



Work Activity Hazard Management

SMS-HSS-OS02-PD08 – Land Transportation Procedure

Purpose

To define the requirements for land transportation, including traffic management planning, when conducting Santos work activities to reduce risks to drivers, passengers and other road users. This procedure supports SMS-HSS-OS02 Work Activity Hazard Management Operating Standard.

Scope

This procedure applies to land transport and traffic management planning while performing Santos related work activities in Australia. In relation to contractors:

- Mode 1 – this procedure applies
- Mode 2 – the contractors management system must meet or exceed the requirements of this procedure

This procedure applies to overseas sites or projects (permanent or temporary assignment):

- Requirements of this document apply in principle but must be adapted following risk assessment to meet local laws, risks, and conditions.
- Differences must be approved by the relevant Executive Vice President

Out of scope is:

- Non-Santos work related vehicle use
- Mode 3 contractors

Life Saving Rules

Wear your seat belt and drive to conditions

- I confirm the vehicle is fit for purpose before use
- I always wear a seatbelt
- I do not exceed the speed limit and reduce my speed to suit the conditions
- I do not overtake in dust or reduced visibility
- I do not use phones or operate devices, even in hands free mode while driving
- I am fit, rested and fully alert while driving
- I follow journey management requirements
- I confirm loads are properly restrained and within Gross Vehicle Mass (GVM) limits



Document Control

Document Owner:	Manager Health and Safety Risk		
Approved by:	Head of Health Safety and Security		
Date approved:	18 August 2023	Version Number:	5.0
Version Changes:	New requirements for traffic management planning, chain of responsibility, IVMS monitoring/reporting, and distraction/fatigue detection technology. Pipeline right of way added to field driving category. Training requirements for side by side vehicles added.		



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Summary of Requirements

- The Santos Driving Life Saving Rules must be complied with at all times.
- Applicable state and national legal requirements for land transport must be complied with at all times.
- Land transport risks must be identified, assessed, eliminated or minimised, and monitored.
- Drivers must be licenced, trained, competent and authorised for the vehicle class and type of driving.
- Light and heavy vehicles must meet Safer Together specifications.
- Vehicle or trailer modifications must be risk assessed, undergo a management of change, and be reviewed and approved by a competent subject matter expert.
- In-vehicle monitoring system (compliant with Safer Together specifications) and distraction/fatigue technology must be installed, monitored, regularly evaluated, and reported on for all required vehicles.
- The use of all-terrain and utility or side-by-side type vehicles must be risk assessed to ensure suitable safety features and control measures.
- Drivers and those involved in the supply chain such as schedulers, consignors, and consignees, must understand and apply their Chain of Responsibility accountability for heavy vehicle safety.
- Vehicle recovery shall only be undertaken by trained and competent persons, where fit for purpose equipment is available and in accordance with an approved procedure.
- Water crossing shall be compliant with Safer Together guidelines.
- Where relevant, authority shall be obtained for work required on or near public roads, and approval obtained from the relevant government authority for temporary management of traffic.
- For facilities and work sites with a risk of vehicle and/or powered mobile plant interaction with pedestrians, a traffic management plan shall be in place.
- Fall prevention controls must be in place to prevent the risk of falls from the back of trucks.
- Loading / unloading exclusion zone (LUEZ) areas shall be established to ensure visible separation of people and equipment during loading/unloading of vehicles and trailers.
- All light vehicles must reverse park or use drive through parks at Santos sites.

