

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
Agency/Department	Genting Malaysia Berhad
Recommendation Number	4.1.1 (Page 18, 19)
Recommendation Title And Details	<p>Establish and Implement a Nationwide Systematic Road Safety Assessment and Risk Mapping</p> <p>Conduct a thorough road safety assessment and risk mapping along the Genting Road. GENM shall take full responsibility to conduct this road safety assessment on their private road while PWD shall be responsible for the stretch along Batang Kali-Gohtong Jaya road which is under their jurisdiction. Immediate and appropriate actions shall be taken according to the road safety audit findings to address safety issues.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - In 2014, GENM conducted a Road Safety Audit (RSA) along the Genting Highlands Access Road from Genting Sempah to Genting Highlands hilltop as well as Chin Swee Bypass Road. - Amongst the RSA recommendations were new road markings, enhancement of safety barrier, traffic signages, road calming devices, etc. - Implementation of RSA recommendations were completed in end 2015.
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - To reduce the ratio of accidents per number of vehicles using the road. - To comply with RSA Stage 5 which recommends improvement works. - To prevent out of control vehicles from going down any embankment slopes. <p>Rationale</p> <ul style="list-style-type: none"> - The ratio of accidents to number of road users has reduced

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
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Recommendation Number	4.1.7 (Page 19)
Recommendation Title And Details	<p>Strengthening the Enforcement for the Use of Safety barrier at High Risk Sections</p> <p>The Malaysian Cabinet has decided to upgrade the current safety barrier from TL-2 to TL-3 and TL-6 for high risk sections in 2007. Since then PWD has introduced a program to upgrade the current safety barrier. A committee chaired by Deputy Director General III of PWD has established the criteria to identify high risk sections. High performance safety barrier shall be installed at the identified sections along the route. High risk section is classified as;</p> <ul style="list-style-type: none"> • Section with embankment height more than 3 m. • Embankment slope of more than 1 : 6. • Location with history of heavy vehicle crashes. • Percentage of heavy vehicle above the national average percentage.
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <p>- Implemented according to Consultants recommendation</p>
	<p>Desired Outcome (s)</p> <p>- It is designed to prevent crossover or head-on collisions while at the same time minimizing vehicle damage in cases of accidental contact</p> <p>Rationale</p> <p>- No crossover or head-on collisions reported since implementation</p>

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Organisation	Genting Malaysia Berhad
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Recommendation Number	4.1.9 (20)
Recommendation Title And Details	<p>Establish a Technical Guideline for the Design and Use of Emergency Escape Ramp (EER)</p> <p>GENM shall immediately improve the visibility and signage of the EER along the Genting Road. PWD shall also review the need to install EER at all hilly roads with high risk in the country.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - Signages have been replaced as well as added as per JKR recommendations
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - To alert road users in case of emergency / brake failure <p>Rationale</p> <ul style="list-style-type: none"> - Has already been proven in a number of cases.

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
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Recommendation Number	4.4.10 (Page 20)
Recommendation Title And Details	<p>Upgrade and Enhance Current Design Standard, Specification, Construction and Maintenance for All Hilly Roads</p> <p>The relevant authorities shall upgrade the current road design standard, specification, construction and maintenance for all hilly roads. In particular for the Genting Road, the lane width of straight stretch and curves shall be limited to 3.5m and 4.0 m respectively. Along the road, RRPM shall be installed at the center line and the road edge line shall be marked with Vibraline. Reflective delineators shall also be installed along all curve sections of the road to guide motorists travelling at night. High skid resistance pavement shall be considered at substandard curves and shoulder safety barrier shall be installed following the alignment of curves.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - RRPM, vibra-lines, reflective delineators, skid resistance rumble strips, additional road humps and LED flashing lights have been installed along the road. - Regular road pavement repairs was carried out as per Consultants recommendation. - The lanes width markings were limited to 3.5m to 4m. - All the new traffic signs erected are one size higher than the standard JKR size requirement.
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - Improved visibility during bad weather and at night. - To instill lane discipline with narrower lanes. - To prevent drivers from overtaking. <p>Rationale- Ratio of accidents to number of vehicles using the road has reduced.</p>

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
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Recommendation Number	4.1.11 (Page 20)
Recommendation Title And Details	<p>Upgrade and Enhance Current Design Standard, Specification, Construction and Maintenance for All Hilly Roads</p> <p>PWD shall ensure that all signage are properly installed, displayed and maintained along all hilly roads. Adaptive signage to warn road users on heavy fog and rain conditions affecting road safety shall also be introduced along the Genting Road. In addition, a system to measure visibility during heavy fog and rain conditions shall be developed and the information shall be well communicated to the road users.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - All signages has been upgraded as per Consultants recommendation. - Additional blinking lights and LED hazard chevron signs have been installed at designated areas recommended by the Consultant
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - Advance Travel Advisory project has been implemented whereby the public is alerted on travel conditions via RSS feeds throughout public areas in the Resort - Road users are alerted in advance on road conditions. <p>Rationale</p> <ul style="list-style-type: none"> - The ratio of accidents to number of road users has reduced

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
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Recommendation Number	4.1.12 (Page 20)
Recommendation Title And Details	<p>Upgrade and Enhance Current Design Standard, Specification, Construction and Maintenance for All Hilly Roads</p> <p>Align all safety barriers along the curve according to the road geometry to reduce the risk of direct impact in an event of a crash. With the knowledge that all safety barriers are not designed to withstand direct lateral impact, GENM shall reconstruct the barrier to TL-5 standard and to follow the road alignment immediately in order to mitigate crash severity.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - All barriers have been upgraded as per Consultants recommendation - Speed limit on the downhill lane has been reduced to 20 km/h and 30 km/h
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - To reduce lateral impact - Barriers to deflect the vehicles to its original path. <p>Rationale</p> <ul style="list-style-type: none"> - Severity of crashed reported has reduced. - No vehicles have gone down the embankment slopes since implementation.

Status Update for 51 Recommendations of Genting Crash

Organisation	Genting Malaysia Berhad
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Recommendation Number	4.1.13 (Page 21)
Recommendation Title And Details	<p>Upgrade and Enhance Current Design Standard, Specification, Construction and Maintenance for All Hilly Roads</p> <p>GENM is expected to be more proactive and pre-emptive on the safety of road users plying the Genting Road.</p>
Implementation Plan (Status/Update)	<p>Implementation Plan Details</p> <ul style="list-style-type: none"> - On going road maintenance, repair and upgrading works are carried out periodically. - Identification of accident prone areas and proposed preventative measures. - Amongst the measures taken are additional blinking lights and traffic signages to warn road users, speed calming devices, enhancement of street lighting, etc - Conducting Road Safety Awareness campaigns together with relevant agencies such as MIROS, JKR, Polis, JPJ, etc
	<p>Desired Outcome (s)</p> <ul style="list-style-type: none"> - To alert road users travelling on the hilly road <p>Rationale</p> <ul style="list-style-type: none"> - The ratio of accidents to number of road users has reduced