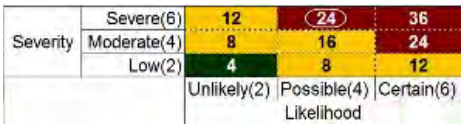
Annex A

Safe access risk assessment

1.1 Lack of planning

Initial Risk Rating



Residual Risk Rating

Barriers - Planning should consider type of access arrangement needed, taking into account quay side and onboard arrangements.

Barriers - If possible, visitors must be greeted on the quay side and means of safe access explained.

Barriers - Prevaling weather conditions including tide and swell must be considered when assessing safe access conditions.

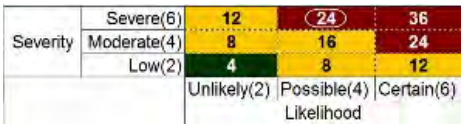
Clear

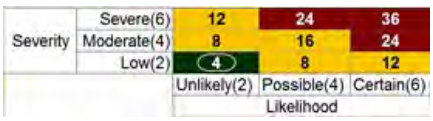
Question
Add Hazard / Control
Measure
Attachment
References
Remark

1.2 Personal injury - transferring during arrival / departure

Initial Risk Rating

Residual Risk Rating





Barriers - Crewmember transferring are not to proceed outside the bulwark untill the Master / OOW confirms that the vessel is calm alongside quay / other vessel.

Barriers - Crewmember transferring must confirm back to the master that a safe means of acces exist prior to transfer.

Barriers - Crew member transferring must be monitored by another crewmember and confirmation of succesful transfer must be confimed back to the master.

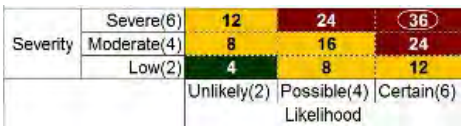
Clear

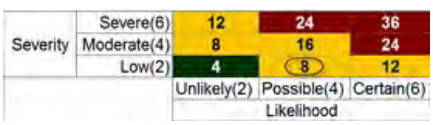
Question
Add Hazard / Control
Measure
Attachment
References
Remark

1.3 Personal injury - Dangerous access conditions

Initial Risk Rating

Residual Risk Rating





Barriers - It is the Captains overall responsibility to assess the criterias for safe access.

Barriers - Transfer to / from a moored vessel must be monitored by another crewmember if a fully rigged gangway isn't in place.

Barriers - Be aware of vessel movement in the vicinity and subsequent waves and suctions which could affect vessel movement.

Clear

Question
Add Hazard / Control
Measure
Attachment
References
Remark

+ Contents

1.4 Personal injury - Inadequate gangway arrangements

Initial Risk Rating

Residual Risk Rating

Barriers - Gangway must be secured on the vessel by a locking mechanism which ensures that the gangway cannot be detached by vessel movement or changing tidal conditions.

Barriers - Gangway must be resting quayside on a firm non-slippery surface.

Barriers - The gangway must be fitted with a safety net and a lifebuoy with light and safety line must be avaliable for immediate use.

Barriers - Gangway arrangements must be fitted with a cargo net and sufficiently lighted for safe access duing hours of darkness.

Barriers - The gangway wheels or roller must be in good working condition.

Barriers - The gangway scepters must be firmly in place and the guide ropes thight and of sufficient strenght.

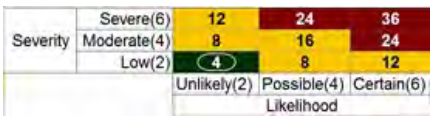
Clear

Question
Add Hazard / Control Measure
Attachment
References
Remark

1.5 Failure to comply with company procedures

Initial Risk Rating

Residual Risk Rating



Barriers - Ensure procedural content of HMS procedure 09-007 is understood and complied with.

Barriers - Toolbox talk to be carried out with all involved crew members detailing the operation and the respective role of each crew member. The stop work authority to be emphasized for all participating crew members.

PPE - PPE to be worn as minimum as per company PPE matrix.

Clear

Question
Add Hazard / Control Measure
Attachment
References
Remark

1.6 Do you want to add any additional hazard and barrier to this Risk Assessment?

- ○ Yes
- ○ No

Clear

Question
Add Hazard / Control Measure
Attachment
References
Remark

* 1.7 Declaration

- ☐ * Confirm that all the applicable barriers listed above are implemented

Clear

Question
Add Hazard / Control Measure

Attachment

References

Remark

* 1.8 Permit to Work and Risk Assessment completion

Will this activity need a Permit to Work?

- Yes
- No

Clear

Question

Add Hazard / Control Measure

Attachment

References

Remark

1 Vessel Access

Liverpool Operation Generic Risk Assessment - Liverpool 001 - Accessing tugs from quay

Pc 5

Svitzer Marine Limited

Liverpool Operation Generic Risk Assessments.

Svitzer Bootle.

Revision number 01.

08/03/04

Compiled by [redacted]

Svitzer Marine Ltd - Hazard and Risk Assessment

F9

Port : Liverpool	Tug : Bootle	Date : 21/07/04	Signature of Assessor: [redacted]

Liverpool 001. Accessing Tugs from Quay.

Guidelines for completing Hazard and Risk Assessment			
S = Severity Factor	3 = Major	2 = Serious	1 = Minor
L = Likelihood Factor	3 = High	2 = Medium	1 = Low
R = Total Risk Factor	Multiply S by L to give R. The higher the number, the greater the risk and level of control needed.		
RR = Residual Risk Factor	Multiply S by L to give RR. This is the risk level remaining when control measures are included.		
For further information on good practice please refer to the "Code of Safe Working Practices for Merchant Seaman"			

Job / Activity	Hazard	Risk	Uncontrolled Risk			Summary of Control Measures to be included.	Residual Risk		
			S	L	R		S	L	RR
Accessing Tugs from quay	*Effects of weather*	*Slips, trips and falls*	*2*	*2*	*4*	*Crew awareness of dangers associated with wind, rain, ice, snow etc.*	*1*	*1*	*1*
Accessing Tugs from quay	*Snow/Ice*	*Slips, trips and falls*	*2*	*2*	*4*	*Crew awareness of dangers associated with snow and ice on quay. Crewmembers should keep a safe distance from the edge at all times.*	*1*	*1*	*1*

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F9

Accessing Tugs from quay	*High Winds*	*Slips, trips and falls*	*3*	*2*	*6*	*Crew awareness of dangers associated with high winds. Crewmembers should keep a safe distance from the edge at all times.*	*3*	*1*	*3*
Accessing tug from Tranmere stages	*Ice, snow, rain*	*Slips, trips and falls*	*3*	*2*	*6*	*Awareness of hazards. Gangway to be used. Safety net on gangway. PPE and Lifejacket.*	*2*	*2*	*4*
Landing personnel from tug to Tranmere/Princes jetty and lock walls.	*Adverse weather, run of tide and large sea swell*	*Slips, trips and falls in river/lock*	*3*	*3*	*9*	*Awareness of hazards. PPE to be used. Lifejacket to be used. Deploy man from ashore to assist with tying up.*	*1*	*1*	*1*

Annex C

ESSAR OIL UK Ltd - Marine Risk Register

ESSAR OIL UK Ltd - Marine Risk Register

Rev : A

RISK REGISTER

Risk Workshop attendees:

[redacted]	
[redacted]	
[redacted]	

Key for Action Parties:

Name	Ref

RISK REGISTER REV CONTROL

Preparer:	[redacted]
Revision Date:	30/11/2018
Revision No.:	A
Note on Revision:	
Detail of the revision	

