4	2	0	4	10	**0.22**	2	2	0	4	8	**0.17**	2	0	0	4	6	**0.13**
	5b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	5c	4	2	0	4	10	**0.22**	3	2	0	2	7	**0.15**	3	0	0	2	5	**0.11**
	5d	4	0	0	4	8	**0.17**	2	0	0	2	4	**0.09**	2	0	0	2	4	**0.09**
	5e	2	1	0	2	5	**0.11**	2	1	0	2	5	**0.11**	2	0	0	2	4	**0.09**
	5f	4	0	0	4	8	**0.17**	0	0	0	0	0	**0.00**	0	0	0	0	0	**0.00**
	5g	4	0	0	4	8	**0.17**	4	0	0	2	6	**0.13**	4	0	0	2	6	**0.13**
6	6a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	6b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	6c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
7	7a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	7b	4	1	2	4	11	**0.24**	0	1	2	0	3	**0.07**	0	0	0	0	0	**0.00**
	7c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	7d	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	7e	4	0	2	4	10	**0.22**	1	0	2	2	5	**0.11**	1	0	0	2	3	**0.07**
	7f	4	1	0	4	9	**0.20**	3	1	0	2	6	**0.13**	3	0	0	2	5	**0.11**
	7g	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	7h	4	0	2	4	10	**0.22**	4	0	2	4	10	**0.22**	4	0	0	4	8	**0.17**
	7i	4	0	2	4	10	**0.22**	0	0	2	0	2	**0.04**	0	0	0	0	0	**0.00**
	7j	4	1	0	4	9	**0.20**	0	1	0	2	3	**0.07**	0	0	0	2	2	**0.04**
	7k	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
8	8a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	8b	4	0	0	4	8	**0.17**	2	0	0	2	4	**0.09**	2	0	0	2	4	**0.09**
	8c	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**
	8d	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	8e	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	8f	4	0	0	4	8	**0.17**	2	0	0	2	4	**0.09**	2	0	0	2	4	**0.09**
	8g	4	1	0	4	9	**0.20**	4	1	0	2	7	**0.15**	4	1	0	2	7	**0.15**
9	9a	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**
	9b	4	1	1	4	10	**0.22**	1	1	1	2	5	**0.11**	1	1	1	2	5	**0.11**
	9c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	9d	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**	4	1	0	4	9	**0.20**
	9e	4	1	0	4	9	**0.20**	0	1	0	0	1	**0.02**	0	1	0	0	1	**0.02**
	9f	4	1	1	4	10	**0.22**	3	1	1	2	7	**0.15**	3	1	1	2	7	**0.15**
	9g	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
10	10a	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	10b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
11	11a	1	0	0	4	5	**0.11**	1	0	0	4	5	**0.11**	1	0	0	4	5	**0.11**
	11b	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**
	11c	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**	4	0	0	4	8	**0.17**

Notes:
(1) Refer to Table AB2 for details of Infiltration & Recharge Rating System.
(2) The reference ru value (0.24) at subarea 3i was based on that back-calculated from MW97/6/23. See Table A4 for details.
(3) Scores that have been adjusted to reflect changes in infiltration & recharge after base-line condition was highlighted.

SAMPLE CALCULATION ON FAILURE PROBABILITY
BY
@RISK

@RISK Analysis for Subarea 5e

Predominant Material : **Fill**
Downslope Movement: **Channelised**

1. Pre 1997 Landslide Condition

Input Parameters	Probability Disturbution Function	Range of Value		Remarks
Slope angle - ß (°)	Deterministic	- Constant	33	Subarea specific attribute
Depth of Surficial Soil - z (m)	Deterministic	- Constant	3.6	Subarea specific attribute
Pore Pressure Ratio - r_u	Trianglar	- Minimum - Most likely - Maximum	0 0.055 0.11	Subarea specific attribute (scaling based on infiltration & recharge conditions)
Cohesion - c' (kPa)	Uniform	- Minimum - Maximum	0 2	Generalised soil properties
Friction Angle - ø' (°)	Trianglar	- Minimum - Most likely - Maximum	30 33 35	
Bulk unit weight of soil - γ (kN/m³)	Deterministic	- Constant	18	

Shallow Sliding Failure Based on Infinite Slope Model

$$FOS = (c'+(\gamma z - \gamma_w z_w) \times \cos^2 ß \tan ø') / (\gamma z \sin ß \cos ß)$$

$$z_w = r_u z \times (\gamma / \gamma_w) / \cos^2 ß$$

Demonstration Calculation (based on the initial mean value generated)

ß	=	33.00	c'	=	1.00
z	=	3.60	ø'	=	33.00
r_u	=	0.055	γ	=	18.00
z_w	=	0.52	γ_w	=	9.81

FOS = 0.956

f = 1 $\begin{pmatrix} f = 1 \text{ if FOS} < 1 \\ f = 0 \text{ if FOS} \geq 1 \end{pmatrix}$

Failure Probability - p_f after 10000 Simulation

$$p_f = \frac{\text{Total no of cases with } f = 1}{10000} = \mathbf{0.8568}$$

@RISK Analysis for Subarea 5e

Predominant Material : **Fill**
Downslope Movement: **Channelised**

---

2. Adjustment for Post 1997 Condition

A. Present-day Condition Shotcrete Surface Protection Applied

Infiltration & Recharge Score = 5

$r_u' = 0.11$

$\Rightarrow \quad z_w' = 0.52$

$FOS' = (c'+(\gamma z - \gamma_w z_w') \times \cos^2 ß \tan ø') / (\gamma z \sin ß \cos ß)$

FOS ' = 0.956

f ' = 1 $\begin{pmatrix} f' = 1 \text{ if } FOS' < 1 \\ f' = 0 \text{ if } FOS' \geq 1 \end{pmatrix}$

Failure Probability - p_f' after 10000 Simulation with Scaled r_u'

$p_f' = \dfrac{\text{Total no of cases with } f' = 1}{10000} =$ **0.814814815**

B. Uncontrolled Discharge Mitigated

Infiltration & Recharge Score = 4

$r_u' = 0.09$

$\Rightarrow \quad z_w'' = 0.42$

$FOS'' = (c'+(\gamma z - \gamma_w z_w'') \times \cos^2 ß \tan ø') / (\gamma z \sin ß \cos ß)$

FOS " = 0.970

f " = 1 $\begin{pmatrix} f' = 1 \text{ if } FOS' < 1 \\ f' = 0 \text{ if } FOS' \geq 1 \end{pmatrix}$

Failure Probability - p_f'' after 10000 Simulation with Scaled r_u''

$p_f'' = \dfrac{\text{Total no of cases with } f'' = 1}{10000} =$ **0.796296296**

@ Risk Simulation Data for Sub-@-risk Sample 5e F.xls (Sample Page)

No of Iteration	c' Uniform	ø' Triangular	ru Triangular	Base-line Condition			Present-day Condition			Mitigating Discharge		
				Zw	FOS	F	Zw	FOS	F	Zw	FOS	F
1	0.00744	33.89093	0.00780	0.07323	1.02318	0	0.07323	1.02318	0	0.05992	1.02526	0
2	1.86416	31.69264	0.01892	0.17767	0.98817	1	0.17767	0.98817	1	0.14537	0.99282	1
3	0.55749	34.02652	0.05488	0.51541	0.97740	1	0.51541	0.97740	1	0.42170	0.99215	1
4	1.10030	34.07631	0.04991	0.46872	1.00490	0	0.46872	1.00490	0	0.38350	1.01834	0
5	1.71264	33.28337	0.03958	0.37171	1.01184	0	0.37171	1.01184	0	0.30413	1.02218	0
6	1.65491	31.52158	0.04579	0.43004	0.93885	1	0.43004	0.93885	1	0.35185	0.95003	1
7	0.91218	31.53649	0.03500	0.32865	0.92878	1	0.32865	0.92878	1	0.26890	0.93733	1
8	1.59362	33.79122	0.07286	0.68422	0.97761	1	0.68422	0.97761	1	0.55982	0.99701	1
9	0.63430	33.18768	0.04053	0.38061	0.97058	1	0.38061	0.97058	1	0.31141	0.98113	1
10	0.94527	33.88279	0.02239	0.21028	1.03309	0	0.21028	1.03309	0	0.17205	1.03908	0
11	0.77419	32.70257	0.04421	0.41516	0.95269	1	0.41516	0.95269	1	0.33968	0.96399	1
12	0.23000	31.07815	0.02940	0.27614	0.89708	1	0.27614	0.89708	1	0.22593	0.90413	1
13	1.00700	32.69599	0.05503	0.51676	0.94512	1	0.51676	0.94512	1	0.42280	0.95918	1
14	0.61434	33.05794	0.07033	0.66047	0.92276	1	0.66047	0.92276	1	0.54038	0.94098	1
15	0.50525	33.41290	0.07570	0.71093	0.92359	1	0.71093	0.92359	1	0.58167	0.94347	1
16	1.33043	34.80645	0.03496	0.32834	1.06223	0	0.32834	1.06223	0	0.26864	1.07190	0
17	0.73801	33.60257	0.01663	0.15616	1.02393	0	0.15616	1.02393	0	0.12777	1.02833	0
18	1.27677	31.66351	0.08972	0.84255	0.87169	1	0.84255	0.87169	1	0.68936	0.89371	1
19	0.97980	32.80123	0.04652	0.43689	0.95989	1	0.43689	0.95989	1	0.35746	0.97182	1
20	0.15201	34.57182	0.08098	0.76052	0.94412	1	0.76052	0.94412	1	0.62224	0.96634	1
21	0.80347	30.44678	0.05110	0.47990	0.86651	1	0.47990	0.86651	1	0.39265	0.87847	1
22	1.21502	33.54705	0.05718	0.53701	0.97908	1	0.53701	0.97908	1	0.43937	0.99417	1
23	0.90539	32.76813	0.07069	0.66387	0.92214	1	0.66387	0.92214	1	0.54317	0.94025	1
24	0.97827	32.29238	0.06427	0.60353	0.91731	1	0.60353	0.91731	1	0.49380	0.93348	1
25	1.57677	32.44247	0.07366	0.69178	0.92959	1	0.69178	0.92959	1	0.56600	0.94823	1
26	0.43100	32.96856	0.05634	0.52912	0.93335	1	0.52912	0.93335	1	0.43292	0.94790	1
27	0.36330	33.41370	0.05154	0.48404	0.95371	1	0.48404	0.95371	1	0.39603	0.96725	1
28	1.59836	31.23208	0.05254	0.49345	0.91800	1	0.49345	0.91800	1	0.40373	0.93068	1
29	0.17038	32.15537	0.01575	0.14794	0.95211	1	0.14794	0.95211	1	0.12104	0.95605	1
30	0.93997	32.30438	0.07970	0.74845	0.89507	1	0.74845	0.89507	1	0.61237	0.91512	1
31	0.06372	34.67786	0.04734	0.44457	0.99582	1	0.44457	0.99582	1	0.36374	1.00886	0
32	0.26741	32.41722	0.07980	0.74940	0.87597	1	0.74940	0.87597	1	0.61315	0.89614	1
33	1.91946	32.47341	0.05642	0.52982	0.96624	1	0.52982	0.96624	1	0.43349	0.98053	1
34	1.56150	33.03673	0.06947	0.65244	0.95525	1	0.65244	0.95525	1	0.53381	0.97323	1
35	1.24614	32.11188	0.03699	0.34735	0.95768	1	0.34735	0.95768	1	0.28420	0.96692	1
36	0.77060	33.69922	0.08701	0.81717	0.92592	1	0.81717	0.92592	1	0.66859	0.94902	1
37	0.87587	30.84863	0.06064	0.56953	0.87001	1	0.56953	0.87001	1	0.46598	0.88443	1
38	1.02337	32.75718	0.06344	0.59578	0.93596	1	0.59578	0.93596	1	0.48746	0.95221	1
39	1.96289	32.57487	0.06780	0.63669	0.95532	1	0.63669	0.95532	1	0.52093	0.97256	1
40	1.31038	31.49675	0.05797	0.54439	0.91002	1	0.54439	0.91002	1	0.44541	0.92416	1
41	1.10222	32.24746	0.02229	0.20929	0.97794	1	0.20929	0.97794	1	0.17124	0.98354	1
42	1.13916	30.77183	0.06915	0.64940	0.86526	1	0.64940	0.86526	1	0.53133	0.88165	1
43	1.54928	32.69559	0.03989	0.37462	0.98470	1	0.37462	0.98470	1	0.30651	0.99489	1
44	0.40437	33.24870	0.08258	0.77552	0.90467	1	0.77552	0.90467	1	0.63452	0.92622	1
45	0.62086	32.42202	0.06193	0.58164	0.91291	1	0.58164	0.91291	1	0.47589	0.92857	1
46	1.17904	34.28959	0.05724	0.53759	1.00439	0	0.53759	1.00439	0	0.43985	1.01993	0
47	0.65653	32.99754	0.02380	0.22347	0.98826	1	0.22347	0.98826	1	0.18284	0.99441	1
48	1.39765	33.26468	0.05683	0.53369	0.97575	1	0.53369	0.97575	1	0.43666	0.99059	1
49	0.87703	30.71069	0.04844	0.45494	0.88133	1	0.45494	0.88133	1	0.37222	0.89278	1
50	1.63990	33.61982	0.04315	0.40519	1.01645	0	0.40519	1.01645	0	0.33152	1.02787	0
51	1.26642	30.78424	0.08203	0.77037	0.85317	1	0.77037	0.85317	1	0.63030	0.87262	1
52	0.82474	30.72698	0.02254	0.21173	0.91381	1	0.21173	0.91381	1	0.17323	0.91915	1
53	1.97381	33.71565	0.03137	0.29457	1.04843	0	0.29457	1.04843	0	0.24101	1.05676	0
54	0.48256	34.39286	0.02242	0.21058	1.03679	0	0.21058	1.03679	0	0.17229	1.04290	0

APPENDIX B

LANDSLIDE CONSEQUENCE ASSESSMENT

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B1 LANDSLIDE CONSEQUENCE MODEL

In the context of this QRA, the landslide consequence is taken to be the expected number of fatalities for a given facility if subjected to a landslide hazard. The following model has been developed for the landslide consequence assessment:

$$\text{Landslide consequence} = \text{Vulnerability factor} \times \text{Expected number of vulnerable people in a given facility directly hit by a landslide}$$

where Vulnerability factor is the probability of an individual losing his life if subjected to a given landslide, and

Expected number of vulnerable people in a given facility directly hit by a landslide corresponds to the average number of people in a facility exposed to the risk of a landslide (see further discussions in Section B3 and Appendix C).

B2 VULNERABILITY FACTOR

The vulnerability factor, defined as the probability of an individual losing his life if subjected to a given landslide, has been assessed by reference to the location of the facility relative to the credible range of debris runout distance. The derivation of vulnerability factors is explained in detail below. Regard has been given to the dissimilar probabilities of escape for landslides of different scales and whether the facility being assessed is protected or not. Specifically, the assessment involved first consideration of the vulnerability factor for an unprotected facility subjected to a large landslide (Table B1). The vulnerability factor for a smaller landslide and/or a protected facility was then obtained by application of a scaling factor (Table B2).

In this study, the maximum runout distance of landslide debris was first estimated based on expert judgement taking due account of the past landslide information (see further discussion in Section B2.1).

As landslide would not always travel to its maximum runout distance, the debris might reach anywhere within the limits defined by the source location and the maximum runout location. To quantitatively describe the possible reach of the debris, the area within the limits defined by the source location and the maximum runout location was subdivided into 6 equal zones (i.e. Zone No. 1 being closest to the source location, and Zone 6 closest to the maximum runout location). The probability of the debris reaching these zones was assumed to follow a triangular distribution with the peak at the middle location, thus giving rise to a probability of 5.5%, 16.7%, 27.8%, 27.8%, 16.7% and 5.5% respectively for debris reaching Zones 1, 2, 3, 4, 5 and 6.

The next step was to estimate the probability of an individual losing his life in an unprotected facility located in one of these six zones. For example, if a facility was located in Zone 4, it was subjected to a hazard not only arising from landslides reaching Zone 4, but also from landslides reaching Zones 5 and 6. Therefore the probability of an individual losing his life in an unprotected facility located in Zone 4 would be the total probability from those landslides reaching Zones 4, 5 and 6. Also the probability of an individual losing his life arising from a landslide reaching Zone 6 would be higher than that reaching Zones 5

which in turn higher than that reaching Zone 4. These probabilities were estimated by expert judgement as shown in Table B1.

Table B1 was used to estimate the probability of an individual losing his life in an unprotected facility subjected to a large landslide. For cases of an individual being in a protected facility and/or arising from one landslide of smaller size, a scaling factor was proposed as shown in Table B2.

B2.1 Maximum Runout Distance of Landslide Debris

Based on the characteristics of the past landslides in the study area, the debris runout distances were plotted against the debris travel angles as shown in Figure B1. The general trends were that the steeper the debris travel angles, or the larger the debris volumes, the longer were the debris runout distances. It was also observed that given the same debris volume and the same debris travel angle, the runout distance tended to be longer for channelized debris flow type of landslides than open hillslope landslides.

For each of the landslide classes, there appeared to be an upper bound relationship between the travel angles and the runout distances, beyond which the data points were unlikely to appear. Figure B1 shows these upper-bound lines of the six landslide classes defined in Appendix A. These upper-bound lines were estimated based on expert judgement with the data presented in Figure B1.

Given these upper-bound relationships, the maximum runout distances of debris along debris trails could be established. For each type of landslide in a sub-area, the debris travel angle was first assumed. From Figure B1, the upper-bound runout distance corresponding to the assumed travel angle was read. This was compared to the runout distance (estimated based on survey plans) that the debris would have to travel on site to reach the assumed travel angle. If the upper-bound runout distance read from Figure B1 was longer (thus the assumed travel angle being too high), the travel angle had to be reduced (after several trials) until the 2 runout distances (from Figure B1 and from survey plans) would match. This runout distance (after adjustment for the travel angle as described) was taken as the maximum runout distance corresponding to the travel angle of the landslide debris.

In this study, the runout distance (estimated on survey plans) was measured along the expected debris trail, starting from the crest of the sub-area. To minimise computation, the surface profile of the debris trail was simplified to several short segments. The travel angle was limited to a lower-bound of 20°, except for the case of large channelized debris flow where the lower-bound of the travel angle was taken as 15°. An example illustrating the determination of the maximum runout distance at sub-area 5e is shown in Section B2.2. Table B3 summarises the assessed maximum runout distances of the six landslide hazards for all sub-areas.

B2.2 Example Calculation on Derivation of Maximum Runout Distance

This example calculation relates to a large channelized debris flow originating from sub-area 5e.

The ground profile along the assumed debris trail starting from sub-area 5e is shown in Figure B3. The maximum runout distance was determined by adjusting the travel angle graphically starting from the edge of the facilities.

First trial:	Assumed travel angle (to the edge of facility)	=	28.8°
	Upper bound runout distance from Figure B1	=	168.8 m
	Runout distance by survey plans	=	88.4 m

As the upper-bound runout distance from Figure B1 is greater than the runout distance on survey plans, the travel angle needed to be reduced.

Second trial:	Assumed travel angle	=	26.0°
	Upper bound runout distance from Figure B1	=	155.0 m
	Runout distance by survey plans	=	98 m

By trial and error with regard to the values of travel angle, the maximum travel distance that matches with the runout angle for large debris flow event along the runout path as follows:

Final result:	Travel angle	=	20.2°
	Determined maximum Runout distance	=	126.0 m

B2.3 Example Calculation on Derivation of Vulnerability Factor

This example calculations illustrate the determination of vulnerability factor for a LCDF initiating from sub-area 5e and affecting the residential flat on the 1/F. of Block 10 at Woodcrest Hill.

Maximum runout distance	=	126.0 m	(Section B2.2, also shown in Table B3)
Facility located from the crest of sub-area	=	88.4 m	(From survey plan, & shown in Table B3)
Zone no. where facility located	=	5	(Between 84 m and 105 m, see Figure B3)
Scaling Factor	=	0.9	(From Table B2)

Debris reaching zone no. (I)	Facility located at Zone no. 5		
	Probability of debris reaching the specified zone (assuming triangular distribution) (II)	Probability of an individual losing his life in an unprotected facility arising from a large channelized debris flow	
		Given debris reaching the specified zone (Table B1) (III)	Taking into account the probability of debris reaching the specified zone (IV) = (II) × (III)
1	5.5 %	0	0
2	16.7%	0	0
3	27.8%	0	0
4	27.8%	0	0
5	16.7%	0.15	0.0251
6	5.5%	0.5	0.0275
		Σ	0.0526

Applying the scaling factor of 0.9 for a protected facility subjected to a large landslide (Table B2), the vulnerability factor can be adjusted as follows:

$$\text{Vulnerability Factor} = 0.0526 \times 0.9$$

$$= 0.047$$

The vulnerability factors for all facilities subjected to different landslide hazards are summarised in Table B4. The detailed calculations are shown in Table B5. Figure B4 show the location of the facilities below the hillside.

B3 EXPECTED NUMBER OF VULNERABLE PEOPLE IN A FACILITY DIRECTLY HIT BY A LANDSLIDE

The expected numbers of vulnerable people in a facility directly hit by a given landslide as shown in Table B6 are the average number of people in a facility exposed to the risk of landslide as discussed in Section B1. These values were estimated based on expert judgement taking account of the scales of landslide, the types of facilities, their density of occupation and degree of usage.

B4 LANDSLIDE CONSEQUENCE

As discussed in Section B1, the landslide consequence (expressed in terms of likely number of fatalities) can be obtained by multiplying the vulnerability factor (Section B2) with the expected number of vulnerable people in a facility directly hit by a landslide (Section B3).

The following example illustrates the calculation of the landslide consequence for the residential flat on 1/F of Block 10 at Woodcrest Hill, subjected to a LCDF.

$$\text{Landslide Consequence} = \text{Vulnerability Factor} \times \text{Expected no. of vulnerable people in a facility directly hit by a landslide}$$

$$= 0.047 \times 6$$

$$= 0.282 \text{ (likely number of fatalities per event)}$$

Table B7 summarises the landslide consequence for each facility subjected to different landslide hazards occurring within different sub-areas.

B5 LANDSLIDE CONSEQUENCE AFTER FORTHCOMING MEASURES

The forthcoming measures, involving detailed geotechnical studies and if necessary slope upgrading works to selected slopes under the LPM Programme or proper and regular maintenance of the existing shotcrete surfacing, would mitigate the landslide risks by primarily reducing the landslide hazards (Appendix A). The potential landslide consequence after completion of the forthcoming measures would remain unchanged.

B6 LANDSLIDE CONSEQUENCE AFTER ADDITIONAL RISK MITIGATION MEASURES

The additional risk mitigation measures can be preventive (by stabilising the slope) or protective (by controlling the landsliding debris).

The preventive-type option (e.g. stabilising the slope) will mitigate the landslide risks by reducing the landslide frequencies of the relevant subareas as discussed in Section A3.5 of Appendix A. The potential landslide consequences after completion of the slope stabilisation works would remain unchanged.

The protective-type options (e.g. barrier wall at the slope toe or a series of check dams along the drainage line) will mitigate the landslide risks by reducing the potential consequences to the relevant facilities. With the protective measures, it has been assumed that the landslide consequences would be negligible.

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Table B1 - Probability of an Individual Losing His Life in an Unprotected Facility Subjected to a Large Landslide

Debris Reaching Zone No.	Facility Located in Zone No.						Probability of Debris Reaching Various Zones
	6	5	4	3	2	1	
1	0	0	0	0	0	0.5	5.5%
2	8	0	0	0	0.4	0.9	16.7%
3	0	0	0	0.25	0.8	0.95	27.8%
4	0	0	0.2	0.65	0.9	0.95	27.8%
5	0	0.15	0.5	0.8	0.95	0.95	16.7%
6	0.15	0.5	0.8	0.95	0.95	0.95	5.5%

Table B2 - Scaling Factors for Adjusting Vulnerability Factors

Scale of Landslide		Protected Facility	Unprotected Facility
Small	($V < 50\ m^3$)	0.4	0.6
Medium	($50\ m^3 \leq V < 200\ m^3$)	0.7	0.8
Large	($200\ m^3 \leq V < 1000\ m^3$)	0.9	1
Note:	The scaling factors above are necessary to adjust the vulnerability factors in Table B1 (corresponding to unprotected facility subjected to a large landslide) to reflect the higher probability of escape for a smaller landslide and/or protected facility.		

Table B3 - Maximum Travel Distance Determined by Graphical Method

Slope Segment No.	Slope Sub-area No.	Facility Affected	Distance from Source of Debris to Facility (m)	Open Hillslope Landslide						Channelized Debris Flow					
				Small		Medium		Large		Small		Medium		Large	
				Min. Travel Angle (°)	Max. Travel Distance (m)	Min. Travel Angle (°)	Max. Travel Distance (m)	Min. Travel Angle (°)	Max. Travel Distance (m)	Min. Travel Angle (°)	Max. Travel Distance (m)	Min. Travel Angle (°)	Max. Travel Distance (m)	Min. Travel Angle (°)	Max. Travel Distance (m)
1	1a	Residential flats of Block 13-18	40.5	32.2	30.4	26.7	50.2	20.0	66.9	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	31.9	32.2	30.4	26.7	50.2	20.0	66.9	-	-	-	-	-	-
	1b	Carports adjacent to Block 12	40.8	34.1	35.1	27.1	51.7	20.0	70.0	-	-	-	-	-	-
	1c	Sitting out area behind Bk. 12	37.6	34.3	35.7	26.4	48.9	20.0	64.3	-	-	-	-	-	-
	1d	Residential flats of Block 13-18	58.4	23.0	7.5	29.3	59.7	20.0	75.0	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	49.8	23.0	7.5	29.3	59.7	20.0	75.0	-	-	-	-	-	-
	1e	Carports Adjacent to Block 12	56.5	27.5	18.6	29.7	61.2	20.0	75.0	-	-	-	-	-	-
	1f	Sitting out area behind Bk. 12	48.4	35.3	38.4	28.7	57.7	20.9	79.3	-	-	-	-	-	-
2	2a	Carports adjacent to Block 12	71.5	-	-	-	-	20.9	79.3	-	-	-	-	15.8	104.0
		Sitting out area behind Bk. 12	54.0	-	-	-	-	20.9	79.3	-	-	-	-	15.8	104.0
	2b	Carports adjacent to Block 12	104.0	-	-	-	-	23.8	93.8	-	-	-	-	19.0	119.9
		Sitting out area behind Bk. 12	86.5	-	-	-	-	23.8	93.8	-	-	-	-	19.0	119.9
	2c	Carports adjacent to Block 12	150.6	-	-	-	-	29.9	124.4	-	-	-	-	25.7	153.3
		Sitting out area behind Bk. 12	133.1	-	-	-	-	29.9	124.4	-	-	-	-	25.7	153.3
	2d	Carports adjacent to Block 12	167.6	-	-	-	-	30.8	129.1	-	-	-	-	27.1	160.7
		Sitting out area behind Bk. 12	150.1	-	-	-	-	30.8	129.1	-	-	-	-	27.1	160.7
3	3a	Carports adjacent to Block 12	68.7	21.1	2.8	20.0	25.1	20.0	52.1	20.0	25.1	20.0	52.1	15.0	74.1
		Sitting out area behind Bk. 12	52.7	21.1	2.8	20.0	25.1	20.0	52.1	20.0	25.1	20.0	52.1	15.0	74.1
	3b	Carports adjacent to Block 12	52.4	31.8	29.5	26.3	48.5	20.0	63.6	-	-	-	-	-	-
		Sitting out area behind Bk. 12	40.4	31.8	29.5	26.3	48.5	20.0	63.6	-	-	-	-	-	-
	3c	Carports adjacent to Block 12	129.4	36.7	41.9	32.6	72.1	27.8	113.8	32.6	72.1	27.8	113.8	23.1	140.7
		Sitting out area behind Bk. 12	113.4	36.7	41.9	32.6	72.1	27.8	113.8	32.6	72.1	27.8	113.8	23.1	140.7
	3d	Carports adjacent to Block 12	87.6	32.6	31.6	27.7	53.9	22.2	85.8	27.7	53.9	22.2	85.8	17.2	111.0
		Sitting out area behind Bk. 12	71.6	32.6	31.6	27.7	53.9	22.2	85.8	27.7	53.9	22.2	85.8	17.2	111.0
	3e	Carports adjacent to Block 12	86.1	36.5	41.3	33.1	74.0	25.3	101.5	-	-	-	-	-	-
		Sitting out area behind Bk. 12	74.1	36.5	41.3	33.1	74.0	25.3	101.5	-	-	-	-	-	-
	3f	Carports adjacent to Block 12	153.9	34.2	35.5	33.7	76.4	29.4	121.9	33.7	76.4	29.4	121.9	25.8	154.0
		Sitting out area behind Bk. 12	137.9	34.2	35.5	33.7	76.4	29.4	121.9	33.7	76.4	29.4	121.9	25.8	154.0
	3g	Carports adjacent to Block 12	145.3	43.2	58.0	37.2	89.4	31.3	131.3	37.2	89.4	31.3	131.3	26.7	158.3
		Sitting out area behind Bk. 12	129.3	43.2	58.0	37.2	89.4	31.3	131.3	37.2	89.4	31.3	131.3	26.7	158.3
	3h	Carports adjacent to Block 12	138.7	33.9	34.7	32.1	70.5	28.1	115.7	32.1	70.5	28.1	115.7	24.0	145.0
		Sitting out area behind Bk. 12	122.7	33.9	34.7	32.1	70.5	28.1	115.7	32.1	70.5	28.1	115.7	24.0	145.0
	3i	Carports adjacent to Block 12	114.8	35.7	39.3	32.0	69.8	26.5	107.6	32.0	69.8	26.5	107.6	21.7	133.5
		Sitting out area behind Bk. 12	98.8	35.7	39.3	32.0	69.8	26.5	107.6	32.0	69.8	26.5	107.6	21.7	133.5
	3j	Carports adjacent to Block 12	97.1	38.1	45.3	34.7	80.3	27.1	110.7	-	-	-	-	-	-
		Sitting out area behind Bk. 12	85.1	38.1	45.3	34.7	80.3	27.1	110.7	-	-	-	-	-	-
4	4a	1/F residential flats of Bk. 11	38.6	35.6	38.9	27.3	52.2	20.0	70.8	-	-	-	-	-	-
		Patio of Block 11	32.8	35.6	38.9	27.3	52.2	20.0	70.8	-	-	-	-	-	-
	4b	1/F residential flats of Bk. 10	37.6	35.3	38.2	26.8	50.6	20.0	67.5	-	-	-	-	-	-
		Patio of Block 10	31.8	35.3	38.2	26.8	50.6	20.0	67.5	-	-	-	-	-	-
	4c	1/F residential flats of Bk. 11	71.0	34.1	35.4	33.4	75.2	25.1	100.5	-	-	-	-	-	-
		Patio of Block 11	65.2	34.1	35.4	33.4	75.2	25.1	100.5	-	-	-	-	-	-
	4d	1/F residential flats of Bk. 10	65.6	35.2	38.0	32.5	71.8	24.3	96.4	-	-	-	-	-	-
		Patio of Block 10	59.8	35.2	38.0	32.5	71.8	24.3	96.4	-	-	-	-	-	-
	4e	1/F residential flats of Bk. 10	74.8	33.4	33.6	33.8	76.8	25.5	102.4	-	-	-	-	-	-
		Patio of Block 10	69.0	33.4	33.6	33.8	76.8	25.5	102.4	-	-	-	-	-	-
5	5a	1/F residential flats of Bk. 10	51.5	33.8	34.4	27.1	51.5	20.0	69.7	27.1	51.5	20.0	69.7	15.0	92.3
		Patio of Block 10	46.5	33.8	34.4	27.1	51.5	20.0	69.7	27.1	51.5	20.0	69.7	15.0	92.3
		Garden area between Bk. 9 & 10	33.4	33.8	34.4	27.1	51.5	20.0	69.7	27.1	51.5	20.0	69.7	15.0	92.3
	5b	1/F residential flats of Bk. 9	57.1	33.1	32.7	30.0	62.7	22.1	85.5	-	-	-	-	-	-
		Patio of Block 9	51.3	33.1	32.7	30.0	62.7	22.1	85.5	-	-	-	-	-	-
	5c	1/F residential flats of Bk. 10	73.6	33.3	33.2	31.2	66.9	23.3	91.4	31.2	66.9	23.3	91.4	18.3	116.2
		Patio of Block 10	68.6	33.3	33.2	31.2	66.9	23.3	91.4	31.2	66.9	23.3	91.4	18.3	116.2
		Garden area between Bk. 9 & 10	55.5	33.3	33.2	31.2	66.9	23.3	91.4	31.2	66.9	23.3	91.4	18.3	116.2
	5d	1/F residential flats of Bk. 10	71.2	31.7	29.1	30.4	64.0	22.7	88.3	30.4	64.0	22.7	88.3	17.6	113.1
		Patio of Block 10	66.2	31.7	29.1	30.4	64.0	22.7	88.3	30.4	64.0	22.7	88.3	17.6	113.1
		Garden area between Bk. 9 & 10	53.1	31.7	29.1	30.4	64.0	22.7	88.3	30.4	64.0	22.7	88.3	17.6	113.1
	5e	1/F residential flats of Bk. 10	88.4	30.7	26.8	32.3	71.2	25.2	101.1	32.3	71.2	25.2	101.1	20.2	126.0
		Patio of Block 10	83.4	30.7	26.8	32.3	71.2	25.2	101.1	32.3	71.2	25.2	101.1	20.2	126.0
		Garden area between Bk. 9 & 10	70.3	30.7	26.8	32.3	71.2	25.2	101.1	32.3	71.2	25.2	101.1	20.2	126.0
	5f	1/F residential flats of Bk. 10	94.1	32.1	30.2	30.0	62.4	25.4	102.1	30.0	62.4	25.4	102.1	20.4	127.1
		Patio of Block 10	89.1	32.1	30.2	30.0	62.4	25.4	102.1	30.0	62.4	25.4	102.1	20.4	127.1
		Garden area between Bk. 9 & 10	76.0	32.1	30.2	30.0	62.4	25.4	102.1	30.0	62.4	25.4	102.1	20.4	127.1
	5g	1/F residential flats of Bk. 10	95.4	24.5	11.1	28.6	57.4	25.4	102.0	28.6	57.4	25.4	102.0	20.4	127.0
		Patio of Block 10	90.4	24.5	11.1	28.6	57.4	25.4	102.0	28.6	57.4	25.4	102.0	20.4	127.0
		Garden area between Bk. 9 & 10	77.3	24.5	11.1	28.6	57.4	25.4	102.0	28.6	57.4	25.4	102.0	20.4	127.0
6	6a	G/F residential flat of Bk5	43.7	30.7	26.8	26.2	48.3	20.0	63.4	-	-	-	-	-	-
		Patio of Block 5	40.1	30.7	26.8	26.2	48.3	20.0	63.4	-	-	-	-	-	-
	6b	Driveway near main entrance	32.0	29.0	22.4	24.8	42.9	20.0	53.8	-	-	-	-	-	-
		Guardhouse near main entrance	44.3	29.0	22.4	24.8	42.9	20.0	53.8	-	-	-	-	-	-
	6c	G/F residential flat of Bk5	84.7	34.1	35.2	32.3	71.2	25.8	103.8	-	-	-	-	-	-
		Patio of Block 5	81.1	34.1	35.2	32.3	71.2	25.8	103.8	-	-	-	-	-	-
7	7a	G/F carports & driveway	59.5	26.6	16.4	26.5	49.5	20.6	78.2	-	-	-	-	-	-
	7b	1/F residential flats	60.0	29.3	23.2	24.6	42.3	20.0	68.2	24.6	42.3	20.0	68.2	15.0	90.8
		G/F lobby	55.9	29.3	23.2	24.6	42.3	20.0	68.2	24.6	42.3	20.0	68.2	15.0	90.8
	7c	1/F residential flats	56.7	30.4	26.0	29.1	59.0	21.2	81.1	-	-	-	-	-	-
		Patio at 1/F level	53.3	30.4	26.0	29.1	59.0	21.2	81.1	-	-	-	-	-	-
	7d	G/F carports & driveway	114.1	28.4	21.1	28.5	56.8	27.8	113.8	-	-	-	-	-	-
	7e	1/F residential flats	118.5	34.3	35.7	29.7	61.3	25.7	103.5	29.7	61.3	25.7	103.5	21.8	134.2
		G/F lobby	114.4	34.3	35.7	29.7	61.3	25.7	103.5	29.7	61.3	25.7	103.5	21.8	134.2
	7f	1/F residential flats	102.5	28.1	20.2	26.1	48.0	23.1	90.4	26.1	48.0	23.1	90.4	19.1	120.6
		G/F lobby	98.4	28.1	20.2	26.1	48.0	23.1	90.4	26.1	48.0	23.1	90.4	19.1	120.6
	7g	1/F residential flats	97.3	24.0	10.1	23.7	38.9	25.6	102.8	-	-	-	-	-	-
		Patio at 1/F level	93.2	24.0	10.1	23.7	38.9	25.6	102.8	-	-	-	-	-	-
	7h	G/F carports & driveway	131.2	23.4	8.6	25.4	45.4	26.5	107.6	-	-	-	-	-	-
	7i	1/F residential flats	133.5	36.1	40.3	31.3	67.5	27.1	110.4	31.3	67.5	27.1	110.4	23.8	143.8
		G/F lobby	129.4	36.1	40.3	31.3	67.5	27.1	110.4	31.3	67.5	27.1	110.4	23.8	143.8
	7j	1/F residential flats	135.6	34.3	35.7	30.8	65.3	26.7	108.3	30.8	65.3	26.7	108.3	23.7	143.5
		G/F lobby	131.5	34.3	35.7	30.8	65.3	26.7	108.3	30.8	65.3	26.7	108.3	23.7	143.5
	7k	1/F residential flats	121.9	29.2	22.9	26.3	48.5	27.8	113.9	-	-	-	-	-	-
		Patio at 1/F level	117.8	29.2	22.9	26.3	48.5	27.8	113.9	-	-	-	-	-	-

Notes:

(1) The runout distance was measure along the assumed debris trial and travel angle was measured on the line joining the distal end of the debris to crest of the sub-area defined by Cruden & Varnes (1996).

(2) Maximum travel distance was determined by adjusting the extend of assumed debris runout such that the travel angle was minimized and travel distance was maximized. See example in Figure B2.

Table B4 - Summary of Vulnerability Factors for Different Facilities (Sheet 1 of 2)

Slope Segment No	Slope Sub-area No	Facility Affected	Distance from Source of Debris to Facility (m)	Vulnerability Factor					
				Open Hillslope Landslide			Channelized Debris Flow		
				Small	Medium	Large	Small	Medium	Large
Woodcrest Hill									
1	1a	Residential flats of Block 13-18	40.5	0.000	0.037	0.165	-	-	-
		Garages & driveway of Bk. 13-18	31.9	0.000	0.146	0.436	-	-	-
	1b	Carports adjacent to Block 12	40.8	0.000	0.042	0.183	-	-	-
	1c	Sitting out area behind Bk. 12	37.6	0.000	0.042	0.183	-	-	-
	1d	Residential flats of Block 13-18	58.4	0.000	0.006	0.047	-	-	-
		Garages & driveway of Bk. 13-18	49.8	0.000	0.007	0.183	-	-	-
	1e	Carports Adjacent to Block 12	56.5	0.000	0.007	0.053	-	-	-
	1f	Sitting out area behind Bk. 12	48.4	0.000	0.007	0.183	-	-	-
2	2a	Carports adjacent to Block 12	71.5	-	-	0.008	-	-	0.053
		Sitting out area behind Bk. 12	54.0	-	-	0.053	-	-	0.183
	2b	Carports adjacent to Block 12	104.0	-	-	0.000	-	-	0.008
		Sitting out area behind Bk. 12	86.5	-	-	0.008	-	-	0.053
	2c	Carports adjacent to Block 12	150.6	-	-	0.000	-	-	0.008
		Sitting out area behind Bk. 12	133.1	-	-	0.000	-	-	0.008
	2d	Carports adjacent to Block 12	167.6	-	-	0.000	-	-	0.000
		Sitting out area behind Bk. 12	150.1	-	-	0.000	-	-	0.008
3	3a	Carports adjacent to Block 12	68.7	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	52.7	0.000	0.000	0.000	0.000	0.000	0.053
	3b	Carports adjacent to Block 12	52.4	0.000	0.000	0.053	-	-	-
		Sitting out area behind Bk. 12	40.4	0.000	0.006	0.165	-	-	-
	3c	Carports adjacent to Block 12	129.4	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	113.4	0.000	0.000	0.007	0.000	0.007	0.047
	3d	Carports adjacent to Block 12	87.6	0.000	0.000	0.000	0.000	0.000	0.053
		Sitting out area behind Bk. 12	71.6	0.000	0.000	0.007	0.000	0.007	0.165
	3e	Carports adjacent to Block 12	86.1	0.000	0.000	0.008	-	-	-
		Sitting out area behind Bk. 12	74.1	0.000	0.000	0.053	-	-	-
	3f	Carports adjacent to Block 12	153.9	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	137.9	0.000	0.000	0.000	0.000	0.000	0.008
	3g	Carports adjacent to Block 12	145.3	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	129.3	0.000	0.000	0.008	0.000	0.008	0.053
	3h	Carports adjacent to Block 12	138.7	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	122.7	0.000	0.000	0.000	0.000	0.000	0.008
	3i	Carports adjacent to Block 12	114.8	0.000	0.000	0.000	0.000	0.000	0.008
		Sitting out area behind Bk. 12	98.8	0.000	0.000	0.008	0.000	0.008	0.053
	3j	Carports adjacent to Block 12	97.1	0.000	0.000	0.008	-	-	-
		Sitting out area behind Bk. 12	85.1	0.000	0.000	0.053	-	-	-
4	4a	1/F residential flats of Bk. 11	38.6	0.003	0.037	0.165	-	-	-
		Patio of Block 11	32.8	0.005	0.146	0.436	-	-	-
	4b	1/F residential flats of Bk. 10	37.6	0.003	0.037	0.165	-	-	-
		Patio of Block 10	31.8	0.032	0.146	0.436	-	-	-
	4c	1/F residential flats of Bk. 11	71.0	0.000	0.006	0.047	-	-	-
		Patio of Block 11	65.2	0.000	0.007	0.183	-	-	-
	4d	1/F residential flats of Bk. 10	65.6	0.000	0.006	0.047	-	-	-
		Patio of Block 10	59.8	0.000	0.042	0.183	-	-	-
	4e	1/F residential flats of Bk. 10	74.8	0.000	0.006	0.047	-	-	-
		Patio of Block 10	69.0	0.000	0.007	0.053	-	-	-
5	5a	1/F residential flats of Bk. 10	51.5	0.000	0.006	0.047	0.006	0.047	0.165
		Patio of Block 10	46.5	0.000	0.007	0.053	0.007	0.053	0.183
		Garden area between Bk. 9 & 10	33.4	0.005	0.146	0.436	0.146	0.436	0.436
	5b	1/F residential flats of Bk. 9	57.1	0.000	0.006	0.047	-	-	-
		Patio of Block 9	51.3	0.000	0.042	0.183	-	-	-
	5c	1/F residential flats of Bk. 10	73.6	0.000	0.000	0.047	0.000	0.047	0.165
		Patio of Block 10	68.6	0.000	0.000	0.053	0.000	0.053	0.183
		Garden area between Bk. 9 & 10	55.5	0.000	0.042	0.183	0.042	0.183	0.436
	5d	1/F residential flats of Bk. 10	71.2	0.000	0.000	0.047	0.000	0.047	0.165
		Patio of Block 10	66.2	0.000	0.000	0.053	0.000	0.053	0.183
		Garden area between Bk. 9 & 10	53.1	0.000	0.042	0.183	0.042	0.183	0.436
	5e	1/F residential flats of Bk. 10	88.4	0.000	0.000	0.007	0.000	0.007	0.047
		Patio of Block 10	83.4	0.000	0.000	0.053	0.000	0.053	0.183
		Garden area between Bk. 9 & 10	70.3	0.000	0.007	0.053	0.007	0.053	0.183
	5f	1/F residential flats of Bk. 10	94.1	0.000	0.000	0.007	0.000	0.007	0.047
		Patio of Block 10	89.1	0.000	0.000	0.008	0.000	0.008	0.053
		Garden area between Bk. 9 & 10	76.0	0.000	0.000	0.053	0.000	0.053	0.183
	5g	1/F residential flats of Bk. 10	95.4	0.000	0.000	0.007	0.000	0.007	0.047
		Patio of Block 10	90.4	0.000	0.000	0.008	0.000	0.008	0.053
		Garden area between Bk. 9 & 10	77.3	0.000	0.000	0.053	0.000	0.053	0.183
6	6a	G/F residential flat of Bk5	43.7	0.000	0.006	0.047	-	-	-
		Patio of Block 5	40.1	0.000	0.042	0.183	-	-	-
	6b	Driveway near main entrance	32.0	0.000	0.042	0.183	-	-	-
		Guardhouse near main entrance	44.3	0.000	0.000	0.053	-	-	-
	6c	G/F residential flat of Bk5	84.7	0.000	0.000	0.047	-	-	-
		Patio of Block 5	81.1	0.000	0.000	0.053	-	-	-

Table B4 - Summary of Vulnerability Factors for Different Facilities (Sheet 2 of 2)

Slope Segment No	Slope Sub-area No	Facility Affected	Distance from Source of Debris to Facility (m)	Vulnerability Factor					
				Open Hillslope Landslide			Channelized Debris Flow		
				Small	Medium	Large	Small	Medium	Large
K. K. Terrace									
7	7a	G/F carports & driveway	59.5	0.000	0.000	0.053	-	-	-
	7b	1/F residential flats	60.0	0.000	0.000	0.007	0.000	0.007	0.165
		G/F lobby	55.9	0.000	0.000	0.053	0.000	0.053	0.183
	7c	1/F residential flats	56.7	0.000	0.006	0.047	-	-	-
		Patio at 1/F level	53.3	0.000	0.007	0.183	-	-	-
	7d	G/F carports & driveway	114.1	0.000	0.000	0.000	-	-	-
	7e	1/F residential flats	118.5	0.000	0.000	0.000	0.000	0.000	0.007
		G/F lobby	114.4	0.000	0.000	0.000	0.000	0.000	0.008
	7f	1/F residential flats	102.5	0.000	0.000	0.000	0.000	0.000	0.007
		G/F lobby	98.4	0.000	0.000	0.000	0.000	0.000	0.053
	7g	1/F residential flats	97.3	0.000	0.000	0.007	-	-	-
		Patio at 1/F level	93.2	0.000	0.000	0.008	-	-	-
	7h	G/F carports & driveway	131.2	0.000	0.000	0.000	-	-	-
	7i	1/F residential flats	133.5	0.000	0.000	0.000	0.000	0.000	0.007
		G/F lobby	129.4	0.000	0.000	0.000	0.000	0.000	0.008
	7j	1/F residential flats	135.6	0.000	0.000	0.000	0.000	0.000	0.007
		G/F lobby	131.5	0.000	0.000	0.000	0.000	0.000	0.008
	7k	1/F residential flats	121.9	0.000	0.000	0.000	-	-	-
		Patio at 1/F level	117.8	0.000	0.000	0.000	-	-	-

Notes:

(1) For slope segment No. 2, the disused pond has a volume larger than that of a small or medium landslide. For such events, the landslide debris would be entrapped by the disused pond. Therefore, the risks of small and medium landslides for segment No. 2 are negligible and have been ignored from the QRA.

(2) Slope segments No. 1, 4, 6 and slope sub-areas Nos. 3b, 3e, 3j, 5b, 7a, 7c, 7d, 7g, 7h, 7k are not within a drainage line. Therefore, vulnerability factors are not applicable for channelized debris flows in these areas.

(3) Derivation of vulnerability factor is shown in Table B5.

Table B5 - Vulnerability Factor Calculation (Sheet 1 of 6 - for Small Open Hillslope Landslide)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris: Facility located from crest of sub-area (m)	Mobility of Debris: Minimum Travel Angle (°)	Mobility of Debris: Max. Travel Distance (m)	Debris Runout Zone: Total	Debris Runout Zone: Facility in	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
								Probability of debris reaching various zones							
								5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	32.2	30.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Garages & driveway of Bk. 13-18	31.9	32.2	30.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	1b	Carports adjacent to Block 12	40.8	34.1	35.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	1c	Sitting out area behind Bk. 12	37.6	34.3	35.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	1d	Residential flats of Block 13-18	58.4	23.0	7.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Garages & driveway of Bk. 13-18	49.8	23.0	7.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	1e	Carports adjacent to Block 12	56.5	27.5	18.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	1f	Sitting out area behind Bk. 12	48.4	35.3	38.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	54.0	-	-	-	-	-	-	-	-	-	-	-	-
	2b	Carports adjacent to Block 12	104.0	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	86.5	-	-	-	-	-	-	-	-	-	-	-	-
	2c	Carports adjacent to Block 12	150.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	133.1	-	-	-	-	-	-	-	-	-	-	-	-
	2d	Carports adjacent to Block 12	167.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	150.1	-	-	-	-	-	-	-	-	-	-	-	-
3	3a	Carports adjacent to Block 12	68.7	21.1	2.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	52.7	21.1	2.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3b	Carports adjacent to Block 12	52.4	31.8	29.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	40.4	31.8	29.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3c	Carports adjacent to Block 12	129.4	36.7	41.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	113.4	36.7	41.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3d	Carports adjacent to Block 12	87.6	32.6	31.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	71.6	32.6	31.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3e	Carports adjacent to Block 12	86.1	36.5	41.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	74.1	36.5	41.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3f	Carports adjacent to Block 12	153.9	34.2	35.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	137.9	34.2	35.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3g	Carports adjacent to Block 12	145.3	43.2	58.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	129.3	43.2	58.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3h	Carports adjacent to Block 12	138.7	33.9	34.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	122.7	33.9	34.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3i	Carports adjacent to Block 12	114.8	35.7	39.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	98.8	35.7	39.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	3j	Residential Building of Bk12 ????	107.1	38.1	45.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Carports adjacent to Block 12	97.1	38.1	45.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Sitting out area behind Bk. 12	85.1	38.1	45.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
4	4a	1/F residential flats of Bk. 11	38.6	35.6	38.9	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.4	0.003
		Patio of Block 11	32.8	35.6	38.9	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.6	0.005
	4b	1/F residential flats of Bk. 10	37.6	35.3	38.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.4	0.003
		Patio of Block 10	31.8	35.3	38.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.6	0.032
	4c	1/F residential flats of Bk. 11	71.0	34.1	35.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 11	65.2	34.1	35.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	4d	1/F residential flats of Bk. 10	65.6	35.2	38.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	59.8	35.2	38.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	4e	1/F residential flats of Bk. 10	74.8	33.4	33.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	69.0	33.4	33.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
5	5a	1/F residential flats of Bk. 10	51.5	33.8	34.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	46.5	33.8	34.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	33.4	33.8	34.4	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.6	0.005
	5b	1/F residential flats of Bk. 9	57.1	33.1	32.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 9	51.3	33.1	32.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	5c	1/F residential flats of Bk. 10	73.6	33.3	33.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	68.6	33.3	33.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	55.5	33.3	33.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	5d	1/F residential flats of Bk. 10	71.2	31.7	29.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	66.2	31.7	29.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	53.1	31.7	29.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	5e	1/F residential flats of Bk. 10	88.4	30.7	26.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	83.4	30.7	26.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	70.3	30.7	26.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	5f	1/F residential flats of Bk. 10	94.1	32.1	30.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	89.1	32.1	30.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	76.0	32.1	30.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	5g	1/F residential flats of Bk. 10	95.4	24.5	11.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 10	90.4	24.5	11.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Garden area between Bk. 9 & 10	77.3	24.5	11.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
6	6a	G/F residential flat of Bk5	43.7	30.7	26.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 5	40.1	30.7	26.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	6b	Driveway near main entrance	32.0	29.0	22.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
		Guardhouse near main entrance	44.3	29.0	22.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	6c	G/F residential flat of Bk5	84.7	34.1	35.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio of Block 5	81.1	34.1	35.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
7	7a	G/F carports & driveway	59.5	26.6	16.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7b	1/F residential flats	60.0	29.3	23.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		G/F lobby	55.9	29.3	23.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7c	1/F residential flats	56.7	30.4	26.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio at 1/F level	53.3	30.4	26.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7d	G/F carports & driveway	114.1	28.4	21.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7e	1/F residential flats	118.5	34.3	35.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		G/F lobby	114.4	34.3	35.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7f	1/F residential flats	102.5	28.1	20.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		G/F lobby	98.4	28.1	20.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7g	1/F residential flats	97.3	24.0	10.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio at 1/F level	93.2	24.0	10.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7h	G/F carports & driveway	131.2	23.4	8.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7i	1/F residential flats	133.5	36.1	40.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		G/F lobby	129.4	36.1	40.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7j	1/F residential flats	135.6	34.3	35.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		G/F lobby	131.5	34.3	35.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000
	7k	1/F residential flats	121.9	29.2	22.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.000
		Patio at 1/F level	117.8	29.2	22.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.000

Table B5 - Vulnerability Factor Calculation (Sheet 2 of 6 - for Medium Open Hillslope Landslide)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris					Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
			Facility located from crest of sub-area (m)	Minimum Travel Angle (°)	Max. Travel Distance (m)	Debris Runout Zone		Probability of debris reaching various zones							
						Total	Facility in	5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	26.7	50.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.7	0.037
		Garages & driveway of Bk. 13-18	31.9	26.7	50.2	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.8	0.146
	1b	Carports adjacent to Block 12	40.8	27.1	51.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	1c	Sitting out area behind Bk. 12	37.6	26.4	48.9	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	1d	Residential flats of Block 13-18	58.4	29.3	59.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Garages & driveway of Bk. 13-18	49.8	29.3	59.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	1e	Carports adjacent to Block 12	56.5	29.7	61.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	1f	Sitting out area behind Bk. 12	48.4	28.7	57.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	54.0	-	-	-	-	-	-	-	-	-	-	-	-
	2b	Carports adjacent to Block 12	104.0	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	86.5	-	-	-	-	-	-	-	-	-	-	-	-
	2c	Carports adjacent to Block 12	150.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	133.1	-	-	-	-	-	-	-	-	-	-	-	-
	2d	Carports adjacent to Block 12	167.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	150.1	-	-	-	-	-	-	-	-	-	-	-	-
3	3a	Carports adjacent to Block 12	68.7	20.0	25.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	52.7	20.0	25.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3b	Carports adjacent to Block 12	52.4	26.3	48.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	40.4	26.3	48.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.006
	3c	Carports adjacent to Block 12	129.4	32.6	72.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	113.4	32.6	72.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3d	Carports adjacent to Block 12	87.6	27.7	53.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	71.6	27.7	53.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3e	Carports adjacent to Block 12	86.1	33.1	74.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	74.1	33.1	74.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3f	Carports adjacent to Block 12	153.9	33.7	76.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	137.9	33.7	76.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3g	Carports adjacent to Block 12	145.3	37.2	89.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	129.3	37.2	89.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3h	Carports adjacent to Block 12	138.7	32.1	70.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	122.7	32.1	70.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3i	Carports adjacent to Block 12	114.8	32.0	69.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	98.8	32.0	69.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3j	Residential Building of Bk12 ????	107.1	34.7	80.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Carports adjacent to Block 12	97.1	34.7	80.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	85.1	34.7	80.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
4	4a	1/F residential flats of Bk. 11	38.6	27.3	52.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.7	0.037
		Patio of Block 11	32.8	27.3	52.2	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.8	0.146
	4b	1/F residential flats of Bk. 10	37.6	26.8	50.6	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.7	0.037
		Patio of Block 10	31.8	26.8	50.6	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.8	0.146
	4c	1/F residential flats of Bk. 11	71.0	33.4	75.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 11	65.2	33.4	75.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	4d	1/F residential flats of Bk. 10	65.6	32.5	71.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 10	59.8	32.5	71.8	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	4e	1/F residential flats of Bk. 10	74.8	33.8	76.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 10	69.0	33.8	76.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
5	5a	1/F residential flats of Bk. 10	51.5	27.1	51.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 10	46.5	27.1	51.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
		Garden area between Bk. 9 & 10	33.4	27.1	51.5	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.8	0.146
	5b	1/F residential flats of Bk. 9	57.1	30.0	62.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 9	51.3	30.0	62.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	5c	1/F residential flats of Bk. 10	73.6	31.2	66.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	68.6	31.2	66.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	55.5	31.2	66.9	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	5d	1/F residential flats of Bk. 10	71.2	30.4	64.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	66.2	30.4	64.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	53.1	30.4	64.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	5e	1/F residential flats of Bk. 10	88.4	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	83.4	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	70.3	32.3	71.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	5f	1/F residential flats of Bk. 10	94.1	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	89.1	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	76.0	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	5g	1/F residential flats of Bk. 10	95.4	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	90.4	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	77.3	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
6	6a	G/F residential flat of Bk5	43.7	26.2	48.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 5	40.1	26.2	48.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	6b	Driveway near main entrance	32.0	24.8	42.9	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
		Guardhouse near main entrance	44.3	24.8	42.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	6c	G/F residential flat of Bk5	84.7	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 5	81.1	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
7	7a	G/F carports & driveway	59.5	26.5	49.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7b	1/F residential flats	60.0	24.6	42.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	55.9	24.6	42.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7c	1/F residential flats	56.7	29.1	59.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio at 1/F level	53.3	29.1	59.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	7d	G/F carports & driveway	114.1	28.5	56.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7e	1/F residential flats	118.5	29.7	61.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	114.4	29.7	61.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7f	1/F residential flats	102.5	26.1	48.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	98.4	26.1	48.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7g	1/F residential flats	97.3	23.7	38.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio at 1/F level	93.2	23.7	38.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7h	G/F carports & driveway	131.2	25.4	45.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7i	1/F residential flats	133.5	31.3	67.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	129.4	31.3	67.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7j	1/F residential flats	135.6	30.8	65.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	131.5	30.8	65.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7k	1/F residential flats	121.9	26.3	48.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio at 1/F level	117.8	26.3	48.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000

Table B5 - Vulnerability Factor Calculation (Sheet 3 of 6 - for Large Open Hillslope Landslide)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris: Facility located from crest of sub-area (m)	Mobility of Debris: Minimum Travel Angle (°)	Mobility of Debris: Max. Travel Distance (m)	Debris Runout Zone: Total	Debris Runout Zone: Facility in	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
								Probability of debris reaching various zones							
								5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	20.0	66.9	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Garages & driveway of Bk. 13-18	31.9	20.0	66.9	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	1b	Carports adjacent to Block 12	40.8	20.0	70.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	1c	Sitting out area behind Bk. 12	37.6	20.0	64.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	1d	Residential flats of Block 13-18	58.4	20.0	75.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Garages & driveway of Bk. 13-18	49.8	20.0	75.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	1e	Carports adjacent to Block 12	56.5	20.0	75.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	1f	Sitting out area behind Bk. 12	48.4	20.9	79.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	20.9	79.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	54.0	20.9	79.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	2b	Carports adjacent to Block 12	104.0	23.8	93.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	86.5	23.8	93.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	2c	Carports adjacent to Block 12	150.6	29.9	124.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	133.1	29.9	124.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	2d	Carports adjacent to Block 12	167.6	30.8	129.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	150.1	30.8	129.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
3	3a	Carports adjacent to Block 12	68.7	20.0	52.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	52.7	20.0	52.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3b	Carports adjacent to Block 12	52.4	20.0	63.6	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Sitting out area behind Bk. 12	40.4	20.0	63.6	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.165
	3c	Carports adjacent to Block 12	129.4	27.8	113.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	113.4	27.8	113.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.007
	3d	Carports adjacent to Block 12	87.6	22.2	85.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	71.6	22.2	85.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.007
	3e	Carports adjacent to Block 12	86.1	25.3	101.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	74.1	25.3	101.5	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	3f	Carports adjacent to Block 12	153.9	29.4	121.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	137.9	29.4	121.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3g	Carports adjacent to Block 12	145.3	31.3	131.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	129.3	31.3	131.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3h	Carports adjacent to Block 12	138.7	28.1	115.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	122.7	28.1	115.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3i	Carports adjacent to Block 12	114.8	26.5	107.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	98.8	26.5	107.6	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3j	Residential Building of Bk12 ????	107.1	27.1	110.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Carports adjacent to Block 12	97.1	27.1	110.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	85.1	27.1	110.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
4	4a	1/F residential flats of Bk. 11	38.6	20.0	70.8	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Patio of Block 11	32.8	20.0	70.8	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	4b	1/F residential flats of Bk. 10	37.6	20.0	67.5	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Patio of Block 10	31.8	20.0	67.5	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	4c	1/F residential flats of Bk. 11	71.0	25.1	100.5	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 11	65.2	25.1	100.5	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	4d	1/F residential flats of Bk. 10	65.6	24.3	96.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	59.8	24.3	96.4	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	4e	1/F residential flats of Bk. 10	74.8	25.5	102.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	69.0	25.5	102.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
5	5a	1/F residential flats of Bk. 10	51.5	20.0	69.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	46.5	20.0	69.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	33.4	20.0	69.7	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	5b	1/F residential flats of Bk. 9	57.1	22.1	85.5	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 9	51.3	22.1	85.5	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5c	1/F residential flats of Bk. 10	73.6	23.3	91.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	68.6	23.3	91.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	55.5	23.3	91.4	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5d	1/F residential flats of Bk. 10	71.2	22.7	88.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	66.2	22.7	88.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	53.1	22.7	88.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5e	1/F residential flats of Bk. 10	88.4	25.2	101.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	83.4	25.2	101.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	70.3	25.2	101.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	5f	1/F residential flats of Bk. 10	94.1	25.4	102.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	89.1	25.4	102.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Garden area between Bk. 9 & 10	76.0	25.4	102.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	5g	1/F residential flats of Bk. 10	95.4	25.4	102.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	90.4	25.4	102.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Garden area between Bk. 9 & 10	77.3	25.4	102.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
6	6a	G/F residential flat of Bk5	43.7	20.0	63.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 5	40.1	20.0	63.4	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	6b	Driveway near main entrance	32.0	20.0	53.8	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
		Guardhouse near main entrance	44.3	20.0	53.8	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	6c	G/F residential flat of Bk5	84.7	25.8	103.8	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 5	81.1	25.8	103.8	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
7	7a	G/F carports & driveway	59.5	20.6	78.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	7b	1/F residential flats	60.0	20.0	68.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	55.9	20.0	68.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	7c	1/F residential flats	56.7	21.2	81.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio at 1/F level	53.3	21.2	81.1	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	7d	G/F carports & driveway	114.1	27.8	113.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7e	1/F residential flats	118.5	25.7	103.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	114.4	25.7	103.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7f	1/F residential flats	102.5	23.1	90.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	98.4	23.1	90.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7g	1/F residential flats	97.3	25.6	102.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio at 1/F level	93.2	25.6	102.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	7h	G/F carports & driveway	131.2	26.5	107.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7i	1/F residential flats	133.5	27.1	110.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	129.4	27.1	110.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7j	1/F residential flats	135.6	26.7	108.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	131.5	26.7	108.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7k	1/F residential flats	121.9	27.8	113.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		Patio at 1/F level	117.8	27.8	113.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000

Table B5 - Vulnerability Factor Calculation (Sheet 4 of 6 - for Small Channelized Debris Flow)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris: Facility located from crest of sub-area (m)	Mobility of Debris: Minimum Travel Angle (°)	Mobility of Debris: Max. Travel Distance (m)	Mobility of Debris: Debris Runout Zone: Total	Mobility of Debris: Debris Runout Zone: Facility in	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
								Probability of debris reaching various zones							
								5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	31.9	-	-	-	-	-	-	-	-	-	-	-	-
	1b	Carports adjacent to Block 12	40.8	-	-	-	-	-	-	-	-	-	-	-	-
	1c	Sitting out area behind Bk. 12	37.6	-	-	-	-	-	-	-	-	-	-	-	-
	1d	Residential flats of Block 13-18	58.4	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	49.8	-	-	-	-	-	-	-	-	-	-	-	-
	1e	Carports adjacent to Block 12	56.5	-	-	-	-	-	-	-	-	-	-	-	-
	1f	Sitting out area behind Bk. 12	48.4	-	-	-	-	-	-	-	-	-	-	-	-
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	54.0	-	-	-	-	-	-	-	-	-	-	-	-
	2b	Carports adjacent to Block 12	104.0	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	86.5	-	-	-	-	-	-	-	-	-	-	-	-
	2c	Carports adjacent to Block 12	150.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	133.1	-	-	-	-	-	-	-	-	-	-	-	-
	2d	Carports adjacent to Block 12	167.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	150.1	-	-	-	-	-	-	-	-	-	-	-	-
3	3a	Carports adjacent to Block 12	68.7	20.0	25.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	52.7	20.0	25.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3b	Carports adjacent to Block 12	52.4	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	40.4	-	-	-	-	-	-	-	-	-	-	-	-
	3c	Carports adjacent to Block 12	129.4	32.6	72.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	113.4	32.6	72.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3d	Carports adjacent to Block 12	87.6	27.7	53.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	71.6	27.7	53.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3e	Carports adjacent to Block 12	86.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	74.1	-	-	-	-	-	-	-	-	-	-	-	-
	3f	Carports adjacent to Block 12	153.9	33.7	76.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	137.9	33.7	76.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3g	Carports adjacent to Block 12	145.3	37.2	89.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	129.3	37.2	89.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3h	Carports adjacent to Block 12	138.7	32.1	70.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	122.7	32.1	70.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3i	Carports adjacent to Block 12	114.8	32.0	69.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Sitting out area behind Bk. 12	98.8	32.0	69.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	3j	Residential Building of Bk12 ????	107.1	-	-	-	-	-	-	-	-	-	-	-	-
		Carports adjacent to Block 12	97.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	85.1	-	-	-	-	-	-	-	-	-	-	-	-
4	4a	1/F residential flats of Bk. 11	38.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	32.8	-	-	-	-	-	-	-	-	-	-	-	-
	4b	1/F residential flats of Bk. 10	37.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	31.8	-	-	-	-	-	-	-	-	-	-	-	-
	4c	1/F residential flats of Bk. 11	71.0	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	65.2	-	-	-	-	-	-	-	-	-	-	-	-
	4d	1/F residential flats of Bk. 10	65.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	59.8	-	-	-	-	-	-	-	-	-	-	-	-
	4e	1/F residential flats of Bk. 10	74.8	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	69.0	-	-	-	-	-	-	-	-	-	-	-	-
5	5a	1/F residential flats of Bk. 10	51.5	27.1	51.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.7	0.006
		Patio of Block 10	46.5	27.1	51.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
		Garden area between Bk. 9 & 10	33.4	27.1	51.5	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.8	0.146
	5b	1/F residential flats of Bk. 9	57.1	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 9	51.3	-	-	-	-	-	-	-	-	-	-	-	-
	5c	1/F residential flats of Bk. 10	73.6	31.2	66.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	68.6	31.2	66.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	55.5	31.2	66.9	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	5d	1/F residential flats of Bk. 10	71.2	30.4	64.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	66.2	30.4	64.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	53.1	30.4	64.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.8	0.042
	5e	1/F residential flats of Bk. 10	88.4	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	83.4	32.3	71.2	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	70.3	32.3	71.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.8	0.007
	5f	1/F residential flats of Bk. 10	94.1	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	89.1	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	76.0	30.0	62.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	5g	1/F residential flats of Bk. 10	95.4	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		Patio of Block 10	90.4	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
		Garden area between Bk. 9 & 10	77.3	28.6	57.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
6	6a	G/F residential flat of Bk5	43.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	40.1	-	-	-	-	-	-	-	-	-	-	-	-
	6b	Driveway near main entrance	32.0	-	-	-	-	-	-	-	-	-	-	-	-
		Guardhouse near main entrance	44.3	-	-	-	-	-	-	-	-	-	-	-	-
	6c	G/F residential flat of Bk5	84.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	81.1	-	-	-	-	-	-	-	-	-	-	-	-
7	7a	G/F carports & driveway	59.5	-	-	-	-	-	-	-	-	-	-	-	-
	7b	1/F residential flats	60.0	24.6	42.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	55.9	24.6	42.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7c	1/F residential flats	56.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	53.3	-	-	-	-	-	-	-	-	-	-	-	-
	7d	G/F carports & driveway	114.1	-	-	-	-	-	-	-	-	-	-	-	-
	7e	1/F residential flats	118.5	29.7	61.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	114.4	29.7	61.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7f	1/F residential flats	102.5	26.1	48.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	98.4	26.1	48.0	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7g	1/F residential flats	97.3	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	93.2	-	-	-	-	-	-	-	-	-	-	-	-
	7h	G/F carports & driveway	131.2	-	-	-	-	-	-	-	-	-	-	-	-
	7i	1/F residential flats	133.5	31.3	67.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	129.4	31.3	67.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7j	1/F residential flats	135.6	30.8	65.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.000
		G/F lobby	131.5	30.8	65.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.000
	7k	1/F residential flats	121.9	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	117.8	-	-	-	-	-	-	-	-	-	-	-	-

Table B5 - Vulnerability Factor Calculation (Sheet 5 of 6 - for Medium Channelized Debris Flow)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris: Facility located from crest of sub-area (m)	Mobility of Debris: Minimum Travel Angle (°)	Mobility of Debris: Max. Travel Distance (m)	Mobility of Debris: Debris Runout Zone: Total	Mobility of Debris: Debris Runout Zone: Facility in	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
								Probability of debris reaching various zones							
								5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	31.9	-	-	-	-	-	-	-	-	-	-	-	-
	1b	Carports adjacent to Block 12	40.8	-	-	-	-	-	-	-	-	-	-	-	-
	1c	Sitting out area behind Bk. 12	37.6	-	-	-	-	-	-	-	-	-	-	-	-
	1d	Residential flats of Block 13-18	58.4	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	49.8	-	-	-	-	-	-	-	-	-	-	-	-
	1e	Carports adjacent to Block 12	56.5	-	-	-	-	-	-	-	-	-	-	-	-
	1f	Sitting out area behind Bk. 12	48.4	-	-	-	-	-	-	-	-	-	-	-	-
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	54.0	-	-	-	-	-	-	-	-	-	-	-	-
	2b	Carports adjacent to Block 12	104.0	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	86.5	-	-	-	-	-	-	-	-	-	-	-	-
	2c	Carports adjacent to Block 12	150.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	133.1	-	-	-	-	-	-	-	-	-	-	-	-
	2d	Carports adjacent to Block 12	167.6	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	150.1	-	-	-	-	-	-	-	-	-	-	-	-
3	3a	Carports adjacent to Block 12	68.7	20.0	52.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	52.7	20.0	52.1	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3b	Carports adjacent to Block 12	52.4	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	40.4	-	-	-	-	-	-	-	-	-	-	-	-
	3c	Carports adjacent to Block 12	129.4	27.8	113.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	113.4	27.8	113.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.007
	3d	Carports adjacent to Block 12	87.6	22.2	85.8	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	71.6	22.2	85.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.007
	3e	Carports adjacent to Block 12	86.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	74.1	-	-	-	-	-	-	-	-	-	-	-	-
	3f	Carports adjacent to Block 12	153.9	29.4	121.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	137.9	29.4	121.9	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3g	Carports adjacent to Block 12	145.3	31.3	131.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	129.3	31.3	131.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3h	Carports adjacent to Block 12	138.7	28.1	115.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	122.7	28.1	115.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	3i	Carports adjacent to Block 12	114.8	26.5	107.6	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	98.8	26.5	107.6	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3j	Residential Building of Bk12 ????	107.1	-	-	-	-	-	-	-	-	-	-	-	-
		Carports adjacent to Block 12	97.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	85.1	-	-	-	-	-	-	-	-	-	-	-	-
4	4a	1/F residential flats of Bk. 11	38.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	32.8	-	-	-	-	-	-	-	-	-	-	-	-
	4b	1/F residential flats of Bk. 10	37.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	31.8	-	-	-	-	-	-	-	-	-	-	-	-
	4c	1/F residential flats of Bk. 11	71.0	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	65.2	-	-	-	-	-	-	-	-	-	-	-	-
	4d	1/F residential flats of Bk. 10	65.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	59.8	-	-	-	-	-	-	-	-	-	-	-	-
	4e	1/F residential flats of Bk. 10	74.8	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	69.0	-	-	-	-	-	-	-	-	-	-	-	-
5	5a	1/F residential flats of Bk. 10	51.5	20.0	69.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	46.5	20.0	69.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	33.4	20.0	69.7	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	5b	1/F residential flats of Bk. 9	57.1	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 9	51.3	-	-	-	-	-	-	-	-	-	-	-	-
	5c	1/F residential flats of Bk. 10	73.6	23.3	91.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	68.6	23.3	91.4	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	55.5	23.3	91.4	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5d	1/F residential flats of Bk. 10	71.2	22.7	88.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	66.2	22.7	88.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	53.1	22.7	88.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5e	1/F residential flats of Bk. 10	88.4	25.2	101.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	83.4	25.2	101.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	70.3	25.2	101.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	5f	1/F residential flats of Bk. 10	94.1	25.4	102.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	89.1	25.4	102.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Garden area between Bk. 9 & 10	76.0	25.4	102.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	5g	1/F residential flats of Bk. 10	95.4	25.4	102.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		Patio of Block 10	90.4	25.4	102.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Garden area between Bk. 9 & 10	77.3	25.4	102.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
6	6a	G/F residential flat of Bk5	43.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	40.1	-	-	-	-	-	-	-	-	-	-	-	-
	6b	Driveway near main entrance	32.0	-	-	-	-	-	-	-	-	-	-	-	-
		Guardhouse near main entrance	44.3	-	-	-	-	-	-	-	-	-	-	-	-
	6c	G/F residential flat of Bk5	84.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	81.1	-	-	-	-	-	-	-	-	-	-	-	-
7	7a	G/F carports & driveway	59.5	-	-	-	-	-	-	-	-	-	-	-	-
	7b	1/F residential flats	60.0	20.0	68.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	55.9	20.0	68.2	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	7c	1/F residential flats	56.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	53.3	-	-	-	-	-	-	-	-	-	-	-	-
	7d	G/F carports & driveway	114.1	-	-	-	-	-	-	-	-	-	-	-	-
	7e	1/F residential flats	118.5	25.7	103.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	114.4	25.7	103.5	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7f	1/F residential flats	102.5	23.1	90.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	98.4	23.1	90.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7g	1/F residential flats	97.3	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	93.2	-	-	-	-	-	-	-	-	-	-	-	-
	7h	G/F carports & driveway	131.2	-	-	-	-	-	-	-	-	-	-	-	-
	7i	1/F residential flats	133.5	27.1	110.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	129.4	27.1	110.4	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7j	1/F residential flats	135.6	26.7	108.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.000
		G/F lobby	131.5	26.7	108.3	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
	7k	1/F residential flats	121.9	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	117.8	-	-	-	-	-	-	-	-	-	-	-	-

Table B5 - Vulnerability Factor Calculation (Sheet 6 of 6 - for Large Channelized Debris Flow)

Slope Segment No.	Slope Sub-area No.	Facility Affected	Mobility of Debris: Facility located from crest of sub-area (m)	Mobility of Debris: Minimum Travel Angle (°)	Mobility of Debris: Max. Travel Distance (m)	Mobility of Debris: Debris Runout Zone: Total	Mobility of Debris: Debris Runout Zone: Facility in	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Scaling factor (Table B2)	Vulnerability Factor
								Probability of debris reaching various zones							
								5.5%	16.7%	27.8%	27.8%	16.7%	5.5%		
								Probability of an individual loss his life in an unprotected facility arising from a large landslide							
1	1a	Residential flats of Block 13-18	40.5	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	31.9	-	-	-	-	-	-	-	-	-	-	-	-
	1b	Carports adjacent to Block 12	40.8	-	-	-	-	-	-	-	-	-	-	-	-
	1c	Sitting out area behind Bk. 12	37.6	-	-	-	-	-	-	-	-	-	-	-	-
	1d	Residential flats of Block 13-18	58.4	-	-	-	-	-	-	-	-	-	-	-	-
		Garages & driveway of Bk. 13-18	49.8	-	-	-	-	-	-	-	-	-	-	-	-
	1e	Carports adjacent to Block 12	56.5	-	-	-	-	-	-	-	-	-	-	-	-
	1f	Sitting out area behind Bk. 12	48.4	-	-	-	-	-	-	-	-	-	-	-	-
2 (See Note 4)	2a	Carports adjacent to Block 12	71.5	15.8	104.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Sitting out area behind Bk. 12	54.0	15.8	104.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	2b	Carports adjacent to Block 12	104.0	19.0	119.9	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	86.5	19.0	119.9	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	2c	Carports adjacent to Block 12	150.6	25.7	153.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	133.1	25.7	153.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	2d	Carports adjacent to Block 12	167.6	27.1	160.7	6	NR	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.000
		Sitting out area behind Bk. 12	150.1	27.1	160.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
3	3a	Carports adjacent to Block 12	68.7	15.0	74.1	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	52.7	15.0	74.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	3b	Carports adjacent to Block 12	52.4	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	40.4	-	-	-	-	-	-	-	-	-	-	-	-
	3c	Carports adjacent to Block 12	129.4	23.1	140.7	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	113.4	23.1	140.7	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.047
	3d	Carports adjacent to Block 12	87.6	17.2	111.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Sitting out area behind Bk. 12	71.6	17.2	111.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.165
	3e	Carports adjacent to Block 12	86.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	74.1	-	-	-	-	-	-	-	-	-	-	-	-
	3f	Carports adjacent to Block 12	153.9	25.8	154.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	137.9	25.8	154.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3g	Carports adjacent to Block 12	145.3	26.7	158.3	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	129.3	26.7	158.3	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	3h	Carports adjacent to Block 12	138.7	24.0	145.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	122.7	24.0	145.0	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	3i	Carports adjacent to Block 12	114.8	21.7	133.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
		Sitting out area behind Bk. 12	98.8	21.7	133.5	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	3j	Residential Building of Bk12 ????	107.1	-	-	-	-	-	-	-	-	-	-	-	-
		Carports adjacent to Block 12	97.1	-	-	-	-	-	-	-	-	-	-	-	-
		Sitting out area behind Bk. 12	85.1	-	-	-	-	-	-	-	-	-	-	-	-
4	4a	1/F residential flats of Bk. 11	38.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	32.8	-	-	-	-	-	-	-	-	-	-	-	-
	4b	1/F residential flats of Bk. 10	37.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	31.8	-	-	-	-	-	-	-	-	-	-	-	-
	4c	1/F residential flats of Bk. 11	71.0	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 11	65.2	-	-	-	-	-	-	-	-	-	-	-	-
	4d	1/F residential flats of Bk. 10	65.6	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	59.8	-	-	-	-	-	-	-	-	-	-	-	-
	4e	1/F residential flats of Bk. 10	74.8	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 10	69.0	-	-	-	-	-	-	-	-	-	-	-	-
5	5a	1/F residential flats of Bk. 10	51.5	15.0	92.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Patio of Block 10	46.5	15.0	92.3	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
		Garden area between Bk. 9 & 10	33.4	15.0	92.3	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	5b	1/F residential flats of Bk. 9	57.1	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 9	51.3	-	-	-	-	-	-	-	-	-	-	-	-
	5c	1/F residential flats of Bk. 10	73.6	18.3	116.2	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Patio of Block 10	68.6	18.3	116.2	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
		Garden area between Bk. 9 & 10	55.5	18.3	116.2	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	5d	1/F residential flats of Bk. 10	71.2	17.6	113.1	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		Patio of Block 10	66.2	17.6	113.1	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
		Garden area between Bk. 9 & 10	53.1	17.6	113.1	6	3	0.00	0.00	0.25	0.65	0.80	0.95	1.0	0.436
	5e	1/F residential flats of Bk. 10	88.4	20.2	126.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	83.4	20.2	126.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
		Garden area between Bk. 9 & 10	70.3	20.2	126.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5f	1/F residential flats of Bk. 10	94.1	20.4	127.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	89.1	20.4	127.1	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	76.0	20.4	127.1	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	5g	1/F residential flats of Bk. 10	95.4	20.4	127.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	0.9	0.047
		Patio of Block 10	90.4	20.4	127.0	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
		Garden area between Bk. 9 & 10	77.3	20.4	127.0	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
6	6a	G/F residential flat of Bk5	43.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	40.1	-	-	-	-	-	-	-	-	-	-	-	-
	6b	Driveway near main entrance	32.0	-	-	-	-	-	-	-	-	-	-	-	-
		Guardhouse near main entrance	44.3	-	-	-	-	-	-	-	-	-	-	-	-
	6c	G/F residential flat of Bk5	84.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio of Block 5	81.1	-	-	-	-	-	-	-	-	-	-	-	-
7	7a	G/F carports & driveway	59.5	-	-	-	-	-	-	-	-	-	-	-	-
	7b	1/F residential flats	60.0	15.0	90.8	6	4	0.00	0.00	0.00	0.20	0.50	0.80	0.9	0.165
		G/F lobby	55.9	15.0	90.8	6	4	0.00	0.00	0.00	0.20	0.50	0.80	1.0	0.183
	7c	1/F residential flats	56.7	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	53.3	-	-	-	-	-	-	-	-	-	-	-	-
	7d	G/F carports & driveway	114.1	-	-	-	-	-	-	-	-	-	-	-	-
	7e	1/F residential flats	118.5	21.8	134.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	114.4	21.8	134.2	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	7f	1/F residential flats	102.5	19.1	120.6	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	98.4	19.1	120.6	6	5	0.00	0.00	0.00	0.00	0.15	0.50	1.0	0.053
	7g	1/F residential flats	97.3	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	93.2	-	-	-	-	-	-	-	-	-	-	-	-
	7h	G/F carports & driveway	131.2	-	-	-	-	-	-	-	-	-	-	-	-
	7i	1/F residential flats	133.5	23.8	143.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	129.4	23.8	143.8	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	7j	1/F residential flats	135.6	23.7	143.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	0.9	0.007
		G/F lobby	131.5	23.7	143.5	6	6	0.00	0.00	0.00	0.00	0.00	0.15	1.0	0.008
	7k	1/F residential flats	121.9	-	-	-	-	-	-	-	-	-	-	-	-
		Patio at 1/F level	117.8	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

(1) The runout distance was measure along the assumed debris trial and travel angle was measured on the line joining the distal end of the debris to crest of the sub-area defined by Cruden & Varnes (1996).

