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Electrical Resilience Survey 2021

For Welsh Government

February 2022

Resilience Survey 2021

Health Board	
Date	
Completed By	

Contents

1.0 Completion Notes

In order to establish the degree to which the NHS organisations electrical infrastructure are resilient/have sufficient capacity and prepared for emergencies. The following questionnaire has been compiled. The questions within this return will identify current levels of electrical capacity and resilience to the disruption of key estates and facilities services associated with NHS Health Boards and Trusts in Wales. The questionnaire also questions relating to low carbon initiatives and NHS Wales decarbonisation strategy.

It is important that all questions are answered with valid information, supplemented wherever practical with comments adjacent to each question in order to add value to the responses by way of clarification or expansion of details.

1.1 General Notes

a. Data should be entered for all major sites where service continuity is significant to the organisations services (see the table in section 1.2 for clarification).
b. Data entered for each service should assume that all other services are operating satisfactorily.
c. All data entry boxes should be checked appropriate to the provision of service.
d. A comments box is available on the relevant sub-question to allow users to add helpful supplementary notes to explain the rationale underpinning the response.
e. Since it is impractical to cover all variants in the services listed below it will be necessary for Estates and Facilities Managers to utilise their expert local knowledge and judgement to interpret and respond to the questions in an appropriate way. The purpose of the return is to establish the extent of resilience to the loss of key estates and facilities services and whether organisations have adequate plans and procedures in place to deal with such events. In cases of doubt, choose the worst case condition and add any relevant comments in the adjoining comments boxes.
f. The term "adequate" and "regularly tested" shall mean that which is sufficient for the relevant service to continue to support an acceptable level of healthcare provision within the organisation's emergency procedures whilst normal supplies are disrupted.
g. The name of the relevant Hospital site shall be entered in the site box provided and its category as described in the table below.

1.2 Major Sites

An individual return is required for all sites that "significantly" contribute to the organisation's ability to deliver its services are outlined in the categories below.

Description	Full Description
General Acute Hospital	Sites that are hospitals providing acute services. Such hospitals may provide non-acute or single speciality services from up to 20% of the gross internal floor area of the whole site without altering the classification.
Multi-service Hospital	Sites that are hospitals providing multi-service functions, including single speciality, acute services, mental health and community services. Such sites must provide at least two differing service functions each with gross internal floor area representing more than 20% of the total GIA for the whole site.
Short Term Non-Acute Hospital	Sites that are hospitals providing short term (less than 6 months), non-acute services including respite care, convalescence and rehabilitation.
Long Stay Hospital	Sites that are hospitals where the service delivered is mainly for long stay patients i.e. where patient stays are expected to be more than six months e.g. hospitals for the long-stay care of mentally ill, elderly or patients with learning difficulties.
Specialist Hospital	Sites that predominantly undertake a specialist function, inclusive of Radiotherapy, Dental Hospital, Maternity Hospital, Children's Hospital, and Secure Unit for mental health.
Community Hospital	Sites that are residential homes, community resources centres or cottage hospitals including inpatient care for older people, rehabilitation and maternity services, outpatient clinics and day care, as well as minor injury and illness units. Community hospital services are characterised by allowing direct access to GPs and other local community staff.
Support Facilities	Sites that provide the main administrative or other support services such as Trust HQ, ambulance operations centres and major stations.

Please Note: Individual returns are the responsibility of the host organisation where areas are leased out.

2.0 Primary Site Utilities

2. 1 Main Electrical Supplies		Data Definitions	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Comments
Current Incoming supply and infrastructure.	Maximum Demand	What is the current agreed maximum demand on the site?								
	Incoming infrastructure maximum capacity	What is the maximum supply capacity the DNO can supply to the site with minimum upgrade costs?								
	Energy supplier	Who is the current electricity energy supplier for the site?								
	Future works with 5 years.	Based on known building extensions and upgrades for the next 5 years, is the current supply capacity likely to be sufficient to meet foreseeable building needs? (a separate question relating to LCI technologies and associated electrical capacity is below).								
		At the current time, how much additional capacity is available from the DNO, (with limited DNO re-enforcement costs i.e., less than £10k)?								
		What additional electrical load capacity would necessitate the DNO in substantial investment to reinforcement of their infrastructures?								
How would you ensure continued power supply during external electricity supply disruption?	Are written procedures in place for the loss of main electrical supplies	Select YES if there are written emergency procedures in place to maintain an adequate level of electrical services in the event of disruption to the normal intake electrical supply.		Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Enter any comments here
	District Network Operator (DNO) arrangements	Are arrangements agreed and in place with your District Network Operator (DNO) to ensure maximum resilience is available from the network configuration and are aware of hospital's needs. This may be achieved by notation on the DNO "protected site" list or by other written agreement. Site(s) are protected-Listed by the District Network Operator to ensure maximum availability of the intake electricity supply.	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Enter any comments here
	Backup emergency generators (please state number of generators)	Please state the number of emergency standby generators available to supply electricity in the event of normal electricity supply disruption. Indicate if there is HV generation only or in addition to LV. Indicate if generators are N + 1 or essential only.	Enter No	Enter No	Enter No	Enter No	Enter No	Enter No	Enter No	Enter any comments here

2. 1 Main Electrical Supplies		Data Definitions	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Enter site name here	Comments
	Emergency Generator Supply Capacity (%)	Select the percentage band relevant to the estimated proportion of the typical weekday peak load demand (essential + non-essential) associated with the electrical distribution system which the emergency generators are required to provide emergency backup support. For example, typically emergency standby generators are designed to carry at least 60% of the normally expected total hospital load demand. If you have no backup generators please select none.	Select %	Select %	Select %	Select %	Select %	Select %	Select %	Enter any comments here
	Local backup for all systems requiring continuous supply	Select YES if there is local emergency uninterruptible power supply (UPS) for category A and/or B clinical areas or other units that require continued electrical supply during disruption of the normal electricity supply (e.g., operating theatre lights, IPS, IT equipment etc.) and communications/data system? Indicate if UPS/IPS units are N + 1	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Select Yes or No	Enter any comments here
LOW CARBON INITIATIVE (LCI)	As part of the Low Carbon Initiative and NHS Wales decarbonisation strategy, it is anticipated site electrical loads will increase over the next 10 years.	Is it envisaged the incoming site DNO HV/LV supply will be sufficient to meet the new LCI and new site loads once fossil fuel is phased out?								
		Is it foreseeable that to meet the changes brought on by the LCI, that the DNO electrical supply infrastructure will require re-enforcement?								
		Is it envisaged the existing Health Board HV/LV site infrastructure will require substantial upgrade and reinforcement to meet the LCI needs?								
		As part of the LCI initiative, the resilience of the electrical supply will become ever more important on hospital sites, so having N+1 generator feeding all major switchboards is it envisaged as the norm. Would the Generator sizes and configuration required need substantial upgrade and reinforcement?								
		What renewable sources (solar PV, wind etc.) and systems are currently installed in the hospital and what load do they offset importing?								
		What low carbon systems (heat pumps etc.) are currently installed within the hospital								