SAFETY MANAGEMENT SYSTEM

Safety Case - Detailed Barriers Report | Generated on: 13/04/2026

[ID: 100] CATEGORY: Runway Excursion

TOP EVENT: Long landing and runway excursion with heavy rain

Initial Risk	Residual Risk
4A	2C

THREATS	PROACTIVE BARRIERS	EFFECTIVENESS
Sudden tailwind not promptly communicated	Onboard Windshear/Tailwind Alerting system and live performance update (ACARS/FMC) [INACTIVE - OPEN CPAS] Weakened by: Lack of confirmed information from ATC (-2)	NONE
Severe runway contamination (aquaplaning)	Grooved Runway for rapid rain drainage [INACTIVE - OPEN CPAS]	NONE

CONSEQUENCES	REACTIVE BARRIERS	EFFECTIVENESS
Excursion beyond runway end and structural damage	Safe aircraft arrest via EMAS bed at runway end [INACTIVE - OPEN CPAS]	NONE
	Maximum use of thrust reversers and Autobrake MAX [ACTIVE] Weakened by: Delay in applying Thrust Reversers, Asymmetric manual braking overriding Autobrake (-2)	NONE
Injuries to passengers and crew during impact and evacuation	Rapid intervention of ARFF and evacuation coordination [INACTIVE - OPEN CPAS]	NONE

BARRIERA	CORRECTIVE ACTIONS (CPA)	RESP.	DEADLINE	ACTION STATUS
Maximum use of thrust reversers and Autobrake MAX	Supplementary flight crew training completed and validated. Reactive defense effectiveness was confirmed through simulated runway excursion scenarios on contaminated surfaces, specifically testing automatic braking logic and thrust reverser symmetry. Evidence of completion is filed in the Safety Management System (SMS) training log. Post-training evaluation confirms a significant reduction in reaction time, ensuring the intended safety margin is maintained.	Head of Training	2026-05-30	**COMPLETED**
Onboard Windshear/Tailwind Alerting system and live performance update (ACARS/FMC)		Safety Manager	2026-06-15	**OPEN**
Safe aircraft arrest via EMAS bed at runway end		Airport Infrastructure Manager	2026-04-30	**OPEN**