(2) Maximum travel distance was determined by adjusting the extend of assumed debris runout such that the travel angle was minimized and travel distance was maximized. See example in Figure B2.

(3) Proportion of the occurrence & Likely probability of death are shown in Table B1.

(4) Vulnerability Factor = Sum of (likely probability of death x occuring proportion of debris travel to individual zone) x scaling factor for using for adjusting vulnerability factor.

(5) For slope segment No. 2, the disused pond has a volume larger than that of a small or medium landslide. For such events, the landslide debris would be entrapped by the disused pond. Therefore, the risks of small and medium landslides for segment No. 2 are negligible and have been ignored from the QRA.

(6) Slope segment nos. 1, 4, 6, & slope subarea nos. 3b, 3e, 3j, 5b, 7a, 7c, 7d, 7g, 7h and 7k are not within drainage line. Therefore vulnerability factors are not applicable for debris flow in these area.

Table B6 - Expected Number of Vulnerable People in Given Facility Directly Hit by a Landslide

Scale of Landslide (See Appendix A)		Type of Facility			
		Residential Building	Guard House	Car Park	Open Space
Small	($V < 50\ m^3$)	1.5	0.25	0.05	0.015
Medium	($50\ m^3 \leq V < 200\ m^3$)	3	0.5	0.1	0.03
Large	($200\ m^3 \leq V < 1000\ m^3$)	6	1	0.2	0.06
Note:	The above values are applicable to both open hillslope landslides and channelized debris flows.				

Table B7 - Summary of Landslide Consequence for Different Sub-area (Sheet 1 of 2)

Slope Segment No	Slope Sub-area No	Facility Affected	Landslide Consequence - Likely No. of Fatalities Per Event					
			Open Hillslope Landslide			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
Woodcrest Hill								
1	1a	Residential flats of Block 13-18	0.000	0.110	0.989	-	-	-
		Garages & driveway of Bk. 13-18	0.000	0.015	0.087	-	-	-
	1b	Carports adjacent to Block 12	0.000	0.004	0.037	-	-	-
	1c	Sitting out area behind Bk. 12	0.000	0.001	0.011	-	-	-
	1d	Residential flats of Block 13-18	0.000	0.017	0.284	-	-	-
		Garages & driveway of Bk. 13-18	0.000	0.001	0.037	-	-	-
	1e	Carports Adjacent to Block 12	0.000	0.001	0.011	-	-	-
	1f	Sitting out area behind Bk. 12	0.000	0.000	0.011	-	-	-
2	2a	Carports adjacent to Block 12	-	-	0.002	-	-	0.011
		Sitting out area behind Bk. 12	-	-	0.003	-	-	0.011
	2b	Carports adjacent to Block 12	-	-	0.000	-	-	0.002
		Sitting out area behind Bk. 12	-	-	0.000	-	-	0.003
	2c	Carports adjacent to Block 12	-	-	0.000	-	-	0.002
		Sitting out area behind Bk. 12	-	-	0.000	-	-	0.000
	2d	Carports adjacent to Block 12	-	-	0.000	-	-	0.000
		Sitting out area behind Bk. 12	-	-	0.000	-	-	0.000
3	3a	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.003
	3b	Carports adjacent to Block 12	0.000	0.000	0.011	-	-	-
		Sitting out area behind Bk. 12	0.000	0.000	0.010	-	-	-
	3c	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.003
	3d	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.011
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.010
	3e	Carports adjacent to Block 12	0.000	0.000	0.002	-	-	-
		Sitting out area behind Bk. 12	0.000	0.000	0.003	-	-	-
	3f	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.000
	3g	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.003
	3h	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.000
	3i	Carports adjacent to Block 12	0.000	0.000	0.000	0.000	0.000	0.002
		Sitting out area behind Bk. 12	0.000	0.000	0.000	0.000	0.000	0.003
	3j	Carports adjacent to Block 12	0.000	0.000	0.002	-	-	-
		Sitting out area behind Bk. 12	0.000	0.000	0.003	-	-	-
4	4a	1/F residential flats of Bk. 11	0.005	0.110	0.989	-	-	-
		Patio of Block 11	0.000	0.004	0.026	-	-	-
	4b	1/F residential flats of Bk. 10	0.005	0.110	0.989	-	-	-
		Patio of Block 10	0.000	0.004	0.026	-	-	-
	4c	1/F residential flats of Bk. 11	0.000	0.017	0.284	-	-	-
		Patio of Block 11	0.000	0.000	0.011	-	-	-
	4d	1/F residential flats of Bk. 10	0.000	0.017	0.284	-	-	-
		Patio of Block 10	0.000	0.001	0.011	-	-	-
	4e	1/F residential flats of Bk. 10	0.000	0.017	0.284	-	-	-
		Patio of Block 10	0.000	0.000	0.003	-	-	-

Table B7 - Summary of Landslide Consequence for Different Sub-area (Sheet 2 of 2)

Slope Segment No	Slope Sub-area No	Facility Affected	Landslide Consequence - Likely No. of Fatalities Per Event					
			Open Hillslope Landslide			Channelized Debris Flow		
			Small	Medium	Large	Small	Medium	Large
Woodcrest Hill (Cont'd)								
5	5a	1/F residential flats of Bk. 10	0.000	0.017	0.284	0.009	0.142	0.989
		Patio of Block 10	0.000	0.000	0.003	0.000	0.002	0.011
		Garden area between Bk. 9 & 10	0.000	0.004	0.026	0.002	0.013	0.026
	5b	1/F residential flats of Bk. 9	0.000	0.017	0.284	-	-	-
		Patio of Block 9	0.000	0.001	0.011	-	-	-
	5c	1/F residential flats of Bk. 10	0.000	0.000	0.284	0.000	0.142	0.989
		Patio of Block 10	0.000	0.000	0.003	0.000	0.002	0.011
		Garden area between Bk. 9 & 10	0.000	0.001	0.011	0.001	0.005	0.026
	5d	1/F residential flats of Bk. 10	0.000	0.000	0.284	0.000	0.142	0.989
		Patio of Block 10	0.000	0.000	0.003	0.000	0.002	0.011
		Garden area between Bk. 9 & 10	0.000	0.001	0.011	0.001	0.005	0.026
	5e	1/F residential flats of Bk. 10	0.000	0.000	0.045	0.000	0.022	0.284
		Patio of Block 10	0.000	0.000	0.003	0.000	0.002	0.011
		Garden area between Bk. 9 & 10	0.000	0.000	0.003	0.000	0.002	0.011
	5f	1/F residential flats of Bk. 10	0.000	0.000	0.045	0.000	0.022	0.284
		Patio of Block 10	0.000	0.000	0.000	0.000	0.000	0.003
		Garden area between Bk. 9 & 10	0.000	0.000	0.003	0.000	0.002	0.011
	5g	1/F residential flats of Bk. 10	0.000	0.000	0.045	0.000	0.022	0.284
		Patio of Block 10	0.000	0.000	0.000	0.000	0.000	0.003
		Garden area between Bk. 9 & 10	0.000	0.000	0.003	0.000	0.002	0.011
6	6a	G/F residential flat of Bk5	0.000	0.017	0.284	-	-	-
		Patio of Block 5	0.000	0.001	0.011	-	-	-
	6b	Driveway near main entrance	0.000	0.004	0.037	-	-	-
		Guardhouse near main entrance	0.000	0.000	0.053	-	-	-
	6c	G/F residential flat of Bk5	0.000	0.000	0.284	-	-	-
		Patio of Block 5	0.000	0.000	0.003	-	-	-
K.K. Terrace								
7	7a	G/F carports & driveway	0.000	0.000	0.011	-	-	-
	7b	1/F residential flats	0.000	0.000	0.045	0.000	0.022	0.989
		G/F lobby	0.000	0.000	0.053	0.000	0.026	0.183
	7c	1/F residential flats	0.000	0.017	0.284	-	-	-
		Patio at 1/F level	0.000	0.000	0.011	-	-	-
	7d	G/F carports & driveway	0.000	0.000	0.000	-	-	-
	7e	1/F residential flats	0.000	0.000	0.000	0.000	0.000	0.045
		G/F lobby	0.000	0.000	0.000	0.000	0.000	0.008
	7f	1/F residential flats	0.000	0.000	0.000	0.000	0.000	0.045
		G/F lobby	0.000	0.000	0.000	0.000	0.000	0.053
	7g	1/F residential flats	0.000	0.000	0.045	-	-	-
		Patio at 1/F level	0.000	0.000	0.000	-	-	-
	7h	G/F carports & driveway	0.000	0.000	0.000	-	-	-
	7i	1/F residential flats	0.000	0.000	0.000	0.000	0.000	0.045
		G/F lobby	0.000	0.000	0.000	0.000	0.000	0.008
	7j	1/F residential flats	0.000	0.000	0.000	0.000	0.000	0.045
		G/F lobby	0.000	0.000	0.000	0.000	0.000	0.008
	7k	1/F residential flats	0.000	0.000	0.000	-	-	-
		Patio at 1/F level	0.000	0.000	0.000	-	-	-

Note: The values above are applicable to all the conditions considered in the QRA, except that the potential consequence would be reduced to become negligible where the provision of protective works comprising barrier wall or check dams is considered as additional risk mitigation measures as discussed in Section 8.

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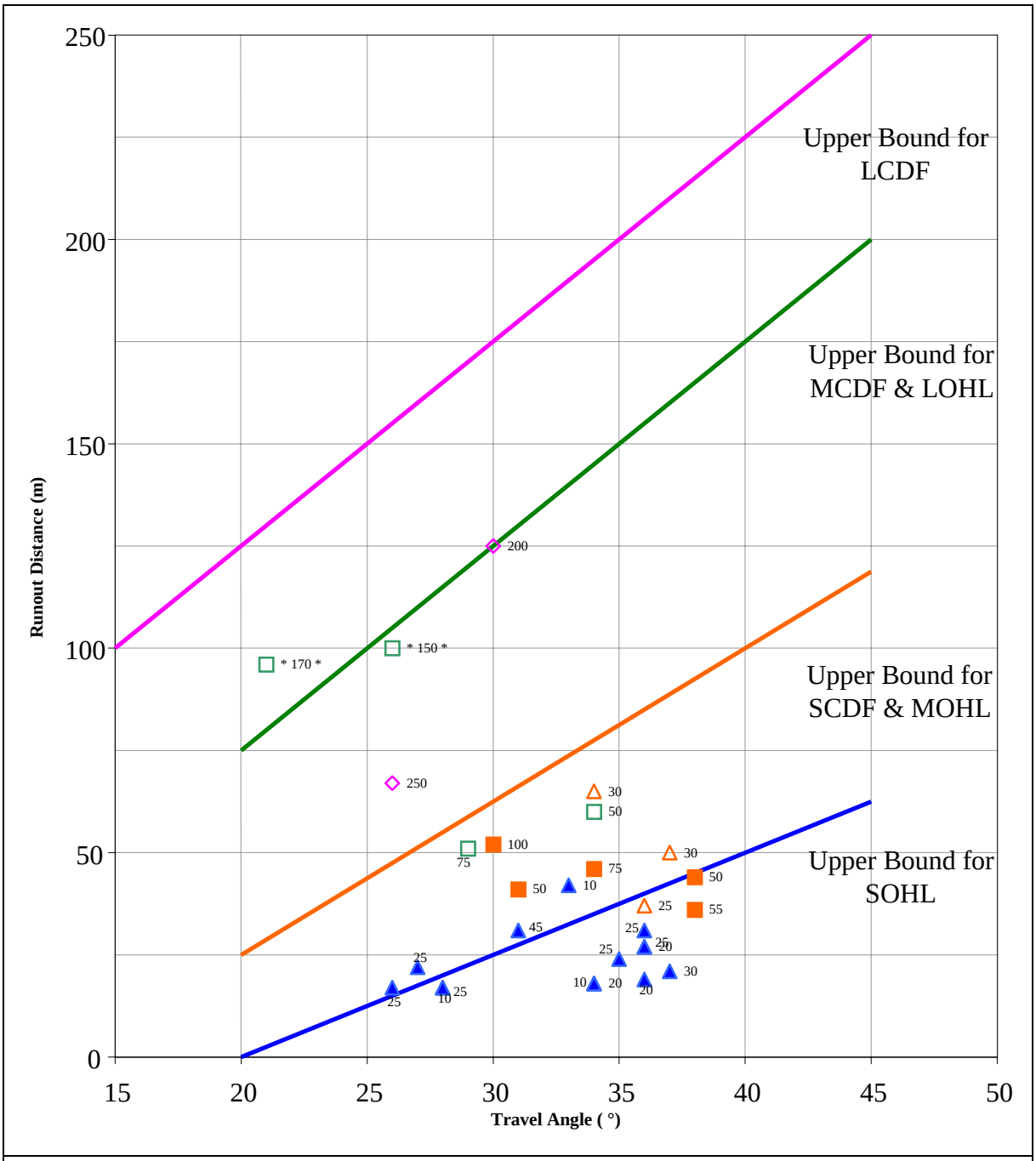


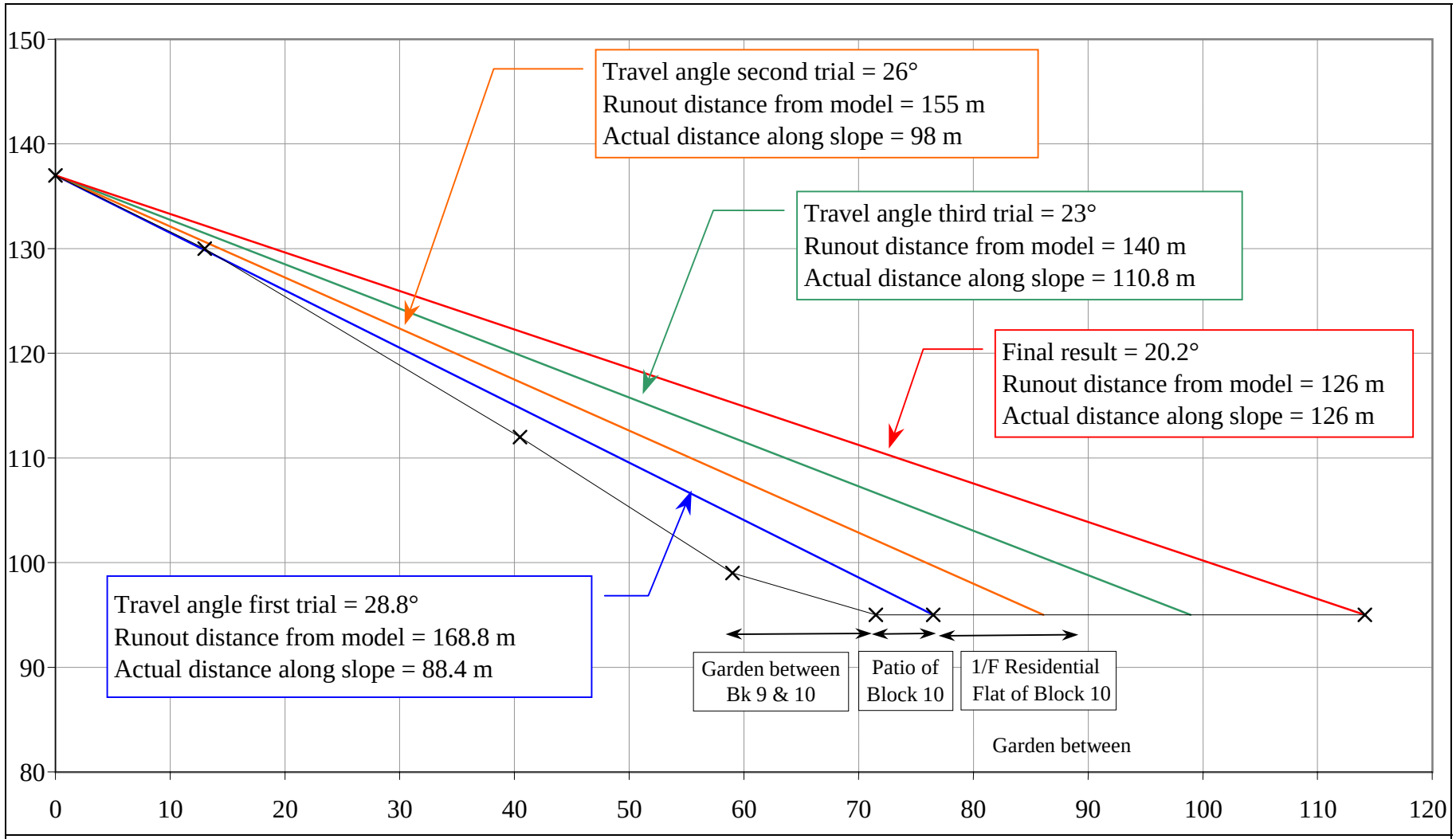
Legend:

◇	Large Channelized Debris Flow (LCDF)	□	Medium Channelized Debris Flow (MCDF)
◆	Large Open Hillslope Landslide (LOHL)	■	Medium Open Hillslope Landslide (MOHL)
△	Small Channelized Debris Flow (SCDF)	▲	Small Open Hillslope Landslide (SOHL)

Notes:

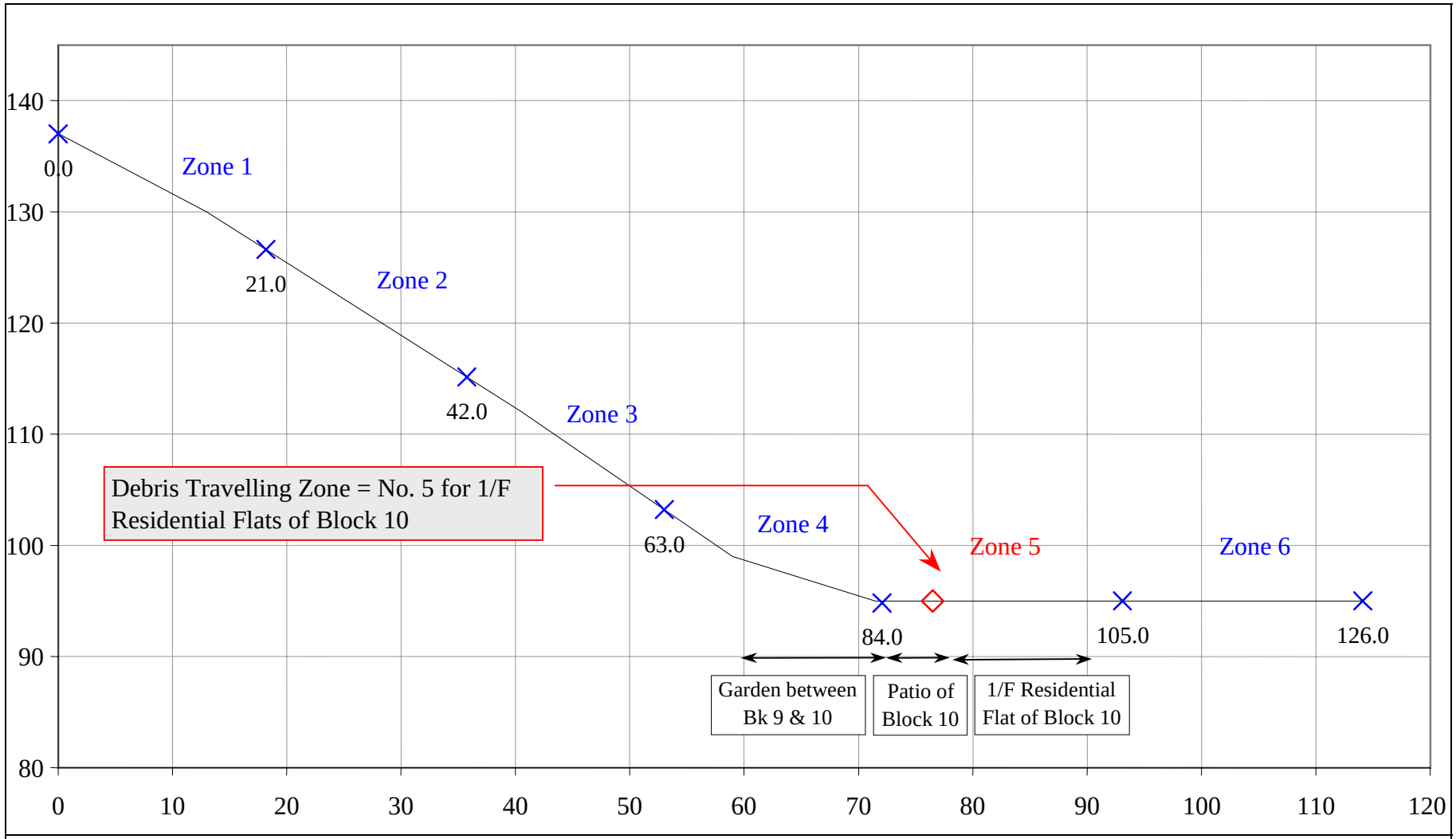
(1) The number by each data point represents the corresponding landslide volume.
(2) The travel angles of landslide debris are based on the line joining the distal end of the debris to the crest of the landslide, as defined by Cruden & Varnes (1996).
(3) * denotes a landslide that extends beyond the slope toe. In such cases, the travel angles of landslide debris were affected by the gradient of downslope topography.
(4) The travel distance is based on that measured along the debris travel path.

Figure B1 - Landslide Debris Runout Model



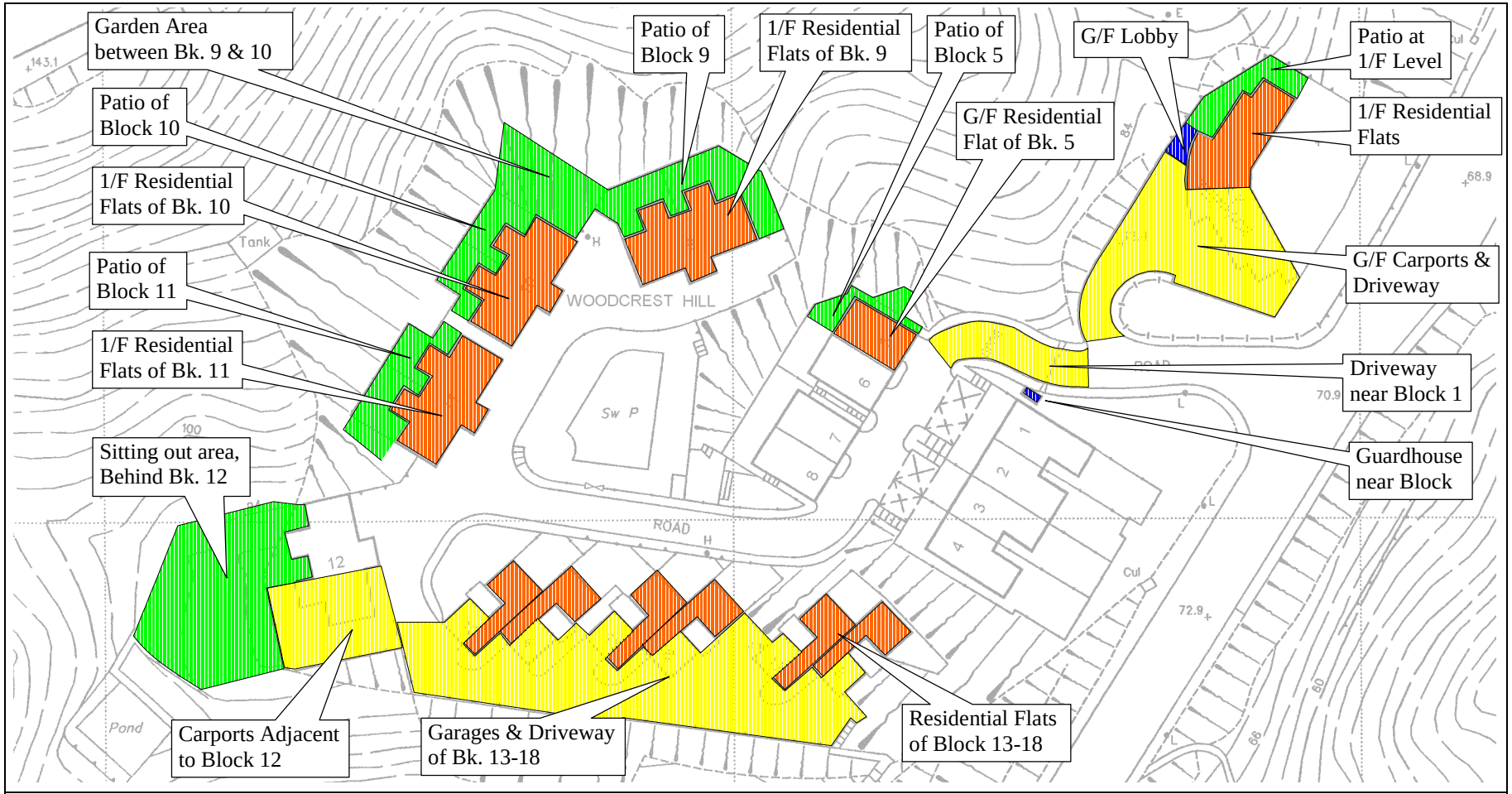
Notes: The method to determine the debris runout distance is based on trial and error to match the longest runout distance and lowest travel angle shown in Figure B1.

Figure B2 - Determination of Debris Runout Distance Using the Example of a Large Channelized Debris Flow from Sub-area 5e



Notes: (1) The numbers along the slope surface denote the range of runout distance corresponding to the various debris runout zones.
(2) Refer to Section B2 for discussion on debris travelling.

Figure B3 - Debris Runout Zones for a Large Debris Flow at Subarea 5e



Legend: Types of facilities

- Residential Building
- Guard House
- Car Park
- Open Space

Notes:
(1) Facilities that are highlighted in this figure are potentially threatened by landslide from the hillside.
(2) See Figure 8 and Table C5 for grouping of subareas that affect the facilities.

Figure B4 - Facilities below the Hillside

APPENDIX C

LANDSLIDE RISK ASSESSMENT

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C1 INTRODUCTION

In this study, consideration has been given to both the individual landslide risk and the societal landslide risk (as far as the facilities in Woodcrest Hill and K.K. Terrace are concerned).

C2 INDIVIDUAL LANDSLIDE RISK CRITERIA

Landslide risk to individuals can be broadly classified as follows:

(a) Individual Risk (IR), which is the frequency of harm per year to a theoretical individual who is exposed to a hazard or hazards from a facility for 100% of the time (GEO, 1998b). In this study, the harm refers to annual potential fatality.

(b) Personal Individual Risk (PIR), which is the frequency of harm per year to an actual individual who is exposed to a hazard or hazards from a facility, with account taken of temporal factors which expose the individual to the hazard(s), and with account also taken of the probability of escape or protection from the hazards (GEO, 1998b). Similarly, the harm refers to annual potential fatality in this study.

GEO (1998b) proposes that "for existing developments the maximum individual risk to which any member of the public should be exposed from natural terrain landslides and boulder falls is taken to be 10^{-4} per year."

GEO (1998b) further elaborates that the individual risk acceptability criteria "is actually for Personal Individual Risk (PIR), ····· and tends to be calculated for an average member of an exposed population."

In this study, the tolerable limit of 10^{-4} per year for PIR of an average person was adopted.

C3 SOCIETAL LANDSLIDE RISK CRITERIA

Societal risk is a measure of the overall risk for the affected community. It accounts for the likely impact of all accidental events, not just a particular type of individual, as in the case of individual risk, but all individuals who may be exposed to the risk, and it reflects the number of people exposed (GEO, 1998b).

Societal risk can be measured in terms of Potential Loss of Life (PLL) per year, which is the predicted number of fatalities per year as far as the affected community is concerned.

Societal risk can also be measured by calculating the frequency of N or more fatality per year, F, and the associated number of fatality, N. These data are usually plotted on a double-logarithmic graph, known as the F-N curve.

The established F-N curve can be evaluated in accordance with the societal risk criteria (Figure 9) proposed in GEO (1998b). As the study area considered in this QRA is reasonably close to the reference toe length of GEO (1998b) viz 500 m length of natural terrain which present risk to the community, no scaling up or down of the societal risk criteria is necessary.

C4 LANDSLIDE RISK MODEL

The landslide risk was assessed by integrating the results of the hazard assessment in terms of landslide frequency (Appendix A) and consequence assessment (Appendix B).

The individual landslide risk, expressed in terms of PIR, was calculated using the following formula:

$$\text{PIR} = \underset{\substack{\uparrow \\ \text{All associated sub-areas} \\ \text{All corresponding landslide hazards}}}{\Sigma} \left[\text{Landslide frequency} \times \text{Vulnerability factor} \times \begin{array}{c}\text{Hazard exposure of} \\ \text{an average person}\end{array}\right]$$

The hazard exposure of an average person was defined as the average time of presence of an individual in a given facility (Table C1). The PIR thus calculated was compared with the tolerable limit of 10^{-4}, as discussed in Section C2.

The societal risk was calculated using the following formula:

$$\text{Societal risk} = \underset{\substack{\uparrow \\ \text{All associated sub-areas} \\ \text{All corresponding landslide hazards}}}{\Sigma} \left[\text{Landslide frequency} \times \text{Landslide consequence}\right]$$

The calculated societal risk (in terms of PLL) was converted into a F-N curve, using a methodology generally following that outlined in Wong, Ho & Chan (1997). Due regard has been given to the specific temporal distribution of a given facility under the different scenarios of landslides (i.e. small, medium and large). The established F-N curve was then compared with the societal landslide risk criteria, as discussed in Section C3 and shown in Figure 9.

C5 PRESENT-DAY INDIVIDUAL LANDSLIDE RISK LEVEL

The present-day PIR is summarised in Table C2 and plotted as risk contours in Figure 12. Detailed PIR calculations are shown in Table C3.

It can be seen that the present-day PIR of an average person staying in most of the facilities was well below the tolerable limit of 10^{-4} and hence may be taken as acceptable according to the Interim Risk Guidelines (GEO, 1998b).

The present-day PIR of an average person in the residential flats on the 1/F of Block 10 at Woodcrest Hill was 6.30×10^{-4},which is higher than the tolerable limit 1×10^{-4}. Mitigation measures would be required.

C5.1 Example Calculations on Personal Individual Risk

This example calculation is associated with the Present-day Personal Individual Risk for an average person staying in the residential flat on the 1/F of Block 10 at Woodcrest Hill.

The associated PIR involved 6 types of hillside hazards (i.e. SOHL, MOHL, LOHL, SCDF, MCDF and LCDF) arising from 9 sub-areas (4b, 4d, 4e, 5a, 5c, 5d, 5e, 5f & 5g) (See Appendix A for types of landslide hazards and locations of the sub-areas). The PIR due to landsliding within sub-area 5e to the above facility is shown in Table C3a.

Table C3a - PIR with Respect to Landsliding from Sub-area 5e (Data Extracted from Table C3)

(I)	Types of Hazard	SOHL	MOHL	LOHL	SCDF	MCDF	LCDF	Total PIR from Sub-area 5e
(II)	Present-day Frequency (Table A5a)	1.28E-2	7.45E-4	7.45E-5	1.02E-2	3.16E-3	2.11E-3	
(III)	Vulnerability Factor (Table B4)	0.000	0.000	0.007	0.000	0.007	0.047	
(IV)	Average Hazard Exposure (Table C1)	0.684						
(V)	PIR (V) = (II)×(III)×(IV)	0	0	3.78E-7	0	1.60E-5	6.81E-5	Σ =8.46E-5

This procedure was repeated for sub-areas 4b, 4d, 4e, 5a, 5c, 5d, 5f & 5g and the corresponding PIR is tabulated in Table C3b.

Table C3b - PIR of Residential Flat on 1/F of Bk. 10 (Extracted from Table C3 Sheet 3/7)

Sub-area no.	4b	4d	4e	5a	5c	5d	5e	5f	5g	Total
PIR from Sub-areas	1.96E-5	3.77E-6	2.09E-7	4.42E-5	2.76E-4	2.79E-6	8.46E-5	1.69E-4	2.90E-5	Σ =6.30E-4

The present-day PIR of an average person staying in the residential flat on the 1/F of Block 10 of Woodcrest Hill is 6.3×10^{-4} /year.

C6 PRESENT-DAY SOCIETAL LANDSLIDE RISK LEVEL

A summary of the present-day societal landslide risks is given in Table C4, and the corresponding calculations shown in Table C5. A summary of the F-N data is shown in Table C7. The F-N curve derived in this study is presented in Figure 10. As can be seen, the societal risk was within the ALARP (as low as reasonably practicable) region.

C6.1 Example Calculations of Societal Landslide Risk

The calculation of societal landslide risk is illustrated below using sub-area 5e reaching the residential flats on the 1/F of Block 10, Woodcrest Hill as an example:

Table C5a - Present-day Societal Landslide Risks Contributed by Sub-area 5e (Extracted from Table C5)

(I)	Types of Hazard	SOHL	MOHL	LOHL	SCDF	MCDF	LCDF
(II)	Present–day Landslide Frequency (Table A5)	1.28E-2	7.45E-4	7.45E-4	1.02E-2	3.16E-3	2.11E-3
(III)	Landslide Consequence (From Table B7)	0.000	0.000	0.045	0.000	0.022	0.284
(IV)	Societal Landslide Risk (IV) = (II)×(III)	0	0	3.32E-6	0	7.04E-5	5.98E-4

C6.2 Example Calculation on F-N Data Points

The present-day societal risk to the residential flats on the 1/F of Block 10 with respect to a large channelized debris flow from sub-area 5e was considered in the following example calculation.

The first step was to consider different scenarios of landslides and under each calculate, the number of fatality (N) and its corresponding frequency of N fatality per year (f). When the effects of all the different scenarios are considered, the cumulative frequency of N or more fatality per year (F) can be established.

The expected number of fatality (N) is calculated as follows:

$$\text{Expected no. of fatalities } (N) = \text{Vulnerability factor} \times \text{Expected no. of vulnerable people in a facility}$$

In assessing the expected number of vulnerable people in a facility, account has been taken of the full credible range of number of people present and the temporal distribution of persons exposed to the different scenarios of landslides.

Having established the expected no. of fatality, the next step was to establish the associated frequency of the fatality. The frequency of facility (f) was calculated as follows: -

$$\text{Frequencies of fatality (f) with Z people present in the facility} = \text{Landslide Frequency} \times \text{Probability of Z people present}$$

The number of fatality (N) is calculated as follows:

Table C8a - Break Down of Landslide Risk Due to Large Channelised Debris Flow from Sub-area 5e to Residential Flat on 1/F of Bk. 10 (Extracted from Table C8 Sheet 7/15)

No of People (Z)	Vulnerability Factor	No. of Fatality (N)	Probability of Z People Present	Landslide Frequency	Frequencies of Fatalities (f)	Societal Risk
(Table C6)	(Table B4)	(III)=(II)×(I)	(Table C6)	(Table A5)	(VI)=(V)×(IV)	(VII)=(III)×(VI)
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)
40	0.0473	1.892	0.30%	2.11e-3	6.32E-06	1.20E-05
20		0.846	1.25%		2.63E-05	2.49E-05
10		0.473	3.55%		7.48E-05	3.54E-05
9		0.426	6.65%		1.40E-04	5.96E-05
8		0.378	12.6%		2.65E-04	1.00E-04
7		0.331	16.8%		3.54E-04	1.17E-04
6		0.284	16.45%		3.47E-04	9.83E-05
5		0.236	14.35%		3.02E-04	7.15E-05
4		0.189	10.85%		2.29E-04	4.32E-05
3		0.142	7.65%		1.61E-04	2.24E-05
2		0.095	4.85%		1.02E-04	9.66E-06
1		0.047	2.80%		5.90E-05	2.79E-06
					Σ	5.98E-04

The above calculation illustrated only one class of landslide from one sub-area. The procedure was repeated for all the facilities and associated sub-areas and for different landslide hazards. Tables C8 to Table C11 show the landslide risk breakdown for other facilities. By arranging N in a descending order and summing up the effects of all the various scenarios, the cumulative frequency of N or more fatalities per year (F) was established and the F-N curve can be plotted.

C7 RESIDUAL RISK AFTER MITIGATION

The same approach has been adopted to calculate the risk levels corresponding to the following conditions:

(a) after the forthcoming measures, and

(b) after the additional risk mitigation measures.

The PIRs are plotted as risk contours in Figures 14 and 22 respectively and summarised in Table C2. The societal risks (in terms of PLL) are summarised in Table C4. The F-N curves are presented in Figure 10.

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Table C1 - Hazard Exposure of an Average Person

	Type of Facility			
	Residential Building	Guard House	Car Park	Open Space
Average Exposure	0.684	0.5	0.040	0.020

Note: The hazard exposure of an average person was taken as the average time an individual would be present in the facility, and was estimated based on limited site observations and expert judgement taking into consideration of likely variation with time of the day, day of the week and general habit of the residents.

Table C2 - Summary of Personal Individual Risk

Facilities Affected	Personal Individual Risk (PIR) (Probability of Landslide Fatality to an Average Person per Year)			
	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
Woodcrest Hill				
Residential flats of Block 13-18	9.93E-8	9.93E-8	9.93E-8	9.93E-8
Garages & driveway of Bk. 13-18	2.04E-8	2.04E-8	2.04E-8	2.04E-8
Carports adjacent to Block 12	1.20E-5	9.91E-6	9.89E-6	9.89E-6
Sitting out area behind Bk. 12	2.69E-5	2.26E-5	2.25E-5	2.25E-5
1/F residential flats of Bk. 11	3.13E-6	3.13E-6	3.13E-6	3.13E-6
Patio of Block 11	2.24E-7	2.24E-7	2.24E-7	2.24E-7
1/F residential flats of Bk. 10	**7.39E-4**	**6.30E-4**	**5.05E-4**	6.48E-5
Patio of Block 10	3.61E-5	3.25E-5	2.25E-5	5.47E-6
Garden area between Bk. 9 & 10	9.34E-5	8.01E-5	6.34E-5	6.66E-6
1/F residential flats of Bk. 9	2.55E-8	2.55E-8	2.55E-8	2.55E-8
Patio of Block 9	4.28E-9	4.28E-9	4.28E-9	4.28E-9
G/F residential flat of Bk5	3.47E-7	3.47E-7	3.47E-7	3.47E-7
Patio of Block 5	1.58E-8	1.58E-8	1.58E-8	1.58E-8
Driveway near main entrance	5.48E-10	5.48E-10	5.48E-10	5.48E-10
Guardhouse near main entrance	5.97E-10	5.97E-10	5.97E-10	5.97E-10
K.K. Terrace				
G/F carports & driveway	1.61E-10	1.61E-10	1.61E-10	1.61E-10
1/F residential flats	**1.36E-4**	5.26E-5	3.38E-5	8.77E-6
G/F lobby	**1.44E-4**	4.88E-5	3.29E-5	7.25E-6
Patio at 1/F level	1.11E-10	1.11E-10	1.11E-10	1.11E-10

Table C3 - Personal Individual Risk Calculations (Sheet 1 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Vulnerability factor		Hazard exposure of an averaged person	Personal Individual Risk (PIR) (Frequency of Fatality to an Averaged Person Per Year)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation		Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table B4)	(Note 2)	(Table C1)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Residential flats of Block 13-18	1a	SOHL	4.48E-05	4.48E-05	4.48E-05	4.48E-05	0.000	0.000	0.684	0.00E+00	9.93E-08	0.00E+00	9.93E-08	0.00E+00	9.93E-08	0.00E+00	9.93E-08
		MOHL	2.61E-06	2.61E-06	2.61E-06	2.61E-06	0.037	0.037		6.57E-08		6.57E-08		6.57E-08		6.57E-08	
		LOHL	2.61E-07	2.61E-07	2.61E-07	2.61E-07	0.165	0.165		2.94E-08		2.94E-08		2.94E-08		2.94E-08	
Woodcrest Hill	1d	SOHL	9.90E-06	9.90E-06	9.90E-06	9.90E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.77E-07	5.77E-07	5.77E-07	5.77E-07	0.006	0.006		2.28E-09		2.28E-09		2.28E-09		2.28E-09	
		LOHL	5.77E-08	5.77E-08	5.77E-08	5.77E-08	0.047	0.047		1.87E-09		1.87E-09		1.87E-09		1.87E-09	
Garages & driveway of Bk. 13-18	1a	SOHL	4.48E-05	4.48E-05	4.48E-05	4.48E-05	0.000	0.000	0.040	0.00E+00	2.04E-08	0.00E+00	2.04E-08	0.00E+00	2.04E-08	0.00E+00	2.04E-08
		MOHL	2.61E-06	2.61E-06	2.61E-06	2.61E-06	0.146	0.146		1.53E-08		1.53E-08		1.53E-08		1.53E-08	
		LOHL	2.61E-07	2.61E-07	2.61E-07	2.61E-07	0.436	0.436		4.55E-09		4.55E-09		4.55E-09		4.55E-09	
	1d	SOHL	9.90E-06	9.90E-06	9.90E-06	9.90E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Woodcrest Hill		MOHL	5.77E-07	5.77E-07	5.77E-07	5.77E-07	0.007	0.007		1.52E-10		1.52E-10		1.52E-10		1.52E-10	
		LOHL	5.77E-08	5.77E-08	5.77E-08	5.77E-08	0.183	0.183		4.22E-10		4.22E-10		4.22E-10		4.22E-10	
Carports adjacent to Block 12	1b	SOHL	9.94E-03	9.94E-03	9.94E-03	9.94E-03	0.000	0.000	0.040	0.00E+00	1.20E-05	0.00E+00	9.91E-06	0.00E+00	9.89E-06	0.00E+00	9.89E-06
		MOHL	5.79E-04	5.79E-04	5.79E-04	5.79E-04	0.042	0.042		9.73E-07		9.73E-07		9.73E-07		9.73E-07	
		LOHL	5.79E-05	5.79E-05	5.79E-05	5.79E-05	0.183	0.183		4.24E-07		4.24E-07		4.24E-07		4.24E-07	
Woodcrest Hill	1e	SOHL	3.45E-05	3.45E-05	3.45E-05	3.45E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.01E-06	2.01E-06	2.01E-06	2.01E-06	0.007	0.007		5.31E-10		5.31E-10		5.31E-10		5.31E-10	
		LOHL	2.01E-07	2.01E-07	2.01E-07	2.01E-07	0.053	0.053		4.23E-10		4.23E-10		4.23E-10		4.23E-10	
	2a	LOHL	1.31E-05	1.31E-05	1.31E-05	1.31E-05	0.008	0.008		4.32E-09		4.32E-09		4.32E-09		4.32E-09	
		LCDF	1.72E-04	1.72E-04	1.72E-04	1.72E-04	0.053	0.053		3.62E-07		3.62E-07		3.62E-07		3.62E-07	
	2b	LOHL	4.27E-04	4.27E-04	4.27E-04	4.27E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.38E-03	2.38E-03	2.38E-03	2.38E-03	0.008	0.008		7.86E-07		7.86E-07		7.86E-07		7.86E-07	
	2c	LOHL	1.20E-05	1.20E-05	1.20E-05	1.20E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.58E-04	1.58E-04	1.58E-04	1.58E-04	0.008	0.008		5.22E-08		5.22E-08		5.22E-08		5.22E-08	
	2d	LOHL	1.26E-04	1.26E-04	1.26E-04	1.26E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.62E-04	3.62E-04	3.62E-04	3.62E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
	3a	SOHL	5.48E-05	1.10E-05	1.10E-05	1.10E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.19E-06	6.39E-07	6.39E-07	6.39E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.19E-07	6.39E-08	6.39E-08	6.39E-08	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.03E-05	4.07E-06	4.07E-06	4.07E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.31E-06	1.26E-06	1.26E-06	1.26E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.21E-06	8.42E-07	8.42E-07	8.42E-07	0.008	0.008		1.39E-09		2.78E-10		2.78E-10		2.78E-10	
	3b	SOHL	1.30E-03	1.30E-03	1.30E-03	1.30E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.58E-05	7.58E-05	7.58E-05	7.58E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.58E-06	7.58E-06	7.58E-06	7.58E-06	0.053	0.053		1.59E-08		1.59E-08		1.59E-08		1.59E-08	
	3c	SOHL	3.66E-02	2.98E-02	2.98E-02	2.98E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.13E-03	1.74E-03	1.74E-03	1.74E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.13E-04	1.74E-04	1.74E-04	1.74E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.73E-02	1.41E-02	1.41E-02	1.41E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.36E-03	4.37E-03	4.37E-03	4.37E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.58E-03	2.91E-03	2.91E-03	2.91E-03	0.008	0.008		1.18E-06		9.61E-07		9.61E-07		9.61E-07	
	3d	SOHL	4.05E-02	2.68E-02	2.68E-02	2.68E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.36E-03	1.56E-03	1.56E-03	1.56E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.36E-04	1.56E-04	1.56E-04	1.56E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.13E-02	7.49E-03	7.49E-03	7.49E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.51E-03	2.32E-03	2.32E-03	2.32E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.34E-03	1.55E-03	1.55E-03	1.55E-03	0.053	0.053		4.91E-06		3.26E-06		3.26E-06		3.26E-06	
	3e	SOHL	5.40E-03	5.40E-03	4.59E-03	4.59E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.15E-04	3.15E-04	2.68E-04	2.68E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.15E-05	3.15E-05	2.68E-05	2.68E-05	0.008	0.008		1.04E-08		1.04E-08		8.83E-09		8.83E-09	
	3f	SOHL	8.82E-04	9.82E-05	9.82E-05	9.82E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.14E-05	5.72E-06	5.72E-06	5.72E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.14E-06	5.72E-07	5.72E-07	5.72E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	3.27E-04	3.64E-05	3.64E-05	3.64E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.02E-04	1.13E-05	1.13E-05	1.13E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	6.77E-05	7.54E-06	7.54E-06	7.54E-06	0.008	0.008		2.23E-08		2.49E-09		2.49E-09		2.49E-09	
	3g	SOHL	1.17E-02	9.34E-03	9.34E-03	9.34E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.81E-04	5.44E-04	5.44E-04	5.44E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.81E-05	5.44E-05	5.44E-05	5.44E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.25E-02	9.99E-03	9.99E-03	9.99E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.88E-03	3.10E-03	3.10E-03	3.10E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.58E-03	2.07E-03	2.07E-03	2.07E-03	0.008	0.008		8.53E-07		6.82E-07		6.82E-07		6.82E-07	
	3h	SOHL	5.11E-02	4.89E-02	4.89E-02	4.89E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.98E-03	2.85E-03	2.85E-03	2.85E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.98E-04	2.85E-04	2.85E-04	2.85E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.11E-02	1.06E-02	1.06E-02	1.06E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.45E-03	3.30E-03	3.30E-03	3.30E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.30E-03	2.20E-03	2.20E-03	2.20E-03	0.008	0.008		7.60E-07		7.26E-07		7.26E-07		7.26E-07	
	3i	SOHL	9.41E-02	9.40E-02	9.40E-02	9.40E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.48E-03	5.48E-03	5.48E-03	5.48E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.48E-04	5.48E-04	5.48E-04	5.48E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.39E-02	2.38E-02	2.38E-02	2.38E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.41E-03	7.40E-03	7.40E-03	7.40E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.94E-03	4.93E-03	4.93E-03	4.93E-03	0.008	0.008		1.63E-06		1.63E-06		1.63E-06		1.63E-06	
	3j	SOHL	1.25E-02	1.25E-02	2.01E-03	2.01E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.27E-04	7.27E-04	1.17E-04	1.17E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.27E-05	7.27E-05	1.17E-05	1.17E-05	0.008	0.008		2.40E-08		2.40E-08		3.86E-09		3.86E-09	

Table C3 - Personal Individual Risk Calculations (Sheet 2 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Vulnerability factor		Hazard exposure of an averaged person	Personal Individual Risk (PIR) (Frequency of Fatality to an Averaged Person Per Year)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation		Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table B4)	(Note 2)	(Table C1)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Sitting out area behind Bk. 12	1c	SOHL	9.88E-03	9.88E-03	9.88E-03	9.88E-03	0.000	0.000	0.020	0.00E+00	2.69E-05	0.00E+00	2.26E-05	0.00E+00	2.25E-05	0.00E+00	2.25E-05
		MOHL	5.76E-04	5.76E-04	5.76E-04	5.76E-04	0.042	0.042		4.84E-07		4.84E-07		4.84E-07		4.84E-07	
		LOHL	5.76E-05	5.76E-05	5.76E-05	5.76E-05	0.183	0.183		2.11E-07		2.11E-07		2.11E-07		2.11E-07	
Woodcrest Hill	1f	SOHL	1.95E-05	1.95E-05	1.95E-05	1.95E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.14E-06	1.14E-06	1.14E-06	1.14E-06	0.007	0.007		1.50E-10		1.50E-10		1.50E-10		1.50E-10	
		LOHL	1.14E-07	1.14E-07	1.14E-07	1.14E-07	0.183	0.183		4.16E-10		4.16E-10		4.16E-10		4.16E-10	
	2a	LOHL	1.31E-05	1.31E-05	1.31E-05	1.31E-05	0.053	0.053		1.37E-08		1.37E-08		1.37E-08		1.37E-08	
		LCDF	1.72E-04	1.72E-04	1.72E-04	1.72E-04	0.183	0.183		6.31E-07		6.31E-07		6.31E-07		6.31E-07	
	2b	LOHL	4.27E-04	4.27E-04	4.27E-04	4.27E-04	0.008	0.008		7.04E-08		7.04E-08		7.04E-08		7.04E-08	
		LCDF	2.38E-03	2.38E-03	2.38E-03	2.38E-03	0.053	0.053		2.50E-06		2.50E-06		2.50E-06		2.50E-06	
	2c	LOHL	1.20E-05	1.20E-05	1.20E-05	1.20E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.58E-04	1.58E-04	1.58E-04	1.58E-04	0.008	0.008		2.61E-08		2.61E-08		2.61E-08		2.61E-08	
	2d	LOHL	1.26E-04	1.26E-04	1.26E-04	1.26E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.62E-04	3.62E-04	3.62E-04	3.62E-04	0.008	0.008		5.97E-08		5.96E-08		5.96E-08		5.96E-08	
	3a	SOHL	5.48E-05	1.10E-05	1.10E-05	1.10E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.19E-06	6.39E-07	6.39E-07	6.39E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.19E-07	6.39E-08	6.39E-08	6.39E-08	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.03E-05	4.07E-06	4.07E-06	4.07E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.31E-06	1.26E-06	1.26E-06	1.26E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.21E-06	8.42E-07	8.42E-07	8.42E-07	0.053	0.053		4.42E-09		8.84E-10		8.84E-10		8.84E-10	
	3b	SOHL	1.30E-03	1.30E-03	1.30E-03	1.30E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.58E-05	7.58E-05	7.58E-05	7.58E-05	0.006	0.006		8.75E-09		8.75E-09		8.75E-09		8.75E-09	
		LOHL	7.58E-06	7.58E-06	7.58E-06	7.58E-06	0.165	0.165		2.50E-08		2.50E-08		2.50E-08		2.50E-08	
	3c	SOHL	3.66E-02	2.98E-02	2.98E-02	2.98E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.13E-03	1.74E-03	1.74E-03	1.74E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.13E-04	1.74E-04	1.74E-04	1.74E-04	0.007	0.007		3.17E-08		2.58E-08		2.58E-08		2.58E-08	
		SCDF	1.73E-02	1.41E-02	1.41E-02	1.41E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.36E-03	4.37E-03	4.37E-03	4.37E-03	0.007	0.007		7.96E-07		6.49E-07		6.49E-07		6.49E-07	
		LCDF	3.58E-03	2.91E-03	2.91E-03	2.91E-03	0.047	0.047		3.38E-06		2.76E-06		2.76E-06		2.76E-06	
	3d	SOHL	4.05E-02	2.68E-02	2.68E-02	2.68E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.36E-03	1.56E-03	1.56E-03	1.56E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.36E-04	1.56E-04	1.56E-04	1.56E-04	0.007	0.007		3.50E-08		2.32E-08		2.32E-08		2.32E-08	
		SCDF	1.13E-02	7.49E-03	7.49E-03	7.49E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.51E-03	2.32E-03	2.32E-03	2.32E-03	0.007	0.007		5.21E-07		3.45E-07		3.45E-07		3.45E-07	
		LCDF	2.34E-03	1.55E-03	1.55E-03	1.55E-03	0.165	0.165		7.71E-06		5.11E-06		5.11E-06		5.11E-06	
	3e	SOHL	5.40E-03	5.40E-03	4.59E-03	4.59E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.15E-04	3.15E-04	2.68E-04	2.68E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.15E-05	3.15E-05	2.68E-05	2.68E-05	0.053	0.053		3.31E-08		3.31E-08		2.81E-08		2.81E-08	
	3f	SOHL	8.82E-04	9.82E-05	9.82E-05	9.82E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.14E-05	5.72E-06	5.72E-06	5.72E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.14E-06	5.72E-07	5.72E-07	5.72E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	3.27E-04	3.64E-05	3.64E-05	3.64E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.02E-04	1.13E-05	1.13E-05	1.13E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	6.77E-05	7.54E-06	7.54E-06	7.54E-06	0.008	0.008		1.12E-08		1.24E-09		1.24E-09		1.24E-09	
	3g	SOHL	1.17E-02	9.34E-03	9.34E-03	9.34E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.81E-04	5.44E-04	5.44E-04	5.44E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.81E-05	5.44E-05	5.44E-05	5.44E-05	0.008	0.008		1.12E-08		8.98E-09		8.98E-09		8.98E-09	
		SCDF	1.25E-02	9.99E-03	9.99E-03	9.99E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.88E-03	3.10E-03	3.10E-03	3.10E-03	0.008	0.008		6.40E-07		5.11E-07		5.11E-07		5.11E-07	
		LCDF	2.58E-03	2.07E-03	2.07E-03	2.07E-03	0.053	0.053		2.72E-06		2.17E-06		2.17E-06		2.17E-06	
	3h	SOHL	5.11E-02	4.89E-02	4.89E-02	4.89E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.98E-03	2.85E-03	2.85E-03	2.85E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.98E-04	2.85E-04	2.85E-04	2.85E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.11E-02	1.06E-02	1.06E-02	1.06E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.45E-03	3.30E-03	3.30E-03	3.30E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.30E-03	2.20E-03	2.20E-03	2.20E-03	0.008	0.008		3.80E-07		3.63E-07		3.63E-07		3.63E-07	
	3i	SOHL	9.41E-02	9.40E-02	9.40E-02	9.40E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.48E-03	5.48E-03	5.48E-03	5.48E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.48E-04	5.48E-04	5.48E-04	5.48E-04	0.008	0.008		9.05E-08		9.04E-08		9.04E-08		9.04E-08	
		SCDF	2.39E-02	2.38E-02	2.38E-02	2.38E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.41E-03	7.40E-03	7.40E-03	7.40E-03	0.008	0.008		1.22E-06		1.22E-06		1.22E-06		1.22E-06	
		LCDF	4.94E-03	4.93E-03	4.93E-03	4.93E-03	0.053	0.053		5.19E-06		5.19E-06		5.19E-06		5.19E-06	
	3j	SOHL	1.25E-02	1.25E-02	2.01E-03	2.01E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.27E-04	7.27E-04	1.17E-04	1.17E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.27E-05	7.27E-05	1.17E-05	1.17E-05	0.053	0.053		7.64E-08		7.64E-08		1.23E-08		1.23E-08	
1/F residential flats of Bk. 11	4a	SOHL	4.22E-04	4.22E-04	4.22E-04	4.22E-04	0.003	0.003	0.684	9.53E-07	3.13E-06	9.53E-07	3.13E-06	9.53E-07	3.13E-06	9.53E-07	3.13E-06
		MOHL	2.46E-05	2.46E-05	2.46E-05	2.46E-05	0.037	0.037		6.19E-07		6.19E-07		6.19E-07		6.19E-07	
		LOHL	2.46E-06	2.46E-06	2.46E-06	2.46E-06	0.165	0.165		2.77E-07		2.77E-07		2.77E-07		2.77E-07	
Woodcrest Hill	4c	SOHL	3.07E-03	3.07E-03	3.07E-03	3.07E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.79E-04	1.79E-04	1.79E-04	1.79E-04	0.006	0.006		7.05E-07		7.05E-07		7.05E-07		7.05E-07	
		LOHL	1.79E-05	1.79E-05	1.79E-05	1.79E-05	0.047	0.047		5.78E-07		5.78E-07		5.78E-07		5.78E-07	
Patio of Block 11	4a	SOHL	4.22E-04	4.22E-04	4.22E-04	4.22E-04	0.005	0.005	0.020	4.18E-08	2.24E-07	4.18E-08	2.24E-07	4.18E-08	2.24E-07	4.18E-08	2.24E-07
		MOHL	2.46E-05	2.46E-05	2.46E-05	2.46E-05	0.146	0.146		7.21E-08		7.21E-08		7.21E-08		7.21E-08	
Woodcrest Hill		LOHL	2.46E-06	2.46E-06	2.46E-06	2.46E-06	0.436	0.436		2.15E-08		2.15E-08		2.15E-08		2.15E-08	
	4c	SOHL	3.07E-03	3.07E-03	3.07E-03	3.07E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.79E-04	1.79E-04	1.79E-04	1.79E-04	0.007	0.007		2.36E-08		2.36E-08		2.36E-08		2.36E-08	
		LOHL	1.79E-05	1.79E-05	1.79E-05	1.79E-05	0.183	0.183		6.54E-08		6.54E-08		6.54E-08		6.54E-08	

Table C3 - Personal Individual Risk Calculations (Sheet 3 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Vulnerability factor		Hazard exposure of an averaged person	Personal Individual Risk (PIR) (Frequency of Fatality to an Averaged Person Per Year)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation		Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table B4)	(Note 2)	(Table C1)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
1/F residential flats of Bk. 10	4b	SOHL	4.45E-03	4.45E-03	4.01E-03	4.01E-03	0.003	0.003	0.684	1.01E-05	7.39E-04	1.01E-05	6.30E-04	9.05E-06	5.05E-04	9.05E-06	6.48E-05
		MOHL	2.59E-04	2.59E-04	2.34E-04	2.34E-04	0.037	0.037		6.53E-06		6.53E-06		5.88E-06		5.88E-06	
		LOHL	2.59E-05	2.59E-05	2.34E-05	2.34E-05	0.165	0.165		2.92E-06		2.92E-06		2.63E-06		2.63E-06	
Woodcrest Hill	4d	SOHL	9.00E-03	9.00E-03	9.00E-03	9.00E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.24E-04	5.24E-04	5.24E-04	5.24E-04	0.006	0.006		2.07E-06		2.07E-06		2.07E-06		2.07E-06	
		LOHL	5.24E-05	5.24E-05	5.24E-05	5.24E-05	0.047	0.047		1.70E-06		1.70E-06		1.70E-06		1.70E-06	
	4e	SOHL	4.99E-04	4.98E-04	5.48E-06	5.48E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.91E-05	2.90E-05	3.19E-07	3.19E-07	0.006	0.006		1.15E-07		1.15E-07		1.26E-09		1.26E-09	
		LOHL	2.91E-06	2.90E-06	3.19E-08	3.19E-08	0.047	0.047		9.40E-08		9.39E-08		1.03E-09		1.03E-09	
	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.006	0.006		7.13E-07		7.13E-07		7.13E-07		1.81E-07	
		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.047	0.047		5.84E-07		5.84E-07		5.84E-07		1.48E-07	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.006	0.006		4.54E-06		4.54E-06		4.54E-06		1.15E-06	
		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.047	0.047		1.15E-05		1.15E-05		1.15E-05		2.92E-06	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.165	0.165		2.68E-05		2.68E-05		2.68E-05		6.79E-06	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.047	0.047		1.52E-06		1.22E-06		1.16E-06		3.10E-09	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.047	0.047		1.03E-04		8.28E-05		7.87E-05		2.10E-07	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.165	0.165		2.39E-04		1.92E-04		1.83E-04		4.88E-07	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.047	0.047		4.18E-08		4.18E-08		4.18E-08		3.38E-08	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.047	0.047		8.26E-07		8.26E-07		8.26E-07		6.67E-07	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.165	0.165		1.92E-06		1.92E-06		1.92E-06		1.55E-06	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.007	0.007		3.78E-07		3.78E-07		1.21E-07		4.41E-10	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.007	0.007		1.60E-05		1.60E-05		5.15E-06		1.87E-08	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.047	0.047		6.81E-05		6.81E-05		2.19E-05		7.95E-08	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.007	0.007		2.60E-07		2.12E-07		1.49E-07		2.61E-10	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.007	0.007		3.94E-05		3.22E-05		2.26E-05		3.97E-08	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.047	0.047		1.67E-04		1.37E-04		9.58E-05		1.68E-07	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.007	0.007		8.66E-07		7.28E-07		7.28E-07		7.28E-07	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.007	0.007		6.40E-06		5.38E-06		5.38E-06		5.38E-06	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.047	0.047		2.72E-05		2.29E-05		2.29E-05		2.29E-05	
Patio of Block 10	4b	SOHL	4.45E-03	4.45E-03	4.01E-03	4.01E-03	0.032	0.032	0.020	2.81E-06	3.61E-05	2.81E-06	3.25E-05	2.53E-06	2.25E-05	2.53E-06	5.47E-06
		MOHL	2.59E-04	2.59E-04	2.34E-04	2.34E-04	0.146	0.146		7.60E-07		7.60E-07		6.85E-07		6.85E-07	
Woodcrest Hill		LOHL	2.59E-05	2.59E-05	2.34E-05	2.34E-05	0.436	0.436		2.26E-07		2.26E-07		2.04E-07		2.04E-07	
	4d	SOHL	9.00E-03	9.00E-03	9.00E-03	9.00E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.24E-04	5.24E-04	5.24E-04	5.24E-04	0.042	0.042		4.41E-07		4.41E-07		4.41E-07		4.41E-07	
		LOHL	5.24E-05	5.24E-05	5.24E-05	5.24E-05	0.183	0.183		1.92E-07		1.92E-07		1.92E-07		1.92E-07	
	4e	SOHL	4.99E-04	4.98E-04	5.48E-06	5.48E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.91E-05	2.90E-05	3.19E-07	3.19E-07	0.007	0.007		3.84E-09		3.83E-09		4.22E-11		4.22E-11	
		LOHL	2.91E-06	2.90E-06	3.19E-08	3.19E-08	0.053	0.053		3.05E-09		3.05E-09		3.36E-11		3.36E-11	
	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.007	0.007		2.38E-08		2.38E-08		2.38E-08		6.04E-09	
		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.053	0.053		1.90E-08		1.90E-08		1.90E-08		4.81E-09	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.007	0.007		1.52E-07		1.52E-07		1.52E-07		3.85E-08	
		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.053	0.053		3.75E-07		3.75E-07		3.75E-07		9.50E-08	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.183	0.183		8.71E-07		8.71E-07		8.71E-07		2.21E-07	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.053	0.053		4.93E-08		3.97E-08		3.77E-08		1.01E-10	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.053	0.053		3.34E-06		2.69E-06		2.56E-06		6.82E-09	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.183	0.183		7.75E-06		6.25E-06		5.94E-06		1.59E-08	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.053	0.053		1.36E-09		1.36E-09		1.36E-09		1.10E-09	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.053	0.053		2.68E-08		2.68E-08		2.68E-08		2.17E-08	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.183	0.183		6.23E-08		6.23E-08		6.23E-08		5.03E-08	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.053	0.053		7.83E-08		7.83E-08		2.51E-08		9.14E-11	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.053	0.053		3.32E-06		3.32E-06		1.07E-06		3.88E-09	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.183	0.183		7.71E-06		7.71E-06		2.47E-06		9.00E-09	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.008	0.008		8.43E-09		6.89E-09		4.83E-09		8.49E-12	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.008	0.008		1.28E-06		1.05E-06		7.33E-07		1.29E-09	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.053	0.053		5.44E-06		4.44E-06		3.11E-06		5.47E-09	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.008	0.008		2.81E-08		2.37E-08		2.37E-08		2.37E-08	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.008	0.008		2.08E-07		1.75E-07		1.75E-07		1.75E-07	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.053	0.053		8.84E-07		7.42E-07		7.42E-07		7.42E-07	

Table C3 - Personal Individual Risk Calculations (Sheet 4 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Vulnerability factor		Hazard exposure of an averaged person	Personal Individual Risk (PIR) (Frequency of Fatality to an Averaged Person Per Year)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation		Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table B4)	(Note 2)	(Table C1)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Garden area between Bk. 9 & 10	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.005	0.005	0.020	3.07E-07	9.34E-05	3.07E-07	8.01E-05	3.07E-07	6.34E-05	7.77E-08	6.66E-06
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.146	0.146		5.29E-07		5.29E-07		5.29E-07		1.34E-07	
		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.436	0.436		1.57E-07		1.57E-07		1.57E-07		3.99E-08	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.146	0.146		3.37E-06		3.37E-06		3.37E-06		8.54E-07	
Woodcrest Hill		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.436	0.436		3.11E-06		3.11E-06		3.11E-06		7.89E-07	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.436	0.436		2.08E-06		2.08E-06		2.08E-06		5.26E-07	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.042	0.042		3.94E-07		3.18E-07		3.02E-07		8.05E-10	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.183	0.183		1.72E-07		1.38E-07		1.31E-07		3.51E-10	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.042	0.042		8.61E-06		6.93E-06		6.59E-06		1.76E-08	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.183	0.183		1.16E-05		9.37E-06		8.91E-06		2.38E-08	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.436	0.436		1.85E-05		1.49E-05		1.41E-05		3.77E-08	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.042	0.042		1.09E-08		1.09E-08		1.09E-08		8.77E-09	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.183	0.183		4.73E-09		4.73E-09		4.73E-09		3.82E-09	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.042	0.042		6.92E-08		6.92E-08		6.92E-08		5.59E-08	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.183	0.183		9.35E-08		9.35E-08		9.35E-08		7.55E-08	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.436	0.436		1.48E-07		1.48E-07		1.48E-07		1.20E-07	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.007	0.007		9.83E-08		9.83E-08		3.15E-08		1.15E-10	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.053	0.053		7.83E-08		7.83E-08		2.51E-08		9.14E-11	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.007	0.007		1.34E-06		1.34E-06		4.31E-07		1.57E-09	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.053	0.053		3.32E-06		3.32E-06		1.07E-06		3.88E-09	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.183	0.183		7.71E-06		7.71E-06		2.47E-06		9.00E-09	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.053	0.053		5.37E-08		4.39E-08		3.07E-08		5.41E-11	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.053	0.053		8.16E-06		6.66E-06		4.67E-06		8.21E-09	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.183	0.183		1.89E-05		1.55E-05		1.08E-05		1.91E-08	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.053	0.053		1.79E-07		1.51E-07		1.51E-07		1.51E-07	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.053	0.053		1.33E-06		1.11E-06		1.11E-06		1.11E-06	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.183	0.183		3.08E-06		2.59E-06		2.59E-06		2.59E-06	
1/F residential flats of Bk. 9 Woodcrest Hill	5b	SOHL	6.08E-05	6.08E-05	6.08E-05	6.08E-05	0.000	0.000	0.684	0.00E+00	2.55E-08	0.00E+00	2.55E-08	0.00E+00	2.55E-08	0.00E+00	2.55E-08
		MOHL	3.54E-06	3.54E-06	3.54E-06	3.54E-06	0.006	0.006		1.40E-08		1.40E-08		1.40E-08		1.40E-08	
		LOHL	3.54E-07	3.54E-07	3.54E-07	3.54E-07	0.047	0.047		1.15E-08		1.15E-08		1.15E-08		1.15E-08	
Patio of Block 9 Woodcrest Hill	5b	SOHL	6.08E-05	6.08E-05	6.08E-05	6.08E-05	0.000	0.000	0.020	0.00E+00	4.28E-09	0.00E+00	4.28E-09	0.00E+00	4.28E-09	0.00E+00	4.28E-09
		MOHL	3.54E-06	3.54E-06	3.54E-06	3.54E-06	0.042	0.042		2.98E-09		2.98E-09		2.98E-09		2.98E-09	
		LOHL	3.54E-07	3.54E-07	3.54E-07	3.54E-07	0.183	0.183		1.30E-09		1.30E-09		1.30E-09		1.30E-09	
G/F residential flat of Bk5	6a	SOHL	8.04E-05	8.04E-05	8.04E-05	8.04E-05	0.000	0.000	0.684	0.00E+00	3.47E-07	0.00E+00	3.47E-07	0.00E+00	3.47E-07	0.00E+00	3.47E-07
		MOHL	4.68E-06	4.68E-06	4.68E-06	4.68E-06	0.006	0.006		1.85E-08		1.85E-08		1.85E-08		1.85E-08	
		LOHL	4.68E-07	4.68E-07	4.68E-07	4.68E-07	0.047	0.047		1.52E-08		1.52E-08		1.52E-08		1.52E-08	
Woodcrest Hill	6c	SOHL	1.67E-03	1.67E-03	1.67E-03	1.67E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	9.70E-05	9.70E-05	9.70E-05	9.70E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	9.70E-06	9.70E-06	9.70E-06	9.70E-06	0.047	0.047		3.14E-07		3.14E-07		3.14E-07		3.14E-07	
Patio of Block 5	6a	SOHL	8.04E-05	8.04E-05	8.04E-05	8.04E-05	0.000	0.000	0.020	0.00E+00	1.58E-08	0.00E+00	1.58E-08	0.00E+00	1.58E-08	0.00E+00	1.58E-08
		MOHL	4.68E-06	4.68E-06	4.68E-06	4.68E-06	0.042	0.042		3.94E-09		3.94E-09		3.94E-09		3.94E-09	
Woodcrest Hill		LOHL	4.68E-07	4.68E-07	4.68E-07	4.68E-07	0.183	0.183		1.72E-09		1.72E-09		1.72E-09		1.72E-09	
	6c	SOHL	1.67E-03	1.67E-03	1.67E-03	1.67E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	9.70E-05	9.70E-05	9.70E-05	9.70E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	9.70E-06	9.70E-06	9.70E-06	9.70E-06	0.053	0.053		1.02E-08		1.02E-08		1.02E-08		1.02E-08	
Driveway near main entrance Woodcrest Hill	6b	SOHL	3.90E-06	3.90E-06	3.90E-06	3.90E-06	0.000	0.000	0.040	0.00E+00	5.48E-10	0.00E+00	5.48E-10	0.00E+00	5.48E-10	0.00E+00	5.48E-10
		MOHL	2.27E-07	2.27E-07	2.27E-07	2.27E-07	0.042	0.042		3.82E-10		3.82E-10		3.82E-10		3.82E-10	
		LOHL	2.27E-08	2.27E-08	2.27E-08	2.27E-08	0.183	0.183		1.66E-10		1.66E-10		1.66E-10		1.66E-10	
Guardhouse near main entrance Woodcrest Hill	6b	SOHL	3.90E-06	3.90E-06	3.90E-06	3.90E-06	0.000	0.000	0.500	0.00E+00	5.97E-10	0.00E+00	5.97E-10	0.00E+00	5.97E-10	0.00E+00	5.97E-10
		MOHL	2.27E-07	2.27E-07	2.27E-07	2.27E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.27E-08	2.27E-08	2.27E-08	2.27E-08	0.053	0.053		5.97E-10		5.97E-10		5.97E-10		5.97E-10	
G/F carports & driveway	7a	SOHL	1.32E-05	1.32E-05	1.32E-05	1.32E-05	0.000	0.000	0.040	0.00E+00	1.61E-10	0.00E+00	1.61E-10	0.00E+00	1.61E-10	0.00E+00	1.61E-10
		MOHL	7.66E-07	7.66E-07	7.66E-07	7.66E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.66E-08	7.66E-08	7.66E-08	7.66E-08	0.053	0.053		1.61E-10		1.61E-10		1.61E-10		1.61E-10	
K.K. Terrace	7d	SOHL	1.12E-04	1.12E-04	1.12E-04	1.12E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.51E-06	6.51E-06	6.51E-06	6.51E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.51E-07	6.51E-07	6.51E-07	6.51E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
	7h	SOHL	2.69E-02	2.69E-02	2.69E-02	2.69E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.57E-03	1.57E-03	1.57E-03	1.57E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.57E-04	1.57E-04	1.57E-04	1.57E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	

Table C3 - Personal Individual Risk Calculations (Sheet 5 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Vulnerability factor		Hazard exposure of an averaged person	Personal Individual Risk (PIR) (Frequency of Fatality to an Averaged Person Per Year)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation		Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table B4)	(Note 2)	(Table C1)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
1/F residential flats	7b	SOHL	9.68E-03	1.01E-03	1.01E-03	1.01E-03	0.000	0.000	0.684	0.00E+00	1.36E-04	0.00E+00	5.26E-05	0.00E+00	3.38E-05	0.00E+00	8.77E-06
		MOHL	5.64E-04	5.88E-05	5.88E-05	5.88E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
K.K. Terrace		LOHL	5.64E-05	5.88E-06	5.88E-06	5.88E-06	0.007	0.007		2.87E-07		2.99E-08		2.99E-08		2.99E-08	
		SCDF	3.59E-03	3.75E-04	3.75E-04	3.75E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.12E-03	1.16E-04	1.16E-04	1.16E-04	0.007	0.000		5.66E-06		5.91E-07		5.91E-07		0.00E+00	
		LCDF	7.43E-04	7.75E-05	7.75E-05	7.75E-05	0.165	0.165		8.38E-05		8.74E-06		8.74E-06		8.74E-06	
	7c	SOHL	2.98E-06	2.98E-06	2.98E-06	2.98E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.74E-07	1.74E-07	1.74E-07	1.74E-07	0.006	0.006		6.87E-10		6.87E-10		6.87E-10		6.87E-10	
		LOHL	1.74E-08	1.74E-08	1.74E-08	1.74E-08	0.047	0.047		5.62E-10		5.62E-10		5.62E-10		5.62E-10	
	7e	SOHL	7.95E-02	7.14E-02	6.21E-02	6.21E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.63E-03	4.16E-03	3.62E-03	3.62E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.63E-04	4.16E-04	3.62E-04	3.62E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.16E-02	1.94E-02	1.69E-02	1.69E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.70E-03	6.01E-03	5.23E-03	5.23E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.47E-03	4.01E-03	3.49E-03	3.49E-03	0.007	0.000		2.27E-05		2.04E-05		1.77E-05		0.00E+00	
	7f	SOHL	4.46E-03	1.96E-03	1.59E-03	1.59E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.60E-04	1.14E-04	9.29E-05	9.29E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.60E-05	1.14E-05	9.29E-06	9.29E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.66E-03	7.28E-04	5.91E-04	5.91E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.14E-04	2.26E-04	1.84E-04	1.84E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.43E-04	1.51E-04	1.22E-04	1.22E-04	0.007	0.000		1.74E-06		7.65E-07		6.21E-07		0.00E+00	
	7g	SOHL	2.49E-05	2.49E-05	2.49E-05	2.49E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.45E-06	1.45E-06	1.45E-06	1.45E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.45E-07	1.45E-07	1.45E-07	1.45E-07	0.007	0.007		7.35E-10		7.35E-10		7.35E-10		7.35E-10	
	7i	SOHL	5.36E-02	5.36E-02	2.15E-02	2.15E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.12E-03	3.12E-03	1.25E-03	1.25E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.12E-04	3.12E-04	1.25E-04	1.25E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.46E-02	1.46E-02	5.85E-03	5.85E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	4.53E-03	4.53E-03	1.81E-03	1.81E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.02E-03	3.02E-03	1.21E-03	1.21E-03	0.007	0.000		1.53E-05		1.53E-05		6.14E-06		0.00E+00	
	7j	SOHL	5.96E-02	5.96E-02	5.96E-05	5.96E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.47E-03	3.47E-03	3.47E-06	3.47E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.47E-04	3.47E-04	3.47E-07	3.47E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	6.44E-03	6.44E-03	6.44E-06	6.44E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.00E-03	2.00E-03	2.00E-06	2.00E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.33E-03	1.33E-03	1.33E-06	1.33E-06	0.007	0.000		6.77E-06		6.77E-06		6.77E-09		0.00E+00	
	7k	SOHL	1.22E-06	1.22E-06	1.22E-06	1.22E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.10E-08	7.10E-08	7.10E-08	7.10E-08	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.10E-09	7.10E-09	7.10E-09	7.10E-09	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
G/F lobby	7b	SOHL	9.68E-03	1.01E-03	1.01E-03	1.01E-03	0.000	0.000	0.500	0.00E+00	1.44E-04	0.00E+00	4.88E-05	0.00E+00	3.29E-05	0.00E+00	7.25E-06
		MOHL	5.64E-04	5.88E-05	5.88E-05	5.88E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
K.K. Terrace (Through sky window)		LOHL	5.64E-05	5.88E-06	5.88E-06	5.88E-06	0.053	0.053		1.48E-06		1.55E-07		1.55E-07		1.55E-07	
		SCDF	3.59E-03	3.75E-04	3.75E-04	3.75E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.12E-03	1.16E-04	1.16E-04	1.16E-04	0.053	0.000		2.93E-05		3.06E-06		3.06E-06		0.00E+00	
		LCDF	7.43E-04	7.75E-05	7.75E-05	7.75E-05	0.183	0.183		6.81E-05		7.10E-06		7.10E-06		7.10E-06	
	7e	SOHL	7.95E-02	7.14E-02	6.21E-02	6.21E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.63E-03	4.16E-03	3.62E-03	3.62E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.63E-04	4.16E-04	3.62E-04	3.62E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.16E-02	1.94E-02	1.69E-02	1.69E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.70E-03	6.01E-03	5.23E-03	5.23E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.47E-03	4.01E-03	3.49E-03	3.49E-03	0.008	0.000		1.84E-05		1.65E-05		1.44E-05		0.00E+00	
	7f	SOHL	4.46E-03	1.96E-03	1.59E-03	1.59E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.60E-04	1.14E-04	9.29E-05	9.29E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.60E-05	1.14E-05	9.29E-06	9.29E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.66E-03	7.28E-04	5.91E-04	5.91E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.14E-04	2.26E-04	1.84E-04	1.84E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.43E-04	1.51E-04	1.22E-04	1.22E-04	0.053	0.000		9.00E-06		3.96E-06		3.22E-06		0.00E+00	
	7i	SOHL	5.36E-02	5.36E-02	2.15E-02	2.15E-02	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.12E-03	3.12E-03	1.25E-03	1.25E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.12E-04	3.12E-04	1.25E-04	1.25E-04	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.46E-02	1.46E-02	5.85E-03	5.85E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	4.53E-03	4.53E-03	1.81E-03	1.81E-03	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.02E-03	3.02E-03	1.21E-03	1.21E-03	0.008	0.000		1.25E-05		1.25E-05		4.99E-06		0.00E+00	
	7j	SOHL	5.96E-02	5.96E-02	5.96E-05	5.96E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.47E-03	3.47E-03	3.47E-06	3.47E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.47E-04	3.47E-04	3.47E-07	3.47E-07	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	6.44E-03	6.44E-03	6.44E-06	6.44E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.00E-03	2.00E-03	2.00E-06	2.00E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.33E-03	1.33E-03	1.33E-06	1.33E-06	0.008	0.000		5.50E-06		5.50E-06		5.50E-09		0.00E+00	
Patio at 1/F level	7c	SOHL	2.98E-06	2.98E-06	2.98E-06	2.98E-06	0.000	0.000	0.020	0.00E+00	1.11E-10	0.00E+00	1.11E-10	0.00E+00	1.11E-10	0.00E+00	1.11E-10
		MOHL	1.74E-07	1.74E-07	1.74E-07	1.74E-07	0.007	0.007		2.29E-11		2.29E-11		2.29E-11		2.29E-11	
K.K. Terrace		LOHL	1.74E-08	1.74E-08	1.74E-08	1.74E-08	0.183	0.183		6.37E-11		6.37E-11		6.37E-11		6.37E-11	
	7g	SOHL	2.49E-05	2.49E-05	2.49E-05	2.49E-05	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.45E-06	1.45E-06	1.45E-06	1.45E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.45E-07	1.45E-07	1.45E-07	1.45E-07	0.008	0.008		2.39E-11		2.39E-11		2.39E-11		2.39E-11	
	7k	SOHL	1.22E-06	1.22E-06	1.22E-06	1.22E-06	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.10E-08	7.10E-08	7.10E-08	7.10E-08	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.10E-09	7.10E-09	7.10E-09	7.10E-09	0.000	0.000		0.00E+00		0.00E+00		0.00E+00		0.00E+00	

Notes:

(1) SOHL = Small Open Hillslope Landslide, MOHL = Medium Open Hillslope Landslide, LOHL = Large Open Hillslope Landslide, SCDF = Small Channelized Debris Flow, MCDF = Medium Channelized Debris Flow & LCDF = Large Channelized Debris Flow.

