#### **JOB DESCRIPTION**

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| JOB IDENTIFICATION |
|  Job Title: **TECHNICIAN MECHANICAL**Responsible to (insert job title): **Supervisor**Department(s): **Estates Department**Directorate: **Information & Clinical Support Services**Operating Division: **NHS Ayrshire & Arran** Last Update (insert date): **May 2005**  |
| 2. JOB PURPOSE |
| To assist in the provision of a comprehensive multi-site installation, maintenance and Planned Preventative Maintenance (PPM) service and to maximise the efficiency and quality of the mechanical, electrical and environmental services of NHS Ayrshire & Arran using resources available. |
| **3. DIMENSIONS** |
| The Jobholder is one of a team of Technicians Mechanical employed by Estates Department to provide a service across all sites within the NHS Ayrshire & Arran.The Jobholder may be based at any one of the hospital sites within NHS Ayrshire & Arran, which are:-* Ayr Hospital, *(including Ailsa, Biggart Hospital and Heathfield Clinic*)
* Ayrshire Central
* Crosshouse,
* The Jobholder is directly responsible to the Supervisor, Estate Officer and Senior Estate Officer on the site in which he is based
* The Jobholder may occasionally be required to supervise apprentice duties.
* Plan, organise complex activities including installations and maintenance of engineering plan and equipment in co-ordinating with suppliers, contractors and hospital staff
* There are no budgetary responsibilities although the jobholder will impact on the departmental budget.
* The Department operates 24 hours per day, seven days per week and the Jobholder normally works between the hours of 8.00am to 4.30pm Monday to Thursday and to 1.00pm Friday.
* The Jobholder also participates in the Department’s On-Call rota, responsible for general maintenance and breakdown cover for relevant sites out-of-hours
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| **4. ORGANISATIONAL CHART**

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|  | HEAD OF ESTATES |  |
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| ESTATE MANAGERNORTH |  | ESTATE MANAGERSOUTH |  | ESTATE MANAGER EAST |
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| ESTATE OFFICERS |  | ESTATE OFFICERS |  | ESTATE OFFICERS |
|  |  |  |  |  |  |  |  |
| SUPERVISOR |  | SUPERVISOR |  | SUPERVISOR |
|  |  |  |  |  |  |  |  |
| TRADESMEN |  | TRADESMEN |  | TRADESMEN |

