

PART 4

Safety Management



System

PART 4

SAFETY MANAGEMENT SYSTEM	3
INTRODUCTION.....	3
SITE SAFETY MANAGEMENT POLICY AND STRUCTURE.....	3
FACILITY SAFETY MANAGEMENT STRUCTURE	6
Nuclear Operations Director (NOD)	6
Head of Nuclear Activities (HNA)	7
Facility Manager, Dockmaster Shiplift (FM)	7
Shiplift Planning Manager (SPM)	8
Senior Berthing Officer / Jetty Facility Controller	8
SAFETY MANAGEMENT INTERFACES.....	8
Commanding Officer (CO)	10
Captain of the Base (COB)	10
Base Executive Officer (BXO)	10
Emergency Planning Manager (EPM)	10
Duty Naval Base Officer (DNBO)	11
Queen's Harbour Master (QHM)	11
Base Services Co-Ordination Officer (BSCO)	11
Base Security Officer (BSyO)	11
Utilities Operations Manager (UOM)	11
M&E Maintenance Manager (M&E MM) Faslane	12
Estates Maintenance Manager (EMM)	12
Superintendent Fleet Maintenance (Clyde) (SFM(C))	12
Platform Group Manager (PGM)	12
Vessel Support Capability Manager (VSCM)	13
Assistant Director Logistics (ADLogs)	13
Staff Communications Officer (SCO)	13
Telephone Operations Manager (TOM)	13
NUCLEAR SAFETY MANAGEMENT STRUCTURE.....	13
Maintenance Of The Nuclear Site Safety Justification	15
Head of Design and Safety Justification (HDSJ)	16
Head of Naval Base Design Department (HNBDD)	16
Site Safety Justification Manager (SSJM)	17
Head of Nuclear Safety and Development (HNSAD)	17
Approval Authority Manager (AAM)	17
SAFETY COMMITTEES AND GROUPS	18
Shiplift Facility Safety Case Working Group (SFSCWG)	19
Nuclear Site Safety Sub-Committee (NSSSC)	19
Nuclear Weapons Site Safety Sub-Committee	20
Safety Design Control Committee (SDCC)	20
Clyde Nuclear Safety Committee (CNSC)	20
Berthing and Services Committee (BSC)	21
Berthing and Services Test Group (BSTG)	21
Procedure Authorisation Group (PAG)	21
Nuclear Services Authorisation Group / Docking Nuclear Services Authorisation Group (NSAG / DNSAG)	21
Strategic Weapons System Procedure Authorisation Group (SWSPAG)	22



Nuclear Justification Appraisal Group (NJAG)	22	
Vessel and Crew Support Operations Working Group (V&CSOWG)	22	
QUALITY ASSURANCE STRUCTURE	23	
Corporate Quality	23	
Control of Change	23	
Audit	24	
Document Structure	25	
FSC Supporting Documentation	27	
Ships Operating Procedures	28	
ADMINISTRATIVE CONTROL OF ACTIVITIES	28	
Berthing / Docking / Unberthing	28	
Craneage	28	
Shore Service Connection / Disconnection	29	
Facility Maintenance	29	
NSRP Activities	30	
Vessel Non NSRP Activities	31	
Store Transfer and Vehicle Movement	31	
Communications and Alarm Systems	31	
ABNORMAL OPERATIONS	31	
Fault Recovery	32	
Fault Recovery Procedures	32	
MANNING LEVELS	33	
TRAINING AND QUALIFICATION	33	
FACILITY OPERATING CONTROLS AND LIMITS	34	
Facility Conditions and Limits of Safe Operation	34	
ACCIDENT AND INCIDENT ARRANGEMENTS	34	
RADIOLOGICAL HAZARD CONTROLS	35	
Health Physics Controls	35	
Control of Radiological Inventory	35	
Waste Management Arrangements	35	
CONCLUSION	35	
REFERENCES	38	
FIGURES		
Figure 4.1	Line Management Responsibilities within Shiplift Facility.	4
Figure 4.2	Safety Management Interfaces.	7
Figure 4.3	Nuclear Safety Responsibilities.	13
Figure 4.4	CMS Documentation Structure.	18

Safety Management



SAFETY MANAGEMENT SYSTEM

INTRODUCTION

- 4001 The following sections demonstrate that the Shiplift Facility is adequately controlled for any operational state, including normal and abnormal operations, maintenance periods (planned and unplanned), emergency operations and during modification work. The sections in this part are:
- Site Safety Management Policy and Structure. - Describes the Site Safety Management Policy and how it relates to the site management system.
 - Facility Safety Management Structure. - Describes the Facility Management Structure.
 - Safety Management Interface. – Describes the Functional Safety Management Structure for key personnel.
 - Nuclear Safety Management Structure. – Describes the Nuclear Safety Management Structure for key personnel and responsibilities of Safety Committees.
 - Quality Assurance Structure. – Describes the Quality Assurance arrangements, audits and documentation structure.
 - Administrative Controls of Activities. – Describes manpower requirements and training, together with the management arrangements and operating arrangements associated with each activity. Also described is the modification process, operating safety limits, safety mechanisms and bounding limits and conditions associated with the Facility.
 - Accident and Incident Arrangements. – Describes the arrangements in place for dealing with accident and incidents that could lead to a nuclear or radiological hazard.
 - Radiological Hazard Controls. – Describes administrative arrangements on matters relating to radiological safety.
- 4002 The Shiplift Facility Statement of Responsibilities (SOR) (Ref.¹) formalises the agreement between the Facility Operator (FO) and the parties who exercise responsibilities identified within this part of the Facility Safety Case (FSC). Management of the operation and activities within the Shiplift Facility is undertaken by the Shiplift Facility Manager - Dockmaster (DM(S)) under Reference².

SITE SAFETY MANAGEMENT POLICY AND STRUCTURE

- 4003 The responsibility for ensuring Nuclear Safety on the Nuclear Site and within the nominated Facilities/Utilities of Faslane lies with Naval Base Commander (NBC) as the Authorisee. NBC Safety Policy is promulgated within the Clyde Management System Manual (Ref.³) and the Policy is delegated through the normal management arrangements to the Facility Operators and through to the nominated Facility Managers. The nominated Facility Managers have right of direct access to the Authorisee over matters of Nuclear Safety.