(2) Check dams along drainage line of segment 7 is proposed as additional mitigation measure which reduce the landslide consequence by trapping the landslide debris. The landslide consequence of small to medium scale of landslide arising from subareas 7b and landslide consequence of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero.

(3) Personal Individual Risk (PIR) = $\Sigma i\ \Sigma j$ (Landslide Frequency $_{ij}$ × Vulnerability Factors $_{ij}$ × hazard exposure of an averaged person)
Where i = Associated slope sub-area
j = Hazard (i.e. Type of Failure)

Table C4 - Summary of Societal Landslide Risk

Facilities Affected	Potential Loss of Life (PLL) Per Year			
	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
Woodcrest Hill				
Residential flats of Block 13-18	5.73E-7	5.73E-7	5.73E-7	5.73E-7
Garages & driveway of Bk. 13-18	6.35E-8	6.35E-8	6.35E-8	6.35E-8
Carports adjacent to Block 12	5.76E-5	4.71E-5	4.70E-5	1.07E-5
Sitting out area behind Bk. 12	7.51E-5	6.30E-5	6.28E-5	1.15E-5
1/F residential flats of Bk. 11	1.54E-5	1.54E-5	1.54E-5	1.54E-5
Patio of Block 11	4.35E-7	4.35E-7	4.35E-7	4.35E-7
1/F residential flats of Bk. 10	5.57E-3	4.73E-3	3.76E-3	4.25E-4
Patio of Block 10	8.69E-5	7.75E-5	5.22E-5	8.49E-6
Garden area between Bk. 9 & 10	2.06E-4	1.76E-4	1.36E-4	1.45E-5
1/F residential flats of Bk. 9	1.62E-7	1.62E-7	1.62E-7	1.62E-7
Patio of Block 9	8.36E-9	8.36E-9	8.36E-9	8.36E-9
G/F residential flat of Bk5	2.97E-6	2.97E-6	2.97E-6	2.97E-6
Patio of Block 5	4.16E-8	4.16E-8	4.16E-8	4.16E-8
Driveway near main entrance	1.79E-9	1.79E-9	1.79E-9	1.79E-9
Guardhouse near main entrance	1.19E-9	1.19E-9	1.19E-9	1.19E-9
K.K. Terrace				
G/F carports & driveway	8.05E-10	8.05E-10	8.05E-10	8.05E-10
1/F residential flats	1.17E-3	4.59E-4	2.94E-4	7.69E-5
G/F lobby	2.59E-4	9.44E-5	6.28E-5	1.45E-5
Patio at 1/F level	2.97E-10	2.97E-10	2.97E-10	2.97E-10
Total PLL	**7.45E-3**	**5.67E-3**	**4.44E-3**	**5.81E-4**

Table C5 - Societal Risk Calculations (Sheet 1 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Landslide Consequence		Landslide Risk -Total PLL / Year (See Note 3)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation	Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table C1)	(Note 2)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Residential flats of Block 13-18	1a	SOHL	4.48E-05	4.48E-05	4.48E-05	4.48E-05	0.0000	0.0000	0.00E+00	5.73E-07	0.00E+00	5.73E-07	0.00E+00	5.73E-07	0.00E+00	5.73E-07
		MOHL	2.61E-06	2.61E-06	2.61E-06	2.61E-06	0.1104	0.1104	2.88E-07		2.88E-07		2.88E-07		2.88E-07	
Woodcrest Hill		LOHL	2.61E-07	2.61E-07	2.61E-07	2.61E-07	0.9887	0.9887	2.58E-07		2.58E-07		2.58E-07		2.58E-07	
	1d	SOHL	9.90E-06	9.90E-06	9.90E-06	9.90E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.77E-07	5.77E-07	5.77E-07	5.77E-07	0.0173	0.0173	9.99E-09		9.99E-09		9.99E-09		9.99E-09	
		LOHL	5.77E-08	5.77E-08	5.77E-08	5.77E-08	0.2838	0.2838	1.64E-08		1.64E-08		1.64E-08		1.64E-08	
Garages & driveway of Bk. 13-18	1a	SOHL	4.48E-05	4.48E-05	4.48E-05	4.48E-05	0.0000	0.0000	0.00E+00	6.35E-08	0.00E+00	6.35E-08	0.00E+00	6.35E-08	0.00E+00	6.35E-08
		MOHL	2.61E-06	2.61E-06	2.61E-06	2.61E-06	0.0146	0.0146	3.83E-08		3.83E-08		3.83E-08		3.83E-08	
		LOHL	2.61E-07	2.61E-07	2.61E-07	2.61E-07	0.0872	0.0872	2.28E-08		2.28E-08		2.28E-08		2.28E-08	
Woodcrest Hill	1d	SOHL	9.90E-06	9.90E-06	9.90E-06	9.90E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.77E-07	5.77E-07	5.77E-07	5.77E-07	0.0007	0.0007	3.81E-10		3.81E-10		3.81E-10		3.81E-10	
		LOHL	5.77E-08	5.77E-08	5.77E-08	5.77E-08	0.0366	0.0366	2.11E-09		2.11E-09		2.11E-09		2.11E-09	
Carports adjacent to Block 12	1b	SOHL	9.94E-03	9.94E-03	9.94E-03	9.94E-03	0.0000	0.0000	0.00E+00	5.76E-05	0.00E+00	4.71E-05	0.00E+00	4.70E-05	0.00E+00	1.07E-05
		MOHL	5.79E-04	5.79E-04	5.79E-04	5.79E-04	0.0042	0.0042	2.43E-06		2.43E-06		2.43E-06		2.43E-06	
Woodcrest Hill		LOHL	5.79E-05	5.79E-05	5.79E-05	5.79E-05	0.0366	0.0366	2.12E-06		2.12E-06		2.12E-06		2.12E-06	
	1e	SOHL	3.45E-05	3.45E-05	3.45E-05	3.45E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.01E-06	2.01E-06	2.01E-06	2.01E-06	0.0007	0.0007	1.33E-09		1.33E-09		1.33E-09		1.33E-09	
		LOHL	2.01E-07	2.01E-07	2.01E-07	2.01E-07	0.0105	0.0105	2.11E-09		2.11E-09		2.11E-09		2.11E-09	
	2a	LOHL	1.31E-05	1.31E-05	1.31E-05	1.31E-05	0.0017	0.0017	2.16E-08		2.16E-08		2.16E-08		2.16E-08	
		LCDF	1.72E-04	1.72E-04	1.72E-04	1.72E-04	0.0105	0.0105	1.81E-06		1.81E-06		1.81E-06		1.81E-06	
	2b	LOHL	4.27E-04	4.27E-04	4.27E-04	4.27E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.38E-03	2.38E-03	2.38E-03	2.38E-03	0.0017	0.0017	3.93E-06		3.93E-06		3.93E-06		3.93E-06	
	2c	LOHL	1.20E-05	1.20E-05	1.20E-05	1.20E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.58E-04	1.58E-04	1.58E-04	1.58E-04	0.0017	0.0017	2.61E-07		2.61E-07		2.61E-07		2.61E-07	
	2d	LOHL	1.26E-04	1.26E-04	1.26E-04	1.26E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.62E-04	3.62E-04	3.62E-04	3.62E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
	3a	SOHL	5.48E-05	1.10E-05	1.10E-05	1.10E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.19E-06	6.39E-07	6.39E-07	6.39E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.19E-07	6.39E-08	6.39E-08	6.39E-08	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.03E-05	4.07E-06	4.07E-06	4.07E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.31E-06	1.26E-06	1.26E-06	1.26E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.21E-06	8.42E-07	8.42E-07	8.42E-07	0.0017	0.0000	6.94E-09		1.39E-09		1.39E-09		0.00E+00	
	3b	SOHL	1.30E-03	1.30E-03	1.30E-03	1.30E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.58E-05	7.58E-05	7.58E-05	7.58E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.58E-06	7.58E-06	7.58E-06	7.58E-06	0.0105	0.0105	7.96E-08		7.96E-08		7.96E-08		7.96E-08	
	3c	SOHL	3.66E-02	2.98E-02	2.98E-02	2.98E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.13E-03	1.74E-03	1.74E-03	1.74E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.13E-04	1.74E-04	1.74E-04	1.74E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.73E-02	1.41E-02	1.41E-02	1.41E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.36E-03	4.37E-03	4.37E-03	4.37E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.58E-03	2.91E-03	2.91E-03	2.91E-03	0.0017	0.0000	5.90E-06		4.81E-06		4.81E-06		0.00E+00	
	3d	SOHL	4.05E-02	2.68E-02	2.68E-02	2.68E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.36E-03	1.56E-03	1.56E-03	1.56E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.36E-04	1.56E-04	1.56E-04	1.56E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.13E-02	7.49E-03	7.49E-03	7.49E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.51E-03	2.32E-03	2.32E-03	2.32E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.34E-03	1.55E-03	1.55E-03	1.55E-03	0.0105	0.0000	2.46E-05		1.63E-05		1.63E-05		0.00E+00	
	3e	SOHL	5.40E-03	5.40E-03	4.59E-03	4.59E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.15E-04	3.15E-04	2.68E-04	2.68E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.15E-05	3.15E-05	2.68E-05	2.68E-05	0.0017	0.0017	5.19E-08		5.19E-08		4.42E-08		4.42E-08	
	3f	SOHL	8.82E-04	9.82E-05	9.82E-05	9.82E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.14E-05	5.72E-06	5.72E-06	5.72E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.14E-06	5.72E-07	5.72E-07	5.72E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	3.27E-04	3.64E-05	3.64E-05	3.64E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.02E-04	1.13E-05	1.13E-05	1.13E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	6.77E-05	7.54E-06	7.54E-06	7.54E-06	0.0017	0.0000	1.12E-07		1.24E-08		1.24E-08		0.00E+00	
	3g	SOHL	1.17E-02	9.34E-03	9.34E-03	9.34E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.81E-04	5.44E-04	5.44E-04	5.44E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.81E-05	5.44E-05	5.44E-05	5.44E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.25E-02	9.99E-03	9.99E-03	9.99E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.88E-03	3.10E-03	3.10E-03	3.10E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.58E-03	2.07E-03	2.07E-03	2.07E-03	0.0017	0.0000	4.26E-06		3.41E-06		3.41E-06		0.00E+00	
	3h	SOHL	5.11E-02	4.89E-02	4.89E-02	4.89E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.98E-03	2.85E-03	2.85E-03	2.85E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.98E-04	2.85E-04	2.85E-04	2.85E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.11E-02	1.06E-02	1.06E-02	1.06E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.45E-03	3.30E-03	3.30E-03	3.30E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.30E-03	2.20E-03	2.20E-03	2.20E-03	0.0017	0.0000	3.80E-06		3.63E-06		3.63E-06		0.00E+00	
	3i	SOHL	9.41E-02	9.40E-02	9.40E-02	9.40E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.48E-03	5.48E-03	5.48E-03	5.48E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.48E-04	5.48E-04	5.48E-04	5.48E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.39E-02	2.38E-02	2.38E-02	2.38E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.41E-03	7.40E-03	7.40E-03	7.40E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.94E-03	4.93E-03	4.93E-03	4.93E-03	0.0017	0.0000	8.15E-06		8.14E-06		8.14E-06		0.00E+00	
	3j	SOHL	1.25E-02	1.25E-02	2.01E-03	2.01E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.27E-04	7.27E-04	1.17E-04	1.17E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.27E-05	7.27E-05	1.17E-05	1.17E-05	0.0017	0.0017	1.20E-07		1.20E-07		1.93E-08		1.93E-08	

Table C5 - Societal Risk Calculations (Sheet 2 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Landslide Consequence		Landslide Risk -Total PLL / Year (See Note 3)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation	Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table C1)	(Note 2)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Sitting out area behind Bk. 12	1c	SOHL	9.88E-03	9.88E-03	9.88E-03	9.88E-03	0.0000	0.0000	0.00E+00	7.51E-05	0.00E+00	6.30E-05	0.00E+00	6.28E-05	0.00E+00	1.15E-05
		MOHL	5.76E-04	5.76E-04	5.76E-04	5.76E-04	0.0013	0.0013	7.26E-07		7.26E-07		7.26E-07		7.26E-07	
Woodcrest Hill		LOHL	5.76E-05	5.76E-05	5.76E-05	5.76E-05	0.0110	0.0110	6.32E-07		6.32E-07		6.32E-07		6.32E-07	
	1f	SOHL	1.95E-05	1.95E-05	1.95E-05	1.95E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.14E-06	1.14E-06	1.14E-06	1.14E-06	0.0002	0.0002	2.25E-10		2.25E-10		2.25E-10		2.25E-10	
		LOHL	1.14E-07	1.14E-07	1.14E-07	1.14E-07	0.0110	0.0110	1.25E-09		1.25E-09		1.25E-09		1.25E-09	
	2a	LOHL	1.31E-05	1.31E-05	1.31E-05	1.31E-05	0.0032	0.0032	4.12E-08		4.12E-08		4.12E-08		4.12E-08	
		LCDF	1.72E-04	1.72E-04	1.72E-04	1.72E-04	0.0110	0.0110	1.89E-06		1.89E-06		1.89E-06		1.89E-06	
	2b	LOHL	4.27E-04	4.27E-04	4.27E-04	4.27E-04	0.0005	0.0005	2.11E-07		2.11E-07		2.11E-07		2.11E-07	
		LCDF	2.38E-03	2.38E-03	2.38E-03	2.38E-03	0.0032	0.0032	7.51E-06		7.51E-06		7.51E-06		7.51E-06	
	2c	LOHL	1.20E-05	1.20E-05	1.20E-05	1.20E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.58E-04	1.58E-04	1.58E-04	1.58E-04	0.0005	0.0005	7.84E-08		7.84E-08		7.84E-08		7.84E-08	
	2d	LOHL	1.26E-04	1.26E-04	1.26E-04	1.26E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.62E-04	3.62E-04	3.62E-04	3.62E-04	0.0005	0.0005	1.79E-07		1.79E-07		1.79E-07		1.79E-07	
	3a	SOHL	5.48E-05	1.10E-05	1.10E-05	1.10E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.19E-06	6.39E-07	6.39E-07	6.39E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.19E-07	6.39E-08	6.39E-08	6.39E-08	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.03E-05	4.07E-06	4.07E-06	4.07E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.31E-06	1.26E-06	1.26E-06	1.26E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.21E-06	8.42E-07	8.42E-07	8.42E-07	0.0032	0.0000	1.33E-08		2.65E-09		2.65E-09		0.00E+00	
	3b	SOHL	1.30E-03	1.30E-03	1.30E-03	1.30E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.58E-05	7.58E-05	7.58E-05	7.58E-05	0.0002	0.0002	1.31E-08		1.31E-08		1.31E-08		1.31E-08	
		LOHL	7.58E-06	7.58E-06	7.58E-06	7.58E-06	0.0099	0.0099	7.49E-08		7.49E-08		7.49E-08		7.49E-08	
	3c	SOHL	3.66E-02	2.98E-02	2.98E-02	2.98E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.13E-03	1.74E-03	1.74E-03	1.74E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.13E-04	1.74E-04	1.74E-04	1.74E-04	0.0004	0.0000	9.50E-08		7.74E-08		7.74E-08		0.00E+00	
		SCDF	1.73E-02	1.41E-02	1.41E-02	1.41E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.36E-03	4.37E-03	4.37E-03	4.37E-03	0.0002	0.0000	1.19E-06		9.73E-07		9.73E-07		0.00E+00	
		LCDF	3.58E-03	2.91E-03	2.91E-03	2.91E-03	0.0028	0.0000	1.01E-05		8.27E-06		8.27E-06		0.00E+00	
	3d	SOHL	4.05E-02	2.68E-02	2.68E-02	2.68E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.36E-03	1.56E-03	1.56E-03	1.56E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.36E-04	1.56E-04	1.56E-04	1.56E-04	0.0004	0.0000	1.05E-07		6.96E-08		6.96E-08		0.00E+00	
		SCDF	1.13E-02	7.49E-03	7.49E-03	7.49E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.51E-03	2.32E-03	2.32E-03	2.32E-03	0.0002	0.0000	7.81E-07		5.18E-07		5.18E-07		0.00E+00	
		LCDF	2.34E-03	1.55E-03	1.55E-03	1.55E-03	0.0099	0.0000	2.31E-05		1.53E-05		1.53E-05		0.00E+00	
	3e	SOHL	5.40E-03	5.40E-03	4.59E-03	4.59E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.15E-04	3.15E-04	2.68E-04	2.68E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.15E-05	3.15E-05	2.68E-05	2.68E-05	0.0032	0.0032	9.92E-08		9.92E-08		8.44E-08		8.44E-08	
	3f	SOHL	8.82E-04	9.82E-05	9.82E-05	9.82E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.14E-05	5.72E-06	5.72E-06	5.72E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.14E-06	5.72E-07	5.72E-07	5.72E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	3.27E-04	3.64E-05	3.64E-05	3.64E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.02E-04	1.13E-05	1.13E-05	1.13E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	6.77E-05	7.54E-06	7.54E-06	7.54E-06	0.0005	0.0000	3.35E-08		3.73E-09		3.73E-09		0.00E+00	
	3g	SOHL	1.17E-02	9.34E-03	9.34E-03	9.34E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.81E-04	5.44E-04	5.44E-04	5.44E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.81E-05	5.44E-05	5.44E-05	5.44E-05	0.0005	0.0000	3.37E-08		2.69E-08		2.69E-08		0.00E+00	
		SCDF	1.25E-02	9.99E-03	9.99E-03	9.99E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.88E-03	3.10E-03	3.10E-03	3.10E-03	0.0002	0.0000	9.59E-07		7.67E-07		7.67E-07		0.00E+00	
		LCDF	2.58E-03	2.07E-03	2.07E-03	2.07E-03	0.0032	0.0000	8.15E-06		6.51E-06		6.51E-06		0.00E+00	
	3h	SOHL	5.11E-02	4.89E-02	4.89E-02	4.89E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.98E-03	2.85E-03	2.85E-03	2.85E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.98E-04	2.85E-04	2.85E-04	2.85E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.11E-02	1.06E-02	1.06E-02	1.06E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.45E-03	3.30E-03	3.30E-03	3.30E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	2.30E-03	2.20E-03	2.20E-03	2.20E-03	0.0005	0.0000	1.14E-06		1.09E-06		1.09E-06		0.00E+00	
	3i	SOHL	9.41E-02	9.40E-02	9.40E-02	9.40E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.48E-03	5.48E-03	5.48E-03	5.48E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.48E-04	5.48E-04	5.48E-04	5.48E-04	0.0005	0.0000	2.71E-07		2.71E-07		2.71E-07		0.00E+00	
		SCDF	2.39E-02	2.38E-02	2.38E-02	2.38E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.41E-03	7.40E-03	7.40E-03	7.40E-03	0.0002	0.0000	1.83E-06		1.83E-06		1.83E-06		0.00E+00	
		LCDF	4.94E-03	4.93E-03	4.93E-03	4.93E-03	0.0032	0.0000	1.56E-05		1.56E-05		1.56E-05		0.00E+00	
	3j	SOHL	1.25E-02	1.25E-02	2.01E-03	2.01E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.27E-04	7.27E-04	1.17E-04	1.17E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.27E-05	7.27E-05	1.17E-05	1.17E-05	0.0032	0.0032	2.29E-07		2.29E-07		3.69E-08		3.69E-08	
1/F residential flats of Bk. 11	4a	SOHL	4.22E-04	4.22E-04	4.22E-04	4.22E-04	0.0050	0.0050	2.09E-06	1.54E-05	2.09E-06	1.54E-05	2.09E-06	1.54E-05	2.09E-06	1.54E-05
		MOHL	2.46E-05	2.46E-05	2.46E-05	2.46E-05	0.1104	0.1104	2.71E-06		2.71E-06		2.71E-06		2.71E-06	
Woodcrest Hill		LOHL	2.46E-06	2.46E-06	2.46E-06	2.46E-06	0.9887	0.9887	2.43E-06		2.43E-06		2.43E-06		2.43E-06	
	4c	SOHL	3.07E-03	3.07E-03	3.07E-03	3.07E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.79E-04	1.79E-04	1.79E-04	1.79E-04	0.0173	0.0173	3.09E-06		3.09E-06		3.09E-06		3.09E-06	
		LOHL	1.79E-05	1.79E-05	1.79E-05	1.79E-05	0.2838	0.2838	5.07E-06		5.07E-06		5.07E-06		5.07E-06	
Patio of Block 11	4a	SOHL	4.22E-04	4.22E-04	4.22E-04	4.22E-04	0.0001	0.0001	3.14E-08	4.35E-07	3.14E-08	4.35E-07	3.14E-08	4.35E-07	3.14E-08	4.35E-07
		MOHL	2.46E-05	2.46E-05	2.46E-05	2.46E-05	0.0044	0.0044	1.08E-07		1.08E-07		1.08E-07		1.08E-07	
Facilities affected		LOHL	2.46E-06	2.46E-06	2.46E-06	2.46E-06	0.0262	0.0262	6.44E-08		6.44E-08		6.44E-08		6.44E-08	
	4c	SOHL	3.07E-03	3.07E-03	3.07E-03	3.07E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.79E-04	1.79E-04	1.79E-04	1.79E-04	0.0002	0.0002	3.54E-08		3.54E-08		3.54E-08		3.54E-08	
		LOHL	1.79E-05	1.79E-05	1.79E-05	1.79E-05	0.0110	0.0110	1.96E-07		1.96E-07		1.96E-07		1.96E-07	

Table C5 - Societal Risk Calculations (Sheet 3 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Landslide Consequence		Landslide Risk -Total PLL / Year (See Note 3)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation	Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table C1)	(Note 2)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
1/F residential flats of Bk. 10	4b	SOHL	4.45E-03	4.45E-03	4.01E-03	4.01E-03	0.0050	0.0050	2.20E-05	5.57E-03	2.20E-05	4.73E-03	1.99E-05	3.76E-03	1.99E-05	4.25E-04
		MOHL	2.59E-04	2.59E-04	2.34E-04	2.34E-04	0.1104	0.1104	2.86E-05		2.86E-05		2.58E-05		2.58E-05	
		LOHL	2.59E-05	2.59E-05	2.34E-05	2.34E-05	0.9887	0.9887	2.57E-05		2.57E-05		2.31E-05		2.31E-05	
Woodcrest Hill	4d	SOHL	9.00E-03	9.00E-03	9.00E-03	9.00E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.24E-04	5.24E-04	5.24E-04	5.24E-04	0.0173	0.0173	9.09E-06		9.09E-06		9.09E-06		9.09E-06	
		LOHL	5.24E-05	5.24E-05	5.24E-05	5.24E-05	0.2838	0.2838	1.49E-05		1.49E-05		1.49E-05		1.49E-05	
	4e	SOHL	4.99E-04	4.98E-04	5.48E-06	5.48E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.91E-05	2.90E-05	3.19E-07	3.19E-07	0.0173	0.0173	5.03E-07		5.03E-07		5.53E-09		5.53E-09	
		LOHL	2.91E-06	2.90E-06	3.19E-08	3.19E-08	0.2838	0.2838	8.25E-07		8.24E-07		9.06E-09		9.06E-09	
	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.0173	0.0173	3.13E-06		3.13E-06		3.13E-06		7.93E-07	
		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.2838	0.2838	5.12E-06		5.12E-06		5.12E-06		1.30E-06	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.0087	0.0087	9.96E-06		9.96E-06		9.96E-06		2.52E-06	
		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.1419	0.1419	5.06E-05		5.06E-05		5.06E-05		1.28E-05	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.9887	0.9887	2.35E-04		2.35E-04		2.35E-04		5.96E-05	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.2838	0.2838	1.33E-05		1.07E-05		1.02E-05		2.72E-08	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.1419	0.1419	4.51E-04		3.63E-04		3.45E-04		9.21E-07	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.9887	0.9887	2.09E-03		1.69E-03		1.60E-03		4.28E-06	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.2838	0.2838	3.66E-07		3.66E-07		3.66E-07		2.96E-07	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.1419	0.1419	3.62E-06		3.62E-06		3.62E-06		2.93E-06	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.9887	0.9887	1.68E-05		1.68E-05		1.68E-05		1.36E-05	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.0446	0.0446	3.32E-06		3.32E-06		1.06E-06		3.87E-09	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.0223	0.0223	7.04E-05		7.04E-05		2.26E-05		8.21E-08	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.2838	0.2838	5.98E-04		5.98E-04		1.92E-04		6.98E-07	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.0446	0.0446	2.28E-06		1.86E-06		1.30E-06		2.29E-09	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.0223	0.0223	1.73E-04		1.41E-04		9.89E-05		1.74E-07	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.2838	0.2838	1.47E-03		1.20E-03		8.40E-04		1.48E-06	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.0446	0.0446	7.60E-06		6.39E-06		6.39E-06		6.39E-06	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.0223	0.0223	2.81E-05		2.36E-05		2.36E-05		2.36E-05	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.2838	0.2838	2.39E-04		2.00E-04		2.00E-04		2.00E-04	
Patio of Block 10	4b	SOHL	4.45E-03	4.45E-03	4.01E-03	4.01E-03	0.0005	0.0005	2.11E-06	8.69E-05	2.11E-06	7.75E-05	1.90E-06	5.22E-05	1.90E-06	8.49E-06
		MOHL	2.59E-04	2.59E-04	2.34E-04	2.34E-04	0.0044	0.0044	1.14E-06		1.14E-06		1.03E-06		1.03E-06	
Woodcrest Hill		LOHL	2.59E-05	2.59E-05	2.34E-05	2.34E-05	0.0262	0.0262	6.79E-07		6.79E-07		6.11E-07		6.11E-07	
	4d	SOHL	9.00E-03	9.00E-03	9.00E-03	9.00E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.24E-04	5.24E-04	5.24E-04	5.24E-04	0.0013	0.0013	6.61E-07		6.61E-07		6.61E-07		6.61E-07	
		LOHL	5.24E-05	5.24E-05	5.24E-05	5.24E-05	0.0110	0.0110	5.76E-07		5.76E-07		5.76E-07		5.76E-07	
	4e	SOHL	4.99E-04	4.98E-04	5.48E-06	5.48E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.91E-05	2.90E-05	3.19E-07	3.19E-07	0.0002	0.0002	5.75E-09		5.75E-09		6.32E-11		6.32E-11	
		LOHL	2.91E-06	2.90E-06	3.19E-08	3.19E-08	0.0032	0.0032	9.16E-09		9.15E-09		1.01E-10		1.01E-10	
	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.0002	0.0002	3.58E-08		3.58E-08		3.58E-08		9.06E-09	
		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.0032	0.0032	5.69E-08		5.69E-08		5.69E-08		1.44E-08	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.0001	0.0001	1.14E-07		1.14E-07		1.14E-07		2.88E-08	
		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.0016	0.0016	5.63E-07		5.63E-07		5.63E-07		1.43E-07	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.0110	0.0110	2.61E-06		2.61E-06		2.61E-06		6.62E-07	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.0032	0.0032	1.48E-07		1.19E-07		1.13E-07		3.02E-10	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.0016	0.0016	5.01E-06		4.04E-06		3.83E-06		1.02E-08	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.0110	0.0110	2.33E-05		1.87E-05		1.78E-05		4.76E-08	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.0032	0.0032	4.07E-09		4.07E-09		4.07E-09		3.29E-09	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.0016	0.0016	4.02E-08		4.02E-08		4.02E-08		3.25E-08	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.0110	0.0110	1.87E-07		1.87E-07		1.87E-07		1.51E-07	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.0032	0.0032	2.35E-07		2.35E-07		7.53E-08		2.74E-10	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.0016	0.0016	4.98E-06		4.98E-06		1.60E-06		5.81E-09	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.0110	0.0110	2.31E-05		2.31E-05		7.42E-06		2.70E-08	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.0005	0.0005	2.53E-08		2.07E-08		1.45E-08		2.55E-11	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.0002	0.0002	1.92E-06		1.57E-06		1.10E-06		1.93E-09	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.0032	0.0032	1.63E-05		1.33E-05		9.33E-06		1.64E-08	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.0005	0.0005	8.44E-08		7.10E-08		7.10E-08		7.10E-08	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.0002	0.0002	3.12E-07		2.62E-07		2.62E-07		2.62E-07	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.0032	0.0032	2.65E-06		2.23E-06		2.23E-06		2.23E-06	

Table C5 - Societal Risk Calculations (Sheet 4 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Landslide Consequence		Landslide Risk -Total PLL / Year (See Note 3)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation	Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table C1)	(Note 2)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
Garden area between Bk. 9 & 10	5a	SOHL	3.10E-03	3.10E-03	3.10E-03	7.85E-04	0.0001	0.0001	2.30E-07	2.06E-04	2.30E-07	1.76E-04	2.30E-07	1.36E-04	5.83E-08	1.45E-05
		MOHL	1.81E-04	1.81E-04	1.81E-04	4.57E-05	0.0044	0.0044	7.94E-07		7.94E-07		7.94E-07		2.01E-07	
Woodcrest Hill		LOHL	1.81E-05	1.81E-05	1.81E-05	4.57E-06	0.0262	0.0262	4.72E-07		4.72E-07		4.72E-07		1.20E-07	
		SCDF	1.15E-03	1.15E-03	1.15E-03	2.91E-04	0.0022	0.0022	2.53E-06		2.53E-06		2.53E-06		6.40E-07	
		MCDF	3.57E-04	3.57E-04	3.57E-04	9.04E-05	0.0131	0.0131	4.67E-06		4.67E-06		4.67E-06		1.18E-06	
		LCDF	2.38E-04	2.38E-04	2.38E-04	6.03E-05	0.0262	0.0262	6.23E-06		6.23E-06		6.23E-06		1.58E-06	
	5c	SOHL	8.05E-03	6.48E-03	6.16E-03	1.64E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.69E-04	3.78E-04	3.59E-04	9.58E-07	0.0013	0.0013	5.91E-07		4.76E-07		4.53E-07		1.21E-09	
		LOHL	4.69E-05	3.78E-05	3.59E-05	9.58E-08	0.0110	0.0110	5.15E-07		4.15E-07		3.94E-07		1.05E-09	
		SCDF	1.02E-02	8.25E-03	7.84E-03	2.09E-05	0.0006	0.0006	6.45E-06		5.20E-06		4.94E-06		1.32E-08	
		MCDF	3.18E-03	2.56E-03	2.43E-03	6.49E-06	0.0055	0.0055	1.74E-05		1.41E-05		1.34E-05		3.57E-08	
		LCDF	2.12E-03	1.71E-03	1.62E-03	4.33E-06	0.0262	0.0262	5.54E-05		4.46E-05		4.24E-05		1.13E-07	
	5d	SOHL	2.22E-04	2.22E-04	2.22E-04	1.79E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.29E-05	1.29E-05	1.29E-05	1.04E-05	0.0013	0.0013	1.63E-08		1.63E-08		1.63E-08		1.32E-08	
		LOHL	1.29E-06	1.29E-06	1.29E-06	1.04E-06	0.0110	0.0110	1.42E-08		1.42E-08		1.42E-08		1.15E-08	
		SCDF	8.22E-05	8.22E-05	8.22E-05	6.65E-05	0.0006	0.0006	5.19E-08		5.19E-08		5.19E-08		4.19E-08	
		MCDF	2.55E-05	2.55E-05	2.55E-05	2.06E-05	0.0055	0.0055	1.40E-07		1.40E-07		1.40E-07		1.13E-07	
		LCDF	1.70E-05	1.70E-05	1.70E-05	1.37E-05	0.0262	0.0262	4.45E-07		4.45E-07		4.45E-07		3.60E-07	
	5e	SOHL	1.28E-02	1.28E-02	4.10E-03	1.49E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.45E-04	7.45E-04	2.39E-04	8.69E-07	0.0002	0.0002	1.47E-07		1.47E-07		4.73E-08		1.72E-10	
		LOHL	7.45E-05	7.45E-05	2.39E-05	8.69E-08	0.0032	0.0032	2.35E-07		2.35E-07		7.53E-08		2.74E-10	
		SCDF	1.02E-02	1.02E-02	3.27E-03	1.19E-05	0.0001	0.0001	1.01E-06		1.01E-06		3.23E-07		1.18E-09	
		MCDF	3.16E-03	3.16E-03	1.01E-03	3.69E-06	0.0016	0.0016	4.98E-06		4.98E-06		1.60E-06		5.81E-09	
		LCDF	2.11E-03	2.11E-03	6.76E-04	2.46E-06	0.0110	0.0110	2.31E-05		2.31E-05		7.42E-06		2.70E-08	
	5f	SOHL	8.77E-03	7.17E-03	5.02E-03	8.83E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	5.11E-04	4.18E-04	2.92E-04	5.14E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	5.11E-05	4.18E-05	2.92E-05	5.14E-08	0.0032	0.0032	1.61E-07		1.32E-07		9.22E-08		1.62E-10	
		SCDF	2.50E-02	2.04E-02	1.43E-02	2.52E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	7.76E-03	6.34E-03	4.44E-03	7.81E-06	0.0016	0.0016	1.22E-05		1.00E-05		7.00E-06		1.23E-08	
		LCDF	5.17E-03	4.23E-03	2.96E-03	5.21E-06	0.0110	0.0110	5.68E-05		4.64E-05		3.25E-05		5.72E-08	
	5g	SOHL	2.93E-02	2.46E-02	2.46E-02	2.46E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.71E-03	1.43E-03	1.43E-03	1.43E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.71E-04	1.43E-04	1.43E-04	1.43E-04	0.0032	0.0032	5.38E-07		4.52E-07		4.52E-07		4.52E-07	
		SCDF	4.06E-03	3.41E-03	3.41E-03	3.41E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.26E-03	1.06E-03	1.06E-03	1.06E-03	0.0016	0.0016	1.99E-06		1.67E-06		1.67E-06		1.67E-06	
		LCDF	8.41E-04	7.06E-04	7.06E-04	7.06E-04	0.0110	0.0110	9.24E-06		7.76E-06		7.76E-06		7.76E-06	
1/F residential flats of Bk. 9	5b	SOHL	6.08E-05	6.08E-05	6.08E-05	6.08E-05	0.0000	0.0000	0.00E+00	1.62E-07	0.00E+00	1.62E-07	0.00E+00	1.62E-07	0.00E+00	1.62E-07
Woodcrest Hill		MOHL	3.54E-06	3.54E-06	3.54E-06	3.54E-06	0.0173	0.0173	6.14E-08		6.14E-08		6.14E-08		6.14E-08	
		LOHL	3.54E-07	3.54E-07	3.54E-07	3.54E-07	0.2838	0.2838	1.01E-07		1.01E-07		1.01E-07		1.01E-07	
Patio of Block 9	5b	SOHL	6.08E-05	6.08E-05	6.08E-05	6.08E-05	0.0000	0.0000	0.00E+00	8.36E-09	0.00E+00	8.36E-09	0.00E+00	8.36E-09	0.00E+00	8.36E-09
Woodcrest Hill		MOHL	3.54E-06	3.54E-06	3.54E-06	3.54E-06	0.0013	0.0013	4.47E-09		4.47E-09		4.47E-09		4.47E-09	
		LOHL	3.54E-07	3.54E-07	3.54E-07	3.54E-07	0.0110	0.0110	3.89E-09		3.89E-09		3.89E-09		3.89E-09	
G/F residential flat of Bk5	6a	SOHL	8.04E-05	8.04E-05	8.04E-05	8.04E-05	0.0000	0.0000	0.00E+00	2.97E-06	0.00E+00	2.97E-06	0.00E+00	2.97E-06	0.00E+00	2.97E-06
		MOHL	4.68E-06	4.68E-06	4.68E-06	4.68E-06	0.0173	0.0173	8.11E-08		8.11E-08		8.11E-08		8.11E-08	
Woodcrest Hill		LOHL	4.68E-07	4.68E-07	4.68E-07	4.68E-07	0.2838	0.2838	1.33E-07		1.33E-07		1.33E-07		1.33E-07	
	6c	SOHL	1.67E-03	1.67E-03	1.67E-03	1.67E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	9.70E-05	9.70E-05	9.70E-05	9.70E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	9.70E-06	9.70E-06	9.70E-06	9.70E-06	0.2838	0.2838	2.75E-06		2.75E-06		2.75E-06		2.75E-06	
Patio of Block 5	6a	SOHL	8.04E-05	8.04E-05	8.04E-05	8.04E-05	0.0000	0.0000	0.00E+00	4.16E-08	0.00E+00	4.16E-08	0.00E+00	4.16E-08	0.00E+00	4.16E-08
		MOHL	4.68E-06	4.68E-06	4.68E-06	4.68E-06	0.0013	0.0013	5.91E-09		5.91E-09		5.91E-09		5.91E-09	
Woodcrest Hill		LOHL	4.68E-07	4.68E-07	4.68E-07	4.68E-07	0.0110	0.0110	5.15E-09		5.15E-09		5.15E-09		5.15E-09	
	6c	SOHL	1.67E-03	1.67E-03	1.67E-03	1.67E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	9.70E-05	9.70E-05	9.70E-05	9.70E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	9.70E-06	9.70E-06	9.70E-06	9.70E-06	0.0032	0.0032	3.06E-08		3.06E-08		3.06E-08		3.06E-08	
Driveway near main entrance	6b	SOHL	3.90E-06	3.90E-06	3.90E-06	3.90E-06	0.0000	0.0000	0.00E+00	1.79E-09	0.00E+00	1.79E-09	0.00E+00	1.79E-09	0.00E+00	1.79E-09
Woodcrest Hill		MOHL	2.27E-07	2.27E-07	2.27E-07	2.27E-07	0.0042	0.0042	9.55E-10		9.55E-10		9.55E-10		9.55E-10	
		LOHL	2.27E-08	2.27E-08	2.27E-08	2.27E-08	0.0366	0.0366	8.32E-10		8.32E-10		8.32E-10		8.32E-10	
Guardhouse near main entrance	6b	SOHL	3.90E-06	3.90E-06	3.90E-06	3.90E-06	0.0000	0.0000	0.00E+00	1.19E-09	0.00E+00	1.19E-09	0.00E+00	1.19E-09	0.00E+00	1.19E-09
Woodcrest Hill		MOHL	2.27E-07	2.27E-07	2.27E-07	2.27E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.27E-08	2.27E-08	2.27E-08	2.27E-08	0.0526	0.0526	1.19E-09		1.19E-09		1.19E-09		1.19E-09	
G/F carports & driveway	7a	SOHL	1.32E-05	1.32E-05	1.32E-05	1.32E-05	0.0000	0.0000	0.00E+00	8.05E-10	0.00E+00	8.05E-10	0.00E+00	8.05E-10	0.00E+00	8.05E-10
		MOHL	7.66E-07	7.66E-07	7.66E-07	7.66E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
K.K. Terrace		LOHL	7.66E-08	7.66E-08	7.66E-08	7.66E-08	0.0105	0.0105	8.05E-10		8.05E-10		8.05E-10		8.05E-10	
	7d	SOHL	1.12E-04	1.12E-04	1.12E-04	1.12E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	6.51E-06	6.51E-06	6.51E-06	6.51E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	6.51E-07	6.51E-07	6.51E-07	6.51E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
	7h	SOHL	2.69E-02	2.69E-02	2.69E-02	2.69E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.57E-03	1.57E-03	1.57E-03	1.57E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.57E-04	1.57E-04	1.57E-04	1.57E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	

Table C5 - Societal Risk Calculations (Sheet 5 of 5)

Facilities affected	Associated slope sub-areas	Types of failure	Landslide frequencies (f)				Landslide Consequence		Landslide Risk -Total PLL / Year (See Note 3)							
			Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Before Additional Mitigation	After Additional Mitigation	Base-line Condition		Present-day Condition		After Forthcoming Measures		After Additional Risk Mitigation Measures	
		(Note 1)	(Table A4)	(Table A5)	(Table A6)	(Table A7)	(Table C1)	(Note 2)	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas	Individual Hazard	Σ ALL Sub-areas
1/F residential flats	7b	SOHL	9.68E-03	1.01E-03	1.01E-03	1.01E-03	0.0000	0.0000	0.00E+00	1.17E-03	0.00E+00	4.59E-04	0.00E+00	2.94E-04	0.00E+00	7.69E-05
		MOHL	5.64E-04	5.88E-05	5.88E-05	5.88E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
K.K. Terrace		LOHL	5.64E-05	5.88E-06	5.88E-06	5.88E-06	0.0446	0.0446	2.51E-06		2.62E-07		2.62E-07		2.62E-07	
		SCDF	3.59E-03	3.75E-04	3.75E-04	3.75E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.12E-03	1.16E-04	1.16E-04	1.16E-04	0.0223	0.0000	2.48E-05		2.59E-06		2.59E-06		0.00E+00	
		LCDF	7.43E-04	7.75E-05	7.75E-05	7.75E-05	0.9887	0.9887	7.35E-04		7.67E-05		7.67E-05		7.67E-05	
	7c	SOHL	2.98E-06	2.98E-06	2.98E-06	2.98E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.74E-07	1.74E-07	1.74E-07	1.74E-07	0.0173	0.0173	3.01E-09		3.01E-09		3.01E-09		3.01E-09	
		LOHL	1.74E-08	1.74E-08	1.74E-08	1.74E-08	0.2838	0.2838	4.93E-09		4.93E-09		4.93E-09		4.93E-09	
	7e	SOHL	7.95E-02	7.14E-02	6.21E-02	6.21E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.63E-03	4.16E-03	3.62E-03	3.62E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.63E-04	4.16E-04	3.62E-04	3.62E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.16E-02	1.94E-02	1.69E-02	1.69E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.70E-03	6.01E-03	5.23E-03	5.23E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.47E-03	4.01E-03	3.49E-03	3.49E-03	0.0446	0.0000	1.99E-04		1.79E-04		1.55E-04		0.00E+00	
	7f	SOHL	4.46E-03	1.96E-03	1.59E-03	1.59E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.60E-04	1.14E-04	9.29E-05	9.29E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.60E-05	1.14E-05	9.29E-06	9.29E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.66E-03	7.28E-04	5.91E-04	5.91E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.14E-04	2.26E-04	1.84E-04	1.84E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.43E-04	1.51E-04	1.22E-04	1.22E-04	0.0446	0.0000	1.53E-05		6.71E-06		5.45E-06		0.00E+00	
	7g	SOHL	2.49E-05	2.49E-05	2.49E-05	2.49E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.45E-06	1.45E-06	1.45E-06	1.45E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.45E-07	1.45E-07	1.45E-07	1.45E-07	0.0446	0.0446	6.45E-09		6.45E-09		6.45E-09		6.45E-09	
	7i	SOHL	5.36E-02	5.36E-02	2.15E-02	2.15E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.12E-03	3.12E-03	1.25E-03	1.25E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.12E-04	3.12E-04	1.25E-04	1.25E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.46E-02	1.46E-02	5.85E-03	5.85E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	4.53E-03	4.53E-03	1.81E-03	1.81E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.02E-03	3.02E-03	1.21E-03	1.21E-03	0.0446	0.0000	1.35E-04		1.35E-04		5.39E-05		0.00E+00	
	7j	SOHL	5.96E-02	5.96E-02	5.96E-05	5.96E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.47E-03	3.47E-03	3.47E-06	3.47E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.47E-04	3.47E-04	3.47E-07	3.47E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	6.44E-03	6.44E-03	6.44E-06	6.44E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.00E-03	2.00E-03	2.00E-06	2.00E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.33E-03	1.33E-03	1.33E-06	1.33E-06	0.0446	0.0000	5.94E-05		5.94E-05		5.94E-08		0.00E+00	
	7k	SOHL	1.22E-06	1.22E-06	1.22E-06	1.22E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.10E-08	7.10E-08	7.10E-08	7.10E-08	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.10E-09	7.10E-09	7.10E-09	7.10E-09	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
G/F lobby	7b	SOHL	9.68E-03	1.01E-03	1.01E-03	1.01E-03	0.0000	0.0000	0.00E+00	2.59E-04	0.00E+00	9.44E-05	0.00E+00	6.28E-05	0.00E+00	1.45E-05
		MOHL	5.64E-04	5.88E-05	5.88E-05	5.88E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
K.K. Terrace (Through sky window)		LOHL	5.64E-05	5.88E-06	5.88E-06	5.88E-06	0.0526	0.0526	2.96E-06		3.09E-07		3.09E-07		3.09E-07	
		SCDF	3.59E-03	3.75E-04	3.75E-04	3.75E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	1.12E-03	1.16E-04	1.16E-04	1.16E-04	0.0263	0.0000	2.93E-05		3.06E-06		3.06E-06		0.00E+00	
		LCDF	7.43E-04	7.75E-05	7.75E-05	7.75E-05	0.1831	0.1831	1.36E-04		1.42E-05		1.42E-05		1.42E-05	
	7e	SOHL	7.95E-02	7.14E-02	6.21E-02	6.21E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	4.63E-03	4.16E-03	3.62E-03	3.62E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	4.63E-04	4.16E-04	3.62E-04	3.62E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	2.16E-02	1.94E-02	1.69E-02	1.69E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	6.70E-03	6.01E-03	5.23E-03	5.23E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	4.47E-03	4.01E-03	3.49E-03	3.49E-03	0.0083	0.0000	3.68E-05		3.31E-05		2.88E-05		0.00E+00	
	7f	SOHL	4.46E-03	1.96E-03	1.59E-03	1.59E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	2.60E-04	1.14E-04	9.29E-05	9.29E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	2.60E-05	1.14E-05	9.29E-06	9.29E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.66E-03	7.28E-04	5.91E-04	5.91E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	5.14E-04	2.26E-04	1.84E-04	1.84E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.43E-04	1.51E-04	1.22E-04	1.22E-04	0.0526	0.0000	1.80E-05		7.92E-06		6.43E-06		0.00E+00	
	7i	SOHL	5.36E-02	5.36E-02	2.15E-02	2.15E-02	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.12E-03	3.12E-03	1.25E-03	1.25E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.12E-04	3.12E-04	1.25E-04	1.25E-04	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	1.46E-02	1.46E-02	5.85E-03	5.85E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	4.53E-03	4.53E-03	1.81E-03	1.81E-03	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	3.02E-03	3.02E-03	1.21E-03	1.21E-03	0.0083	0.0000	2.49E-05		2.49E-05		9.98E-06		0.00E+00	
	7j	SOHL	5.96E-02	5.96E-02	5.96E-05	5.96E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	3.47E-03	3.47E-03	3.47E-06	3.47E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	3.47E-04	3.47E-04	3.47E-07	3.47E-07	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		SCDF	6.44E-03	6.44E-03	6.44E-06	6.44E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MCDF	2.00E-03	2.00E-03	2.00E-06	2.00E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LCDF	1.33E-03	1.33E-03	1.33E-06	1.33E-06	0.0083	0.0000	1.10E-05		1.10E-05		1.10E-08		0.00E+00	
Patio at 1/F level	7c	SOHL	2.98E-06	2.98E-06	2.98E-06	2.98E-06	0.0000	0.0000	0.00E+00	2.97E-10	0.00E+00	2.97E-10	0.00E+00	2.97E-10	0.00E+00	2.97E-10
		MOHL	1.74E-07	1.74E-07	1.74E-07	1.74E-07	0.0002	0.0002	3.44E-11		3.44E-11		3.44E-11		3.44E-11	
K.K. Terrace		LOHL	1.74E-08	1.74E-08	1.74E-08	1.74E-08	0.0110	0.0110	1.91E-10		1.91E-10		1.91E-10		1.91E-10	
	7g	SOHL	2.49E-05	2.49E-05	2.49E-05	2.49E-05	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	1.45E-06	1.45E-06	1.45E-06	1.45E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	1.45E-07	1.45E-07	1.45E-07	1.45E-07	0.0005	0.0005	7.17E-11		7.17E-11		7.17E-11		7.17E-11	
	7k	SOHL	1.22E-06	1.22E-06	1.22E-06	1.22E-06	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		MOHL	7.10E-08	7.10E-08	7.10E-08	7.10E-08	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	
		LOHL	7.10E-09	7.10E-09	7.10E-09	7.10E-09	0.0000	0.0000	0.00E+00		0.00E+00		0.00E+00		0.00E+00	

Notes:

(1) SOHL = Small Open Hillslope Landslide, MOHL = Medium Open Hillslope Landslide, LOHL = Large Open Hillslope Landslide, SCDF = Small Channelized Debris Flow, MCDF = Medium Channelized Debris Flow & LCDF = Large Channelized Debris Flow.

(2) Check dams along drainage line of segment 7 is proposed as additional mitigation measure which reduce the landslide consequence by trapping the landslide debris. The landslide consequence of small to medium scale of landslide arising from subareas 7b and landslide consequence of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero.

(3) Landslide Risk (PLL) = $\Sigma_i \Sigma_j$ (Landslide frequency $_{ij}$ × Landslide consequency $_{ij}$)
Where i = Associated slope sub-area
j = Hazard (i.e. Type of Failure)

Table C6 - Distribution of Number of People Present in Different Types of Facilities
(Page 1 of 2)

Small Scale Landslide

No. of People Present at Each Residential Building

No of People	**40**	**20**	**10**	9	8	7	6	5	4	3	2	1	0
Distribution	0.010%	0.020%	0.320%	0.4%	0.7%	1.2%	2.0%	3.4%	5.6%	8.5%	14.2%	23.7%	40.1%

No. of People Present at Each Guard House

No of People	-	-	-	-	-	-	-	-	-	-	-	1	0
Distribution												25%	75%

No. of People Present at Each Car Park

No of People	-	-	-	-	**30**	**20**	**10**	5	4	3	2	1	0
Distribution					0.005%	0.010%	0.015%	0.07%	0.17%	0.34%	0.70%	1.06%	97.6%

No. of People Present at Each Open Space

No of People	-	-	-	-	**20**	**15**	**10**	5	4	3	2	1	0
Distribution					0.001%	0.004%	0.010%	0.02%	0.04%	0.11%	0.20%	0.33%	99.3%

Medium Scale Landslide

No. of People Present at Each Residential Building

No of People	**40**	**20**	**10**	9	8	7	6	5	4	3	2	1	0
Distribution	0.02%	0.04%	0.74%	1.05%	1.9%	3.4%	5.7%	9.5%	14.1%	18.70%	17.40%	14.35%	13.20%

No. of People Present at Each Guard House

No of People	-	-	-	-	-	-	-	-	-	-	-	1	0
Distribution												50%	50.0%

No. of People Present at Each Car Park

No of People	-	-	-	-	**30**	**20**	**10**	5	4	3	2	1	0
Distribution					0.007%	0.013%	0.020%	0.09%	0.29%	0.44%	0.80%	4.81%	93.5%

No. of People Present at Each Open Space

No of People	-	-	-	-	**20**	**15**	**10**	5	4	3	2	1	0
Distribution					0.003%	0.007%	0.015%	0.06%	0.10%	0.21%	0.38%	0.60%	98.6%

Table C6 - Distribution of Number of People Present in Different Types of Facilities (Page 2 of 2)

Large Scale Landslide

No. of People Present at Each Residential Building

No of People	**40**	**20**	**10**	9	8	7	6	5	4	3	2	1	0
Distribution	0.30%	1.25%	3.55%	6.65%	12.6%	16.8%	16.5%	14.4%	10.9%	7.65%	4.85%	2.80%	1.90%

No. of People Present at Each Guard House

No of People	-	-	-	-	-	-	-	-	-	-	-	1	0
Distribution												100%	0.0%

No. of People Present at Each Car Park

No of People	-	-	-	-	**30**	**20**	**10**	5	4	3	2	1	0
Distribution					0.01%	0.02%	0.04%	0.15%	0.55%	0.95%	1.45%	10.2%	86.6%

No. of People Present at Each Open Space

No of People	-	-	-	-	**20**	**15**	**10**	5	4	3	2	1	0
Distribution					0.005%	0.01%	0.02%	0.12%	0.19%	0.42%	0.85%	1.23%	97.2%

Notes:

(1) The distributions of the total number of people were established based on limited observations and expert judgement with due consideration of day time/night time, week day/weekend occupancy and extreme events (e.g. large christmas party, fully occupied vehicles queuing up in front of gate, etc.). The distributions were suitably adjusted for the different scale of landslides.

(2) The temporal distributions of the residential flat were based on the information obtained from the management office of Woodcrest Hill and K.K. Terrace.

(3) The number of people present is assumed to be discrete. Number of people in bold represent an extreme events (e.g. a big party with 40 people in residential flats).

Table C7 - Summary of F-N Curve Data

Number of Fatalities (N)	Frequency of N or more Fatalities per Yr (F)			
	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
13	2.61E-11	2.61E-11	2.61E-11	2.61E-11
8	1.32E-07	1.11E-07	1.07E-07	8.23E-09
6	9.83E-06	6.54E-06	6.26E-06	5.71E-07
5	9.84E-06	6.55E-06	6.27E-06	5.77E-07
4	1.04E-05	7.00E-06	6.71E-06	6.13E-07
3	5.06E-05	3.36E-05	3.20E-05	2.96E-06
2	5.55E-05	3.78E-05	3.57E-05	3.30E-06
1	6.93E-03	5.34E-03	4.13E-03	5.56E-04

Note: The above data were obtained by summing all the f-N points obtained in Table 8 to Table 11 and sorting in descending order of N. F was calculated by summing up the cumulative f to nearest integer of N. The frequency of N = 1 includes those with N<1 with the corresponding f adjusted proportionally.

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 1 of 15)

Residential flats of Block 13-18 at Woodcrest Hill - Affected by Hazard from Sub-area: 1a, 1d

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
1a	SOHL	40	0.000	0.000	0.000	0.000	0.010%	4.48E-05	4.48E-05	4.48E-05	4.48E-05	4.48E-09	4.48E-09	4.48E-09	4.48E-09
		20			0.000	0.000	0.020%					8.97E-09	8.97E-09	8.97E-09	8.97E-09
		10			0.000	0.000	0.320%					1.43E-07	1.43E-07	1.43E-07	1.43E-07
		9			0.000	0.000	0.400%					1.79E-07	1.79E-07	1.79E-07	1.79E-07
		8			0.000	0.000	0.700%					3.14E-07	3.14E-07	3.14E-07	3.14E-07
		7			0.000	0.000	1.200%					5.38E-07	5.38E-07	5.38E-07	5.38E-07
		6			0.000	0.000	1.950%					8.74E-07	8.74E-07	8.74E-07	8.74E-07
		5			0.000	0.000	3.400%					1.52E-06	1.52E-06	1.52E-06	1.52E-06
		4			0.000	0.000	5.550%					2.49E-06	2.49E-06	2.49E-06	2.49E-06
		3			0.000	0.000	8.500%					3.81E-06	3.81E-06	3.81E-06	3.81E-06
		2			0.000	0.000	14.200%					6.37E-06	6.37E-06	6.37E-06	6.37E-06
		1			0.000	0.000	23.650%					1.06E-05	1.06E-05	1.06E-05	1.06E-05
	MOHL	40	0.037	0.037	1.471	1.471	0.020%	2.61E-06	2.61E-06	2.61E-06	2.61E-06	5.22E-10	5.22E-10	5.22E-10	5.22E-10
		20			0.736	0.736	0.040%					1.04E-09	1.04E-09	1.04E-09	1.04E-09
		10			0.368	0.368	0.740%					1.93E-08	1.93E-08	1.93E-08	1.93E-08
		9			0.331	0.331	1.050%					2.74E-08	2.74E-08	2.74E-08	2.74E-08
		8			0.294	0.294	1.850%					4.83E-08	4.83E-08	4.83E-08	4.83E-08
		7			0.257	0.257	3.350%					8.75E-08	8.75E-08	8.75E-08	8.75E-08
		6			0.221	0.221	5.700%					1.49E-07	1.49E-07	1.49E-07	1.49E-07
		5			0.184	0.184	9.500%					2.48E-07	2.48E-07	2.48E-07	2.48E-07
		4			0.147	0.147	14.100%					3.68E-07	3.68E-07	3.68E-07	3.68E-07
		3			0.110	0.110	18.700%					4.88E-07	4.88E-07	4.88E-07	4.88E-07
		2			0.074	0.074	17.400%					4.54E-07	4.54E-07	4.54E-07	4.54E-07
		1			0.037	0.037	14.350%					3.75E-07	3.75E-07	3.75E-07	3.75E-07
	LOHL	40	0.165	0.165	6.592	6.592	0.300%	2.61E-07	2.61E-07	2.61E-07	2.61E-07	7.83E-10	7.83E-10	7.83E-10	7.83E-10
		20			3.296	3.296	1.250%					3.26E-09	3.26E-09	3.26E-09	3.26E-09
		10			1.648	1.648	3.550%					9.27E-09	9.27E-09	9.27E-09	9.27E-09
		9			1.483	1.483	6.650%					1.74E-08	1.74E-08	1.74E-08	1.74E-08
		8			1.318	1.318	12.600%					3.29E-08	3.29E-08	3.29E-08	3.29E-08
		7			1.154	1.154	16.800%					4.39E-08	4.39E-08	4.39E-08	4.39E-08
		6			0.989	0.989	16.450%					4.30E-08	4.30E-08	4.30E-08	4.30E-08
		5			0.824	0.824	14.350%					3.75E-08	3.75E-08	3.75E-08	3.75E-08
		4			0.659	0.659	10.850%					2.83E-08	2.83E-08	2.83E-08	2.83E-08
		3			0.494	0.494	7.650%					2.00E-08	2.00E-08	2.00E-08	2.00E-08
		2			0.330	0.330	4.850%					1.27E-08	1.27E-08	1.27E-08	1.27E-08
		1			0.165	0.165	2.800%					7.31E-09	7.31E-09	7.31E-09	7.31E-09
1d	SOHL	40	0.000	0.000	0.000	0.000	0.010%	9.90E-06	9.90E-06	9.90E-06	9.90E-06	9.90E-10	9.90E-10	9.90E-10	9.90E-10
		20			0.000	0.000	0.020%					1.98E-09	1.98E-09	1.98E-09	1.98E-09
		10			0.000	0.000	0.320%					3.17E-08	3.17E-08	3.17E-08	3.17E-08
		9			0.000	0.000	0.400%					3.96E-08	3.96E-08	3.96E-08	3.96E-08
		8			0.000	0.000	0.700%					6.93E-08	6.93E-08	6.93E-08	6.93E-08
		7			0.000	0.000	1.200%					1.19E-07	1.19E-07	1.19E-07	1.19E-07
		6			0.000	0.000	1.950%					1.93E-07	1.93E-07	1.93E-07	1.93E-07
		5			0.000	0.000	3.400%					3.37E-07	3.37E-07	3.37E-07	3.37E-07
		4			0.000	0.000	5.550%					5.49E-07	5.49E-07	5.49E-07	5.49E-07
		3			0.000	0.000	8.500%					8.41E-07	8.41E-07	8.41E-07	8.41E-07
		2			0.000	0.000	14.200%					1.41E-06	1.41E-06	1.41E-06	1.41E-06
		1			0.000	0.000	23.650%					2.34E-06	2.34E-06	2.34E-06	2.34E-06
	MOHL	40	0.006	0.006	0.231	0.231	0.020%	5.77E-07	5.77E-07	5.77E-07	5.77E-07	1.15E-10	1.15E-10	1.15E-10	1.15E-10
		20			0.116	0.116	0.040%					2.31E-10	2.31E-10	2.31E-10	2.31E-10
		10			0.058	0.058	0.740%					4.27E-09	4.27E-09	4.27E-09	4.27E-09
		9			0.052	0.052	1.050%					6.05E-09	6.05E-09	6.05E-09	6.05E-09
		8			0.046	0.046	1.850%					1.07E-08	1.07E-08	1.07E-08	1.07E-08
		7			0.040	0.040	3.350%					1.93E-08	1.93E-08	1.93E-08	1.93E-08
		6			0.035	0.035	5.700%					3.29E-08	3.29E-08	3.29E-08	3.29E-08
		5			0.029	0.029	9.500%					5.48E-08	5.48E-08	5.48E-08	5.48E-08
		4			0.023	0.023	14.100%					8.13E-08	8.13E-08	8.13E-08	8.13E-08
		3			0.017	0.017	18.700%					1.08E-07	1.08E-07	1.08E-07	1.08E-07
		2			0.012	0.012	17.400%					1.00E-07	1.00E-07	1.00E-07	1.00E-07
		1			0.006	0.006	14.350%					8.27E-08	8.27E-08	8.27E-08	8.27E-08
	LOHL	40	0.047	0.047	1.892	1.892	0.300%	5.77E-08	5.77E-08	5.77E-08	5.77E-08	1.73E-10	1.73E-10	1.73E-10	1.73E-10
		20			0.946	0.946	1.250%					7.21E-10	7.21E-10	7.21E-10	7.21E-10
		10			0.473	0.473	3.550%					2.05E-09	2.05E-09	2.05E-09	2.05E-09
		9			0.426	0.426	6.650%					3.83E-09	3.83E-09	3.83E-09	3.83E-09
		8			0.378	0.378	12.600%					7.26E-09	7.26E-09	7.26E-09	7.26E-09
		7			0.331	0.331	16.800%					9.69E-09	9.69E-09	9.69E-09	9.69E-09
		6			0.284	0.284	16.450%					9.48E-09	9.48E-09	9.48E-09	9.48E-09
		5			0.236	0.236	14.350%					8.27E-09	8.27E-09	8.27E-09	8.27E-09
		4			0.189	0.189	10.850%					6.26E-09	6.26E-09	6.26E-09	6.26E-09
		3			0.142	0.142	7.650%					4.41E-09	4.41E-09	4.41E-09	4.41E-09
		2			0.095	0.095	4.850%					2.80E-09	2.80E-09	2.80E-09	2.80E-09
		1			0.047	0.047	2.800%					1.61E-09	1.61E-09	1.61E-09	1.61E-09
											Σ f x N	5.73E-07	5.73E-07	5.73E-07	5.73E-07

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 2 of 15)

1/F residential flats of Bk. 11 at Woodcrest Hill - Affected by Hazard from Sub-area: 4a, 4c

