Project Brief for the new children’s hospital
Summary

Introduction

The Project Brief for the new children’s hospital describes the scope and scale of the proposed hospital and its satellite centres, and outlines the services, projected activity and capacity that these facilities are intended to provide. It covers the proposed organisational structure and physical accommodation needed to deliver safe, high quality healthcare for the children and young people in Ireland over forthcoming decades.

The Project Brief also includes cost estimates. However, these remain commercially sensitive and details are not included in this Summary.

Objective of the new children’s hospital

The overarching objective in developing the new children’s hospital is to improve the health and wellbeing of children and young people in Ireland.

Development of the new children’s hospital on a joint campus with St. James’s Hospital aims to provide the highest possible standard of treatment and care to children, young people and their families who require access to national tertiary and quaternary paediatric services. The increased scale and critical mass of clinical activity achieved by amalgamating the three children’s hospitals, combined with the sub-specialisation achieved by tri-location with adult and maternity hospitals, are universally accepted as the primary factors in improving clinical outcomes for the sickest children and young people.

The development of the new children’s hospital also affords the opportunity to implement Government policy to provide appropriate care and treatment as locally as possible, with secondary (less complex) care services for children and young people in the Greater Dublin area to be provided in both the new children’s hospital at the St James’s campus and its satellite centres at Tallaght and Connolly Hospitals.

Design Intent

The new children’s hospital is being developed to provide a state-of-the-art, child-centred and family-focused hospital and satellite centres, which will facilitate excellence in the delivery of clinical services, paediatric research and education. It will provide an environment that is fully supportive of children, young people and healthcare staff. The hospital and satellite centres will be designed to comply with best international practice and health guidelines, with maximum flexibility to facilitate future changes in service delivery. The new children’s hospital will:

- Provide full tertiary and quaternary paediatric care for the sickest children and young people in Ireland
- Provide secondary, or less complex, care for the Greater Dublin Area, supported by two satellite centres
- Support and enable the transformation of paediatric healthcare services in Ireland through the implementation of the HSE Clinical Programme for Paediatrics and Neonatology
• Provide clinical services to children and young people currently being provided at Our Lady's Children's Hospital, Crumlin, Temple Street Children's University Hospital, the National Children's Hospital, Tallaght and other hospitals in the Greater Dublin area.
• Have the potential to accommodate all-island requirements for highly specialist treatments, where agreed.
• Treat children up to the age of the eve of their 16th birthday, with children currently within the system treated up to the eve of their 18th birthday. Transition to adult services will commence early and be completed by the 18th birthday unless in specific circumstances where clinical outcomes are better under paediatric services.
• Expand the role of ambulatory care and reduce reliance on inpatient treatment, in line with international trends and best practice.
• Deal with higher levels of acuity among inpatients.
• Be the primary centre for paediatric education, training, research and innovation in Ireland, by acting as the fulcrum of a paediatric academic health sciences network in collaboration with all academic institutions.
• Be the driving force behind a move towards home-based care, wherever clinically appropriate.
• Support efficiencies through campus-wide sharing of clinical and non-clinical services on the campuses at St. James's, Connolly and Tallaght Hospitals.

Summary of the Facilities

Co-location on a shared campus with an existing academic adult hospital, and ultimately tri-location with a maternity hospital enables the sharing of certain common clinical and non-clinical services between these three facilities, realising clinical, educational, research, operational and financial benefits. The core elements of the children’s hospital include:

• Clinical accommodation of approximately 64,500m² in the main new children’s hospital and approximately 2,000m² in each of the satellite centres.
• All in-patient beds in single rooms with en-suite, with in-room overnight accommodation for a parent.
• Outpatients, Day Care, Theatre Suite, Emergency Department and Critical Care Units.
• Laboratory, Medical Imaging and Diagnostic services.
• Specialist therapy and play facilities.
• Age appropriate facilities for children and young people and family facilities.
• Hospital School.
• Reception, concourse and public realm appropriate for a children’s hospital and reflecting the hospital’s national profile.

These core hospital facilities will be supported by:

• Education, training, research and innovation facilities.
• Underground car parking proposed for up to 1,000 car parking spaces.
• Family accommodation facility.

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1 Clinical accommodation represents net floor area. The gross floor area will include circulation, communication and plant space and will be determined by the final design.
Satellite Centres on the campuses of Connolly and Tallaght Hospitals

The HSE National Clinical Programme for Paediatrics and Neonatology envisages that care is provided as close to home as possible and where clinically appropriate. In the Greater Dublin Area, the satellite centres at Tallaght and Connolly Hospitals will support the children’s hospital in the provision of secondary (or less complex) paediatric care for the region, and enhance the interface with primary care, by local access to emergency and OPD general paediatric services, including rapid access OPD clinics.