Project Risk Register

No.	Risk	Consequence	Classification of Risk						Rating when registered						Mitigating Action / Response	Action Parties: Ref	Current Rating - (after mitigation)							Status Update		
			T	E	C	O	P	S	Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H			Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H	Target Date to Complete	Closure Date	Status
1	**VESSEL UNDERWAY PILOT STATION TO BERTH** Vessel Mechanical Breakdown: e.g. Engine failure, Steerage Failure, blackout Vessel Navigation Failure: e.g. vessel equipment failure Channel: not maintained as documented - e.g. navaids, water depth, Human factors Weather: visibility, wind etc. Security Availabilty of tugs Communication failure	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to Canal, Locks, berths, key walls or Banks Damage to other vessels No tug available to berth						S	4	3	C	12		M		Vetting Policy Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures Simulator trainging with Pilots and tug skippers in emergency response Ships crew competancy and SMS system Planned maintenace Tug contract		1	3	C	3	L					
2	**VESSEL UNDER TOWAGE /PUSHING OPERATIONS** Tugl Mechanical Breakdown: e.g. Engine failure, Steerage Failure, blackout Vessel Navigation Failure: e.g. vessel equipment failure Channel: not maintained as documented - e.g. navaids, water depth, Human factors Weather: visibility, wind etc. Security Communication failure	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to Damage to Canal, Locks, berths, key walls or Banks Damage to other vessels						S	4	3	C	12		M		Vetting Policy (Suitable ship for towing) Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures Simulator trainging with Pilots and tug skippers in emergency response Tug crew competancy and SMS system planned maintenace Tug contract		1	3	C	3	L					
3	**VESSEL UNDER WAY BERTH TO PILOT STATION** Vessel Mechanical Breakdown: e.g. Engine failure, Steerage Failure Vessel Navigation Failure: e.g. vessel equipment failure Channel: not maintained as documented - e.g. navaids, water depth, Human error Weather: visibility, ice, wind etc. Security	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to Canal, Locks, berths, key walls or Banks Damage to other vessels No tug available to berth						S	4	3	C	12		M		Vetting Policy Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures Simulator trainging with Pilots and tug skippers in emergency response Ships crew competancy and SMS system Planned maintenace Tug contract		1	3	C	3	L					
4	**Transfers of ships between berths** Vessel Mechanical Breakdown: e.g. Engine failure, Steerage Failure, blackout Vessel Navigation Failure: e.g. vessel equipment failure Berthsl: not maintained as documented - e.g. water depth, Human factors Weather: visibility, wind etc. Security Availabilty of tugs Communication failure	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to Canal, Locks, berths, key walls or Banks Damage to other vessels No tug available to berth						S	4	3	C	12		M		Vetting Policy Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures Simulator trainging with Pilots and tug skippers in emergency response Ships crew competancy and SMS system Planned maintenace Tug contract		1	3	C	3	L					
5	**VESSEL AT ANCHOR** Human factors Navigation failure Equipment failure (anchor, windlass) Weather (high wind, highseas, strong tide) Congested anchorage Security Other vessels no control of Communication failure	Loss Of Control Collision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Dragging anchor onto shore other vessels, pipeline						S	4	3	C	12		M		Vetting Policy (Suitable ship for anchoring) Peel Port NTM and procedures Ships Procedures Planned maintenace Weather limits Crew compatenacy		1	3	C	3	L					

Project Risk Register

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			T	E	C	O	P	S	Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H			Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H	Target Date to Complete	Closure Date	Status
6	**VESSEL MANOEUVRING IN CONFINED AREAS** Vessel Mechanical Breakdown: e.g. Engine failure, Steerage Failure Vessel Navigation Failure: e.g. vessel equipment failure Human Factors Bad Weather : visibility, wind, tide Tug mechanical failure e.g. tow rope/engine/steering failure/blackout Communication failure Vessel interaction Congested sea area (high traffic density)	Loss Of Control Collision - Jetty, 3rd party vessel Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (includes jetty & vessel)						S	4	3	C	12		M		Vetting Policy Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures Simulator trainging with Pilots and tug skippers in emergency response Crew competancy Ships SMS Panned maintenace		1	3	C	3	L					
7	**Standby Tug Operations** Off standby crew change Off standy operations	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to berth ship						S	4	3	C	12		M		Towage Contract Simulator training VHF contact Foam Testing Competancy and Training Rules for standby Permissions to leave station		1	3	C	3	L					
8	**VESSEL MOORED AT BERTH** Vessel passing too close and at speed (Interaction) Human Factors Environmental conditions: high wind/seas/strong tide Rise and fall water level (tidal/rivercanal level) Mechanical failure of ship or shore mooring eq't poor condition of mooring rope/wire, bollards, dolphins and fenders Mechanical failure on passing vessel Vessel non related turning in turning basan	Loss Of Control Collision Mooring wire parts with fatality Hose/loading arm failure resulting in: Ignited release -fatality Unignited release (pollution) asset damage - gangway/dock/loading arm/vessel Grounding						S	4	3	C	12		M		Vetting Policy Procedures for vessels bound to and from Tranmere Oil Terminal Peel Port NTM and procedures(safe Speed/passing distances) ISGOTT SSSCL Planned maintenace Inspection of Mooring points Crew competancy Weather limits		1	3	C	3	L					
9	**ON WATER TRANSPORT BY GIGBOAT, FERRY, WORKBOAT, BUNKER BARGE OR STORES BOAT** Ship visits by staff / Contractors / Agents Mooring line deployment Social Events Ferry use workboat Bunker barge spill Inspection of Berth fendering/structure Inspection of N38 Boom/piles Moving waste bins from WOD	Loss Of Control Collision Allision Grounding and possibly: Fatalities Ignited release (fire or explosion) Unignited release (pollution) Asset Damage (own and 3rd party) Damage to Canal, Locks, berths, key walls or Banks Damage to other vessels						S	4	3	C	12		M		Designated life jacket areas Risk assessment for PFD Tranmere local rule 2.1 Stanlow local rule 3.6 RYA qualification for boatpeople Boats inspected to MCA standards Vetting policy for bunker and stores craft Rules for use of cranes Weather limits Procedures and maintenace for ferry and workboats		1	3	C	3	L					
10	**MOORING/UNMOORING OPERATIONS** Vessel/Shore Equipment failure Human Factors - including inadequate tug bollard pull Communication error / failure Tug mechanical failure Terminal equipment failure Mooring boat operations failure Weather : high wind/seas/strong tide Mooring type Incorrect mooring pattern personal injury including fatilatey Grounding/Ship/Shore damage Fall to water	Loss Of Control Collision - Jetty, 3rd party vessel Mooring parts with fatality Asset damage to shore or ship equipment Mooring boat capsized Fatality Drowning						S	4	4	D	16			H	Ship vetting standards Ships maintenance and inspection of mooring gear Competence of Pilots Towage contract Training / Competence of Loading Masters Training / Competence Mooring procedure (Briggs / Port) Audits Competancy of ships crews PFD in use		3	4	D	12		M				
11	**LIFTING EQUIPMENT UNDER STRESS EG HOSE LIFTING, GANGWAY POSITIONING, SUPPLIES DELIVERY, CONNECTION EQUIPMENT** Failure of Equipment due to inadequate maintenance, inappropriate equipment Human factors Stored energy Using ships gangway under wires at Tranmere	Loss Of Control Fatality Ship/Shore damage pollution						S	4	4	D	16			H	Training / Competence Maintenance and Inspection of gangways/equipment Audits Procdures		2	4	D	8	L					