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
4a	SOHL	40	0.003	0.003	0.132	0.132	0.01%	4.22E-04	4.22E-04	4.22E-04	4.22E-04	4.22E-08	4.22E-08	4.22E-08	4.22E-08
		20			0.066	0.066	0.02%					8.44E-08	8.44E-08	8.44E-08	8.44E-08
		10			0.033	0.033	0.32%					1.35E-06	1.35E-06	1.35E-06	1.35E-06
		9			0.030	0.030	0.40%					1.69E-06	1.69E-06	1.69E-06	1.69E-06
		8			0.026	0.026	0.70%					2.96E-06	2.96E-06	2.96E-06	2.96E-06
		7			0.023	0.023	1.20%					5.07E-06	5.07E-06	5.07E-06	5.07E-06
		6			0.020	0.020	1.95%					8.23E-06	8.23E-06	8.23E-06	8.23E-06
		5			0.017	0.017	3.40%					1.44E-05	1.44E-05	1.44E-05	1.44E-05
		4			0.013	0.013	5.55%					2.34E-05	2.34E-05	2.34E-05	2.34E-05
		3			0.010	0.010	8.50%					3.59E-05	3.59E-05	3.59E-05	3.59E-05
		2			0.007	0.007	14.20%					6.00E-05	6.00E-05	6.00E-05	6.00E-05
		1			0.003	0.003	23.65%					9.99E-05	9.99E-05	9.99E-05	9.99E-05
	MOHL	40	0.037	0.037	1.471	1.471	0.02%	2.46E-05	2.46E-05	2.46E-05	2.46E-05	4.92E-09	4.92E-09	4.92E-09	4.92E-09
		20			0.736	0.736	0.04%					9.84E-09	9.84E-09	9.84E-09	9.84E-09
		10			0.368	0.368	0.74%					1.82E-07	1.82E-07	1.82E-07	1.82E-07
		9			0.331	0.331	1.05%					2.58E-07	2.58E-07	2.58E-07	2.58E-07
		8			0.294	0.294	1.85%					4.55E-07	4.55E-07	4.55E-07	4.55E-07
		7			0.257	0.257	3.35%					8.24E-07	8.24E-07	8.24E-07	8.24E-07
		6			0.221	0.221	5.70%					1.40E-06	1.40E-06	1.40E-06	1.40E-06
		5			0.184	0.184	9.50%					2.34E-06	2.34E-06	2.34E-06	2.34E-06
		4			0.147	0.147	14.10%					3.47E-06	3.47E-06	3.47E-06	3.47E-06
		3			0.110	0.110	18.70%					4.60E-06	4.60E-06	4.60E-06	4.60E-06
		2			0.074	0.074	17.40%					4.28E-06	4.28E-06	4.28E-06	4.28E-06
		1			0.037	0.037	14.35%					3.53E-06	3.53E-06	3.53E-06	3.53E-06
	LOHL	40	0.165	0.165	6.592	6.592	0.30%	2.46E-06	2.46E-06	2.46E-06	2.46E-06	7.38E-09	7.38E-09	7.38E-09	7.38E-09
		20			3.296	3.296	1.25%					3.07E-08	3.07E-08	3.07E-08	3.07E-08
		10			1.648	1.648	3.55%					8.73E-08	8.73E-08	8.73E-08	8.73E-08
		9			1.483	1.483	6.65%					1.64E-07	1.64E-07	1.64E-07	1.64E-07
		8			1.318	1.318	12.60%					3.10E-07	3.10E-07	3.10E-07	3.10E-07
		7			1.154	1.154	16.80%					4.13E-07	4.13E-07	4.13E-07	4.13E-07
		6			0.989	0.989	16.45%					4.05E-07	4.05E-07	4.05E-07	4.05E-07
		5			0.824	0.824	14.35%					3.53E-07	3.53E-07	3.53E-07	3.53E-07
		4			0.659	0.659	10.85%					2.67E-07	2.67E-07	2.67E-07	2.67E-07
		3			0.494	0.494	7.65%					1.88E-07	1.88E-07	1.88E-07	1.88E-07
		2			0.330	0.330	4.85%					1.19E-07	1.19E-07	1.19E-07	1.19E-07
		1			0.165	0.165	2.80%					6.89E-08	6.89E-08	6.89E-08	6.89E-08
4c	SOHL	40	0.000	0.000	0.000	0.000	0.01%	3.07E-03	3.07E-03	3.07E-03	3.07E-03	3.07E-07	3.07E-07	3.07E-07	3.07E-07
		20			0.000	0.000	0.02%					6.13E-07	6.13E-07	6.13E-07	6.13E-07
		10			0.000	0.000	0.32%					9.81E-06	9.81E-06	9.81E-06	9.81E-06
		9			0.000	0.000	0.40%					1.23E-05	1.23E-05	1.23E-05	1.23E-05
		8			0.000	0.000	0.70%					2.15E-05	2.15E-05	2.15E-05	2.15E-05
		7			0.000	0.000	1.20%					3.68E-05	3.68E-05	3.68E-05	3.68E-05
		6			0.000	0.000	1.95%					5.98E-05	5.98E-05	5.98E-05	5.98E-05
		5			0.000	0.000	3.40%					1.04E-04	1.04E-04	1.04E-04	1.04E-04
		4			0.000	0.000	5.55%					1.70E-04	1.70E-04	1.70E-04	1.70E-04
		3			0.000	0.000	8.50%					2.61E-04	2.61E-04	2.61E-04	2.61E-04
		2			0.000	0.000	14.20%					4.35E-04	4.35E-04	4.35E-04	4.35E-04
		1			0.000	0.000	23.65%					7.25E-04	7.25E-04	7.25E-04	7.25E-04
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	1.79E-04	1.79E-04	1.79E-04	1.79E-04	3.57E-08	3.57E-08	3.57E-08	3.57E-08
		20			0.116	0.116	0.04%					7.14E-08	7.14E-08	7.14E-08	7.14E-08
		10			0.058	0.058	0.74%					1.32E-06	1.32E-06	1.32E-06	1.32E-06
		9			0.052	0.052	1.05%					1.87E-06	1.87E-06	1.87E-06	1.87E-06
		8			0.046	0.046	1.85%					3.30E-06	3.30E-06	3.30E-06	3.30E-06
		7			0.040	0.040	3.35%					5.98E-06	5.98E-06	5.98E-06	5.98E-06
		6			0.035	0.035	5.70%					1.02E-05	1.02E-05	1.02E-05	1.02E-05
		5			0.029	0.029	9.50%					1.70E-05	1.70E-05	1.70E-05	1.70E-05
		4			0.023	0.023	14.10%					2.52E-05	2.52E-05	2.52E-05	2.52E-05
		3			0.017	0.017	18.70%					3.34E-05	3.34E-05	3.34E-05	3.34E-05
		2			0.012	0.012	17.40%					3.11E-05	3.11E-05	3.11E-05	3.11E-05
		1			0.006	0.006	14.35%					2.56E-05	2.56E-05	2.56E-05	2.56E-05
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	1.79E-05	1.79E-05	1.79E-05	1.79E-05	5.36E-08	5.36E-08	5.36E-08	5.36E-08
		20			0.946	0.946	1.25%					2.23E-07	2.23E-07	2.23E-07	2.23E-07
		10			0.473	0.473	3.55%					6.34E-07	6.34E-07	6.34E-07	6.34E-07
		9			0.426	0.426	6.65%					1.19E-06	1.19E-06	1.19E-06	1.19E-06
		8			0.378	0.378	12.60%					2.25E-06	2.25E-06	2.25E-06	2.25E-06
		7			0.331	0.331	16.80%					3.00E-06	3.00E-06	3.00E-06	3.00E-06
		6			0.284	0.284	16.45%					2.94E-06	2.94E-06	2.94E-06	2.94E-06
		5			0.236	0.236	14.35%					2.56E-06	2.56E-06	2.56E-06	2.56E-06
		4			0.189	0.189	10.85%					1.94E-06	1.94E-06	1.94E-06	1.94E-06
		3			0.142	0.142	7.65%					1.37E-06	1.37E-06	1.37E-06	1.37E-06
		2			0.095	0.095	4.85%					8.66E-07	8.66E-07	8.66E-07	8.66E-07
		1			0.047	0.047	2.80%					5.00E-07	5.00E-07	5.00E-07	5.00E-07
											Σ f x N	1.54E-05	1.54E-05	1.54E-05	1.54E-05

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 3 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
4b	SOHL	40	0.003	0.003	0.132	0.132	0.01%	4.45E-03	4.45E-03	4.01E-03	4.01E-03	4.45E-07	4.45E-07	4.01E-07	4.01E-07
		20			0.066	0.066	0.02%					8.91E-07	8.91E-07	8.02E-07	8.02E-07
		10			0.033	0.033	0.32%					1.43E-05	1.43E-05	1.28E-05	1.28E-05
		9			0.030	0.030	0.40%					1.78E-05	1.78E-05	1.60E-05	1.60E-05
		8			0.026	0.026	0.70%					3.12E-05	3.12E-05	2.81E-05	2.81E-05
		7			0.023	0.023	1.20%					5.35E-05	5.35E-05	4.81E-05	4.81E-05
		6			0.020	0.020	1.95%					8.69E-05	8.69E-05	7.82E-05	7.82E-05
		5			0.017	0.017	3.40%					1.51E-04	1.51E-04	1.36E-04	1.36E-04
		4			0.013	0.013	5.55%					2.47E-04	2.47E-04	2.23E-04	2.23E-04
		3			0.010	0.010	8.50%					3.79E-04	3.79E-04	3.41E-04	3.41E-04
		2			0.007	0.007	14.20%					6.33E-04	6.33E-04	5.70E-04	5.70E-04
		1			0.003	0.003	23.65%					1.05E-03	1.05E-03	9.49E-04	9.49E-04
	MOHL	40	0.037	0.037	1.471	1.471	0.02%	2.59E-04	2.59E-04	2.34E-04	2.34E-04	5.19E-08	5.19E-08	4.67E-08	4.67E-08
		20			0.736	0.736	0.04%					1.04E-07	1.04E-07	9.35E-08	9.35E-08
		10			0.368	0.368	0.74%					1.92E-06	1.92E-06	1.73E-06	1.73E-06
		9			0.331	0.331	1.05%					2.72E-06	2.72E-06	2.45E-06	2.45E-06
		8			0.294	0.294	1.85%					4.80E-06	4.80E-06	4.32E-06	4.32E-06
		7			0.257	0.257	3.35%					8.69E-06	8.69E-06	7.83E-06	7.83E-06
		6			0.221	0.221	5.70%					1.48E-05	1.48E-05	1.33E-05	1.33E-05
		5			0.184	0.184	9.50%					2.47E-05	2.47E-05	2.22E-05	2.22E-05
		4			0.147	0.147	14.10%					3.66E-05	3.66E-05	3.29E-05	3.29E-05
		3			0.110	0.110	18.70%					4.85E-05	4.85E-05	4.37E-05	4.37E-05
		2			0.074	0.074	17.40%					4.51E-05	4.51E-05	4.07E-05	4.07E-05
		1			0.037	0.037	14.35%					3.72E-05	3.72E-05	3.35E-05	3.35E-05
	LOHL	40	0.165	0.165	6.592	6.592	0.30%	2.59E-05	2.59E-05	2.34E-05	2.34E-05	7.78E-08	7.78E-08	7.01E-08	7.01E-08
		20			3.296	3.296	1.25%					3.24E-07	3.24E-07	2.92E-07	2.92E-07
		10			1.648	1.648	3.55%					9.21E-07	9.21E-07	8.29E-07	8.29E-07
		9			1.483	1.483	6.65%					1.73E-06	1.73E-06	1.55E-06	1.55E-06
		8			1.318	1.318	12.60%					3.27E-06	3.27E-06	2.94E-06	2.94E-06
		7			1.154	1.154	16.80%					4.36E-06	4.36E-06	3.93E-06	3.93E-06
		6			0.989	0.989	16.45%					4.27E-06	4.27E-06	3.84E-06	3.84E-06
		5			0.824	0.824	14.35%					3.72E-06	3.72E-06	3.35E-06	3.35E-06
		4			0.659	0.659	10.85%					2.82E-06	2.82E-06	2.54E-06	2.54E-06
		3			0.494	0.494	7.65%					1.98E-06	1.98E-06	1.79E-06	1.79E-06
		2			0.330	0.330	4.85%					1.26E-06	1.26E-06	1.13E-06	1.13E-06
		1			0.165	0.165	2.80%					7.27E-07	7.27E-07	6.54E-07	6.54E-07
4d	SOHL	40	0.000	0.000	0.000	0.000	0.01%	9.00E-03	9.00E-03	9.00E-03	9.00E-03	9.00E-07	9.00E-07	9.00E-07	9.00E-07
		20			0.000	0.000	0.02%					1.80E-06	1.80E-06	1.80E-06	1.80E-06
		10			0.000	0.000	0.32%					2.88E-05	2.88E-05	2.88E-05	2.88E-05
		9			0.000	0.000	0.40%					3.60E-05	3.60E-05	3.60E-05	3.60E-05
		8			0.000	0.000	0.70%					6.30E-05	6.30E-05	6.30E-05	6.30E-05
		7			0.000	0.000	1.20%					1.08E-04	1.08E-04	1.08E-04	1.08E-04
		6			0.000	0.000	1.95%					1.76E-04	1.76E-04	1.76E-04	1.76E-04
		5			0.000	0.000	3.40%					3.06E-04	3.06E-04	3.06E-04	3.06E-04
		4			0.000	0.000	5.55%					5.00E-04	5.00E-04	5.00E-04	5.00E-04
		3			0.000	0.000	8.50%					7.65E-04	7.65E-04	7.65E-04	7.65E-04
		2			0.000	0.000	14.20%					1.28E-03	1.28E-03	1.28E-03	1.28E-03
		1			0.000	0.000	23.65%					2.13E-03	2.13E-03	2.13E-03	2.13E-03
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	5.24E-04	5.24E-04	5.24E-04	5.24E-04	1.05E-07	1.05E-07	1.05E-07	1.05E-07
		20			0.116	0.116	0.04%					2.10E-07	2.10E-07	2.10E-07	2.10E-07
		10			0.058	0.058	0.74%					3.88E-06	3.88E-06	3.88E-06	3.88E-06
		9			0.052	0.052	1.05%					5.51E-06	5.51E-06	5.51E-06	5.51E-06
		8			0.046	0.046	1.85%					9.70E-06	9.70E-06	9.70E-06	9.70E-06
		7			0.040	0.040	3.35%					1.76E-05	1.76E-05	1.76E-05	1.76E-05
		6			0.035	0.035	5.70%					2.99E-05	2.99E-05	2.99E-05	2.99E-05
		5			0.029	0.029	9.50%					4.98E-05	4.98E-05	4.98E-05	4.98E-05
		4			0.023	0.023	14.10%					7.39E-05	7.39E-05	7.39E-05	7.39E-05
		3			0.017	0.017	18.70%					9.81E-05	9.81E-05	9.81E-05	9.81E-05
		2			0.012	0.012	17.40%					9.13E-05	9.13E-05	9.13E-05	9.13E-05
		1			0.006	0.006	14.35%					7.53E-05	7.53E-05	7.53E-05	7.53E-05
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	5.24E-05	5.24E-05	5.24E-05	5.24E-05	1.57E-07	1.57E-07	1.57E-07	1.57E-07
		20			0.946	0.946	1.25%					6.56E-07	6.56E-07	6.56E-07	6.56E-07
		10			0.473	0.473	3.55%					1.86E-06	1.86E-06	1.86E-06	1.86E-06
		9			0.426	0.426	6.65%					3.49E-06	3.49E-06	3.49E-06	3.49E-06
		8			0.378	0.378	12.60%					6.61E-06	6.61E-06	6.61E-06	6.61E-06
		7			0.331	0.331	16.80%					8.81E-06	8.81E-06	8.81E-06	8.81E-06
		6			0.284	0.284	16.45%					8.63E-06	8.63E-06	8.63E-06	8.63E-06
		5			0.236	0.236	14.35%					7.53E-06	7.53E-06	7.53E-06	7.53E-06
		4			0.189	0.189	10.85%					5.69E-06	5.69E-06	5.69E-06	5.69E-06
		3			0.142	0.142	7.65%					4.01E-06	4.01E-06	4.01E-06	4.01E-06
		2			0.095	0.095	4.85%					2.54E-06	2.54E-06	2.54E-06	2.54E-06
		1			0.047	0.047	2.80%					1.47E-06	1.47E-06	1.47E-06	1.47E-06
4e	SOHL	40	0.000	0.000	0.000	0.000	0.01%	4.99E-04	4.98E-04	5.48E-06	5.48E-06	4.99E-08	4.98E-08	5.48E-10	5.48E-10
		20			0.000	0.000	0.02%					9.98E-08	9.97E-08	1.10E-09	1.10E-09
		10			0.000	0.000	0.32%					1.60E-06	1.59E-06	1.75E-08	1.75E-08
		9			0.000	0.000	0.40%					2.00E-06	1.99E-06	2.19E-08	2.19E-08
		8			0.000	0.000	0.70%					3.49E-06	3.49E-06	3.84E-08	3.84E-08
		7			0.000	0.000	1.20%					5.99E-06	5.98E-06	6.58E-08	6.58E-08
		6			0.000	0.000	1.95%					9.73E-06	9.72E-06	1.07E-07	1.07E-07
		5			0.000	0.000	3.40%					1.70E-05	1.69E-05	1.86E-07	1.86E-07
		4			0.000	0.000	5.55%					2.77E-05	2.77E-05	3.04E-07	3.04E-07
		3			0.000	0.000	8.50%					4.24E-05	4.24E-05	4.66E-07	4.66E-07
		2			0.000	0.000	14.20%					7.08E-05	7.08E-05	7.78E-07	7.78E-07
		1			0.000	0.000	23.65%					1.18E-04	1.18E-04	1.30E-06	1.30E-06
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	2.91E-05	2.90E-05	3.19E-07	3.19E-07	5.81E-09	5.81E-09	6.39E-11	6.39E-11
		20			0.116	0.116	0.04%					1.16E-08	1.16E-08	1.28E-10	1.28E-10
		10			0.058	0.058	0.74%					2.15E-07	2.15E-07	2.36E-09	2.36E-09
		9			0.052	0.052	1.05%					3.05E-07	3.05E-07	3.35E-09	3.35E-09
		8			0.046	0.046	1.85%					5.38E-07	5.37E-07	5.91E-09	5.91E-09
		7			0.040	0.040	3.35%					9.73E-07	9.72E-07	1.07E-08	1.07E-08
		6			0.035	0.035	5.70%					1.66E-06	1.65E-06	1.82E-08	1.82E-08
		5			0.029	0.029	9.50%					2.76E-06	2.76E-06	3.03E-08	3.03E-08
		4			0.023	0.023	14.10%					4.10E-06	4.09E-06	4.50E-08	4.50E-08
		3			0.017	0.017	18.70%					5.43E-06	5.43E-06	5.97E-08	5.97E-08
		2			0.012	0.012	17.40%					5.06E-06	5.05E-06	5.56E-08	5.56E-08
		1			0.006	0.006	14.35%					4.17E-06	4.17E-06	4.58E-08	4.58E-08

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 4 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
4e	LOHL	40	0.047	0.047	1.892	1.892	0.30%	2.91E-06	2.90E-06	3.19E-08	3.19E-08	8.72E-09	8.71E-09	9.58E-11	9.58E-11
		20			0.946	0.946	1.25%					3.63E-08	3.63E-08	3.99E-10	3.99E-10
		10			0.473	0.473	3.55%					1.03E-07	1.03E-07	1.13E-09	1.13E-09
		9			0.426	0.426	6.65%					1.93E-07	1.93E-07	2.12E-09	2.12E-09
		8			0.378	0.378	12.60%					3.66E-07	3.66E-07	4.02E-09	4.02E-09
		7			0.331	0.331	16.80%					4.88E-07	4.88E-07	5.36E-09	5.36E-09
		6			0.284	0.284	16.45%					4.78E-07	4.78E-07	5.25E-09	5.25E-09
		5			0.236	0.236	14.35%					4.17E-07	4.17E-07	4.58E-09	4.58E-09
		4			0.189	0.189	10.85%					3.15E-07	3.15E-07	3.46E-09	3.46E-09
		3			0.142	0.142	7.65%					2.22E-07	2.22E-07	2.44E-09	2.44E-09
		2			0.095	0.095	4.85%					1.41E-07	1.41E-07	1.55E-09	1.55E-09
		1			0.047	0.047	2.80%					8.14E-08	8.13E-08	8.94E-10	8.94E-10
5a	SOHL	40	0.000	0.000	0.000	0.000	0.01%	3.10E-03	3.10E-03	3.10E-03	7.85E-04	3.10E-07	3.10E-07	3.10E-07	7.85E-08
		20			0.000	0.000	0.02%					6.20E-07	6.20E-07	6.20E-07	1.57E-07
		10			0.000	0.000	0.32%					9.92E-06	9.92E-06	9.92E-06	2.51E-06
		9			0.000	0.000	0.40%					1.24E-05	1.24E-05	1.24E-05	3.14E-06
		8			0.000	0.000	0.70%					2.17E-05	2.17E-05	2.17E-05	5.50E-06
		7			0.000	0.000	1.20%					3.72E-05	3.72E-05	3.72E-05	9.42E-06
		6			0.000	0.000	1.95%					6.05E-05	6.05E-05	6.05E-05	1.53E-05
		5			0.000	0.000	3.40%					1.05E-04	1.05E-04	1.05E-04	2.67E-05
		4			0.000	0.000	5.55%					1.72E-04	1.72E-04	1.72E-04	4.36E-05
		3			0.000	0.000	8.50%					2.64E-04	2.64E-04	2.64E-04	6.67E-05
		2			0.000	0.000	14.20%					4.40E-04	4.40E-04	4.40E-04	1.12E-04
		1			0.000	0.000	23.65%					7.33E-04	7.33E-04	7.33E-04	1.86E-04
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	1.81E-04	1.81E-04	1.81E-04	4.57E-05	3.61E-08	3.61E-08	3.61E-08	9.15E-09
		20			0.116	0.116	0.04%					7.22E-08	7.22E-08	7.22E-08	1.83E-08
		10			0.058	0.058	0.74%					1.34E-06	1.34E-06	1.34E-06	3.39E-07
		9			0.052	0.052	1.05%					1.90E-06	1.90E-06	1.90E-06	4.80E-07
		8			0.046	0.046	1.85%					3.34E-06	3.34E-06	3.34E-06	8.46E-07
		7			0.040	0.040	3.35%					6.05E-06	6.05E-06	6.05E-06	1.53E-06
		6			0.035	0.035	5.70%					1.03E-05	1.03E-05	1.03E-05	2.61E-06
		5			0.029	0.029	9.50%					1.72E-05	1.72E-05	1.72E-05	4.35E-06
		4			0.023	0.023	14.10%					2.55E-05	2.55E-05	2.55E-05	6.45E-06
		3			0.017	0.017	18.70%					3.38E-05	3.38E-05	3.38E-05	8.55E-06
		2			0.012	0.012	17.40%					3.14E-05	3.14E-05	3.14E-05	7.96E-06
		1			0.006	0.006	14.35%					2.59E-05	2.59E-05	2.59E-05	6.56E-06
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	1.81E-05	1.81E-05	1.81E-05	4.57E-06	5.42E-08	5.42E-08	5.42E-08	1.37E-08
		20			0.946	0.946	1.25%					2.26E-07	2.26E-07	2.26E-07	5.72E-08
		10			0.473	0.473	3.55%					6.41E-07	6.41E-07	6.41E-07	1.62E-07
		9			0.426	0.426	6.65%					1.20E-06	1.20E-06	1.20E-06	3.04E-07
		8			0.378	0.378	12.60%					2.28E-06	2.28E-06	2.28E-06	5.76E-07
		7			0.331	0.331	16.80%					3.03E-06	3.03E-06	3.03E-06	7.69E-07
		6			0.284	0.284	16.45%					2.97E-06	2.97E-06	2.97E-06	7.53E-07
		5			0.236	0.236	14.35%					2.59E-06	2.59E-06	2.59E-06	6.56E-07
		4			0.189	0.189	10.85%					1.96E-06	1.96E-06	1.96E-06	4.96E-07
		3			0.142	0.142	7.65%					1.38E-06	1.38E-06	1.38E-06	3.50E-07
		2			0.095	0.095	4.85%					8.76E-07	8.76E-07	8.76E-07	2.22E-07
		1			0.047	0.047	2.80%					5.06E-07	5.06E-07	5.06E-07	1.28E-07
	SCCDF	40	0.006	0.006	0.231	0.231	0.01%	1.15E-03	1.15E-03	1.15E-03	2.91E-04	1.15E-07	1.15E-07	1.15E-07	2.91E-08
		20			0.116	0.116	0.02%					2.30E-07	2.30E-07	2.30E-07	5.83E-08
		10			0.058	0.058	0.32%					3.68E-06	3.68E-06	3.68E-06	9.32E-07
		9			0.052	0.052	0.40%					4.60E-06	4.60E-06	4.60E-06	1.17E-06
		8			0.046	0.046	0.70%					8.05E-06	8.05E-06	8.05E-06	2.04E-06
		7			0.040	0.040	1.20%					1.38E-05	1.38E-05	1.38E-05	3.50E-06
		6			0.035	0.035	1.95%					2.24E-05	2.24E-05	2.24E-05	5.68E-06
		5			0.029	0.029	3.40%					3.91E-05	3.91E-05	3.91E-05	9.91E-06
		4			0.023	0.023	5.55%					6.38E-05	6.38E-05	6.38E-05	1.62E-05
		3			0.017	0.017	8.50%					9.78E-05	9.78E-05	9.78E-05	2.48E-05
		2			0.012	0.012	14.20%					1.63E-04	1.63E-04	1.63E-04	4.14E-05
		1			0.006	0.006	23.65%					2.72E-04	2.72E-04	2.72E-04	6.89E-05
	MCCDF	40	0.047	0.047	1.892	1.892	0.02%	3.57E-04	3.57E-04	3.57E-04	9.04E-05	7.14E-08	7.14E-08	7.14E-08	1.81E-08
		20			0.946	0.946	0.04%					1.43E-07	1.43E-07	1.43E-07	3.62E-08
		10			0.473	0.473	0.74%					2.64E-06	2.64E-06	2.64E-06	6.69E-07
		9			0.426	0.426	1.05%					3.75E-06	3.75E-06	3.75E-06	9.49E-07
		8			0.378	0.378	1.85%					6.60E-06	6.60E-06	6.60E-06	1.67E-06
		7			0.331	0.331	3.35%					1.20E-05	1.20E-05	1.20E-05	3.03E-06
		6			0.284	0.284	5.70%					2.03E-05	2.03E-05	2.03E-05	5.15E-06
		5			0.236	0.236	9.50%					3.39E-05	3.39E-05	3.39E-05	8.59E-06
		4			0.189	0.189	14.10%					5.03E-05	5.03E-05	5.03E-05	1.27E-05
		3			0.142	0.142	18.70%					6.67E-05	6.67E-05	6.67E-05	1.69E-05
		2			0.095	0.095	17.40%					6.21E-05	6.21E-05	6.21E-05	1.57E-05
		1			0.047	0.047	14.35%					5.12E-05	5.12E-05	5.12E-05	1.30E-05
	LCCDF	40	0.165	0.165	6.592	6.592	0.30%	2.38E-04	2.38E-04	2.38E-04	6.03E-05	7.14E-07	7.14E-07	7.14E-07	1.81E-07
		20			3.296	3.296	1.25%					2.97E-06	2.97E-06	2.97E-06	7.53E-07
		10			1.648	1.648	3.55%					8.45E-06	8.45E-06	8.45E-06	2.14E-06
		9			1.483	1.483	6.65%					1.58E-05	1.58E-05	1.58E-05	4.01E-06
		8			1.318	1.318	12.60%					3.00E-05	3.00E-05	3.00E-05	7.59E-06
		7			1.154	1.154	16.80%					4.00E-05	4.00E-05	4.00E-05	1.01E-05
		6			0.989	0.989	16.45%					3.91E-05	3.91E-05	3.91E-05	9.92E-06
		5			0.824	0.824	14.35%					3.41E-05	3.41E-05	3.41E-05	8.65E-06
		4			0.659	0.659	10.85%					2.58E-05	2.58E-05	2.58E-05	6.54E-06
		3			0.494	0.494	7.65%					1.82E-05	1.82E-05	1.82E-05	4.61E-06
		2			0.330	0.330	4.85%					1.15E-05	1.15E-05	1.15E-05	2.92E-06
		1			0.165	0.165	2.80%					6.66E-06	6.66E-06	6.66E-06	1.69E-06
5c	SOHL	40	0.000	0.000	0.000	0.000	0.01%	8.05E-03	6.48E-03	6.16E-03	1.64E-05	8.05E-07	6.48E-07	6.16E-07	1.64E-09
		20			0.000	0.000	0.02%					1.61E-06	1.30E-06	1.23E-06	3.29E-09
		10			0.000	0.000	0.32%					2.57E-05	2.07E-05	1.97E-05	5.26E-08
		9			0.000	0.000	0.40%					3.22E-05	2.59E-05	2.46E-05	6.58E-08
		8			0.000	0.000	0.70%					5.63E-05	4.54E-05	4.31E-05	1.15E-07
		7			0.000	0.000	1.20%					9.65E-05	7.78E-05	7.39E-05	1.97E-07
		6			0.000	0.000	1.95%					1.57E-04	1.26E-04	1.20E-04	3.21E-07
		5			0.000	0.000	3.40%					2.74E-04	2.20E-04	2.09E-04	5.59E-07
		4			0.000	0.000	5.55%					4.47E-04	3.60E-04	3.42E-04	9.13E-07
		3			0.000	0.000	8.50%					6.84E-04	5.51E-04	5.24E-04	1.40E-06
		2			0.000	0.000	14.20%					1.14E-03	9.21E-04	8.75E-04	2.34E-06
		1			0.000	0.000	23.65%					1.90E-03	1.53E-03	1.46E-03	3.89E-06

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 5 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5c	MOHL	40	0.000	0.000	0.000	0.000	0.02%	4.69E-04	3.78E-04	3.59E-04	9.58E-07	9.37E-08	7.55E-08	7.18E-08	1.92E-10
		20			0.000	0.000	0.04%					1.87E-07	1.51E-07	1.44E-07	3.83E-10
		10			0.000	0.000	0.74%					3.47E-06	2.79E-06	2.66E-06	7.09E-09
		9			0.000	0.000	1.05%					4.92E-06	3.97E-06	3.77E-06	1.01E-08
		8			0.000	0.000	1.85%					8.67E-06	6.99E-06	6.64E-06	1.77E-08
		7			0.000	0.000	3.35%					1.57E-05	1.27E-05	1.20E-05	3.21E-08
		6			0.000	0.000	5.70%					2.67E-05	2.15E-05	2.05E-05	5.46E-08
		5			0.000	0.000	9.50%					4.45E-05	3.59E-05	3.41E-05	9.10E-08
		4			0.000	0.000	14.10%					6.61E-05	5.32E-05	5.06E-05	1.35E-07
		3			0.000	0.000	18.70%					8.76E-05	7.06E-05	6.71E-05	1.79E-07
		2			0.000	0.000	17.40%					8.15E-05	6.57E-05	6.24E-05	1.67E-07
		1			0.000	0.000	14.35%					6.73E-05	5.42E-05	5.15E-05	1.37E-07
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	4.69E-05	3.78E-05	3.59E-05	9.58E-08	1.41E-07	1.13E-07	1.08E-07	2.87E-10
		20			0.946	0.946	1.25%					5.86E-07	4.72E-07	4.49E-07	1.20E-09
		10			0.473	0.473	3.55%					1.66E-06	1.34E-06	1.27E-06	3.40E-09
		9			0.426	0.426	6.65%					3.12E-06	2.51E-06	2.39E-06	6.37E-09
		8			0.378	0.378	12.60%					5.91E-06	4.76E-06	4.52E-06	1.21E-08
		7			0.331	0.331	16.80%					7.87E-06	6.34E-06	6.03E-06	1.61E-08
		6			0.284	0.284	16.45%					7.71E-06	6.21E-06	5.90E-06	1.58E-08
		5			0.236	0.236	14.35%					6.73E-06	5.42E-06	5.15E-06	1.37E-08
		4			0.189	0.189	10.85%					5.08E-06	4.10E-06	3.89E-06	1.04E-08
		3			0.142	0.142	7.65%					3.59E-06	2.89E-06	2.74E-06	7.33E-09
		2			0.095	0.095	4.85%					2.27E-06	1.83E-06	1.74E-06	4.65E-09
		1			0.047	0.047	2.80%					1.31E-06	1.06E-06	1.00E-06	2.68E-09
	SCCDF	40	0.000	0.000	0.000	0.000	0.01%	1.02E-02	8.25E-03	7.84E-03	2.09E-05	1.02E-06	8.25E-07	7.84E-07	2.09E-09
		20			0.000	0.000	0.02%					2.05E-06	1.65E-06	1.57E-06	4.18E-09
		10			0.000	0.000	0.32%					3.28E-05	2.64E-05	2.51E-05	6.69E-08
		9			0.000	0.000	0.40%					4.09E-05	3.30E-05	3.13E-05	8.37E-08
		8			0.000	0.000	0.70%					7.16E-05	5.77E-05	5.49E-05	1.46E-07
		7			0.000	0.000	1.20%					1.23E-04	9.90E-05	9.40E-05	2.51E-07
		6			0.000	0.000	1.95%					2.00E-04	1.61E-04	1.53E-04	4.08E-07
		5			0.000	0.000	3.40%					3.48E-04	2.80E-04	2.66E-04	7.11E-07
		4			0.000	0.000	5.55%					5.68E-04	4.58E-04	4.35E-04	1.16E-06
		3			0.000	0.000	8.50%					8.70E-04	7.01E-04	6.66E-04	1.78E-06
		2			0.000	0.000	14.20%					1.45E-03	1.17E-03	1.11E-03	2.97E-06
		1			0.000	0.000	23.65%					2.42E-03	1.95E-03	1.85E-03	4.95E-06
	MCCDF	40	0.047	0.047	1.892	1.892	0.02%	3.18E-03	2.56E-03	2.43E-03	6.49E-06	6.35E-07	5.12E-07	4.86E-07	1.30E-09
		20			0.946	0.946	0.04%					1.27E-06	1.02E-06	9.73E-07	2.60E-09
		10			0.473	0.473	0.74%					2.35E-05	1.89E-05	1.80E-05	4.80E-08
		9			0.426	0.426	1.05%					3.34E-05	2.69E-05	2.55E-05	6.82E-08
		8			0.378	0.378	1.85%					5.88E-05	4.74E-05	4.50E-05	1.20E-07
		7			0.331	0.331	3.35%					1.06E-04	8.57E-05	8.15E-05	2.18E-07
		6			0.284	0.284	5.70%					1.81E-04	1.46E-04	1.39E-04	3.70E-07
		5			0.236	0.236	9.50%					3.02E-04	2.43E-04	2.31E-04	6.17E-07
		4			0.189	0.189	14.10%					4.48E-04	3.61E-04	3.43E-04	9.15E-07
		3			0.142	0.142	18.70%					5.94E-04	4.79E-04	4.55E-04	1.21E-06
		2			0.095	0.095	17.40%					5.53E-04	4.45E-04	4.23E-04	1.13E-06
		1			0.047	0.047	14.35%					4.56E-04	3.67E-04	3.49E-04	9.32E-07
	LCCDF	40	0.165	0.165	6.592	6.592	0.30%	2.12E-03	1.71E-03	1.62E-03	4.33E-06	6.35E-06	5.12E-06	4.86E-06	1.30E-08
		20			3.296	3.296	1.25%					2.65E-05	2.13E-05	2.03E-05	5.41E-08
		10			1.648	1.648	3.55%					7.52E-05	6.06E-05	5.76E-05	1.54E-07
		9			1.483	1.483	6.65%					1.41E-04	1.13E-04	1.08E-04	2.88E-07
		8			1.318	1.318	12.60%					2.67E-04	2.15E-04	2.04E-04	5.45E-07
		7			1.154	1.154	16.80%					3.56E-04	2.87E-04	2.72E-04	7.27E-07
		6			0.989	0.989	16.45%					3.48E-04	2.81E-04	2.67E-04	7.12E-07
		5			0.824	0.824	14.35%					3.04E-04	2.45E-04	2.33E-04	6.21E-07
		4			0.659	0.659	10.85%					2.30E-04	1.85E-04	1.76E-04	4.70E-07
		3			0.494	0.494	7.65%					1.62E-04	1.31E-04	1.24E-04	3.31E-07
		2			0.330	0.330	4.85%					1.03E-04	8.28E-05	7.86E-05	2.10E-07
		1			0.165	0.165	2.80%					5.93E-05	4.78E-05	4.54E-05	1.21E-07
5d	SOHL	40	0.000	0.000	0.000	0.000	0.01%	2.22E-04	2.22E-04	2.22E-04	1.79E-04	2.22E-08	2.22E-08	2.22E-08	1.79E-08
		20			0.000	0.000	0.02%					4.43E-08	4.43E-08	4.43E-08	3.58E-08
		10			0.000	0.000	0.32%					7.09E-07	7.09E-07	7.09E-07	5.73E-07
		9			0.000	0.000	0.40%					8.87E-07	8.87E-07	8.87E-07	7.16E-07
		8			0.000	0.000	0.70%					1.55E-06	1.55E-06	1.55E-06	1.25E-06
		7			0.000	0.000	1.20%					2.66E-06	2.66E-06	2.66E-06	2.15E-06
		6			0.000	0.000	1.95%					4.32E-06	4.32E-06	4.32E-06	3.49E-06
		5			0.000	0.000	3.40%					7.54E-06	7.54E-06	7.54E-06	6.09E-06
		4			0.000	0.000	5.55%					1.23E-05	1.23E-05	1.23E-05	9.94E-06
		3			0.000	0.000	8.50%					1.88E-05	1.88E-05	1.88E-05	1.52E-05
		2			0.000	0.000	14.20%					3.15E-05	3.15E-05	3.15E-05	2.54E-05
		1			0.000	0.000	23.65%					5.24E-05	5.24E-05	5.24E-05	4.24E-05
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	1.29E-05	1.29E-05	1.29E-05	1.04E-05	2.58E-09	2.58E-09	2.58E-09	2.09E-09
		20			0.000	0.000	0.04%					5.17E-09	5.17E-09	5.17E-09	4.17E-09
		10			0.000	0.000	0.74%					9.56E-08	9.56E-08	9.56E-08	7.72E-08
		9			0.000	0.000	1.05%					1.36E-07	1.36E-07	1.36E-07	1.10E-07
		8			0.000	0.000	1.85%					2.39E-07	2.39E-07	2.39E-07	1.93E-07
		7			0.000	0.000	3.35%					4.33E-07	4.33E-07	4.33E-07	3.50E-07
		6			0.000	0.000	5.70%					7.36E-07	7.36E-07	7.36E-07	5.95E-07
		5			0.000	0.000	9.50%					1.23E-06	1.23E-06	1.23E-06	9.91E-07
		4			0.000	0.000	14.10%					1.82E-06	1.82E-06	1.82E-06	1.47E-06
		3			0.000	0.000	18.70%					2.41E-06	2.41E-06	2.41E-06	1.95E-06
		2			0.000	0.000	17.40%					2.25E-06	2.25E-06	2.25E-06	1.82E-06
		1			0.000	0.000	14.35%					1.85E-06	1.85E-06	1.85E-06	1.50E-06
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	1.29E-06	1.29E-06	1.29E-06	1.04E-06	3.87E-09	3.87E-09	3.87E-09	3.13E-09
		20			0.946	0.946	1.25%					1.61E-08	1.61E-08	1.61E-08	1.30E-08
		10			0.473	0.473	3.55%					4.58E-08	4.58E-08	4.58E-08	3.70E-08
		9			0.426	0.426	6.65%					8.59E-08	8.59E-08	8.59E-08	6.94E-08
		8			0.378	0.378	12.60%					1.63E-07	1.63E-07	1.63E-07	1.31E-07
		7			0.331	0.331	16.80%					2.17E-07	2.17E-07	2.17E-07	1.75E-07
		6			0.284	0.284	16.45%					2.12E-07	2.12E-07	2.12E-07	1.72E-07
		5			0.236	0.236	14.35%					1.85E-07	1.85E-07	1.85E-07	1.50E-07
		4			0.189	0.189	10.85%					1.40E-07	1.40E-07	1.40E-07	1.13E-07
		3			0.142	0.142	7.65%					9.88E-08	9.88E-08	9.88E-08	7.98E-08
		2			0.095	0.095	4.85%					6.26E-08	6.26E-08	6.26E-08	5.06E-08
		1			0.047	0.047	2.80%					3.62E-08	3.62E-08	3.62E-08	2.92E-08

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 6 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5d	SCDF	40	0.000	0.000	0.000	0.000	0.01%	8.22E-05	8.22E-05	8.22E-05	6.65E-05	8.22E-09	8.22E-09	8.22E-09	6.65E-09
		20			0.000	0.000	0.02%					1.64E-08	1.64E-08	1.64E-08	1.33E-08
		10			0.000	0.000	0.32%					2.63E-07	2.63E-07	2.63E-07	2.13E-07
		9			0.000	0.000	0.40%					3.29E-07	3.29E-07	3.29E-07	2.66E-07
		8			0.000	0.000	0.70%					5.76E-07	5.76E-07	5.76E-07	4.65E-07
		7			0.000	0.000	1.20%					9.87E-07	9.87E-07	9.87E-07	7.97E-07
		6			0.000	0.000	1.95%					1.60E-06	1.60E-06	1.60E-06	1.30E-06
		5			0.000	0.000	3.40%					2.80E-06	2.80E-06	2.80E-06	2.26E-06
		4			0.000	0.000	5.55%					4.56E-06	4.56E-06	4.56E-06	3.69E-06
		3			0.000	0.000	8.50%					6.99E-06	6.99E-06	6.99E-06	5.65E-06
		2			0.000	0.000	14.20%					1.17E-05	1.17E-05	1.17E-05	9.44E-06
		1			0.000	0.000	23.65%					1.95E-05	1.95E-05	1.95E-05	1.57E-05
	MCDF	40	0.047	0.047	1.892	1.892	0.02%	2.55E-05	2.55E-05	2.55E-05	2.06E-05	5.10E-09	5.10E-09	5.10E-09	4.12E-09
		20			0.946	0.946	0.04%					1.02E-08	1.02E-08	1.02E-08	8.25E-09
		10			0.473	0.473	0.74%					1.89E-07	1.89E-07	1.89E-07	1.53E-07
		9			0.426	0.426	1.05%					2.68E-07	2.68E-07	2.68E-07	2.17E-07
		8			0.378	0.378	1.85%					4.72E-07	4.72E-07	4.72E-07	3.82E-07
		7			0.331	0.331	3.35%					8.55E-07	8.55E-07	8.55E-07	6.91E-07
		6			0.284	0.284	5.70%					1.45E-06	1.45E-06	1.45E-06	1.18E-06
		5			0.236	0.236	9.50%					2.42E-06	2.42E-06	2.42E-06	1.96E-06
		4			0.189	0.189	14.10%					3.60E-06	3.60E-06	3.60E-06	2.91E-06
		3			0.142	0.142	18.70%					4.77E-06	4.77E-06	4.77E-06	3.86E-06
		2			0.095	0.095	17.40%					4.44E-06	4.44E-06	4.44E-06	3.59E-06
		1			0.047	0.047	14.35%					3.66E-06	3.66E-06	3.66E-06	2.96E-06
	LCDF	40	0.165	0.165	6.592	6.592	0.30%	1.70E-05	1.70E-05	1.70E-05	1.37E-05	5.10E-08	5.10E-08	5.10E-08	4.12E-08
		20			3.296	3.296	1.25%					2.13E-07	2.13E-07	2.13E-07	1.72E-07
		10			1.648	1.648	3.55%					6.04E-07	6.04E-07	6.04E-07	4.88E-07
		9			1.483	1.483	6.65%					1.13E-06	1.13E-06	1.13E-06	9.14E-07
		8			1.318	1.318	12.60%					2.14E-06	2.14E-06	2.14E-06	1.73E-06
		7			1.154	1.154	16.80%					2.86E-06	2.86E-06	2.86E-06	2.31E-06
		6			0.989	0.989	16.45%					2.80E-06	2.80E-06	2.80E-06	2.26E-06
		5			0.824	0.824	14.35%					2.44E-06	2.44E-06	2.44E-06	1.97E-06
		4			0.659	0.659	10.85%					1.85E-06	1.85E-06	1.85E-06	1.49E-06
		3			0.494	0.494	7.65%					1.30E-06	1.30E-06	1.30E-06	1.05E-06
		2			0.330	0.330	4.85%					8.25E-07	8.25E-07	8.25E-07	6.67E-07
		1			0.165	0.165	2.80%					4.76E-07	4.76E-07	4.76E-07	3.85E-07
5e	SOHL	40	0.000	0.000	0.000	0.000	0.01%	1.28E-02	1.28E-02	4.10E-03	1.49E-05	1.28E-06	1.28E-06	4.10E-07	1.49E-09
		20			0.000	0.000	0.02%					2.56E-06	2.56E-06	8.20E-07	2.98E-09
		10			0.000	0.000	0.32%					4.09E-05	4.09E-05	1.31E-05	4.78E-08
		9			0.000	0.000	0.40%					5.11E-05	5.11E-05	1.64E-05	5.97E-08
		8			0.000	0.000	0.70%					8.95E-05	8.95E-05	2.87E-05	1.04E-07
		7			0.000	0.000	1.20%					1.53E-04	1.53E-04	4.92E-05	1.79E-07
		6			0.000	0.000	1.95%					2.49E-04	2.49E-04	8.00E-05	2.91E-07
		5			0.000	0.000	3.40%					4.35E-04	4.35E-04	1.39E-04	5.07E-07
		4			0.000	0.000	5.55%					7.10E-04	7.10E-04	2.28E-04	8.28E-07
		3			0.000	0.000	8.50%					1.09E-03	1.09E-03	3.49E-04	1.27E-06
		2			0.000	0.000	14.20%					1.82E-03	1.82E-03	5.82E-04	2.12E-06
		1			0.000	0.000	23.65%					3.02E-03	3.02E-03	9.70E-04	3.53E-06
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	7.45E-04	7.45E-04	2.39E-04	8.69E-07	1.49E-07	1.49E-07	4.78E-08	1.74E-10
		20			0.000	0.000	0.04%					2.98E-07	2.98E-07	9.56E-08	3.48E-10
		10			0.000	0.000	0.74%					5.51E-06	5.51E-06	1.77E-06	6.43E-09
		9			0.000	0.000	1.05%					7.82E-06	7.82E-06	2.51E-06	9.13E-09
		8			0.000	0.000	1.85%					1.38E-05	1.38E-05	4.42E-06	1.61E-08
		7			0.000	0.000	3.35%					2.50E-05	2.50E-05	8.00E-06	2.91E-08
		6			0.000	0.000	5.70%					4.25E-05	4.25E-05	1.36E-05	4.96E-08
		5			0.000	0.000	9.50%					7.08E-05	7.08E-05	2.27E-05	8.26E-08
		4			0.000	0.000	14.10%					1.05E-04	1.05E-04	3.37E-05	1.23E-07
		3			0.000	0.000	18.70%					1.39E-04	1.39E-04	4.47E-05	1.63E-07
		2			0.000	0.000	17.40%					1.30E-04	1.30E-04	4.16E-05	1.51E-07
		1			0.000	0.000	14.35%					1.07E-04	1.07E-04	3.43E-05	1.25E-07
	LOHL	40	0.007	0.007	0.297	0.297	0.30%	7.45E-05	7.45E-05	2.39E-05	8.69E-08	2.23E-07	2.23E-07	7.17E-08	2.61E-10
		20			0.149	0.149	1.25%					9.31E-07	9.31E-07	2.99E-07	1.09E-09
		10			0.074	0.074	3.55%					2.64E-06	2.64E-06	8.48E-07	3.09E-09
		9			0.067	0.067	6.65%					4.95E-06	4.95E-06	1.59E-06	5.78E-09
		8			0.059	0.059	12.60%					9.38E-06	9.38E-06	3.01E-06	1.10E-08
		7			0.052	0.052	16.80%					1.25E-05	1.25E-05	4.01E-06	1.46E-08
		6			0.045	0.045	16.45%					1.23E-05	1.23E-05	3.93E-06	1.43E-08
		5			0.037	0.037	14.35%					1.07E-05	1.07E-05	3.43E-06	1.25E-08
		4			0.030	0.030	10.85%					8.08E-06	8.08E-06	2.59E-06	9.43E-09
		3			0.022	0.022	7.65%					5.70E-06	5.70E-06	1.83E-06	6.65E-09
		2			0.015	0.015	4.85%					3.61E-06	3.61E-06	1.16E-06	4.22E-09
		1			0.007	0.007	2.80%					2.09E-06	2.09E-06	6.69E-07	2.43E-09
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	1.02E-02	1.02E-02	3.27E-03	1.19E-05	1.02E-06	1.02E-06	3.27E-07	1.19E-09
		20			0.000	0.000	0.02%					2.04E-06	2.04E-06	6.53E-07	2.38E-09
		10			0.000	0.000	0.32%					3.26E-05	3.26E-05	1.05E-05	3.80E-08
		9			0.000	0.000	0.40%					4.07E-05	4.07E-05	1.31E-05	4.75E-08
		8			0.000	0.000	0.70%					7.13E-05	7.13E-05	2.29E-05	8.32E-08
		7			0.000	0.000	1.20%					1.22E-04	1.22E-04	3.92E-05	1.43E-07
		6			0.000	0.000	1.95%					1.99E-04	1.99E-04	6.37E-05	2.32E-07
		5			0.000	0.000	3.40%					3.46E-04	3.46E-04	1.11E-04	4.04E-07
		4			0.000	0.000	5.55%					5.65E-04	5.65E-04	1.81E-04	6.59E-07
		3			0.000	0.000	8.50%					8.65E-04	8.65E-04	2.78E-04	1.01E-06
		2			0.000	0.000	14.20%					1.45E-03	1.45E-03	4.64E-04	1.69E-06
		1			0.000	0.000	23.65%					2.41E-03	2.41E-03	7.72E-04	2.81E-06
	MCDF	40	0.007	0.007	0.297	0.297	0.02%	3.16E-03	3.16E-03	1.01E-03	3.69E-06	6.32E-07	6.32E-07	2.03E-07	7.38E-10
		20			0.149	0.149	0.04%					1.26E-06	1.26E-06	4.05E-07	1.48E-09
		10			0.074	0.074	0.74%					2.34E-05	2.34E-05	7.50E-06	2.73E-08
		9			0.067	0.067	1.05%					3.32E-05	3.32E-05	1.06E-05	3.87E-08
		8			0.059	0.059	1.85%					5.85E-05	5.85E-05	1.88E-05	6.82E-08
		7			0.052	0.052	3.35%					1.06E-04	1.06E-04	3.40E-05	1.24E-07
		6			0.045	0.045	5.70%					1.80E-04	1.80E-04	5.78E-05	2.10E-07
		5			0.037	0.037	9.50%					3.00E-04	3.00E-04	9.63E-05	3.50E-07
		4			0.030	0.030	14.10%					4.46E-04	4.46E-04	1.43E-04	5.20E-07
		3			0.022	0.022	18.70%					5.91E-04	5.91E-04	1.90E-04	6.90E-07
		2			0.015	0.015	17.40%					5.50E-04	5.50E-04	1.76E-04	6.42E-07
		1			0.007	0.007	14.35%					4.53E-04	4.53E-04	1.45E-04	5.29E-07

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 7 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5e	LCDF	40	0.047	0.047	1.892	1.892	0.30%	2.11E-03	2.11E-03	6.76E-04	2.46E-06	6.32E-06	6.32E-06	2.03E-06	7.38E-09
		20			0.946	0.946	1.25%					2.63E-05	2.63E-05	8.45E-06	3.07E-08
		10			0.473	0.473	3.55%					7.48E-05	7.48E-05	2.40E-05	8.73E-08
		9			0.426	0.426	6.65%					1.40E-04	1.40E-04	4.49E-05	1.63E-07
		8			0.378	0.378	12.60%					2.65E-04	2.65E-04	8.51E-05	3.10E-07
		7			0.331	0.331	16.80%					3.54E-04	3.54E-04	1.14E-04	4.13E-07
		6			0.284	0.284	16.45%					3.47E-04	3.47E-04	1.11E-04	4.04E-07
		5			0.236	0.236	14.35%					3.02E-04	3.02E-04	9.70E-05	3.53E-07
		4			0.189	0.189	10.85%					2.29E-04	2.29E-04	7.33E-05	2.67E-07
		3			0.142	0.142	7.65%					1.61E-04	1.61E-04	5.17E-05	1.88E-07
		2			0.095	0.095	4.85%					1.02E-04	1.02E-04	3.28E-05	1.19E-07
		1			0.047	0.047	2.80%					5.90E-05	5.90E-05	1.89E-05	6.88E-08
5f	SOHL	40	0.000	0.000	0.000	0.000	0.01%	8.77E-03	7.17E-03	5.02E-03	8.83E-06	8.77E-07	7.17E-07	5.02E-07	8.83E-10
		20			0.000	0.000	0.02%					1.75E-06	1.43E-06	1.00E-06	1.77E-09
		10			0.000	0.000	0.32%					2.81E-05	2.29E-05	1.61E-05	2.83E-08
		9			0.000	0.000	0.40%					3.51E-05	2.87E-05	2.01E-05	3.53E-08
		8			0.000	0.000	0.70%					6.14E-05	5.02E-05	3.51E-05	6.18E-08
		7			0.000	0.000	1.20%					1.05E-04	8.60E-05	6.02E-05	1.06E-07
		6			0.000	0.000	1.95%					1.71E-04	1.40E-04	9.79E-05	1.72E-07
		5			0.000	0.000	3.40%					2.98E-04	2.44E-04	1.71E-04	3.00E-07
		4			0.000	0.000	5.55%					4.87E-04	3.98E-04	2.79E-04	4.90E-07
		3			0.000	0.000	8.50%					7.46E-04	6.09E-04	4.27E-04	7.51E-07
		2			0.000	0.000	14.20%					1.25E-03	1.02E-03	7.13E-04	1.25E-06
		1			0.000	0.000	23.65%					2.07E-03	1.70E-03	1.19E-03	2.09E-06
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	5.11E-04	4.18E-04	2.92E-04	5.14E-07	1.02E-07	8.35E-08	5.85E-08	1.03E-10
		20			0.000	0.000	0.04%					2.04E-07	1.67E-07	1.17E-07	2.06E-10
		10			0.000	0.000	0.74%					3.78E-06	3.09E-06	2.16E-06	3.81E-09
		9			0.000	0.000	1.05%					5.37E-06	4.38E-06	3.07E-06	5.40E-09
		8			0.000	0.000	1.85%					9.46E-06	7.72E-06	5.41E-06	9.52E-09
		7			0.000	0.000	3.35%					1.71E-05	1.40E-05	9.80E-06	1.72E-08
		6			0.000	0.000	5.70%					2.91E-05	2.38E-05	1.67E-05	2.93E-08
		5			0.000	0.000	9.50%					4.86E-05	3.97E-05	2.78E-05	4.89E-08
		4			0.000	0.000	14.10%					7.21E-05	5.89E-05	4.12E-05	7.25E-08
		3			0.000	0.000	18.70%					9.56E-05	7.81E-05	5.47E-05	9.62E-08
		2			0.000	0.000	17.40%					8.89E-05	7.27E-05	5.09E-05	8.95E-08
		1			0.000	0.000	14.35%					7.33E-05	5.99E-05	4.20E-05	7.38E-08
	LOHL	40	0.007	0.007	0.297	0.297	0.30%	5.11E-05	4.18E-05	2.92E-05	5.14E-08	1.53E-07	1.25E-07	8.77E-08	1.54E-10
		20			0.149	0.149	1.25%					6.39E-07	5.22E-07	3.66E-07	6.43E-10
		10			0.074	0.074	3.55%					1.81E-06	1.48E-06	1.04E-06	1.83E-09
		9			0.067	0.067	6.65%					3.40E-06	2.78E-06	1.94E-06	3.42E-09
		8			0.059	0.059	12.60%					6.44E-06	5.26E-06	3.68E-06	6.48E-09
		7			0.052	0.052	16.80%					8.59E-06	7.01E-06	4.91E-06	8.64E-09
		6			0.045	0.045	16.45%					8.41E-06	6.87E-06	4.81E-06	8.46E-09
		5			0.037	0.037	14.35%					7.33E-06	5.99E-06	4.20E-06	7.38E-09
		4			0.030	0.030	10.85%					5.55E-06	4.53E-06	3.17E-06	5.58E-09
		3			0.022	0.022	7.65%					3.91E-06	3.19E-06	2.24E-06	3.94E-09
		2			0.015	0.015	4.85%					2.48E-06	2.03E-06	1.42E-06	2.50E-09
		1			0.007	0.007	2.80%					1.43E-06	1.17E-06	8.19E-07	1.44E-09
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	2.50E-02	2.04E-02	1.43E-02	2.52E-05	2.50E-06	2.04E-06	1.43E-06	2.52E-09
		20			0.000	0.000	0.02%					5.00E-06	4.09E-06	2.86E-06	5.03E-09
		10			0.000	0.000	0.32%					8.00E-05	6.54E-05	4.58E-05	8.05E-08
		9			0.000	0.000	0.40%					1.00E-04	8.17E-05	5.72E-05	1.01E-07
		8			0.000	0.000	0.70%					1.75E-04	1.43E-04	1.00E-04	1.76E-07
		7			0.000	0.000	1.20%					3.00E-04	2.45E-04	1.72E-04	3.02E-07
		6			0.000	0.000	1.95%					4.88E-04	3.98E-04	2.79E-04	4.91E-07
		5			0.000	0.000	3.40%					8.50E-04	6.95E-04	4.86E-04	8.56E-07
		4			0.000	0.000	5.55%					1.39E-03	1.13E-03	7.94E-04	1.40E-06
		3			0.000	0.000	8.50%					2.13E-03	1.74E-03	1.22E-03	2.14E-06
		2			0.000	0.000	14.20%					3.55E-03	2.90E-03	2.03E-03	3.57E-06
		1			0.000	0.000	23.65%					5.91E-03	4.83E-03	3.38E-03	5.95E-06
	MCDF	40	0.007	0.007	0.297	0.297	0.02%	7.76E-03	6.34E-03	4.44E-03	7.81E-06	1.55E-06	1.27E-06	8.88E-07	1.56E-09
		20			0.149	0.149	0.04%					3.10E-06	2.54E-06	1.78E-06	3.12E-09
		10			0.074	0.074	0.74%					5.74E-05	4.69E-05	3.29E-05	5.78E-08
		9			0.067	0.067	1.05%					8.15E-05	6.66E-05	4.66E-05	8.20E-08
		8			0.059	0.059	1.85%					1.44E-04	1.17E-04	8.21E-05	1.45E-07
		7			0.052	0.052	3.35%					2.60E-04	2.12E-04	1.49E-04	2.62E-07
		6			0.045	0.045	5.70%					4.42E-04	3.61E-04	2.53E-04	4.45E-07
		5			0.037	0.037	9.50%					7.37E-04	6.02E-04	4.22E-04	7.42E-07
		4			0.030	0.030	14.10%					1.09E-03	8.94E-04	6.26E-04	1.10E-06
		3			0.022	0.022	18.70%					1.45E-03	1.19E-03	8.30E-04	1.46E-06
		2			0.015	0.015	17.40%					1.35E-03	1.10E-03	7.73E-04	1.36E-06
		1			0.007	0.007	14.35%					1.11E-03	9.10E-04	6.37E-04	1.12E-06
	LCDF	40	0.047	0.047	1.892	1.892	0.30%	5.17E-03	4.23E-03	2.96E-03	5.21E-06	1.55E-05	1.27E-05	8.88E-06	1.56E-08
		20			0.946	0.946	1.25%					6.47E-05	5.28E-05	3.70E-05	6.51E-08
		10			0.473	0.473	3.55%					1.84E-04	1.50E-04	1.05E-04	1.85E-07
		9			0.426	0.426	6.65%					3.44E-04	2.81E-04	1.97E-04	3.46E-07
		8			0.378	0.378	12.60%					6.52E-04	5.33E-04	3.73E-04	6.56E-07
		7			0.331	0.331	16.80%					8.69E-04	7.10E-04	4.97E-04	8.75E-07
		6			0.284	0.284	16.45%					8.51E-04	6.95E-04	4.87E-04	8.57E-07
		5			0.236	0.236	14.35%					7.42E-04	6.07E-04	4.25E-04	7.47E-07
		4			0.189	0.189	10.85%					5.61E-04	4.59E-04	3.21E-04	5.65E-07
		3			0.142	0.142	7.65%					3.96E-04	3.23E-04	2.26E-04	3.98E-07
		2			0.095	0.095	4.85%					2.51E-04	2.05E-04	1.44E-04	2.53E-07
		1			0.047	0.047	2.80%					1.45E-04	1.18E-04	8.29E-05	1.46E-07
5g	SOHL	40	0.000	0.000	0.000	0.000	0.01%	2.93E-02	2.46E-02	2.46E-02	2.46E-02	2.93E-06	2.46E-06	2.46E-06	2.46E-06
		20			0.000	0.000	0.02%					5.86E-06	4.92E-06	4.92E-06	4.92E-06
		10			0.000	0.000	0.32%					9.37E-05	7.87E-05	7.87E-05	7.87E-05
		9			0.000	0.000	0.40%					1.17E-04	9.84E-05	9.84E-05	9.84E-05
		8			0.000	0.000	0.70%					2.05E-04	1.72E-04	1.72E-04	1.72E-04
		7			0.000	0.000	1.20%					3.51E-04	2.95E-04	2.95E-04	2.95E-04
		6			0.000	0.000	1.95%					5.71E-04	4.80E-04	4.80E-04	4.80E-04
		5			0.000	0.000	3.40%					9.96E-04	8.37E-04	8.37E-04	8.37E-04
		4			0.000	0.000	5.55%					1.63E-03	1.37E-03	1.37E-03	1.37E-03
		3			0.000	0.000	8.50%					2.49E-03	2.09E-03	2.09E-03	2.09E-03
		2			0.000	0.000	14.20%					4.16E-03	3.49E-03	3.49E-03	3.49E-03
		1			0.000	0.000	23.65%					6.93E-03	5.82E-03	5.82E-03	5.82E-03

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 8 of 15)

1/F residential flats of Bk. 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5g	MOHL	40	0.000	0.000	0.000	0.000	0.02%	1.71E-03	1.43E-03	1.43E-03	1.43E-03	3.41E-07	2.87E-07	2.87E-07	2.87E-07
		20			0.000	0.000	0.04%					6.82E-07	5.73E-07	5.73E-07	5.73E-07
		10			0.000	0.000	0.74%					1.26E-05	1.06E-05	1.06E-05	1.06E-05
		9			0.000	0.000	1.05%					1.79E-05	1.51E-05	1.51E-05	1.51E-05
		8			0.000	0.000	1.85%					3.16E-05	2.65E-05	2.65E-05	2.65E-05
		7			0.000	0.000	3.35%					5.71E-05	4.80E-05	4.80E-05	4.80E-05
		6			0.000	0.000	5.70%					9.72E-05	8.17E-05	8.17E-05	8.17E-05
		5			0.000	0.000	9.50%					1.62E-04	1.36E-04	1.36E-04	1.36E-04
		4			0.000	0.000	14.10%					2.41E-04	2.02E-04	2.02E-04	2.02E-04
		3			0.000	0.000	18.70%					3.19E-04	2.68E-04	2.68E-04	2.68E-04
		2			0.000	0.000	17.40%					2.97E-04	2.49E-04	2.49E-04	2.49E-04
		1			0.000	0.000	14.35%					2.45E-04	2.06E-04	2.06E-04	2.06E-04
	LOHL	40	0.007	0.007	0.297	0.297	0.30%	1.71E-04	1.43E-04	1.43E-04	1.43E-04	5.12E-07	4.30E-07	4.30E-07	4.30E-07
		20			0.149	0.149	1.25%					2.13E-06	1.79E-06	1.79E-06	1.79E-06
		10			0.074	0.074	3.55%					6.06E-06	5.09E-06	5.09E-06	5.09E-06
		9			0.067	0.067	6.65%					1.13E-05	9.53E-06	9.53E-06	9.53E-06
		8			0.059	0.059	12.60%					2.15E-05	1.81E-05	1.81E-05	1.81E-05
		7			0.052	0.052	16.80%					2.87E-05	2.41E-05	2.41E-05	2.41E-05
		6			0.045	0.045	16.45%					2.81E-05	2.36E-05	2.36E-05	2.36E-05
		5			0.037	0.037	14.35%					2.45E-05	2.06E-05	2.06E-05	2.06E-05
		4			0.030	0.030	10.85%					1.85E-05	1.56E-05	1.56E-05	1.56E-05
		3			0.022	0.022	7.65%					1.30E-05	1.10E-05	1.10E-05	1.10E-05
		2			0.015	0.015	4.85%					8.27E-06	6.95E-06	6.95E-06	6.95E-06
		1			0.007	0.007	2.80%					4.78E-06	4.01E-06	4.01E-06	4.01E-06
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	4.06E-03	3.41E-03	3.41E-03	3.41E-03	4.06E-07	3.41E-07	3.41E-07	3.41E-07
		20			0.000	0.000	0.02%					8.13E-07	6.83E-07	6.83E-07	6.83E-07
		10			0.000	0.000	0.32%					1.30E-05	1.09E-05	1.09E-05	1.09E-05
		9			0.000	0.000	0.40%					1.63E-05	1.37E-05	1.37E-05	1.37E-05
		8			0.000	0.000	0.70%					2.84E-05	2.39E-05	2.39E-05	2.39E-05
		7			0.000	0.000	1.20%					4.88E-05	4.10E-05	4.10E-05	4.10E-05
		6			0.000	0.000	1.95%					7.92E-05	6.66E-05	6.66E-05	6.66E-05
		5			0.000	0.000	3.40%					1.38E-04	1.16E-04	1.16E-04	1.16E-04
		4			0.000	0.000	5.55%					2.26E-04	1.89E-04	1.89E-04	1.89E-04
		3			0.000	0.000	8.50%					3.45E-04	2.90E-04	2.90E-04	2.90E-04
		2			0.000	0.000	14.20%					5.77E-04	4.85E-04	4.85E-04	4.85E-04
		1			0.000	0.000	23.65%					9.61E-04	8.07E-04	8.07E-04	8.07E-04
	MCDF	40	0.007	0.007	0.297	0.297	0.02%	1.26E-03	1.06E-03	1.06E-03	1.06E-03	2.52E-07	2.12E-07	2.12E-07	2.12E-07
		20			0.149	0.149	0.04%					5.04E-07	4.24E-07	4.24E-07	4.24E-07
		10			0.074	0.074	0.74%					9.33E-06	7.84E-06	7.84E-06	7.84E-06
		9			0.067	0.067	1.05%					1.32E-05	1.11E-05	1.11E-05	1.11E-05
		8			0.059	0.059	1.85%					2.33E-05	1.96E-05	1.96E-05	1.96E-05
		7			0.052	0.052	3.35%					4.22E-05	3.55E-05	3.55E-05	3.55E-05
		6			0.045	0.045	5.70%					7.19E-05	6.04E-05	6.04E-05	6.04E-05
		5			0.037	0.037	9.50%					1.20E-04	1.01E-04	1.01E-04	1.01E-04
		4			0.030	0.030	14.10%					1.78E-04	1.49E-04	1.49E-04	1.49E-04
		3			0.022	0.022	18.70%					2.36E-04	1.98E-04	1.98E-04	1.98E-04
		2			0.015	0.015	17.40%					2.19E-04	1.84E-04	1.84E-04	1.84E-04
		1			0.007	0.007	14.35%					1.81E-04	1.52E-04	1.52E-04	1.52E-04
	LCDF	40	0.047	0.047	1.892	1.892	0.30%	8.41E-04	7.06E-04	7.06E-04	7.06E-04	2.52E-06	2.12E-06	2.12E-06	2.12E-06
		20			0.946	0.946	1.25%					1.05E-05	8.83E-06	8.83E-06	8.83E-06
		10			0.473	0.473	3.55%					2.98E-05	2.51E-05	2.51E-05	2.51E-05
		9			0.426	0.426	6.65%					5.59E-05	4.70E-05	4.70E-05	4.70E-05
		8			0.378	0.378	12.60%					1.06E-04	8.90E-05	8.90E-05	8.90E-05
		7			0.331	0.331	16.80%					1.41E-04	1.19E-04	1.19E-04	1.19E-04
		6			0.284	0.284	16.45%					1.38E-04	1.16E-04	1.16E-04	1.16E-04
		5			0.236	0.236	14.35%					1.21E-04	1.01E-04	1.01E-04	1.01E-04
		4			0.189	0.189	10.85%					9.12E-05	7.66E-05	7.66E-05	7.66E-05
		3			0.142	0.142	7.65%					6.43E-05	5.40E-05	5.40E-05	5.40E-05
		2			0.095	0.095	4.85%					4.08E-05	3.43E-05	3.43E-05	3.43E-05
		1			0.047	0.047	2.80%					2.35E-05	1.98E-05	1.98E-05	1.98E-05
											Σ f x N	5.57E-03	4.73E-03	3.76E-03	4.25E-04

Notes:
(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.
(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.
(3) Column (e) = (c) × (d).
(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.
(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 9 of 15)

1/F residential flats of Bk. 9 at Woodcrest Hill - Affected by Hazard from Sub-area: 5b

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5b	SOHL	40	0.000	0.000	0.000	0.000	0.01%	6.08E-05	6.08E-05	6.08E-05	6.08E-05	6.08E-09	6.08E-09	6.08E-09	6.08E-09
		20			0.000	0.000	0.02%					1.22E-08	1.22E-08	1.22E-08	1.22E-08
		10			0.000	0.000	0.32%					1.95E-07	1.95E-07	1.95E-07	1.95E-07
		9			0.000	0.000	0.40%					2.43E-07	2.43E-07	2.43E-07	2.43E-07
		8			0.000	0.000	0.70%					4.26E-07	4.26E-07	4.26E-07	4.26E-07
		7			0.000	0.000	1.20%					7.30E-07	7.30E-07	7.30E-07	7.30E-07
		6			0.000	0.000	1.95%					1.19E-06	1.19E-06	1.19E-06	1.19E-06
		5			0.000	0.000	3.40%					2.07E-06	2.07E-06	2.07E-06	2.07E-06
		4			0.000	0.000	5.55%					3.38E-06	3.38E-06	3.38E-06	3.38E-06
		3			0.000	0.000	8.50%					5.17E-06	5.17E-06	5.17E-06	5.17E-06
		2			0.000	0.000	14.20%					8.64E-06	8.64E-06	8.64E-06	8.64E-06
		1			0.000	0.000	23.65%					1.44E-05	1.44E-05	1.44E-05	1.44E-05
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	3.54E-06	3.54E-06	3.54E-06	3.54E-06	7.09E-10	7.09E-10	7.09E-10	7.09E-10
		20			0.116	0.116	0.04%					1.42E-09	1.42E-09	1.42E-09	1.42E-09
		10			0.058	0.058	0.74%					2.62E-08	2.62E-08	2.62E-08	2.62E-08
		9			0.052	0.052	1.05%					3.72E-08	3.72E-08	3.72E-08	3.72E-08
		8			0.046	0.046	1.85%					6.56E-08	6.56E-08	6.56E-08	6.56E-08
		7			0.040	0.040	3.35%					1.19E-07	1.19E-07	1.19E-07	1.19E-07
		6			0.035	0.035	5.70%					2.02E-07	2.02E-07	2.02E-07	2.02E-07
		5			0.029	0.029	9.50%					3.37E-07	3.37E-07	3.37E-07	3.37E-07
		4			0.023	0.023	14.10%					5.00E-07	5.00E-07	5.00E-07	5.00E-07
		3			0.017	0.017	18.70%					6.63E-07	6.63E-07	6.63E-07	6.63E-07
		2			0.012	0.012	17.40%					6.17E-07	6.17E-07	6.17E-07	6.17E-07
		1			0.006	0.006	14.35%					5.09E-07	5.09E-07	5.09E-07	5.09E-07
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	3.54E-07	3.54E-07	3.54E-07	3.54E-07	1.06E-09	1.06E-09	1.06E-09	1.06E-09
		20			0.946	0.946	1.25%					4.43E-09	4.43E-09	4.43E-09	4.43E-09
		10			0.473	0.473	3.55%					1.26E-08	1.26E-08	1.26E-08	1.26E-08
		9			0.426	0.426	6.65%					2.36E-08	2.36E-08	2.36E-08	2.36E-08
		8			0.378	0.378	12.60%					4.47E-08	4.47E-08	4.47E-08	4.47E-08
		7			0.331	0.331	16.80%					5.95E-08	5.95E-08	5.95E-08	5.95E-08
		6			0.284	0.284	16.45%					5.83E-08	5.83E-08	5.83E-08	5.83E-08
		5			0.236	0.236	14.35%					5.09E-08	5.09E-08	5.09E-08	5.09E-08
		4			0.189	0.189	10.85%					3.85E-08	3.85E-08	3.85E-08	3.85E-08
		3			0.142	0.142	7.65%					2.71E-08	2.71E-08	2.71E-08	2.71E-08
		2			0.095	0.095	4.85%					1.72E-08	1.72E-08	1.72E-08	1.72E-08
		1			0.047	0.047	2.80%					9.92E-09	9.92E-09	9.92E-09	9.92E-09
											Σ f x N	1.62E-07	1.62E-07	1.62E-07	1.62E-07

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 10 of 15)

G/F residential flat of Bk5 at Woodcrest Hill - Affected by Hazard from Sub-area: 6a, 6c

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
6a	SOHL	40	0.000	0.000	0.000	0.000	0.01%	8.04E-05	8.04E-05	8.04E-05	8.04E-05	8.04E-09	8.04E-09	8.04E-09	8.04E-09
		20			0.000	0.000	0.02%					1.61E-08	1.61E-08	1.61E-08	1.61E-08
		10			0.000	0.000	0.32%					2.57E-07	2.57E-07	2.57E-07	2.57E-07
		9			0.000	0.000	0.40%					3.22E-07	3.22E-07	3.22E-07	3.22E-07
		8			0.000	0.000	0.70%					5.63E-07	5.63E-07	5.63E-07	5.63E-07
		7			0.000	0.000	1.20%					9.65E-07	9.65E-07	9.65E-07	9.65E-07
		6			0.000	0.000	1.95%					1.57E-06	1.57E-06	1.57E-06	1.57E-06
		5			0.000	0.000	3.40%					2.73E-06	2.73E-06	2.73E-06	2.73E-06
		4			0.000	0.000	5.55%					4.46E-06	4.46E-06	4.46E-06	4.46E-06
		3			0.000	0.000	8.50%					6.83E-06	6.83E-06	6.83E-06	6.83E-06
		2			0.000	0.000	14.20%					1.14E-05	1.14E-05	1.14E-05	1.14E-05
		1			0.000	0.000	23.65%					1.90E-05	1.90E-05	1.90E-05	1.90E-05
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	4.68E-06	4.68E-06	4.68E-06	4.68E-06	9.37E-10	9.37E-10	9.37E-10	9.37E-10
		20			0.116	0.116	0.04%					1.87E-09	1.87E-09	1.87E-09	1.87E-09
		10			0.058	0.058	0.74%					3.47E-08	3.47E-08	3.47E-08	3.47E-08
		9			0.052	0.052	1.05%					4.92E-08	4.92E-08	4.92E-08	4.92E-08
		8			0.046	0.046	1.85%					8.66E-08	8.66E-08	8.66E-08	8.66E-08
		7			0.040	0.040	3.35%					1.57E-07	1.57E-07	1.57E-07	1.57E-07
		6			0.035	0.035	5.70%					2.67E-07	2.67E-07	2.67E-07	2.67E-07
		5			0.029	0.029	9.50%					4.45E-07	4.45E-07	4.45E-07	4.45E-07
		4			0.023	0.023	14.10%					6.60E-07	6.60E-07	6.60E-07	6.60E-07
		3			0.017	0.017	18.70%					8.76E-07	8.76E-07	8.76E-07	8.76E-07
		2			0.012	0.012	17.40%					8.15E-07	8.15E-07	8.15E-07	8.15E-07
		1			0.006	0.006	14.35%					6.72E-07	6.72E-07	6.72E-07	6.72E-07
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	4.68E-07	4.68E-07	4.68E-07	4.68E-07	1.41E-09	1.41E-09	1.41E-09	1.41E-09
		20			0.946	0.946	1.25%					5.85E-09	5.85E-09	5.85E-09	5.85E-09
		10			0.473	0.473	3.55%					1.66E-08	1.66E-08	1.66E-08	1.66E-08
		9			0.426	0.426	6.65%					3.11E-08	3.11E-08	3.11E-08	3.11E-08
		8			0.378	0.378	12.60%					5.90E-08	5.90E-08	5.90E-08	5.90E-08
		7			0.331	0.331	16.80%					7.87E-08	7.87E-08	7.87E-08	7.87E-08
		6			0.284	0.284	16.45%					7.70E-08	7.70E-08	7.70E-08	7.70E-08
		5			0.236	0.236	14.35%					6.72E-08	6.72E-08	6.72E-08	6.72E-08
		4			0.189	0.189	10.85%					5.08E-08	5.08E-08	5.08E-08	5.08E-08
		3			0.142	0.142	7.65%					3.58E-08	3.58E-08	3.58E-08	3.58E-08
		2			0.095	0.095	4.85%					2.27E-08	2.27E-08	2.27E-08	2.27E-08
		1			0.047	0.047	2.80%					1.31E-08	1.31E-08	1.31E-08	1.31E-08
6c	SOHL	40	0.000	0.000	0.000	0.000	0.01%	1.67E-03	1.67E-03	1.67E-03	1.67E-03	1.67E-07	1.67E-07	1.67E-07	1.67E-07
		20			0.000	0.000	0.02%					3.33E-07	3.33E-07	3.33E-07	3.33E-07
		10			0.000	0.000	0.32%					5.33E-06	5.33E-06	5.33E-06	5.33E-06
		9			0.000	0.000	0.40%					6.66E-06	6.66E-06	6.66E-06	6.66E-06
		8			0.000	0.000	0.70%					1.17E-05	1.17E-05	1.17E-05	1.17E-05
		7			0.000	0.000	1.20%					2.00E-05	2.00E-05	2.00E-05	2.00E-05
		6			0.000	0.000	1.95%					3.25E-05	3.25E-05	3.25E-05	3.25E-05
		5			0.000	0.000	3.40%					5.66E-05	5.66E-05	5.66E-05	5.66E-05
		4			0.000	0.000	5.55%					9.24E-05	9.24E-05	9.24E-05	9.24E-05
		3			0.000	0.000	8.50%					1.42E-04	1.42E-04	1.42E-04	1.42E-04
		2			0.000	0.000	14.20%					2.36E-04	2.36E-04	2.36E-04	2.36E-04
		1			0.000	0.000	23.65%					3.94E-04	3.94E-04	3.94E-04	3.94E-04
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	9.70E-05	9.70E-05	9.70E-05	9.70E-05	1.94E-08	1.94E-08	1.94E-08	1.94E-08
		20			0.000	0.000	0.04%					3.88E-08	3.88E-08	3.88E-08	3.88E-08
		10			0.000	0.000	0.74%					7.18E-07	7.18E-07	7.18E-07	7.18E-07
		9			0.000	0.000	1.05%					1.02E-06	1.02E-06	1.02E-06	1.02E-06
		8			0.000	0.000	1.85%					1.79E-06	1.79E-06	1.79E-06	1.79E-06
		7			0.000	0.000	3.35%					3.25E-06	3.25E-06	3.25E-06	3.25E-06
		6			0.000	0.000	5.70%					5.53E-06	5.53E-06	5.53E-06	5.53E-06
		5			0.000	0.000	9.50%					9.21E-06	9.21E-06	9.21E-06	9.21E-06
		4			0.000	0.000	14.10%					1.37E-05	1.37E-05	1.37E-05	1.37E-05
		3			0.000	0.000	18.70%					1.81E-05	1.81E-05	1.81E-05	1.81E-05
		2			0.000	0.000	17.40%					1.69E-05	1.69E-05	1.69E-05	1.69E-05
		1			0.000	0.000	14.35%					1.39E-05	1.39E-05	1.39E-05	1.39E-05
	LOHL	40	0.047	0.047	1.892	1.892	0.30%	9.70E-06	9.70E-06	9.70E-06	9.70E-06	2.91E-08	2.91E-08	2.91E-08	2.91E-08
		20			0.946	0.946	1.25%					1.21E-07	1.21E-07	1.21E-07	1.21E-07
		10			0.473	0.473	3.55%					3.44E-07	3.44E-07	3.44E-07	3.44E-07
		9			0.426	0.426	6.65%					6.45E-07	6.45E-07	6.45E-07	6.45E-07
		8			0.378	0.378	12.60%					1.22E-06	1.22E-06	1.22E-06	1.22E-06
		7			0.331	0.331	16.80%					1.63E-06	1.63E-06	1.63E-06	1.63E-06
		6			0.284	0.284	16.45%					1.60E-06	1.60E-06	1.60E-06	1.60E-06
		5			0.236	0.236	14.35%					1.39E-06	1.39E-06	1.39E-06	1.39E-06
		4			0.189	0.189	10.85%					1.05E-06	1.05E-06	1.05E-06	1.05E-06
		3			0.142	0.142	7.65%					7.42E-07	7.42E-07	7.42E-07	7.42E-07
		2			0.095	0.095	4.85%					4.70E-07	4.70E-07	4.70E-07	4.70E-07
		1			0.047	0.047	2.80%					2.72E-07	2.72E-07	2.72E-07	2.72E-07
											Σ f x N	2.97E-06	2.97E-06	2.97E-06	2.97E-06