Detailed Requirements

1. Life Saving Rules

- The Santos Life Saving Rules for vehicle operation must be complied with at all times.
 - I confirm the vehicle is fit for purpose before use
 - Drivers shall verify vehicle is fit for use before each journey (that is, pre-start inspection).
 - All vehicles have an established inspection and servicing schedule developed by a competent person which meets manufacturer requirements as a minimum.
 - Vehicles are maintained and regularly checked by competent persons (e.g. qualified Mechanic) to ensure they are roadworthy (safe and in a suitable condition to drive).
 - Vehicles with any damage or faults that may affect safe operation are tagged out of service until repaired by a competent and qualified person.
 - Maintenance (inspection and service) records are retained for all vehicles.
 - I always wear a seatbelt
 - Seatbelts worn by all occupants whenever the vehicle is in motion.
 - I do not exceed the speed limit and reduce my speed to suit the conditions



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- Drive at safe speed, even if it is lower than the designated speed limit.
- All driving on unsealed roads is maximum 60km/hr speed unless signposted lower.
- 4WD engaged for driving on unsealed roads and off-road.
- Cruise control turned off during unsuitable conditions (e.g. unsealed and wet roads)
- In the event of mechanical issues, power failure or load restraint concerns while driving, the driver safely stops the vehicle.
- I do not overtake in dust or reduced visibility
 - Driver ensures appropriate distance from other vehicles to maintain visibility.
 - Drivers only overtake when there is clear road ahead to complete without speeding.
- I do not use phones or operate devices, even in hands free mode while driving
 - Driver stops in a safe location before using mobile device (even if handsfree)
 - Driver sensibly uses any in-vehicle technology (vehicle dashboard, Field NavApp), to avoid distraction.
- I am fit, rested and fully alert while driving
 - Drivers are fit to drive, including not being impaired by alcohol, illegal substances, medication, injury/illness, health conditions and/or fatigue.
 - Drivers must pull over and stop for minimum 5 minutes if a fatigue alert is activated while in motion.
 - Drivers stop vehicles and rest at defined intervals (15 minute break for every 2 hours of continuous driving) and do not drive more than 10 hours in a 24 hour period. Fatigue-regulated heavy vehicle drivers operate in accordance with heavy vehicle nationally legislated rest breaks.
- I follow journey management requirements
 - Journeys outside of plant, facility or township boundaries must be planned and monitored for safe arrival.
 - A journey management process is established which outlines specific journeys which require a risk assessment, trip plan, trip monitoring, emergency communication capability, adequate rest breaks, check in and overdue processes.
- I confirm loads are properly restrained and within Gross Vehicle Mass (GVM) limits
 - Fit for purpose vehicles and trailers are selected for the type of load.
 - Load mass and dimensions do not exceed vehicle and legal limits.
 - Loads are positioned, secured and restrained to prevent the load from shifting, falling, or becoming a projectile.
 - Items in vehicle cabins are secured to reduce risk of injury in the event of an accident.
 - Condition of loads and restraint equipment is checked prior and during journey (e.g. during each fatigue break).



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2. Legal Requirements

- Applicable state and national legal requirements for land transport shall be complied with.
 - This includes road traffic laws, Work Health and Safety laws, Heavy Vehicle National Law (HVNL), Chain of Responsibility (CoR), National Transport Commission (NTC) Load Restraint Guidelines, passenger transport legislation, and traffic management for works on or near roads.
 - Actions must not be taken that could influence drivers and others to breach Heavy Vehicle National Law including speeding and fatigue management breaches.
 - Drivers conform with any traffic management plans, signage and applicable laws.
 - Drivers with a suspended, cancelled or restricted drivers licence must not drive and immediately notify their Supervisor.
 - Safer Together “Safe Transport of Passengers Guideline” is used to guide the use of passenger transport (such as buses).

3. Risk Management

- Land transport risks shall be:
 - Identified
 - Assessed
 - Eliminated or minimised in accordance with hierarchy of controls, so far as is reasonably practicable
 - Monitored and reviewed
- Elimination of driving or substitution for a safer alternative (such as passenger transport) must always be considered.