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| 5. ROLE OF DEPARTMENT |
| To facilitate the delivery of uninterrupted quality healthcare by providing 24 hour 7 day safe and effective upkeep and development of NHS Ayrshire & Arran’s land, properties and assetsTo deliver, maintain and develop a high quality, cost effective, responsive and efficient engineering and building service to all staff patients and departments within an agreed budget, in line with the policies, procedures and requirements of NHS Ayrshire & ArranTo provide professional and managerial support for the Facilities Department in matters relating to engineering and building development To contribute to the strategic direction of NHS Ayrshire & Arran |
| 6. KEY RESULT AREAS |
| * Ascertain desired action using acquired skills and abilities to expedite best solution for desired outcome and assist putting solutions into practice
* Install and commission machinery using installation manuals to ensure safety and in compliance with health and safety, and statuary regulations that benefits and provides a safe environment for the user and patient care.
* Complete Planned Preventative Maintenance in accordance with organisational and manufacturers recommendations, using appropriate tools, test equipment, and recording details of work carried out within set time-scales, to prevent breakdown and maintain optimal operational ability.
* Respond to breakdowns, evaluate situation and take corrective action to ensure minimal disruption and damage.
* Test, monitor and overhaul back up systems such as emergency electricity generators to ensure a continuality of service for patient care areas and all other departments
* Participate in lift rescue, maintaining manufacturer’s safety standards to ensure quick and safe release of trapped individuals.
* Survey plant and equipment for, safety, soundness and establish maintenance to be undertaken.
* Be aware of Health and Safety requirements when undertaking all work to maintain a safe environment for staff and patients
* Verify integrity and monitor medical gas, heating and ventilation systems utilising calibrated test equipment to maintain a safe working environment within hospital sites.
* Fault finding and analysis in complex controls and monitoring equipment using fine tools and calibrated measuring equipment in a safe manner in order to keep hospital running efficiently.
* Fault finding and analysis within complex systems/equipment in a safe, effective manner using fine tools and calibrated measuring equipment as required in order to minimise future breakdowns and keep hospital running efficiently
* Work as a highly skilled Competent person to maintain Medical Gases to Health Technical Memorandum SHTM 02 to ensure a safe supply for patient use
* In depth effective use of BMS (Building Management System) computer to set parameters and record data on a wide range of building services to provide correct environmental conditions throughout the hospital and provide an early warning of services (medical gases, heating, water, power etc.) failing.
* Investigate, research and plan upgrades and developments to meet changing requirements of health care**.**
* In depth testing and repair of sterilization equipment and washer disinfectors
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| 7a. EQUIPMENT AND MACHINERY |
| * Calibrated medical gas equipment to test flow rates
* Calibrated gas analyser to record boiler efficiency
* Siemens Building Management system to monitor, theatre environment, essential plant, electrical distribution, heating systems and temperatures for legionella prevention
* Calibrated test equipment to determine flow rates on air handling units
* Hand tools and portable electric tools, pipe threader,
* Welding equipment: gas, electric arc and mig.
* Precision Electric workshop machinery;- Lathe, universal mill and pillar drill
* Lifting gear, chain blocks, slings and runway beams
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| 7b. SYSTEMS |
| * Records of the performance of essential item of plant and equipment
* Daily time sheets for forwarding to Supervisor
* On-call and overtime sheets for forwarding to Supervisor
* Weekly boiler efficiency checks for internal audit purposes and monitor efficiency
* Daily check on theatre medical gas system, to ensure pressures are maintained.
* Safety cabinets and ventilation air flow calibration sheets
* Permit to work system for medical gases, electrical distribution and hot work
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| 8. ASSIGNMENT AND REVIEW OF WORK | ***Frequency*** | ***Weight*** |
| * Duties are allocated by Supervisor/Estate Officers, although the Jobholder operates autonomously within designated parameters and Health & Safety Regulations.
* Breakdowns are a major aspect of the work, some require major in depth ability to fault find and carry out repairs to put the equipment, facility back into service.
* Planned Preventative Maintenance work is allocated weekly and is then prioritised by the Jobholder, liasing with staff in relevant departments to establish accessibility, taking into the account the needs of the service.
* Much of the Jobholder’s work is demand-driven and therefore unpredictable and may consist of repair, redesign and installation as necessary to undertake a particular task.
* Measure up jobs for new installations and alterations; check plans/drawing to work out best route to run in supplies and establish materials required to enable the job to be carried out quickly with minimum disruption
* Keep records of weekly boiler efficiency checks for internal audit purposes and management of boiler performance.
* Daily check on theatre medical gas system to ensure pressures are maintained
* Identify problems with medical gas system within theatre area, liase with nurse in charge to ascertain problem area, track fault using specialised equipment and protective clothing in line with Health & Safety regulations. Determine severity of fault and appropriate action to be taken, advise medical staff if shut down is required and agree safest way to proceed. Make recommendation to authorised person on suitable solution.
* Participate in lift rescue, maintaining manufacturers safety standard to ensure quick and safe release of trapped individuals
* The majority of the jobholder’s work is unsupervised.
* Work in wards theatres and clinics areas often alongside patients to repair and maintain medical gases, operating tables, beds, heating systems etc.
* Undertake repairs and maintain equipment used by patients such medical gases and body fluid suction machines
* Participate in departmental On-call service to provide 24 hour emergency cover across all hospital/clinic sites in East sector.
 | ***All duties, daily,*** ***ongoing*** | *All equipment in accordance with H&S Regulations**Weight: As is comfortable in accordance with Moving & Handling Risk Assessments* *Max Wt 25kg without use of lifting equipment* |
| **9. DECISIONS AND JUDGEMENTS** |
| * Able to use own initiative and undertake a wide range of duties without referral back to supervisor.
* Ability to repair major and minor faults in a safe manner whilst keeping hospital running efficiently i.e. on troubleshooting fault, the jobholder can decide to close down certain areas of the site until repair has been completed, for health and safety reasons.
* Identify problem with medical gas system within theatre area and take appropriate action.
* Ascertain how many persons are trapped in lift and reassure, ask if medical assistance is

required, liase with other members of test and proceed with rescue in accordancewith manufactures guide lines* Ability to repair faults in a safe manner whilst keeping hospital running efficiently.
* Prioritise work as they occur on a daily basis.
* Measure up jobs for new installations and alterations establishing the best route to run

