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Mr. David Cullinane, TD,  
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**PQ 19968/20 \* To ask the Minister for Health the average lifespan of a modular unit such as those put in place at UHL; the cost of each; the number of beds per unit; the timeline by stage for these units to be procured and put in place; and if he will make a statement on the matter. -David Cullinane**

Dear Deputy Cullinane,

The Health Service Executive has been requested to reply directly to you in the context of the above Parliamentary Question which you submitted to the Minister for Health for response.

The construction of a modular building is a process in which the building (usually just the shell or box for larger buildings) is constructed off-site, using largely the same materials and designing to the same codes and standards as conventionally built facilities but in a reduced time frame. Modular Buildings are better described as Rapid Builds, they are not portocabins. When referring to an inpatient ward block these are permanent buildings that meet all building regulations and have a life span equivalent to any traditional build, the modular only refers to the rapid build delivery model. The builds in many cases may cost more than a traditional build but the advantage being the reduced programme time and offsite fabrication in some cases.

The Modular 60 Bed Ward Block currently under construction at University Hospital Limerick is a four storey, 5353m<sup>2</sup> gross floor area with three floor of 20 acute beds with single rooms with ensuite bathrooms, ancillary facilities for ward support and staff and a full plant room at basement level. While the construction methods are considered 'modular' in that the frame was installed in units and there are no external blockwork walls involved unlike traditional walls, much of the build has been done insitu including the concrete floors poured at each level, and all internal partitions and services installed on site.

The procurement of the ward block main contract took approximately three months from invitation to tender to tender evaluation and recommendation for approval. Once the project had been approved, the ward block itself will have taken approximately 17 months to design and construct. On this particular project there was an enabling works requirement of a secant pile retaining wall which had to be completed before commencement of the main works on site as a result of the topography of the selected site. The total project costs are estimated to be in the region of €21m once complete which will include the enabling works, design fees, equipping and construction. The building with its reinforced concrete basement construction has a comparable lifespan of a traditionally built structure of typically 40 to 50 years.

Also, in response to the COVID 19 Emergency a rapid build 24 single ensuite bed ward with a gross floor area of 1585 sq metres has been recently delivered at UHL utilising a light gauge steel system build. A significant reduction in project programme was achieved both through using a design & build approach so that construction works commenced earlier on site, extended working hours and also through speeding up the process using

subcontractor design, off site manufacture and installation. The ensuite bathrooms were manufactured off site and delivered to site as completed pods. The steel panels were also fabricated off site and assembled on site. The HSE availed of Statutory Instruments relating to exemption from certain planning and building control requirements where works were in response to COVID-19 and also fast tracked the procurement process in this instance.

The contractor also worked continuously 24/7 and throughout the lockdown to complete the works. The project commenced in March 2020 and the building was completed and ready for occupancy by August 2020. The overall cost of this project is in the region of €12.5 million. In addition to the new 24 bed ward, a plant room floor, demolition works, a new link corridor and modifications to the existing hospital were also required. A similar lifespan in excess of 40 years is envisaged. The main difference from traditional build is really the box or frame construction. Additionally, the use of a light gauge steel system throughout means the internal walls are load bearing. This needs to be carefully considered in each case as it has implications for future flexibility.

A further 2 storey 14 bed modular unit with seven ensuite bedrooms on each level has also been provided at UHL as part of the COVID-19 Emergency Response. Each floor also included some limited critical support spaces along with the seven patient rooms. While the construction methods are considered 'modular' in that the frame and much of the external fabric were assembled in a factory and installed on site in units, the final weathering and the full internal fit out were installed on site. Site preparation works included concrete foundations, footpaths and utilities connections. With good maintenance, the anticipated lifespan of the building is between 20-30 years.

The HSE again availed of building control and planning exemptions and through negotiations with the contractor for the 60 bed Modular Unit achieved a similar delivery timeline as achieved for the 24 bed ward. The site enabling works required for the construction were carried out during the period of off-site fabrication, and from sketch scheme to substantial completion, the process took approximately 16 weeks.

The overall cost including foundations, equipping etc. for this unit was in the region of €4.7 million.

For the delivery of a modular or rapid build building, like any construction project, the budget and programme will depend on a number of factors such as enabling works, proximity to existing services, decanting requirements or phasing limitations, building use i.e complexity of ward requirements, level of engagement needed during the design process, level of mechanical and electrical services in the design including ventilation requirements.

Yours sincerely,



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**Jim Curran**  
**National Director, Estates**