4. Driver licencing, training and authorisation

- Training needs shall be assessed, and implemented to ensure competency for:
 - Vehicle type and driving being performed (including towing) as per Appendix A
 - Chain of Responsibility (including load restraint and fatigue) where applicable
 - Vehicle recovery where applicable
 - Traffic management for works on or near roads, where applicable
- Drivers shall:
 - Be licenced for class, type and configuration of vehicle being driven
 - Be authorised by senior management for the type of vehicle they will be using and the nature of driving being performed (see table below).
 - Demonstrate a satisfactory traffic offence history check prior to being authorised to drive.

Authorisation	Description
Restricted	Driving within urban areas, plant areas and sealed highways between urban areas.
Field	As per restricted authorisation plus driving on sealed or unsealed roads or along formed right of way tracks (e.g. pipelines) in Santos field areas.
Off-road	As per restricted and field authorisation plus driving on areas without formed roads/tracks (e.g. site scouting or seismic activities) or on rugged formed tracks. Note: Off-road areas may require environmental or land access approval prior to being driven.



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- Regular monitoring and review of valid drivers licencing, training and authorisation occurs to ensure currency and adequacy.

5. Vehicle Specifications

- Vehicle specifications must meet Safer Together light and heavy vehicle specifications (including hire vehicles and passenger transports).
- Heavy vehicles and trailers designed to carry bulk liquids must be sized and designed so that slosh is minimised.
- Heavy vehicles carrying dangerous goods must meet the requirements of the Australian Code for the Transportation of Dangerous Goods by Road and Rail
- Light vehicle trailers specifications are as follows:
 - Trailers must not exceed 2.5m in overall width.
 - Overhang distance from axle to the rear of the load must not exceed 2.5m.
 - A flag must be placed at the end of the load when the carried load projects greater than 1.2 m from the rear of the trailer.
 - Dual axle trailer must be selected where possible.
 - Dual safety chains must be used when trailers are in use.
 - Trailers with greater than 0.75 tonnes gross trailer mass (GTM) must be fitted with a compatible brake system.
 - Where the GTM exceeds 2 tonnes, trailers must have a breakaway system fitted to the braking system. This system will cause the brakes to be applied if the trailer becomes disconnected from the towing vehicle.
- Privately owned vehicles may be used for occasional Santos work-related driving in urban areas if the vehicle is:
 - ANCAP 5 star-rated or equivalent NCAP rating at the time of manufacture.
 - In a safe and suitable condition to drive.

6. Vehicle Modifications

- Santos vehicle or trailer modifications must be approved by the Fleet team in accordance with SMS-LMA-OS01-PD3 Fleet Management.
- For contractors, any modifications to a vehicle or trailer must undergo management of change, risk assessment, with review and approval by a competent subject matter expert.

7. All-Terrain and Utility Vehicles

- Motorcycle and quad bikes (or similar) are prohibited.
- All-terrain and utility or side-by-side type vehicles must be risk assessed to identify suitable controls.
- All-terrain and utility or side-by-side type vehicles (excluding golf cart type vehicles) must have the following minimum safety features:
 - Bench or bucket type seating with seat belts.
 - Steering wheel.
 - Foot operated brake and accelerator.
 - Roll-over protection.
- Helmets must:



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- Be worn at locations within a gazetted (legal) road or road-related area and in other locations when travelling at speeds in excess of 20km/hr.
- Comply with Australian Standard 1698 Protective helmets
- A means of communication must be carried, but not used, when operating e.g. radio, mobile phone.

8. Chain of Responsibility

- Those involved in the supply chain such as schedulers, consignors, and consignees, understand and apply their Chain of Responsibility accountability for heavy vehicle safety.
- All loads carried on heavy vehicles shall have documented mass and dimensions.
- Heavy vehicle drivers shall know vehicles mass, check weights, and keep accurate loading documentation that shows load does not exceed legal mass and dimensions.
- Controls shall be implemented to prevent the overloading of vehicles.
- Equipment is available to ensure the safe packing, restraint and transport of goods, storage and preservation.