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 11 of 15)

1/F residential flats at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7c, 7e, 7f, 7i, 7j, 7k

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7b	SOHL	40	0.000	0.000	0.000	0.000	0.01%	9.68E-03	1.01E-03	1.01E-03	1.01E-03	9.68E-07	1.01E-07	1.01E-07	1.01E-07
		20			0.000	0.000	0.02%					1.94E-06	2.02E-07	2.02E-07	2.02E-07
		10			0.000	0.000	0.32%					3.10E-05	3.23E-06	3.23E-06	3.23E-06
		9			0.000	0.000	0.40%					3.87E-05	4.04E-06	4.04E-06	4.04E-06
		8			0.000	0.000	0.70%					6.78E-05	7.07E-06	7.07E-06	7.07E-06
		7			0.000	0.000	1.20%					1.16E-04	1.21E-05	1.21E-05	1.21E-05
		6			0.000	0.000	1.95%					1.89E-04	1.97E-05	1.97E-05	1.97E-05
		5			0.000	0.000	3.40%					3.29E-04	3.43E-05	3.43E-05	3.43E-05
		4			0.000	0.000	5.55%					5.38E-04	5.61E-05	5.61E-05	5.61E-05
		3			0.000	0.000	8.50%					8.23E-04	8.59E-05	8.59E-05	8.59E-05
		2			0.000	0.000	14.20%					1.38E-03	1.43E-04	1.43E-04	1.43E-04
		1			0.000	0.000	23.65%					2.29E-03	2.39E-04	2.39E-04	2.39E-04
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	5.64E-04	5.88E-05	5.88E-05	5.88E-05	1.13E-07	1.18E-08	1.18E-08	1.18E-08
		20			0.000	0.000	0.04%					2.26E-07	2.35E-08	2.35E-08	2.35E-08
		10			0.000	0.000	0.74%					4.17E-06	4.35E-07	4.35E-07	4.35E-07
		9			0.000	0.000	1.05%					5.92E-06	6.18E-07	6.18E-07	6.18E-07
		8			0.000	0.000	1.85%					1.04E-05	1.09E-06	1.09E-06	1.09E-06
		7			0.000	0.000	3.35%					1.89E-05	1.97E-06	1.97E-06	1.97E-06
		6			0.000	0.000	5.70%					3.22E-05	3.35E-06	3.35E-06	3.35E-06
		5			0.000	0.000	9.50%					5.36E-05	5.59E-06	5.59E-06	5.59E-06
		4			0.000	0.000	14.10%					7.95E-05	8.30E-06	8.30E-06	8.30E-06
		3			0.000	0.000	18.70%					1.05E-04	1.10E-05	1.10E-05	1.10E-05
		2			0.000	0.000	17.40%					9.82E-05	1.02E-05	1.02E-05	1.02E-05
		1			0.000	0.000	14.35%					8.10E-05	8.44E-06	8.44E-06	8.44E-06
	LOHL	40	0.007	0.007	0.297	0.297	0.30%	5.64E-05	5.88E-06	5.88E-06	5.88E-06	1.69E-07	1.77E-08	1.77E-08	1.77E-08
		20			0.149	0.149	1.25%					7.05E-07	7.36E-08	7.36E-08	7.36E-08
		10			0.074	0.074	3.55%					2.00E-06	2.09E-07	2.09E-07	2.09E-07
		9			0.067	0.067	6.65%					3.75E-06	3.91E-07	3.91E-07	3.91E-07
		8			0.059	0.059	12.60%					7.11E-06	7.41E-07	7.41E-07	7.41E-07
		7			0.052	0.052	16.80%					9.48E-06	9.89E-07	9.89E-07	9.89E-07
		6			0.045	0.045	16.45%					9.28E-06	9.68E-07	9.68E-07	9.68E-07
		5			0.037	0.037	14.35%					8.10E-06	8.44E-07	8.44E-07	8.44E-07
		4			0.030	0.030	10.85%					6.12E-06	6.38E-07	6.38E-07	6.38E-07
		3			0.022	0.022	7.65%					4.32E-06	4.50E-07	4.50E-07	4.50E-07
		2			0.015	0.015	4.85%					2.74E-06	2.85E-07	2.85E-07	2.85E-07
		1			0.007	0.007	2.80%					1.58E-06	1.65E-07	1.65E-07	1.65E-07
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	3.59E-03	3.75E-04	3.75E-04	3.75E-04	3.59E-07	3.75E-08	3.75E-08	3.75E-08
		20			0.000	0.000	0.02%					7.19E-07	7.50E-08	7.50E-08	7.50E-08
		10			0.000	0.000	0.32%					1.15E-05	1.20E-06	1.20E-06	1.20E-06
		9			0.000	0.000	0.40%					1.44E-05	1.50E-06	1.50E-06	1.50E-06
		8			0.000	0.000	0.70%					2.52E-05	2.62E-06	2.62E-06	2.62E-06
		7			0.000	0.000	1.20%					4.31E-05	4.50E-06	4.50E-06	4.50E-06
		6			0.000	0.000	1.95%					7.01E-05	7.31E-06	7.31E-06	7.31E-06
		5			0.000	0.000	3.40%					1.22E-04	1.27E-05	1.27E-05	1.27E-05
		4			0.000	0.000	5.55%					1.99E-04	2.08E-05	2.08E-05	2.08E-05
		3			0.000	0.000	8.50%					3.05E-04	3.19E-05	3.19E-05	3.19E-05
		2			0.000	0.000	14.20%					5.10E-04	5.32E-05	5.32E-05	5.32E-05
		1			0.000	0.000	23.65%					8.50E-04	8.86E-05	8.86E-05	8.86E-05
	MCDF	40	0.007	0.000	0.297	0.000	0.02%	1.12E-03	1.16E-04	1.16E-04	1.16E-04	2.23E-07	2.33E-08	2.33E-08	2.33E-08
		20			0.149	0.000	0.04%					4.46E-07	4.65E-08	4.65E-08	4.65E-08
		10			0.074	0.000	0.74%					8.25E-06	8.61E-07	8.61E-07	8.61E-07
		9			0.067	0.000	1.05%					1.17E-05	1.22E-06	1.22E-06	1.22E-06
		8			0.059	0.000	1.85%					2.06E-05	2.15E-06	2.15E-06	2.15E-06
		7			0.052	0.000	3.35%					3.74E-05	3.90E-06	3.90E-06	3.90E-06
		6			0.045	0.000	5.70%					6.36E-05	6.63E-06	6.63E-06	6.63E-06
		5			0.037	0.000	9.50%					1.06E-04	1.10E-05	1.10E-05	1.10E-05
		4			0.030	0.000	14.10%					1.57E-04	1.64E-05	1.64E-05	1.64E-05
		3			0.022	0.000	18.70%					2.09E-04	2.18E-05	2.18E-05	2.18E-05
		2			0.015	0.000	17.40%					1.94E-04	2.02E-05	2.02E-05	2.02E-05
		1			0.007	0.000	14.35%					1.60E-04	1.67E-05	1.67E-05	1.67E-05
	LCDF	40	0.165	0.165	6.592	6.592	0.30%	7.43E-04	7.75E-05	7.75E-05	7.75E-05	2.23E-06	2.33E-07	2.33E-07	2.33E-07
		20			3.296	3.296	1.25%					9.29E-06	9.69E-07	9.69E-07	9.69E-07
		10			1.648	1.648	3.55%					2.64E-05	2.75E-06	2.75E-06	2.75E-06
		9			1.483	1.483	6.65%					4.94E-05	5.16E-06	5.16E-06	5.16E-06
		8			1.318	1.318	12.60%					9.37E-05	9.77E-06	9.77E-06	9.77E-06
		7			1.154	1.154	16.80%					1.25E-04	1.30E-05	1.30E-05	1.30E-05
		6			0.989	0.989	16.45%					1.22E-04	1.28E-05	1.28E-05	1.28E-05
		5			0.824	0.824	14.35%					1.07E-04	1.11E-05	1.11E-05	1.11E-05
		4			0.659	0.659	10.85%					8.07E-05	8.41E-06	8.41E-06	8.41E-06
		3			0.494	0.494	7.65%					5.69E-05	5.93E-06	5.93E-06	5.93E-06
		2			0.330	0.330	4.85%					3.61E-05	3.76E-06	3.76E-06	3.76E-06
		1			0.165	0.165	2.80%					2.08E-05	2.17E-06	2.17E-06	2.17E-06
7c	SOHL	40	0.000	0.000	0.000	0.000	0.01%	2.98E-06	2.98E-06	2.98E-06	2.98E-06	2.98E-10	2.98E-10	2.98E-10	2.98E-10
		20			0.000	0.000	0.02%					5.97E-10	5.97E-10	5.97E-10	5.97E-10
		10			0.000	0.000	0.32%					9.55E-09	9.55E-09	9.55E-09	9.55E-09
		9			0.000	0.000	0.40%					1.19E-08	1.19E-08	1.19E-08	1.19E-08
		8			0.000	0.000	0.70%					2.09E-08	2.09E-08	2.09E-08	2.09E-08
		7			0.000	0.000	1.20%					3.58E-08	3.58E-08	3.58E-08	3.58E-08
		6			0.000	0.000	1.95%					5.82E-08	5.82E-08	5.82E-08	5.82E-08
		5			0.000	0.000	3.40%					1.01E-07	1.01E-07	1.01E-07	1.01E-07
		4			0.000	0.000	5.55%					1.66E-07	1.66E-07	1.66E-07	1.66E-07
		3			0.000	0.000	8.50%					2.54E-07	2.54E-07	2.54E-07	2.54E-07
		2			0.000	0.000	14.20%					4.24E-07	4.24E-07	4.24E-07	4.24E-07
		1			0.000	0.000	23.65%					7.06E-07	7.06E-07	7.06E-07	7.06E-07
	MOHL	40	0.006	0.006	0.231	0.231	0.02%	1.74E-07	1.74E-07	1.74E-07	1.74E-07	3.48E-11	3.48E-11	3.48E-11	3.48E-11
		20			0.116	0.116	0.04%					6.95E-11	6.95E-11	6.95E-11	6.95E-11
		10			0.058	0.058	0.74%					1.29E-09	1.29E-09	1.29E-09	1.29E-09
		9			0.052	0.052	1.05%					1.83E-09	1.83E-09	1.83E-09	1.83E-09
		8			0.046	0.046	1.85%					3.22E-09	3.22E-09	3.22E-09	3.22E-09
		7			0.040	0.040	3.35%					5.82E-09	5.82E-09	5.82E-09	5.82E-09
		6			0.035	0.035	5.70%					9.91E-09	9.91E-09	9.91E-09	9.91E-09
		5			0.029	0.029	9.50%					1.65E-08	1.65E-08	1.65E-08	1.65E-08
		4			0.023	0.023	14.10%					2.45E-08	2.45E-08	2.45E-08	2.45E-08
		3			0.017	0.017	18.70%					3.25E-08	3.25E-08	3.25E-08	3.25E-08
		2			0.012	0.012	17.40%					3.03E-08	3.03E-08	3.03E-08	3.03E-08
		1			0.006	0.006	14.35%					2.49E-08	2.49E-08	2.49E-08	2.49E-08

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 12 of 15)

1/F residential flats at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7c, 7e, 7f, 7i, 7j, 7k (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7c	LOHL	40	0.047	0.047	1.892	1.892	0.30%	1.74E-08	1.74E-08	1.74E-08	1.74E-08	5.22E-11	5.22E-11	5.22E-11	5.22E-11
		20			0.946	0.946	1.25%					2.17E-10	2.17E-10	2.17E-10	2.17E-10
		10			0.473	0.473	3.55%					6.17E-10	6.17E-10	6.17E-10	6.17E-10
		9			0.426	0.426	6.65%					1.16E-09	1.16E-09	1.16E-09	1.16E-09
		8			0.378	0.378	12.60%					2.19E-09	2.19E-09	2.19E-09	2.19E-09
		7			0.331	0.331	16.80%					2.92E-09	2.92E-09	2.92E-09	2.92E-09
		6			0.284	0.284	16.45%					2.86E-09	2.86E-09	2.86E-09	2.86E-09
		5			0.236	0.236	14.35%					2.49E-09	2.49E-09	2.49E-09	2.49E-09
		4			0.189	0.189	10.85%					1.89E-09	1.89E-09	1.89E-09	1.89E-09
		3			0.142	0.142	7.65%					1.33E-09	1.33E-09	1.33E-09	1.33E-09
		2			0.095	0.095	4.85%					8.43E-10	8.43E-10	8.43E-10	8.43E-10
		1			0.047	0.047	2.80%					4.87E-10	4.87E-10	4.87E-10	4.87E-10
7e	SOHL	40	0.000	0.000	0.000	0.000	0.01%	7.95E-02	7.14E-02	6.21E-02	6.21E-02	7.95E-06	7.14E-06	6.21E-06	6.21E-06
		20			0.000	0.000	0.02%					1.59E-05	1.43E-05	1.24E-05	1.24E-05
		10			0.000	0.000	0.32%					2.54E-04	2.28E-04	1.99E-04	1.99E-04
		9			0.000	0.000	0.40%					3.18E-04	2.85E-04	2.48E-04	2.48E-04
		8			0.000	0.000	0.70%					5.57E-04	5.00E-04	4.35E-04	4.35E-04
		7			0.000	0.000	1.20%					9.54E-04	8.56E-04	7.45E-04	7.45E-04
		6			0.000	0.000	1.95%					1.55E-03	1.39E-03	1.21E-03	1.21E-03
		5			0.000	0.000	3.40%					2.70E-03	2.43E-03	2.11E-03	2.11E-03
		4			0.000	0.000	5.55%					4.41E-03	3.96E-03	3.45E-03	3.45E-03
		3			0.000	0.000	8.50%					6.76E-03	6.07E-03	5.28E-03	5.28E-03
		2			0.000	0.000	14.20%					1.13E-02	1.01E-02	8.82E-03	8.82E-03
		1			0.000	0.000	23.65%					1.88E-02	1.69E-02	1.47E-02	1.47E-02
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	4.63E-03	4.16E-03	3.62E-03	3.62E-03	9.27E-07	8.31E-07	7.23E-07	7.23E-07
		20			0.000	0.000	0.04%					1.85E-06	1.66E-06	1.45E-06	1.45E-06
		10			0.000	0.000	0.74%					3.43E-05	3.08E-05	2.68E-05	2.68E-05
		9			0.000	0.000	1.05%					4.86E-05	4.36E-05	3.80E-05	3.80E-05
		8			0.000	0.000	1.85%					8.57E-05	7.69E-05	6.69E-05	6.69E-05
		7			0.000	0.000	3.35%					1.55E-04	1.39E-04	1.21E-04	1.21E-04
		6			0.000	0.000	5.70%					2.64E-04	2.37E-04	2.06E-04	2.06E-04
		5			0.000	0.000	9.50%					4.40E-04	3.95E-04	3.44E-04	3.44E-04
		4			0.000	0.000	14.10%					6.53E-04	5.86E-04	5.10E-04	5.10E-04
		3			0.000	0.000	18.70%					8.66E-04	7.77E-04	6.76E-04	6.76E-04
		2			0.000	0.000	17.40%					8.06E-04	7.23E-04	6.29E-04	6.29E-04
		1			0.000	0.000	14.35%					6.65E-04	5.97E-04	5.19E-04	5.19E-04
	LOHL	40	0.000	0.000	0.000	0.000	0.30%	4.63E-04	4.16E-04	3.62E-04	3.62E-04	1.39E-06	1.25E-06	1.09E-06	1.09E-06
		20			0.000	0.000	1.25%					5.79E-06	5.20E-06	4.52E-06	4.52E-06
		10			0.000	0.000	3.55%					1.64E-05	1.48E-05	1.28E-05	1.28E-05
		9			0.000	0.000	6.65%					3.08E-05	2.76E-05	2.41E-05	2.41E-05
		8			0.000	0.000	12.60%					5.84E-05	5.24E-05	4.56E-05	4.56E-05
		7			0.000	0.000	16.80%					7.78E-05	6.98E-05	6.08E-05	6.08E-05
		6			0.000	0.000	16.45%					7.62E-05	6.84E-05	5.95E-05	5.95E-05
		5			0.000	0.000	14.35%					6.65E-05	5.97E-05	5.19E-05	5.19E-05
		4			0.000	0.000	10.85%					5.03E-05	4.51E-05	3.92E-05	3.92E-05
		3			0.000	0.000	7.65%					3.54E-05	3.18E-05	2.77E-05	2.77E-05
		2			0.000	0.000	4.85%					2.25E-05	2.02E-05	1.75E-05	1.75E-05
		1			0.000	0.000	2.80%					1.30E-05	1.16E-05	1.01E-05	1.01E-05
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	2.16E-02	1.94E-02	1.69E-02	1.69E-02	2.16E-06	1.94E-06	1.69E-06	1.69E-06
		20			0.000	0.000	0.02%					4.32E-06	3.87E-06	3.37E-06	3.37E-06
		10			0.000	0.000	0.32%					6.91E-05	6.20E-05	5.39E-05	5.39E-05
		9			0.000	0.000	0.40%					8.63E-05	7.75E-05	6.74E-05	6.74E-05
		8			0.000	0.000	0.70%					1.51E-04	1.36E-04	1.18E-04	1.18E-04
		7			0.000	0.000	1.20%					2.59E-04	2.32E-04	2.02E-04	2.02E-04
		6			0.000	0.000	1.95%					4.21E-04	3.78E-04	3.29E-04	3.29E-04
		5			0.000	0.000	3.40%					7.34E-04	6.59E-04	5.73E-04	5.73E-04
		4			0.000	0.000	5.55%					1.20E-03	1.08E-03	9.35E-04	9.35E-04
		3			0.000	0.000	8.50%					1.83E-03	1.65E-03	1.43E-03	1.43E-03
		2			0.000	0.000	14.20%					3.07E-03	2.75E-03	2.39E-03	2.39E-03
		1			0.000	0.000	23.65%					5.11E-03	4.58E-03	3.99E-03	3.99E-03
	MCDF	40	0.000	0.000	0.000	0.000	0.02%	6.70E-03	6.01E-03	5.23E-03	5.23E-03	1.34E-06	1.20E-06	1.05E-06	1.05E-06
		20			0.000	0.000	0.04%					2.68E-06	2.40E-06	2.09E-06	2.09E-06
		10			0.000	0.000	0.74%					4.96E-05	4.45E-05	3.87E-05	3.87E-05
		9			0.000	0.000	1.05%					7.03E-05	6.31E-05	5.49E-05	5.49E-05
		8			0.000	0.000	1.85%					1.24E-04	1.11E-04	9.68E-05	9.68E-05
		7			0.000	0.000	3.35%					2.24E-04	2.01E-04	1.75E-04	1.75E-04
		6			0.000	0.000	5.70%					3.82E-04	3.43E-04	2.98E-04	2.98E-04
		5			0.000	0.000	9.50%					6.36E-04	5.71E-04	4.97E-04	4.97E-04
		4			0.000	0.000	14.10%					9.45E-04	8.48E-04	7.38E-04	7.38E-04
		3			0.000	0.000	18.70%					1.25E-03	1.12E-03	9.78E-04	9.78E-04
		2			0.000	0.000	17.40%					1.17E-03	1.05E-03	9.10E-04	9.10E-04
		1			0.000	0.000	14.35%					9.61E-04	8.63E-04	7.51E-04	7.51E-04
	LCDF	40	0.007	0.000	0.297	0.000	0.30%	4.47E-03	4.01E-03	3.49E-03	3.49E-03	1.34E-05	1.20E-05	1.05E-05	1.05E-05
		20			0.149	0.000	1.25%					5.58E-05	5.01E-05	4.36E-05	4.36E-05
		10			0.074	0.000	3.55%					1.59E-04	1.42E-04	1.24E-04	1.24E-04
		9			0.067	0.000	6.65%					2.97E-04	2.67E-04	2.32E-04	2.32E-04
		8			0.059	0.000	12.60%					5.63E-04	5.05E-04	4.39E-04	4.39E-04
		7			0.052	0.000	16.80%					7.50E-04	6.73E-04	5.86E-04	5.86E-04
		6			0.045	0.000	16.45%					7.35E-04	6.59E-04	5.74E-04	5.74E-04
		5			0.037	0.000	14.35%					6.41E-04	5.75E-04	5.00E-04	5.00E-04
		4			0.030	0.000	10.85%					4.85E-04	4.35E-04	3.78E-04	3.78E-04
		3			0.022	0.000	7.65%					3.42E-04	3.07E-04	2.67E-04	2.67E-04
		2			0.015	0.000	4.85%					2.17E-04	1.94E-04	1.69E-04	1.69E-04
		1			0.007	0.000	2.80%					1.25E-04	1.12E-04	9.76E-05	9.76E-05
7f	SOHL	40	0.000	0.000	0.000	0.000	0.01%	4.46E-03	1.96E-03	1.59E-03	1.59E-03	4.46E-07	1.96E-07	1.59E-07	1.59E-07
		20			0.000	0.000	0.02%					8.93E-07	3.93E-07	3.19E-07	3.19E-07
		10			0.000	0.000	0.32%					1.43E-05	6.28E-06	5.10E-06	5.10E-06
		9			0.000	0.000	0.40%					1.79E-05	7.85E-06	6.38E-06	6.38E-06
		8			0.000	0.000	0.70%					3.12E-05	1.37E-05	1.12E-05	1.12E-05
		7			0.000	0.000	1.20%					5.36E-05	2.36E-05	1.91E-05	1.91E-05
		6			0.000	0.000	1.95%					8.70E-05	3.83E-05	3.11E-05	3.11E-05
		5			0.000	0.000	3.40%					1.52E-04	6.68E-05	5.42E-05	5.42E-05
		4			0.000	0.000	5.55%					2.48E-04	1.09E-04	8.85E-05	8.85E-05
		3			0.000	0.000	8.50%					3.79E-04	1.67E-04	1.36E-04	1.36E-04
		2			0.000	0.000	14.20%					6.34E-04	2.79E-04	2.26E-04	2.26E-04
		1			0.000	0.000	23.65%					1.06E-03	4.64E-04	3.77E-04	3.77E-04

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 13 of 15)

1/F residential flats at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7c, 7e, 7f, 7i, 7j, 7k (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7f	MOHL	40	0.000	0.000	0.000	0.000	0.02%	2.60E-04	1.14E-04	9.29E-05	9.29E-05	5.20E-08	2.29E-08	1.86E-08	1.86E-08
		20			0.000	0.000	0.04%					1.04E-07	4.57E-08	3.71E-08	3.71E-08
		10			0.000	0.000	0.74%					1.92E-06	8.46E-07	6.87E-07	6.87E-07
		9			0.000	0.000	1.05%					2.73E-06	1.20E-06	9.75E-07	9.75E-07
		8			0.000	0.000	1.85%					4.81E-06	2.12E-06	1.72E-06	1.72E-06
		7			0.000	0.000	3.35%					8.71E-06	3.83E-06	3.11E-06	3.11E-06
		6			0.000	0.000	5.70%					1.48E-05	6.52E-06	5.29E-06	5.29E-06
		5			0.000	0.000	9.50%					2.47E-05	1.09E-05	8.82E-06	8.82E-06
		4			0.000	0.000	14.10%					3.67E-05	1.61E-05	1.31E-05	1.31E-05
		3			0.000	0.000	18.70%					4.86E-05	2.14E-05	1.74E-05	1.74E-05
		2			0.000	0.000	17.40%					4.52E-05	1.99E-05	1.62E-05	1.62E-05
		1			0.000	0.000	14.35%					3.73E-05	1.64E-05	1.33E-05	1.33E-05
	LOHL	40	0.000	0.000	0.000	0.000	0.30%	2.60E-05	1.14E-05	9.29E-06	9.29E-06	7.80E-08	3.43E-08	2.79E-08	2.79E-08
		20			0.000	0.000	1.25%					3.25E-07	1.43E-07	1.16E-07	1.16E-07
		10			0.000	0.000	3.55%					9.23E-07	4.06E-07	3.30E-07	3.30E-07
		9			0.000	0.000	6.65%					1.73E-06	7.61E-07	6.18E-07	6.18E-07
		8			0.000	0.000	12.60%					3.28E-06	1.44E-06	1.17E-06	1.17E-06
		7			0.000	0.000	16.80%					4.37E-06	1.92E-06	1.56E-06	1.56E-06
		6			0.000	0.000	16.45%					4.28E-06	1.88E-06	1.53E-06	1.53E-06
		5			0.000	0.000	14.35%					3.73E-06	1.64E-06	1.33E-06	1.33E-06
		4			0.000	0.000	10.85%					2.82E-06	1.24E-06	1.01E-06	1.01E-06
		3			0.000	0.000	7.65%					1.99E-06	8.75E-07	7.10E-07	7.10E-07
		2			0.000	0.000	4.85%					1.26E-06	5.55E-07	4.50E-07	4.50E-07
		1			0.000	0.000	2.80%					7.28E-07	3.20E-07	2.60E-07	2.60E-07
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	1.66E-03	7.28E-04	5.91E-04	5.91E-04	1.66E-07	7.28E-08	5.91E-08	5.91E-08
		20			0.000	0.000	0.02%					3.31E-07	1.46E-07	1.18E-07	1.18E-07
		10			0.000	0.000	0.32%					5.30E-06	2.33E-06	1.89E-06	1.89E-06
		9			0.000	0.000	0.40%					6.62E-06	2.91E-06	2.37E-06	2.37E-06
		8			0.000	0.000	0.70%					1.16E-05	5.10E-06	4.14E-06	4.14E-06
		7			0.000	0.000	1.20%					1.99E-05	8.74E-06	7.10E-06	7.10E-06
		6			0.000	0.000	1.95%					3.23E-05	1.42E-05	1.15E-05	1.15E-05
		5			0.000	0.000	3.40%					5.63E-05	2.48E-05	2.01E-05	2.01E-05
		4			0.000	0.000	5.55%					9.19E-05	4.04E-05	3.28E-05	3.28E-05
		3			0.000	0.000	8.50%					1.41E-04	6.19E-05	5.03E-05	5.03E-05
		2			0.000	0.000	14.20%					2.35E-04	1.03E-04	8.40E-05	8.40E-05
		1			0.000	0.000	23.65%					3.92E-04	1.72E-04	1.40E-04	1.40E-04
	MCDF	40	0.000	0.000	0.000	0.000	0.02%	5.14E-04	2.26E-04	1.84E-04	1.84E-04	1.03E-07	4.52E-08	3.67E-08	3.67E-08
		20			0.000	0.000	0.04%					2.06E-07	9.04E-08	7.34E-08	7.34E-08
		10			0.000	0.000	0.74%					3.80E-06	1.67E-06	1.36E-06	1.36E-06
		9			0.000	0.000	1.05%					5.40E-06	2.37E-06	1.93E-06	1.93E-06
		8			0.000	0.000	1.85%					9.51E-06	4.18E-06	3.40E-06	3.40E-06
		7			0.000	0.000	3.35%					1.72E-05	7.57E-06	6.15E-06	6.15E-06
		6			0.000	0.000	5.70%					2.93E-05	1.29E-05	1.05E-05	1.05E-05
		5			0.000	0.000	9.50%					4.88E-05	2.15E-05	1.74E-05	1.74E-05
		4			0.000	0.000	14.10%					7.25E-05	3.19E-05	2.59E-05	2.59E-05
		3			0.000	0.000	18.70%					9.61E-05	4.23E-05	3.43E-05	3.43E-05
		2			0.000	0.000	17.40%					8.94E-05	3.93E-05	3.19E-05	3.19E-05
		1			0.000	0.000	14.35%					7.37E-05	3.24E-05	2.63E-05	2.63E-05
	LCDF	40	0.007	0.000	0.297	0.000	0.30%	3.43E-04	1.51E-04	1.22E-04	1.22E-04	1.03E-06	4.52E-07	3.67E-07	3.67E-07
		20			0.149	0.000	1.25%					4.28E-06	1.88E-06	1.53E-06	1.53E-06
		10			0.074	0.000	3.55%					1.22E-05	5.35E-06	4.34E-06	4.34E-06
		9			0.067	0.000	6.65%					2.28E-05	1.00E-05	8.14E-06	8.14E-06
		8			0.059	0.000	12.60%					4.32E-05	1.90E-05	1.54E-05	1.54E-05
		7			0.052	0.000	16.80%					5.76E-05	2.53E-05	2.06E-05	2.06E-05
		6			0.045	0.000	16.45%					5.64E-05	2.48E-05	2.01E-05	2.01E-05
		5			0.037	0.000	14.35%					4.92E-05	2.16E-05	1.76E-05	1.76E-05
		4			0.030	0.000	10.85%					3.72E-05	1.64E-05	1.33E-05	1.33E-05
		3			0.022	0.000	7.65%					2.62E-05	1.15E-05	9.36E-06	9.36E-06
		2			0.015	0.000	4.85%					1.66E-05	7.31E-06	5.93E-06	5.93E-06
		1			0.007	0.000	2.80%					9.59E-06	4.22E-06	3.43E-06	3.43E-06
7g	SOHL	40	0.000	0.000	0.000	0.000	0.01%	2.49E-05	2.49E-05	2.49E-05	2.49E-05	2.49E-09	2.49E-09	2.49E-09	2.49E-09
		20			0.000	0.000	0.02%					4.97E-09	4.97E-09	4.97E-09	4.97E-09
		10			0.000	0.000	0.32%					7.95E-08	7.95E-08	7.95E-08	7.95E-08
		9			0.000	0.000	0.40%					9.94E-08	9.94E-08	9.94E-08	9.94E-08
		8			0.000	0.000	0.70%					1.74E-07	1.74E-07	1.74E-07	1.74E-07
		7			0.000	0.000	1.20%					2.98E-07	2.98E-07	2.98E-07	2.98E-07
		6			0.000	0.000	1.95%					4.85E-07	4.85E-07	4.85E-07	4.85E-07
		5			0.000	0.000	3.40%					8.45E-07	8.45E-07	8.45E-07	8.45E-07
		4			0.000	0.000	5.55%					1.38E-06	1.38E-06	1.38E-06	1.38E-06
		3			0.000	0.000	8.50%					2.11E-06	2.11E-06	2.11E-06	2.11E-06
		2			0.000	0.000	14.20%					3.53E-06	3.53E-06	3.53E-06	3.53E-06
		1			0.000	0.000	23.65%					5.88E-06	5.88E-06	5.88E-06	5.88E-06
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	1.45E-06	1.45E-06	1.45E-06	1.45E-06	2.90E-10	2.90E-10	2.90E-10	2.90E-10
		20			0.000	0.000	0.04%					5.79E-10	5.79E-10	5.79E-10	5.79E-10
		10			0.000	0.000	0.74%					1.07E-08	1.07E-08	1.07E-08	1.07E-08
		9			0.000	0.000	1.05%					1.52E-08	1.52E-08	1.52E-08	1.52E-08
		8			0.000	0.000	1.85%					2.68E-08	2.68E-08	2.68E-08	2.68E-08
		7			0.000	0.000	3.35%					4.85E-08	4.85E-08	4.85E-08	4.85E-08
		6			0.000	0.000	5.70%					8.25E-08	8.25E-08	8.25E-08	8.25E-08
		5			0.000	0.000	9.50%					1.38E-07	1.38E-07	1.38E-07	1.38E-07
		4			0.000	0.000	14.10%					2.04E-07	2.04E-07	2.04E-07	2.04E-07
		3			0.000	0.000	18.70%					2.71E-07	2.71E-07	2.71E-07	2.71E-07
		2			0.000	0.000	17.40%					2.52E-07	2.52E-07	2.52E-07	2.52E-07
		1			0.000	0.000	14.35%					2.08E-07	2.08E-07	2.08E-07	2.08E-07
	LOHL	40	0.007	0.007	0.297	0.297	0.30%	1.45E-07	1.45E-07	1.45E-07	1.45E-07	4.34E-10	4.34E-10	4.34E-10	4.34E-10
		20			0.149	0.149	1.25%					1.81E-09	1.81E-09	1.81E-09	1.81E-09
		10			0.074	0.074	3.55%					5.14E-09	5.14E-09	5.14E-09	5.14E-09
		9			0.067	0.067	6.65%					9.63E-09	9.63E-09	9.63E-09	9.63E-09
		8			0.059	0.059	12.60%					1.82E-08	1.82E-08	1.82E-08	1.82E-08
		7			0.052	0.052	16.80%					2.43E-08	2.43E-08	2.43E-08	2.43E-08
		6			0.045	0.045	16.45%					2.38E-08	2.38E-08	2.38E-08	2.38E-08
		5			0.037	0.037	14.35%					2.08E-08	2.08E-08	2.08E-08	2.08E-08
		4			0.030	0.030	10.85%					1.57E-08	1.57E-08	1.57E-08	1.57E-08
		3			0.022	0.022	7.65%					1.11E-08	1.11E-08	1.11E-08	1.11E-08
		2			0.015	0.015	4.85%					7.02E-09	7.02E-09	7.02E-09	7.02E-09
		1			0.007	0.007	2.80%					4.05E-09	4.05E-09	4.05E-09	4.05E-09

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 14 of 15)

1/F residential flats at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7c, 7e, 7f, 7i, 7j, 7k (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7i	SOHL	40	0.000	0.000	0.000	0.000	0.01%	5.36E-02	5.36E-02	2.15E-02	2.15E-02	5.36E-06	5.36E-06	2.15E-06	2.15E-06
		20			0.000	0.000	0.02%					1.07E-05	1.07E-05	4.29E-06	4.29E-06
		10			0.000	0.000	0.32%					1.71E-04	1.71E-04	6.87E-05	6.87E-05
		9			0.000	0.000	0.40%					2.14E-04	2.14E-04	8.58E-05	8.58E-05
		8			0.000	0.000	0.70%					3.75E-04	3.75E-04	1.50E-04	1.50E-04
		7			0.000	0.000	1.20%					6.43E-04	6.43E-04	2.58E-04	2.58E-04
		6			0.000	0.000	1.95%					1.04E-03	1.04E-03	4.18E-04	4.18E-04
		5			0.000	0.000	3.40%					1.82E-03	1.82E-03	7.30E-04	7.30E-04
		4			0.000	0.000	5.55%					2.97E-03	2.97E-03	1.19E-03	1.19E-03
		3			0.000	0.000	8.50%					4.55E-03	4.55E-03	1.82E-03	1.82E-03
		2			0.000	0.000	14.20%					7.61E-03	7.61E-03	3.05E-03	3.05E-03
		1			0.000	0.000	23.65%					1.27E-02	1.27E-02	5.07E-03	5.07E-03
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	3.12E-03	3.12E-03	1.25E-03	1.25E-03	6.24E-07	6.24E-07	2.50E-07	2.50E-07
		20			0.000	0.000	0.04%					1.25E-06	1.25E-06	5.00E-07	5.00E-07
		10			0.000	0.000	0.74%					2.31E-05	2.31E-05	9.25E-06	9.25E-06
		9			0.000	0.000	1.05%					3.28E-05	3.28E-05	1.31E-05	1.31E-05
		8			0.000	0.000	1.85%					5.77E-05	5.77E-05	2.31E-05	2.31E-05
		7			0.000	0.000	3.35%					1.05E-04	1.05E-04	4.19E-05	4.19E-05
		6			0.000	0.000	5.70%					1.78E-04	1.78E-04	7.13E-05	7.13E-05
		5			0.000	0.000	9.50%					2.96E-04	2.96E-04	1.19E-04	1.19E-04
		4			0.000	0.000	14.10%					4.40E-04	4.40E-04	1.76E-04	1.76E-04
		3			0.000	0.000	18.70%					5.84E-04	5.84E-04	2.34E-04	2.34E-04
		2			0.000	0.000	17.40%					5.43E-04	5.43E-04	2.18E-04	2.18E-04
		1			0.000	0.000	14.35%					4.48E-04	4.48E-04	1.79E-04	1.79E-04
	LOHL	40	0.000	0.000	0.000	0.000	0.30%	3.12E-04	3.12E-04	1.25E-04	1.25E-04	9.36E-07	9.36E-07	3.75E-07	3.75E-07
		20			0.000	0.000	1.25%					3.90E-06	3.90E-06	1.56E-06	1.56E-06
		10			0.000	0.000	3.55%					1.11E-05	1.11E-05	4.44E-06	4.44E-06
		9			0.000	0.000	6.65%					2.08E-05	2.08E-05	8.31E-06	8.31E-06
		8			0.000	0.000	12.60%					3.93E-05	3.93E-05	1.58E-05	1.58E-05
		7			0.000	0.000	16.80%					5.24E-05	5.24E-05	2.10E-05	2.10E-05
		6			0.000	0.000	16.45%					5.13E-05	5.13E-05	2.06E-05	2.06E-05
		5			0.000	0.000	14.35%					4.48E-05	4.48E-05	1.79E-05	1.79E-05
		4			0.000	0.000	10.85%					3.39E-05	3.39E-05	1.36E-05	1.36E-05
		3			0.000	0.000	7.65%					2.39E-05	2.39E-05	9.56E-06	9.56E-06
		2			0.000	0.000	4.85%					1.51E-05	1.51E-05	6.06E-06	6.06E-06
		1			0.000	0.000	2.80%					8.74E-06	8.74E-06	3.50E-06	3.50E-06
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	1.46E-02	1.46E-02	5.85E-03	5.85E-03	1.46E-06	1.46E-06	5.85E-07	5.85E-07
		20			0.000	0.000	0.02%					2.92E-06	2.92E-06	1.17E-06	1.17E-06
		10			0.000	0.000	0.32%					4.67E-05	4.67E-05	1.87E-05	1.87E-05
		9			0.000	0.000	0.40%					5.84E-05	5.84E-05	2.34E-05	2.34E-05
		8			0.000	0.000	0.70%					1.02E-04	1.02E-04	4.09E-05	4.09E-05
		7			0.000	0.000	1.20%					1.75E-04	1.75E-04	7.02E-05	7.02E-05
		6			0.000	0.000	1.95%					2.85E-04	2.85E-04	1.14E-04	1.14E-04
		5			0.000	0.000	3.40%					4.96E-04	4.96E-04	1.99E-04	1.99E-04
		4			0.000	0.000	5.55%					8.10E-04	8.10E-04	3.24E-04	3.24E-04
		3			0.000	0.000	8.50%					1.24E-03	1.24E-03	4.97E-04	4.97E-04
		2			0.000	0.000	14.20%					2.07E-03	2.07E-03	8.30E-04	8.30E-04
		1			0.000	0.000	23.65%					3.45E-03	3.45E-03	1.38E-03	1.38E-03
	MCDF	40	0.000	0.000	0.000	0.000	0.02%	4.53E-03	4.53E-03	1.81E-03	1.81E-03	9.06E-07	9.06E-07	3.63E-07	3.63E-07
		20			0.000	0.000	0.04%					1.81E-06	1.81E-06	7.26E-07	7.26E-07
		10			0.000	0.000	0.74%					3.35E-05	3.35E-05	1.34E-05	1.34E-05
		9			0.000	0.000	1.05%					4.76E-05	4.76E-05	1.91E-05	1.91E-05
		8			0.000	0.000	1.85%					8.38E-05	8.38E-05	3.36E-05	3.36E-05
		7			0.000	0.000	3.35%					1.52E-04	1.52E-04	6.08E-05	6.08E-05
		6			0.000	0.000	5.70%					2.58E-04	2.58E-04	1.03E-04	1.03E-04
		5			0.000	0.000	9.50%					4.30E-04	4.30E-04	1.72E-04	1.72E-04
		4			0.000	0.000	14.10%					6.39E-04	6.39E-04	2.56E-04	2.56E-04
		3			0.000	0.000	18.70%					8.47E-04	8.47E-04	3.39E-04	3.39E-04
		2			0.000	0.000	17.40%					7.88E-04	7.88E-04	3.16E-04	3.16E-04
		1			0.000	0.000	14.35%					6.50E-04	6.50E-04	2.60E-04	2.60E-04
	LCDF	40	0.007	0.000	0.297	0.000	0.30%	3.02E-03	3.02E-03	1.21E-03	1.21E-03	9.06E-06	9.06E-06	3.63E-06	3.63E-06
		20			0.149	0.000	1.25%					3.77E-05	3.77E-05	1.51E-05	1.51E-05
		10			0.074	0.000	3.55%					1.07E-04	1.07E-04	4.29E-05	4.29E-05
		9			0.067	0.000	6.65%					2.01E-04	2.01E-04	8.04E-05	8.04E-05
		8			0.059	0.000	12.60%					3.80E-04	3.80E-04	1.52E-04	1.52E-04
		7			0.052	0.000	16.80%					5.07E-04	5.07E-04	2.03E-04	2.03E-04
		6			0.045	0.000	16.45%					4.97E-04	4.97E-04	1.99E-04	1.99E-04
		5			0.037	0.000	14.35%					4.33E-04	4.33E-04	1.74E-04	1.74E-04
		4			0.030	0.000	10.85%					3.28E-04	3.28E-04	1.31E-04	1.31E-04
		3			0.022	0.000	7.65%					2.31E-04	2.31E-04	9.25E-05	9.25E-05
		2			0.015	0.000	4.85%					1.46E-04	1.46E-04	5.87E-05	5.87E-05
		1			0.007	0.000	2.80%					8.45E-05	8.45E-05	3.39E-05	3.39E-05
7j	SOHL	40	0.000	0.000	0.000	0.000	0.01%	5.96E-02	5.96E-02	5.96E-05	5.96E-05	5.96E-06	5.96E-06	5.96E-09	5.96E-09
		20			0.000	0.000	0.02%					1.19E-05	1.19E-05	1.19E-08	1.19E-08
		10			0.000	0.000	0.32%					1.91E-04	1.91E-04	1.91E-07	1.91E-07
		9			0.000	0.000	0.40%					2.38E-04	2.38E-04	2.38E-07	2.38E-07
		8			0.000	0.000	0.70%					4.17E-04	4.17E-04	4.17E-07	4.17E-07
		7			0.000	0.000	1.20%					7.15E-04	7.15E-04	7.15E-07	7.15E-07
		6			0.000	0.000	1.95%					1.16E-03	1.16E-03	1.16E-06	1.16E-06
		5			0.000	0.000	3.40%					2.03E-03	2.03E-03	2.03E-06	2.03E-06
		4			0.000	0.000	5.55%					3.31E-03	3.31E-03	3.31E-06	3.31E-06
		3			0.000	0.000	8.50%					5.06E-03	5.06E-03	5.06E-06	5.06E-06
		2			0.000	0.000	14.20%					8.46E-03	8.46E-03	8.46E-06	8.46E-06
		1			0.000	0.000	23.65%					1.41E-02	1.41E-02	1.41E-05	1.41E-05
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	3.47E-03	3.47E-03	3.47E-06	3.47E-06	6.94E-07	6.94E-07	6.94E-10	6.94E-10
		20			0.000	0.000	0.04%					1.39E-06	1.39E-06	1.39E-09	1.39E-09
		10			0.000	0.000	0.74%					2.57E-05	2.57E-05	2.57E-08	2.57E-08
		9			0.000	0.000	1.05%					3.64E-05	3.64E-05	3.64E-08	3.64E-08
		8			0.000	0.000	1.85%					6.42E-05	6.42E-05	6.42E-08	6.42E-08
		7			0.000	0.000	3.35%					1.16E-04	1.16E-04	1.16E-07	1.16E-07
		6			0.000	0.000	5.70%					1.98E-04	1.98E-04	1.98E-07	1.98E-07
		5			0.000	0.000	9.50%					3.30E-04	3.30E-04	3.30E-07	3.30E-07
		4			0.000	0.000	14.10%					4.89E-04	4.89E-04	4.89E-07	4.89E-07
		3			0.000	0.000	18.70%					6.49E-04	6.49E-04	6.49E-07	6.49E-07
		2			0.000	0.000	17.40%					6.04E-04	6.04E-04	6.04E-07	6.04E-07
		1			0.000	0.000	14.35%					4.98E-04	4.98E-04	4.98E-07	4.98E-07

Table C8 - Breakdown the Number of Fatalities for Residential Buildings (Sheet 15 of 15)

1/F residential flats at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7c, 7e, 7f, 7i, 7j, 7k (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7j	LOHL	40	0.000	0.000	0.000	0.000	0.30%	3.47E-04	3.47E-04	3.47E-07	3.47E-07	1.04E-06	1.04E-06	1.04E-09	1.04E-09
		20			0.000	0.000	1.25%					4.34E-06	4.34E-06	4.34E-09	4.34E-09
		10			0.000	0.000	3.55%					1.23E-05	1.23E-05	1.23E-08	1.23E-08
		9			0.000	0.000	6.65%					2.31E-05	2.31E-05	2.31E-08	2.31E-08
		8			0.000	0.000	12.60%					4.37E-05	4.37E-05	4.37E-08	4.37E-08
		7			0.000	0.000	16.80%					5.83E-05	5.83E-05	5.83E-08	5.83E-08
		6			0.000	0.000	16.45%					5.71E-05	5.71E-05	5.71E-08	5.71E-08
		5			0.000	0.000	14.35%					4.98E-05	4.98E-05	4.98E-08	4.98E-08
		4			0.000	0.000	10.85%					3.77E-05	3.77E-05	3.77E-08	3.77E-08
		3			0.000	0.000	7.65%					2.65E-05	2.65E-05	2.65E-08	2.65E-08
		2			0.000	0.000	4.85%					1.68E-05	1.68E-05	1.68E-08	1.68E-08
		1			0.000	0.000	2.80%					9.72E-06	9.72E-06	9.72E-09	9.72E-09
	SCDF	40	0.000	0.000	0.000	0.000	0.01%	6.44E-03	6.44E-03	6.44E-06	6.44E-06	6.44E-07	6.44E-07	6.44E-10	6.44E-10
		20			0.000	0.000	0.02%					1.29E-06	1.29E-06	1.29E-09	1.29E-09
		10			0.000	0.000	0.32%					2.06E-05	2.06E-05	2.06E-08	2.06E-08
		9			0.000	0.000	0.40%					2.58E-05	2.58E-05	2.58E-08	2.58E-08
		8			0.000	0.000	0.70%					4.51E-05	4.51E-05	4.51E-08	4.51E-08
		7			0.000	0.000	1.20%					7.73E-05	7.73E-05	7.73E-08	7.73E-08
		6			0.000	0.000	1.95%					1.26E-04	1.26E-04	1.26E-07	1.26E-07
		5			0.000	0.000	3.40%					2.19E-04	2.19E-04	2.19E-07	2.19E-07
		4			0.000	0.000	5.55%					3.57E-04	3.57E-04	3.57E-07	3.57E-07
		3			0.000	0.000	8.50%					5.47E-04	5.47E-04	5.47E-07	5.47E-07
		2			0.000	0.000	14.20%					9.15E-04	9.15E-04	9.15E-07	9.15E-07
		1			0.000	0.000	23.65%					1.52E-03	1.52E-03	1.52E-06	1.52E-06
	MCDF	40	0.000	0.000	0.000	0.000	0.02%	2.00E-03	2.00E-03	2.00E-06	2.00E-06	4.00E-07	4.00E-07	4.00E-10	4.00E-10
		20			0.000	0.000	0.04%					7.99E-07	7.99E-07	7.99E-10	7.99E-10
		10			0.000	0.000	0.74%					1.48E-05	1.48E-05	1.48E-08	1.48E-08
		9			0.000	0.000	1.05%					2.10E-05	2.10E-05	2.10E-08	2.10E-08
		8			0.000	0.000	1.85%					3.70E-05	3.70E-05	3.70E-08	3.70E-08
		7			0.000	0.000	3.35%					6.70E-05	6.70E-05	6.70E-08	6.70E-08
		6			0.000	0.000	5.70%					1.14E-04	1.14E-04	1.14E-07	1.14E-07
		5			0.000	0.000	9.50%					1.90E-04	1.90E-04	1.90E-07	1.90E-07
		4			0.000	0.000	14.10%					2.82E-04	2.82E-04	2.82E-07	2.82E-07
		3			0.000	0.000	18.70%					3.74E-04	3.74E-04	3.74E-07	3.74E-07
		2			0.000	0.000	17.40%					3.48E-04	3.48E-04	3.48E-07	3.48E-07
		1			0.000	0.000	14.35%					2.87E-04	2.87E-04	2.87E-07	2.87E-07
	LCDF	40	0.007	0.000	0.297	0.000	0.30%	1.33E-03	1.33E-03	1.33E-06	1.33E-06	4.00E-06	4.00E-06	4.00E-09	4.00E-09
		20			0.149	0.000	1.25%					1.67E-05	1.67E-05	1.67E-08	1.67E-08
		10			0.074	0.000	3.55%					4.73E-05	4.73E-05	4.73E-08	4.73E-08
		9			0.067	0.000	6.65%					8.86E-05	8.86E-05	8.86E-08	8.86E-08
		8			0.059	0.000	12.60%					1.68E-04	1.68E-04	1.68E-07	1.68E-07
		7			0.052	0.000	16.80%					2.24E-04	2.24E-04	2.24E-07	2.24E-07
		6			0.045	0.000	16.45%					2.19E-04	2.19E-04	2.19E-07	2.19E-07
		5			0.037	0.000	14.35%					1.91E-04	1.91E-04	1.91E-07	1.91E-07
		4			0.030	0.000	10.85%					1.45E-04	1.45E-04	1.45E-07	1.45E-07
		3			0.022	0.000	7.65%					1.02E-04	1.02E-04	1.02E-07	1.02E-07
		2			0.015	0.000	4.85%					6.46E-05	6.46E-05	6.46E-08	6.46E-08
		1			0.007	0.000	2.80%					3.73E-05	3.73E-05	3.73E-08	3.73E-08
7k	SOHL	40	0.000	0.000	0.000	0.000	0.01%	1.22E-06	1.22E-06	1.22E-06	1.22E-06	1.22E-10	1.22E-10	1.22E-10	1.22E-10
		20			0.000	0.000	0.02%					2.44E-10	2.44E-10	2.44E-10	2.44E-10
		10			0.000	0.000	0.32%					3.90E-09	3.90E-09	3.90E-09	3.90E-09
		9			0.000	0.000	0.40%					4.87E-09	4.87E-09	4.87E-09	4.87E-09
		8			0.000	0.000	0.70%					8.53E-09	8.53E-09	8.53E-09	8.53E-09
		7			0.000	0.000	1.20%					1.46E-08	1.46E-08	1.46E-08	1.46E-08
		6			0.000	0.000	1.95%					2.38E-08	2.38E-08	2.38E-08	2.38E-08
		5			0.000	0.000	3.40%					4.14E-08	4.14E-08	4.14E-08	4.14E-08
		4			0.000	0.000	5.55%					6.76E-08	6.76E-08	6.76E-08	6.76E-08
		3			0.000	0.000	8.50%					1.04E-07	1.04E-07	1.04E-07	1.04E-07
		2			0.000	0.000	14.20%					1.73E-07	1.73E-07	1.73E-07	1.73E-07
		1			0.000	0.000	23.65%					2.88E-07	2.88E-07	2.88E-07	2.88E-07
	MOHL	40	0.000	0.000	0.000	0.000	0.02%	7.10E-08	7.10E-08	7.10E-08	7.10E-08	1.42E-11	1.42E-11	1.42E-11	1.42E-11
		20			0.000	0.000	0.04%					2.84E-11	2.84E-11	2.84E-11	2.84E-11
		10			0.000	0.000	0.74%					5.25E-10	5.25E-10	5.25E-10	5.25E-10
		9			0.000	0.000	1.05%					7.45E-10	7.45E-10	7.45E-10	7.45E-10
		8			0.000	0.000	1.85%					1.31E-09	1.31E-09	1.31E-09	1.31E-09
		7			0.000	0.000	3.35%					2.38E-09	2.38E-09	2.38E-09	2.38E-09
		6			0.000	0.000	5.70%					4.04E-09	4.04E-09	4.04E-09	4.04E-09
		5			0.000	0.000	9.50%					6.74E-09	6.74E-09	6.74E-09	6.74E-09
		4			0.000	0.000	14.10%					1.00E-08	1.00E-08	1.00E-08	1.00E-08
		3			0.000	0.000	18.70%					1.33E-08	1.33E-08	1.33E-08	1.33E-08
		2			0.000	0.000	17.40%					1.23E-08	1.23E-08	1.23E-08	1.23E-08
		1			0.000	0.000	14.35%					1.02E-08	1.02E-08	1.02E-08	1.02E-08
	LOHL	40	0.000	0.000	0.000	0.000	0.30%	7.10E-09	7.10E-09	7.10E-09	7.10E-09	2.13E-11	2.13E-11	2.13E-11	2.13E-11
		20			0.000	0.000	1.25%					8.87E-11	8.87E-11	8.87E-11	8.87E-11
		10			0.000	0.000	3.55%					2.52E-10	2.52E-10	2.52E-10	2.52E-10
		9			0.000	0.000	6.65%					4.72E-10	4.72E-10	4.72E-10	4.72E-10
		8			0.000	0.000	12.60%					8.94E-10	8.94E-10	8.94E-10	8.94E-10
		7			0.000	0.000	16.80%					1.19E-09	1.19E-09	1.19E-09	1.19E-09
		6			0.000	0.000	16.45%					1.17E-09	1.17E-09	1.17E-09	1.17E-09
		5			0.000	0.000	14.35%					1.02E-09	1.02E-09	1.02E-09	1.02E-09
		4			0.000	0.000	10.85%					7.70E-10	7.70E-10	7.70E-10	7.70E-10
		3			0.000	0.000	7.65%					5.43E-10	5.43E-10	5.43E-10	5.43E-10
		2			0.000	0.000	4.85%					3.44E-10	3.44E-10	3.44E-10	3.44E-10
		1			0.000	0.000	2.80%					1.99E-10	1.99E-10	1.99E-10	1.99E-10
											Σ f x N	1.17E-03	4.59E-04	2.94E-04	7.70E-05

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C9 - Breakdown the Number of Fatalities for Guard House

Guardhouse near main entrance at Woodcrest Hill - Affected by Hazard from Sub-area: 6b

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
6b	SOHL	1	0.000	0.000	0.000	0.000	25%	3.90E-06	3.90E-06	3.90E-06	3.90E-06	9.75E-07	9.75E-07	9.75E-07	9.75E-07
	MOHL	1	0.000	0.000	0.000	0.000	50%	2.27E-07	2.27E-07	2.27E-07	2.27E-07	1.95E-06	1.95E-06	1.14E-07	1.95E-06
	LOHL	1	0.053	0.053	0.053	0.053	100%	2.27E-08	2.27E-08	2.27E-08	2.27E-08	2.27E-08	2.27E-08	2.27E-08	2.27E-08
											Σ f x N	1.19E-09	1.19E-09	1.19E-09	1.19E-09

G/F lobby at K.K. Terrace - Affected by Hazard from Sub-area: 7b, 7e, 7f, 7i, 7j,

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7b	SOHL	1	0.000	0.000	0.000	0.000	25%	9.68E-03	1.01E-03	1.01E-03	1.01E-03	2.4.E-03	2.53E-04	2.53E-04	2.53E-04
	MOHL	1	0.000	0.000	0.000	0.000	50%	5.64E-04	5.88E-05	5.88E-05	5.88E-05	2.8.E-04	2.94E-05	2.94E-05	2.94E-05
	LOHL	1	0.053	0.053	0.053	0.053	100%	5.64E-05	5.88E-06	5.88E-06	5.88E-06	5.6.E-05	5.88E-06	5.88E-06	5.88E-06
	SCDF	1	0.000	0.000	0.000	0.000	25%	3.59E-03	3.75E-04	3.75E-04	3.75E-04	9.0.E-04	9.37E-05	9.37E-05	9.37E-05
	MCDF	1	0.053	0.000	0.053	0.000	50%	1.12E-03	1.16E-04	1.16E-04	1.16E-04	5.6.E-04	5.82E-05	5.82E-05	5.82E-05
	LCDF	1	0.183	0.183	0.183	0.183	100%	7.43E-04	7.75E-05	7.75E-05	7.75E-05	7.4.E-04	7.75E-05	7.75E-05	7.75E-05
7e	SOHL	1	0.000	0.000	0.000	0.000	25%	7.95E-02	7.14E-02	6.21E-02	6.21E-02	2.0.E-02	1.78E-02	1.55E-02	1.55E-02
	MOHL	1	0.000	0.000	0.000	0.000	50%	4.63E-03	4.16E-03	3.62E-03	3.62E-03	2.3.E-03	2.08E-03	1.81E-03	1.81E-03
	LOHL	1	0.000	0.000	0.000	0.000	100%	4.63E-04	4.16E-04	3.62E-04	3.62E-04	4.6.E-04	4.16E-04	3.62E-04	3.62E-04
	SCDF	1	0.000	0.000	0.000	0.000	25%	2.16E-02	1.94E-02	1.69E-02	1.69E-02	5.4.E-03	4.84E-03	4.21E-03	4.21E-03
	MCDF	1	0.000	0.000	0.000	0.000	50%	6.70E-03	6.01E-03	5.23E-03	5.23E-03	3.3.E-03	3.01E-03	2.62E-03	2.62E-03
	LCDF	1	0.008	0.000	0.008	0.000	100%	4.47E-03	4.01E-03	3.49E-03	3.49E-03	4.5.E-03	4.01E-03	3.49E-03	3.49E-03
7f	SOHL	1	0.000	0.000	0.000	0.000	25%	4.46E-03	1.96E-03	1.59E-03	1.59E-03	1.1.E-03	4.91E-04	3.99E-04	3.99E-04
	MOHL	1	0.000	0.000	0.000	0.000	50%	2.60E-04	1.14E-04	9.29E-05	9.29E-05	1.3.E-04	5.72E-05	4.64E-05	4.64E-05
	LOHL	1	0.000	0.000	0.000	0.000	100%	2.60E-05	1.14E-05	9.29E-06	9.29E-06	2.6.E-05	1.14E-05	9.29E-06	9.29E-06
	SCDF	1	0.000	0.000	0.000	0.000	25%	1.66E-03	7.28E-04	5.91E-04	5.91E-04	4.1.E-04	1.82E-04	1.48E-04	1.48E-04
	MCDF	1	0.000	0.000	0.000	0.000	50%	5.14E-04	2.26E-04	1.84E-04	1.84E-04	2.6.E-04	1.13E-04	9.18E-05	9.18E-05
	LCDF	1	0.053	0.000	0.053	0.000	100%	3.43E-04	1.51E-04	1.22E-04	1.22E-04	3.4.E-04	1.51E-04	1.22E-04	1.22E-04
7i	SOHL	1	0.000	0.000	0.000	0.000	25%	5.36E-02	5.36E-02	2.15E-02	2.15E-02	1.3.E-02	1.34E-02	5.36E-03	5.36E-03
	MOHL	1	0.000	0.000	0.000	0.000	50%	3.12E-03	3.12E-03	1.25E-03	1.25E-03	1.6.E-03	1.56E-03	6.25E-04	6.25E-04
	LOHL	1	0.000	0.000	0.000	0.000	100%	3.12E-04	3.12E-04	1.25E-04	1.25E-04	3.1.E-04	3.12E-04	1.25E-04	1.25E-04
	SCDF	1	0.000	0.000	0.000	0.000	25%	1.46E-02	1.46E-02	5.85E-03	5.85E-03	3.6.E-03	3.65E-03	1.46E-03	1.46E-03
	MCDF	1	0.000	0.000	0.000	0.000	50%	4.53E-03	4.53E-03	1.81E-03	1.81E-03	2.3.E-03	2.26E-03	9.07E-04	9.07E-04
	LCDF	1	0.008	0.000	0.008	0.000	100%	3.02E-03	3.02E-03	1.21E-03	1.21E-03	3.0.E-03	3.02E-03	1.21E-03	1.21E-03
7j	SOHL	1	0.000	0.000	0.000	0.000	25%	5.96E-02	5.96E-02	5.96E-05	5.96E-05	1.5.E-02	1.49E-02	1.49E-05	1.49E-05
	MOHL	1	0.000	0.000	0.000	0.000	50%	3.47E-03	3.47E-03	3.47E-06	3.47E-06	1.7.E-03	1.74E-03	1.74E-06	1.74E-06
	LOHL	1	0.000	0.000	0.000	0.000	100%	3.47E-04	3.47E-04	3.47E-07	3.47E-07	3.5.E-04	3.47E-04	3.47E-07	3.47E-07
	SCDF	1	0.000	0.000	0.000	0.000	25%	6.44E-03	6.44E-03	6.44E-06	6.44E-06	1.6.E-03	1.61E-03	1.61E-06	1.61E-06
	MCDF	1	0.000	0.000	0.000	0.000	50%	2.00E-03	2.00E-03	2.00E-06	2.00E-06	1.0.E-03	9.99E-04	9.99E-07	9.99E-07
	LCDF	1	0.008	0.000	0.008	0.000	100%	1.33E-03	1.33E-03	1.33E-06	1.33E-06	1.3.E-03	1.33E-03	1.33E-06	1.33E-06
											Σ f x N	2.59E-04	9.44E-05	6.28E-05	1.45E-05

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 1 of 8)

Garages & driveway of Bk. 13-18 at Woodcrest Hill - Affected by Hazard from Sub-area: 1a, 1d

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
1a	SOHL	30	0.000	0.000	0.000	0.000	0.01%	4.48E-05	4.48E-05	4.48E-05	4.48E-05	2.24E-09	2.24E-09	2.24E-09	2.24E-09
		20			0.000	0.000	0.01%					4.48E-09	4.48E-09	4.48E-09	4.48E-09
		10			0.000	0.000	0.02%					6.72E-09	6.72E-09	6.72E-09	6.72E-09
		5			0.000	0.000	0.07%					3.14E-08	3.14E-08	3.14E-08	3.14E-08
		4			0.000	0.000	0.17%					7.62E-08	7.62E-08	7.62E-08	7.62E-08
		3			0.000	0.000	0.34%					1.52E-07	1.52E-07	1.52E-07	1.52E-07
		2			0.000	0.000	0.70%					3.14E-07	3.14E-07	3.14E-07	3.14E-07
		1			0.000	0.000	1.06%					4.75E-07	4.75E-07	4.75E-07	4.75E-07
	MOHL	30	0.146	0.146	4.394	4.394	0.01%	2.61E-06	2.61E-06	2.61E-06	2.61E-06	1.83E-10	1.83E-10	1.83E-10	1.83E-10
		20			2.930	2.930	0.01%					3.39E-10	3.39E-10	3.39E-10	3.39E-10
		10			1.465	1.465	0.02%					5.22E-10	5.22E-10	5.22E-10	5.22E-10
		5			0.732	0.732	0.09%					2.35E-09	2.35E-09	2.35E-09	2.35E-09
		4			0.586	0.586	0.29%					7.57E-09	7.57E-09	7.57E-09	7.57E-09
		3			0.439	0.439	0.44%					1.15E-08	1.15E-08	1.15E-08	1.15E-08
		2			0.293	0.293	0.80%					2.09E-08	2.09E-08	2.09E-08	2.09E-08
		1			0.146	0.146	4.81%					1.26E-07	1.26E-07	1.26E-07	1.26E-07
	LOHL	30	0.436	0.436	13.082	13.082	0.01%	2.61E-07	2.61E-07	2.61E-07	2.61E-07	2.61E-11	2.61E-11	2.61E-11	2.61E-11
		20			8.721	8.721	0.02%					5.22E-11	5.22E-11	5.22E-11	5.22E-11
		10			4.361	4.361	0.04%					1.04E-10	1.04E-10	1.04E-10	1.04E-10
		5			2.180	2.180	0.15%					3.92E-10	3.92E-10	3.92E-10	3.92E-10
		4			1.744	1.744	0.55%					1.44E-09	1.44E-09	1.44E-09	1.44E-09
		3			1.308	1.308	0.95%					2.48E-09	2.48E-09	2.48E-09	2.48E-09
		2			0.872	0.872	1.45%					3.79E-09	3.79E-09	3.79E-09	3.79E-09
		1			0.436	0.436	10.21%					2.67E-08	2.67E-08	2.67E-08	2.67E-08
1d	SOHL	30	0.000	0.000	0.000	0.000	0.01%	9.90E-06	9.90E-06	9.90E-06	9.90E-06	4.95E-10	4.95E-10	4.95E-10	4.95E-10
		20			0.000	0.000	0.01%					9.90E-10	9.90E-10	9.90E-10	9.90E-10
		10			0.000	0.000	0.02%					1.48E-09	1.48E-09	1.48E-09	1.48E-09
		5			0.000	0.000	0.07%					6.93E-09	6.93E-09	6.93E-09	6.93E-09
		4			0.000	0.000	0.17%					1.68E-08	1.68E-08	1.68E-08	1.68E-08
		3			0.000	0.000	0.34%					3.37E-08	3.37E-08	3.37E-08	3.37E-08
		2			0.000	0.000	0.70%					6.93E-08	6.93E-08	6.93E-08	6.93E-08
		1			0.000	0.000	1.06%					1.05E-07	1.05E-07	1.05E-07	1.05E-07
	MOHL	30	0.007	0.007	0.198	0.198	0.01%	5.77E-07	5.77E-07	5.77E-07	5.77E-07	4.04E-11	4.04E-11	4.04E-11	4.04E-11
		20			0.132	0.132	0.01%					7.50E-11	7.50E-11	7.50E-11	7.50E-11
		10			0.066	0.066	0.02%					1.15E-10	1.15E-10	1.15E-10	1.15E-10
		5			0.033	0.033	0.09%					5.19E-10	5.19E-10	5.19E-10	5.19E-10
		4			0.026	0.026	0.29%					1.67E-09	1.67E-09	1.67E-09	1.67E-09
		3			0.020	0.020	0.44%					2.54E-09	2.54E-09	2.54E-09	2.54E-09
		2			0.013	0.013	0.80%					4.61E-09	4.61E-09	4.61E-09	4.61E-09
		1			0.007	0.007	4.81%					2.77E-08	2.77E-08	2.77E-08	2.77E-08
	LOHL	30	0.183	0.183	5.493	5.493	0.01%	5.77E-08	5.77E-08	5.77E-08	5.77E-08	5.77E-12	5.77E-12	5.77E-12	5.77E-12
		20			3.662	3.662	0.02%					1.15E-11	1.15E-11	1.15E-11	1.15E-11
		10			1.831	1.831	0.04%					2.31E-11	2.31E-11	2.31E-11	2.31E-11
		5			0.916	0.916	0.15%					8.65E-11	8.65E-11	8.65E-11	8.65E-11
		4			0.732	0.732	0.55%					3.17E-10	3.17E-10	3.17E-10	3.17E-10
		3			0.549	0.549	0.95%					5.48E-10	5.48E-10	5.48E-10	5.48E-10
		2			0.366	0.366	1.45%					8.36E-10	8.36E-10	8.36E-10	8.36E-10
		1			0.183	0.183	10.21%					5.89E-09	5.89E-09	5.89E-09	5.89E-09
											Σ f x N	6.36E-08	6.36E-08	6.36E-08	6.36E-08

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 2 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
1b	SOHL	30	0.000	0.000	0.000	0.000	0.01%	9.94E-03	9.94E-03	9.94E-03	9.94E-03	4.97E-07	4.97E-07	4.97E-07	4.97E-07
		20			0.000	0.000	0.01%					9.94E-07	9.94E-07	9.94E-07	9.94E-07
		10			0.000	0.000	0.02%					1.49E-06	1.49E-06	1.49E-06	1.49E-06
		5			0.000	0.000	0.07%					6.96E-06	6.96E-06	6.96E-06	6.96E-06
		4			0.000	0.000	0.17%					1.69E-05	1.69E-05	1.69E-05	1.69E-05
		3			0.000	0.000	0.34%					3.38E-05	3.38E-05	3.38E-05	3.38E-05
		2			0.000	0.000	0.70%					6.96E-05	6.96E-05	6.96E-05	6.96E-05
		1			0.000	0.000	1.06%					1.05E-04	1.05E-04	1.05E-04	1.05E-04
	MOHL	30	0.042	0.042	1.261	1.261	0.01%	5.79E-04	5.79E-04	5.79E-04	5.79E-04	4.05E-08	4.05E-08	4.05E-08	4.05E-08
		20			0.841	0.841	0.01%					7.52E-08	7.52E-08	7.52E-08	7.52E-08
		10			0.420	0.420	0.02%					1.16E-07	1.16E-07	1.16E-07	1.16E-07
		5			0.210	0.210	0.09%					5.21E-07	5.21E-07	5.21E-07	5.21E-07
		4			0.168	0.168	0.29%					1.68E-06	1.68E-06	1.68E-06	1.68E-06
		3			0.126	0.126	0.44%					2.55E-06	2.55E-06	2.55E-06	2.55E-06
		2			0.084	0.084	0.80%					4.63E-06	4.63E-06	4.63E-06	4.63E-06
		1			0.042	0.042	4.81%					2.78E-05	2.78E-05	2.78E-05	2.78E-05
	LOHL	30	0.183	0.183	5.493	5.493	0.01%	5.79E-05	5.79E-05	5.79E-05	5.79E-05	5.79E-09	5.79E-09	5.79E-09	5.79E-09
		20			3.662	3.662	0.02%					1.16E-08	1.16E-08	1.16E-08	1.16E-08
		10			1.831	1.831	0.04%					2.32E-08	2.32E-08	2.32E-08	2.32E-08
		5			0.916	0.916	0.15%					8.68E-08	8.68E-08	8.68E-08	8.68E-08
		4			0.732	0.732	0.55%					3.18E-07	3.18E-07	3.18E-07	3.18E-07
		3			0.549	0.549	0.95%					5.50E-07	5.50E-07	5.50E-07	5.50E-07
		2			0.366	0.366	1.45%					8.39E-07	8.39E-07	8.39E-07	8.39E-07
		1			0.183	0.183	10.21%					5.91E-06	5.91E-06	5.91E-06	5.91E-06
1e	SOHL	30	0.000	0.000	0.000	0.000	0.01%	3.45E-05	3.45E-05	3.45E-05	3.45E-05	1.73E-09	1.73E-09	1.73E-09	1.73E-09
		20			0.000	0.000	0.01%					3.45E-09	3.45E-09	3.45E-09	3.45E-09
		10			0.000	0.000	0.02%					5.18E-09	5.18E-09	5.18E-09	5.18E-09
		5			0.000	0.000	0.07%					2.42E-08	2.42E-08	2.42E-08	2.42E-08
		4			0.000	0.000	0.17%					5.87E-08	5.87E-08	5.87E-08	5.87E-08
		3			0.000	0.000	0.34%					1.17E-07	1.17E-07	1.17E-07	1.17E-07
		2			0.000	0.000	0.70%					2.42E-07	2.42E-07	2.42E-07	2.42E-07
		1			0.000	0.000	1.06%					3.66E-07	3.66E-07	3.66E-07	3.66E-07
	MOHL	30	0.007	0.007	0.198	0.198	0.01%	2.01E-06	2.01E-06	2.01E-06	2.01E-06	1.41E-10	1.41E-10	1.41E-10	1.41E-10
		20			0.132	0.132	0.01%					2.62E-10	2.62E-10	2.62E-10	2.62E-10
		10			0.066	0.066	0.02%					4.02E-10	4.02E-10	4.02E-10	4.02E-10
		5			0.033	0.033	0.09%					1.81E-09	1.81E-09	1.81E-09	1.81E-09
		4			0.026	0.026	0.29%					5.83E-09	5.83E-09	5.83E-09	5.83E-09
		3			0.020	0.020	0.44%					8.85E-09	8.85E-09	8.85E-09	8.85E-09
		2			0.013	0.013	0.80%					1.61E-08	1.61E-08	1.61E-08	1.61E-08
		1			0.007	0.007	4.81%					9.68E-08	9.68E-08	9.68E-08	9.68E-08
	LOHL	30	0.053	0.053	1.577	1.577	0.01%	2.01E-07	2.01E-07	2.01E-07	2.01E-07	2.01E-11	2.01E-11	2.01E-11	2.01E-11
		20			1.051	1.051	0.02%					4.02E-11	4.02E-11	4.02E-11	4.02E-11
		10			0.526	0.526	0.04%					8.05E-11	8.05E-11	8.05E-11	8.05E-11
		5			0.263	0.263	0.15%					3.02E-10	3.02E-10	3.02E-10	3.02E-10
		4			0.210	0.210	0.55%					1.11E-09	1.11E-09	1.11E-09	1.11E-09
		3			0.158	0.158	0.95%					1.91E-09	1.91E-09	1.91E-09	1.91E-09
		2			0.105	0.105	1.45%					2.92E-09	2.92E-09	2.92E-09	2.92E-09
		1			0.053	0.053	10.21%					2.05E-08	2.05E-08	2.05E-08	2.05E-08
2a	LOHL	30	0.008	0.008	0.248	0.248	0.01%	1.31E-05	1.31E-05	1.31E-05	1.31E-05	1.31E-09	1.31E-09	1.31E-09	1.31E-09
		20			0.165	0.165	0.02%					2.62E-09	2.62E-09	2.62E-09	2.62E-09
		10			0.083	0.083	0.04%					5.23E-09	5.23E-09	5.23E-09	5.23E-09
		5			0.041	0.041	0.15%					1.96E-08	1.96E-08	1.96E-08	1.96E-08
		4			0.033	0.033	0.55%					7.19E-08	7.19E-08	7.19E-08	7.19E-08
		3			0.025	0.025	0.95%					1.24E-07	1.24E-07	1.24E-07	1.24E-07
		2			0.017	0.017	1.45%					1.90E-07	1.90E-07	1.90E-07	1.90E-07
		1			0.008	0.008	10.21%					1.34E-06	1.34E-06	1.34E-06	1.34E-06
	LCDF	30	0.053	0.053	1.577	1.577	0.01%	1.72E-04	1.72E-04	1.72E-04	1.72E-04	1.72E-08	1.72E-08	1.72E-08	1.72E-08
		20			1.051	1.051	0.02%					3.45E-08	3.45E-08	3.45E-08	3.45E-08
		10			0.526	0.526	0.04%					6.89E-08	6.89E-08	6.89E-08	6.89E-08
		5			0.263	0.263	0.15%					2.58E-07	2.58E-07	2.58E-07	2.58E-07
		4			0.210	0.210	0.55%					9.48E-07	9.48E-07	9.48E-07	9.48E-07
		3			0.158	0.158	0.95%					1.64E-06	1.64E-06	1.64E-06	1.64E-06
		2			0.105	0.105	1.45%					2.50E-06	2.50E-06	2.50E-06	2.50E-06
		1			0.053	0.053	10.21%					1.76E-05	1.76E-05	1.76E-05	1.76E-05
2b	LOHL	30	0.000	0.000	0.000	0.000	0.01%	4.27E-04	4.27E-04	4.27E-04	4.27E-04	4.27E-08	4.27E-08	4.27E-08	4.27E-08
		20			0.000	0.000	0.02%					8.53E-08	8.53E-08	8.53E-08	8.53E-08
		10			0.000	0.000	0.04%					1.71E-07	1.71E-07	1.71E-07	1.71E-07
		5			0.000	0.000	0.15%					6.40E-07	6.40E-07	6.40E-07	6.40E-07
		4			0.000	0.000	0.55%					2.35E-06	2.35E-06	2.35E-06	2.35E-06
		3			0.000	0.000	0.95%					4.05E-06	4.05E-06	4.05E-06	4.05E-06
		2			0.000	0.000	1.45%					6.19E-06	6.19E-06	6.19E-06	6.19E-06
		1			0.000	0.000	10.21%					4.36E-05	4.36E-05	4.36E-05	4.36E-05
	LCDF	30	0.008	0.008	0.248	0.248	0.01%	2.38E-03	2.38E-03	2.38E-03	2.38E-03	2.38E-07	2.38E-07	2.38E-07	2.38E-07
		20			0.165	0.165	0.02%					4.76E-07	4.76E-07	4.76E-07	4.76E-07
		10			0.083	0.083	0.04%					9.53E-07	9.53E-07	9.53E-07	9.53E-07
		5			0.041	0.041	0.15%					3.57E-06	3.57E-06	3.57E-06	3.57E-06
		4			0.033	0.033	0.55%					1.31E-05	1.31E-05	1.31E-05	1.31E-05
		3			0.025	0.025	0.95%					2.26E-05	2.26E-05	2.26E-05	2.26E-05
		2			0.017	0.017	1.45%					3.45E-05	3.45E-05	3.45E-05	3.45E-05
		1			0.008	0.008	10.21%					2.43E-04	2.43E-04	2.43E-04	2.43E-04
2c	LOHL	30	0.000	0.000	0.000	0.000	0.01%	1.20E-05	1.20E-05	1.20E-05	1.20E-05	1.20E-09	1.20E-09	1.20E-09	1.20E-09
		20			0.000	0.000	0.02%					2.40E-09	2.40E-09	2.40E-09	2.40E-09
		10			0.000	0.000	0.04%					4.81E-09	4.81E-09	4.81E-09	4.81E-09
		5			0.000	0.000	0.15%					1.80E-08	1.80E-08	1.80E-08	1.80E-08
		4			0.000	0.000	0.55%					6.61E-08	6.61E-08	6.61E-08	6.61E-08
		3			0.000	0.000	0.95%					1.14E-07	1.14E-07	1.14E-07	1.14E-07
		2			0.000	0.000	1.45%					1.74E-07	1.74E-07	1.74E-07	1.74E-07
		1			0.000	0.000	10.21%					1.23E-06	1.23E-06	1.23E-06	1.23E-06
	LCDF	30	0.008	0.008	0.248	0.248	0.01%	1.58E-04	1.58E-04	1.58E-04	1.58E-04	1.58E-08	1.58E-08	1.58E-08	1.58E-08
		20			0.165	0.165	0.02%					3.17E-08	3.17E-08	3.17E-08	3.17E-08
		10			0.083	0.083	0.04%					6.33E-08	6.33E-08	6.33E-08	6.33E-08
		5			0.041	0.041	0.15%					2.37E-07	2.37E-07	2.37E-07	2.37E-07
		4			0.033	0.033	0.55%					8.71E-07	8.71E-07	8.71E-07	8.71E-07
		3			0.025	0.025	0.95%					1.50E-06	1.50E-06	1.50E-06	1.50E-06
		2			0.017	0.017	1.45%					2.30E-06	2.30E-06	2.30E-06	2.30E-06
		1			0.008	0.008	10.21%					1.62E-05	1.62E-05	1.62E-05	1.62E-05