Maternity hospital

The Department of Health is currently developing a National Strategy for Maternity Services which will inform the delivery of tri-located maternity services on the campus with the new children’s hospital and St James’s Hospital. A site for the proposed maternity hospital is identified in the Site Master Plan for the campus at St James’s Hospital and the new children’s hospital design will incorporate the required operational links with both maternity and adult hospitals.

Information and Communication Technology (ICT)

ICT has a critical role in ensuring the high quality, effective, efficient and integrated clinical and business operation of the new children’s hospital and its satellite centres.

Based on best international practice, the new children’s hospital and satellite centres are planned to open and function as a digital hospital, with the capacity to become a paperless organisation. This will support clinicians and managers to deliver safer, higher quality and more efficient and integrated services to children, young people and their families.

ICT will be one of the key enablers for the successful functioning of an integrated model of care, and standardised and equitable care processes across an integrated clinical network for paediatrics, in which the new children’s hospital will play a central role.

Activity and Capacity

The new children’s hospital and satellite centres are planned to meet the projected demand for paediatric healthcare services in Ireland over the next three decades. A number of key factors are impacting on these healthcare demands:

- Projected growth by the CSO of 8.19% in the child population between 2011 and 2021
- Increased survival rates for premature babies and children with complex conditions, such as congenital abnormalities and cancer
- The trend towards the centralisation and regionalisation of specific paediatric surgery
- Contemporary national neonatal and paediatric transportation and retrieval services to transport the sickest babies and children to the most appropriate hospital
- Increased numbers and complexity of cases in areas such as cardiac surgery and neurosurgery
- The move in contemporary healthcare towards increased provision of ambulatory treatment, and community and home-based care
- Increased length of hospital stay required for specific children with more complex acute conditions or chronic conditions requiring regular intervention / interaction
- Advances in technologies that enable new treatments
The success of screening programmes and earlier intervention

Projected capacity requirements for the new children’s hospital on joint campuses with St. James’s, Connolly and Tallaght Hospitals are based on expected activity levels in 2021, when the child population is expected to peak based on the most recent (2011) census data and CSO projections. Child population is expected to fall post 2021 until 2036 and increasing again thereafter.

**Description of the Accommodation**

The hospital and satellite centres are planned to support the HSE National Clinical Programme for Paediatrics and Neonatology and the hospital functioning as the nexus of an integrated clinical network for paediatric services.

<table>
<thead>
<tr>
<th>Accommodation</th>
<th>Details</th>
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<tr>
<td>384 in-patient beds, of which 62 are critical care beds</td>
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<td>85 daycare beds</td>
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<td>14 theatres, including 3 hybrid theatres</td>
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<td>3 procedure rooms</td>
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<td>111 outpatient consulting/exam rooms (99 in the main new children’s hospital and 6 in each satellite centre)</td>
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<tr>
<td>32 observation beds in ED and satellite centres (not in-patient beds), 20 in the main new children’s hospital and six in each satellite centre</td>
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Accommodation includes in-patient beds, day care, outpatients, emergency, therapy, diagnostics, theatres and procedure rooms, non-clinical support and corporate support facilities at the hospital. Accommodation at the two satellite centres at Connolly and Tallaght Hospitals includes urgent and emergency care out-patients and diagnostic facilities.

The new children’s hospital is planned to accommodate a total of 469 beds (384 in-patient beds and 85 day care beds). In line with international best practice and evidence based findings, accommodation for children in the new hospital will be provided in 100% single rooms, with facilities for parents to comfortably sleep in the room with their sick child. This also complies fully with current design guidelines and standards in respect of prevention and control of infections in acute hospital environments.

There is a significant increase in critical care beds in the new children’s hospital compared with the existing critical care bed base, with 62 beds divided into Paediatric, Cardiac and Neonatal Intensive Care and High Dependency beds, based on projected increased activity and acuity. The higher allocation of both critical care beds and daycare beds within the overall bed complement reflects international and best practice trends in paediatric acute bed requirements.

Also within the in-patient bed configuration for the new children’s hospital, a specific allocation will be made for “23 hour beds” to accommodate an overnight stay following specific elective procedures / interventions, as well as an allocation of Acute Medical and Surgical Assessment Units for unscheduled admissions from the Emergency Department and satellite centres.

Access to paediatric and neonatal critical care services will be supported by a centralised national neonatal and paediatric transport and retrieval services, with helipad access to the new children’s hospital.
Treatment and diagnostic facilities in the new hospital will accommodate advanced medical technology and equipment to support highly complex diagnostic, interventional and treatment procedures. Access to CT imaging in the adult hospitals and general imaging will be available in the satellite centres.