9. In-Vehicle Monitoring System (IVMS)

- IVMS requirements compliant with Safer Together specifications are installed in all light and heavy vehicles (excluding vehicles that do not leave site boundaries or vehicles that do not leave metropolitan/city areas).
- Distraction/fatigue detection technology shall be installed in light and heavy vehicles; (with exclusions as per above and also excluding rental vehicles where such technology is not provided by rental vehicle company).
- IVMS key allocation shall ensure drivers are uniquely identifiable.
- Distraction/fatigue detection technology shall provide real time feedback to drivers.
- IVMS data shall be monitored for compliance to Life Saving Rules and Safer Together standards, on a frequency no greater than monthly.
- Contractors shall submit IVMS and distraction/fatigue driving performance data monthly to Santos in the required format.
- IVMS and distraction/fatigue detection technology data shall be evaluated quarterly to identify and address risks and trends.
- A consequence framework shall be applied to intentional and/or repeated driving breaches, including IVMS tampering (e.g. SMS-PEO-OS02-PD02 Counselling & Discipline Procedure or contractor equivalent).

10. Vehicle Recovery

- Vehicle recovery shall only be undertaken by trained and competent persons and where fit for purpose equipment is available.
- Procedures shall be established and approved for vehicle recovery.
- Preference is for use of specialised vehicle recovery contractors. Self-recovery is permitted for low risk/low complexity vehicle recovery if trained and competent to do so using:
 - basic recovery tools e.g. shovel, vehicle recovery boards (Maxtrax)
 - a vehicle mounted winch on a light vehicle.
- The following vehicle recovery methods are prohibited:
 - Snatch straps
 - Winch recovery of a bogged vehicle with a tilt tray truck by a Santos employee.



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11. Water Crossing

- Water crossing shall be compliant with Safer Together guidelines.
- Drivers must only consider driving through water if:
 - There is no practical alternate route AND
 - They have confidently assessed that:
 - the road surface is intact, and
 - the water depth and speed are safe (see table below)
- Drivers must never enter water on foot or in their vehicle to try to determine depth. Depth can be judged from depth markers if the road is intact, visual assessment if road surface is visible through the water, observing other vehicles crossing etc.
- The following table and diagram provides criteria for water speed and maximum depth:

Water speed	Maximum depth
Fast-flowing (above normal walking pace).	Bottom rim of the wheel.
Slow flowing or still (below normal walking pace).	Wheel hub



- Drivers must consider the crossing high risk and must not cross if there is any doubt about:
 - Suitability of surface
 - Depth of water
 - Speed of water
- High risk water crossings
 - High risk water crossings must only be considered where there is an immediate need to drive through water.
 - Drivers must contact their supervisor and have a conversation about high risk water crossings, including:
 - Water crossings at night.
 - Width of water more than 5 m. Exception: designated concrete causeways with flood markers and no signs of recent heavy flooding.
 - Driver has not driven the road in the last 3 months.
 - Driver is not confident in their assessment of the depth, speed or surface condition of the crossing.
 - Water at the crossing exceeds height / speed limits but there is an emergency situation which requires the vehicle to cross.



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NOTE: A crossing is not considered high risk if:

- it is under the active control of the Police / Main Roads
- it has been declared open by one of the major oil & gas operators.

- Supervisor’s conversation
 - The supervisor’s conversation with a driver regarding a high-risk water crossing must include the following:
 - Challenge the driver on the need to cross.
 - Discuss the following:
 - How the driver has determined the speed and depth of the water.
 - The risks and the controls the driver will use before, during and after the crossing.
 - The supervisor must:
 - Not let drivers cross if there is any doubt about the risk.
 - Establish contact with the driver once they have crossed.
- Safely driving through water
 - The following requirements apply to driving through water once it has been determined safe to cross:

When	Requirement
Before	Select low range 4WD and choose a low gear. Lower windows to provide an escape route. One vehicle at time to cross.
During	Approach the water at slow speed. Don’t brake when approaching the water. Drive in the middle of the road where the crown is highest. Drive at a steady speed without change gears.
After	Gently apply the brake pedal with left foot for a few seconds while driving to dry the brakes.