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 3 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
2d	LOHL	30	0.000	0.000	0.000	0.000	0.01%	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-08	1.26E-08	1.26E-08	1.26E-08
		20			0.000	0.000	0.02%					2.52E-08	2.52E-08	2.52E-08	2.52E-08
		10			0.000	0.000	0.04%					5.03E-08	5.03E-08	5.03E-08	5.03E-08
		5			0.000	0.000	0.15%					1.89E-07	1.89E-07	1.89E-07	1.89E-07
		4			0.000	0.000	0.55%					6.92E-07	6.92E-07	6.92E-07	6.92E-07
		3			0.000	0.000	0.95%					1.20E-06	1.19E-06	1.19E-06	1.19E-06
		2			0.000	0.000	1.45%					1.82E-06	1.82E-06	1.82E-06	1.82E-06
		1			0.000	0.000	10.21%					1.28E-05	1.28E-05	1.28E-05	1.28E-05
	LCDF	30	0.000	0.000	0.000	0.000	0.01%	3.62E-04	3.62E-04	3.62E-04	3.62E-04	3.62E-08	3.62E-08	3.62E-08	3.62E-08
		20			0.000	0.000	0.02%					7.23E-08	7.23E-08	7.23E-08	7.23E-08
		10			0.000	0.000	0.04%					1.45E-07	1.45E-07	1.45E-07	1.45E-07
		5			0.000	0.000	0.15%					5.42E-07	5.42E-07	5.42E-07	5.42E-07
		4			0.000	0.000	0.55%					1.99E-06	1.99E-06	1.99E-06	1.99E-06
		3			0.000	0.000	0.95%					3.43E-06	3.43E-06	3.43E-06	3.43E-06
		2			0.000	0.000	1.45%					5.24E-06	5.24E-06	5.24E-06	5.24E-06
		1			0.000	0.000	10.21%					3.69E-05	3.69E-05	3.69E-05	3.69E-05
3a	SOHL	30	0.000	0.000	0.000	0.000	0.01%	5.48E-05	1.10E-05	1.10E-05	1.10E-05	2.74E-09	5.48E-10	5.48E-10	5.48E-10
		20			0.000	0.000	0.01%					5.48E-09	1.10E-09	1.10E-09	1.10E-09
		10			0.000	0.000	0.02%					8.22E-09	1.64E-09	1.64E-09	1.64E-09
		5			0.000	0.000	0.07%					3.84E-08	7.67E-09	7.67E-09	7.67E-09
		4			0.000	0.000	0.17%					9.32E-08	1.86E-08	1.86E-08	1.86E-08
		3			0.000	0.000	0.34%					1.86E-07	3.73E-08	3.73E-08	3.73E-08
		2			0.000	0.000	0.70%					3.84E-07	7.67E-08	7.67E-08	7.67E-08
		1			0.000	0.000	1.06%					5.81E-07	1.16E-07	1.16E-07	1.16E-07
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	3.19E-06	6.39E-07	6.39E-07	6.39E-07	2.24E-10	4.47E-11	4.47E-11	4.47E-11
		20			0.000	0.000	0.01%					4.15E-10	8.30E-11	8.30E-11	8.30E-11
		10			0.000	0.000	0.02%					6.39E-10	1.28E-10	1.28E-10	1.28E-10
		5			0.000	0.000	0.09%					2.87E-09	5.75E-10	5.75E-10	5.75E-10
		4			0.000	0.000	0.29%					9.26E-09	1.85E-09	1.85E-09	1.85E-09
		3			0.000	0.000	0.44%					1.41E-08	2.81E-09	2.81E-09	2.81E-09
		2			0.000	0.000	0.80%					2.55E-08	5.11E-09	5.11E-09	5.11E-09
		1			0.000	0.000	4.81%					1.54E-07	3.07E-08	3.07E-08	3.07E-08
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	3.19E-07	6.39E-08	6.39E-08	6.39E-08	3.19E-11	6.39E-12	6.39E-12	6.39E-12
		20			0.000	0.000	0.02%					6.39E-11	1.28E-11	1.28E-11	1.28E-11
		10			0.000	0.000	0.04%					1.28E-10	2.55E-11	2.55E-11	2.55E-11
		5			0.000	0.000	0.15%					4.79E-10	9.58E-11	9.58E-11	9.58E-11
		4			0.000	0.000	0.55%					1.76E-09	3.51E-10	3.51E-10	3.51E-10
		3			0.000	0.000	0.95%					3.03E-09	6.07E-10	6.07E-10	6.07E-10
		2			0.000	0.000	1.45%					4.63E-09	9.26E-10	9.26E-10	9.26E-10
		1			0.000	0.000	10.21%					3.26E-08	6.52E-09	6.52E-09	6.52E-09
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	2.03E-05	4.07E-06	4.07E-06	4.07E-06	1.02E-09	2.03E-10	2.03E-10	2.03E-10
		20			0.000	0.000	0.01%					2.03E-09	4.07E-10	4.07E-10	4.07E-10
		10			0.000	0.000	0.02%					3.05E-09	6.10E-10	6.10E-10	6.10E-10
		5			0.000	0.000	0.07%					1.42E-08	2.85E-09	2.85E-09	2.85E-09
		4			0.000	0.000	0.17%					3.46E-08	6.91E-09	6.91E-09	6.91E-09
		3			0.000	0.000	0.34%					6.91E-08	1.38E-08	1.38E-08	1.38E-08
		2			0.000	0.000	0.70%					1.42E-07	2.85E-08	2.85E-08	2.85E-08
		1			0.000	0.000	1.06%					2.16E-07	4.31E-08	4.31E-08	4.31E-08
	MCDF	30	0.000	0.000	0.000	0.000	0.01%	6.31E-06	1.26E-06	1.26E-06	1.26E-06	4.42E-10	8.84E-11	8.84E-11	8.84E-11
		20			0.000	0.000	0.01%					8.21E-10	1.64E-10	1.64E-10	1.64E-10
		10			0.000	0.000	0.02%					1.26E-09	2.52E-10	2.52E-10	2.52E-10
		5			0.000	0.000	0.09%					5.68E-09	1.14E-09	1.14E-09	1.14E-09
		4			0.000	0.000	0.29%					1.83E-08	3.66E-09	3.66E-09	3.66E-09
		3			0.000	0.000	0.44%					2.78E-08	5.55E-09	5.55E-09	5.55E-09
		2			0.000	0.000	0.80%					5.05E-08	1.01E-08	1.01E-08	1.01E-08
		1			0.000	0.000	4.81%					3.04E-07	6.07E-08	6.07E-08	6.07E-08
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	4.21E-06	8.42E-07	8.42E-07	8.42E-07	4.21E-10	8.42E-11	8.42E-11	8.42E-11
		20			0.165	0.000	0.02%					8.42E-10	1.68E-10	1.68E-10	1.68E-10
		10			0.083	0.000	0.04%					1.68E-09	3.37E-10	3.37E-10	3.37E-10
		5			0.041	0.000	0.15%					6.31E-09	1.26E-09	1.26E-09	1.26E-09
		4			0.033	0.000	0.55%					2.31E-08	4.63E-09	4.63E-09	4.63E-09
		3			0.025	0.000	0.95%					4.00E-08	7.99E-09	7.99E-09	7.99E-09
		2			0.017	0.000	1.45%					6.10E-08	1.22E-08	1.22E-08	1.22E-08
		1			0.008	0.000	10.21%					4.30E-07	8.59E-08	8.59E-08	8.59E-08
3b	SOHL	30	0.000	0.000	0.000	0.000	0.01%	1.30E-03	1.30E-03	1.30E-03	1.30E-03	6.50E-08	6.50E-08	6.50E-08	6.50E-08
		20			0.000	0.000	0.01%					1.30E-07	1.30E-07	1.30E-07	1.30E-07
		10			0.000	0.000	0.02%					1.95E-07	1.95E-07	1.95E-07	1.95E-07
		5			0.000	0.000	0.07%					9.11E-07	9.11E-07	9.11E-07	9.11E-07
		4			0.000	0.000	0.17%					2.21E-06	2.21E-06	2.21E-06	2.21E-06
		3			0.000	0.000	0.34%					4.42E-06	4.42E-06	4.42E-06	4.42E-06
		2			0.000	0.000	0.70%					9.11E-06	9.11E-06	9.11E-06	9.11E-06
		1			0.000	0.000	1.06%					1.38E-05	1.38E-05	1.38E-05	1.38E-05
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	7.58E-05	7.58E-05	7.58E-05	7.58E-05	5.30E-09	5.30E-09	5.30E-09	5.30E-09
		20			0.000	0.000	0.01%					9.85E-09	9.85E-09	9.85E-09	9.85E-09
		10			0.000	0.000	0.02%					1.52E-08	1.52E-08	1.52E-08	1.52E-08
		5			0.000	0.000	0.09%					6.82E-08	6.82E-08	6.82E-08	6.82E-08
		4			0.000	0.000	0.29%					2.20E-07	2.20E-07	2.20E-07	2.20E-07
		3			0.000	0.000	0.44%					3.33E-07	3.33E-07	3.33E-07	3.33E-07
		2			0.000	0.000	0.80%					6.06E-07	6.06E-07	6.06E-07	6.06E-07
		1			0.000	0.000	4.81%					3.65E-06	3.65E-06	3.65E-06	3.65E-06
	LOHL	30	0.053	0.053	1.577	1.577	0.01%	7.58E-06	7.58E-06	7.58E-06	7.58E-06	7.58E-10	7.58E-10	7.58E-10	7.58E-10
		20			1.051	1.051	0.02%					1.52E-09	1.52E-09	1.52E-09	1.52E-09
		10			0.526	0.526	0.04%					3.03E-09	3.03E-09	3.03E-09	3.03E-09
		5			0.263	0.263	0.15%					1.14E-08	1.14E-08	1.14E-08	1.14E-08
		4			0.210	0.210	0.55%					4.17E-08	4.17E-08	4.17E-08	4.17E-08
		3			0.158	0.158	0.95%					7.20E-08	7.20E-08	7.20E-08	7.20E-08
		2			0.105	0.105	1.45%					1.10E-07	1.10E-07	1.10E-07	1.10E-07
		1			0.053	0.053	10.21%					7.74E-07	7.74E-07	7.74E-07	7.74E-07
3c	SOHL	30	0.000	0.000	0.000	0.000	0.01%	3.66E-02	2.98E-02	2.98E-02	2.98E-02	1.83E-06	1.49E-06	1.49E-06	1.49E-06
		20			0.000	0.000	0.01%					3.66E-06	2.98E-06	2.98E-06	2.98E-06
		10			0.000	0.000	0.02%					5.49E-06	4.47E-06	4.47E-06	4.47E-06
		5			0.000	0.000	0.07%					2.56E-05	2.09E-05	2.09E-05	2.09E-05
		4			0.000	0.000	0.17%					6.22E-05	5.07E-05	5.07E-05	5.07E-05
		3			0.000	0.000	0.34%					1.24E-04	1.01E-04	1.01E-04	1.01E-04
		2			0.000	0.000	0.70%					2.56E-04	2.09E-04	2.09E-04	2.09E-04
		1			0.000	0.000	1.06%					3.88E-04	3.16E-04	3.16E-04	3.16E-04

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 4 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3c	MOHL	30	0.000	0.000	0.000	0.000	0.01%	2.13E-03	1.74E-03	1.74E-03	1.74E-03	1.49E-07	1.22E-07	1.22E-07	1.22E-07
		20			0.000	0.000	0.01%					2.77E-07	2.26E-07	2.26E-07	2.26E-07
		10			0.000	0.000	0.02%					4.26E-07	3.47E-07	3.47E-07	3.47E-07
		5			0.000	0.000	0.09%					1.92E-06	1.56E-06	1.56E-06	1.56E-06
		4			0.000	0.000	0.29%					6.18E-06	5.04E-06	5.04E-06	5.04E-06
		3			0.000	0.000	0.44%					9.38E-06	7.64E-06	7.64E-06	7.64E-06
		2			0.000	0.000	0.80%					1.71E-05	1.39E-05	1.39E-05	1.39E-05
		1			0.000	0.000	4.81%					1.03E-04	8.36E-05	8.36E-05	8.36E-05
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	2.13E-04	1.74E-04	1.74E-04	1.74E-04	2.13E-08	1.74E-08	1.74E-08	1.74E-08
		20			0.000	0.000	0.02%					4.26E-08	3.47E-08	3.47E-08	3.47E-08
		10			0.000	0.000	0.04%					8.53E-08	6.95E-08	6.95E-08	6.95E-08
		5			0.000	0.000	0.15%					3.20E-07	2.61E-07	2.61E-07	2.61E-07
		4			0.000	0.000	0.55%					1.17E-06	9.55E-07	9.55E-07	9.55E-07
		3			0.000	0.000	0.95%					2.03E-06	1.65E-06	1.65E-06	1.65E-06
		2			0.000	0.000	1.45%					3.09E-06	2.52E-06	2.52E-06	2.52E-06
		1			0.000	0.000	10.21%					2.18E-05	1.77E-05	1.77E-05	1.77E-05
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	1.73E-02	1.41E-02	1.41E-02	1.41E-02	8.64E-07	7.04E-07	7.04E-07	7.04E-07
		20			0.000	0.000	0.01%					1.73E-06	1.41E-06	1.41E-06	1.41E-06
		10			0.000	0.000	0.02%					2.59E-06	2.11E-06	2.11E-06	2.11E-06
		5			0.000	0.000	0.07%					1.21E-05	9.86E-06	9.86E-06	9.86E-06
		4			0.000	0.000	0.17%					2.94E-05	2.39E-05	2.39E-05	2.39E-05
		3			0.000	0.000	0.34%					5.88E-05	4.79E-05	4.79E-05	4.79E-05
		2			0.000	0.000	0.70%					1.21E-04	9.86E-05	9.86E-05	9.86E-05
		1			0.000	0.000	1.06%					1.83E-04	1.49E-04	1.49E-04	1.49E-04
	MCDF	30	0.000	0.000	0.000	0.000	0.01%	5.36E-03	4.37E-03	4.37E-03	4.37E-03	3.75E-07	3.06E-07	3.06E-07	3.06E-07
		20			0.000	0.000	0.01%					6.97E-07	5.68E-07	5.68E-07	5.68E-07
		10			0.000	0.000	0.02%					1.07E-06	8.74E-07	8.74E-07	8.74E-07
		5			0.000	0.000	0.09%					4.83E-06	3.93E-06	3.93E-06	3.93E-06
		4			0.000	0.000	0.29%					1.56E-05	1.27E-05	1.27E-05	1.27E-05
		3			0.000	0.000	0.44%					2.36E-05	1.92E-05	1.92E-05	1.92E-05
		2			0.000	0.000	0.80%					4.29E-05	3.50E-05	3.50E-05	3.50E-05
		1			0.000	0.000	4.81%					2.58E-04	2.10E-04	2.10E-04	2.10E-04
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	3.58E-03	2.91E-03	2.91E-03	2.91E-03	3.58E-07	2.91E-07	2.91E-07	2.91E-07
		20			0.165	0.000	0.02%					7.15E-07	5.83E-07	5.83E-07	5.83E-07
		10			0.083	0.000	0.04%					1.43E-06	1.17E-06	1.17E-06	1.17E-06
		5			0.041	0.000	0.15%					5.36E-06	4.37E-06	4.37E-06	4.37E-06
		4			0.033	0.000	0.55%					1.97E-05	1.60E-05	1.60E-05	1.60E-05
		3			0.025	0.000	0.95%					3.40E-05	2.77E-05	2.77E-05	2.77E-05
		2			0.017	0.000	1.45%					5.18E-05	4.22E-05	4.22E-05	4.22E-05
		1			0.008	0.000	10.21%					3.65E-04	2.97E-04	2.97E-04	2.97E-04
3d	SOHL	30	0.000	0.000	0.000	0.000	0.01%	4.05E-02	2.68E-02	2.68E-02	2.68E-02	2.02E-06	1.34E-06	1.34E-06	1.34E-06
		20			0.000	0.000	0.01%					4.05E-06	2.68E-06	2.68E-06	2.68E-06
		10			0.000	0.000	0.02%					6.07E-06	4.02E-06	4.02E-06	4.02E-06
		5			0.000	0.000	0.07%					2.83E-05	1.88E-05	1.88E-05	1.88E-05
		4			0.000	0.000	0.17%					6.88E-05	4.56E-05	4.56E-05	4.56E-05
		3			0.000	0.000	0.34%					1.38E-04	9.12E-05	9.12E-05	9.12E-05
		2			0.000	0.000	0.70%					2.83E-04	1.88E-04	1.88E-04	1.88E-04
		1			0.000	0.000	1.06%					4.29E-04	2.84E-04	2.84E-04	2.84E-04
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	2.36E-03	1.56E-03	1.56E-03	1.56E-03	1.65E-07	1.09E-07	1.09E-07	1.09E-07
		20			0.000	0.000	0.01%					3.06E-07	2.03E-07	2.03E-07	2.03E-07
		10			0.000	0.000	0.02%					4.71E-07	3.13E-07	3.13E-07	3.13E-07
		5			0.000	0.000	0.09%					2.12E-06	1.41E-06	1.41E-06	1.41E-06
		4			0.000	0.000	0.29%					6.84E-06	4.53E-06	4.53E-06	4.53E-06
		3			0.000	0.000	0.44%					1.04E-05	6.88E-06	6.88E-06	6.88E-06
		2			0.000	0.000	0.80%					1.89E-05	1.25E-05	1.25E-05	1.25E-05
		1			0.000	0.000	4.81%					1.13E-04	7.52E-05	7.52E-05	7.52E-05
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	2.36E-04	1.56E-04	1.56E-04	1.56E-04	2.36E-08	1.56E-08	1.56E-08	1.56E-08
		20			0.000	0.000	0.02%					4.71E-08	3.13E-08	3.13E-08	3.13E-08
		10			0.000	0.000	0.04%					9.43E-08	6.25E-08	6.25E-08	6.25E-08
		5			0.000	0.000	0.15%					3.54E-07	2.34E-07	2.34E-07	2.34E-07
		4			0.000	0.000	0.55%					1.30E-06	8.59E-07	8.59E-07	8.59E-07
		3			0.000	0.000	0.95%					2.24E-06	1.48E-06	1.48E-06	1.48E-06
		2			0.000	0.000	1.45%					3.42E-06	2.27E-06	2.27E-06	2.27E-06
		1			0.000	0.000	10.21%					2.41E-05	1.60E-05	1.60E-05	1.60E-05
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	1.13E-02	7.49E-03	7.49E-03	7.49E-03	5.65E-07	3.75E-07	3.75E-07	3.75E-07
		20			0.000	0.000	0.01%					1.13E-06	7.49E-07	7.49E-07	7.49E-07
		10			0.000	0.000	0.02%					1.70E-06	1.12E-06	1.12E-06	1.12E-06
		5			0.000	0.000	0.07%					7.91E-06	5.24E-06	5.24E-06	5.24E-06
		4			0.000	0.000	0.17%					1.92E-05	1.27E-05	1.27E-05	1.27E-05
		3			0.000	0.000	0.34%					3.84E-05	2.55E-05	2.55E-05	2.55E-05
		2			0.000	0.000	0.70%					7.91E-05	5.24E-05	5.24E-05	5.24E-05
		1			0.000	0.000	1.06%					1.20E-04	7.94E-05	7.94E-05	7.94E-05
	MCDF	30	0.000	0.000	0.000	0.000	0.01%	3.51E-03	2.32E-03	2.32E-03	2.32E-03	2.45E-07	1.63E-07	1.63E-07	1.63E-07
		20			0.000	0.000	0.01%					4.56E-07	3.02E-07	3.02E-07	3.02E-07
		10			0.000	0.000	0.02%					7.01E-07	4.65E-07	4.65E-07	4.65E-07
		5			0.000	0.000	0.09%					3.16E-06	2.09E-06	2.09E-06	2.09E-06
		4			0.000	0.000	0.29%					1.02E-05	6.74E-06	6.74E-06	6.74E-06
		3			0.000	0.000	0.44%					1.54E-05	1.02E-05	1.02E-05	1.02E-05
		2			0.000	0.000	0.80%					2.81E-05	1.86E-05	1.86E-05	1.86E-05
		1			0.000	0.000	4.81%					1.69E-04	1.12E-04	1.12E-04	1.12E-04
	LCDF	30	0.053	0.000	1.577	0.000	0.01%	2.34E-03	1.55E-03	1.55E-03	1.55E-03	2.34E-07	1.55E-07	1.55E-07	1.55E-07
		20			1.051	0.000	0.02%					4.68E-07	3.10E-07	3.10E-07	3.10E-07
		10			0.526	0.000	0.04%					9.35E-07	6.20E-07	6.20E-07	6.20E-07
		5			0.263	0.000	0.15%					3.51E-06	2.32E-06	2.32E-06	2.32E-06
		4			0.210	0.000	0.55%					1.29E-05	8.52E-06	8.52E-06	8.52E-06
		3			0.158	0.000	0.95%					2.22E-05	1.47E-05	1.47E-05	1.47E-05
		2			0.105	0.000	1.45%					3.39E-05	2.25E-05	2.25E-05	2.25E-05
		1			0.053	0.000	10.21%					2.39E-04	1.58E-04	1.58E-04	1.58E-04
3e	SOHL	30	0.000	0.000	0.000	0.000	0.01%	5.40E-03	5.40E-03	4.59E-03	4.59E-03	2.70E-07	2.70E-07	2.30E-07	2.30E-07
		20			0.000	0.000	0.01%					5.40E-07	5.40E-07	4.59E-07	4.59E-07
		10			0.000	0.000	0.02%					8.10E-07	8.10E-07	6.89E-07	6.89E-07
		5			0.000	0.000	0.07%					3.78E-06	3.78E-06	3.22E-06	3.22E-06
		4			0.000	0.000	0.17%					9.18E-06	9.18E-06	7.81E-06	7.81E-06
		3			0.000	0.000	0.34%					1.84E-05	1.84E-05	1.56E-05	1.56E-05
		2			0.000	0.000	0.70%					3.78E-05	3.78E-05	3.22E-05	3.22E-05
		1			0.000	0.000	1.06%					5.72E-05	5.72E-05	4.87E-05	4.87E-05

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 5 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3e	MOHL	30	0.000	0.000	0.000	0.000	0.01%	3.15E-04	3.15E-04	2.68E-04	2.68E-04	2.20E-08	2.20E-08	1.87E-08	1.87E-08
		20			0.000	0.000	0.01%					4.09E-08	4.09E-08	3.48E-08	3.48E-08
		10			0.000	0.000	0.02%					6.29E-08	6.29E-08	5.35E-08	5.35E-08
		5			0.000	0.000	0.09%					2.83E-07	2.83E-07	2.41E-07	2.41E-07
		4			0.000	0.000	0.29%					9.12E-07	9.12E-07	7.76E-07	7.76E-07
		3			0.000	0.000	0.44%					1.38E-06	1.38E-06	1.18E-06	1.18E-06
		2			0.000	0.000	0.80%					2.52E-06	2.52E-06	2.14E-06	2.14E-06
		1			0.000	0.000	4.81%					1.51E-05	1.51E-05	1.29E-05	1.29E-05
	LOHL	30	0.008	0.008	0.248	0.248	0.01%	3.15E-05	3.15E-05	2.68E-05	2.68E-05	3.15E-09	3.15E-09	2.68E-09	2.68E-09
		20			0.165	0.165	0.02%					6.29E-09	6.29E-09	5.35E-09	5.35E-09
		10			0.083	0.083	0.04%					1.26E-08	1.26E-08	1.07E-08	1.07E-08
		5			0.041	0.041	0.15%					4.72E-08	4.72E-08	4.01E-08	4.01E-08
		4			0.033	0.033	0.55%					1.73E-07	1.73E-07	1.47E-07	1.47E-07
		3			0.025	0.025	0.95%					2.99E-07	2.99E-07	2.54E-07	2.54E-07
		2			0.017	0.017	1.45%					4.56E-07	4.56E-07	3.88E-07	3.88E-07
		1			0.008	0.008	10.21%					3.21E-06	3.21E-06	2.73E-06	2.73E-06
3f	SOHL	30	0.000	0.000	0.000	0.000	0.01%	8.82E-04	9.82E-05	9.82E-05	9.82E-05	4.41E-08	4.91E-09	4.91E-09	4.91E-09
		20			0.000	0.000	0.01%					8.82E-08	9.82E-09	9.82E-09	9.82E-09
		10			0.000	0.000	0.02%					1.32E-07	1.47E-08	1.47E-08	1.47E-08
		5			0.000	0.000	0.07%					6.17E-07	6.87E-08	6.87E-08	6.87E-08
		4			0.000	0.000	0.17%					1.50E-06	1.67E-07	1.67E-07	1.67E-07
		3			0.000	0.000	0.34%					3.00E-06	3.34E-07	3.34E-07	3.34E-07
		2			0.000	0.000	0.70%					6.17E-06	6.87E-07	6.87E-07	6.87E-07
		1			0.000	0.000	1.06%					9.35E-06	1.04E-06	1.04E-06	1.04E-06
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	5.14E-05	5.72E-06	5.72E-06	5.72E-06	3.60E-09	4.00E-10	4.00E-10	4.00E-10
		20			0.000	0.000	0.01%					6.68E-09	7.44E-10	7.44E-10	7.44E-10
		10			0.000	0.000	0.02%					1.03E-08	1.14E-09	1.14E-09	1.14E-09
		5			0.000	0.000	0.09%					4.62E-08	5.15E-09	5.15E-09	5.15E-09
		4			0.000	0.000	0.29%					1.49E-07	1.66E-08	1.66E-08	1.66E-08
		3			0.000	0.000	0.44%					2.26E-07	2.52E-08	2.52E-08	2.52E-08
		2			0.000	0.000	0.80%					4.11E-07	4.58E-08	4.58E-08	4.58E-08
		1			0.000	0.000	4.81%					2.47E-06	2.75E-07	2.75E-07	2.75E-07
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	5.14E-06	5.72E-07	5.72E-07	5.72E-07	5.14E-10	5.72E-11	5.72E-11	5.72E-11
		20			0.000	0.000	0.02%					1.03E-09	1.14E-10	1.14E-10	1.14E-10
		10			0.000	0.000	0.04%					2.06E-09	2.29E-10	2.29E-10	2.29E-10
		5			0.000	0.000	0.15%					7.71E-09	8.58E-10	8.58E-10	8.58E-10
		4			0.000	0.000	0.55%					2.83E-08	3.15E-09	3.15E-09	3.15E-09
		3			0.000	0.000	0.95%					4.88E-08	5.43E-09	5.43E-09	5.43E-09
		2			0.000	0.000	1.45%					7.45E-08	8.29E-09	8.29E-09	8.29E-09
		1			0.000	0.000	10.21%					5.25E-07	5.84E-08	5.84E-08	5.84E-08
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	3.27E-04	3.64E-05	3.64E-05	3.64E-05	1.64E-08	1.82E-09	1.82E-09	1.82E-09
		20			0.000	0.000	0.01%					3.27E-08	3.64E-09	3.64E-09	3.64E-09
		10			0.000	0.000	0.02%					4.91E-08	5.46E-09	5.46E-09	5.46E-09
		5			0.000	0.000	0.07%					2.29E-07	2.55E-08	2.55E-08	2.55E-08
		4			0.000	0.000	0.17%					5.56E-07	6.19E-08	6.19E-08	6.19E-08
		3			0.000	0.000	0.34%					1.11E-06	1.24E-07	1.24E-07	1.24E-07
		2			0.000	0.000	0.70%					2.29E-06	2.55E-07	2.55E-07	2.55E-07
		1			0.000	0.000	1.06%					3.47E-06	3.86E-07	3.86E-07	3.86E-07
	MCDF	30	0.000	0.000	0.000	0.000	0.01%	1.02E-04	1.13E-05	1.13E-05	1.13E-05	7.11E-09	7.91E-10	7.91E-10	7.91E-10
		20			0.000	0.000	0.01%					1.32E-08	1.47E-09	1.47E-09	1.47E-09
		10			0.000	0.000	0.02%					2.03E-08	2.26E-09	2.26E-09	2.26E-09
		5			0.000	0.000	0.09%					9.14E-08	1.02E-08	1.02E-08	1.02E-08
		4			0.000	0.000	0.29%					2.95E-07	3.28E-08	3.28E-08	3.28E-08
		3			0.000	0.000	0.44%					4.47E-07	4.97E-08	4.97E-08	4.97E-08
		2			0.000	0.000	0.80%					8.13E-07	9.04E-08	9.04E-08	9.04E-08
		1			0.000	0.000	4.81%					4.89E-06	5.44E-07	5.44E-07	5.44E-07
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	6.77E-05	7.54E-06	7.54E-06	7.54E-06	6.77E-09	7.54E-10	7.54E-10	7.54E-10
		20			0.165	0.000	0.02%					1.35E-08	1.51E-09	1.51E-09	1.51E-09
		10			0.083	0.000	0.04%					2.71E-08	3.01E-09	3.01E-09	3.01E-09
		5			0.041	0.000	0.15%					1.02E-07	1.13E-08	1.13E-08	1.13E-08
		4			0.033	0.000	0.55%					3.72E-07	4.15E-08	4.15E-08	4.15E-08
		3			0.025	0.000	0.95%					6.43E-07	7.16E-08	7.16E-08	7.16E-08
		2			0.017	0.000	1.45%					9.82E-07	1.09E-07	1.09E-07	1.09E-07
		1			0.008	0.000	10.21%					6.91E-06	7.69E-07	7.69E-07	7.69E-07
3g	SOHL	30	0.000	0.000	0.000	0.000	0.01%	1.17E-02	9.34E-03	9.34E-03	9.34E-03	5.84E-07	4.67E-07	4.67E-07	4.67E-07
		20			0.000	0.000	0.01%					1.17E-06	9.34E-07	9.34E-07	9.34E-07
		10			0.000	0.000	0.02%					1.75E-06	1.40E-06	1.40E-06	1.40E-06
		5			0.000	0.000	0.07%					8.18E-06	6.54E-06	6.54E-06	6.54E-06
		4			0.000	0.000	0.17%					1.99E-05	1.59E-05	1.59E-05	1.59E-05
		3			0.000	0.000	0.34%					3.97E-05	3.18E-05	3.18E-05	3.18E-05
		2			0.000	0.000	0.70%					8.18E-05	6.54E-05	6.54E-05	6.54E-05
		1			0.000	0.000	1.06%					1.24E-04	9.90E-05	9.90E-05	9.90E-05
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	6.81E-04	5.44E-04	5.44E-04	5.44E-04	4.76E-08	3.81E-08	3.81E-08	3.81E-08
		20			0.000	0.000	0.01%					8.85E-08	7.07E-08	7.07E-08	7.07E-08
		10			0.000	0.000	0.02%					1.36E-07	1.09E-07	1.09E-07	1.09E-07
		5			0.000	0.000	0.09%					6.12E-07	4.90E-07	4.90E-07	4.90E-07
		4			0.000	0.000	0.29%					1.97E-06	1.58E-06	1.58E-06	1.58E-06
		3			0.000	0.000	0.44%					2.99E-06	2.39E-06	2.39E-06	2.39E-06
		2			0.000	0.000	0.80%					5.44E-06	4.35E-06	4.35E-06	4.35E-06
		1			0.000	0.000	4.81%					3.27E-05	2.62E-05	2.62E-05	2.62E-05
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	6.81E-05	5.44E-05	5.44E-05	5.44E-05	6.81E-09	5.44E-09	5.44E-09	5.44E-09
		20			0.000	0.000	0.02%					1.36E-08	1.09E-08	1.09E-08	1.09E-08
		10			0.000	0.000	0.04%					2.72E-08	2.18E-08	2.18E-08	2.18E-08
		5			0.000	0.000	0.15%					1.02E-07	8.16E-08	8.16E-08	8.16E-08
		4			0.000	0.000	0.55%					3.74E-07	2.99E-07	2.99E-07	2.99E-07
		3			0.000	0.000	0.95%					6.47E-07	5.17E-07	5.17E-07	5.17E-07
		2			0.000	0.000	1.45%					9.87E-07	7.89E-07	7.89E-07	7.89E-07
		1			0.000	0.000	10.21%					6.95E-06	5.56E-06	5.56E-06	5.56E-06
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	1.25E-02	9.99E-03	9.99E-03	9.99E-03	6.25E-07	4.99E-07	4.99E-07	4.99E-07
		20			0.000	0.000	0.01%					1.25E-06	9.99E-07	9.99E-07	9.99E-07
		10			0.000	0.000	0.02%					1.87E-06	1.50E-06	1.50E-06	1.50E-06
		5			0.000	0.000	0.07%					8.74E-06	6.99E-06	6.99E-06	6.99E-06
		4			0.000	0.000	0.17%					2.12E-05	1.70E-05	1.70E-05	1.70E-05
		3			0.000	0.000	0.34%					4.25E-05	3.40E-05	3.40E-05	3.40E-05
		2			0.000	0.000	0.70%					8.74E-05	6.99E-05	6.99E-05	6.99E-05
		1			0.000	0.000	1.06%					1.32E-04	1.06E-04	1.06E-04	1.06E-04

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 6 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3g	MCDF	30	0.000	0.000	0.000	0.000	0.01%	3.88E-03	3.10E-03	3.10E-03	3.10E-03	2.71E-07	2.17E-07	2.17E-07	2.17E-07
		20			0.000	0.000	0.01%					5.04E-07	4.03E-07	4.03E-07	4.03E-07
		10			0.000	0.000	0.02%					7.75E-07	6.20E-07	6.20E-07	6.20E-07
		5			0.000	0.000	0.09%					3.49E-06	2.79E-06	2.79E-06	2.79E-06
		4			0.000	0.000	0.29%					1.12E-05	8.99E-06	8.99E-06	8.99E-06
		3			0.000	0.000	0.44%					1.71E-05	1.36E-05	1.36E-05	1.36E-05
		2			0.000	0.000	0.80%					3.10E-05	2.48E-05	2.48E-05	2.48E-05
		1			0.000	0.000	4.81%					1.86E-04	1.49E-04	1.49E-04	1.49E-04
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	2.58E-03	2.07E-03	2.07E-03	2.07E-03	2.58E-07	2.07E-07	2.07E-07	2.07E-07
		20			0.165	0.000	0.02%					5.17E-07	4.13E-07	4.13E-07	4.13E-07
		10			0.083	0.000	0.04%					1.03E-06	8.26E-07	8.26E-07	8.26E-07
		5			0.041	0.000	0.15%					3.88E-06	3.10E-06	3.10E-06	3.10E-06
		4			0.033	0.000	0.55%					1.42E-05	1.14E-05	1.14E-05	1.14E-05
		3			0.025	0.000	0.95%					2.46E-05	1.96E-05	1.96E-05	1.96E-05
		2			0.017	0.000	1.45%					3.75E-05	3.00E-05	3.00E-05	3.00E-05
		1			0.008	0.000	10.21%					2.64E-04	2.11E-04	2.11E-04	2.11E-04
3h	SOHL	30	0.000	0.000	0.000	0.000	0.01%	5.11E-02	4.89E-02	4.89E-02	4.89E-02	2.55E-06	2.44E-06	2.44E-06	2.44E-06
		20			0.000	0.000	0.01%					5.11E-06	4.89E-06	4.89E-06	4.89E-06
		10			0.000	0.000	0.02%					7.66E-06	7.33E-06	7.33E-06	7.33E-06
		5			0.000	0.000	0.07%					3.58E-05	3.42E-05	3.42E-05	3.42E-05
		4			0.000	0.000	0.17%					8.69E-05	8.31E-05	8.31E-05	8.31E-05
		3			0.000	0.000	0.34%					1.74E-04	1.66E-04	1.66E-04	1.66E-04
		2			0.000	0.000	0.70%					3.58E-04	3.42E-04	3.42E-04	3.42E-04
		1			0.000	0.000	1.06%					5.42E-04	5.18E-04	5.18E-04	5.18E-04
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	2.98E-03	2.85E-03	2.85E-03	2.85E-03	2.08E-07	1.99E-07	1.99E-07	1.99E-07
		20			0.000	0.000	0.01%					3.87E-07	3.70E-07	3.70E-07	3.70E-07
		10			0.000	0.000	0.02%					5.95E-07	5.69E-07	5.69E-07	5.69E-07
		5			0.000	0.000	0.09%					2.68E-06	2.56E-06	2.56E-06	2.56E-06
		4			0.000	0.000	0.29%					8.63E-06	8.25E-06	8.25E-06	8.25E-06
		3			0.000	0.000	0.44%					1.31E-05	1.25E-05	1.25E-05	1.25E-05
		2			0.000	0.000	0.80%					2.38E-05	2.28E-05	2.28E-05	2.28E-05
		1			0.000	0.000	4.81%					1.43E-04	1.37E-04	1.37E-04	1.37E-04
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	2.98E-04	2.85E-04	2.85E-04	2.85E-04	2.98E-08	2.85E-08	2.85E-08	2.85E-08
		20			0.000	0.000	0.02%					5.95E-08	5.69E-08	5.69E-08	5.69E-08
		10			0.000	0.000	0.04%					1.19E-07	1.14E-07	1.14E-07	1.14E-07
		5			0.000	0.000	0.15%					4.46E-07	4.27E-07	4.27E-07	4.27E-07
		4			0.000	0.000	0.55%					1.64E-06	1.57E-06	1.57E-06	1.57E-06
		3			0.000	0.000	0.95%					2.83E-06	2.70E-06	2.70E-06	2.70E-06
		2			0.000	0.000	1.45%					4.32E-06	4.13E-06	4.13E-06	4.13E-06
		1			0.000	0.000	10.21%					3.04E-05	2.91E-05	2.91E-05	2.91E-05
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	1.11E-02	1.06E-02	1.06E-02	1.06E-02	5.56E-07	5.32E-07	5.32E-07	5.32E-07
		20			0.000	0.000	0.01%					1.11E-06	1.06E-06	1.06E-06	1.06E-06
		10			0.000	0.000	0.02%					1.67E-06	1.60E-06	1.60E-06	1.60E-06
		5			0.000	0.000	0.07%					7.79E-06	7.45E-06	7.45E-06	7.45E-06
		4			0.000	0.000	0.17%					1.89E-05	1.81E-05	1.81E-05	1.81E-05
		3			0.000	0.000	0.34%					3.78E-05	3.62E-05	3.62E-05	3.62E-05
		2			0.000	0.000	0.70%					7.79E-05	7.45E-05	7.45E-05	7.45E-05
		1			0.000	0.000	1.06%					1.18E-04	1.13E-04	1.13E-04	1.13E-04
	MCDF	30	0.000	0.000	0.000	0.000	0.01%	3.45E-03	3.30E-03	3.30E-03	3.30E-03	2.42E-07	2.31E-07	2.31E-07	2.31E-07
		20			0.000	0.000	0.01%					4.49E-07	4.29E-07	4.29E-07	4.29E-07
		10			0.000	0.000	0.02%					6.91E-07	6.60E-07	6.60E-07	6.60E-07
		5			0.000	0.000	0.09%					3.11E-06	2.97E-06	2.97E-06	2.97E-06
		4			0.000	0.000	0.29%					1.00E-05	9.58E-06	9.58E-06	9.58E-06
		3			0.000	0.000	0.44%					1.52E-05	1.45E-05	1.45E-05	1.45E-05
		2			0.000	0.000	0.80%					2.76E-05	2.64E-05	2.64E-05	2.64E-05
		1			0.000	0.000	4.81%					1.66E-04	1.59E-04	1.59E-04	1.59E-04
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	2.30E-03	2.20E-03	2.20E-03	2.20E-03	2.30E-07	2.20E-07	2.20E-07	2.20E-07
		20			0.165	0.000	0.02%					4.60E-07	4.40E-07	4.40E-07	4.40E-07
		10			0.083	0.000	0.04%					9.21E-07	8.81E-07	8.81E-07	8.81E-07
		5			0.041	0.000	0.15%					3.45E-06	3.30E-06	3.30E-06	3.30E-06
		4			0.033	0.000	0.55%					1.27E-05	1.21E-05	1.21E-05	1.21E-05
		3			0.025	0.000	0.95%					2.19E-05	2.09E-05	2.09E-05	2.09E-05
		2			0.017	0.000	1.45%					3.34E-05	3.19E-05	3.19E-05	3.19E-05
		1			0.008	0.000	10.21%					2.35E-04	2.25E-04	2.25E-04	2.25E-04
3i	SOHL	30	0.000	0.000	0.000	0.000	0.01%	9.41E-02	9.40E-02	9.40E-02	9.40E-02	4.71E-06	4.70E-06	4.70E-06	4.70E-06
		20			0.000	0.000	0.01%					9.41E-06	9.40E-06	9.40E-06	9.40E-06
		10			0.000	0.000	0.02%					1.41E-05	1.41E-05	1.41E-05	1.41E-05
		5			0.000	0.000	0.07%					6.59E-05	6.58E-05	6.58E-05	6.58E-05
		4			0.000	0.000	0.17%					1.60E-04	1.60E-04	1.60E-04	1.60E-04
		3			0.000	0.000	0.34%					3.20E-04	3.20E-04	3.20E-04	3.20E-04
		2			0.000	0.000	0.70%					6.59E-04	6.58E-04	6.58E-04	6.58E-04
		1			0.000	0.000	1.06%					9.98E-04	9.97E-04	9.97E-04	9.97E-04
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	5.48E-03	5.48E-03	5.48E-03	5.48E-03	3.84E-07	3.83E-07	3.83E-07	3.83E-07
		20			0.000	0.000	0.01%					7.13E-07	7.12E-07	7.12E-07	7.12E-07
		10			0.000	0.000	0.02%					1.10E-06	1.10E-06	1.10E-06	1.10E-06
		5			0.000	0.000	0.09%					4.93E-06	4.93E-06	4.93E-06	4.93E-06
		4			0.000	0.000	0.29%					1.59E-05	1.59E-05	1.59E-05	1.59E-05
		3			0.000	0.000	0.44%					2.41E-05	2.41E-05	2.41E-05	2.41E-05
		2			0.000	0.000	0.80%					4.39E-05	4.38E-05	4.38E-05	4.38E-05
		1			0.000	0.000	4.81%					2.64E-04	2.63E-04	2.63E-04	2.63E-04
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	5.48E-04	5.48E-04	5.48E-04	5.48E-04	5.48E-08	5.48E-08	5.48E-08	5.48E-08
		20			0.000	0.000	0.02%					1.10E-07	1.10E-07	1.10E-07	1.10E-07
		10			0.000	0.000	0.04%					2.19E-07	2.19E-07	2.19E-07	2.19E-07
		5			0.000	0.000	0.15%					8.22E-07	8.22E-07	8.22E-07	8.22E-07
		4			0.000	0.000	0.55%					3.02E-06	3.01E-06	3.01E-06	3.01E-06
		3			0.000	0.000	0.95%					5.21E-06	5.20E-06	5.20E-06	5.20E-06
		2			0.000	0.000	1.45%					7.95E-06	7.94E-06	7.94E-06	7.94E-06
		1			0.000	0.000	10.21%					5.60E-05	5.59E-05	5.59E-05	5.59E-05
	SCDF	30	0.000	0.000	0.000	0.000	0.01%	2.39E-02	2.38E-02	2.38E-02	2.38E-02	1.19E-06	1.19E-06	1.19E-06	1.19E-06
		20			0.000	0.000	0.01%					2.39E-06	2.38E-06	2.38E-06	2.38E-06
		10			0.000	0.000	0.02%					3.58E-06	3.58E-06	3.58E-06	3.58E-06
		5			0.000	0.000	0.07%					1.67E-05	1.67E-05	1.67E-05	1.67E-05
		4			0.000	0.000	0.17%					4.06E-05	4.05E-05	4.05E-05	4.05E-05
		3			0.000	0.000	0.34%					8.11E-05	8.11E-05	8.11E-05	8.11E-05
		2			0.000	0.000	0.70%					1.67E-04	1.67E-04	1.67E-04	1.67E-04
		1			0.000	0.000	1.06%					2.53E-04	2.53E-04	2.53E-04	2.53E-04

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 7 of 8)

Carports adjacent to Block 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3i	MCDF	30	0.000	0.000	0.000	0.000	0.01%	7.41E-03	7.40E-03	7.40E-03	7.40E-03	5.18E-07	5.18E-07	5.18E-07	5.18E-07
		20			0.000	0.000	0.01%					9.63E-07	9.62E-07	9.62E-07	9.62E-07
		10			0.000	0.000	0.02%					1.48E-06	1.48E-06	1.48E-06	1.48E-06
		5			0.000	0.000	0.09%					6.67E-06	6.66E-06	6.66E-06	6.66E-06
		4			0.000	0.000	0.29%					2.15E-05	2.15E-05	2.15E-05	2.15E-05
		3			0.000	0.000	0.44%					3.26E-05	3.26E-05	3.26E-05	3.26E-05
		2			0.000	0.000	0.80%					5.93E-05	5.92E-05	5.92E-05	5.92E-05
		1			0.000	0.000	4.81%					3.56E-04	3.56E-04	3.56E-04	3.56E-04
	LCDF	30	0.008	0.000	0.248	0.000	0.01%	4.94E-03	4.93E-03	4.93E-03	4.93E-03	4.94E-07	4.93E-07	4.93E-07	4.93E-07
		20			0.165	0.000	0.02%					9.88E-07	9.87E-07	9.87E-07	9.87E-07
		10			0.083	0.000	0.04%					1.98E-06	1.97E-06	1.97E-06	1.97E-06
		5			0.041	0.000	0.15%					7.41E-06	7.40E-06	7.40E-06	7.40E-06
		4			0.033	0.000	0.55%					2.72E-05	2.71E-05	2.71E-05	2.71E-05
		3			0.025	0.000	0.95%					4.69E-05	4.69E-05	4.69E-05	4.69E-05
		2			0.017	0.000	1.45%					7.16E-05	7.15E-05	7.15E-05	7.15E-05
		1			0.008	0.000	10.21%					5.04E-04	5.04E-04	5.04E-04	5.04E-04
3j	SOHL	30	0.000	0.000	0.000	0.000	0.01%	1.25E-02	1.25E-02	2.01E-03	2.01E-03	6.24E-07	6.24E-07	1.00E-07	1.00E-07
		20			0.000	0.000	0.01%					1.25E-06	1.25E-06	2.01E-07	2.01E-07
		10			0.000	0.000	0.02%					1.87E-06	1.87E-06	3.01E-07	3.01E-07
		5			0.000	0.000	0.07%					8.74E-06	8.74E-06	1.41E-06	1.41E-06
		4			0.000	0.000	0.17%					2.12E-05	2.12E-05	3.41E-06	3.41E-06
		3			0.000	0.000	0.34%					4.24E-05	4.24E-05	6.83E-06	6.83E-06
		2			0.000	0.000	0.70%					8.74E-05	8.74E-05	1.41E-05	1.41E-05
		1			0.000	0.000	1.06%					1.32E-04	1.32E-04	2.13E-05	2.13E-05
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	7.27E-04	7.27E-04	1.17E-04	1.17E-04	5.09E-08	5.09E-08	8.19E-09	8.19E-09
		20			0.000	0.000	0.01%					9.45E-08	9.45E-08	1.52E-08	1.52E-08
		10			0.000	0.000	0.02%					1.45E-07	1.45E-07	2.34E-08	2.34E-08
		5			0.000	0.000	0.09%					6.54E-07	6.54E-07	1.05E-07	1.05E-07
		4			0.000	0.000	0.29%					2.11E-06	2.11E-06	3.39E-07	3.39E-07
		3			0.000	0.000	0.44%					3.20E-06	3.20E-06	5.15E-07	5.15E-07
		2			0.000	0.000	0.80%					5.82E-06	5.82E-06	9.36E-07	9.36E-07
		1			0.000	0.000	4.81%					3.50E-05	3.50E-05	5.63E-06	5.63E-06
	LOHL	30	0.008	0.008	0.248	0.248	0.01%	7.27E-05	7.27E-05	1.17E-05	1.17E-05	7.27E-09	7.27E-09	1.17E-09	1.17E-09
		20			0.165	0.165	0.02%					1.45E-08	1.45E-08	2.34E-09	2.34E-09
		10			0.083	0.083	0.04%					2.91E-08	2.91E-08	4.68E-09	4.68E-09
		5			0.041	0.041	0.15%					1.09E-07	1.09E-07	1.75E-08	1.75E-08
		4			0.033	0.033	0.55%					4.00E-07	4.00E-07	6.43E-08	6.43E-08
		3			0.025	0.025	0.95%					6.91E-07	6.91E-07	1.11E-07	1.11E-07
		2			0.017	0.017	1.45%					1.05E-06	1.05E-06	1.70E-07	1.70E-07
		1			0.008	0.008	10.21%					7.42E-06	7.42E-06	1.19E-06	1.19E-06
											Σ f x N	5.77E-05	4.71E-05	4.70E-05	1.07E-05

Driveway near main entrance at Woodcrest Hill - Affected by Hazard from Sub-area: 6b

6b	SOHL	30	0.000	0.000	0.000	0.000	0.01%	3.90E-06	3.90E-06	3.90E-06	3.90E-06	1.95E-10	1.95E-10	1.95E-10	1.95E-10
		20			0.000	0.000	0.01%					3.90E-10	3.90E-10	3.90E-10	3.90E-10
		10			0.000	0.000	0.02%					5.85E-10	5.85E-10	5.85E-10	5.85E-10
		5			0.000	0.000	0.07%					2.73E-09	2.73E-09	2.73E-09	2.73E-09
		4			0.000	0.000	0.17%					6.63E-09	6.63E-09	6.63E-09	6.63E-09
		3			0.000	0.000	0.34%					1.33E-08	1.33E-08	1.33E-08	1.33E-08
		2			0.000	0.000	0.70%					2.73E-08	2.73E-08	2.73E-08	2.73E-08
		1			0.000	0.000	1.06%					4.13E-08	4.13E-08	4.13E-08	4.13E-08
	MOHL	30	0.042	0.042	1.261	1.261	0.01%	2.27E-07	2.27E-07	2.27E-07	2.27E-07	1.59E-11	1.59E-11	1.59E-11	1.59E-11
		20			0.841	0.841	0.01%					2.95E-11	2.95E-11	2.95E-11	2.95E-11
		10			0.420	0.420	0.02%					4.54E-11	4.54E-11	4.54E-11	4.54E-11
		5			0.210	0.210	0.09%					2.04E-10	2.04E-10	2.04E-10	2.04E-10
		4			0.168	0.168	0.29%					6.59E-10	6.59E-10	6.59E-10	6.59E-10
		3			0.126	0.126	0.44%					9.99E-10	9.99E-10	9.99E-10	9.99E-10
		2			0.084	0.084	0.80%					1.82E-09	1.82E-09	1.82E-09	1.82E-09
		1			0.042	0.042	4.81%					1.09E-08	1.09E-08	1.09E-08	1.09E-08
	LOHL	30	0.183	0.183	5.493	5.493	0.01%	2.27E-08	2.27E-08	2.27E-08	2.27E-08	2.27E-12	2.27E-12	2.27E-12	2.27E-12
		20			3.662	3.662	0.02%					4.54E-12	4.54E-12	4.54E-12	4.54E-12
		10			1.831	1.831	0.04%					9.08E-12	9.08E-12	9.08E-12	9.08E-12
		5			0.916	0.916	0.15%					3.41E-11	3.41E-11	3.41E-11	3.41E-11
		4			0.732	0.732	0.55%					1.25E-10	1.25E-10	1.25E-10	1.25E-10
		3			0.549	0.549	0.95%					2.16E-10	2.16E-10	2.16E-10	2.16E-10
		2			0.366	0.366	1.45%					3.29E-10	3.29E-10	3.29E-10	3.29E-10
		1			0.183	0.183	10.21%					2.32E-09	2.32E-09	2.32E-09	2.32E-09
											Σ f x N	1.79E-09	1.79E-09	1.79E-09	1.79E-09

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C10 - Breakdown the Number of Fatalities for Car Park (Sheet 8 of 8)

G/F carports & driveway at K.K. Terrace - Affected by Hazard from Sub-area: 7a, 7d, 7h

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7a	SOHL	30	0.000	0.000	0.000	0.000	0.01%	1.32E-05	1.32E-05	1.32E-05	1.32E-05	6.58E-10	6.58E-10	6.58E-10	6.58E-10
		20			0.000	0.000	0.01%					1.32E-09	1.32E-09	1.32E-09	1.32E-09
		10			0.000	0.000	0.02%					1.97E-09	1.97E-09	1.97E-09	1.97E-09
		5			0.000	0.000	0.07%					9.21E-09	9.21E-09	9.21E-09	9.21E-09
		4			0.000	0.000	0.17%					2.24E-08	2.24E-08	2.24E-08	2.24E-08
		3			0.000	0.000	0.34%					4.47E-08	4.47E-08	4.47E-08	4.47E-08
		2			0.000	0.000	0.70%					9.21E-08	9.21E-08	9.21E-08	9.21E-08
		1			0.000	0.000	1.06%					1.39E-07	1.39E-07	1.39E-07	1.39E-07
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	7.66E-07	7.66E-07	7.66E-07	7.66E-07	5.36E-11	5.36E-11	5.36E-11	5.36E-11
		20			0.000	0.000	0.01%					9.96E-11	9.96E-11	9.96E-11	9.96E-11
		10			0.000	0.000	0.02%					1.53E-10	1.53E-10	1.53E-10	1.53E-10
		5			0.000	0.000	0.09%					6.90E-10	6.90E-10	6.90E-10	6.90E-10
		4			0.000	0.000	0.29%					2.22E-09	2.22E-09	2.22E-09	2.22E-09
		3			0.000	0.000	0.44%					3.37E-09	3.37E-09	3.37E-09	3.37E-09
		2			0.000	0.000	0.80%					6.13E-09	6.13E-09	6.13E-09	6.13E-09
		1			0.000	0.000	4.81%					3.69E-08	3.69E-08	3.69E-08	3.69E-08
	LOHL	30	0.053	0.053	1.577	1.577	0.01%	7.66E-08	7.66E-08	7.66E-08	7.66E-08	7.66E-12	7.66E-12	7.66E-12	7.66E-12
		20			1.051	1.051	0.02%					1.53E-11	1.53E-11	1.53E-11	1.53E-11
		10			0.526	0.526	0.04%					3.07E-11	3.07E-11	3.07E-11	3.07E-11
		5			0.263	0.263	0.15%					1.15E-10	1.15E-10	1.15E-10	1.15E-10
		4			0.210	0.210	0.55%					4.22E-10	4.22E-10	4.22E-10	4.22E-10
		3			0.158	0.158	0.95%					7.28E-10	7.28E-10	7.28E-10	7.28E-10
		2			0.105	0.105	1.45%					1.11E-09	1.11E-09	1.11E-09	1.11E-09
		1			0.053	0.053	10.21%					7.82E-09	7.82E-09	7.82E-09	7.82E-09
7d	SOHL	30	0.000	0.000	0.000	0.000	0.01%	1.12E-04	1.12E-04	1.12E-04	1.12E-04	5.59E-09	5.59E-09	5.59E-09	5.59E-09
		20			0.000	0.000	0.01%					1.12E-08	1.12E-08	1.12E-08	1.12E-08
		10			0.000	0.000	0.02%					1.68E-08	1.68E-08	1.68E-08	1.68E-08
		5			0.000	0.000	0.07%					7.83E-08	7.83E-08	7.83E-08	7.83E-08
		4			0.000	0.000	0.17%					1.90E-07	1.90E-07	1.90E-07	1.90E-07
		3			0.000	0.000	0.34%					3.80E-07	3.80E-07	3.80E-07	3.80E-07
		2			0.000	0.000	0.70%					7.83E-07	7.83E-07	7.83E-07	7.83E-07
		1			0.000	0.000	1.06%					1.19E-06	1.19E-06	1.19E-06	1.19E-06
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	6.51E-06	6.51E-06	6.51E-06	6.51E-06	4.56E-10	4.56E-10	4.56E-10	4.56E-10
		20			0.000	0.000	0.01%					8.47E-10	8.47E-10	8.47E-10	8.47E-10
		10			0.000	0.000	0.02%					1.30E-09	1.30E-09	1.30E-09	1.30E-09
		5			0.000	0.000	0.09%					5.86E-09	5.86E-09	5.86E-09	5.86E-09
		4			0.000	0.000	0.29%					1.89E-08	1.89E-08	1.89E-08	1.89E-08
		3			0.000	0.000	0.44%					2.87E-08	2.87E-08	2.87E-08	2.87E-08
		2			0.000	0.000	0.80%					5.21E-08	5.21E-08	5.21E-08	5.21E-08
		1			0.000	0.000	4.81%					3.13E-07	3.13E-07	3.13E-07	3.13E-07
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	6.51E-07	6.51E-07	6.51E-07	6.51E-07	6.51E-11	6.51E-11	6.51E-11	6.51E-11
		20			0.000	0.000	0.02%					1.30E-10	1.30E-10	1.30E-10	1.30E-10
		10			0.000	0.000	0.04%					2.61E-10	2.61E-10	2.61E-10	2.61E-10
		5			0.000	0.000	0.15%					9.77E-10	9.77E-10	9.77E-10	9.77E-10
		4			0.000	0.000	0.55%					3.58E-09	3.58E-09	3.58E-09	3.58E-09
		3			0.000	0.000	0.95%					6.19E-09	6.19E-09	6.19E-09	6.19E-09
		2			0.000	0.000	1.45%					9.45E-09	9.45E-09	9.45E-09	9.45E-09
		1			0.000	0.000	10.21%					6.65E-08	6.65E-08	6.65E-08	6.65E-08
7h	SOHL	30	0.000	0.000	0.000	0.000	0.01%	2.69E-02	2.69E-02	2.69E-02	2.69E-02	1.35E-06	1.35E-06	1.35E-06	1.35E-06
		20			0.000	0.000	0.01%					2.69E-06	2.69E-06	2.69E-06	2.69E-06
		10			0.000	0.000	0.02%					4.04E-06	4.04E-06	4.04E-06	4.04E-06
		5			0.000	0.000	0.07%					1.89E-05	1.89E-05	1.89E-05	1.89E-05
		4			0.000	0.000	0.17%					4.58E-05	4.58E-05	4.58E-05	4.58E-05
		3			0.000	0.000	0.34%					9.16E-05	9.16E-05	9.16E-05	9.16E-05
		2			0.000	0.000	0.70%					1.89E-04	1.89E-04	1.89E-04	1.89E-04
		1			0.000	0.000	1.06%					2.86E-04	2.86E-04	2.86E-04	2.86E-04
	MOHL	30	0.000	0.000	0.000	0.000	0.01%	1.57E-03	1.57E-03	1.57E-03	1.57E-03	1.10E-07	1.10E-07	1.10E-07	1.10E-07
		20			0.000	0.000	0.01%					2.04E-07	2.04E-07	2.04E-07	2.04E-07
		10			0.000	0.000	0.02%					3.14E-07	3.14E-07	3.14E-07	3.14E-07
		5			0.000	0.000	0.09%					1.41E-06	1.41E-06	1.41E-06	1.41E-06
		4			0.000	0.000	0.29%					4.55E-06	4.55E-06	4.55E-06	4.55E-06
		3			0.000	0.000	0.44%					6.91E-06	6.90E-06	6.90E-06	6.90E-06
		2			0.000	0.000	0.80%					1.26E-05	1.26E-05	1.26E-05	1.26E-05
		1			0.000	0.000	4.81%					7.55E-05	7.55E-05	7.55E-05	7.55E-05
	LOHL	30	0.000	0.000	0.000	0.000	0.01%	1.57E-04	1.57E-04	1.57E-04	1.57E-04	1.57E-08	1.57E-08	1.57E-08	1.57E-08
		20			0.000	0.000	0.02%					3.14E-08	3.14E-08	3.14E-08	3.14E-08
		10			0.000	0.000	0.04%					6.28E-08	6.28E-08	6.28E-08	6.28E-08
		5			0.000	0.000	0.15%					2.35E-07	2.35E-07	2.35E-07	2.35E-07
		4			0.000	0.000	0.55%					8.63E-07	8.63E-07	8.63E-07	8.63E-07
		3			0.000	0.000	0.95%					1.49E-06	1.49E-06	1.49E-06	1.49E-06
		2			0.000	0.000	1.45%					2.28E-06	2.28E-06	2.28E-06	2.28E-06
		1			0.000	0.000	10.21%					1.60E-05	1.60E-05	1.60E-05	1.60E-05
											Σ f x N	8.06E-10	8.06E-10	8.06E-10	8.06E-10

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 1 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
1c	SOHL	20	0.000	0.000	0.000	0.000	0.001%	9.88E-03	9.88E-03	9.88E-03	9.88E-03	9.88E-08	9.88E-08	9.88E-08	9.88E-08
		15			0.000	0.000	0.004%					3.95E-07	3.95E-07	3.95E-07	3.95E-07
		10			0.000	0.000	0.010%					9.88E-07	9.88E-07	9.88E-07	9.88E-07
		5			0.000	0.000	0.020%					1.98E-06	1.98E-06	1.98E-06	1.98E-06
		4			0.000	0.000	0.040%					3.95E-06	3.95E-06	3.95E-06	3.95E-06
		3			0.000	0.000	0.110%					1.09E-05	1.09E-05	1.09E-05	1.09E-05
		2			0.000	0.000	0.200%					1.98E-05	1.98E-05	1.98E-05	1.98E-05
		1			0.000	0.000	0.330%					3.26E-05	3.26E-05	3.26E-05	3.26E-05
	MOHL	20	0.042	0.042	0.841	0.841	0.003%	5.76E-04	5.76E-04	5.76E-04	5.76E-04	1.73E-08	1.73E-08	1.73E-08	1.73E-08
		15			0.631	0.631	0.007%					4.03E-08	4.03E-08	4.03E-08	4.03E-08
		10			0.420	0.420	0.015%					8.63E-08	8.63E-08	8.63E-08	8.63E-08
		5			0.210	0.210	0.060%					3.45E-07	3.45E-07	3.45E-07	3.45E-07
		4			0.168	0.168	0.100%					5.76E-07	5.76E-07	5.76E-07	5.76E-07
		3			0.126	0.126	0.210%					1.21E-06	1.21E-06	1.21E-06	1.21E-06
		2			0.084	0.084	0.380%					2.19E-06	2.19E-06	2.19E-06	2.19E-06
		1			0.042	0.042	0.595%					3.42E-06	3.42E-06	3.42E-06	3.42E-06
	LOHL	20	0.183	0.183	3.662	3.662	0.005%	5.76E-05	5.76E-05	5.76E-05	5.76E-05	2.88E-09	2.88E-09	2.88E-09	2.88E-09
		15			2.747	2.747	0.010%					5.76E-09	5.76E-09	5.76E-09	5.76E-09
		10			1.831	1.831	0.020%					1.15E-08	1.15E-08	1.15E-08	1.15E-08
		5			0.916	0.916	0.120%					6.91E-08	6.91E-08	6.91E-08	6.91E-08
		4			0.732	0.732	0.190%					1.09E-07	1.09E-07	1.09E-07	1.09E-07
		3			0.549	0.549	0.420%					2.42E-07	2.42E-07	2.42E-07	2.42E-07
		2			0.366	0.366	0.850%					4.89E-07	4.89E-07	4.89E-07	4.89E-07
		1			0.183	0.183	1.230%					7.08E-07	7.08E-07	7.08E-07	7.08E-07
1d	SOHL	20	0.000	0.000	0.000	0.000	0.001%	1.95E-05	1.95E-05	1.95E-05	1.95E-05	1.95E-10	1.95E-10	1.95E-10	1.95E-10
		15			0.000	0.000	0.004%					7.80E-10	7.80E-10	7.80E-10	7.80E-10
		10			0.000	0.000	0.010%					1.95E-09	1.95E-09	1.95E-09	1.95E-09
		5			0.000	0.000	0.020%					3.90E-09	3.90E-09	3.90E-09	3.90E-09
		4			0.000	0.000	0.040%					7.80E-09	7.80E-09	7.80E-09	7.80E-09
		3			0.000	0.000	0.110%					2.14E-08	2.14E-08	2.14E-08	2.14E-08
		2			0.000	0.000	0.200%					3.90E-08	3.90E-08	3.90E-08	3.90E-08
		1			0.000	0.000	0.330%					6.43E-08	6.43E-08	6.43E-08	6.43E-08
	MOHL	20	0.007	0.007	0.132	0.132	0.003%	1.14E-06	1.14E-06	1.14E-06	1.14E-06	3.41E-11	3.41E-11	3.41E-11	3.41E-11
		15			0.099	0.099	0.007%					7.95E-11	7.95E-11	7.95E-11	7.95E-11
		10			0.066	0.066	0.015%					1.70E-10	1.70E-10	1.70E-10	1.70E-10
		5			0.033	0.033	0.060%					6.81E-10	6.81E-10	6.81E-10	6.81E-10
		4			0.026	0.026	0.100%					1.14E-09	1.14E-09	1.14E-09	1.14E-09
		3			0.020	0.020	0.210%					2.38E-09	2.38E-09	2.38E-09	2.38E-09
		2			0.013	0.013	0.380%					4.31E-09	4.31E-09	4.31E-09	4.31E-09
		1			0.007	0.007	0.595%					6.76E-09	6.76E-09	6.76E-09	6.76E-09
	LOHL	20	0.183	0.183	3.662	3.662	0.005%	1.14E-07	1.14E-07	1.14E-07	1.14E-07	5.68E-12	5.68E-12	5.68E-12	5.68E-12
		15			2.747	2.747	0.010%					1.14E-11	1.14E-11	1.14E-11	1.14E-11
		10			1.831	1.831	0.020%					2.27E-11	2.27E-11	2.27E-11	2.27E-11
		5			0.916	0.916	0.120%					1.36E-10	1.36E-10	1.36E-10	1.36E-10
		4			0.732	0.732	0.190%					2.16E-10	2.16E-10	2.16E-10	2.16E-10
		3			0.549	0.549	0.420%					4.77E-10	4.77E-10	4.77E-10	4.77E-10
		2			0.366	0.366	0.850%					9.65E-10	9.65E-10	9.65E-10	9.65E-10
		1			0.183	0.183	1.230%					1.40E-09	1.40E-09	1.40E-09	1.40E-09
2a	LOHL	20	0.053	0.053	1.051	1.051	0.005%	1.31E-05	1.31E-05	1.31E-05	1.31E-05	6.54E-10	6.54E-10	6.54E-10	6.54E-10
		15			0.788	0.788	0.010%					1.31E-09	1.31E-09	1.31E-09	1.31E-09
		10			0.526	0.526	0.020%					2.62E-09	2.62E-09	2.62E-09	2.62E-09
		5			0.263	0.263	0.120%					1.57E-08	1.57E-08	1.57E-08	1.57E-08
		4			0.210	0.210	0.190%					2.48E-08	2.48E-08	2.48E-08	2.48E-08
		3			0.158	0.158	0.420%					5.49E-08	5.49E-08	5.49E-08	5.49E-08
		2			0.105	0.105	0.850%					1.11E-07	1.11E-07	1.11E-07	1.11E-07
		1			0.053	0.053	1.230%					1.61E-07	1.61E-07	1.61E-07	1.61E-07
	LCDF	20	0.183	0.183	3.662	3.662	0.005%	1.72E-04	1.72E-04	1.72E-04	1.72E-04	8.62E-09	8.62E-09	8.62E-09	8.62E-09
		15			2.747	2.747	0.010%					1.72E-08	1.72E-08	1.72E-08	1.72E-08
		10			1.831	1.831	0.020%					3.45E-08	3.45E-08	3.45E-08	3.45E-08
		5			0.916	0.916	0.120%					2.07E-07	2.07E-07	2.07E-07	2.07E-07
		4			0.732	0.732	0.190%					3.27E-07	3.27E-07	3.27E-07	3.27E-07
		3			0.549	0.549	0.420%					7.24E-07	7.24E-07	7.24E-07	7.24E-07
		2			0.366	0.366	0.850%					1.46E-06	1.46E-06	1.46E-06	1.46E-06
		1			0.183	0.183	1.230%					2.12E-06	2.12E-06	2.12E-06	2.12E-06
2b	LOHL	20	0.008	0.008	0.165	0.165	0.005%	4.27E-04	4.27E-04	4.27E-04	4.27E-04	2.13E-08	2.13E-08	2.13E-08	2.13E-08
		15			0.124	0.124	0.010%					4.27E-08	4.27E-08	4.27E-08	4.27E-08
		10			0.083	0.083	0.020%					8.53E-08	8.53E-08	8.53E-08	8.53E-08
		5			0.041	0.041	0.120%					5.12E-07	5.12E-07	5.12E-07	5.12E-07
		4			0.033	0.033	0.190%					8.11E-07	8.11E-07	8.11E-07	8.11E-07
		3			0.025	0.025	0.420%					1.79E-06	1.79E-06	1.79E-06	1.79E-06
		2			0.017	0.017	0.850%					3.63E-06	3.63E-06	3.63E-06	3.63E-06
		1			0.008	0.008	1.230%					5.25E-06	5.25E-06	5.25E-06	5.25E-06
	LCDF	20	0.053	0.053	1.051	1.051	0.005%	2.38E-03	2.38E-03	2.38E-03	2.38E-03	1.19E-07	1.19E-07	1.19E-07	1.19E-07
		15			0.788	0.788	0.010%					2.38E-07	2.38E-07	2.38E-07	2.38E-07
		10			0.526	0.526	0.020%					4.76E-07	4.76E-07	4.76E-07	4.76E-07
		5			0.263	0.263	0.120%					2.86E-06	2.86E-06	2.86E-06	2.86E-06
		4			0.210	0.210	0.190%					4.53E-06	4.53E-06	4.53E-06	4.53E-06
		3			0.158	0.158	0.420%					1.00E-05	1.00E-05	1.00E-05	1.00E-05
		2			0.105	0.105	0.850%					2.03E-05	2.03E-05	2.03E-05	2.03E-05
		1			0.053	0.053	1.230%					2.93E-05	2.93E-05	2.93E-05	2.93E-05
2c	LOHL	20	0.000	0.000	0.000	0.000	0.005%	1.20E-05	1.20E-05	1.20E-05	1.20E-05	6.01E-10	6.01E-10	6.01E-10	6.01E-10
		15			0.000	0.000	0.010%					1.20E-09	1.20E-09	1.20E-09	1.20E-09
		10			0.000	0.000	0.020%					2.40E-09	2.40E-09	2.40E-09	2.40E-09
		5			0.000	0.000	0.120%					1.44E-08	1.44E-08	1.44E-08	1.44E-08
		4			0.000	0.000	0.190%					2.28E-08	2.28E-08	2.28E-08	2.28E-08
		3			0.000	0.000	0.420%					5.05E-08	5.05E-08	5.05E-08	5.05E-08
		2			0.000	0.000	0.850%					1.02E-07	1.02E-07	1.02E-07	1.02E-07
		1			0.000	0.000	1.230%					1.48E-07	1.48E-07	1.48E-07	1.48E-07
	LCDF	20	0.008	0.008	0.165	0.165	0.005%	1.58E-04	1.58E-04	1.58E-04	1.58E-04	7.92E-09	7.92E-09	7.92E-09	7.92E-09
		15			0.124	0.124	0.010%					1.58E-08	1.58E-08	1.58E-08	1.58E-08
		10			0.083	0.083	0.020%					3.17E-08	3.17E-08	3.17E-08	3.17E-08
		5			0.041	0.041	0.120%					1.90E-07	1.90E-07	1.90E-07	1.90E-07
		4			0.033	0.033	0.190%					3.01E-07	3.01E-07	3.01E-07	3.01E-07
		3			0.025	0.025	0.420%					6.65E-07	6.65E-07	6.65E-07	6.65E-07
		2			0.017	0.017	0.850%					1.35E-06	1.35E-06	1.35E-06	1.35E-06
		1			0.008	0.008	1.230%					1.95E-06	1.95E-06	1.95E-06	1.95E-06