The theatre suite in the new children’s hospital will accommodate three hybrid theatres. These will integrate imaging within the theatre suite, facilitating access to imaging during surgery without the infant or child having to be transferred to different departments for imaging during their surgical procedure. These facilities are designed to support complex surgical procedures for improved clinical outcomes for babies, children and young people.

Emergency access and Outpatient Department (OPD) services in the new children’s hospital and the satellite centres are planned and designed to accommodate an increasing shift in paediatric services from in-patient based care to day care, out-patient care and home based care.

There will be 99 OPD consulting / examination rooms in the children’s hospital and 6 OPD consulting / examination rooms in each satellite centre. OPD services are planned and designed to support drop-in clinics, rapid access clinics, out-reach OPD clinics to paediatric units in regional hospitals, shared care programmes with regional and local hospitals and to co-ordinate home based care, in particular through the utilisation of integrated ICT systems across the clinical network. Out-patient services in the hospital will be organised through clinical clusters so that, as far as possible, the multidisciplinary team is located where the child and family attend an out-patient based service. As far as possible, OPD specialists with strong clinical links will be adjacent to enhance cross-specialist working, staff efficiency, increased patient satisfaction and better clinical outcomes.

The hospital will also include accommodation for the following support facilities required in a children’s hospital of this size, scale and nature in order to deliver high quality child centred and family-focused services:

- Hospital School (Primary and Post Primary Education)
- Family Resource and Information Centre
- Family accommodation near the paediatric and neonatal intensive care units
- Specialist therapy area with hydro-pool and gym
- Play areas, external gardens and courtyards
- Undergraduate, postgraduate and continuing professional paediatric education facilities for medical, nursing and health and social care professionals
- An institute for child and adolescent health
- Car parking for circa 1000 vehicles at the children’s hospital, and further car-parking at the satellite centres

Accommodation for families requiring long-term family accommodation will be provided in a separate facility adjacent to the new children’s hospital. It is expected that this service will be provided for by a charitable agency. This is not included in the schedule of accommodation in the Design Brief but is required to be accommodated on or adjacent to the campus.

**Design Principles**

The new children’s hospital will facilitate excellence in the delivery of clinical services, education and research in an environment that is fully supportive of children, young people, their families and staff. The following key principles will be applied in order to ensure that the future hospital provides child-centred, family-focused care and treatment.
The design of the new hospital must:

- Provide environments that are aesthetically pleasing; that welcome, comfort and celebrate the diversity of children, young people and families served by the new children’s hospital and its satellite centres
- Support the efficient, effective and integrated delivery of clinical care
- Demonstrate innovation, variety and quality in design
- Use technology as an innovative solution to enhance the experience of care, communication and collaboration
- Provide easy access to information and support for children, young people, parents, and staff
- Allow for involvement of children, young people and families throughout the design process
- Accommodate minimal separation of children from their families
- Use evidence-based design solutions that minimise family disruptions and maximise comfort for children and their families
- Compel compliance with quality standards and all infection control guidelines
- Realise and maximise the co-location and tri-location benefits of the campus

In its design, the new children’s hospital must recognise the special world and needs of children and young people. The design of the new children’s hospital and satellite centres must enable children and young people to:

- Feel safe and secure in an unfamiliar environment
- Cope with boredom and isolation
- Minimise separation from their families
- Feel normal in a foreign environment
- Have familiar experiences of play, entertainment and socialisation

The design must recognise the different requirements for children of all ages and their experience of spaces within the hospital – for example, in waiting areas, treatment rooms and inpatient areas.

The design should recognise the family’s well-being as a major factor in the provision of care for the child or young person.

The design should recognise the differing needs of children, young people, parents and families in widely diverse situations, for example, in:

- Children’s everyday needs, such as eating, exercise, play, sleep, education and entertainment
- Parents’ and families’ needs for information
- Children’s need for socialisation, and the contrasting needs for privacy and isolation
- The different needs that apply to long and short stays (for children and families)
- The very particular needs of both children and parents in dealing with bereavement

The design must enable clinical functions to operate effectively and efficiently, but must also recognise the key involvement of parents in the care, treatment and healing process and that parents themselves can be primary care-givers.

The new children’s hospital and satellite centres must have a clear single identity with a reputation for excellent and effective clinical services and high profile education and research. It needs to provide a safe and stimulating environment for those involved in the
care of children and young people. Good quality design will help staff deliver on their objectives.

- It is also important that the design created for the new children’s hospital is one that is consistent with the overall development of the campus-wide Site Master Plan for the joint campus with St James’s Hospital and with the Dublin City Council Local Area Plan, and that it can constitute a landmark feature that can be welcomed by the community as a contribution to urban regeneration. The same urban planning requirements are also required for the satellite centres.