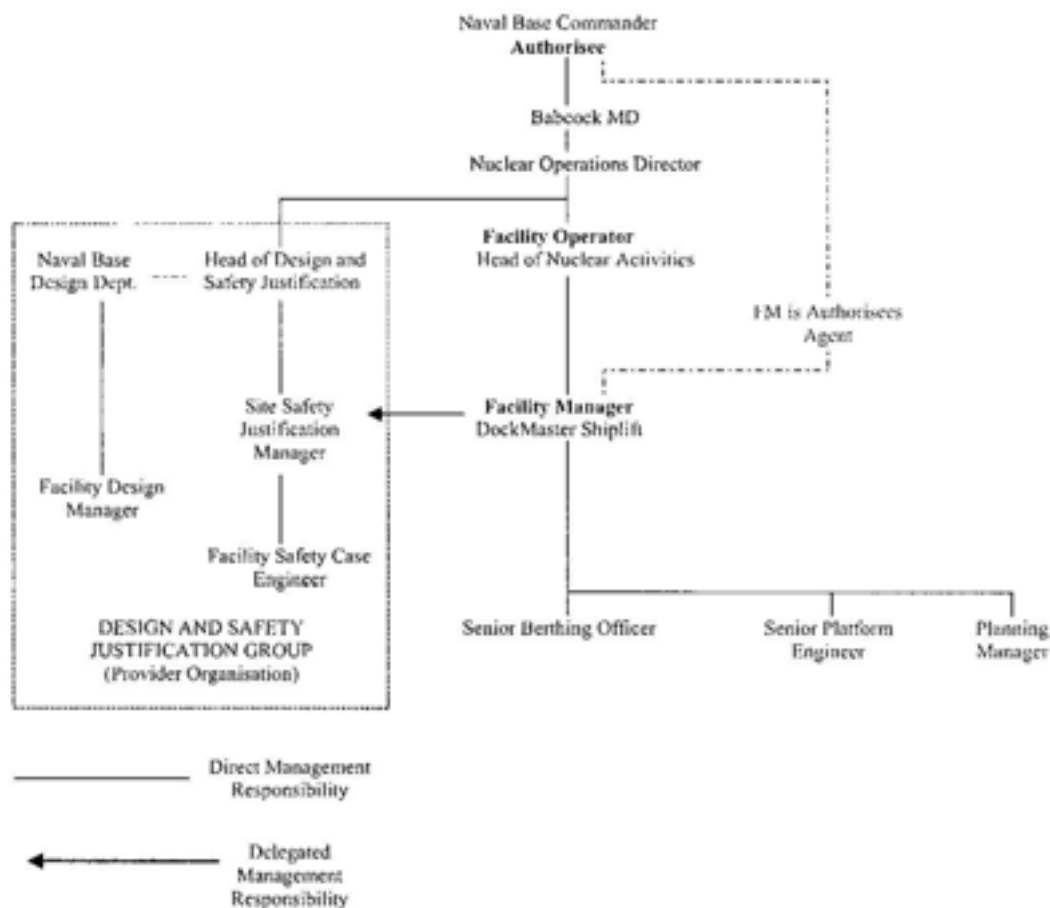
- 4004 The responsibility for ensuring Weapons Safety on the Nuclear Site and within the nominated Facilities at Faslane lies with Naval Base Commander (NBC) as the Weapons Authorisee. NBC Weapons Safety Policy is promulgated within the Clyde Management System Manual (Ref. 3) and the Policy is delegated through the normal management arrangements to the Facility Operators and through to the nominated Facility Managers.
- 4005 The organisation and responsibility for Nuclear Safety at HMNB Clyde, and a discussion of the Site Safety Policy are presented in the Site Safety Case (SSC) (Ref. 4). Terms of Reference (TOR) for the nuclear safety committees, authorisation groups and key posts that interface with the Shiplift FM are provided within the Clyde Management System.
- 4006 NBC (Clyde) now has a partnering arrangement with Babcock International Group, Marine Division. Babcock is contracted to manage the operations services and support to the Fleet on behalf of SFM. Babcock is accountable to SFM to provide an efficient and safe berthing /docking/unberthing service to submarines and surface ships at HM Naval Base (HMNB) Clyde in accordance with the declared operational priorities. However in order to maintain an 'intelligent customer' capability the Shiplift FM post is a MOD seconded post within the Babcock organisation. The Shiplift FM therefore has dual accountabilities:
- To the Managing Director Babcock through the Head of Nuclear Activities (HNA), as the Facility Operator, and the Nuclear Operations Director to manage the operation, maintenance and repair of the Shiplift Facility in a safe and efficient manner, compliant with the appropriate legislation and nuclear site prescription
 - To the Naval Base Commander (Clyde) (NBC(C)) to act as a Duly Authorised Person (DAP)/Authorisees Agent (AA) for control of any activity affecting safety of the Shiplift (and 12 Berth) operations.
- The Shiplift Facility Manager line management is through HNA. However the FM has right of direct access to the Authorisee over matters of nuclear safety.
- 4007 Maintenance of Nuclear Safety during Facility operations is achieved by auditable processes which demonstrate compliance with the Site Safety Justification and ultimately the Ministry of Defence (MOD) Safety Principles and Safety Criteria within JSP 518 (Ref. 5) and IRRs (Ref. 6).

- 4008 The processes which demonstrate compliance with the MoD Authorisation Conditions are identified in the Authorisee's Authorisation Conditions Compliance Statements (ACCS). The ACCS set out the arrangements that demonstrate compliance with the MoD Authorisation Conditions. The implementation of the ACCS is managed through the processes and procedures established within HMNB Clyde's Management System. This FSC takes due account of ACCS with particular reference to the following AC's in the context of the Shiplift Facility:
- Training (AC 10)
 - Emergency Arrangements (AC 11)
 - Duly Authorised and Suitably Qualified and Experiences Persons(AC 12)
 - Safety Documentation (AC 14)
 - Conditions and Limits of Safe Operation (AC 23)
 - Berthing and Movements (AC 23a)
 - Operating Instructions (AC 24)
 - Control and Supervision of Operations (AC 26)
 - Safety Mechanisms, Devices and Circuits (AC 27)
 - Examination, Maintenance, Inspection and Testing (AC 28)
 - Duty to Carry Out Tests, Inspections and Examinations (AC 29)
 - Control of Organisational Change (AC 36)
- 4009 The approach to the fulfilment of these AC's is consistent with the requirements of JSP 518.
- 4010 The processes which demonstrate compliance with the MoD Nuclear Weapons Authorisation Conditions are identified in the Authorisee's Nuclear Weapons Authorisation Conditions Compliance Statements (NW-ACCS) (Ref. ³). The implementation of the ACCS is managed through the processes and procedures established within HMNB Clyde's Management System. The review of the Shiplift FSC against the requirements of the NW-ACCS is an outstanding Forward Action.

FACILITY SAFETY MANAGEMENT STRUCTURE

4011 The Line Management Responsibilities within the Shiplift Facility are described below and shown in Figure 4.1. This reflects the Babcock partnering role referenced on Para. 4006. Further details of individual responsibilities are defined in appropriate departmental Terms of Reference.