Project Risk Register

No.	Risk	Consequence	Classification of Risk						Rating when registered						Mitigating Action / Response	Action Parties: Ref	Current Rating - (after mitigation)							Status Update		
			T	E	C	O	P	S	Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H			Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H	Target Date to Complete	Closure Date	Status
12	**VESSEL HULL OVERSTRESSED** Incorrect cargo configuration Structural weakness through corrosion etc. Incorrect Ballast configuration Cargo or Ballast system failure Human factors - Cargo/ballast plan Equipment failure - (vessel loadicator) Safety sytem failure (P/V V/Vs)	Loss Of Conrol/ Structural Failure Total Loss of Vessel unignited release ignited release Fatality Pollution Explosion						S	4	4	D	16			H	OCIMF Standards Training Ship/Terminal Regulations TPP (Tanker Port Performance Form) Ship pre arrival checks (PV v/v's) Planned maintenace Monitoring flows/pressures		2	4	D	8	L					
13	**WEATHER** High Winds Electrical storm Hurricane activity Swell conditions in exposed locations Ice Fog	Loss of Control Fire Ignited release (fire/explosion) Uningnited release (pollution) Injury /fatality Asset damage - ship/terminal Loss of fire fighting systems due to ice Vessel breakout from berth Collision from passing vessels in fog						S	4	3	C	12		M		OCIMF Standards Training Ship/Terminal Regulations SSSCL (ISGOTT) winterisation checks port regulations		3	3	C	9	L					
14	**VESSEL ACCESS** unsecured gangway Weather : high wind/seas/strong tide/ice inadequate protection - rails/safety net etc Equipment failure, hydraulics, structural Transfer from / to other vessels via accommodation ladder / pilot ladder Poor landing area due to ship/shore equipment	Loss of Control/Fall Personnel injury - blow to head, crushing, drowning resulting in injury / fatality Asset damage						S	4	4	D	16			H	Port rules for use of heaving lines Terminal regulations for use of heaving lines Training / Competence Maintenance and Inspection of gangways/equipment Safety harnesses to be warn PFD to worn		3	4	D	12		M				
15	**FALL FROM HEIGHT** Inadequate protection e.g. safety rails Human factors Trip hazards	Loss of Control/Fall Personnel injury - drowning / Injury / fatality						S	4	3	C	12		M		Physical Barriers OCIMF standards LSR Red Lifejacket area on Jetties Inspections and audits Safety harnesses to be worn		3	3	C	9	L					
16	**SLIP AND FALL AT SAME HEIGHT** Uneven surface Slippery surface(Ice,Oil) Poor Housekeeping Weather : high wind/seas/strong tide Ergonomics Poor lighting	Loss of Control/Fall Personnel injury - drowning / Injury / fatality						S	3	4	D	12		M		Training Competance House keeping Audits, good housekeeping standards Red lifejacket area on berths, Winterisation procedures		1	4	D	4	L					
17	**PERSONNEL UNDER WATER (DIVING)** Inappropriate Equipment (Scuba) Human Factors - competency Adverse weather / Tide conditions Ship and third party vessel machinery Shore intakes Poor underwater visibility Communication failure	Exposure to health hazard - asphyxiation Exposure to physical hazard - propellor, bow thruster etc. fatality - drowning						S	4	2	B	8	L			Port Rules for diving operations Terminal rules for diving operations Ship rules for diving operations competant/approved diving company		4	2	B	8	L					
18	**HYDRAULIC OIL SPILLS** inadequate maintenance Human factors (overfill) Equipment failure	Loss Of Containment Unignited release (pollution) Ignited release Exposure to health hazard - Skin contact / high pressure Physical injury due to kinetic energy (e.g.parted hose fitments etc)						S	2	4	D	8	L			Bunded areas Good Planned maintenace system Ship/shore checks Correct operational/maintenace procedures		2	4	D	8	L					
19	**CARGO SPILLS(Oil/Chemical)** Cargo transfer system during loading/discharge Operations typical threats include: Failure of cargo containment and transfer systems gasket failure Structural failure - Jetty, ship, pipelines / valves, loading arms / hoses, pumps Human factors (tank entry, hotwork, maintenance, competence) Inadequate maintenance / inspection Vessel stability error Overpressurisation of system Excessive loading rate Sampling / ullaging / dipping Crude oil washing during tanker discharge Equipment failure - e.g.high level alarms, comms, gauging Inert Gas system failure / vapour recovery system failure Incorrect line draining Connecting to wrong line Release from refinery outfall	Unignited release (pollution) Ignited release - fire and explosion Health Hazard e.g.Skin contact / inhalation Physical injury due to kinetic energy Fatality Asset damage - ship and terminal						S	4	3	C	12		M		Ship vetting standards Maintenance schedules TPP agreement COW checklists Terminal regulations ISGOTT rules Operational planning Vessel cargo plan/procedures Crew/Jetty op competance		3	4	D	12		M				

Project Risk Register

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20	**BUNKER FUEL SPILLS** Bunker transfer system during operations and internal transfer e.g. Structural failure - hose, gasket, pipeline Overpressurisation Human factors (bunker vessel & receiving vessel) Equipment failure - e.g.high level alarms, comms, gauging Barge failure Weather Passing ships In correct equipment and conections	Unignited release (pollution) Health Hazard e.g.Skin contact / inhalation / toxcicity Asset damage - ship and terminal hose pipeline						S	2	4	D	8	L			Ship vetting standards Maintenance schedules TPP agreement COW checklists Terminal regulations ISGOTT rules BSSSCL		2	4	D	8	L					
21	**SLOPS SPILLS** Slop oil transfer system during discharge e.g. Equipment failure(Hose, arm) Human factors	Unignited release (pollution) Ignited release Personnel Injury Asset Damage						S	2	4	D	8	L			Ship vetting standards Maintenance schedules TPP agreement Terminal regulations ISGOTT rules SSSCL		2	4	D	8	L					
22	**CARGO HEATING (HOTOIL)** Inadequate maintenance Equipment failure Human factors	Unignited release (pollution) Ignited release Personnel Injury Asset Damage						S	2	4	D	8	L			Ship vetting standards Maintenance schedules TPP agreement Terminal regulations ISGOTT rules SSSCL		2	4	D	8	L					
23	**H2S AND BENZENE** Venting (inc gas freeing), Sampling and Ullaging tanks Connecting /disconnecting hoses/ hard arms Tank Entry	Asphyxiation/fatality Long term health issues						S	4	2	B	8	L			Closed loading VRU for Benzene cargos Terminal regulations COSHH Procedures and competance Correct PPE (Chemical suits) Personel gas monitors Personnel Exposure monitoring		4	2	B	8	L					
24	**ELECTRICAL** Inadequate maintenance of electrical equipment Design defect (arc flash) Use of non EX equipment (inc. portable detectors, comms, testing equipment) in hazardous areas e.g open cable junction box Human factors (equipment isolation)	Explosion & Fire Injury / Fatality						S	4	2	B	8	L			Terminal Rules ISGOOTT Rules SSSCL Ship rules Competancy PAT testing of equipment		4	2	B	8	L					
25	**ELECTROSTATIC ENERGY** Static discharge during tank cleaning operation Hose Connection (insulating flange) Loading into an empty tank Inserting ungrounded device into a cargo tank e.g. sounding rod. Static accumalator cargos	explosion & Fire Injury / Fatality Major asset damage						S	4	3	C	12		M		Terminal regulations ISGOOTT Rules SSSCL Maintenace schedules Insulating flanges Surying procedures(Indepandant) Static cargo rules		4	3	C	12		M				
26	**SECURITY** Criminal activity Terrorism Sabotage Stowaways /smuggling (drugs)	Injury / Fatality Major asset damage Fiscal penalties Hostage situation Ship arreted loss of berth until border force complete investigation						S	4	2	B	8	L			ISPS rules Pre arrival immigration clearance Site security Visitor clearnace Secure areas Competancy and training Exercises CCTV coverage		4	2	B	8	L					
27	**PHYSICAL EFFECT(push,pull lift,carry)** Incorrect lifting posture Human factors Inadequate resources Equipment failure	Personnel injury						S	3	4	D	12		M		Training competance Pre use checks Correct colour code Stores procedures Correct man power for task		2	4	D	8	L					
28	**BALLAST WATER MANAGEMENT** Discharge of ballast from vessel containing destructive micro-organisms - (muddy river ballast) Cargo/ballast cross contaimination	Environmental damage to local eco-system Pollution Loss of berth						S	2	2	B	4	L			Ship Ballast water management plan		2	2	B	4	L					
29	**INSUFFICIENT OXYGEN ATMOSPHERES** Human Factors (tank entry, maintenance, competence)	Fatality						S	5	3	C	15			H	Ship SMS Terminal regulations Training and competance ISGOTT Guidelines Port Guide lines		0	3	C	0	L					