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 2 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
2d	LOHL	20	0.000	0.000	0.000	0.000	0.005%	1.26E-04	1.26E-04	1.26E-04	1.26E-04	6.29E-09	6.29E-09	6.29E-09	6.29E-09
		15			0.000	0.000	0.010%					1.26E-08	1.26E-08	1.26E-08	1.26E-08
		10			0.000	0.000	0.020%					2.52E-08	2.52E-08	2.52E-08	2.52E-08
		5			0.000	0.000	0.120%					1.51E-07	1.51E-07	1.51E-07	1.51E-07
		4			0.000	0.000	0.190%					2.39E-07	2.39E-07	2.39E-07	2.39E-07
		3			0.000	0.000	0.420%					5.28E-07	5.28E-07	5.28E-07	5.28E-07
		2			0.000	0.000	0.850%					1.07E-06	1.07E-06	1.07E-06	1.07E-06
		1			0.000	0.000	1.230%					1.55E-06	1.55E-06	1.55E-06	1.55E-06
	LCDF	20	0.008	0.008	0.165	0.165	0.005%	3.62E-04	3.62E-04	3.62E-04	3.62E-04	1.81E-08	1.81E-08	1.81E-08	1.81E-08
		15			0.124	0.124	0.010%					3.62E-08	3.62E-08	3.62E-08	3.62E-08
		10			0.083	0.083	0.020%					7.23E-08	7.23E-08	7.23E-08	7.23E-08
		5			0.041	0.041	0.120%					4.34E-07	4.34E-07	4.34E-07	4.34E-07
		4			0.033	0.033	0.190%					6.87E-07	6.87E-07	6.87E-07	6.87E-07
		3			0.025	0.025	0.420%					1.52E-06	1.52E-06	1.52E-06	1.52E-06
		2			0.017	0.017	0.850%					3.07E-06	3.07E-06	3.07E-06	3.07E-06
		1			0.008	0.008	1.230%					4.45E-06	4.45E-06	4.45E-06	4.45E-06
3a	SOHL	20	0.000	0.000	0.000	0.000	0.001%	5.48E-05	1.10E-05	1.10E-05	1.10E-05	5.48E-10	1.10E-10	1.10E-10	1.10E-10
		15			0.000	0.000	0.004%					2.19E-09	4.39E-10	4.39E-10	4.39E-10
		10			0.000	0.000	0.010%					5.48E-09	1.10E-09	1.10E-09	1.10E-09
		5			0.000	0.000	0.020%					1.10E-08	2.19E-09	2.19E-09	2.19E-09
		4			0.000	0.000	0.040%					2.19E-08	4.39E-09	4.39E-09	4.39E-09
		3			0.000	0.000	0.110%					6.03E-08	1.21E-08	1.21E-08	1.21E-08
		2			0.000	0.000	0.200%					1.10E-07	2.19E-08	2.19E-08	2.19E-08
		1			0.000	0.000	0.330%					1.81E-07	3.62E-08	3.62E-08	3.62E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	3.19E-06	6.39E-07	6.39E-07	6.39E-07	9.58E-11	1.92E-11	1.92E-11	1.92E-11
		15			0.000	0.000	0.007%					2.24E-10	4.47E-11	4.47E-11	4.47E-11
		10			0.000	0.000	0.015%					4.79E-10	9.58E-11	9.58E-11	9.58E-11
		5			0.000	0.000	0.060%					1.92E-09	3.83E-10	3.83E-10	3.83E-10
		4			0.000	0.000	0.100%					3.19E-09	6.39E-10	6.39E-10	6.39E-10
		3			0.000	0.000	0.210%					6.71E-09	1.34E-09	1.34E-09	1.34E-09
		2			0.000	0.000	0.380%					1.21E-08	2.43E-09	2.43E-09	2.43E-09
		1			0.000	0.000	0.595%					1.90E-08	3.80E-09	3.80E-09	3.80E-09
	LOHL	20	0.000	0.000	0.000	0.000	0.005%	3.19E-07	6.39E-08	6.39E-08	6.39E-08	1.60E-11	3.19E-12	3.19E-12	3.19E-12
		15			0.000	0.000	0.010%					3.19E-11	6.39E-12	6.39E-12	6.39E-12
		10			0.000	0.000	0.020%					6.39E-11	1.28E-11	1.28E-11	1.28E-11
		5			0.000	0.000	0.120%					3.83E-10	7.66E-11	7.66E-11	7.66E-11
		4			0.000	0.000	0.190%					6.07E-10	1.21E-10	1.21E-10	1.21E-10
		3			0.000	0.000	0.420%					1.34E-09	2.68E-10	2.68E-10	2.68E-10
		2			0.000	0.000	0.850%					2.71E-09	5.43E-10	5.43E-10	5.43E-10
		1			0.000	0.000	1.230%					3.93E-09	7.86E-10	7.86E-10	7.86E-10
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	2.03E-05	4.07E-06	4.07E-06	4.07E-06	2.03E-10	4.07E-11	4.07E-11	4.07E-11
		15			0.000	0.000	0.004%					8.14E-10	1.63E-10	1.63E-10	1.63E-10
		10			0.000	0.000	0.010%					2.03E-09	4.07E-10	4.07E-10	4.07E-10
		5			0.000	0.000	0.020%					4.07E-09	8.14E-10	8.14E-10	8.14E-10
		4			0.000	0.000	0.040%					8.14E-09	1.63E-09	1.63E-09	1.63E-09
		3			0.000	0.000	0.110%					2.24E-08	4.47E-09	4.47E-09	4.47E-09
		2			0.000	0.000	0.200%					4.07E-08	8.14E-09	8.14E-09	8.14E-09
		1			0.000	0.000	0.330%					6.71E-08	1.34E-08	1.34E-08	1.34E-08
	MCDF	20	0.000	0.000	0.000	0.000	0.003%	6.31E-06	1.26E-06	1.26E-06	1.26E-06	1.89E-10	3.79E-11	3.79E-11	3.79E-11
		15			0.000	0.000	0.007%					4.42E-10	8.84E-11	8.84E-11	8.84E-11
		10			0.000	0.000	0.015%					9.47E-10	1.89E-10	1.89E-10	1.89E-10
		5			0.000	0.000	0.060%					3.79E-09	7.57E-10	7.57E-10	7.57E-10
		4			0.000	0.000	0.100%					6.31E-09	1.26E-09	1.26E-09	1.26E-09
		3			0.000	0.000	0.210%					1.33E-08	2.65E-09	2.65E-09	2.65E-09
		2			0.000	0.000	0.380%					2.40E-08	4.80E-09	4.80E-09	4.80E-09
		1			0.000	0.000	0.595%					3.76E-08	7.51E-09	7.51E-09	7.51E-09
	LCDF	20	0.053	0.000	1.051	0.000	0.005%	4.21E-06	8.42E-07	8.42E-07	8.42E-07	2.10E-10	4.21E-11	4.21E-11	4.21E-11
		15			0.788	0.000	0.010%					4.21E-10	8.42E-11	8.42E-11	8.42E-11
		10			0.526	0.000	0.020%					8.42E-10	1.68E-10	1.68E-10	1.68E-10
		5			0.263	0.000	0.120%					5.05E-09	1.01E-09	1.01E-09	1.01E-09
		4			0.210	0.000	0.190%					7.99E-09	1.60E-09	1.60E-09	1.60E-09
		3			0.158	0.000	0.420%					1.77E-08	3.53E-09	3.53E-09	3.53E-09
		2			0.105	0.000	0.850%					3.58E-08	7.15E-09	7.15E-09	7.15E-09
		1			0.053	0.000	1.230%					5.18E-08	1.04E-08	1.04E-08	1.04E-08
3b	SOHL	20	0.000	0.000	0.000	0.000	0.001%	1.30E-03	1.30E-03	1.30E-03	1.30E-03	1.30E-08	1.30E-08	1.30E-08	1.30E-08
		15			0.000	0.000	0.004%					5.20E-08	5.20E-08	5.20E-08	5.20E-08
		10			0.000	0.000	0.010%					1.30E-07	1.30E-07	1.30E-07	1.30E-07
		5			0.000	0.000	0.020%					2.60E-07	2.60E-07	2.60E-07	2.60E-07
		4			0.000	0.000	0.040%					5.20E-07	5.20E-07	5.20E-07	5.20E-07
		3			0.000	0.000	0.110%					1.43E-06	1.43E-06	1.43E-06	1.43E-06
		2			0.000	0.000	0.200%					2.60E-06	2.60E-06	2.60E-06	2.60E-06
		1			0.000	0.000	0.330%					4.29E-06	4.29E-06	4.29E-06	4.29E-06
	MOHL	20	0.006	0.006	0.116	0.116	0.003%	7.58E-05	7.58E-05	7.58E-05	7.58E-05	2.27E-09	2.27E-09	2.27E-09	2.27E-09
		15			0.087	0.087	0.007%					5.30E-09	5.30E-09	5.30E-09	5.30E-09
		10			0.058	0.058	0.015%					1.14E-08	1.14E-08	1.14E-08	1.14E-08
		5			0.029	0.029	0.060%					4.55E-08	4.55E-08	4.55E-08	4.55E-08
		4			0.023	0.023	0.100%					7.58E-08	7.58E-08	7.58E-08	7.58E-08
		3			0.017	0.017	0.210%					1.59E-07	1.59E-07	1.59E-07	1.59E-07
		2			0.012	0.012	0.380%					2.88E-07	2.88E-07	2.88E-07	2.88E-07
		1			0.006	0.006	0.595%					4.51E-07	4.51E-07	4.51E-07	4.51E-07
	LOHL	20	0.165	0.165	3.296	3.296	0.005%	7.58E-06	7.58E-06	7.58E-06	7.58E-06	3.79E-10	3.79E-10	3.79E-10	3.79E-10
		15			2.472	2.472	0.010%					7.58E-10	7.58E-10	7.58E-10	7.58E-10
		10			1.648	1.648	0.020%					1.52E-09	1.52E-09	1.52E-09	1.52E-09
		5			0.824	0.824	0.120%					9.09E-09	9.09E-09	9.09E-09	9.09E-09
		4			0.659	0.659	0.190%					1.44E-08	1.44E-08	1.44E-08	1.44E-08
		3			0.494	0.494	0.420%					3.18E-08	3.18E-08	3.18E-08	3.18E-08
		2			0.330	0.330	0.850%					6.44E-08	6.44E-08	6.44E-08	6.44E-08
		1			0.165	0.165	1.230%					9.32E-08	9.32E-08	9.32E-08	9.32E-08
3c	SOHL	20	0.000	0.000	0.000	0.000	0.001%	3.66E-02	2.98E-02	2.98E-02	2.98E-02	3.66E-07	2.98E-07	2.98E-07	2.98E-07
		15			0.000	0.000	0.004%					1.46E-06	1.19E-06	1.19E-06	1.19E-06
		10			0.000	0.000	0.010%					3.66E-06	2.98E-06	2.98E-06	2.98E-06
		5			0.000	0.000	0.020%					7.32E-06	5.96E-06	5.96E-06	5.96E-06
		4			0.000	0.000	0.040%					1.46E-05	1.19E-05	1.19E-05	1.19E-05
		3			0.000	0.000	0.110%					4.03E-05	3.28E-05	3.28E-05	3.28E-05
		2			0.000	0.000	0.200%					7.32E-05	5.96E-05	5.96E-05	5.96E-05
		1			0.000	0.000	0.330%					1.21E-04	9.84E-05	9.84E-05	9.84E-05

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 3 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3c	MOHL	20	0.000	0.000	0.000	0.000	0.003%	2.13E-03	1.74E-03	1.74E-03	1.74E-03	6.39E-08	5.21E-08	5.21E-08	5.21E-08
		15			0.000	0.000	0.007%					1.49E-07	1.22E-07	1.22E-07	1.22E-07
		10			0.000	0.000	0.015%					3.20E-07	2.61E-07	2.61E-07	2.61E-07
		5			0.000	0.000	0.060%					1.28E-06	1.04E-06	1.04E-06	1.04E-06
		4			0.000	0.000	0.100%					2.13E-06	1.74E-06	1.74E-06	1.74E-06
		3			0.000	0.000	0.210%					4.48E-06	3.65E-06	3.65E-06	3.65E-06
		2			0.000	0.000	0.380%					8.10E-06	6.60E-06	6.60E-06	6.60E-06
		1			0.000	0.000	0.595%					1.27E-05	1.03E-05	1.03E-05	1.03E-05
	LOHL	20	0.007	0.000	0.149	0.000	0.005%	2.13E-04	1.74E-04	1.74E-04	1.74E-04	1.07E-08	8.69E-09	8.69E-09	8.69E-09
		15			0.111	0.000	0.010%					2.13E-08	1.74E-08	1.74E-08	1.74E-08
		10			0.074	0.000	0.020%					4.26E-08	3.47E-08	3.47E-08	3.47E-08
		5			0.037	0.000	0.120%					2.56E-07	2.08E-07	2.08E-07	2.08E-07
		4			0.030	0.000	0.190%					4.05E-07	3.30E-07	3.30E-07	3.30E-07
		3			0.022	0.000	0.420%					8.95E-07	7.30E-07	7.30E-07	7.30E-07
		2			0.015	0.000	0.850%					1.81E-06	1.48E-06	1.48E-06	1.48E-06
		1			0.007	0.000	1.230%					2.62E-06	2.14E-06	2.14E-06	2.14E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.73E-02	1.41E-02	1.41E-02	1.41E-02	1.73E-07	1.41E-07	1.41E-07	1.41E-07
		15			0.000	0.000	0.004%					6.91E-07	5.63E-07	5.63E-07	5.63E-07
		10			0.000	0.000	0.010%					1.73E-06	1.41E-06	1.41E-06	1.41E-06
		5			0.000	0.000	0.020%					3.46E-06	2.82E-06	2.82E-06	2.82E-06
		4			0.000	0.000	0.040%					6.91E-06	5.63E-06	5.63E-06	5.63E-06
		3			0.000	0.000	0.110%					1.90E-05	1.55E-05	1.55E-05	1.55E-05
		2			0.000	0.000	0.200%					3.46E-05	2.82E-05	2.82E-05	2.82E-05
		1			0.000	0.000	0.330%					5.70E-05	4.65E-05	4.65E-05	4.65E-05
	MCDF	20	0.007	0.000	0.149	0.000	0.003%	5.36E-03	4.37E-03	4.37E-03	4.37E-03	1.61E-07	1.31E-07	1.31E-07	1.31E-07
		15			0.111	0.000	0.007%					3.75E-07	3.06E-07	3.06E-07	3.06E-07
		10			0.074	0.000	0.015%					8.04E-07	6.56E-07	6.56E-07	6.56E-07
		5			0.037	0.000	0.060%					3.22E-06	2.62E-06	2.62E-06	2.62E-06
		4			0.030	0.000	0.100%					5.36E-06	4.37E-06	4.37E-06	4.37E-06
		3			0.022	0.000	0.210%					1.13E-05	9.18E-06	9.18E-06	9.18E-06
		2			0.015	0.000	0.380%					2.04E-05	1.66E-05	1.66E-05	1.66E-05
		1			0.007	0.000	0.595%					3.19E-05	2.60E-05	2.60E-05	2.60E-05
	LCDF	20	0.047	0.000	0.946	0.000	0.005%	3.58E-03	2.91E-03	2.91E-03	2.91E-03	1.79E-07	1.46E-07	1.46E-07	1.46E-07
		15			0.709	0.000	0.010%					3.58E-07	2.91E-07	2.91E-07	2.91E-07
		10			0.473	0.000	0.020%					7.15E-07	5.83E-07	5.83E-07	5.83E-07
		5			0.236	0.000	0.120%					4.29E-06	3.50E-06	3.50E-06	3.50E-06
		4			0.189	0.000	0.190%					6.79E-06	5.54E-06	5.54E-06	5.54E-06
		3			0.142	0.000	0.420%					1.50E-05	1.22E-05	1.22E-05	1.22E-05
		2			0.095	0.000	0.850%					3.04E-05	2.48E-05	2.48E-05	2.48E-05
		1			0.047	0.000	1.230%					4.40E-05	3.58E-05	3.58E-05	3.58E-05
3d	SOHL	20	0.000	0.000	0.000	0.000	0.001%	4.05E-02	2.68E-02	2.68E-02	2.68E-02	4.05E-07	2.68E-07	2.68E-07	2.68E-07
		15			0.000	0.000	0.004%					1.62E-06	1.07E-06	1.07E-06	1.07E-06
		10			0.000	0.000	0.010%					4.05E-06	2.68E-06	2.68E-06	2.68E-06
		5			0.000	0.000	0.020%					8.09E-06	5.37E-06	5.37E-06	5.37E-06
		4			0.000	0.000	0.040%					1.62E-05	1.07E-05	1.07E-05	1.07E-05
		3			0.000	0.000	0.110%					4.45E-05	2.95E-05	2.95E-05	2.95E-05
		2			0.000	0.000	0.200%					8.09E-05	5.37E-05	5.37E-05	5.37E-05
		1			0.000	0.000	0.330%					1.34E-04	8.85E-05	8.85E-05	8.85E-05
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	2.36E-03	1.56E-03	1.56E-03	1.56E-03	7.07E-08	4.69E-08	4.69E-08	4.69E-08
		15			0.000	0.000	0.007%					1.65E-07	1.09E-07	1.09E-07	1.09E-07
		10			0.000	0.000	0.015%					3.54E-07	2.34E-07	2.34E-07	2.34E-07
		5			0.000	0.000	0.060%					1.41E-06	9.38E-07	9.38E-07	9.38E-07
		4			0.000	0.000	0.100%					2.36E-06	1.56E-06	1.56E-06	1.56E-06
		3			0.000	0.000	0.210%					4.95E-06	3.28E-06	3.28E-06	3.28E-06
		2			0.000	0.000	0.380%					8.96E-06	5.94E-06	5.94E-06	5.94E-06
		1			0.000	0.000	0.595%					1.40E-05	9.30E-06	9.30E-06	9.30E-06
	LOHL	20	0.007	0.000	0.149	0.000	0.005%	2.36E-04	1.56E-04	1.56E-04	1.56E-04	1.18E-08	7.81E-09	7.81E-09	7.81E-09
		15			0.111	0.000	0.010%					2.36E-08	1.56E-08	1.56E-08	1.56E-08
		10			0.074	0.000	0.020%					4.71E-08	3.13E-08	3.13E-08	3.13E-08
		5			0.037	0.000	0.120%					2.83E-07	1.88E-07	1.88E-07	1.88E-07
		4			0.030	0.000	0.190%					4.48E-07	2.97E-07	2.97E-07	2.97E-07
		3			0.022	0.000	0.420%					9.90E-07	6.56E-07	6.56E-07	6.56E-07
		2			0.015	0.000	0.850%					2.00E-06	1.33E-06	1.33E-06	1.33E-06
		1			0.007	0.000	1.230%					2.90E-06	1.92E-06	1.92E-06	1.92E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.13E-02	7.49E-03	7.49E-03	7.49E-03	1.13E-07	7.49E-08	7.49E-08	7.49E-08
		15			0.000	0.000	0.004%					4.52E-07	3.00E-07	3.00E-07	3.00E-07
		10			0.000	0.000	0.010%					1.13E-06	7.49E-07	7.49E-07	7.49E-07
		5			0.000	0.000	0.020%					2.26E-06	1.50E-06	1.50E-06	1.50E-06
		4			0.000	0.000	0.040%					4.52E-06	3.00E-06	3.00E-06	3.00E-06
		3			0.000	0.000	0.110%					1.24E-05	8.24E-06	8.24E-06	8.24E-06
		2			0.000	0.000	0.200%					2.26E-05	1.50E-05	1.50E-05	1.50E-05
		1			0.000	0.000	0.330%					3.73E-05	2.47E-05	2.47E-05	2.47E-05
	MCDF	20	0.007	0.000	0.149	0.000	0.003%	3.51E-03	2.32E-03	2.32E-03	2.32E-03	1.05E-07	6.97E-08	6.97E-08	6.97E-08
		15			0.111	0.000	0.007%					2.45E-07	1.63E-07	1.63E-07	1.63E-07
		10			0.074	0.000	0.015%					5.26E-07	3.49E-07	3.49E-07	3.49E-07
		5			0.037	0.000	0.060%					2.10E-06	1.39E-06	1.39E-06	1.39E-06
		4			0.030	0.000	0.100%					3.51E-06	2.32E-06	2.32E-06	2.32E-06
		3			0.022	0.000	0.210%					7.36E-06	4.88E-06	4.88E-06	4.88E-06
		2			0.015	0.000	0.380%					1.33E-05	8.83E-06	8.83E-06	8.83E-06
		1			0.007	0.000	0.595%					2.09E-05	1.38E-05	1.38E-05	1.38E-05
	LCDF	20	0.165	0.000	3.296	0.000	0.005%	2.34E-03	1.55E-03	1.55E-03	1.55E-03	1.17E-07	7.75E-08	7.75E-08	7.75E-08
		15			2.472	0.000	0.010%					2.34E-07	1.55E-07	1.55E-07	1.55E-07
		10			1.648	0.000	0.020%					4.68E-07	3.10E-07	3.10E-07	3.10E-07
		5			0.824	0.000	0.120%					2.81E-06	1.86E-06	1.86E-06	1.86E-06
		4			0.659	0.000	0.190%					4.44E-06	2.94E-06	2.94E-06	2.94E-06
		3			0.494	0.000	0.420%					9.82E-06	6.51E-06	6.51E-06	6.51E-06
		2			0.330	0.000	0.850%					1.99E-05	1.32E-05	1.32E-05	1.32E-05
		1			0.165	0.000	1.230%					2.88E-05	1.91E-05	1.91E-05	1.91E-05
3e	SOHL	20	0.000	0.000	0.000	0.000	0.001%	5.40E-03	5.40E-03	4.59E-03	4.59E-03	5.40E-08	5.40E-08	4.59E-08	4.59E-08
		15			0.000	0.000	0.004%					2.16E-07	2.16E-07	1.84E-07	1.84E-07
		10			0.000	0.000	0.010%					5.40E-07	5.40E-07	4.59E-07	4.59E-07
		5			0.000	0.000	0.020%					1.08E-06	1.08E-06	9.19E-07	9.19E-07
		4			0.000	0.000	0.040%					2.16E-06	2.16E-06	1.84E-06	1.84E-06
		3			0.000	0.000	0.110%					5.94E-06	5.94E-06	5.05E-06	5.05E-06
		2			0.000	0.000	0.200%					1.08E-05	1.08E-05	9.19E-06	9.19E-06
		1			0.000	0.000	0.330%					1.78E-05	1.78E-05	1.52E-05	1.52E-05

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 4 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3e	MOHL	20	0.000	0.000	0.000	0.000	0.003%	3.15E-04	3.15E-04	2.68E-04	2.68E-04	9.44E-09	9.44E-09	8.03E-09	8.03E-09
		15			0.000	0.000	0.007%					2.20E-08	2.20E-08	1.87E-08	1.87E-08
		10			0.000	0.000	0.015%					4.72E-08	4.72E-08	4.01E-08	4.01E-08
		5			0.000	0.000	0.060%					1.89E-07	1.89E-07	1.61E-07	1.61E-07
		4			0.000	0.000	0.100%					3.15E-07	3.15E-07	2.68E-07	2.68E-07
		3			0.000	0.000	0.210%					6.61E-07	6.61E-07	5.62E-07	5.62E-07
		2			0.000	0.000	0.380%					1.20E-06	1.20E-06	1.02E-06	1.02E-06
		1			0.000	0.000	0.595%					1.87E-06	1.87E-06	1.59E-06	1.59E-06
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	3.15E-05	3.15E-05	2.68E-05	2.68E-05	1.57E-09	1.57E-09	1.34E-09	1.34E-09
		15			0.788	0.788	0.010%					3.15E-09	3.15E-09	2.68E-09	2.68E-09
		10			0.526	0.526	0.020%					6.29E-09	6.29E-09	5.35E-09	5.35E-09
		5			0.263	0.263	0.120%					3.78E-08	3.78E-08	3.21E-08	3.21E-08
		4			0.210	0.210	0.190%					5.98E-08	5.98E-08	5.08E-08	5.08E-08
		3			0.158	0.158	0.420%					1.32E-07	1.32E-07	1.12E-07	1.12E-07
		2			0.105	0.105	0.850%					2.67E-07	2.67E-07	2.27E-07	2.27E-07
		1			0.053	0.053	1.230%					3.87E-07	3.87E-07	3.29E-07	3.29E-07
3f	SOHL	20	0.000	0.000	0.000	0.000	0.001%	8.82E-04	9.82E-05	9.82E-05	9.82E-05	8.82E-09	9.82E-10	9.82E-10	9.82E-10
		15			0.000	0.000	0.004%					3.53E-08	3.93E-09	3.93E-09	3.93E-09
		10			0.000	0.000	0.010%					8.82E-08	9.82E-09	9.82E-09	9.82E-09
		5			0.000	0.000	0.020%					1.76E-07	1.96E-08	1.96E-08	1.96E-08
		4			0.000	0.000	0.040%					3.53E-07	3.93E-08	3.93E-08	3.93E-08
		3			0.000	0.000	0.110%					9.70E-07	1.08E-07	1.08E-07	1.08E-07
		2			0.000	0.000	0.200%					1.76E-06	1.96E-07	1.96E-07	1.96E-07
		1			0.000	0.000	0.330%					2.91E-06	3.24E-07	3.24E-07	3.24E-07
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	5.14E-05	5.72E-06	5.72E-06	5.72E-06	1.54E-09	1.72E-10	1.72E-10	1.72E-10
		15			0.000	0.000	0.007%					3.60E-09	4.00E-10	4.00E-10	4.00E-10
		10			0.000	0.000	0.015%					7.71E-09	8.58E-10	8.58E-10	8.58E-10
		5			0.000	0.000	0.060%					3.08E-08	3.43E-09	3.43E-09	3.43E-09
		4			0.000	0.000	0.100%					5.14E-08	5.72E-09	5.72E-09	5.72E-09
		3			0.000	0.000	0.210%					1.08E-07	1.20E-08	1.20E-08	1.20E-08
		2			0.000	0.000	0.380%					1.95E-07	2.17E-08	2.17E-08	2.17E-08
		1			0.000	0.000	0.595%					3.06E-07	3.40E-08	3.40E-08	3.40E-08
	LOHL	20	0.000	0.000	0.000	0.000	0.005%	5.14E-06	5.72E-07	5.72E-07	5.72E-07	2.57E-10	2.86E-11	2.86E-11	2.86E-11
		15			0.000	0.000	0.010%					5.14E-10	5.72E-11	5.72E-11	5.72E-11
		10			0.000	0.000	0.020%					1.03E-09	1.14E-10	1.14E-10	1.14E-10
		5			0.000	0.000	0.120%					6.17E-09	6.86E-10	6.86E-10	6.86E-10
		4			0.000	0.000	0.190%					9.76E-09	1.09E-09	1.09E-09	1.09E-09
		3			0.000	0.000	0.420%					2.16E-08	2.40E-09	2.40E-09	2.40E-09
		2			0.000	0.000	0.850%					4.37E-08	4.86E-09	4.86E-09	4.86E-09
		1			0.000	0.000	1.230%					6.32E-08	7.04E-09	7.04E-09	7.04E-09
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	3.27E-04	3.64E-05	3.64E-05	3.64E-05	3.27E-09	3.64E-10	3.64E-10	3.64E-10
		15			0.000	0.000	0.004%					1.31E-08	1.46E-09	1.46E-09	1.46E-09
		10			0.000	0.000	0.010%					3.27E-08	3.64E-09	3.64E-09	3.64E-09
		5			0.000	0.000	0.020%					6.55E-08	7.29E-09	7.29E-09	7.29E-09
		4			0.000	0.000	0.040%					1.31E-07	1.46E-08	1.46E-08	1.46E-08
		3			0.000	0.000	0.110%					3.60E-07	4.01E-08	4.01E-08	4.01E-08
		2			0.000	0.000	0.200%					6.55E-07	7.29E-08	7.29E-08	7.29E-08
		1			0.000	0.000	0.330%					1.08E-06	1.20E-07	1.20E-07	1.20E-07
	MCDF	20	0.000	0.000	0.000	0.000	0.003%	1.02E-04	1.13E-05	1.13E-05	1.13E-05	3.05E-09	3.39E-10	3.39E-10	3.39E-10
		15			0.000	0.000	0.007%					7.11E-09	7.91E-10	7.91E-10	7.91E-10
		10			0.000	0.000	0.015%					1.52E-08	1.70E-09	1.70E-09	1.70E-09
		5			0.000	0.000	0.060%					6.09E-08	6.78E-09	6.78E-09	6.78E-09
		4			0.000	0.000	0.100%					1.02E-07	1.13E-08	1.13E-08	1.13E-08
		3			0.000	0.000	0.210%					2.13E-07	2.37E-08	2.37E-08	2.37E-08
		2			0.000	0.000	0.380%					3.86E-07	4.30E-08	4.30E-08	4.30E-08
		1			0.000	0.000	0.595%					6.04E-07	6.73E-08	6.73E-08	6.73E-08
	LCDF	20	0.008	0.000	0.165	0.000	0.005%	6.77E-05	7.54E-06	7.54E-06	7.54E-06	3.39E-09	3.77E-10	3.77E-10	3.77E-10
		15			0.124	0.000	0.010%					6.77E-09	7.54E-10	7.54E-10	7.54E-10
		10			0.083	0.000	0.020%					1.35E-08	1.51E-09	1.51E-09	1.51E-09
		5			0.041	0.000	0.120%					8.13E-08	9.04E-09	9.04E-09	9.04E-09
		4			0.033	0.000	0.190%					1.29E-07	1.43E-08	1.43E-08	1.43E-08
		3			0.025	0.000	0.420%					2.84E-07	3.17E-08	3.17E-08	3.17E-08
		2			0.017	0.000	0.850%					5.76E-07	6.41E-08	6.41E-08	6.41E-08
		1			0.008	0.000	1.230%					8.33E-07	9.27E-08	9.27E-08	9.27E-08
3g	SOHL	20	0.000	0.000	0.000	0.000	0.001%	1.17E-02	9.34E-03	9.34E-03	9.34E-03	1.17E-07	9.34E-08	9.34E-08	9.34E-08
		15			0.000	0.000	0.004%					4.67E-07	3.74E-07	3.74E-07	3.74E-07
		10			0.000	0.000	0.010%					1.17E-06	9.34E-07	9.34E-07	9.34E-07
		5			0.000	0.000	0.020%					2.34E-06	1.87E-06	1.87E-06	1.87E-06
		4			0.000	0.000	0.040%					4.67E-06	3.74E-06	3.74E-06	3.74E-06
		3			0.000	0.000	0.110%					1.29E-05	1.03E-05	1.03E-05	1.03E-05
		2			0.000	0.000	0.200%					2.34E-05	1.87E-05	1.87E-05	1.87E-05
		1			0.000	0.000	0.330%					3.86E-05	3.08E-05	3.08E-05	3.08E-05
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	6.81E-04	5.44E-04	5.44E-04	5.44E-04	2.04E-08	1.63E-08	1.63E-08	1.63E-08
		15			0.000	0.000	0.007%					4.76E-08	3.81E-08	3.81E-08	3.81E-08
		10			0.000	0.000	0.015%					1.02E-07	8.16E-08	8.16E-08	8.16E-08
		5			0.000	0.000	0.060%					4.08E-07	3.26E-07	3.26E-07	3.26E-07
		4			0.000	0.000	0.100%					6.81E-07	5.44E-07	5.44E-07	5.44E-07
		3			0.000	0.000	0.210%					1.43E-06	1.14E-06	1.14E-06	1.14E-06
		2			0.000	0.000	0.380%					2.59E-06	2.07E-06	2.07E-06	2.07E-06
		1			0.000	0.000	0.595%					4.05E-06	3.24E-06	3.24E-06	3.24E-06
	LOHL	20	0.008	0.000	0.165	0.000	0.005%	6.81E-05	5.44E-05	5.44E-05	5.44E-05	3.40E-09	2.72E-09	2.72E-09	2.72E-09
		15			0.124	0.000	0.010%					6.81E-09	5.44E-09	5.44E-09	5.44E-09
		10			0.083	0.000	0.020%					1.36E-08	1.09E-08	1.09E-08	1.09E-08
		5			0.041	0.000	0.120%					8.17E-08	6.53E-08	6.53E-08	6.53E-08
		4			0.033	0.000	0.190%					1.29E-07	1.03E-07	1.03E-07	1.03E-07
		3			0.025	0.000	0.420%					2.86E-07	2.29E-07	2.29E-07	2.29E-07
		2			0.017	0.000	0.850%					5.78E-07	4.62E-07	4.62E-07	4.62E-07
		1			0.008	0.000	1.230%					8.37E-07	6.69E-07	6.69E-07	6.69E-07
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.25E-02	9.99E-03	9.99E-03	9.99E-03	1.25E-07	9.99E-08	9.99E-08	9.99E-08
		15			0.000	0.000	0.004%					5.00E-07	3.99E-07	3.99E-07	3.99E-07
		10			0.000	0.000	0.010%					1.25E-06	9.99E-07	9.99E-07	9.99E-07
		5			0.000	0.000	0.020%					2.50E-06	2.00E-06	2.00E-06	2.00E-06
		4			0.000	0.000	0.040%					5.00E-06	3.99E-06	3.99E-06	3.99E-06
		3			0.000	0.000	0.110%					1.37E-05	1.10E-05	1.10E-05	1.10E-05
		2			0.000	0.000	0.200%					2.50E-05	2.00E-05	2.00E-05	2.00E-05
		1			0.000	0.000	0.330%					4.12E-05	3.30E-05	3.30E-05	3.30E-05

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 5 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3g	MCDF	20	0.008	0.000	0.165	0.000	0.003%	3.88E-03	3.10E-03	3.10E-03	3.10E-03	1.16E-07	9.30E-08	9.30E-08	9.30E-08
		15			0.124	0.000	0.007%					2.71E-07	2.17E-07	2.17E-07	2.17E-07
		10			0.083	0.000	0.015%					5.81E-07	4.65E-07	4.65E-07	4.65E-07
		5			0.041	0.000	0.060%					2.33E-06	1.86E-06	1.86E-06	1.86E-06
		4			0.033	0.000	0.100%					3.88E-06	3.10E-06	3.10E-06	3.10E-06
		3			0.025	0.000	0.210%					8.14E-06	6.51E-06	6.51E-06	6.51E-06
		2			0.017	0.000	0.380%					1.47E-05	1.18E-05	1.18E-05	1.18E-05
		1			0.008	0.000	0.595%					2.31E-05	1.84E-05	1.84E-05	1.84E-05
	LCDF	20	0.053	0.000	1.051	0.000	0.005%	2.58E-03	2.07E-03	2.07E-03	2.07E-03	1.29E-07	1.03E-07	1.03E-07	1.03E-07
		15			0.788	0.000	0.010%					2.58E-07	2.07E-07	2.07E-07	2.07E-07
		10			0.526	0.000	0.020%					5.17E-07	4.13E-07	4.13E-07	4.13E-07
		5			0.263	0.000	0.120%					3.10E-06	2.48E-06	2.48E-06	2.48E-06
		4			0.210	0.000	0.190%					4.91E-06	3.93E-06	3.93E-06	3.93E-06
		3			0.158	0.000	0.420%					1.09E-05	8.68E-06	8.68E-06	8.68E-06
		2			0.105	0.000	0.850%					2.20E-05	1.76E-05	1.76E-05	1.76E-05
		1			0.053	0.000	1.230%					3.18E-05	2.54E-05	2.54E-05	2.54E-05
3h	SOHL	20	0.000	0.000	0.000	0.000	0.001%	5.11E-02	4.89E-02	4.89E-02	4.89E-02	5.11E-07	4.89E-07	4.89E-07	4.89E-07
		15			0.000	0.000	0.004%					2.04E-06	1.95E-06	1.95E-06	1.95E-06
		10			0.000	0.000	0.010%					5.11E-06	4.89E-06	4.89E-06	4.89E-06
		5			0.000	0.000	0.020%					1.02E-05	9.77E-06	9.77E-06	9.77E-06
		4			0.000	0.000	0.040%					2.04E-05	1.95E-05	1.95E-05	1.95E-05
		3			0.000	0.000	0.110%					5.62E-05	5.37E-05	5.37E-05	5.37E-05
		2			0.000	0.000	0.200%					1.02E-04	9.77E-05	9.77E-05	9.77E-05
		1			0.000	0.000	0.330%					1.69E-04	1.61E-04	1.61E-04	1.61E-04
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	2.98E-03	2.85E-03	2.85E-03	2.85E-03	8.93E-08	8.54E-08	8.54E-08	8.54E-08
		15			0.000	0.000	0.007%					2.08E-07	1.99E-07	1.99E-07	1.99E-07
		10			0.000	0.000	0.015%					4.46E-07	4.27E-07	4.27E-07	4.27E-07
		5			0.000	0.000	0.060%					1.79E-06	1.71E-06	1.71E-06	1.71E-06
		4			0.000	0.000	0.100%					2.98E-06	2.85E-06	2.85E-06	2.85E-06
		3			0.000	0.000	0.210%					6.25E-06	5.98E-06	5.98E-06	5.98E-06
		2			0.000	0.000	0.380%					1.13E-05	1.08E-05	1.08E-05	1.08E-05
		1			0.000	0.000	0.595%					1.77E-05	1.69E-05	1.69E-05	1.69E-05
	LOHL	20	0.000	0.000	0.000	0.000	0.005%	2.98E-04	2.85E-04	2.85E-04	2.85E-04	1.49E-08	1.42E-08	1.42E-08	1.42E-08
		15			0.000	0.000	0.010%					2.98E-08	2.85E-08	2.85E-08	2.85E-08
		10			0.000	0.000	0.020%					5.95E-08	5.69E-08	5.69E-08	5.69E-08
		5			0.000	0.000	0.120%					3.57E-07	3.42E-07	3.42E-07	3.42E-07
		4			0.000	0.000	0.190%					5.66E-07	5.41E-07	5.41E-07	5.41E-07
		3			0.000	0.000	0.420%					1.25E-06	1.20E-06	1.20E-06	1.20E-06
		2			0.000	0.000	0.850%					2.53E-06	2.42E-06	2.42E-06	2.42E-06
		1			0.000	0.000	1.230%					3.66E-06	3.50E-06	3.50E-06	3.50E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.11E-02	1.06E-02	1.06E-02	1.06E-02	1.11E-07	1.06E-07	1.06E-07	1.06E-07
		15			0.000	0.000	0.004%					4.45E-07	4.26E-07	4.26E-07	4.26E-07
		10			0.000	0.000	0.010%					1.11E-06	1.06E-06	1.06E-06	1.06E-06
		5			0.000	0.000	0.020%					2.23E-06	2.13E-06	2.13E-06	2.13E-06
		4			0.000	0.000	0.040%					4.45E-06	4.26E-06	4.26E-06	4.26E-06
		3			0.000	0.000	0.110%					1.22E-05	1.17E-05	1.17E-05	1.17E-05
		2			0.000	0.000	0.200%					2.23E-05	2.13E-05	2.13E-05	2.13E-05
		1			0.000	0.000	0.330%					3.67E-05	3.51E-05	3.51E-05	3.51E-05
	MCDF	20	0.000	0.000	0.000	0.000	0.003%	3.45E-03	3.30E-03	3.30E-03	3.30E-03	1.04E-07	9.91E-08	9.91E-08	9.91E-08
		15			0.000	0.000	0.007%					2.42E-07	2.31E-07	2.31E-07	2.31E-07
		10			0.000	0.000	0.015%					5.18E-07	4.95E-07	4.95E-07	4.95E-07
		5			0.000	0.000	0.060%					2.07E-06	1.98E-06	1.98E-06	1.98E-06
		4			0.000	0.000	0.100%					3.45E-06	3.30E-06	3.30E-06	3.30E-06
		3			0.000	0.000	0.210%					7.25E-06	6.93E-06	6.93E-06	6.93E-06
		2			0.000	0.000	0.380%					1.31E-05	1.25E-05	1.25E-05	1.25E-05
		1			0.000	0.000	0.595%					2.05E-05	1.96E-05	1.96E-05	1.96E-05
	LCDF	20	0.008	0.000	0.165	0.000	0.005%	2.30E-03	2.20E-03	2.20E-03	2.20E-03	1.15E-07	1.10E-07	1.10E-07	1.10E-07
		15			0.124	0.000	0.010%					2.30E-07	2.20E-07	2.20E-07	2.20E-07
		10			0.083	0.000	0.020%					4.60E-07	4.40E-07	4.40E-07	4.40E-07
		5			0.041	0.000	0.120%					2.76E-06	2.64E-06	2.64E-06	2.64E-06
		4			0.033	0.000	0.190%					4.37E-06	4.18E-06	4.18E-06	4.18E-06
		3			0.025	0.000	0.420%					9.67E-06	9.25E-06	9.25E-06	9.25E-06
		2			0.017	0.000	0.850%					1.96E-05	1.87E-05	1.87E-05	1.87E-05
		1			0.008	0.000	1.230%					2.83E-05	2.71E-05	2.71E-05	2.71E-05
3i	SOHL	20	0.000	0.000	0.000	0.000	0.001%	9.41E-02	9.40E-02	9.40E-02	9.40E-02	9.41E-07	9.40E-07	9.40E-07	9.40E-07
		15			0.000	0.000	0.004%					3.76E-06	3.76E-06	3.76E-06	3.76E-06
		10			0.000	0.000	0.010%					9.41E-06	9.40E-06	9.40E-06	9.40E-06
		5			0.000	0.000	0.020%					1.88E-05	1.88E-05	1.88E-05	1.88E-05
		4			0.000	0.000	0.040%					3.76E-05	3.76E-05	3.76E-05	3.76E-05
		3			0.000	0.000	0.110%					1.04E-04	1.03E-04	1.03E-04	1.03E-04
		2			0.000	0.000	0.200%					1.88E-04	1.88E-04	1.88E-04	1.88E-04
		1			0.000	0.000	0.330%					3.11E-04	3.10E-04	3.10E-04	3.10E-04
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	5.48E-03	5.48E-03	5.48E-03	5.48E-03	1.64E-07	1.64E-07	1.64E-07	1.64E-07
		15			0.000	0.000	0.007%					3.84E-07	3.83E-07	3.83E-07	3.83E-07
		10			0.000	0.000	0.015%					8.22E-07	8.22E-07	8.22E-07	8.22E-07
		5			0.000	0.000	0.060%					3.29E-06	3.29E-06	3.29E-06	3.29E-06
		4			0.000	0.000	0.100%					5.48E-06	5.48E-06	5.48E-06	5.48E-06
		3			0.000	0.000	0.210%					1.15E-05	1.15E-05	1.15E-05	1.15E-05
		2			0.000	0.000	0.380%					2.08E-05	2.08E-05	2.08E-05	2.08E-05
		1			0.000	0.000	0.595%					3.26E-05	3.26E-05	3.26E-05	3.26E-05
	LOHL	20	0.008	0.000	0.165	0.000	0.005%	5.48E-04	5.48E-04	5.48E-04	5.48E-04	2.74E-08	2.74E-08	2.74E-08	2.74E-08
		15			0.124	0.000	0.010%					5.48E-08	5.48E-08	5.48E-08	5.48E-08
		10			0.083	0.000	0.020%					1.10E-07	1.10E-07	1.10E-07	1.10E-07
		5			0.041	0.000	0.120%					6.58E-07	6.57E-07	6.57E-07	6.57E-07
		4			0.033	0.000	0.190%					1.04E-06	1.04E-06	1.04E-06	1.04E-06
		3			0.025	0.000	0.420%					2.30E-06	2.30E-06	2.30E-06	2.30E-06
		2			0.017	0.000	0.850%					4.66E-06	4.66E-06	4.66E-06	4.66E-06
		1			0.008	0.000	1.230%					6.74E-06	6.74E-06	6.74E-06	6.74E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	2.39E-02	2.38E-02	2.38E-02	2.38E-02	2.39E-07	2.38E-07	2.38E-07	2.38E-07
		15			0.000	0.000	0.004%					9.55E-07	9.54E-07	9.54E-07	9.54E-07
		10			0.000	0.000	0.010%					2.39E-06	2.38E-06	2.38E-06	2.38E-06
		5			0.000	0.000	0.020%					4.77E-06	4.77E-06	4.77E-06	4.77E-06
		4			0.000	0.000	0.040%					9.55E-06	9.54E-06	9.54E-06	9.54E-06
		3			0.000	0.000	0.110%					2.63E-05	2.62E-05	2.62E-05	2.62E-05
		2			0.000	0.000	0.200%					4.77E-05	4.77E-05	4.77E-05	4.77E-05
		1			0.000	0.000	0.330%					7.88E-05	7.87E-05	7.87E-05	7.87E-05

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 6 of 16)

Sitting out area behind Bk. 12 at Woodcrest Hill - Affected by Hazard from Sub-area: 1b, 1e, 2a, 2b, 2c, 2d, 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
3i	MCDF	20	0.008	0.000	0.165	0.000	0.003%	7.41E-03	7.40E-03	7.40E-03	7.40E-03	2.22E-07	2.22E-07	2.22E-07	2.22E-07
		15			0.124	0.000	0.007%					5.18E-07	5.18E-07	5.18E-07	5.18E-07
		10			0.083	0.000	0.015%					1.11E-06	1.11E-06	1.11E-06	1.11E-06
		5			0.041	0.000	0.060%					4.44E-06	4.44E-06	4.44E-06	4.44E-06
		4			0.033	0.000	0.100%					7.41E-06	7.40E-06	7.40E-06	7.40E-06
		3			0.025	0.000	0.210%					1.56E-05	1.55E-05	1.55E-05	1.55E-05
		2			0.017	0.000	0.380%					2.81E-05	2.81E-05	2.81E-05	2.81E-05
		1			0.008	0.000	0.595%					4.41E-05	4.40E-05	4.40E-05	4.40E-05
	LCDF	20	0.053	0.000	1.051	0.000	0.005%	4.94E-03	4.93E-03	4.93E-03	4.93E-03	2.47E-07	2.47E-07	2.47E-07	2.47E-07
		15			0.788	0.000	0.010%					4.94E-07	4.93E-07	4.93E-07	4.93E-07
		10			0.526	0.000	0.020%					9.88E-07	9.87E-07	9.87E-07	9.87E-07
		5			0.263	0.000	0.120%					5.93E-06	5.92E-06	5.92E-06	5.92E-06
		4			0.210	0.000	0.190%					9.38E-06	9.37E-06	9.37E-06	9.37E-06
		3			0.158	0.000	0.420%					2.07E-05	2.07E-05	2.07E-05	2.07E-05
		2			0.105	0.000	0.850%					4.20E-05	4.19E-05	4.19E-05	4.19E-05
		1			0.053	0.000	1.230%					6.07E-05	6.07E-05	6.07E-05	6.07E-05
3j	SOHL	20	0.000	0.000	0.000	0.000	0.001%	1.25E-02	1.25E-02	2.01E-03	2.01E-03	1.25E-07	1.25E-07	2.01E-08	2.01E-08
		15			0.000	0.000	0.004%					4.99E-07	4.99E-07	8.03E-08	8.03E-08
		10			0.000	0.000	0.010%					1.25E-06	1.25E-06	2.01E-07	2.01E-07
		5			0.000	0.000	0.020%					2.50E-06	2.50E-06	4.02E-07	4.02E-07
		4			0.000	0.000	0.040%					4.99E-06	4.99E-06	8.03E-07	8.03E-07
		3			0.000	0.000	0.110%					1.37E-05	1.37E-05	2.21E-06	2.21E-06
		2			0.000	0.000	0.200%					2.50E-05	2.50E-05	4.02E-06	4.02E-06
		1			0.000	0.000	0.330%					4.12E-05	4.12E-05	6.63E-06	6.63E-06
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	7.27E-04	7.27E-04	1.17E-04	1.17E-04	2.18E-08	2.18E-08	3.51E-09	3.51E-09
		15			0.000	0.000	0.007%					5.09E-08	5.09E-08	8.19E-09	8.19E-09
		10			0.000	0.000	0.015%					1.09E-07	1.09E-07	1.75E-08	1.75E-08
		5			0.000	0.000	0.060%					4.36E-07	4.36E-07	7.02E-08	7.02E-08
		4			0.000	0.000	0.100%					7.27E-07	7.27E-07	1.17E-07	1.17E-07
		3			0.000	0.000	0.210%					1.53E-06	1.53E-06	2.46E-07	2.46E-07
		2			0.000	0.000	0.380%					2.76E-06	2.76E-06	4.44E-07	4.44E-07
		1			0.000	0.000	0.595%					4.33E-06	4.33E-06	6.96E-07	6.96E-07
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	7.27E-05	7.27E-05	1.17E-05	1.17E-05	3.64E-09	3.64E-09	5.85E-10	5.85E-10
		15			0.788	0.788	0.010%					7.27E-09	7.27E-09	1.17E-09	1.17E-09
		10			0.526	0.526	0.020%					1.45E-08	1.45E-08	2.34E-09	2.34E-09
		5			0.263	0.263	0.120%					8.73E-08	8.73E-08	1.40E-08	1.40E-08
		4			0.210	0.210	0.190%					1.38E-07	1.38E-07	2.22E-08	2.22E-08
		3			0.158	0.158	0.420%					3.05E-07	3.05E-07	4.91E-08	4.91E-08
		2			0.105	0.105	0.850%					6.18E-07	6.18E-07	9.94E-08	9.94E-08
		1			0.053	0.053	1.230%					8.94E-07	8.94E-07	1.44E-07	1.44E-07
											Σ f x N	7.51E-05	6.30E-05	6.28E-05	1.15E-05

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 7 of 16)

Patio of Block 11 at Woodcrest Hill - Affected by Hazard from Sub-area: 4a, 4c

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
4a	SOHL	20	0.005	0.005	0.099	0.099	0.001%	4.22E-04	4.22E-04	4.22E-04	4.22E-04	4.22E-09	4.22E-09	4.22E-09	4.22E-09
		15			0.074	0.074	0.004%					1.69E-08	1.69E-08	1.69E-08	1.69E-08
		10			0.050	0.050	0.010%					4.22E-08	4.22E-08	4.22E-08	4.22E-08
		5			0.025	0.025	0.020%					8.44E-08	8.44E-08	8.44E-08	8.44E-08
		4			0.020	0.020	0.040%					1.69E-07	1.69E-07	1.69E-07	1.69E-07
		3			0.015	0.015	0.110%					4.64E-07	4.64E-07	4.64E-07	4.64E-07
		2			0.010	0.010	0.200%					8.44E-07	8.44E-07	8.44E-07	8.44E-07
		1			0.005	0.005	0.330%					1.39E-06	1.39E-06	1.39E-06	1.39E-06
	MOHL	20	0.146	0.146	2.930	2.930	0.003%	2.46E-05	2.46E-05	2.46E-05	2.46E-05	7.38E-10	7.38E-10	7.38E-10	7.38E-10
		15			2.197	2.197	0.007%					1.72E-09	1.72E-09	1.72E-09	1.72E-09
		10			1.465	1.465	0.015%					3.69E-09	3.69E-09	3.69E-09	3.69E-09
		5			0.732	0.732	0.060%					1.48E-08	1.48E-08	1.48E-08	1.48E-08
		4			0.586	0.586	0.100%					2.46E-08	2.46E-08	2.46E-08	2.46E-08
		3			0.439	0.439	0.210%					5.17E-08	5.17E-08	5.17E-08	5.17E-08
		2			0.293	0.293	0.380%					9.35E-08	9.35E-08	9.35E-08	9.35E-08
		1			0.146	0.146	0.595%					1.46E-07	1.46E-07	1.46E-07	1.46E-07
	LOHL	20	0.436	0.436	8.721	8.721	0.005%	2.46E-06	2.46E-06	2.46E-06	2.46E-06	1.23E-10	1.23E-10	1.23E-10	1.23E-10
		15			6.541	6.541	0.010%					2.46E-10	2.46E-10	2.46E-10	2.46E-10
		10			4.361	4.361	0.020%					4.92E-10	4.92E-10	4.92E-10	4.92E-10
		5			2.180	2.180	0.120%					2.95E-09	2.95E-09	2.95E-09	2.95E-09
		4			1.744	1.744	0.190%					4.67E-09	4.67E-09	4.67E-09	4.67E-09
		3			1.308	1.308	0.420%					1.03E-08	1.03E-08	1.03E-08	1.03E-08
		2			0.872	0.872	0.850%					2.09E-08	2.09E-08	2.09E-08	2.09E-08
		1			0.436	0.436	1.230%					3.03E-08	3.03E-08	3.03E-08	3.03E-08
4c	SOHL	20	0.000	0.000	0.000	0.000	0.001%	3.07E-03	3.07E-03	3.07E-03	3.07E-03	3.07E-08	3.07E-08	3.07E-08	3.07E-08
		15			0.000	0.000	0.004%					1.23E-07	1.23E-07	1.23E-07	1.23E-07
		10			0.000	0.000	0.010%					3.07E-07	3.07E-07	3.07E-07	3.07E-07
		5			0.000	0.000	0.020%					6.13E-07	6.13E-07	6.13E-07	6.13E-07
		4			0.000	0.000	0.040%					1.23E-06	1.23E-06	1.23E-06	1.23E-06
		3			0.000	0.000	0.110%					3.37E-06	3.37E-06	3.37E-06	3.37E-06
		2			0.000	0.000	0.200%					6.13E-06	6.13E-06	6.13E-06	6.13E-06
		1			0.000	0.000	0.330%					1.01E-05	1.01E-05	1.01E-05	1.01E-05
	MOHL	20	0.007	0.007	0.132	0.132	0.003%	1.79E-04	1.79E-04	1.79E-04	1.79E-04	5.36E-09	5.36E-09	5.36E-09	5.36E-09
		15			0.099	0.099	0.007%					1.25E-08	1.25E-08	1.25E-08	1.25E-08
		10			0.066	0.066	0.015%					2.68E-08	2.68E-08	2.68E-08	2.68E-08
		5			0.033	0.033	0.060%					1.07E-07	1.07E-07	1.07E-07	1.07E-07
		4			0.026	0.026	0.100%					1.79E-07	1.79E-07	1.79E-07	1.79E-07
		3			0.020	0.020	0.210%					3.75E-07	3.75E-07	3.75E-07	3.75E-07
		2			0.013	0.013	0.380%					6.79E-07	6.79E-07	6.79E-07	6.79E-07
		1			0.007	0.007	0.595%					1.06E-06	1.06E-06	1.06E-06	1.06E-06
	LOHL	20	0.183	0.183	3.662	3.662	0.005%	1.79E-05	1.79E-05	1.79E-05	1.79E-05	8.93E-10	8.93E-10	8.93E-10	8.93E-10
		15			2.747	2.747	0.010%					1.79E-09	1.79E-09	1.79E-09	1.79E-09
		10			1.831	1.831	0.020%					3.57E-09	3.57E-09	3.57E-09	3.57E-09
		5			0.916	0.916	0.120%					2.14E-08	2.14E-08	2.14E-08	2.14E-08
		4			0.732	0.732	0.190%					3.39E-08	3.39E-08	3.39E-08	3.39E-08
		3			0.549	0.549	0.420%					7.50E-08	7.50E-08	7.50E-08	7.50E-08
		2			0.366	0.366	0.850%					1.52E-07	1.52E-07	1.52E-07	1.52E-07
		1			0.183	0.183	0.012					2.20E-07	2.20E-07	2.20E-07	2.20E-07
											Σ f x N	4.35E-07	4.35E-07	4.35E-07	4.35E-07

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 8 of 16)

Patio of Block 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
4b	SOHL	20	0.032	0.032	0.631	0.631	0.001%	4.45E-03	4.45E-03	4.01E-03	4.01E-03	4.45E-08	4.45E-08	4.01E-08	4.01E-08
		15			0.473	0.473	0.004%					1.78E-07	1.78E-07	1.60E-07	1.60E-07
		10			0.315	0.315	0.010%					4.45E-07	4.45E-07	4.01E-07	4.01E-07
		5			0.158	0.158	0.020%					8.91E-07	8.91E-07	8.02E-07	8.02E-07
		4			0.126	0.126	0.040%					1.78E-06	1.78E-06	1.60E-06	1.60E-06
		3			0.095	0.095	0.110%					4.90E-06	4.90E-06	4.41E-06	4.41E-06
		2			0.063	0.063	0.200%					8.91E-06	8.91E-06	8.02E-06	8.02E-06
		1			0.032	0.032	0.330%					1.47E-05	1.47E-05	1.32E-05	1.32E-05
	MOHL	20	0.146	0.146	2.930	2.930	0.003%	2.59E-04	2.59E-04	2.34E-04	2.34E-04	7.78E-09	7.78E-09	7.01E-09	7.01E-09
		15			2.197	2.197	0.007%					1.82E-08	1.82E-08	1.64E-08	1.64E-08
		10			1.465	1.465	0.015%					3.89E-08	3.89E-08	3.50E-08	3.50E-08
		5			0.732	0.732	0.060%					1.56E-07	1.56E-07	1.40E-07	1.40E-07
		4			0.586	0.586	0.100%					2.59E-07	2.59E-07	2.34E-07	2.34E-07
		3			0.439	0.439	0.210%					5.45E-07	5.45E-07	4.91E-07	4.91E-07
		2			0.293	0.293	0.380%					9.86E-07	9.86E-07	8.88E-07	8.88E-07
		1			0.146	0.146	0.595%					1.54E-06	1.54E-06	1.39E-06	1.39E-06
	LOHL	20	0.436	0.436	8.721	8.721	0.005%	2.59E-05	2.59E-05	2.34E-05	2.34E-05	1.30E-09	1.30E-09	1.17E-09	1.17E-09
		15			6.541	6.541	0.010%					2.59E-09	2.59E-09	2.34E-09	2.34E-09
		10			4.361	4.361	0.020%					5.19E-09	5.19E-09	4.67E-09	4.67E-09
		5			2.180	2.180	0.120%					3.11E-08	3.11E-08	2.80E-08	2.80E-08
		4			1.744	1.744	0.190%					4.93E-08	4.93E-08	4.44E-08	4.44E-08
		3			1.308	1.308	0.420%					1.09E-07	1.09E-07	9.81E-08	9.81E-08
		2			0.872	0.872	0.850%					2.21E-07	2.21E-07	1.99E-07	1.99E-07
		1			0.436	0.436	1.230%					3.19E-07	3.19E-07	2.87E-07	2.87E-07
4d	SOHL	20	0.000	0.000	0.000	0.000	0.001%	9.00E-03	9.00E-03	9.00E-03	9.00E-03	9.00E-08	9.00E-08	9.00E-08	9.00E-08
		15			0.000	0.000	0.004%					3.60E-07	3.60E-07	3.60E-07	3.60E-07
		10			0.000	0.000	0.010%					9.00E-07	9.00E-07	9.00E-07	9.00E-07
		5			0.000	0.000	0.020%					1.80E-06	1.80E-06	1.80E-06	1.80E-06
		4			0.000	0.000	0.040%					3.60E-06	3.60E-06	3.60E-06	3.60E-06
		3			0.000	0.000	0.110%					9.90E-06	9.90E-06	9.90E-06	9.90E-06
		2			0.000	0.000	0.200%					1.80E-05	1.80E-05	1.80E-05	1.80E-05
		1			0.000	0.000	0.330%					2.97E-05	2.97E-05	2.97E-05	2.97E-05
	MOHL	20	0.042	0.042	0.841	0.841	0.003%	5.24E-04	5.24E-04	5.24E-04	5.24E-04	1.57E-08	1.57E-08	1.57E-08	1.57E-08
		15			0.631	0.631	0.007%					3.67E-08	3.67E-08	3.67E-08	3.67E-08
		10			0.420	0.420	0.015%					7.87E-08	7.87E-08	7.87E-08	7.87E-08
		5			0.210	0.210	0.060%					3.15E-07	3.15E-07	3.15E-07	3.15E-07
		4			0.168	0.168	0.100%					5.24E-07	5.24E-07	5.24E-07	5.24E-07
		3			0.126	0.126	0.210%					1.10E-06	1.10E-06	1.10E-06	1.10E-06
		2			0.084	0.084	0.380%					1.99E-06	1.99E-06	1.99E-06	1.99E-06
		1			0.042	0.042	0.595%					3.12E-06	3.12E-06	3.12E-06	3.12E-06
	LOHL	20	0.183	0.183	3.662	3.662	0.005%	5.24E-05	5.24E-05	5.24E-05	5.24E-05	2.62E-09	2.62E-09	2.62E-09	2.62E-09
		15			2.747	2.747	0.010%					5.24E-09	5.24E-09	5.24E-09	5.24E-09
		10			1.831	1.831	0.020%					1.05E-08	1.05E-08	1.05E-08	1.05E-08
		5			0.916	0.916	0.120%					6.29E-08	6.29E-08	6.29E-08	6.29E-08
		4			0.732	0.732	0.190%					9.96E-08	9.96E-08	9.96E-08	9.96E-08
		3			0.549	0.549	0.420%					2.20E-07	2.20E-07	2.20E-07	2.20E-07
		2			0.366	0.366	0.850%					4.46E-07	4.46E-07	4.46E-07	4.46E-07
		1			0.183	0.183	1.230%					6.45E-07	6.45E-07	6.45E-07	6.45E-07
4e	SOHL	20	0.000	0.000	0.000	0.000	0.001%	4.99E-04	4.98E-04	5.48E-06	5.48E-06	4.99E-09	4.98E-09	5.48E-11	5.48E-11
		15			0.000	0.000	0.004%					2.00E-08	1.99E-08	2.19E-10	2.19E-10
		10			0.000	0.000	0.010%					4.99E-08	4.98E-08	5.48E-10	5.48E-10
		5			0.000	0.000	0.020%					9.98E-08	9.97E-08	1.10E-09	1.10E-09
		4			0.000	0.000	0.040%					2.00E-07	1.99E-07	2.19E-09	2.19E-09
		3			0.000	0.000	0.110%					5.49E-07	5.48E-07	6.03E-09	6.03E-09
		2			0.000	0.000	0.200%					9.98E-07	9.97E-07	1.10E-08	1.10E-08
		1			0.000	0.000	0.330%					1.65E-06	1.64E-06	1.81E-08	1.81E-08
	MOHL	20	0.007	0.007	0.132	0.132	0.003%	2.91E-05	2.90E-05	3.19E-07	3.19E-07	8.72E-10	8.71E-10	9.58E-12	9.58E-12
		15			0.099	0.099	0.007%					2.03E-09	2.03E-09	2.24E-11	2.24E-11
		10			0.066	0.066	0.015%					4.36E-09	4.35E-09	4.79E-11	4.79E-11
		5			0.033	0.033	0.060%					1.74E-08	1.74E-08	1.92E-10	1.92E-10
		4			0.026	0.026	0.100%					2.91E-08	2.90E-08	3.19E-10	3.19E-10
		3			0.020	0.020	0.210%					6.10E-08	6.10E-08	6.71E-10	6.71E-10
		2			0.013	0.013	0.380%					1.10E-07	1.10E-07	1.21E-09	1.21E-09
		1			0.007	0.007	0.595%					1.73E-07	1.73E-07	1.90E-09	1.90E-09
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	2.91E-06	2.90E-06	3.19E-08	3.19E-08	1.45E-10	1.45E-10	1.60E-12	1.60E-12
		15			0.788	0.788	0.010%					2.91E-10	2.90E-10	3.19E-12	3.19E-12
		10			0.526	0.526	0.020%					5.81E-10	5.81E-10	6.39E-12	6.39E-12
		5			0.263	0.263	0.120%					3.49E-09	3.48E-09	3.83E-11	3.83E-11
		4			0.210	0.210	0.190%					5.52E-09	5.52E-09	6.07E-11	6.07E-11
		3			0.158	0.158	0.420%					1.22E-08	1.22E-08	1.34E-10	1.34E-10
		2			0.105	0.105	0.850%					2.47E-08	2.47E-08	2.71E-10	2.71E-10
		1			0.053	0.053	1.230%					3.57E-08	3.57E-08	3.93E-10	3.93E-10
5a	SOHL	20	0.000	0.000	0.000	0.000	0.001%	3.10E-03	3.10E-03	3.10E-03	7.85E-04	3.10E-08	3.10E-08	3.10E-08	7.85E-09
		15			0.000	0.000	0.004%					1.24E-07	1.24E-07	1.24E-07	3.14E-08
		10			0.000	0.000	0.010%					3.10E-07	3.10E-07	3.10E-07	7.85E-08
		5			0.000	0.000	0.020%					6.20E-07	6.20E-07	6.20E-07	1.57E-07
		4			0.000	0.000	0.040%					1.24E-06	1.24E-06	1.24E-06	3.14E-07
		3			0.000	0.000	0.110%					3.41E-06	3.41E-06	3.41E-06	8.64E-07
		2			0.000	0.000	0.200%					6.20E-06	6.20E-06	6.20E-06	1.57E-06
		1			0.000	0.000	0.330%					1.02E-05	1.02E-05	1.02E-05	2.59E-06
	MOHL	20	0.007	0.007	0.132	0.132	0.003%	1.81E-04	1.81E-04	1.81E-04	4.57E-05	5.42E-09	5.42E-09	5.42E-09	1.37E-09
		15			0.099	0.099	0.007%					1.26E-08	1.26E-08	1.26E-08	3.20E-09
		10			0.066	0.066	0.015%					2.71E-08	2.71E-08	2.71E-08	6.86E-09
		5			0.033	0.033	0.060%					1.08E-07	1.08E-07	1.08E-07	2.74E-08
		4			0.026	0.026	0.100%					1.81E-07	1.81E-07	1.81E-07	4.57E-08
		3			0.020	0.020	0.210%					3.79E-07	3.79E-07	3.79E-07	9.61E-08
		2			0.013	0.013	0.380%					6.86E-07	6.86E-07	6.86E-07	1.74E-07
		1			0.007	0.007	0.595%					1.07E-06	1.07E-06	1.07E-06	2.72E-07
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	1.81E-05	1.81E-05	1.81E-05	4.57E-06	9.03E-10	9.03E-10	9.03E-10	2.29E-10
		15			0.788	0.788	0.010%					1.81E-09	1.81E-09	1.81E-09	4.57E-10
		10			0.526	0.526	0.020%					3.61E-09	3.61E-09	3.61E-09	9.15E-10
		5			0.263	0.263	0.120%					2.17E-08	2.17E-08	2.17E-08	5.49E-09
		4			0.210	0.210	0.190%					3.43E-08	3.43E-08	3.43E-08	8.69E-09
		3			0.158	0.158	0.420%					7.58E-08	7.58E-08	7.58E-08	1.92E-08
		2			0.105	0.105	0.850%					1.53E-07	1.53E-07	1.53E-07	3.89E-08
		1			0.053	0.053	1.230%					2.22E-07	2.22E-07	2.22E-07	5.63E-08

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 9 of 16)

Patio of Block 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5a	SCDF	20	0.007	0.007	0.132	0.132	0.001%	1.15E-03	1.15E-03	1.15E-03	2.91E-04	1.15E-08	1.15E-08	1.15E-08	2.91E-09
		15			0.099	0.099	0.004%					4.60E-08	4.60E-08	4.60E-08	1.17E-08
		10			0.066	0.066	0.010%					1.15E-07	1.15E-07	1.15E-07	2.91E-08
		5			0.033	0.033	0.020%					2.30E-07	2.30E-07	2.30E-07	5.83E-08
		4			0.026	0.026	0.040%					4.60E-07	4.60E-07	4.60E-07	1.17E-07
		3			0.020	0.020	0.110%					1.27E-06	1.27E-06	1.27E-06	3.20E-07
		2			0.013	0.013	0.200%					2.30E-06	2.30E-06	2.30E-06	5.83E-07
		1			0.007	0.007	0.330%					3.80E-06	3.80E-06	3.80E-06	9.61E-07
	MCDF	20	0.053	0.053	1.051	1.051	0.003%	3.57E-04	3.57E-04	3.57E-04	9.04E-05	1.07E-08	1.07E-08	1.07E-08	2.71E-09
		15			0.788	0.788	0.007%					2.50E-08	2.50E-08	2.50E-08	6.33E-09
		10			0.526	0.526	0.015%					5.35E-08	5.35E-08	5.35E-08	1.36E-08
		5			0.263	0.263	0.060%					2.14E-07	2.14E-07	2.14E-07	5.42E-08
		4			0.210	0.210	0.100%					3.57E-07	3.57E-07	3.57E-07	9.04E-08
		3			0.158	0.158	0.210%					7.50E-07	7.50E-07	7.50E-07	1.90E-07
		2			0.105	0.105	0.380%					1.36E-06	1.36E-06	1.36E-06	3.44E-07
		1			0.053	0.053	0.595%					2.12E-06	2.12E-06	2.12E-06	5.38E-07
	LCDF	20	0.183	0.183	3.662	3.662	0.005%	2.38E-04	2.38E-04	2.38E-04	6.03E-05	1.19E-08	1.19E-08	1.19E-08	3.01E-09
		15			2.747	2.747	0.010%					2.38E-08	2.38E-08	2.38E-08	6.03E-09
		10			1.831	1.831	0.020%					4.76E-08	4.76E-08	4.76E-08	1.21E-08
		5			0.916	0.916	0.120%					2.86E-07	2.86E-07	2.86E-07	7.23E-08
		4			0.732	0.732	0.190%					4.52E-07	4.52E-07	4.52E-07	1.15E-07
		3			0.549	0.549	0.420%					9.99E-07	9.99E-07	9.99E-07	2.53E-07
		2			0.366	0.366	0.850%					2.02E-06	2.02E-06	2.02E-06	5.12E-07
		1			0.183	0.183	1.230%					2.93E-06	2.93E-06	2.93E-06	7.41E-07
5c	SOHL	20	0.000	0.000	0.000	0.000	0.001%	8.05E-03	6.48E-03	6.16E-03	1.64E-05	8.05E-08	6.48E-08	6.16E-08	1.64E-10
		15			0.000	0.000	0.004%					3.22E-07	2.59E-07	2.46E-07	6.58E-10
		10			0.000	0.000	0.010%					8.05E-07	6.48E-07	6.16E-07	1.64E-09
		5			0.000	0.000	0.020%					1.61E-06	1.30E-06	1.23E-06	3.29E-09
		4			0.000	0.000	0.040%					3.22E-06	2.59E-06	2.46E-06	6.58E-09
		3			0.000	0.000	0.110%					8.85E-06	7.13E-06	6.78E-06	1.81E-08
		2			0.000	0.000	0.200%					1.61E-05	1.30E-05	1.23E-05	3.29E-08
		1			0.000	0.000	0.330%					2.65E-05	2.14E-05	2.03E-05	5.43E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	4.69E-04	3.78E-04	3.59E-04	9.58E-07	1.41E-08	1.13E-08	1.08E-08	2.87E-11
		15			0.000	0.000	0.007%					3.28E-08	2.64E-08	2.51E-08	6.71E-11
		10			0.000	0.000	0.015%					7.03E-08	5.66E-08	5.38E-08	1.44E-10
		5			0.000	0.000	0.060%					2.81E-07	2.27E-07	2.15E-07	5.75E-10
		4			0.000	0.000	0.100%					4.69E-07	3.78E-07	3.59E-07	9.58E-10
		3			0.000	0.000	0.210%					9.84E-07	7.93E-07	7.54E-07	2.01E-09
		2			0.000	0.000	0.380%					1.78E-06	1.44E-06	1.36E-06	3.64E-09
		1			0.000	0.000	0.595%					2.79E-06	2.25E-06	2.13E-06	5.70E-09
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	4.69E-05	3.78E-05	3.59E-05	9.58E-08	2.34E-09	1.89E-09	1.79E-09	4.79E-12
		15			0.788	0.788	0.010%					4.69E-09	3.78E-09	3.59E-09	9.58E-12
		10			0.526	0.526	0.020%					9.37E-09	7.55E-09	7.18E-09	1.92E-11
		5			0.263	0.263	0.120%					5.62E-08	4.53E-08	4.31E-08	1.15E-10
		4			0.210	0.210	0.190%					8.90E-08	7.18E-08	6.82E-08	1.82E-10
		3			0.158	0.158	0.420%					1.97E-07	1.59E-07	1.51E-07	4.02E-10
		2			0.105	0.105	0.850%					3.98E-07	3.21E-07	3.05E-07	8.14E-10
		1			0.053	0.053	1.230%					5.76E-07	4.65E-07	4.41E-07	1.18E-09
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.02E-02	8.25E-03	7.84E-03	2.09E-05	1.02E-07	8.25E-08	7.84E-08	2.09E-10
		15			0.000	0.000	0.004%					4.09E-07	3.30E-07	3.13E-07	8.37E-10
		10			0.000	0.000	0.010%					1.02E-06	8.25E-07	7.84E-07	2.09E-09
		5			0.000	0.000	0.020%					2.05E-06	1.65E-06	1.57E-06	4.18E-09
		4			0.000	0.000	0.040%					4.09E-06	3.30E-06	3.13E-06	8.37E-09
		3			0.000	0.000	0.110%					1.13E-05	9.07E-06	8.62E-06	2.30E-08
		2			0.000	0.000	0.200%					2.05E-05	1.65E-05	1.57E-05	4.18E-08
		1			0.000	0.000	0.330%					3.38E-05	2.72E-05	2.59E-05	6.90E-08
	MCDF	20	0.053	0.053	1.051	1.051	0.003%	3.18E-03	2.56E-03	2.43E-03	6.49E-06	9.53E-08	7.68E-08	7.30E-08	1.95E-10
		15			0.788	0.788	0.007%					2.22E-07	1.79E-07	1.70E-07	4.55E-10
		10			0.526	0.526	0.015%					4.76E-07	3.84E-07	3.65E-07	9.74E-10
		5			0.263	0.263	0.060%					1.91E-06	1.54E-06	1.46E-06	3.90E-09
		4			0.210	0.210	0.100%					3.18E-06	2.56E-06	2.43E-06	6.49E-09
		3			0.158	0.158	0.210%					6.67E-06	5.37E-06	5.11E-06	1.36E-08
		2			0.105	0.105	0.380%					1.21E-05	9.73E-06	9.24E-06	2.47E-08
		1			0.053	0.053	0.595%					1.89E-05	1.52E-05	1.45E-05	3.86E-08
	LCDF	20	0.183	0.183	3.662	3.662	0.005%	2.12E-03	1.71E-03	1.62E-03	4.33E-06	1.06E-07	8.53E-08	8.11E-08	2.16E-10
		15			2.747	2.747	0.010%					2.12E-07	1.71E-07	1.62E-07	4.33E-10
		10			1.831	1.831	0.020%					4.24E-07	3.41E-07	3.24E-07	8.66E-10
		5			0.916	0.916	0.120%					2.54E-06	2.05E-06	1.95E-06	5.19E-09
		4			0.732	0.732	0.190%					4.02E-06	3.24E-06	3.08E-06	8.22E-09
		3			0.549	0.549	0.420%					8.89E-06	7.17E-06	6.81E-06	1.82E-08
		2			0.366	0.366	0.850%					1.80E-05	1.45E-05	1.38E-05	3.68E-08
		1			0.183	0.183	1.230%					2.60E-05	2.10E-05	1.99E-05	5.32E-08
5d	SOHL	20	0.000	0.000	0.000	0.000	0.001%	2.22E-04	2.22E-04	2.22E-04	1.79E-04	2.22E-09	2.22E-09	2.22E-09	1.79E-09
		15			0.000	0.000	0.004%					8.87E-09	8.87E-09	8.87E-09	7.16E-09
		10			0.000	0.000	0.010%					2.22E-08	2.22E-08	2.22E-08	1.79E-08
		5			0.000	0.000	0.020%					4.43E-08	4.43E-08	4.43E-08	3.58E-08
		4			0.000	0.000	0.040%					8.87E-08	8.87E-08	8.87E-08	7.16E-08
		3			0.000	0.000	0.110%					2.44E-07	2.44E-07	2.44E-07	1.97E-07
		2			0.000	0.000	0.200%					4.43E-07	4.43E-07	4.43E-07	3.58E-07
		1			0.000	0.000	0.330%					7.32E-07	7.32E-07	7.32E-07	5.91E-07
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	1.29E-05	1.29E-05	1.29E-05	1.04E-05	3.87E-10	3.87E-10	3.87E-10	3.13E-10
		15			0.000	0.000	0.007%					9.04E-10	9.04E-10	9.04E-10	7.30E-10
		10			0.000	0.000	0.015%					1.94E-09	1.94E-09	1.94E-09	1.57E-09
		5			0.000	0.000	0.060%					7.75E-09	7.75E-09	7.75E-09	6.26E-09
		4			0.000	0.000	0.100%					1.29E-08	1.29E-08	1.29E-08	1.04E-08
		3			0.000	0.000	0.210%					2.71E-08	2.71E-08	2.71E-08	2.19E-08
		2			0.000	0.000	0.380%					4.91E-08	4.91E-08	4.91E-08	3.96E-08
		1			0.000	0.000	0.595%					7.68E-08	7.68E-08	7.68E-08	6.21E-08
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	1.29E-06	1.29E-06	1.29E-06	1.04E-06	6.46E-11	6.46E-11	6.46E-11	5.22E-11
		15			0.788	0.788	0.010%					1.29E-10	1.29E-10	1.29E-10	1.04E-10
		10			0.526	0.526	0.020%					2.58E-10	2.58E-10	2.58E-10	2.09E-10
		5			0.263	0.263	0.120%					1.55E-09	1.55E-09	1.55E-09	1.25E-09
		4			0.210	0.210	0.190%					2.45E-09	2.45E-09	2.45E-09	1.98E-09
		3			0.158	0.158	0.420%					5.42E-09	5.42E-09	5.42E-09	4.38E-09
		2			0.105	0.105	0.850%					1.10E-08	1.10E-08	1.10E-08	8.87E-09
		1			0.053	0.053	1.230%					1.59E-08	1.59E-08	1.59E-08	1.28E-08