Figure 4.1 – Line Management Responsibilities



Nuclear Operations Director (NOD)

4012 The Nuclear Operations Director (NOD) is responsible to the Managing Director Babcock (MDB) for the effective and safe execution of all nuclear operations within the Babcock Marine, Clyde responsibilities under Naval Base Authorisation. The Nuclear Operations Director has responsibility for Shiplift Facility operations via the Head of Nuclear Activities (HNA) as Facility Operator. He is accountable for the continuous improvement of the safety management arrangements including control of work.

**Head of Nuclear Activities (HNA)**

- 4013 HNA is Facility Operator for the Shiplift Facility and other berthing facilities at HMNB Clyde. He is responsible to Nuclear Operations Director for the provision of docking and jetty facilities and services, as defined in the Statement of Provision of Services to the Fleet (Ref.⁸) to authorised customers of HMNB Clyde.
- 4014 HNA is responsible to Nuclear Operations Director for ensuring nuclear compliance of all related maintenance and jetty activities. HNA is the 'owner' of the Shiplift Facility Safety Case and is therefore responsible for the upkeep and management of the FSC and ensuring that all hazards present in the Shiplift are managed such that the risk is tolerable and As Low As Reasonably Practicable (ALARP). HNA directs the FM to ensure that the Facility is managed in accordance with the requirements of the Nuclear Site Safety Justification (NSSJ).
- 4015 Responsibility for production and maintenance of the Shiplift FSC is delegated to the Head of Design and Safety Justification (HDSJ) through his Terms of Reference (Ref.⁹).
- 4016 HNA is responsible for the provision and management of DNSAG/NSAG and PAG chairmen and secretariat to produce and administer documentation for the prescription of nuclear safety implicated activities within the Facility and for Nuclear and Radiological Safety Implicated work on nuclear submarines respectively.

Facility Manager, Dockmaster Shiplift (FM)

- 4017 The Facility Manager (FM) is responsible to the Facility Operator for the operation and maintenance of the Shiplift Facility on a daily basis, in accordance with the requirements of the Design Safety Case and the NSSJ. FM is a Duly Appointed Person (DAP) in accordance with Process Map CCT-PM-001 (Ref.¹⁰). The role of Shiplift FM can only be undertaken by a DAP.
- 4018 FM reports to the Head of Nuclear Activities (HNA). However FM is also the Authorisees Agent for the Shiplift and 12 Berth Facility. As such the FM has direct access to the Authorisee on matters of nuclear safety.
- 4019 FM is the sponsor of the Shiplift Facility Safety Case (FSC) and has delegated responsibility from HNA to ensure that the Facility is operated within the limits of the Facility Safety Case, and that the risk is tolerable and ALARP.
- 4020 The FM chairs the Shiplift Facility Safety Case Working Group (SFSCWG) which is the formal interface between the FM and Design and Safety Justification Group on matters of nuclear safety.
- 4021 FM is responsible for liaison with the Commanding Officer of each vessel, the Procedure Authorisation Group (PAG) Chairman, the Strategic Weapons System Procedure Authorisation Group (SWSPAG), Nuclear Services Authorisation Group / Docking Nuclear Services Authorisation Group (NSAG / DNSAG) Chairmen and the Platform Group Manager (Clyde) (PGM(C)) for the management of the risk presented by the facility through normal and abnormal operations.
- 4022 The FM has overall responsibility for co-ordination of maintenance, defect repair and testing of all NSI equipment within the Facility. These responsibilities are delegated to appropriate authorities as detailed in the Shiplift SOR (Ref.1). The potential for hazards is minimised by the use of SQEP following authorised procedures.



- 4023 The Facility Manager is responsible for maintaining installed Facility equipment containing radioactive materials in accordance with the IRR99 (Ref.6). In discharging the relevant obligations he takes advice from the HSE recognised HMNB Clyde Base Radiological Protection Advisor (RPA), and the relevant maintenance duties are delegated to the appropriate authorities as detailed in the Shiplift SOR (Ref.1) who operate with support from the Base Health Physics Group.
- 4024 FM acts as Facility cell leader for the HMNB Clyde Nuclear Accident Response Organisation (NARO), in accordance with NARO Orders (Ref.¹¹).

Shiplift Planning Manager (SPM)

- 4025 The Shiplift Planning Manager (SPM) has responsibility for planning berthing and unberthing operations in accordance with the requirements of the Design Safety Case and the Nuclear Site Safety Justification (NSSJ). This excludes those operations that are the responsibility of Commanding Officers of HM ships, submarines, Royal Fleet Auxiliaries, visiting warships and other vessels as appropriate.
- 4026 The management of berthing and unberthing is achieved through the committees discussed within this FSC and in accordance with the requirements of NSA-POL-002 (Ref.¹²) and CMSPMs BO-PM-001, BO-PM-002 and BO-PM-003 (Ref.¹³).
- 4027 SPM is responsible for the co-ordination and control of all jetty crane activities within the Facility in accordance with CMSPM CRA-PM-001 (Ref.¹⁴).