Project Risk Register

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			T	E	C	O	P	S	Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H			Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H	Target Date to Complete	Closure Date	Status
30	**INERT GAS** Purging and Padding Human factors (maintenance, operational competence) Equipment Failure	Asset damage personnel injury Environmental damage due vapour release Fatality Overpressurisation						S	5	4	D	20			H	Ship SMS Terminal regulations Training and competance Planned maintenace		3	4	D	12		M				
31	**Driving**	Death By dangerous driving Asset damage						S	4	3	C	12		M		Speed limit Physical barriers Induction and training Approval to drive on site Life Saving Rules Journey Management and Driving Standards		3	3	C	9	L					
32	**Close to waters edge** Painting Jetty Maintenance Moving to and from vessel Moving to and from ferry Mooring operations jetty operations	Drowning, Hypothermia, injury						S	4	2	B	8	L			Designated life jacket areas Risk assessment for PFD Tranmere local rule 2.1 Stanlow local rule 3.6		3	2	B	6	L					
33	**Completing Cargo/Safety paperwork** Not completeing SSSCL or TPP correctly. Supplying in correct information	Personnel Injury Fire/Explosion Pollution Grounding						S	3	3	C	9	L			OCIMF Standards Training/competance Ship/Terminal Regulations TPP (Tanker Port Performance Form) SSSCL Hydrographic surveys		2	3	C	6	L					
34	**Cargo Con/Disconnection Tranmere** Arm/Hose/spool Failure of hydraulics Use of ships crane Riggers not available Failure of arm/hose/crane Health hazards (Due to type of product)	Personnel Injury Mechanical failure Pollution Ship/Shore asset damage						S	4	4	D	16			H	Correct berthing procedure(line arm arms) Ship/Shore Procedures Training/Competance Inspection of equipment Weather limits		2	4	D	8	L					
35	**Cargo Con/Disconnection Stanlow** Arm/Hose/spool Failure of hydraulics Use of ships crane Failure of arm/hose/crane No Crane available ship/shore maual handling Health hazards (Due to type of product)	Personnel Injury Mechanical failure Pollution Ship/Shore asset damage						S	4	4	D	16			H	Correct berthing procedure(line up arm/hose) Ship/Shore Procedures Training/Competance Inspection of equipment Weather limits		2	4	D	8	L					
36	**General Health hazards** -noise -Exposure to products -Weils diese -Office based illness --Asbestos --carcinogens --legioelle	Personell Injury Death Noise Induced hearing loss long term illness						S	4	3	C	12		M		PPE noise at work regs COSHH assesments Procedures Training Occupational Health monitoring		2	3	C	6	L					
37	**Lone Working** Jetty Operator Loading Master Ferry Men ISPS driver Marine supers Panel man	Personal Injury Fatality Pollution Fire						S	4	3	C	12		M		Operator radios Call in procedures (Briggs/Ferry/L/M) Ship/Shore check procedures every 2 hours Berth visits by L/M supervisor Fitness to work medicals		4	3	C	12		M				
38	**Storing from Shore** Crane failure Manual handling Weight Access Ship shore Uneven surfaces	Personel Injury Incorrect use of ships crane Reduced manpower Asselt damage ship/shore Fire/Explosion Pollution						S	4	2	B	8	L			Terminal regs Store permission regulations Planned maintenace Competancy Use of riggers		2	2	B	4	L					
39	**Springing Ships along a berth** Loss of control of ship Mooring movement Arms/hoses/gangway not removed Weather Lighting Insufficent communication	Vessel Breakout Personnel Injury Fatality equipment failure Asset damage ship/shore polution Fire/explosion grounding						S	4	3	C	12		M		Port regulations Weather limits Ship crew competancy planned maintenace TPP		2	3	C	6	L					

Project Risk Register

No.	Risk	Consequence	Classification of Risk						Rating when registered							Mitigating Action / Response	Action Parties: Ref	Current Rating - (after mitigation)								Status Update		
			T	E	C	O	P	S	Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H			Consequence (1,2,3,4,5)	Probability 1-5	Probability A-E	Sum (CxP)	Rating L	Rating M	Rating H	Target Date to Complete	Closure Date	Status
40	**Testing of ships engines alongside** Insufficent moorings Arm/hose/gangway not removed incorrect ship procedure Weather Lighting Insufficent communication	Vessel Breakout Personnel Injury Fatality equipment failure Asset damage ship/shore polution Fire/explosion grounding						S	4	3	C	12		M		Port regulations Weather limits Ship crew competancy planned maintenace Terminal regulations/permission additional moorings Weather limits		2	3	C	6	L					
41	**Transfer equipment to/from barge at jetty** incorrect ship procedure Weather Lighting Insufficent communication Falling loads Suspended loads	Pollution Equipment failure Asset damage Personel injury Fire/explosion						S	4	3	C	12		M		Clearance policy for craft Planned maintenace Planning/Communication Tested lifting equipment PFD Weather limits		1	3	C	3	L					
42	**Bunkering Of Ferry** Spill Hose Failure Overpressure Mooring failure Weather Lighting Ferry/shore access	Pollution Equipment failure Asset damage Personel injury Fire/explosion over pressure						S	2	3	C	6	L			Competancy procedures Weather limits Spill tray		1	3	C	3	L					
43	**Tranmere Pontoon/Dolphin general maintenace** Workboat failure Fall to water Access to/from equipment Manual Handling Lighting	Drowning, Hypothermia Asset damage personel injury Engine failure of work boat Fire/explosion						S	4	3	C	12		M		Procedures Competancy RYA training weather limits gas tests Tranmere local rule 2.1 Work boat planned maintenace Immersion suits PFD		1	3	C	3	L					
44								S				0	L								0	L					
49								S				0	L								0	L					
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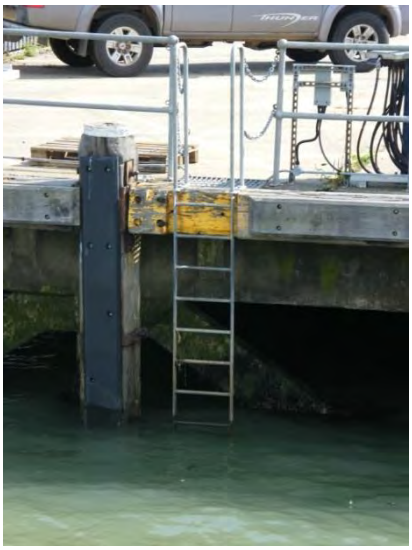
Annex D

SIP014 Guidance on Safe Access and Egress in Ports published by Port Skills and Safety

SIP014 - GUIDANCE ON SAFE ACCESS AND EGRESS IN PORTS



Date: June 2017 **Issue: 1A**

GUIDANCE ON SAFE ACCESS, AND EGRESS IN PORTS

CONTENTS

Revision / Amendment Log

Document	Date	Section	Changes
Issue 1	6 April 2014	All	First issue
Issue 1A	27 June 2017	6, 10 and 14	The following changes have not yet been approved by the HSE Publications Guidance Group and are therefore not yet technically approved by the HSE.