12. Traffic Management Planning

- For facilities and work sites with a risk of vehicle and/or powered mobile plant interaction with pedestrians, a traffic management plan shall be in place.
- Where relevant, authority shall be obtained for work required on or near public roads, and approval obtained from the relevant government authority for temporary management of traffic.
- Nominated areas shall be identified in traffic management plans for drivers to rest and manage fatigue.



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13. Preventing Falls from Trucks

- As far as practicable, accessing or working from the back of a truck must be minimised by designing work so it can be performed from ground level. For example:
 - Place controls, fill points, load securing points, toolboxes etc. within reach from ground level.
 - Using load, loading and securing methods that don't require accessing the back of the vehicle.
 - Using tools/aids that allow work to be conducted from ground level (e.g. grab poles).
- If accessing the back of a truck is required, the following must be used:
 - A safe means of access that allows 3 points of contact, for example:
 - Designated permanent, retractable or foldaway steps or ladder with handrails.
 - Ramp with handrails or that allows the user to remain at least 1m from its side edges.
 - Mobile or portable steps, step ladder or platform.
 - Fall prevention controls as outlined in the table below. Suitable fall prevention methods include:
 - Fixed, retractable or temporary barriers or rails.
 - Fixed or mobile work platforms.
 - Work positioning or fall restraint systems that prevent a fall.

Potential fall height	Mandatory use of fall prevention controls
<1m (e.g. low loader trailer)	No
1–2m (e.g. typical flatbed truck/trailer)	<1m from edge – Yes ≥1m from edge - No
>2m (e.g. top of tanker)	Yes

- Refer also to Falls and Falling Objects Procedure (SMS-HSS-OS02-PD10)

14. Loading / Unloading Exclusion Zone (LUEZ)

- Clearly identified loading / unloading exclusion zone (LUEZ) areas shall be established to ensure visible separation of people and equipment during loading/unloading of vehicles and trailers.
- A communication plan shall be established between spotter and operator/driver.
- Refer to SMS-HSS-OS02-PD11 Managing Controlled Zones Procedure for further detail.

15. Parking

- All light vehicles must reverse park or use drive through parks at Santos sites (i.e. forwards facing on commencement of journey).



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Definitions

Term or acronym	Definition
Field road	A field road is any formed road or track within a Santos area of field operations, excluding urban areas and plant areas. May be a public or private road and may have a sealed or unsealed surface.
Gross trailer mass (GTM)	The maximum loaded mass transmitted to the ground by the axle, or axles, of the trailer when coupled to a towing vehicle.
Gross vehicle mass (GVM)	The maximum loaded mass of a motor vehicle.
Gross combination mass (GCM)	The maximum loaded mass of the towing vehicle and any trailer, or trailers, being towed while driving on the road.
Heavy vehicle	A vehicle with a gross vehicle mass (GVM) of more than 4.5 tonnes and/or a combination that includes a vehicle with a GVM of more than 4.5 tonnes or a passenger bus carrying more than 12 passengers. The GVM of a vehicle is the maximum it can weigh when fully loaded, as specified by the manufacturer.
Light vehicle	A vehicle with a gross vehicle mass (GVM) not more than 4500kg, not including motorbike, quad bike, all-terrain/utility vehicles bicycles and tricycles.
LUEZ	Loading/unloading exclusion zone.
Off-road	Driving on natural land or unformed tracks that have not been designated as a field road. This will generally include pipeline right-of-way tracks and seismic or scouting activities.
Plant areas	Within the boundaries of a plant/facility or its immediate surrounds (e.g. adjacent workshop, yard or administration areas).
Road-related area	An area that divides a road, a footpath or nature strip adjacent to a road, car parks and any shoulder of a road.
Static tow recovery	Vehicle recovery method where the recovery vehicle commences pulling from a standing start (i.e. not a running start).
Urban area	Within recognised boundaries of populated areas (e.g. cities, towns).
Vehicle	Includes heavy vehicles, light vehicles and all-terrain/utility vehicles. Excludes unregistered mobile plant (e.g. forklifts, scissor lifts). Refer to SMS-HSS-OS02-PD05 Plant Safety Procedure and SMS-HSS-OS02-PD03 Lifting Operations Procedure.