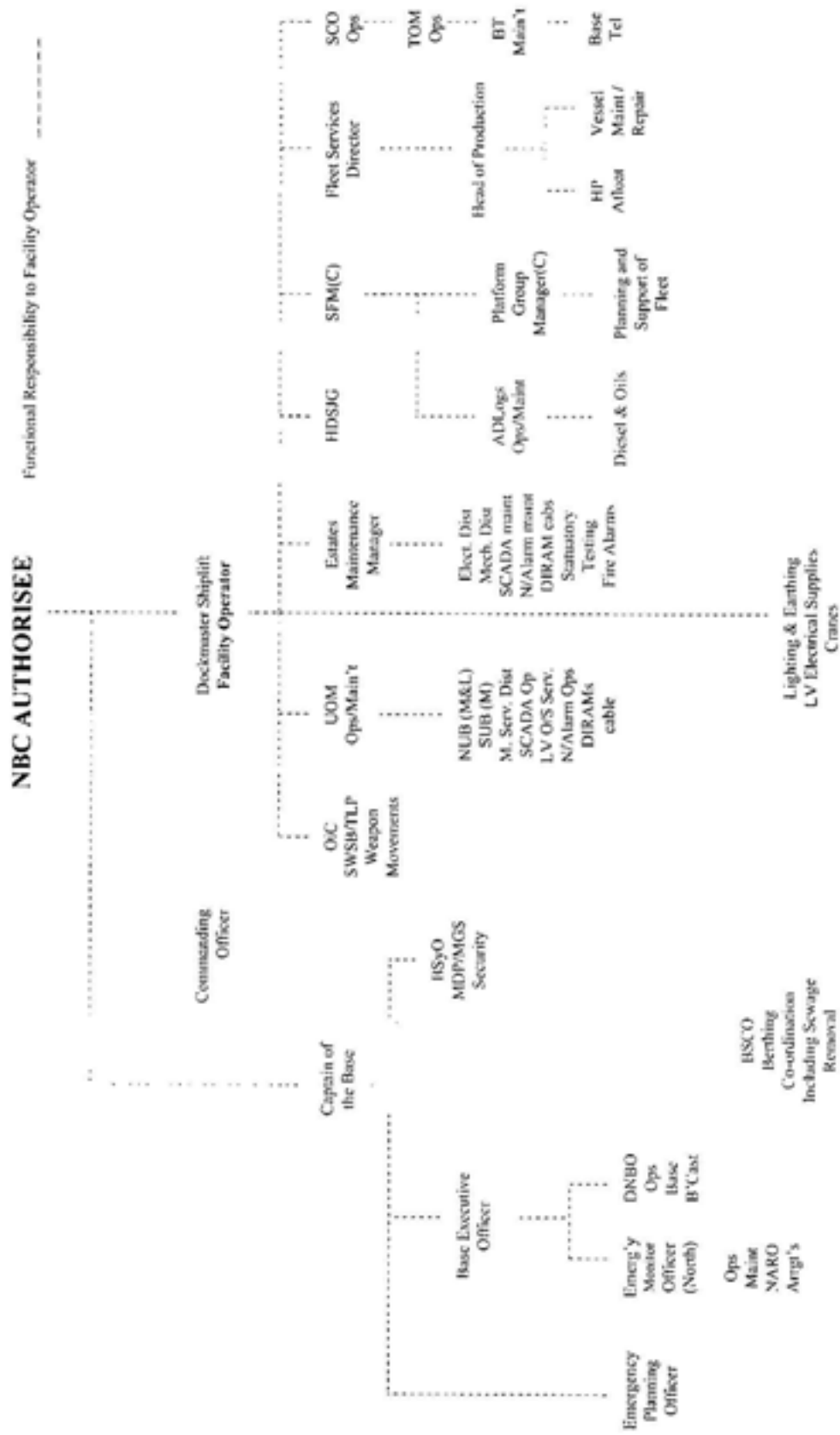
Senior Berthing Officer / Jetty Facility Controller

- 4028 The Senior Berthing Officer / Jetty Facility Controller are the FM authorised representatives for all berthing / docking / unberthing activities which are conducted in accordance with Facilities Standard Operating Procedures (SOPs).
- 4029 Duties of Berthing Officers / Jetty Facility Controllers include the planning of berthing arrangements and updating the Operational Programme taking into account the vessels requirements, Net Explosives Quantity (NEQ), availability of equipment, systems, services and plant and the production of the weekly Operational Plan. Berthing Planning and co-ordination is controlled through the Berthing Working Group (BWG) and Berthing Services Committee (BSC).
- 4030 In addition Berthing Officers / Jetty Facility Controllers shall provide Contractors with safety briefs with the requirements of the Safety Policy (Ref.¹⁵) and report defects in accordance with CMSPM NBDD-PM-004 (Ref.¹⁶).
- 4031 Berthing Officers / Jetty Facility Controllers duties and responsibilities are defined within their departmental Terms of Reference.

SAFETY MANAGEMENT INTERFACES

- 4032 The Functional Responsibilities within the Shiplift Facility are described below and shown in Figure 4.2 Further details of individual responsibilities are defined in appropriate departmental Terms of Reference.

Figure 4.2 – Safety Management Interfaces





Commanding Officer (CO)

- 4033 The Commanding Officer (CO) of a submarine berthed / docked within the Shiplift Facility retains the overall responsibility for the management of nuclear safety in the submarine, at all times, as defined in NRPA 1-1(Ref.¹⁷). His responsibilities with regard to the Authorisee and FO are defined in the protocol between NBC and CAPFASFLOT.
- 4034 The CO is functionally responsible to the FM for ensuring that all NSI work onboard the submarine is controlled by the Nuclear Logic. Proposed by the Ships Staff, the Nuclear Logic takes into account all the authorised limitation of the NSRP and the Facility. The FM is a signatory to the Nuclear Logic.
- 4035 The CO is responsible for ensuring that no Strategic Weapons related activities take place on board which fall outside the boundaries of the Site and Facility Safety Cases. Where an activity has an implication to the safety of the SWS the SWSPAG Chairman is to be informed.

Captain of the Base (COB)

- 4036 Captain of the Base (COB) is functionally responsible to NBC for the provision of all Nuclear Accident Response Organisation requirements to meet BR3019 (Ref.¹⁸) and JSP 518 (Ref. 5) and JSP 471 (Ref.¹⁹). This responsibility includes the provision of sufficient levels of suitably qualified and experienced NARO personnel, Nuclear Accident Headquarters, Automatic Countermeasures, Emergency Planning, Exercising, NARO Training, consultation, liaison and advice, risk and hazard assessment, accident management procedures and arrangements, emergency radiation monitoring, personnel protection. The arrangements are defined within the NARO Orders (Ref.11).
- 4037 COB is functionally responsible to NBC(C) for the provision of all security requirements to meet JSP 440 (Ref.²⁰). This responsibility includes the provision of sufficient levels of suitably qualified and experienced Security personnel, access control and emergency response support.

Base Executive Officer (BXO)

- 4038 Base Executive Officer (BXO) is functionally responsible to the COB for the provision of the Nuclear Accident Organisation (NARO).
- 4039 The BXO has functional authority over the Duty Naval Base Officer (DNBO) who operates the Base Broadcast System.

Emergency Planning Manager (EPM)

- 4040 The purpose of the Emergency Response Department is to advise NBC Clyde on all aspects of HMNB Clyde emergency response planning and policy. The Emergency Response Department is led by the Emergency Planning Manager (EPM) reporting directly to DSA.
- 4041 The EPM is responsible for the provision of all aspects of Emergency Response Planning and business continuity planning including the Nuclear Accident Response Organisation (NARO) via DSA to NBC.

- 4042 The EPM is responsible to DSA for the management, development and leadership of an efficient SQEP Integrated Emergency Response Management team. He is responsible to ensure that arrangements are in place for a timely, managed, controlled, coordinated and effective response to any accident or emergency.
- 4043 EPM is functionally responsible to the DSA for the provision of NARO Orders in accordance with the requirements of CMSPM NARO-PM-003 (Ref. ²¹). These arrangements ensure that the FO has Nuclear Safety and Nuclear Weapons Accident Orders and arrangements in place in the event of an accident or emergency. Additionally, EPM is responsible for the provision of all NARO Operating Instructions in accordance with CMSPM NARO-PM-003 (Ref. 21), to meet FM requirements.
- 4044 EPM is functionally responsible to the DSA for planning and management of all NARO exercises in accordance with CMSPM NARO-PM-002 (Ref.²²), and for management of the clearance of any identified shortcomings in the Nuclear Accident Response arrangements within the Facility.