			They do however relate to factual revocations of maritime regulations. The Merchant Shipping (Means of Access) Regulations 1988 have been revoked, and notice • MGN 533 (M) Means of access https://www.gov.uk/government/publications/mgn-533-m-means-of-access ...replaces the statutory duties in those Regulations. The Merchant Shipping (Safe Movement on Board Ship) Regulations 1988 have been revoked and the following notices replace the statutory duties in those Regulations: • MGN 532 (M) Safe movement on board ship https://www.gov.uk/government/publications/mgn-532-m-safe-movement-on-board-ship • MGN 532 (M) (Corrigendum) Safe movement on board ship https://www.gov.uk/government/publications/mgn-532-m-corrigendum-safe-movement-on-board-ship All MGNs above should be read in conjunction with the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 (S.I. 1997/2967). MGNs 532 and 533 specify that "If the measures in this notice are not complied with, and no measures which MCA agrees are equivalent are in place, MCA will take enforcement action under the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997"

1 INTRODUCTION

1.1 This guidance has been produced by the ports industry with the support of the Health and Safety Executive.

1.2 It is for companies operating in the UK ports industry with responsibility for the safe design, construction, operation, management and maintenance of ports and terminal facilities and management of port and terminal activities. It will also be useful to employees and their representatives.

1.3 Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance. If the guidance goes beyond compliance then this will be clearly identified.

1.4 For the purposes of this document, access also means egress.

1.5 This guidance document retains the original grouping of Access/Egress in one place, as this is more informative to the way the ports industry engages with these topics.

1.6 Properly maintained safe means of access should be provided to every place any person has to visit or work on port premises. This covers safe access not only to work places and working positions, but includes access to shore based plant, offices, welfare facilities, ships, ships' holds or any other place in connection with the operation. The requirement is not only for employees, but extends to any person whose presence is connected with the operation including passengers, crew members, victuallers, statutory authorities etc.

1.7 Access to container tops and container top working is not covered in this document. Guidance can be found in SIP 003 Container Handling

1.8 In certain emergency situations where immediate action is essential it may not be possible to provide access to the highest standards which might normally be expected. The access should however be safe within the constraints of the situation and organisations should be able to demonstrate this.

2 REGULATORY FRAMEWORK AND GUIDANCE

2.1 The two principal relevant pieces of law are the Health and Safety at Work etc. Act (HSWA) 1974, and the Management of Health and Safety at Work Regulations (MHSWR) 1999, which

set out the basic requirements to ensure, so far as is reasonably practicable, the health, safety and welfare of all involved.

2.2 Port specific legislation includes the Dangerous Substances in Harbour Areas Regulations (DSHAR) 1987 and the Loading and Unloading of Fishing Vessels Regulations 1988.

2.3 The Docks Regulations 1988 were in force from 1 January 1989 to 6 April 2014. COP25 'Safety in Docks' was the accompanying ACOP for DR88, which was replaced by a new ACOP L148 'Safety in Docks'.

The PSS/HSE Safety in Ports guidance suite available from the PSS website at: http://www.portskillsandsafety.co.uk/publications/safety_in_ports_guidance is an important supplement to the new ACOP L148: http://www.hse.gov.uk/pubns/books/l148.htm

2.4 Reference can also be made to the:

- International Labour Organisation's (ILO) Code of Practice on Safety and Health in Ports (ILO 152) http://www.ilo.org/safework/info/standards-and-instruments/codes/WCMS_107615/lang--en/index.htm

3 RISK ASSESSMENT

3.1 Risk Assessments must be undertaken in accordance with the Management of Health and Safety at Work Regulations 1999. The risk assessment must consider the risks – not only to permanent employees but also to others including non-permanent employees (NPE's), ship's crew, passengers and visitors that may be affected by the activity. The appropriate control measures must be introduced and should consider collective measures ahead of personal or individual measures.

3.2 Risk assessments must be reviewed regularly and immediately after any incident or when there are significant changes to the operation. Most accidents and near misses can be avoided if the risks from the work are suitably and sufficiently assessed and appropriate control methods are adopted.

3.3 The risk assessment should record the significant hazards of the operation together with the relevant control measures. In port operations risk assessments should take into account changes such as tidal changes, weather, trim, list, load/cargo and vessel dynamics.

3.4 Planning and work execution is discussed in HS(G) 177, Managing Health and Safety in Dockwork: http://www.hse.gov.uk/pubns/books/hsg177.htm

3.5 The Health and Safety at Work Act (HSWA) applies on board a ship when shore based workers are engaged in cargo handling* or other tasks on board. The HSWA also applies to the Master and ship's crew when working with shore-based personnel on board ship.

Note: *Cargo handling may include, but is not limited to, loading, unloading, stowing, unstowing, pouring, trimming, classifying, sizing, stacking, unstacking as well as composing and decomposing unit loads; and also services in relation to cargo or goods such as tallying, weighing, measuring, cubing, checking, receiving, guarding, delivering, sampling and sealing, lashing and unlashing.

3.6 Cooperation and coordination between shipside and landside employers is required. Employers must therefore carry out risk assessments and develop safe systems of work (in consultation with the workers involved) that all parties agree to, so that the respective employers can co-operate effectively with each other.

3.7 A signed agreement or an agreed and recorded system of work with the master of each vessel is recommended - this is not a legal requirement but may help to ensure effective co-ordination with other parties.

3.8 The regulations made under the HSWA; such as The Management of Health and Safety at Work Regulations 1999; The Lifting Operations and Lifting Equipment Regulations 1998 and The Provision and Use of Work Equipment Regulations 1998, do not apply to a master or crew of a ship, or any persons employing them, in relation to safe access, plant and equipment which remain on board the ship and for any undertakings or work which are carried out on board ship solely by the master and the crew. Instead, the Merchant Shipping Act 1894 and related Merchant Shipping Regulations impose similar duties on board ship in UK territorial waters.

3.9 A ship's master has duties under the HSWA in relation to the ship's crew who are put ashore to perform their own tasks (for example loading ship's stores or carrying out maintenance work on their ship). Those duties also extend to plant and equipment (for example a forklift truck) which is under the master's control that is used ashore by ship's crew, or when used by shore based workers ashore or on board ship.

4 ACCESS ON SHORE

4.1 As with all workplaces safe means of access must be provided so far as is reasonably practicable (SFAIRP) to every part of dock premises that any person has to visit such as