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 10 of 16)

Patio of Block 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5d	SCDF	20	0.000	0.000	0.000	0.000	0.001%	8.22E-05	8.22E-05	8.22E-05	6.65E-05	8.22E-10	8.22E-10	8.22E-10	6.65E-10
		15			0.000	0.000	0.004%					3.29E-09	3.29E-09	3.29E-09	2.66E-09
		10			0.000	0.000	0.010%					8.22E-09	8.22E-09	8.22E-09	6.65E-09
		5			0.000	0.000	0.020%					1.64E-08	1.64E-08	1.64E-08	1.33E-08
		4			0.000	0.000	0.040%					3.29E-08	3.29E-08	3.29E-08	2.66E-08
		3			0.000	0.000	0.110%					9.05E-08	9.05E-08	9.05E-08	7.31E-08
		2			0.000	0.000	0.200%					1.64E-07	1.64E-07	1.64E-07	1.33E-07
		1			0.000	0.000	0.330%					2.71E-07	2.71E-07	2.71E-07	2.19E-07
	MCDF	20	0.053	0.053	1.051	1.051	0.003%	2.55E-05	2.55E-05	2.55E-05	2.06E-05	7.66E-10	7.66E-10	7.66E-10	6.19E-10
		15			0.788	0.788	0.007%					1.79E-09	1.79E-09	1.79E-09	1.44E-09
		10			0.526	0.526	0.015%					3.83E-09	3.83E-09	3.83E-09	3.09E-09
		5			0.263	0.263	0.060%					1.53E-08	1.53E-08	1.53E-08	1.24E-08
		4			0.210	0.210	0.100%					2.55E-08	2.55E-08	2.55E-08	2.06E-08
		3			0.158	0.158	0.210%					5.36E-08	5.36E-08	5.36E-08	4.33E-08
		2			0.105	0.105	0.380%					9.70E-08	9.70E-08	9.70E-08	7.84E-08
		1			0.053	0.053	0.595%					1.52E-07	1.52E-07	1.52E-07	1.23E-07
	LCDF	20	0.183	0.183	3.662	3.662	0.005%	1.70E-05	1.70E-05	1.70E-05	1.37E-05	8.51E-10	8.51E-10	8.51E-10	6.87E-10
		15			2.747	2.747	0.010%					1.70E-09	1.70E-09	1.70E-09	1.37E-09
		10			1.831	1.831	0.020%					3.40E-09	3.40E-09	3.40E-09	2.75E-09
		5			0.916	0.916	0.120%					2.04E-08	2.04E-08	2.04E-08	1.65E-08
		4			0.732	0.732	0.190%					3.23E-08	3.23E-08	3.23E-08	2.61E-08
		3			0.549	0.549	0.420%					7.15E-08	7.15E-08	7.15E-08	5.77E-08
		2			0.366	0.366	0.850%					1.45E-07	1.45E-07	1.45E-07	1.17E-07
		1			0.183	0.183	1.230%					2.09E-07	2.09E-07	2.09E-07	1.69E-07
5e	SOHL	20	0.000	0.000	0.000	0.000	0.001%	1.28E-02	1.28E-02	4.10E-03	1.49E-05	1.28E-07	1.28E-07	4.10E-08	1.49E-10
		15			0.000	0.000	0.004%					5.11E-07	5.11E-07	1.64E-07	5.97E-10
		10			0.000	0.000	0.010%					1.28E-06	1.28E-06	4.10E-07	1.49E-09
		5			0.000	0.000	0.020%					2.56E-06	2.56E-06	8.20E-07	2.98E-09
		4			0.000	0.000	0.040%					5.11E-06	5.11E-06	1.64E-06	5.97E-09
		3			0.000	0.000	0.110%					1.41E-05	1.41E-05	4.51E-06	1.64E-08
		2			0.000	0.000	0.200%					2.56E-05	2.56E-05	8.20E-06	2.98E-08
		1			0.000	0.000	0.330%					4.22E-05	4.22E-05	1.35E-05	4.92E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	7.45E-04	7.45E-04	2.39E-04	8.69E-07	2.23E-08	2.23E-08	7.17E-09	2.61E-11
		15			0.000	0.000	0.007%					5.21E-08	5.21E-08	1.67E-08	6.09E-11
		10			0.000	0.000	0.015%					1.12E-07	1.12E-07	3.58E-08	1.30E-10
		5			0.000	0.000	0.060%					4.47E-07	4.47E-07	1.43E-07	5.22E-10
		4			0.000	0.000	0.100%					7.45E-07	7.45E-07	2.39E-07	8.69E-10
		3			0.000	0.000	0.210%					1.56E-06	1.56E-06	5.02E-07	1.83E-09
		2			0.000	0.000	0.380%					2.83E-06	2.83E-06	9.08E-07	3.30E-09
		1			0.000	0.000	0.595%					4.43E-06	4.43E-06	1.42E-06	5.17E-09
	LOHL	20	0.053	0.053	1.051	1.051	0.005%	7.45E-05	7.45E-05	2.39E-05	8.69E-08	3.72E-09	3.72E-09	1.19E-09	4.35E-12
		15			0.788	0.788	0.010%					7.45E-09	7.45E-09	2.39E-09	8.69E-12
		10			0.526	0.526	0.020%					1.49E-08	1.49E-08	4.78E-09	1.74E-11
		5			0.263	0.263	0.120%					8.94E-08	8.94E-08	2.87E-08	1.04E-10
		4			0.210	0.210	0.190%					1.42E-07	1.42E-07	4.54E-08	1.65E-10
		3			0.158	0.158	0.420%					3.13E-07	3.13E-07	1.00E-07	3.65E-10
		2			0.105	0.105	0.850%					6.33E-07	6.33E-07	2.03E-07	7.39E-10
		1			0.053	0.053	1.230%					9.16E-07	9.16E-07	2.94E-07	1.07E-09
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	1.02E-02	1.02E-02	3.27E-03	1.19E-05	1.02E-07	1.02E-07	3.27E-08	1.19E-10
		15			0.000	0.000	0.004%					4.07E-07	4.07E-07	1.31E-07	4.75E-10
		10			0.000	0.000	0.010%					1.02E-06	1.02E-06	3.27E-07	1.19E-09
		5			0.000	0.000	0.020%					2.04E-06	2.04E-06	6.53E-07	2.38E-09
		4			0.000	0.000	0.040%					4.07E-06	4.07E-06	1.31E-06	4.75E-09
		3			0.000	0.000	0.110%					1.12E-05	1.12E-05	3.59E-06	1.31E-08
		2			0.000	0.000	0.200%					2.04E-05	2.04E-05	6.53E-06	2.38E-08
		1			0.000	0.000	0.330%					3.36E-05	3.36E-05	1.08E-05	3.92E-08
	MCDF	20	0.053	0.053	1.051	1.051	0.003%	3.16E-03	3.16E-03	1.01E-03	3.69E-06	9.48E-08	9.48E-08	3.04E-08	1.11E-10
		15			0.788	0.788	0.007%					2.21E-07	2.21E-07	7.10E-08	2.58E-10
		10			0.526	0.526	0.015%					4.74E-07	4.74E-07	1.52E-07	5.53E-10
		5			0.263	0.263	0.060%					1.90E-06	1.90E-06	6.08E-07	2.21E-09
		4			0.210	0.210	0.100%					3.16E-06	3.16E-06	1.01E-06	3.69E-09
		3			0.158	0.158	0.210%					6.64E-06	6.64E-06	2.13E-06	7.74E-09
		2			0.105	0.105	0.380%					1.20E-05	1.20E-05	3.85E-06	1.40E-08
		1			0.053	0.053	0.595%					1.88E-05	1.88E-05	6.03E-06	2.19E-08
	LCDF	20	0.183	0.183	3.662	3.662	0.005%	2.11E-03	2.11E-03	6.76E-04	2.46E-06	1.05E-07	1.05E-07	3.38E-08	1.23E-10
		15			2.747	2.747	0.010%					2.11E-07	2.11E-07	6.76E-08	2.46E-10
		10			1.831	1.831	0.020%					4.21E-07	4.21E-07	1.35E-07	4.92E-10
		5			0.916	0.916	0.120%					2.53E-06	2.53E-06	8.11E-07	2.95E-09
		4			0.732	0.732	0.190%					4.00E-06	4.00E-06	1.28E-06	4.67E-09
		3			0.549	0.549	0.420%					8.85E-06	8.85E-06	2.84E-06	1.03E-08
		2			0.366	0.366	0.850%					1.79E-05	1.79E-05	5.74E-06	2.09E-08
		1			0.183	0.183	1.230%					2.59E-05	2.59E-05	8.31E-06	3.02E-08
5f	SOHL	20	0.000	0.000	0.000	0.000	0.001%	8.77E-03	7.17E-03	5.02E-03	8.83E-06	8.77E-08	7.17E-08	5.02E-08	8.83E-11
		15			0.000	0.000	0.004%					3.51E-07	2.87E-07	2.01E-07	3.53E-10
		10			0.000	0.000	0.010%					8.77E-07	7.17E-07	5.02E-07	8.83E-10
		5			0.000	0.000	0.020%					1.75E-06	1.43E-06	1.00E-06	1.77E-09
		4			0.000	0.000	0.040%					3.51E-06	2.87E-06	2.01E-06	3.53E-09
		3			0.000	0.000	0.110%					9.65E-06	7.88E-06	5.52E-06	9.72E-09
		2			0.000	0.000	0.200%					1.75E-05	1.43E-05	1.00E-05	1.77E-08
		1			0.000	0.000	0.330%					2.90E-05	2.37E-05	1.66E-05	2.91E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	5.11E-04	4.18E-04	2.92E-04	5.14E-07	1.53E-08	1.25E-08	8.77E-09	1.54E-11
		15			0.000	0.000	0.007%					3.58E-08	2.92E-08	2.05E-08	3.60E-11
		10			0.000	0.000	0.015%					7.67E-08	6.26E-08	4.39E-08	7.72E-11
		5			0.000	0.000	0.060%					3.07E-07	2.51E-07	1.75E-07	3.09E-10
		4			0.000	0.000	0.100%					5.11E-07	4.18E-07	2.92E-07	5.14E-10
		3			0.000	0.000	0.210%					1.07E-06	8.77E-07	6.14E-07	1.08E-09
		2			0.000	0.000	0.380%					1.94E-06	1.59E-06	1.11E-06	1.96E-09
		1			0.000	0.000	0.595%					3.04E-06	2.48E-06	1.74E-06	3.06E-09
	LOHL	20	0.008	0.008	0.165	0.165	0.005%	5.11E-05	4.18E-05	2.92E-05	5.14E-08	2.56E-09	2.09E-09	1.46E-09	2.57E-12
		15			0.124	0.124	0.010%					5.11E-09	4.18E-09	2.92E-09	5.14E-12
		10			0.083	0.083	0.020%					1.02E-08	8.35E-09	5.85E-09	1.03E-11
		5			0.041	0.041	0.120%					6.13E-08	5.01E-08	3.51E-08	6.17E-11
		4			0.033	0.033	0.190%					9.71E-08	7.93E-08	5.56E-08	9.78E-11
		3			0.025	0.025	0.420%					2.15E-07	1.75E-07	1.23E-07	2.16E-10
		2			0.017	0.017	0.850%					4.34E-07	3.55E-07	2.49E-07	4.37E-10
		1			0.008	0.008	1.230%					6.29E-07	5.14E-07	3.60E-07	6.33E-10

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 11 of 16)

Patio of Block 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 4b, 4d, 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5f	SCDF	20	0.000	0.000	0.000	0.000	0.001%	2.50E-02	2.04E-02	1.43E-02	2.52E-05	2.50E-07	2.04E-07	1.43E-07	2.52E-10
		15			0.000	0.000	0.004%					1.00E-06	8.17E-07	5.72E-07	1.01E-09
		10			0.000	0.000	0.010%					2.50E-06	2.04E-06	1.43E-06	2.52E-09
		5			0.000	0.000	0.020%					5.00E-06	4.09E-06	2.86E-06	5.03E-09
		4			0.000	0.000	0.040%					1.00E-05	8.17E-06	5.72E-06	1.01E-08
		3			0.000	0.000	0.110%					2.75E-05	2.25E-05	1.57E-05	2.77E-08
		2			0.000	0.000	0.200%					5.00E-05	4.09E-05	2.86E-05	5.03E-08
		1			0.000	0.000	0.330%					8.25E-05	6.74E-05	4.72E-05	8.31E-08
	MCDF	20	0.008	0.008	0.165	0.165	0.003%	7.76E-03	6.34E-03	4.44E-03	7.81E-06	2.33E-07	1.90E-07	1.33E-07	2.34E-10
		15			0.124	0.124	0.007%					5.43E-07	4.44E-07	3.11E-07	5.47E-10
		10			0.083	0.083	0.015%					1.16E-06	9.51E-07	6.66E-07	1.17E-09
		5			0.041	0.041	0.060%					4.66E-06	3.80E-06	2.66E-06	4.69E-09
		4			0.033	0.033	0.100%					7.76E-06	6.34E-06	4.44E-06	7.81E-09
		3			0.025	0.025	0.210%					1.63E-05	1.33E-05	9.32E-06	1.64E-08
		2			0.017	0.017	0.380%					2.95E-05	2.41E-05	1.69E-05	2.97E-08
		1			0.008	0.008	0.595%					4.62E-05	3.77E-05	2.64E-05	4.65E-08
	LCDF	20	0.053	0.053	1.051	1.051	0.005%	5.17E-03	4.23E-03	2.96E-03	5.21E-06	2.59E-07	2.11E-07	1.48E-07	2.60E-10
		15			0.788	0.788	0.010%					5.17E-07	4.23E-07	2.96E-07	5.21E-10
		10			0.526	0.526	0.020%					1.03E-06	8.45E-07	5.92E-07	1.04E-09
		5			0.263	0.263	0.120%					6.21E-06	5.07E-06	3.55E-06	6.25E-09
		4			0.210	0.210	0.190%					9.83E-06	8.03E-06	5.62E-06	9.89E-09
		3			0.158	0.158	0.420%					2.17E-05	1.78E-05	1.24E-05	2.19E-08
		2			0.105	0.105	0.850%					4.40E-05	3.59E-05	2.52E-05	4.43E-08
		1			0.053	0.053	1.230%					6.36E-05	5.20E-05	3.64E-05	6.41E-08
5g	SOHL	20	0.000	0.000	0.000	0.000	0.001%	2.93E-02	2.46E-02	2.46E-02	2.46E-02	2.93E-07	2.46E-07	2.46E-07	2.46E-07
		15			0.000	0.000	0.004%					1.17E-06	9.84E-07	9.84E-07	9.84E-07
		10			0.000	0.000	0.010%					2.93E-06	2.46E-06	2.46E-06	2.46E-06
		5			0.000	0.000	0.020%					5.86E-06	4.92E-06	4.92E-06	4.92E-06
		4			0.000	0.000	0.040%					1.17E-05	9.84E-06	9.84E-06	9.84E-06
		3			0.000	0.000	0.110%					3.22E-05	2.71E-05	2.71E-05	2.71E-05
		2			0.000	0.000	0.200%					5.86E-05	4.92E-05	4.92E-05	4.92E-05
		1			0.000	0.000	0.330%					9.66E-05	8.12E-05	8.12E-05	8.12E-05
	MOHL	20	0.000	0.000	0.000	0.000	0.003%	1.71E-03	1.43E-03	1.43E-03	1.43E-03	5.12E-08	4.30E-08	4.30E-08	4.30E-08
		15			0.000	0.000	0.007%					1.19E-07	1.00E-07	1.00E-07	1.00E-07
		10			0.000	0.000	0.015%					2.56E-07	2.15E-07	2.15E-07	2.15E-07
		5			0.000	0.000	0.060%					1.02E-06	8.60E-07	8.60E-07	8.60E-07
		4			0.000	0.000	0.100%					1.71E-06	1.43E-06	1.43E-06	1.43E-06
		3			0.000	0.000	0.210%					3.58E-06	3.01E-06	3.01E-06	3.01E-06
		2			0.000	0.000	0.380%					6.48E-06	5.45E-06	5.45E-06	5.45E-06
		1			0.000	0.000	0.595%					1.01E-05	8.53E-06	8.53E-06	8.53E-06
	LOHL	20	0.008	0.008	0.165	0.165	0.005%	1.71E-04	1.43E-04	1.43E-04	1.43E-04	8.53E-09	7.17E-09	7.17E-09	7.17E-09
		15			0.124	0.124	0.010%					1.71E-08	1.43E-08	1.43E-08	1.43E-08
		10			0.083	0.083	0.020%					3.41E-08	2.87E-08	2.87E-08	2.87E-08
		5			0.041	0.041	0.120%					2.05E-07	1.72E-07	1.72E-07	1.72E-07
		4			0.033	0.033	0.190%					3.24E-07	2.72E-07	2.72E-07	2.72E-07
		3			0.025	0.025	0.420%					7.16E-07	6.02E-07	6.02E-07	6.02E-07
		2			0.017	0.017	0.850%					1.45E-06	1.22E-06	1.22E-06	1.22E-06
		1			0.008	0.008	1.230%					2.10E-06	1.76E-06	1.76E-06	1.76E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.001%	4.06E-03	3.41E-03	3.41E-03	3.41E-03	4.06E-08	3.41E-08	3.41E-08	3.41E-08
		15			0.000	0.000	0.004%					1.63E-07	1.37E-07	1.37E-07	1.37E-07
		10			0.000	0.000	0.010%					4.06E-07	3.41E-07	3.41E-07	3.41E-07
		5			0.000	0.000	0.020%					8.13E-07	6.83E-07	6.83E-07	6.83E-07
		4			0.000	0.000	0.040%					1.63E-06	1.37E-06	1.37E-06	1.37E-06
		3			0.000	0.000	0.110%					4.47E-06	3.76E-06	3.76E-06	3.76E-06
		2			0.000	0.000	0.200%					8.13E-06	6.83E-06	6.83E-06	6.83E-06
		1			0.000	0.000	0.330%					1.34E-05	1.13E-05	1.13E-05	1.13E-05
	MCDF	20	0.008	0.008	0.165	0.165	0.003%	1.26E-03	1.06E-03	1.06E-03	1.06E-03	3.78E-08	3.18E-08	3.18E-08	3.18E-08
		15			0.124	0.124	0.007%					8.83E-08	7.42E-08	7.42E-08	7.42E-08
		10			0.083	0.083	0.015%					1.89E-07	1.59E-07	1.59E-07	1.59E-07
		5			0.041	0.041	0.060%					7.57E-07	6.36E-07	6.36E-07	6.36E-07
		4			0.033	0.033	0.100%					1.26E-06	1.06E-06	1.06E-06	1.06E-06
		3			0.025	0.025	0.210%					2.65E-06	2.23E-06	2.23E-06	2.23E-06
		2			0.017	0.017	0.380%					4.79E-06	4.03E-06	4.03E-06	4.03E-06
		1			0.008	0.008	0.595%					7.50E-06	6.30E-06	6.30E-06	6.30E-06
	LCDF	20	0.053	0.053	1.051	1.051	0.005%	8.41E-04	7.06E-04	7.06E-04	7.06E-04	4.20E-08	3.53E-08	3.53E-08	3.53E-08
		15			0.788	0.788	0.010%					8.41E-08	7.06E-08	7.06E-08	7.06E-08
		10			0.526	0.526	0.020%					1.68E-07	1.41E-07	1.41E-07	1.41E-07
		5			0.263	0.263	0.120%					1.01E-06	8.48E-07	8.48E-07	8.48E-07
		4			0.210	0.210	0.190%					1.60E-06	1.34E-06	1.34E-06	1.34E-06
		3			0.158	0.158	0.420%					3.53E-06	2.97E-06	2.97E-06	2.97E-06
		2			0.105	0.105	0.850%					7.15E-06	6.00E-06	6.00E-06	6.00E-06
		1			0.053	0.053	1.230%					1.03E-05	8.69E-06	8.69E-06	8.69E-06
											Σ f x N	8.69E-05	7.75E-05	5.22E-05	8.49E-06

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 12 of 16)

Garden area between Bk. 9 & 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 5a, 5c, 5d, 5e, 5f, 5g

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5a	SOHL	20	0.005	0.005	0.099	0.099	0.00%	3.10E-03	3.10E-03	3.10E-03	7.85E-04	3.10E-08	3.10E-08	3.10E-08	7.85E-09
		15			0.074	0.074	0.00%					1.24E-07	1.24E-07	1.24E-07	3.14E-08
		10			0.050	0.050	0.01%					3.10E-07	3.10E-07	3.10E-07	7.85E-08
		5			0.025	0.025	0.02%					6.20E-07	6.20E-07	6.20E-07	1.57E-07
		4			0.020	0.020	0.04%					1.24E-06	1.24E-06	1.24E-06	3.14E-07
		3			0.015	0.015	0.11%					3.41E-06	3.41E-06	3.41E-06	8.64E-07
		2			0.010	0.010	0.20%					6.20E-06	6.20E-06	6.20E-06	1.57E-06
		1			0.005	0.005	0.33%					1.02E-05	1.02E-05	1.02E-05	2.59E-06
	MOHL	20	0.146	0.146	2.930	2.930	0.00%	1.81E-04	1.81E-04	1.81E-04	4.57E-05	5.42E-09	5.42E-09	5.42E-09	1.37E-09
		15			2.197	2.197	0.01%					1.26E-08	1.26E-08	1.26E-08	3.20E-09
		10			1.465	1.465	0.02%					2.71E-08	2.71E-08	2.71E-08	6.86E-09
		5			0.732	0.732	0.06%					1.08E-07	1.08E-07	1.08E-07	2.74E-08
		4			0.586	0.586	0.10%					1.81E-07	1.81E-07	1.81E-07	4.57E-08
		3			0.439	0.439	0.21%					3.79E-07	3.79E-07	3.79E-07	9.61E-08
		2			0.293	0.293	0.38%					6.86E-07	6.86E-07	6.86E-07	1.74E-07
		1			0.146	0.146	0.60%					1.07E-06	1.07E-06	1.07E-06	2.72E-07
	LOHL	20	0.436	0.436	8.721	8.721	0.01%	1.81E-05	1.81E-05	1.81E-05	4.57E-06	9.03E-10	9.03E-10	9.03E-10	2.29E-10
		15			6.541	6.541	0.01%					1.81E-09	1.81E-09	1.81E-09	4.57E-10
		10			4.361	4.361	0.02%					3.61E-09	3.61E-09	3.61E-09	9.15E-10
		5			2.180	2.180	0.12%					2.17E-08	2.17E-08	2.17E-08	5.49E-09
		4			1.744	1.744	0.19%					3.43E-08	3.43E-08	3.43E-08	8.69E-09
		3			1.308	1.308	0.42%					7.58E-08	7.58E-08	7.58E-08	1.92E-08
		2			0.872	0.872	0.85%					1.53E-07	1.53E-07	1.53E-07	3.89E-08
		1			0.436	0.436	1.23%					2.22E-07	2.22E-07	2.22E-07	5.63E-08
	SCDF	20	0.146	0.146	2.930	2.930	0.00%	1.15E-03	1.15E-03	1.15E-03	2.91E-04	1.15E-08	1.15E-08	1.15E-08	2.91E-09
		15			2.197	2.197	0.00%					4.60E-08	4.60E-08	4.60E-08	1.17E-08
		10			1.465	1.465	0.01%					1.15E-07	1.15E-07	1.15E-07	2.91E-08
		5			0.732	0.732	0.02%					2.30E-07	2.30E-07	2.30E-07	5.83E-08
		4			0.586	0.586	0.04%					4.60E-07	4.60E-07	4.60E-07	1.17E-07
		3			0.439	0.439	0.11%					1.27E-06	1.27E-06	1.27E-06	3.20E-07
		2			0.293	0.293	0.20%					2.30E-06	2.30E-06	2.30E-06	5.83E-07
		1			0.146	0.146	0.33%					3.80E-06	3.80E-06	3.80E-06	9.61E-07
	MCDF	20	0.436	0.436	8.721	8.721	0.00%	3.57E-04	3.57E-04	3.57E-04	9.04E-05	1.07E-08	1.07E-08	1.07E-08	2.71E-09
		15			6.541	6.541	0.01%					2.50E-08	2.50E-08	2.50E-08	6.33E-09
		10			4.361	4.361	0.02%					5.35E-08	5.35E-08	5.35E-08	1.36E-08
		5			2.180	2.180	0.06%					2.14E-07	2.14E-07	2.14E-07	5.42E-08
		4			1.744	1.744	0.10%					3.57E-07	3.57E-07	3.57E-07	9.04E-08
		3			1.308	1.308	0.21%					7.50E-07	7.50E-07	7.50E-07	1.90E-07
		2			0.872	0.872	0.38%					1.36E-06	1.36E-06	1.36E-06	3.44E-07
		1			0.436	0.436	0.60%					2.12E-06	2.12E-06	2.12E-06	5.38E-07
	LCDF	20	0.436	0.436	8.721	8.721	0.01%	2.38E-04	2.38E-04	2.38E-04	6.03E-05	1.19E-08	1.19E-08	1.19E-08	3.01E-09
		15			6.541	6.541	0.01%					2.38E-08	2.38E-08	2.38E-08	6.03E-09
		10			4.361	4.361	0.02%					4.76E-08	4.76E-08	4.76E-08	1.21E-08
		5			2.180	2.180	0.12%					2.86E-07	2.86E-07	2.86E-07	7.23E-08
		4			1.744	1.744	0.19%					4.52E-07	4.52E-07	4.52E-07	1.15E-07
		3			1.308	1.308	0.42%					9.99E-07	9.99E-07	9.99E-07	2.53E-07
		2			0.872	0.872	0.85%					2.02E-06	2.02E-06	2.02E-06	5.12E-07
		1			0.436	0.436	1.23%					2.93E-06	2.93E-06	2.93E-06	7.41E-07
5c	SOHL	20	0.000	0.000	0.000	0.000	0.00%	8.05E-03	6.48E-03	6.16E-03	1.64E-05	8.05E-08	6.48E-08	6.16E-08	1.64E-10
		15			0.000	0.000	0.00%					3.22E-07	2.59E-07	2.46E-07	6.58E-10
		10			0.000	0.000	0.01%					8.05E-07	6.48E-07	6.16E-07	1.64E-09
		5			0.000	0.000	0.02%					1.61E-06	1.30E-06	1.23E-06	3.29E-09
		4			0.000	0.000	0.04%					3.22E-06	2.59E-06	2.46E-06	6.58E-09
		3			0.000	0.000	0.11%					8.85E-06	7.13E-06	6.78E-06	1.81E-08
		2			0.000	0.000	0.20%					1.61E-05	1.30E-05	1.23E-05	3.29E-08
		1			0.000	0.000	0.33%					2.65E-05	2.14E-05	2.03E-05	5.43E-08
	MOHL	20	0.042	0.042	0.841	0.841	0.00%	4.69E-04	3.78E-04	3.59E-04	9.58E-07	1.41E-08	1.13E-08	1.08E-08	2.87E-11
		15			0.631	0.631	0.01%					3.28E-08	2.64E-08	2.51E-08	6.71E-11
		10			0.420	0.420	0.02%					7.03E-08	5.66E-08	5.38E-08	1.44E-10
		5			0.210	0.210	0.06%					2.81E-07	2.27E-07	2.15E-07	5.75E-10
		4			0.168	0.168	0.10%					4.69E-07	3.78E-07	3.59E-07	9.58E-10
		3			0.126	0.126	0.21%					9.84E-07	7.93E-07	7.54E-07	2.01E-09
		2			0.084	0.084	0.38%					1.78E-06	1.44E-06	1.36E-06	3.64E-09
		1			0.042	0.042	0.60%					2.79E-06	2.25E-06	2.13E-06	5.70E-09
	LOHL	20	0.183	0.183	3.662	3.662	0.01%	4.69E-05	3.78E-05	3.59E-05	9.58E-08	2.34E-09	1.89E-09	1.79E-09	4.79E-12
		15			2.747	2.747	0.01%					4.69E-09	3.78E-09	3.59E-09	9.58E-12
		10			1.831	1.831	0.02%					9.37E-09	7.55E-09	7.18E-09	1.92E-11
		5			0.916	0.916	0.12%					5.62E-08	4.53E-08	4.31E-08	1.15E-10
		4			0.732	0.732	0.19%					8.90E-08	7.18E-08	6.82E-08	1.82E-10
		3			0.549	0.549	0.42%					1.97E-07	1.59E-07	1.51E-07	4.02E-10
		2			0.366	0.366	0.85%					3.98E-07	3.21E-07	3.05E-07	8.14E-10
		1			0.183	0.183	1.23%					5.76E-07	4.65E-07	4.41E-07	1.18E-09
	SCDF	20	0.042	0.042	0.841	0.841	0.00%	1.02E-02	8.25E-03	7.84E-03	2.09E-05	1.02E-07	8.25E-08	7.84E-08	2.09E-10
		15			0.631	0.631	0.00%					4.09E-07	3.30E-07	3.13E-07	8.37E-10
		10			0.420	0.420	0.01%					1.02E-06	8.25E-07	7.84E-07	2.09E-09
		5			0.210	0.210	0.02%					2.05E-06	1.65E-06	1.57E-06	4.18E-09
		4			0.168	0.168	0.04%					4.09E-06	3.30E-06	3.13E-06	8.37E-09
		3			0.126	0.126	0.11%					1.13E-05	9.07E-06	8.62E-06	2.30E-08
		2			0.084	0.084	0.20%					2.05E-05	1.65E-05	1.57E-05	4.18E-08
		1			0.042	0.042	0.33%					3.38E-05	2.72E-05	2.59E-05	6.90E-08
	MCDF	20	0.183	0.183	3.662	3.662	0.00%	3.18E-03	2.56E-03	2.43E-03	6.49E-06	9.53E-08	7.68E-08	7.30E-08	1.95E-10
		15			2.747	2.747	0.01%					2.22E-07	1.79E-07	1.70E-07	4.55E-10
		10			1.831	1.831	0.02%					4.76E-07	3.84E-07	3.65E-07	9.74E-10
		5			0.916	0.916	0.06%					1.91E-06	1.54E-06	1.46E-06	3.90E-09
		4			0.732	0.732	0.10%					3.18E-06	2.56E-06	2.43E-06	6.49E-09
		3			0.549	0.549	0.21%					6.67E-06	5.37E-06	5.11E-06	1.36E-08
		2			0.366	0.366	0.38%					1.21E-05	9.73E-06	9.24E-06	2.47E-08
		1			0.183	0.183	0.60%					1.89E-05	1.52E-05	1.45E-05	3.86E-08
	LCDF	20	0.436	0.436	8.721	8.721	0.01%	2.12E-03	1.71E-03	1.62E-03	4.33E-06	1.06E-07	8.53E-08	8.11E-08	2.16E-10
		15			6.541	6.541	0.01%					2.12E-07	1.71E-07	1.62E-07	4.33E-10
		10			4.361	4.361	0.02%					4.24E-07	3.41E-07	3.24E-07	8.66E-10
		5			2.180	2.180	0.12%					2.54E-06	2.05E-06	1.95E-06	5.19E-09
		4			1.744	1.744	0.19%					4.02E-06	3.24E-06	3.08E-06	8.22E-09
		3			1.308	1.308	0.42%					8.89E-06	7.17E-06	6.81E-06	1.82E-08
		2			0.872	0.872	0.85%					1.80E-05	1.45E-05	1.38E-05	3.68E-08
		1			0.436	0.436	1.23%					2.60E-05	2.10E-05	1.99E-05	5.32E-08

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 13 of 16)

Garden area between Bk. 9 & 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5d	SOHL	20	0.000	0.000	0.000	0.000	0.00%	2.22E-04	2.22E-04	2.22E-04	1.79E-04	2.22E-09	2.22E-09	2.22E-09	1.79E-09
		15			0.000	0.000	0.00%					8.87E-09	8.87E-09	8.87E-09	7.16E-09
		10			0.000	0.000	0.01%					2.22E-08	2.22E-08	2.22E-08	1.79E-08
		5			0.000	0.000	0.02%					4.43E-08	4.43E-08	4.43E-08	3.58E-08
		4			0.000	0.000	0.04%					8.87E-08	8.87E-08	8.87E-08	7.16E-08
		3			0.000	0.000	0.11%					2.44E-07	2.44E-07	2.44E-07	1.97E-07
		2			0.000	0.000	0.20%					4.43E-07	4.43E-07	4.43E-07	3.58E-07
		1			0.000	0.000	0.33%					7.32E-07	7.32E-07	7.32E-07	5.91E-07
	MOHL	20	0.042	0.042	0.841	0.841	0.00%	1.29E-05	1.29E-05	1.29E-05	1.04E-05	3.87E-10	3.87E-10	3.87E-10	3.13E-10
		15			0.631	0.631	0.01%					9.04E-10	9.04E-10	9.04E-10	7.30E-10
		10			0.420	0.420	0.02%					1.94E-09	1.94E-09	1.94E-09	1.57E-09
		5			0.210	0.210	0.06%					7.75E-09	7.75E-09	7.75E-09	6.26E-09
		4			0.168	0.168	0.10%					1.29E-08	1.29E-08	1.29E-08	1.04E-08
		3			0.126	0.126	0.21%					2.71E-08	2.71E-08	2.71E-08	2.19E-08
		2			0.084	0.084	0.38%					4.91E-08	4.91E-08	4.91E-08	3.96E-08
		1			0.042	0.042	0.60%					7.68E-08	7.68E-08	7.68E-08	6.21E-08
	LOHL	20	0.183	0.183	3.662	3.662	0.01%	1.29E-06	1.29E-06	1.29E-06	1.04E-06	6.46E-11	6.46E-11	6.46E-11	5.22E-11
		15			2.747	2.747	0.01%					1.29E-10	1.29E-10	1.29E-10	1.04E-10
		10			1.831	1.831	0.02%					2.58E-10	2.58E-10	2.58E-10	2.09E-10
		5			0.916	0.916	0.12%					1.55E-09	1.55E-09	1.55E-09	1.25E-09
		4			0.732	0.732	0.19%					2.45E-09	2.45E-09	2.45E-09	1.98E-09
		3			0.549	0.549	0.42%					5.42E-09	5.42E-09	5.42E-09	4.38E-09
		2			0.366	0.366	0.85%					1.10E-08	1.10E-08	1.10E-08	8.87E-09
		1			0.183	0.183	1.23%					1.59E-08	1.59E-08	1.59E-08	1.28E-08
	SCDF	20	0.042	0.042	0.841	0.841	0.00%	8.22E-05	8.22E-05	8.22E-05	6.65E-05	8.22E-10	8.22E-10	8.22E-10	6.65E-10
		15			0.631	0.631	0.00%					3.29E-09	3.29E-09	3.29E-09	2.66E-09
		10			0.420	0.420	0.01%					8.22E-09	8.22E-09	8.22E-09	6.65E-09
		5			0.210	0.210	0.02%					1.64E-08	1.64E-08	1.64E-08	1.33E-08
		4			0.168	0.168	0.04%					3.29E-08	3.29E-08	3.29E-08	2.66E-08
		3			0.126	0.126	0.11%					9.05E-08	9.05E-08	9.05E-08	7.31E-08
		2			0.084	0.084	0.20%					1.64E-07	1.64E-07	1.64E-07	1.33E-07
		1			0.042	0.042	0.33%					2.71E-07	2.71E-07	2.71E-07	2.19E-07
	MCDF	20	0.183	0.183	3.662	3.662	0.00%	2.55E-05	2.55E-05	2.55E-05	2.06E-05	7.66E-10	7.66E-10	7.66E-10	6.19E-10
		15			2.747	2.747	0.01%					1.79E-09	1.79E-09	1.79E-09	1.44E-09
		10			1.831	1.831	0.02%					3.83E-09	3.83E-09	3.83E-09	3.09E-09
		5			0.916	0.916	0.06%					1.53E-08	1.53E-08	1.53E-08	1.24E-08
		4			0.732	0.732	0.10%					2.55E-08	2.55E-08	2.55E-08	2.06E-08
		3			0.549	0.549	0.21%					5.36E-08	5.36E-08	5.36E-08	4.33E-08
		2			0.366	0.366	0.38%					9.70E-08	9.70E-08	9.70E-08	7.84E-08
		1			0.183	0.183	0.60%					1.52E-07	1.52E-07	1.52E-07	1.23E-07
	LCDF	20	0.436	0.436	8.721	8.721	0.01%	1.70E-05	1.70E-05	1.70E-05	1.37E-05	8.51E-10	8.51E-10	8.51E-10	6.87E-10
		15			6.541	6.541	0.01%					1.70E-09	1.70E-09	1.70E-09	1.37E-09
		10			4.361	4.361	0.02%					3.40E-09	3.40E-09	3.40E-09	2.75E-09
		5			2.180	2.180	0.12%					2.04E-08	2.04E-08	2.04E-08	1.65E-08
		4			1.744	1.744	0.19%					3.23E-08	3.23E-08	3.23E-08	2.61E-08
		3			1.308	1.308	0.42%					7.15E-08	7.15E-08	7.15E-08	5.77E-08
		2			0.872	0.872	0.85%					1.45E-07	1.45E-07	1.45E-07	1.17E-07
		1			0.436	0.436	1.23%					2.09E-07	2.09E-07	2.09E-07	1.69E-07
5e	SOHL	20	0.000	0.000	0.000	0.000	0.00%	1.28E-02	1.28E-02	4.10E-03	1.49E-05	1.28E-07	1.28E-07	4.10E-08	1.49E-10
		15			0.000	0.000	0.00%					5.11E-07	5.11E-07	1.64E-07	5.97E-10
		10			0.000	0.000	0.01%					1.28E-06	1.28E-06	4.10E-07	1.49E-09
		5			0.000	0.000	0.02%					2.56E-06	2.56E-06	8.20E-07	2.98E-09
		4			0.000	0.000	0.04%					5.11E-06	5.11E-06	1.64E-06	5.97E-09
		3			0.000	0.000	0.11%					1.41E-05	1.41E-05	4.51E-06	1.64E-08
		2			0.000	0.000	0.20%					2.56E-05	2.56E-05	8.20E-06	2.98E-08
		1			0.000	0.000	0.33%					4.22E-05	4.22E-05	1.35E-05	4.92E-08
	MOHL	20	0.007	0.007	0.132	0.132	0.00%	7.45E-04	7.45E-04	2.39E-04	8.69E-07	2.23E-08	2.23E-08	7.17E-09	2.61E-11
		15			0.099	0.099	0.01%					5.21E-08	5.21E-08	1.67E-08	6.09E-11
		10			0.066	0.066	0.02%					1.12E-07	1.12E-07	3.58E-08	1.30E-10
		5			0.033	0.033	0.06%					4.47E-07	4.47E-07	1.43E-07	5.22E-10
		4			0.026	0.026	0.10%					7.45E-07	7.45E-07	2.39E-07	8.69E-10
		3			0.020	0.020	0.21%					1.56E-06	1.56E-06	5.02E-07	1.83E-09
		2			0.013	0.013	0.38%					2.83E-06	2.83E-06	9.08E-07	3.30E-09
		1			0.007	0.007	0.60%					4.43E-06	4.43E-06	1.42E-06	5.17E-09
	LOHL	20	0.053	0.053	1.051	1.051	0.01%	7.45E-05	7.45E-05	2.39E-05	8.69E-08	3.72E-09	3.72E-09	1.19E-09	4.35E-12
		15			0.788	0.788	0.01%					7.45E-09	7.45E-09	2.39E-09	8.69E-12
		10			0.526	0.526	0.02%					1.49E-08	1.49E-08	4.78E-09	1.74E-11
		5			0.263	0.263	0.12%					8.94E-08	8.94E-08	2.87E-08	1.04E-10
		4			0.210	0.210	0.19%					1.42E-07	1.42E-07	4.54E-08	1.65E-10
		3			0.158	0.158	0.42%					3.13E-07	3.13E-07	1.00E-07	3.65E-10
		2			0.105	0.105	0.85%					6.33E-07	6.33E-07	2.03E-07	7.39E-10
		1			0.053	0.053	1.23%					9.16E-07	9.16E-07	2.94E-07	1.07E-09
	SCDF	20	0.007	0.007	0.132	0.132	0.00%	1.02E-02	1.02E-02	3.27E-03	1.19E-05	1.02E-07	1.02E-07	3.27E-08	1.19E-10
		15			0.099	0.099	0.00%					4.07E-07	4.07E-07	1.31E-07	4.75E-10
		10			0.066	0.066	0.01%					1.02E-06	1.02E-06	3.27E-07	1.19E-09
		5			0.033	0.033	0.02%					2.04E-06	2.04E-06	6.53E-07	2.38E-09
		4			0.026	0.026	0.04%					4.07E-06	4.07E-06	1.31E-06	4.75E-09
		3			0.020	0.020	0.11%					1.12E-05	1.12E-05	3.59E-06	1.31E-08
		2			0.013	0.013	0.20%					2.04E-05	2.04E-05	6.53E-06	2.38E-08
		1			0.007	0.007	0.33%					3.36E-05	3.36E-05	1.08E-05	3.92E-08
	MCDF	20	0.053	0.053	1.051	1.051	0.00%	3.16E-03	3.16E-03	1.01E-03	3.69E-06	9.48E-08	9.48E-08	3.04E-08	1.11E-10
		15			0.788	0.788	0.01%					2.21E-07	2.21E-07	7.10E-08	2.58E-10
		10			0.526	0.526	0.02%					4.74E-07	4.74E-07	1.52E-07	5.53E-10
		5			0.263	0.263	0.06%					1.90E-06	1.90E-06	6.08E-07	2.21E-09
		4			0.210	0.210	0.10%					3.16E-06	3.16E-06	1.01E-06	3.69E-09
		3			0.158	0.158	0.21%					6.64E-06	6.64E-06	2.13E-06	7.74E-09
		2			0.105	0.105	0.38%					1.20E-05	1.20E-05	3.85E-06	1.40E-08
		1			0.053	0.053	0.60%					1.88E-05	1.88E-05	6.03E-06	2.19E-08
	LCDF	20	0.183	0.183	3.662	3.662	0.01%	2.11E-03	2.11E-03	6.76E-04	2.46E-06	1.05E-07	1.05E-07	3.38E-08	1.23E-10
		15			2.747	2.747	0.01%					2.11E-07	2.11E-07	6.76E-08	2.46E-10
		10			1.831	1.831	0.02%					4.21E-07	4.21E-07	1.35E-07	4.92E-10
		5			0.916	0.916	0.12%					2.53E-06	2.53E-06	8.11E-07	2.95E-09
		4			0.732	0.732	0.19%					4.00E-06	4.00E-06	1.28E-06	4.67E-09
		3			0.549	0.549	0.42%					8.85E-06	8.85E-06	2.84E-06	1.03E-08
		2			0.366	0.366	0.85%					1.79E-05	1.79E-05	5.74E-06	2.09E-08
		1			0.183	0.183	1.23%					2.59E-05	2.59E-05	8.31E-06	3.02E-08

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 14 of 16)

Garden area between Bk. 9 & 10 at Woodcrest Hill - Affected by Hazard from Sub-area: 5a, 5c, 5d, 5e, 5f, 5g (cont'd)

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5f	SOHL	20	0.000	0.000	0.000	0.000	0.00%	8.77E-03	7.17E-03	5.02E-03	8.83E-06	8.77E-08	7.17E-08	5.02E-08	8.83E-11
		15			0.000	0.000	0.00%					3.51E-07	2.87E-07	2.01E-07	3.53E-10
		10			0.000	0.000	0.01%					8.77E-07	7.17E-07	5.02E-07	8.83E-10
		5			0.000	0.000	0.02%					1.75E-06	1.43E-06	1.00E-06	1.77E-09
		4			0.000	0.000	0.04%					3.51E-06	2.87E-06	2.01E-06	3.53E-09
		3			0.000	0.000	0.11%					9.65E-06	7.88E-06	5.52E-06	9.72E-09
		2			0.000	0.000	0.20%					1.75E-05	1.43E-05	1.00E-05	1.77E-08
		1			0.000	0.000	0.33%					2.90E-05	2.37E-05	1.66E-05	2.91E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.00%	5.11E-04	4.18E-04	2.92E-04	5.14E-07	1.53E-08	1.25E-08	8.77E-09	1.54E-11
		15			0.000	0.000	0.01%					3.58E-08	2.92E-08	2.05E-08	3.60E-11
		10			0.000	0.000	0.02%					7.67E-08	6.26E-08	4.39E-08	7.72E-11
		5			0.000	0.000	0.06%					3.07E-07	2.51E-07	1.75E-07	3.09E-10
		4			0.000	0.000	0.10%					5.11E-07	4.18E-07	2.92E-07	5.14E-10
		3			0.000	0.000	0.21%					1.07E-06	8.77E-07	6.14E-07	1.08E-09
		2			0.000	0.000	0.38%					1.94E-06	1.59E-06	1.11E-06	1.96E-09
		1			0.000	0.000	0.60%					3.04E-06	2.48E-06	1.74E-06	3.06E-09
	LOHL	20	0.053	0.053	1.051	1.051	0.01%	5.11E-05	4.18E-05	2.92E-05	5.14E-08	2.56E-09	2.09E-09	1.46E-09	2.57E-12
		15			0.788	0.788	0.01%					5.11E-09	4.18E-09	2.92E-09	5.14E-12
		10			0.526	0.526	0.02%					1.02E-08	8.35E-09	5.85E-09	1.03E-11
		5			0.263	0.263	0.12%					6.13E-08	5.01E-08	3.51E-08	6.17E-11
		4			0.210	0.210	0.19%					9.71E-08	7.93E-08	5.56E-08	9.78E-11
		3			0.158	0.158	0.42%					2.15E-07	1.75E-07	1.23E-07	2.16E-10
		2			0.105	0.105	0.85%					4.34E-07	3.55E-07	2.49E-07	4.37E-10
		1			0.053	0.053	1.23%					6.29E-07	5.14E-07	3.60E-07	6.33E-10
	SCDF	20	0.000	0.000	0.000	0.000	0.00%	2.50E-02	2.04E-02	1.43E-02	2.52E-05	2.50E-07	2.04E-07	1.43E-07	2.52E-10
		15			0.000	0.000	0.00%					1.00E-06	8.17E-07	5.72E-07	1.01E-09
		10			0.000	0.000	0.01%					2.50E-06	2.04E-06	1.43E-06	2.52E-09
		5			0.000	0.000	0.02%					5.00E-06	4.09E-06	2.86E-06	5.03E-09
		4			0.000	0.000	0.04%					1.00E-05	8.17E-06	5.72E-06	1.01E-08
		3			0.000	0.000	0.11%					2.75E-05	2.25E-05	1.57E-05	2.77E-08
		2			0.000	0.000	0.20%					5.00E-05	4.09E-05	2.86E-05	5.03E-08
		1			0.000	0.000	0.33%					8.25E-05	6.74E-05	4.72E-05	8.31E-08
	MCDF	20	0.053	0.053	1.051	1.051	0.00%	7.76E-03	6.34E-03	4.44E-03	7.81E-06	2.33E-07	1.90E-07	1.33E-07	2.34E-10
		15			0.788	0.788	0.01%					5.43E-07	4.44E-07	3.11E-07	5.47E-10
		10			0.526	0.526	0.02%					1.16E-06	9.51E-07	6.66E-07	1.17E-09
		5			0.263	0.263	0.06%					4.66E-06	3.80E-06	2.66E-06	4.69E-09
		4			0.210	0.210	0.10%					7.76E-06	6.34E-06	4.44E-06	7.81E-09
		3			0.158	0.158	0.21%					1.63E-05	1.33E-05	9.32E-06	1.64E-08
		2			0.105	0.105	0.38%					2.95E-05	2.41E-05	1.69E-05	2.97E-08
		1			0.053	0.053	0.60%					4.62E-05	3.77E-05	2.64E-05	4.65E-08
	LCDF	20	0.183	0.183	3.662	3.662	0.01%	5.17E-03	4.23E-03	2.96E-03	5.21E-06	2.59E-07	2.11E-07	1.48E-07	2.60E-10
		15			2.747	2.747	0.01%					5.17E-07	4.23E-07	2.96E-07	5.21E-10
		10			1.831	1.831	0.02%					1.03E-06	8.45E-07	5.92E-07	1.04E-09
		5			0.916	0.916	0.12%					6.21E-06	5.07E-06	3.55E-06	6.25E-09
		4			0.732	0.732	0.19%					9.83E-06	8.03E-06	5.62E-06	9.89E-09
		3			0.549	0.549	0.42%					2.17E-05	1.78E-05	1.24E-05	2.19E-08
		2			0.366	0.366	0.85%					4.40E-05	3.59E-05	2.52E-05	4.43E-08
		1			0.183	0.183	1.23%					6.36E-05	5.20E-05	3.64E-05	6.41E-08
5g	SOHL	20	0.000	0.000	0.000	0.000	0.00%	2.93E-02	2.46E-02	2.46E-02	2.46E-02	2.93E-07	2.46E-07	2.46E-07	2.46E-07
		15			0.000	0.000	0.00%					1.17E-06	9.84E-07	9.84E-07	9.84E-07
		10			0.000	0.000	0.01%					2.93E-06	2.46E-06	2.46E-06	2.46E-06
		5			0.000	0.000	0.02%					5.86E-06	4.92E-06	4.92E-06	4.92E-06
		4			0.000	0.000	0.04%					1.17E-05	9.84E-06	9.84E-06	9.84E-06
		3			0.000	0.000	0.11%					3.22E-05	2.71E-05	2.71E-05	2.71E-05
		2			0.000	0.000	0.20%					5.86E-05	4.92E-05	4.92E-05	4.92E-05
		1			0.000	0.000	0.33%					9.66E-05	8.12E-05	8.12E-05	8.12E-05
	MOHL	20	0.000	0.000	0.000	0.000	0.00%	1.71E-03	1.43E-03	1.43E-03	1.43E-03	5.12E-08	4.30E-08	4.30E-08	4.30E-08
		15			0.000	0.000	0.01%					1.19E-07	1.00E-07	1.00E-07	1.00E-07
		10			0.000	0.000	0.02%					2.56E-07	2.15E-07	2.15E-07	2.15E-07
		5			0.000	0.000	0.06%					1.02E-06	8.60E-07	8.60E-07	8.60E-07
		4			0.000	0.000	0.10%					1.71E-06	1.43E-06	1.43E-06	1.43E-06
		3			0.000	0.000	0.21%					3.58E-06	3.01E-06	3.01E-06	3.01E-06
		2			0.000	0.000	0.38%					6.48E-06	5.45E-06	5.45E-06	5.45E-06
		1			0.000	0.000	0.60%					1.01E-05	8.53E-06	8.53E-06	8.53E-06
	LOHL	20	0.053	0.053	1.051	1.051	0.01%	1.71E-04	1.43E-04	1.43E-04	1.43E-04	8.53E-09	7.17E-09	7.17E-09	7.17E-09
		15			0.788	0.788	0.01%					1.71E-08	1.43E-08	1.43E-08	1.43E-08
		10			0.526	0.526	0.02%					3.41E-08	2.87E-08	2.87E-08	2.87E-08
		5			0.263	0.263	0.12%					2.05E-07	1.72E-07	1.72E-07	1.72E-07
		4			0.210	0.210	0.19%					3.24E-07	2.72E-07	2.72E-07	2.72E-07
		3			0.158	0.158	0.42%					7.16E-07	6.02E-07	6.02E-07	6.02E-07
		2			0.105	0.105	0.85%					1.45E-06	1.22E-06	1.22E-06	1.22E-06
		1			0.053	0.053	1.23%					2.10E-06	1.76E-06	1.76E-06	1.76E-06
	SCDF	20	0.000	0.000	0.000	0.000	0.00%	4.06E-03	3.41E-03	3.41E-03	3.41E-03	4.06E-08	3.41E-08	3.41E-08	3.41E-08
		15			0.000	0.000	0.00%					1.63E-07	1.37E-07	1.37E-07	1.37E-07
		10			0.000	0.000	0.01%					4.06E-07	3.41E-07	3.41E-07	3.41E-07
		5			0.000	0.000	0.02%					8.13E-07	6.83E-07	6.83E-07	6.83E-07
		4			0.000	0.000	0.04%					1.63E-06	1.37E-06	1.37E-06	1.37E-06
		3			0.000	0.000	0.11%					4.47E-06	3.76E-06	3.76E-06	3.76E-06
		2			0.000	0.000	0.20%					8.13E-06	6.83E-06	6.83E-06	6.83E-06
		1			0.000	0.000	0.33%					1.34E-05	1.13E-05	1.13E-05	1.13E-05
	MCDF	20	0.053	0.053	1.051	1.051	0.00%	1.26E-03	1.06E-03	1.06E-03	1.06E-03	3.78E-08	3.18E-08	3.18E-08	3.18E-08
		15			0.788	0.788	0.01%					8.83E-08	7.42E-08	7.42E-08	7.42E-08
		10			0.526	0.526	0.02%					1.89E-07	1.59E-07	1.59E-07	1.59E-07
		5			0.263	0.263	0.06%					7.57E-07	6.36E-07	6.36E-07	6.36E-07
		4			0.210	0.210	0.10%					1.26E-06	1.06E-06	1.06E-06	1.06E-06
		3			0.158	0.158	0.21%					2.65E-06	2.23E-06	2.23E-06	2.23E-06
		2			0.105	0.105	0.38%					4.79E-06	4.03E-06	4.03E-06	4.03E-06
		1			0.053	0.053	0.60%					7.50E-06	6.30E-06	6.30E-06	6.30E-06
	LCDF	20	0.183	0.183	3.662	3.662	0.01%	8.41E-04	7.06E-04	7.06E-04	7.06E-04	4.20E-08	3.53E-08	3.53E-08	3.53E-08
		15			2.747	2.747	0.01%					8.41E-08	7.06E-08	7.06E-08	7.06E-08
		10			1.831	1.831	0.02%					1.68E-07	1.41E-07	1.41E-07	1.41E-07
		5			0.916	0.916	0.12%					1.01E-06	8.48E-07	8.48E-07	8.48E-07
		4			0.732	0.732	0.19%					1.60E-06	1.34E-06	1.34E-06	1.34E-06
		3			0.549	0.549	0.42%					3.53E-06	2.97E-06	2.97E-06	2.97E-06
		2			0.366	0.366	0.85%					7.15E-06	6.00E-06	6.00E-06	6.00E-06
		1			0.183	0.183	1.23%					1.03E-05	8.69E-06	8.69E-06	8.69E-06
											Σ f x N	2.06E-04	1.76E-04	1.36E-04	1.45E-05

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 15 of 16)

Patio of Block 9 at Woodcrest Hill - Affected by Hazard from Sub-area: 5b

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
5b	SOHL	20	0.000	0.000	0.000	0.000	0.00%	6.08E-05	6.08E-05	6.08E-05	6.08E-05	6.08E-10	6.08E-10	6.08E-10	6.08E-10
		15			0.000	0.000	0.00%					2.43E-09	2.43E-09	2.43E-09	2.43E-09
		10			0.000	0.000	0.01%					6.08E-09	6.08E-09	6.08E-09	6.08E-09
		5			0.000	0.000	0.02%					1.22E-08	1.22E-08	1.22E-08	1.22E-08
		4			0.000	0.000	0.04%					2.43E-08	2.43E-08	2.43E-08	2.43E-08
		3			0.000	0.000	0.11%					6.69E-08	6.69E-08	6.69E-08	6.69E-08
		2			0.000	0.000	0.20%					1.22E-07	1.22E-07	1.22E-07	1.22E-07
		1			0.000	0.000	0.33%					2.01E-07	2.01E-07	2.01E-07	2.01E-07
	MOHL	20	0.042	0.042	0.841	0.841	0.00%	3.54E-06	3.54E-06	3.54E-06	3.54E-06	1.06E-10	1.06E-10	1.06E-10	1.06E-10
		15			0.631	0.631	0.01%					2.48E-10	2.48E-10	2.48E-10	2.48E-10
		10			0.420	0.420	0.02%					5.32E-10	5.32E-10	5.32E-10	5.32E-10
		5			0.210	0.210	0.06%					2.13E-09	2.13E-09	2.13E-09	2.13E-09
		4			0.168	0.168	0.10%					3.54E-09	3.54E-09	3.54E-09	3.54E-09
		3			0.126	0.126	0.21%					7.44E-09	7.44E-09	7.44E-09	7.44E-09
		2			0.084	0.084	0.38%					1.35E-08	1.35E-08	1.35E-08	1.35E-08
		1			0.042	0.042	0.60%					2.11E-08	2.11E-08	2.11E-08	2.11E-08
	LOHL	20	0.183	0.183	3.662	3.662	0.01%	3.54E-07	3.54E-07	3.54E-07	3.54E-07	1.77E-11	1.77E-11	1.77E-11	1.77E-11
		15			2.747	2.747	0.01%					3.54E-11	3.54E-11	3.54E-11	3.54E-11
		10			1.831	1.831	0.02%					7.09E-11	7.09E-11	7.09E-11	7.09E-11
		5			0.916	0.916	0.12%					4.25E-10	4.25E-10	4.25E-10	4.25E-10
		4			0.732	0.732	0.19%					6.73E-10	6.73E-10	6.73E-10	6.73E-10
		3			0.549	0.549	0.42%					1.49E-09	1.49E-09	1.49E-09	1.49E-09
		2			0.366	0.366	0.85%					3.01E-09	3.01E-09	3.01E-09	3.01E-09
		1			0.183	0.183	1.23%					4.36E-09	4.36E-09	4.36E-09	4.36E-09
											Σ f x N	8.36E-09	8.36E-09	8.36E-09	8.36E-09

Patio of Block 5 at Woodcrest Hill - Affected by Hazard from Sub-area: 6a, 6c

6a	SOHL	20	0.000	0.000	0.000	0.000	0.00%	8.04E-05	8.04E-05	8.04E-05	8.04E-05	8.04E-10	8.04E-10	8.04E-10	8.04E-10
		15			0.000	0.000	0.00%					3.22E-09	3.22E-09	3.22E-09	3.22E-09
		10			0.000	0.000	0.01%					8.04E-09	8.04E-09	8.04E-09	8.04E-09
		5			0.000	0.000	0.02%					1.61E-08	1.61E-08	1.61E-08	1.61E-08
		4			0.000	0.000	0.04%					3.22E-08	3.22E-08	3.22E-08	3.22E-08
		3			0.000	0.000	0.11%					8.84E-08	8.84E-08	8.84E-08	8.84E-08
		2			0.000	0.000	0.20%					1.61E-07	1.61E-07	1.61E-07	1.61E-07
		1			0.000	0.000	0.33%					2.65E-07	2.65E-07	2.65E-07	2.65E-07
	MOHL	20	0.042	0.042	0.841	0.841	0.00%	4.68E-06	4.68E-06	4.68E-06	4.68E-06	1.41E-10	1.41E-10	1.41E-10	1.41E-10
		15			0.631	0.631	0.01%					3.28E-10	3.28E-10	3.28E-10	3.28E-10
		10			0.420	0.420	0.02%					7.03E-10	7.03E-10	7.03E-10	7.03E-10
		5			0.210	0.210	0.06%					2.81E-09	2.81E-09	2.81E-09	2.81E-09
		4			0.168	0.168	0.10%					4.68E-09	4.68E-09	4.68E-09	4.68E-09
		3			0.126	0.126	0.21%					9.84E-09	9.84E-09	9.84E-09	9.84E-09
		2			0.084	0.084	0.38%					1.78E-08	1.78E-08	1.78E-08	1.78E-08
		1			0.042	0.042	0.60%					2.79E-08	2.79E-08	2.79E-08	2.79E-08
	LOHL	20	0.183	0.183	3.662	3.662	0.01%	4.68E-07	4.68E-07	4.68E-07	4.68E-07	2.34E-11	2.34E-11	2.34E-11	2.34E-11
		15			2.747	2.747	0.01%					4.68E-11	4.68E-11	4.68E-11	4.68E-11
		10			1.831	1.831	0.02%					9.37E-11	9.37E-11	9.37E-11	9.37E-11
		5			0.916	0.916	0.12%					5.62E-10	5.62E-10	5.62E-10	5.62E-10
		4			0.732	0.732	0.19%					8.90E-10	8.90E-10	8.90E-10	8.90E-10
		3			0.549	0.549	0.42%					1.97E-09	1.97E-09	1.97E-09	1.97E-09
		2			0.366	0.366	0.85%					3.98E-09	3.98E-09	3.98E-09	3.98E-09
		1			0.183	0.183	1.23%					5.76E-09	5.76E-09	5.76E-09	5.76E-09
6c	SOHL	20	0.000	0.000	0.000	0.000	0.00%	1.67E-03	1.67E-03	1.67E-03	1.67E-03	1.67E-08	1.67E-08	1.67E-08	1.67E-08
		15			0.000	0.000	0.00%					6.66E-08	6.66E-08	6.66E-08	6.66E-08
		10			0.000	0.000	0.01%					1.67E-07	1.67E-07	1.67E-07	1.67E-07
		5			0.000	0.000	0.02%					3.33E-07	3.33E-07	3.33E-07	3.33E-07
		4			0.000	0.000	0.04%					6.66E-07	6.66E-07	6.66E-07	6.66E-07
		3			0.000	0.000	0.11%					1.83E-06	1.83E-06	1.83E-06	1.83E-06
		2			0.000	0.000	0.20%					3.33E-06	3.33E-06	3.33E-06	3.33E-06
		1			0.000	0.000	0.33%					5.49E-06	5.49E-06	5.49E-06	5.49E-06
	MOHL	20	0.000	0.000	0.000	0.000	0.00%	9.70E-05	9.70E-05	9.70E-05	9.70E-05	2.91E-09	2.91E-09	2.91E-09	2.91E-09
		15			0.000	0.000	0.01%					6.79E-09	6.79E-09	6.79E-09	6.79E-09
		10			0.000	0.000	0.02%					1.45E-08	1.45E-08	1.45E-08	1.45E-08
		5			0.000	0.000	0.06%					5.82E-08	5.82E-08	5.82E-08	5.82E-08
		4			0.000	0.000	0.10%					9.70E-08	9.70E-08	9.70E-08	9.70E-08
		3			0.000	0.000	0.21%					2.04E-07	2.04E-07	2.04E-07	2.04E-07
		2			0.000	0.000	0.38%					3.69E-07	3.69E-07	3.69E-07	3.69E-07
		1			0.000	0.000	0.60%					5.77E-07	5.77E-07	5.77E-07	5.77E-07
	LOHL	20	0.053	0.053	1.051	1.051	0.01%	9.70E-06	9.70E-06	9.70E-06	9.70E-06	4.85E-10	4.85E-10	4.85E-10	4.85E-10
		15			0.788	0.788	0.01%					9.70E-10	9.70E-10	9.70E-10	9.70E-10
		10			0.526	0.526	0.02%					1.94E-09	1.94E-09	1.94E-09	1.94E-09
		5			0.263	0.263	0.12%					1.16E-08	1.16E-08	1.16E-08	1.16E-08
		4			0.210	0.210	0.19%					1.84E-08	1.84E-08	1.84E-08	1.84E-08
		3			0.158	0.158	0.42%					4.07E-08	4.07E-08	4.07E-08	4.07E-08
		2			0.105	0.105	0.85%					8.24E-08	8.24E-08	8.24E-08	8.24E-08
		1			0.053	0.053	1.23%					1.19E-07	1.19E-07	1.19E-07	1.19E-07
											Σ f x N	4.16E-08	4.16E-08	4.16E-08	4.16E-08

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).

Table C11 - Breakdown the Number of Fatalities for Open Space (Sheet 16 of 16)

K.K. Terrace at K.K. Terrace - Affected by Hazard from Sub-area: 7c, 7g, 7k

Slope Sub-area No	Type of Hazard	Number of People Present (Z) (Table C6)	Vulnerability Factor		Number of Fatality (N)		Probability of Z People Present (Table C6)	Landslide frequencies				Frequency of Fatality with Z people present (f)			
			Before Additional Mitigation (Table 4)	After Additional Mitigation	Before Additional Mitigation (Table 4)	After Additional Mitigation		Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures	Base-line Condition	Present-day Condition	After Forthcoming Measures	After Additional Risk Mitigation Measures
(a)	(b)	(c)	(d)		(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
7c	SOHL	20	0.000	0.000	0.000	0.000	0.00%	2.98E-06	2.98E-06	2.98E-06	2.98E-06	2.98E-11	2.98E-11	2.98E-11	2.98E-11
		15			0.000	0.000	0.00%					1.19E-10	1.19E-10	1.19E-10	1.19E-10
		10			0.000	0.000	0.01%					2.98E-10	2.98E-10	2.98E-10	2.98E-10
		5			0.000	0.000	0.02%					5.97E-10	5.97E-10	5.97E-10	5.97E-10
		4			0.000	0.000	0.04%					1.19E-09	1.19E-09	1.19E-09	1.19E-09
		3			0.000	0.000	0.11%					3.28E-09	3.28E-09	3.28E-09	3.28E-09
		2			0.000	0.000	0.20%					5.97E-09	5.97E-09	5.97E-09	5.97E-09
		1			0.000	0.000	0.33%					9.85E-09	9.85E-09	9.85E-09	9.85E-09
	MOHL	20	0.007	0.007	0.132	0.132	0.00%	1.74E-07	1.74E-07	1.74E-07	1.74E-07	5.22E-12	5.22E-12	5.22E-12	5.22E-12
		15			0.099	0.099	0.01%					1.22E-11	1.22E-11	1.22E-11	1.22E-11
		10			0.066	0.066	0.02%					2.61E-11	2.61E-11	2.61E-11	2.61E-11
		5			0.033	0.033	0.06%					1.04E-10	1.04E-10	1.04E-10	1.04E-10
		4			0.026	0.026	0.10%					1.74E-10	1.74E-10	1.74E-10	1.74E-10
		3			0.020	0.020	0.21%					3.65E-10	3.65E-10	3.65E-10	3.65E-10
		2			0.013	0.013	0.38%					6.61E-10	6.61E-10	6.61E-10	6.61E-10
		1			0.007	0.007	0.60%					1.03E-09	1.03E-09	1.03E-09	1.03E-09
	LOHL	20	0.183	0.183	3.662	3.662	0.01%	1.74E-08	1.74E-08	1.74E-08	1.74E-08	8.69E-13	8.69E-13	8.69E-13	8.69E-13
		15			2.747	2.747	0.01%					1.74E-12	1.74E-12	1.74E-12	1.74E-12
		10			1.831	1.831	0.02%					3.48E-12	3.48E-12	3.48E-12	3.48E-12
		5			0.916	0.916	0.12%					2.09E-11	2.09E-11	2.09E-11	2.09E-11
		4			0.732	0.732	0.19%					3.30E-11	3.30E-11	3.30E-11	3.30E-11
		3			0.549	0.549	0.42%					7.30E-11	7.30E-11	7.30E-11	7.30E-11
		2			0.366	0.366	0.85%					1.48E-10	1.48E-10	1.48E-10	1.48E-10
		1			0.183	0.183	1.23%					2.14E-10	2.14E-10	2.14E-10	2.14E-10
7g	SOHL	20	0.000	0.000	0.000	0.000	0.00%	2.49E-05	2.49E-05	2.49E-05	2.49E-05	2.49E-10	2.49E-10	2.49E-10	2.49E-10
		15			0.000	0.000	0.00%					9.94E-10	9.94E-10	9.94E-10	9.94E-10
		10			0.000	0.000	0.01%					2.49E-09	2.49E-09	2.49E-09	2.49E-09
		5			0.000	0.000	0.02%					4.97E-09	4.97E-09	4.97E-09	4.97E-09
		4			0.000	0.000	0.04%					9.94E-09	9.94E-09	9.94E-09	9.94E-09
		3			0.000	0.000	0.11%					2.73E-08	2.73E-08	2.73E-08	2.73E-08
		2			0.000	0.000	0.20%					4.97E-08	4.97E-08	4.97E-08	4.97E-08
		1			0.000	0.000	0.33%					8.20E-08	8.20E-08	8.20E-08	8.20E-08
	MOHL	20	0.000	0.000	0.000	0.000	0.00%	1.45E-06	1.45E-06	1.45E-06	1.45E-06	4.34E-11	4.34E-11	4.34E-11	4.34E-11
		15			0.000	0.000	0.01%					1.01E-10	1.01E-10	1.01E-10	1.01E-10
		10			0.000	0.000	0.02%					2.17E-10	2.17E-10	2.17E-10	2.17E-10
		5			0.000	0.000	0.06%					8.69E-10	8.69E-10	8.69E-10	8.69E-10
		4			0.000	0.000	0.10%					1.45E-09	1.45E-09	1.45E-09	1.45E-09
		3			0.000	0.000	0.21%					3.04E-09	3.04E-09	3.04E-09	3.04E-09
		2			0.000	0.000	0.38%					5.50E-09	5.50E-09	5.50E-09	5.50E-09
		1			0.000	0.000	0.60%					8.61E-09	8.61E-09	8.61E-09	8.61E-09
	LOHL	20	0.008	0.008	0.165	0.165	0.01%	1.45E-07	1.45E-07	1.45E-07	1.45E-07	7.24E-12	7.24E-12	7.24E-12	7.24E-12
		15			0.124	0.124	0.01%					1.45E-11	1.45E-11	1.45E-11	1.45E-11
		10			0.083	0.083	0.02%					2.90E-11	2.90E-11	2.90E-11	2.90E-11
		5			0.041	0.041	0.12%					1.74E-10	1.74E-10	1.74E-10	1.74E-10
		4			0.033	0.033	0.19%					2.75E-10	2.75E-10	2.75E-10	2.75E-10
		3			0.025	0.025	0.42%					6.08E-10	6.08E-10	6.08E-10	6.08E-10
		2			0.017	0.017	0.85%					1.23E-09	1.23E-09	1.23E-09	1.23E-09
		1			0.008	0.008	1.23%					1.78E-09	1.78E-09	1.78E-09	1.78E-09
7k	SOHL	20	0.000	0.000	0.000	0.000	0.00%	1.22E-06	1.22E-06	1.22E-06	1.22E-06	1.22E-11	1.22E-11	1.22E-11	1.22E-11
		15			0.000	0.000	0.00%					4.87E-11	4.87E-11	4.87E-11	4.87E-11
		10			0.000	0.000	0.01%					1.22E-10	1.22E-10	1.22E-10	1.22E-10
		5			0.000	0.000	0.02%					2.44E-10	2.44E-10	2.44E-10	2.44E-10
		4			0.000	0.000	0.04%					4.87E-10	4.87E-10	4.87E-10	4.87E-10
		3			0.000	0.000	0.11%					1.34E-09	1.34E-09	1.34E-09	1.34E-09
		2			0.000	0.000	0.20%					2.44E-09	2.44E-09	2.44E-09	2.44E-09
		1			0.000	0.000	0.33%					4.02E-09	4.02E-09	4.02E-09	4.02E-09
	MOHL	20	0.000	0.000	0.000	0.000	0.00%	7.10E-08	7.10E-08	7.10E-08	7.10E-08	2.13E-12	2.13E-12	2.13E-12	2.13E-12
		15			0.000	0.000	0.01%					4.97E-12	4.97E-12	4.97E-12	4.97E-12
		10			0.000	0.000	0.02%					1.06E-11	1.06E-11	1.06E-11	1.06E-11
		5			0.000	0.000	0.06%					4.26E-11	4.26E-11	4.26E-11	4.26E-11
		4			0.000	0.000	0.10%					7.10E-11	7.10E-11	7.10E-11	7.10E-11
		3			0.000	0.000	0.21%					1.49E-10	1.49E-10	1.49E-10	1.49E-10
		2			0.000	0.000	0.38%					2.70E-10	2.70E-10	2.70E-10	2.70E-10
		1			0.000	0.000	0.60%					4.22E-10	4.22E-10	4.22E-10	4.22E-10
	LOHL	20	0.000	0.000	0.000	0.000	0.01%	7.10E-09	7.10E-09	7.10E-09	7.10E-09	3.55E-13	3.55E-13	3.55E-13	3.55E-13
		15			0.000	0.000	0.01%					7.10E-13	7.10E-13	7.10E-13	7.10E-13
		10			0.000	0.000	0.02%					1.42E-12	1.42E-12	1.42E-12	1.42E-12
		5			0.000	0.000	0.12%					8.52E-12	8.52E-12	8.52E-12	8.52E-12
		4			0.000	0.000	0.19%					1.35E-11	1.35E-11	1.35E-11	1.35E-11
		3			0.000	0.000	0.42%					2.98E-11	2.98E-11	2.98E-11	2.98E-11
		2			0.000	0.000	0.85%					6.03E-11	6.03E-11	6.03E-11	6.03E-11
		1			0.000	0.000	1.23%					8.73E-11	8.73E-11	8.73E-11	8.73E-11
											Σ f x N	2.97E-10	2.97E-10	2.97E-10	2.97E-10

Notes:

(1) Column (c) & (f) are extracted from Table C6: Distribution of Total Number of People Present in Different Type of Facilities.

(2) Column (d) is extracted from Table B4: Summary of Vulnerability Factors. The vulnerability factor of small to medium scale of landslide arising from subareas 7b and vulnerability factors of all scale of landslide arising from subareas 7e, 7f, 7i, 7j to the toe facilities are reduced to zero after additional mitigation measure.

(3) Column (e) = (c) × (d).

(4) Column (g) to (j) are extracted from Table A4 to Table A7 in Appendix A - Hazard Assessment.

(5) Column (k) = (f) × (g), Column (l) = (f) × (h), Column (m) = (f) × (i) & Column (n) = (f) × (j).