Duty Naval Base Officer (DNBO)

- 4045 Duty Naval Base Officer (DNBO) is functionally responsible to the COB for the operation of the Base Broadcast System. The Base Broadcast system provides a means of alerting Base personnel in the event of a nuclear accident, fire security event or to allow broadcasts to all or selected areas of the Base. This system is fully described and justified in the Faslane Communication Systems DSR (Ref.²³).

Queen's Harbour Master (QHM)

- 4046 Queen's Harbour Master (QHM) is accountable to NBC for nuclear safety during vessel movements and Port operations. Ship movement and berthing at HMNB Clyde are fully described in the POMSR (Ref.²⁴). QHM is functionally responsible to the COB for the provision of SQEP for all berthing movements within the Facility.

Base Services Co-Ordination Officer (BSCO)

- 4047 Base Services Co-ordination Officer (BSCO) provides an interface between vessel and Base Facilities. BSCO is functionally responsible to QHM for the management of the Base Services Co-ordination Centre for the co-ordination and provision of base services to vessels within the Dockyard Ports (electrical supplies, mechanical services, craneage, transport, stores, victualling, technical, personnel and general advice and guidance).

Base Security Officer (BSyO)

- 4048 Base Security Officer (BSyO) is functionally responsible to COB for the provision of sufficient suitably qualified and experienced security personnel to ensure that all security requirements for the control and access to the Site and facility are maintained in accordance with JSP 440 (Ref.20) and the Clyde Management System.

Utilities Operations Manager (UOM)

- 4049 Utilities Operations Manager (UOM) is functionally responsible to the Shiplift FM for the operation of the electrical (including the SCADA control system) and mechanical services provided from the Northern Utilities Building (NUB).



- 4050 The management arrangements in place for the operation of the NUB and the provision of M&E supplies to the facilities is set out in the NUB OMSR (Ref. ²⁵).
- 4051 Maintenance of M&E systems is divided between the UOM and the M&E Maintenance Manager. The divisions of responsibility are set out in NUB Statement of Responsibilities (Ref. ²⁶).
- 4052 UOM is supported by the Senior Electrical Engineer and NUB Control Engineers.

M&E Maintenance Manager (M&E MM) Faslane

- 4053 M&E Maintenance Manager Faslane is functionally responsible to the FM for the maintenance of mechanical and electrical services and systems to the Facility as set out in Reference 26.
- 4054 The initiation of maintenance concessions is undertaken in accordance with Process Map NSAG-PM-003 (Ref. ²⁷).

Estates Maintenance Manager (EMM)

- 4055 Estates Maintenance Manager (EMM) is functionally responsible to the FM for the operation, maintenance and routine inspection of all civil and B&CE building fabric forming the Facility. He is also responsible for the maintenance of potable and freshwater supplies and drainage within the boundaries of the buildings.

Superintendent Fleet Maintenance (Clyde) (SFM(C))

- 4056 Superintendent Fleet Maintenance (Clyde) (SFM(C)) is accountable to NBC(C) for the management and delivery of all engineered support of all submarines or surface ships based at or visiting HMNB Clyde. Engineering support is provided through the partnering arrangement between HMNB Clyde and Babcock.
- 4057 SFM is functionally responsible to the FM for :
- The management of the oversight of strategic planning and engineering support tasking for submarines and surface ships based at HMNB Clyde and visiting vessels.
 - Logistics support, including all aspects of Stores Support, POL Support, MT Operations and Mechanical Handling Equipment (MHE) maintenance and management of Works and Services Department facilities.

Platform Group Manager (PGM)

- 4058 The Platform Group Manager (PGM) reports to the SFM. He is responsible for the policy, priority and control of the engineering support to fleet maintenance provided by Babcock under the partnering arrangement with Naval Base Clyde.
- 4059 The PGM is functionally responsible to the FM for the control and management of:
- The provision of repair, maintenance, support and test services to submarines and surface ships based at HMNB Clyde and visiting vessels.
 - The provision of Health Physics monitoring, surveying, nucleonic calibration and dosimetry management.



- The calibration of strategic and non-strategic test and measuring equipment via the Northern Calibration Facility (NCF).

Vessel Support Capability Manager (VSCM)

- 4060 The Vessel Support (VS) Programme exists to ensure that HMNB Clyde is ready at all times to manage and deliver all of the engineering support, update and maintenance services to meet the requirements of submarines and surface ships based at, visiting or undertaking operational sea training from HMNB(Clyde).
- 4061 The VS Hold Point Control Document (HPCD) and Logic is the methodology that Superintendent Fleet Maintenance (SFM) uses to ensure that each key phase or activity of the VS programme is conducted safely and within the constraints of the Site's nuclear and conventional safety management arrangements (Reference ²⁸).
- 4062 The Vessel Support Capability Manager (VSCM) is the manager of the process by which the HPC system is controlled. He is functionally responsible to the FM for the review and endorsement of deliverable schedules forming the permissioning route for all new operations or changes to scope of operations within the Facility. The Hold Point Control System is managed through the forum of the Vessel and Crew Support Operational Working Group (VCSOWG) chaired by the VSCM. The TORs of the VCSOWG are contained within Reference ²⁹.

Assistant Director Logistics (ADLogs)

- 4063 Head of Logistics is functionally responsible to the FM for the provision of transport and the operation and maintenance of the Diesel and Oil supplies to the Facility.

Staff Communications Officer (SCO)

- 4064 Staff Communications Officer (SCO) is functionally responsible to the FO as described within Faslane Communications DSR (Ref.23), and for all Base radio and telephone equipment including portable radio pool, pagers and mobile telephones.