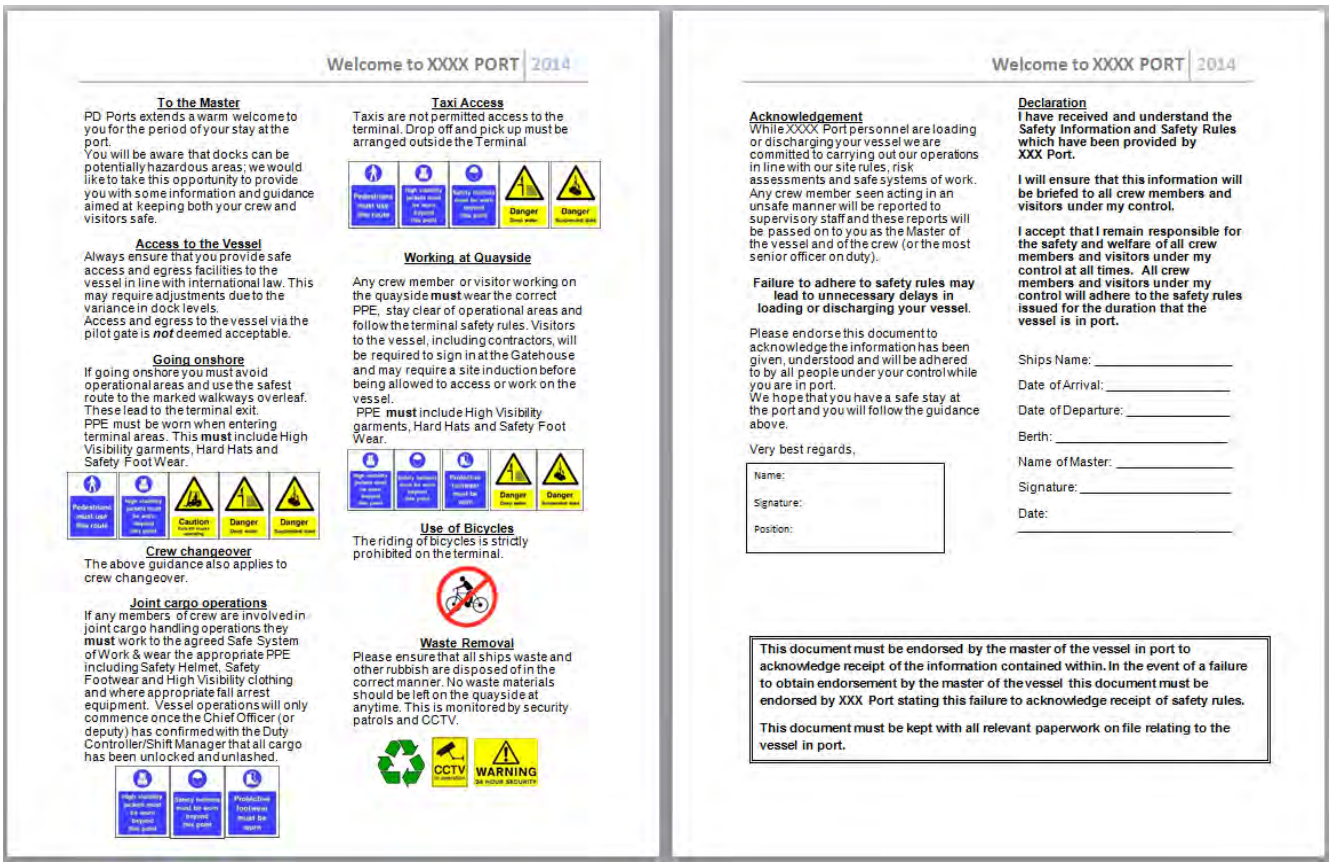
workplaces, work positions, ships, machinery, offices and welfare facilities. Persons include those directly employed and non-directly employed such as, ships' crew, passengers, customers, security officers, enforcement agencies and service providers.

4.2 In particular any floors, decks, surfaces, stairs steps, passages and gangways within dock premises must be fit for purpose and properly maintained.

4.3 Adequate lighting levels need to be maintained in all access areas. Further guidance on lighting levels can be found in SIP 009 Lighting.

4.4 Information should be made available to ship's crew and other visitors. This may include information on safe access routes, restricted access areas, pedestrian walkways, Emergency muster points, Safe parking areas, and services such as the Seafarers Mission.

This is often done by issuing information sheets to visiting vessels and to other visitors. It is often just a single sheet with a map showing safe access routes on one side and relevant safety information such as emergency contact details on the other.



Welcome to XXXX PORT 2014

To the Master
PD Ports extends a warm welcome to you for the period of your stay at the port.
You will be aware that docks can be potentially hazardous areas; we would like to take this opportunity to provide you with some information and guidance aimed at keeping both your crew and visitors safe.

Access to the Vessel
Always ensure that you provide safe access and egress facilities to the vessel in line with international law. This may require adjustments due to the variance in dock levels.
Access and egress to the vessel via the pilot gate is ***not*** deemed acceptable.

Going onshore
If going onshore you must avoid operational areas and use the safest route to the marked walkways overleaf. These lead to the terminal exit.
PPE must be worn when entering terminal areas. This **must** include High Visibility garments, Hard Hats and Safety Foot Wear.

Crew changeover
The above guidance also applies to crew changeover.

Joint cargo operations
If any members of crew are involved in joint cargo handling operations they **must** work to the agreed Safe System of Work & wear the appropriate PPE including Safety Helmet, Safety Footwear and High Visibility clothing and where appropriate fall arrest equipment. Vessel operations will only commence once the Chief Officer (or deputy) has confirmed with the Duty Controller/Shift Manager that all cargo has been unlocked and unlashed.

Taxi Access
Taxis are not permitted access to the terminal. Drop off and pick up must be arranged outside the Terminal

Working at Quayside
Any crew member or visitor working on the quayside **must** wear the correct PPE, stay clear of operational areas and follow the terminal safety rules. Visitors to the vessel, including contractors, will be required to sign in at the Gatehouse and may require a site induction before being allowed to access or work on the vessel.
PPE **must** include High Visibility garments, Hard Hats and Safety Foot Wear.

Use of Bicycles
The riding of bicycles is strictly prohibited on the terminal.

Waste Removal
Please ensure that all ships waste and other rubbish are disposed of in the correct manner. No waste materials should be left on the quayside at anytime. This is monitored by security patrols and CCTV.

Welcome to XXXX PORT 2014

Acknowledgement
While XXXX Port personnel are loading or discharging your vessel we are committed to carrying out our operations in line with our site rules, risk assessments and safe systems of work. Any crew member seen acting in an unsafe manner will be reported to supervisory staff and these reports will be passed on to you as the Master of the vessel and of the crew (or the most senior officer on duty).

Failure to adhere to safety rules may lead to unnecessary delays in loading or discharging your vessel.

Please endorse this document to acknowledge the information has been given, understood and will be adhered to by all people under your control while you are in port.
We hope that you have a safe stay at the port and you will follow the guidance above.

Very best regards,

Name:
Signature:
Position:

Declaration
I have received and understand the Safety Information and Safety Rules which have been provided by XXX Port.

I will ensure that this information will be briefed to all crew members and visitors under my control.

I accept that I remain responsible for the safety and welfare of all crew members and visitors under my control at all times. All crew members and visitors under my control will adhere to the safety rules issued for the duration that the vessel is in port.

Ships Name: _____
Date of Arrival: _____
Date of Departure: _____
Berth: _____
Name of Master: _____
Signature: _____
Date: _____

This document must be endorsed by the master of the vessel in port to acknowledge receipt of the information contained within. In the event of a failure to obtain endorsement by the master of the vessel this document must be endorsed by XXX Port stating this failure to acknowledge receipt of safety rules.

This document must be kept with all relevant paperwork on file relating to the vessel in port.

Figure 1 Sample pages from a visiting ship information document - this type of document will typically also include a map and key telephone contacts

5 PEDESTRIAN/VEHICLE SEGREGATION

5.1 Pedestrian/Vehicle Segregation

- Vehicles and pedestrians should be separated where they share the same workspace. This may involve excluding pedestrians from certain areas or providing separate pedestrian routes.
- Walkways should if possible be so laid out that they do not cross cargo handling areas. If it is necessary that they do, then they should be carefully designed and laid out to provide safe access. Different ports may have different ways of achieving the same aim such as: traffic lights, covered walkways, etc.
- Where pedestrians are required to enter a high risk area e.g. cargo handling area for a particular task, then additional control measures as identified by risk assessment may be required. Consider safe areas for drivers during loading. In some cases this may be within the actual vehicle cab.
- All vehicle and pedestrian traffic routes should be clearly marked and signs clearly visible. Appropriate crossing points should be provided where pedestrians and vehicles meet.
- Vessel loading points adjacent to linkspans and similar routes should be designed to reduce so far as is reasonably practicable the risk to pedestrians from vehicle movements. See SiP 012 "*Guidance on Roll-on Roll-off Passenger & Cruise Operations"*
- Drivers of haulage vehicles need to be advised when it is safe to either stay in their cab, or to go to a safe refuge. For example during a Rubber Tyred Gantry operation, providing the lifting path is not over the cab, the cab may be the appropriate place to remain. Where the lifting path passes over the cab or the driver needs to be involved in the operation, the safe system of work should reflect the joint activity and in such a situation a refuge may be a more appropriate place for the haulage driver to remain during the loading operation. Communication of the 'safe place' is important. It should be practical and make sense to the driver.