pipe work and locate equipment* Measure operating conditions of engineering equipment, eg:- medical gases, heating,

ventilation system, calculate performance, analyses results and adjustment to restore desired conditions* Control stock of materials used to undertake work and request replacements as required
* During emergency call outs the post holder has to initiate a plan of action and has

freedom to undertake what ever work is required in complete autonomy to restore the failed equipment or service* Ensure all plans, information and instructions are accurately interpreted for the efficient and

safe operation of equipment and plant. Update plans when required* Plan new installations and alterations i.e. best route to run supplies. And oversee job from start

till finish |
| 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB |
| * The jobholder requires the ability to diagnose and repair faults in complex plant and equipment
* Deal with new situations as they arise, disseminating newly acquired information to others.
* Requires to understand the complete working of the plant and equipment in the hospital.
* During On-Call Rota out-of-hours, the Jobholder must decide action required to maintain safe and continued operation of services.
* Dealing with irate and unreasonable personnel regarding accessibility and work requirements
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| **11. COMMUNICATIONS AND RELATIONSHIPS** |
| The Jobholder is a member of a team and, in order to ensure a high level of satisfaction and seamless, efficient services are maintained, is required to develop and maintain effective communication links and working relationships to provide technical and safety issues to the following groups:-**Internal*** Colleagues and management within Estates Department, including the other trade groups
* Nursing/Medical staff within wards/departments
* Management/staff within all other departments

**External*** Suppliers of Equipment, materials or spare parts
* Specialist contractors
* Demonstrate own activities to less experienced and new employees, and provide training, guidance and advice to apprentices for the continuation of the service.
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| **12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| **PHYSICAL EFFORT/SKILLS:*** Good eye hand co-ordination for precision and intricate work
* Working with heavy equipment
* Standing, bending, walking for long periods
* Heavy Lifting and Handling
* Working from ladders and scaffolding up to 4 meters above floor level

**MENTAL EFFORT/SKILLS:*** Mental arithmetic – for calculate air flow readings
* Reading of plans – for installation of equipment, valves, pipe work and connections.
* Computer skills
* Ability to read schematic drawings and interpret information
* Reading and interpreting manuals and instructions, comment on non compliance and suggest modifications to enable documents to be kept up to date
* Concentration for periods of an hour with frequent interruptions approximately every hour by bleep or personal visit.

**ENVIRONMENTAL*** Coming into contact with hazardous materials and body fluids
* Working in confined spaces and hazardous areas
* Working in temperatures below freezing on outside plant and equipment and as high as 30 deg C in boiler houses and plant rooms.
* Coming into contact with hazardous materials and body fluids

**EMOTIONAL EFFORT/SKILLS:*** Occasional direct contact with patients, some of who may be physically or emotionally distressed or aggressive.
* Dealing with difficult staff with regards to accessibility and work requirements.
* Frequently working in wards with very ill and distressed patients.
 | ***Frequency******All daily ongoing******All daily ongoing******All daily ongoing*** | *Weight****All equipment in accordance with H&S Regulations****Weight: As is comfortable in accordance with Moving & Handling Risk Assessments**Max Wt 25kg without use of lifting equipment* |
| 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB |
| The jobholder is required to be proficient in, have knowledge of, or undertake training in the following:-* Recognised apprenticeship
* Up to Higher National Certificate or equivalent with appropriate previous experience.
* Use of fine and intricate tools
* Trained with refreshers for competent persons to SHTM 02 Medical Gas pipe systems requirements
* COSHH (*Control of Substances Hazardous to Health)*
* City and Guilds Qualification in HTM 2010 Large porous load sterilizers
* City and Guilds Qualification in HTM 2030 Testing of Endoscope washer disinfectors
* Certified specialist training in Visonik, Desigo and Apogee Building Management System computerised control system
* Precision machining and working to very fine tolerances.
* Steam Boiler plant, pressure vessel and other statutory devises
* Mathematical calculations in respect of mechanical systems and processes
* Reading of plans
* Confined Spaces training
* Fire Safety/Training
* Health & Safety Regulations/training
* Able to use own initiative
* Interpersonal skills
* Problem solving
* Lifting and Handling, use of lifting equipment
* SHE
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