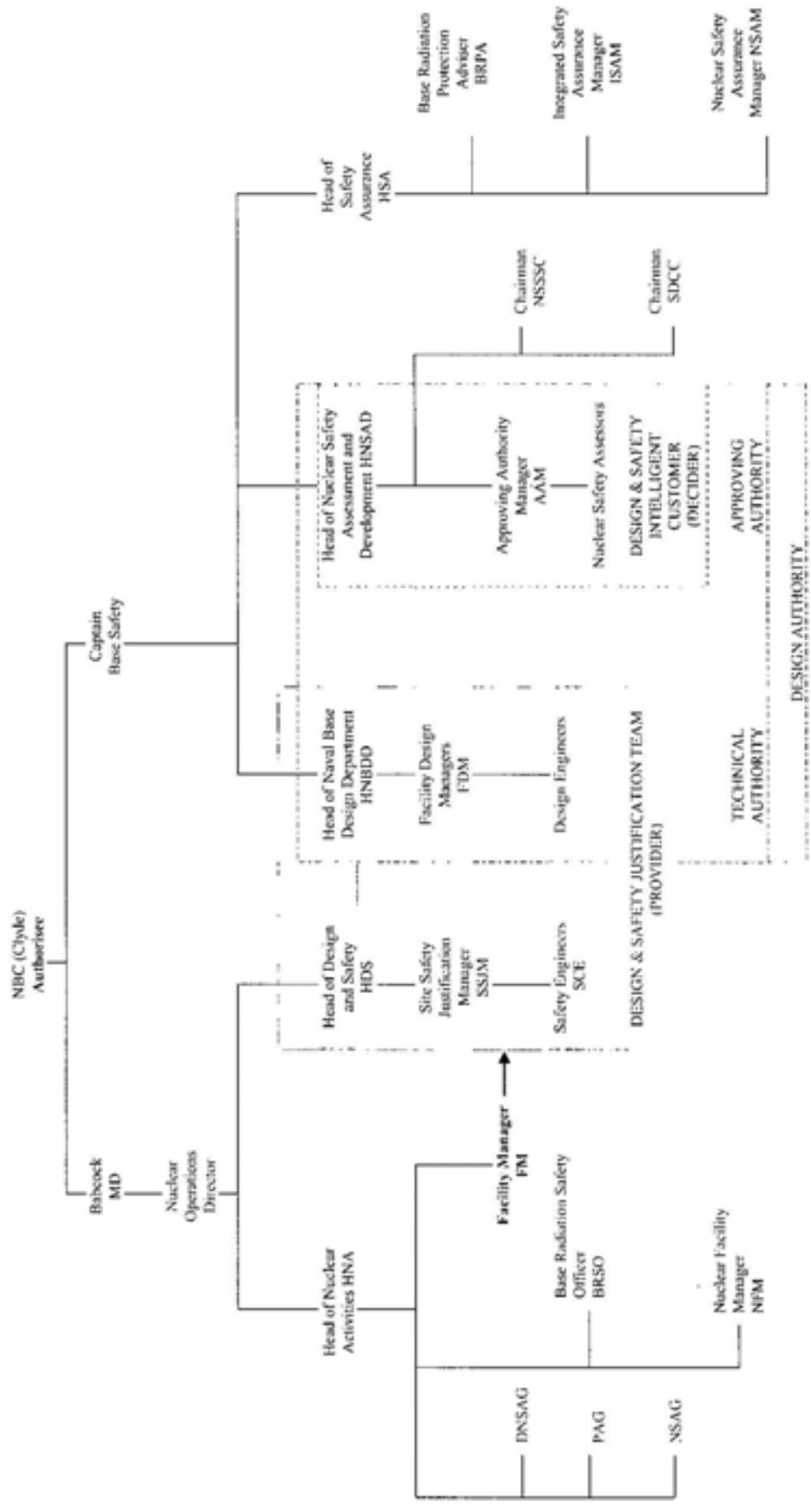
Telephone Operations Manager (TOM)

- 4065 Telephone Operations Manager (TOM) is functionally responsible to the FO for the provision and maintenance of Base telephones and the Meridian telephone system as described within the Faslane Communications DSR (Ref.23).

NUCLEAR SAFETY MANAGEMENT STRUCTURE

- 4066 The Nuclear Safety Responsibilities within HM Naval Base Clyde are defined within Part 5 of the Site Safety Case (Ref.4), which provides a brief description of posts with nuclear safety responsibilities. Nuclear safety responsibilities within the Shiplift Facility area are presented in Figure 4.3.

Figure 4.3 – Nuclear Safety Responsibilities





Maintenance Of The Nuclear Site Safety Justification

- 4067 The Shiplift Facility Operator (HNA) is the owner of the Facility Safety Cases. Responsibility for the implementation of any approved for use design and safety justifications and for operating within them is delegated to the FM.
- 4068 Functional responsibility for the maintenance of the design and safety justification elements of the Facility Safety Case on behalf of the FO/FM is now undertaken by the Decider/ Provider organisations at HMNB Clyde. The safety management organisation to support the maintenance of the FSC is shown in Fig 4.3.
- 4069 The Provider role is undertaken by the Head of Design and Safety Justification (HDSJ) supported by the Site Safety Justification Manager (SSJM) and the Head of Naval Base Design Department (HNBDD). Their organisations together make up the Design and Safety Justification Group (DSJG). The DSJG is responsible for producing and maintaining the extant suite of Nuclear Safety Justifications that makes up the Nuclear Site Safety Justification (NSSJ). In the context of the Shiplift Facility the SSJM is responsible for the maintenance and upkeep of the Facility Safety Case and its supporting Facility Safety Reports forming the facility safety justification. The NBDD is the Design Technical Authority and as such is responsible for the maintenance and upkeep of the Design Safety Reports (DSRs) and supporting Technical Reports (TRs) and of the provision of technical design advice.
- 4070 The Decider organisation is led by the Head of Nuclear Safety and Development (HNSAD) who reports to Captain of Base Safety (CBS). The CBS provides the nuclear safety assurance role to the Authorisee. The Nuclear Safety and Development team (NSADT) led by HNSAD has the following core functions:
- i. Approving Authority
 - ii. Independent Nuclear Design/Safety Justification assessment
 - iii. Specialist area for the development and production of the Nuclear Safety Strategy, Base Standards and NSSJ structure development including external interface arrangements

The NSADT provides the intelligent customer role in the context of the partnership between MOD Clyde and Babcock.

- 4071 The principal functions of the Approving Authority in the context of the FSC are:
- i Approval for use of design, design changes and operational safety justifications for the Facilities through life
 - ii Assessment and approval for use of safety documentation associated with the Facilities through life, ensuring that documentation of Operating Conditions and Limits for the facilities and demonstration of ALARP is fully covered within the Safety Cases
 - iii. Provide assurance to the Authorisee of the acceptability of Technical Authority proposed design solutions.

The role of the Approving Authority is therefore to ensure that the underlying safety analysis for a design proposal or change proposal for a structure, system or



component embodied in a Design Safety Case (DSC) has been adequately assessed and that it is safe to commission that component or continue to operate it, and any changes to conditions and limits required are fully defined.

- 4072 The Approving Authority role within the NSADT is held by the Approving Authority Manager (AAM). The Approving Authority and the NBDD as Design Technical Authority together make up the Design Authority (DA) within HMNB Clyde. The DA function is fundamental in achieving compliance with the Authorisation Conditions and ensuring that Clyde's nuclear facility design intent is maintained, managed and controlled.
- 4073 The independent nuclear design/ safety justification assessment is undertaken through the Chairman Nuclear Site Safety Sub-Committee (CNSSSC) and Chairman Safety Design Control Committee (CSDCC).