Figure 2 - Driver Safe Place example

5.2 Traffic Control

- Consider the application of Road Traffic and other relevant legislation
- Appropriate road signs and markings should be provided
- Establish and enforce site rules and provide these to visiting drivers, consider non-English speaking persons.
- Safety information is best conveyed by standard pictorial signs (see The Health Safety (Safety Signs and Signals) Regulations 1996) http://www.hse.gov.uk/pubns/books/l64.htm

For further guidance see SIP001 Guidance Workplace Transport (Port and Terminal Planning)

5.3 In certain circumstances the requirements concerning means of access may conflict with established rights of way. Where such rights of way are sited so that they could place members of the public who use them in danger, the Local Authority should be asked to consider a realignment of the right of way. Where public access routes cross work routes are unavoidable, then traffic controls may be needed.

6 ACCESS TO SHIPS

6.1 Access should generally be provided by the ship's accommodation ladder, gangways or other ladders. The obligation to provide, rig, secure and maintain in position ships' gangways, accommodation ladders, and other ladders is the responsibility of the master and his employer under the ~~Merchant Shipping (Means of Access) Regulations 1988~~. REVOKED, see instead MGN 533 (M) Means of access.

6.2 Ships' accommodation ladders and gangways should be set in a safe position. The ship's safety nets deployed in line with the ~~Merchant Shipping (Means of Access) Regulations 1988~~. REVOKED, see instead MGN 533 (M) Means of access

6.3

Figure 3 Accommodation ladders with safety nets deployed

6.4 The duties of shore based personnel are to monitor access gangways and accommodation ladders, only use if they are safe and report any defects or concerns. A safety net should be rigged wherever a person may fall between the ship and the quay from a means of access to a ship.

6.5 Accommodation ladders and gangways should be fenced on both sides along their entire length with both upper and intermediate guard rails.

6.6 As far as is practicable, accommodation ladders and gangways should be kept free of any snow, ice, grease, obstructions or other factors likely to make a handhold or foothold insecure.

6.5 Where designed to be suspended, if the suspension ropes of accommodation ladders become slack, this can result in the ladder moving or falling. Ladders in this condition must not be used.

6.7 A gangway that rests on a quay on rollers or wheels should be positioned in such a way that the rollers or wheels are on a reasonably level surface and free from obstruction.

6.8 People should be aware that gangways are prone to adverse movement, which may lead to additional hazards.

6.9 Shore based equipment which is at least as safe as a properly rigged and secured ship's accommodation ladder or gangway should be provided and used where the use of ships'

equipment is impossible or unsafe, especially where ships' decks are significantly below or above the level of the quay, wharf, dock or jetty.

6.10 Where access is provided by the shore, whether by agreement or because the ship's access is inadequate or unavailable - the duty to rig and maintain in position that access, so that it meets these standards and is safe, remains with the person providing it.

6.11 This does not however include the situation where a gangway or other physical means of access is simply lent or loaned by a shoreside employer to the master for use as ship's equipment. In this case access will be deemed to have been provided by the ship, and the rigging and maintenance in position of that access will fall to the master, although the shoreside employer will have a duty under Section 6 of the HSW Act to supply the equipment in a safe condition.

6.12 Each end of a gangway or accommodation or other ladder should provide safe access to a safe place, or to an auxiliary safe access. Where necessary, bulwark ladders should be provided, securely rigged and used.

6.13 Gangways and accommodation ladders should, where it is appropriate, be marked with the maximum design angle of use and the maximum safe loading both by number of persons and by total weight.

Figure 4 Inclinometer on a gangway

6.14 Other types of access may include the use of crane mounted equipment (safety cages, spreaders, torpedoes, gondolas, personnel cages, suspended baskets etc.). All of which must comply with the requirements of Lifting Operations and Lifting Equipment Regulations 1998 (LOLER): http://www.hse.gov.uk/work-equipment-machinery/loler.htm

6.14 Whatever size of vessel, where access between ships is necessary, the access should generally be provided by the ship lying outboard, except that where there is a great disparity in freeboard, access should be provided by the ship with the higher freeboard.

6.15 If means of access such as a gangway or ladder are found to be unsafe, they must be reported immediately to the port and the master their use prevented until they are made safe. Failure by the Master to ensure that access equipment belonging to the vessel is safe, should be reported to the MCA.

6.16 See also 'Access to ships' in ACOP L148: http://www.hse.gov.uk/pubns/books/l148.htm and Safety in Ports 020 Water safety: http://www.portskillsandsafety.co.uk/publications/safety_in_ports_guidance

7 ACCESS TO SMALL CRAFT

7.1 Good co-ordination and co-operation is vital when accessing small craft to make sure that access and egress can be done safely and without risks to health. One way of doing this is to have regular meetings with users, including employees and other stakeholders. The level of cooperation and coordination needed will depend on the nature of the access/egress and the risks involved. Consideration should also be given to issues such as: adequate lighting, maintenance, prevailing conditions, housekeeping, etc.

7.2 Ports should ensure that, so far as is reasonably practicable, small craft are berthed at the most suitable berth to ensure that safe access and egress can be maintained at all times, to vessels in port. This may mean ensuring berths used by these vessels have a means of access that can be used at all states of the tide.

7.3 Dock and Harbour Masters or those responsible for allocating berths for small vessels need to consider the safety of personnel on-board during their stay in port. The decision as to where it is best to berth small craft should take into account factors including: where gangways can be rigged; what access method is to be used or available; if a gangway or ladder from ashore is to be provided, whether quay face ladders are available; power supply, lighting and buoyancy equipment.

7.4 Moorings will need to be managed by the vessel whilst in port to ensure that the vessel remains safely alongside.

7.5 If gangways can be provided, then they should be. Gangways and other means of access need to be monitored to ensure they remain safe. It is the responsibility of the Master/Skipper or those in charge of the vessel to monitor access arrangements.

7.6 **Access to barges and other small ships**

Where the freeboard of the ship is too low to allow normal access equipment to be used, the ship should be moored in a position where the fixed ladders in the quay walls can be safely used for access.

7.7 **Access by means of ladders fixed to the quay wall or pier**

Stepping from ship to shore or shore ladder should be avoided where practicable. However where this is necessary, ensure that the vessel's mooring lines allow for the rising and lowering of the tide, prevent drifting. There should be no crossing where vessels taper.

8 ACCESS TO RORO VESSELS

See SiP 010 *Guidance Workplace Transport (Ro-Ro and Sto-Ro Operations)* for more detailed guidance.

9 LINKSPANS

9.1 See SiP 010 Guidance Workplace Transport (Ro-Ro and Sto-Ro Operations) and SiP 012 Guidance on Roll-on Roll-off Passenger & Cruise Operations for more detailed guidance.

10 ACCESS TO SHIPS' HOLDS & ACROSS CARGO

10.1 People should be aware that ships holds and access ways may be contaminated by hazardous fumes or gases, and as such should be treated as a confined space. See SiP 015 Confined Spaces for further guidance.