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References

Document Name	Catalogue Code
Lifting Operations Procedure	SMS-HSS-OS02-PD03
Plant Safety Procedure	SMS-HSS-OS02-PD05
Falls and Falling Objects Procedure	SMS-HSS-OS02-PD10
Managing Controlled Zones Procedure	SMS-HSS-OS02-PD11
Fleet Management	SMS-LMA-OS01-PD3
Counselling & Discipline Procedure	SMS-PEO-OS02-PD02
Australian Standard 1698 Protective helmets for vehicle users	External
Australian Code for the Transportation of Dangerous Goods by Road and Rail	External
National Transport Commission Load Restraint Guides	External
Safer Together Light Vehicle Specification Version 2	External link (Safer Together membership required to access)
Safer Together Heavy Vehicle Specifications Version 3	External link (Safer Together membership required to access)
Safer Together In-Vehicle Monitoring Systems Specification Standard Version 2	External link (Safer Together membership required to access)
Safer Together Safe Transport of Vehicular Passengers Guideline	External link (Safer Together membership required to access)
Safer Together Water Crossing for Light Vehicles Guideline	External link (Safer Together membership required to access)



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Appendix A – Driver Training and Approval Requirements

Vehicle/driving type	Qualification/training required	Expiry	Approval required
Restricted driving – Plant areas, urban driving or sealed highways between urban areas	Santos Safe Drive online module (EHS.006)	5 years	Restricted authorised driver (L4 Manager approval)
Field driving – Sealed or unsealed field roads or along formed right of way tracks (e.g. pipelines)	Santos Safe Drive online module (EHS.006) PMASUP236 Operate vehicles in the field (EHS.005) Annual Water Crossing Seasonal Awareness (online module)	5 years	Field authorised driver (L2 Manager approval)
Off road driving – Areas without formed roads/tracks (e.g. seismic, scouting) or on rugged formed tracks	Santos Safe Drive online module (EHS.006) RIIV305 Operate and maintain four-wheel drive (EHS.008) Annual Water Crossing Seasonal Awareness (online module)	5 years	Off-road authorised driver (L2 Manager approval)
Towing light vehicle trailers	AURTGA001 Drive and Manoeuvre Trailers (EHS.097)	5 years	N/A
All-terrain and utility vehicles	Restricted, Field, or Off-Road training as above based on where the vehicle will be used AHCMOM216 – Operate side by side utility vehicles	N/A	Restricted, Field, or Off-road authorised driver based on driving location Supervisor approval to use vehicle.
Light vehicle recovery (e.g. winches)	FWPCOT3326 Recover four-wheel drive vehicles (EHS.038)	N/A	N/A
Heavy vehicles (excluding drivers only driving HVs within the confines of a plant area boundary)	Urban/Plant, Field or Off-Road training as above based on where the vehicle will be used Heavy Vehicle Roll Over Awareness (EHS.131) TLIF0009 Apply Chain of Responsibility Legislation, Regulations and Workplace Procedures (Level 1) (WH.021) TLIF0005 Apply a fatigue risk management system (EHS.046) Santos Heavy Vehicle Practical Defensive Driving assessment (EHS.128)	5 years	Restricted, Field or Off-road authorisation based on driving location Heavy vehicle driver authorisation
Note: Drivers already holding a valid unit of competency may apply for recognition of prior learning (RPL) for these qualifications up to 5 years from attainment.			