Head of Design and Safety Justification (HDSJ)

- 4074 The Head of Design and Safety Justification (HDSJ) leads on the Provider role for safety and design justification. The primary functions are:
- a. To ensure, on behalf of the Authorisee, that the nuclear site is operating within the authorised Nuclear Site Safety Justification (NSSJ) and is also compliant with the Authorisation Conditions
 - b. To be the Naval Base Commander's (NBC) senior representative within the partnered organisation for ensuring compliance across BM and MOD functions with nuclear and radiological safety implications
- 4075 The HDSJ is functionally responsible to the FO/FM to produce and maintain the extant suite of Nuclear Safety Justifications that makes up the NSSJ at HMNB Clyde.

Head of Naval Base Design Department (HNBDD)

- 4076 The Head of Naval Base Design Department (HNBDD) is responsible for the design elements of the safety case. The Naval Base Design Department (NBDD) is required to have the SQEP capability to adapt and modify the design elements of the safety case to cope with change of use, modifications and new design and material data.
- 4077 The NBDD functions as part of the Provider element in the production and maintenance of the NSSJ. It is the Design Technical Authority which together with the Approving Authority make up the Design Authority.
- 4078 NBDD has the responsibility for:
- a. Maintaining the design safety cases and management of design solutions
 - b. The certification of design and ensuring configuration of the Facility, the installations and the equipment is recorded and remains within the approved design intent and Design Safety Case
 - c. The maintenance of design intent through specification of the operating criteria and maintenance requirements
 - d. Provision of design advice to the FM and informing the FM of any changes to the Design Safety Case



- e. Assessment, trend analysis and reporting the impact of any defects against the design safety case and design intent.
- 4079 The HNBDD is supported by Facility Design Managers (FDMs) along with a range of SQEP design staff that are responsible to the FO in accordance with the Shiplift SOR (Ref.1). Facility Design Managers (FDMs) within the HNBDD organisation are appointed as DAPs.

Site Safety Justification Manager (SSJM)

- 4080 SSJM is responsible to HDSJ for the review, management and maintenance of the Nuclear Site Safety Justification (NSSJ).
- 4081 SSJM is functionally responsible to the Shiplift Facility Operator/Manager for the maintenance of the Facility Safety Case to ensure that all claimed operations are Justified and Authorised in accordance with the extant Corporate Management System.
- 4082 NSSJ documentation is produced, controlled and administered in accordance with the Process Map (Ref. ³⁰).

Head of Nuclear Safety and Development (HNSAD)

- 4083 HNSAD has an overall responsibility to the Authorisee through Captain Base Safety (CBS) to establish the strategic Nuclear Safety aims for the Site and to facilitate and manage the programme for the effective delivery of the Strategy to achieve those aims.
- 4084 HNSAD leads the Decider element for nuclear safety and design. He acts as MoD intelligent customer for Nuclear Design/Safety Justifications and head of the Approving Authority (AA) for the Clyde Design Authority (DA).
- 4085 HNSAD has responsibility for the Nuclear Site Safety Sub-Committee (NSSSC) and Safety Design Control Committee (SDCC) chairmen and supporting staff.

Approval Authority Manager (AAM)

- 4086 AAM is responsible to the HNSAD. He is the DAP for approval for use of design, design changes and operational safety justifications for the Facilities through life. He acts as intelligent customer with respect to design and safety justifications.
- 4087 Principal responsibilities of the AAM are:
- a. Management of the Approving Authority element of the Clyde Design Authority
 - b. Management of the interface between the Approving Authority and the Design Technical Authority
 - c. Review and approval of design submissions prior to submission to the independent review committees
 - d. Individual responsibility for endorsement of Category D Design/operational safety justifications



- e. Management of the Clyde DA IPR/ITA process
- f. Providing advice on Nuclear Safety Justifications to NBDD, Facility Managers or any other relevant parties
- g. Ownership and development of the associated Clyde DA processes.

SAFETY COMMITTEES AND GROUPS

- 4088 Details of the Terms of Reference (TOR's) of Safety Committees within HMNB Clyde are defined within the Site Safety Case (SSC) (Ref.4) and the Clyde Management System.
- 4089 The FO/FM attend or are represented at the committees addressing issues or business relating to his Facility. The FO/FM also attend or are represented at vessel support co-ordination meetings and at Weekly Briefs to review activities and to identify any potential risks to facility activities and operations.
- 4090 The Shiplift FO/FM is able to monitor and direct the overall progress towards the achievement of a fully SPSC compliant Facility Safety Case through the following committee:
- Shiplift Facility Safety Case Working Group
- 4091 Independent assessment of the adequacy of design and safety justifications for systems or activities related to the Facility is undertaken through the following committees:
- Nuclear Site Safety Sub-Committee (NSSSC)
 - Nuclear Weapons Site Safety Sub-Committee (NWSSSC)
 - Safety Design Control Committee (SDCC)
 - Clyde Nuclear Safety Committee (CNSC).
- 4092 The control of berthing allocation and activities conducted within the Facility are in accordance with the Clyde Management System and discharged through the following committees:
- Berthing and Services Committee (BSC)
 - Berthing and Services Test Group (BSTG)
 - Procedure Authorisation Group (PAG)
 - Nuclear Services Authorisation Group / Docking Nuclear Services Authorisation Group (NSAG / DNSAG)
 - Strategic Weapons Systems Procedure Authorisation Group (SWSPAG)
- 4093 The development of the NSSJ and the prioritisation of key safety issues is directed through the following committee:
- Nuclear Justification Appraisal Group (NJAG)



4094 The maintenance and development of the Vessel Support (VS) Programme to ensure that HMNB Clyde is ready at all times to manage and deliver all of the engineering support, update and maintenance services that meet the agreed requirements of submarines and surface ships is through the following committee:

- Vessel and Crew Support Operations Working Group (V&CSOWG).

Shiplift Facility Safety Case Working Group (SFSCWG)

4095 The Shiplift Facilities Safety Case Working Group (SFSCWG), chaired by the FM, provides a forum through which the Shiplift FM can monitor and direct the overall progress towards the achievement of a fully SPSC compliant Facility Safety Case. The Terms of reference for the SFSCWG are contained in Reference ³¹

4096 The main aims of the SFSCWG are:

- a. To contribute towards the development of the strategy for the achievement of a fully SPSC compliant Shiplift Facility Safety Case
- b. To define and prioritise the related high level safety significant issues and progress the closure of Forward Actions (FAs)
- c. To establish Technical sub-groups as and when required, for resolving specific issues
- d. To monitor the integration of the Shiplift Facility Safety Case into the Nuclear Site Safety Justification
- e. To monitor the progress of the Authorised Site Probabilistic Risk Assessment (PRA) development and the development of the site risk management and ALARP strategy and how it relates to the Shiplift Facility.
- f. To review the Facility Hazard Log as required.
- g. To monitor the development of the Design Safety Case (DSC), the Design Safety Reports (DSRs) and their associated SJPs and PMPs.