10.2 The ship must provide properly maintained safe means of access to cargo holding areas in accordance with ~~Merchant Shipping (Safe Movement on Board Ship) Regulations 1988~~ MGN 532 (M) Safe movement on board ship and MGN 532 (M) (Corrigendum) Safe movement on board ship

MCA enforcement action regarding MGN 533 (M) Means of access, MGN 532 (M) Safe movement on board ship and MGN 532 (M) (Corrigendum) will be undertaken under the Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997

~~This and the Merchant Shipping (Means of Access) Regulations 1988 apply to foreign vessels by virtue of The Merchant Shipping (Safety at Work)(Non-UK Ships) Regulations 1988~~

A pre-use check for confirmation of safe access should be carried out by the shore side operator and any defects reported and rectified.

10.3 Once shore side personnel have gained safe access to a hold, safe access must be maintained so far as reasonably practicable. Safe systems of work should be established and monitored to ensure that access is safely maintained. Entry and exit points should be kept clear and cargo should not be allowed to build up as this could impede access in emergencies. If access is gained by a personnel cage, where possible, the cage must be retained on the lifting device until alternative safe access is provided. Where this is not practicable, the personnel cage should be readily available. Arrangements must be in place to facilitate a rescue in an emergency situation.

10.4 Personnel should not be put at risk from falls. If a safe means of access is not available, consideration should be given, subject to a suitable and sufficient risk assessment, to the provision and use of alternative access arrangements, for example, a personnel cage which is suitably rated and secured in accordance with the requirements of the Lifting Operations and Lifting Equipment Regulations 1998.

10.5 Access across cargo stows presents the risks of slips, trips or falls from height. Particular care should be taken not to step into or jump over any gaps. When walking across cargo that has a curved or uneven surface, for example, pipes, rails or constructional steel, consideration should be given to the use of safe boards or walkways.

10.6 Personnel required to work on cargo may be presented with stows for loading or discharge with one or multiple shear drops. Where working close to an unprotected edge arises, the risks associated with working at heights must be assessed. Examples of control measures available to mitigate the risks associated with working at heights may include the use of safety nets, lifelines with safety harnesses or fall arrest systems.

11 SLIPPERY SURFACES

11.1 Where reasonably practicable, those parts of port premises which have been used for working ships should be cleared of loose material. In addition such materials should be cleared at appropriate intervals in the course of working each ship.

11.2 Ways to reduce slip and trip risks may include:

- Good housekeeping: encourage a ‘see it, sort it’ culture and appropriate monitoring and reporting systems. Report and follow up where a work area has been left untidy by employees from other companies.
- Specify appropriate flooring/surfaces. Slopes and ramps should have a suitable surface which should where necessary be ribbed or coated so as to be slip-resistant.
- Maintain floors, steps and walkways in a good condition.

- Where surfaces do become slippery due to adverse weather or tidal conditions then they should be maintained to ensure that vehicles and pedestrians can move about safely.
- Beware of oil spillages, spilt bulk cargo and trip hazards across walkways or stairways.
- Maintain plant to prevent contamination, e.g. oil getting onto the floor.

11.3 Where surface become slippery, they should be suitably treated so as to ensure that vehicles/people can move safely and be adequately controlled. Where steps are subject to regular tidal cover, they should be kept as slip-resistant as reasonably practicable.

11.4 The risk of slipping/falling in adverse weather conditions may be reduced by wearing appropriate footwear. Another alternative could be to de-ice/clear cargo tops or to wait for improved climatic conditions

12 FENCING OF DOCK EDGES

11.1 See Safety in Ports (SiP) 020 Water Safety

13 LADDERS

13.1 Safe design, procurement and use of ladders are covered by the Work at Height Regulations 2005 and relevant British Standards.

13.2 Portable ladders should be used only where no other safe means of access is reasonably practicable. Portable ladders should be checked prior to use and be fit for purpose. Before using a ladder effective measures should be taken to ensure that the ladder is adequately secured to prevent it from slipping.

- HSE Ladders web page: http://www.hse.gov.uk/work-at-height/using-ladders-safely.htm

13.3 In all cases where a ladder is used as a means of access to a working position, or for work, the ladder should be of such a kind and so used as to provide a means of access that is safe in the circumstances of its use. Risk assessments should take into account potential electric shock risks associated if using metal ladders to gain access to electric powered cargo transport units. Control measures may include: isolating the unit, using a non-conductive ladder, etc.

13.4 Ship's portable ladders which may be used by ship's crew do not always meet HSE standards for ladders and should not be used.

14 RELEVANT LEGISLATION AND GUIDANCE

14.1 Relevant legislation and guidance includes:

- Health and Safety at Work etc. Act 1974
  http://www.legislation.gov.uk/ukpga/1974/37
- Health Safety (Safety Signs and Signals) Regulations 1996)
  http://www.hse.gov.uk/pubns/books/l64.htm
- HSE Work at Height web page:
  http://www.hse.gov.uk/work-at-height/index.htm
- HSE Workplace Transport web page
  http://www.hse.gov.uk/workplacetransport/
- INDG455 Safe use of ladders and stepladders
  http://www.hse.gov.uk/pubns/indg455.htm
- International Labour Organization's (ILO) Code of Practice on Safety and Health in Ports (ILO 152)
  http://www.ilo.org/safework/info/standards-and-instruments/codes/WCMS_107615/lang--en/index.htm
- Lifting Operations and Lifting Equipment Regulations (LOLER) 1998
  http://www.hse.gov.uk/pubns/priced/l113.pdf
- HSE Lifting Operations and Lifting Equipment web page
  http://www.hse.gov.uk/work-equipment-machinery/loler.htm
- Management of Health and Safety at Work HSE web site
  http://www.hse.gov.uk/managing/index.htm
- Managing Health and Safety in Dockwork - HS(G) 177
  http://www.hse.gov.uk/pubns/books/hsg177.htm
- ~~Merchant Shipping (Safe Movement on Board Ship) Regulations 1988~~ REVOKED, see instead MGN 532 (M) Safe movement on board ship:
  https://www.gov.uk/government/publications/mgn-532-m-safe-movement-on-board-ship and
- MGN 532 (M) (Corrigendum) Safe movement on board ship
  https://www.gov.uk/government/publications/mgn-532-m-corrigendum-safe-movement-on-board-ship

- ~~Merchant Shipping (Means of Access) Regulations 1988~~ REVOKED, see instead MGN 533 (M) Means of access: https://www.gov.uk/government/publications/mgn-533-m-means-of-access
- Merchant Shipping (Safety at Work)(Non-UK Ships) Regulations 1988 http://www.legislation.gov.uk/uksi/1988/2274/contents/made
- Provision and Use of Work Equipment Regulations (PUWER) 1998 http://www.hse.gov.uk/pubns/priced/l22.pdf
- Safety in Docks ACOP L148 http://www.hse.gov.uk/pubns/books/l148.htm
- Safety in Ports Guidance documents http://www.portskillsandsafety.co.uk/publications/safety_in_ports_guidance
    - SiP001 Workplace transport planning and terminals
    - SiP002 General cargo
    - SiP003 Container handling
    - SiP004 Timber handling
    - SiP005 Mooring operations
    - SiP006 Transfer of bulk liquids
    - SiP007 Dry bulk cargo loading and unloading
    - SiP008 Storage of dry bulk cargo
    - SiP009 Lighting
    - SiP 010 Ro-Ro and Sto-Ro Operations
    - SiP 012 Ro-Ro Passenger & Cruise Operations
    - SiP 015 Confined spaces
    - SiP016 Emergencies

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FURTHER INFORMATION

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