Nuclear Site Safety Sub-Committee (NSSSC)

4097 The Faslane NSSSC is a sub-committee of the Clyde Nuclear Safety Committee (CNSC). The primary purpose is to assess any changes with implications on the nuclear site safety justification, ensuring that the consequences of change to the justification are thoroughly considered and actions arising properly controlled. The TOR for the Faslane NSSSC are contained in Reference ³².

4098 The NSSSC sits on a regular basis to review and assess and categorise new safety reports and amendments to existing safety reports which comprise the HMNB Clyde NSSJ and advise the document sponsor and the CNSC on their adequacy. Documentation is processed through the NSSSC in accordance with Process Map Reference ³³

4099 The FM or a nominated SQEP representative is a full member of the NSSSC. Other full members are representatives of the NRP Design Authority (Rolls-Royce), the Clyde Design Authority and MOD Intelligent Customer (NSADT)



Nuclear Weapons Site Safety Sub-Committee

- 4100 The Faslane NWSSSC is a sub-committee of the Clyde Nuclear Safety Committee (CNSC). Its primary purpose is to review, assess, categorise and classify new and amended nuclear weapons related safety reports for their adequacy and demonstration that risk is both tolerable and ALARP. The TOR for the NWSSSC are contained within Reference ³⁴.
- 4101 Documentation processed through the NWSSSC is accordance with Process Map Reference ³⁵.
- 4102 The FO or his nominated representative is a full member of the NWSSSC.

Safety Design Control Committee (SDCC)

- 4103 The Safety Design Control Committee (SDCC) is a sub-committee of the CNSC. The primary purpose is to review, assess, categorise & classify all design substantiation and changes to design safety cases, concessions and technical substantiation to ensure that these are controlled through formal procedures and that the Nuclear Propulsion and Nuclear Weapons safety case is not undermined by changes to the design intent. The SDCC will Note, Endorse or Reject the design submissions as appropriate. The SDCC ensures that the consequences of these proposals are thoroughly considered and that implementation meets design intent. The TOR for the Faslane SDCC are contained in Reference ³⁶.
- 4104 The SDCC review, authorisation and approval of safety documentation is carried out in accordance with Process Maps NSAD-PM-001 (Ref. ³⁷) and NSAD-PM-002 (Ref. ³⁸).
- 4105 The FM or nominated SQEP representative is a full member of the SDCC. Other full members are representatives of the NRP Design Authority (Rolls-Royce) and the Clyde Design Authority (Approving Authority).

Clyde Nuclear Safety Committee (CNSC)

- 4106 The purpose of the CNSC is to provide a forum for the discussion of nuclear and radiological issues relevant to the HMNB Clyde, with the objective of providing the Authorisee, through Captain of Base Safety, with considered advice and an independent view on all matters relating to NRP, radiological and nuclear weapons safety. The TOR for the CNSC are contained within Reference ³⁹.
- 4107 Members of the CNSC are appointed/selected from all Departments within the Base which have responsibility for the maintenance of Nuclear Safety. At least two members, experienced in nuclear and radiological safety issues, are independent of the Authorisee's operations, MoD or Base contractors, to bring a wider perspective to the Committee's deliberations.
- 4108 The Chairmen of the NSSSC and NWSSSC are full members of the CNSC.
- 4109 Nuclear safety justifications and design submissions classified B or above are submitted to the CNSC for review and endorsement in accordance with Base Standard 4 (Ref. ⁴⁰).

**Berthing and Services Committee (BSC)**

4110 The primary purpose of the Berthing and Services Committee (BSC) is to co-ordinate nuclear support services with requirements for berth occupancy and explosives handling for all ships and submarines at X and Z berths at HMNB Clyde in accordance with CMS documentation. The BSC is accountable to HNA as the FO for the control of nuclear implicated work, allocation of berths and provision of essential services, ensuring that all matters concerning nuclear safety are addressed, and that the necessary departments are informed of any restrictions. The BSC is chaired by Jetties Facilities Manager (JFM). The TOR for the BSC are contained within Reference ⁴¹.

Berthing and Services Test Group (BSTG)

4111 The programme of nuclear activities, coordinated by the BSC, is reviewed on a day to day basis by the Berthing and Services Test Group (BSTG) to ensure that due consideration is given to the on-going requirements of Nuclear Safety. The BSTG is chaired by the PAG chairman and is responsible to the BSC for ensuring that the stated intentions of both maintenance and berthing programmes can be safely met in accordance with CMSPMs (Ref.13). The TOR for the BSTG are contained within Reference ⁴².

Procedure Authorisation Group (PAG)

4112 The primary purpose of the Procedure Authorisation Group (PAG) is to authorise, monitor and control all activities associated with Nuclear Steam Reactor Plant (NRP) operating within HMNB Clyde. The PAG is responsible to the FO for ensuring that the requirements of the Facility Safety Case are met at all times.

4113 The PAG is responsible for authorising nuclear work onboard the submarine and for control of plant states and for ensuring NSRP work carried out at the facility is in accordance with the scope. As a consequence, the responsibility for authorising activities which may impact in that work, e.g. access within prescribed distance and / or moves of submarines, also fall to the PAG Chairman in accordance with the PAG Policy Document (Ref. ⁴³).

4114 The identification and sequence of all nuclear implicated work is contained within the Nuclear Logic Diagram. The Nuclear Logic is the executive authority for all nuclear procedures. The Shiplift Facility Manager or his representative is a signatory on all Nuclear Logics. This signature provides Facility Operator endorsement for the conduct of the activities within the Shiplift Facility when carried out in accordance with the approved Nuclear Logic. The TOR for the PAG are contained in Reference ⁴⁴.

Nuclear Services Authorisation Group / Docking Nuclear Services Authorisation Group (NSAG / DNSAG)

4115 The Nuclear Services Authorisation Group / Docking Nuclear Services Authorisation Group (NSAG / DNSAG) is responsible to the FO/FM for reviewing and approving procedures for operation, maintenance, modification and repair, including subsequent testing and proving of services, equipment and structures, which are Nuclear Safety Implicated in accordance with the Clyde Management System. The TORs for the NSAG and DNSAG are contained in References ⁴⁵ and ⁴⁶ respectively.