

1.0 Introduction

This Environmental Impact Statement (EIS) has been commissioned by the Health Service Executive (HSE) for the proposed development of the new National Maternity Hospital at St. Vincent's University Hospital Campus.

This Chapter sets out a brief overview of the proposed development and the strategic need for same in terms of the necessity for improvements in healthcare services, followed by a brief overview of the decision making process and the alternatives considered in same. Finally, the content and scope of the EIS, matters considered and the consultation process is set out.

1.1 Purpose of the EIS

The EIS identifies the potential environmental effects, both positive and negative, that are predicted to arise due to the proposed development and outlines measures to address these where required. It is a methodical and detailed evaluation of the environment within which the development of the new National Maternity Hospital is proposed. The EIS provides An Bord Pleanála with the necessary information to enable an informed decision in relation to this important Strategic Infrastructure Development.

The undertaking of an Environmental Impact Assessment is prescribed by the requirements of codified by Directive 2011/92/EU and, in the near future, Directive 2014/52/EU. For the purposes of this application for permission, the relevant requirements of the EIA Directives are implemented into Irish law through the provisions of Part X of the Planning and Development Act 2000, as amended, and the Regulations made thereunder. All applications for permission submitted under section 37E directly to An Bord Pleanála must be accompanied by an EIS.

The content of this EIS has been informed by the statutory pre-application consultations with An Bord Pleanála and by all relevant guidance and legislative requirements.

1.2 Overview of the Proposed Development

The Government has committed to the relocation and development of the new National Maternity Hospital on the St. Vincent's University Hospital Campus to facilitate a comprehensive model of maternity, gynaecology and neonatal service provision in a state of the art, custom built modern facility providing clinical care to international standards to meet the needs of the Greater Dublin Area and the national population. The proposed relocation addresses a key recommendation of the '*Independent Review of Maternity and Gynaecology Services in the Greater Dublin Area*' and international best practice that maternity hospitals should be co-located alongside adult acute services¹.

The co-location of maternity hospitals with adult acute services has been identified as the optimal arrangement as it can provide proximate access to the full range of medical and surgical specialties. This allows clinical support services to be provided in sufficient volume and at a level of complexity that adds value². The proposed development signals a clear desire to provide the best possible care and service for women and infants in Ireland and is particularly important for high-risk mothers and babies.

The proposed development comprises the redevelopment of The National Maternity Hospital at St. Vincent's University Hospital Campus, Elm Park, Dublin 4. The proposed new National Maternity Hospital building will be located at the eastern side of the hospital campus and comprises the construction of a building that rises to 5 and 6 storeys above ground level, with one partial basement level, plus additional ancillary plant areas at the roof level. The proposed development also includes an extension to the existing multi-storey car park at the north of the Campus. The proposed development will be constructed in a sequential manner that allows for the continual operation of the Hospital Campus and, as such, includes the phased demolition of existing buildings at St. Vincent's University Hospital Campus to facilitate clearing the site for the proposed development and the construction of temporary accommodation to facilitate construction sequencing (including a single storey temporary canteen, catering staff changing facilities, household services store and carpenters workshop).

A full and detailed description of the proposed development is set out in Chapter 2 of this EIS, '*Description of the Development*'.

¹ Press Release - Minister for Health Announces Relocation of the National Maternity Hospital, Holles Street, Dublin, Department of Health, 2013.

² Independent Review of Maternity and Gynaecology Services in the Greater Dublin Area, KPMG, 2008, p.19

1.3 Strategic Need for the new National Maternity Hospital

The strategic and clinical need for the development of the new National Maternity Hospital at St. Vincent's University Hospital is set against the quality and locations of existing health infrastructure and the healthcare context underlying the proposed model of care. The *Clinical Case and Model of Care* that underpins the decision to locate the new National Maternity Hospital at the St. Vincent's University Hospital Campus is attached as Appendix 1.1 of this EIS.

As per the National Maternity Strategy 2016 – 2026, the vision behind this *Model of Care* is to ensure that

- Women and babies have access to safe, high quality care in a setting that is most appropriate to their needs;
- Women and families are placed at the centre of all services, and are treated with dignity, respect and compassion, and;
- Parents are supported before; during and after pregnancy to allow them give their child the best possible start in life.

In order to achieve this vision, as outlined above, the following principles will underpin the service delivery in the new National Maternity Hospital on the St. Vincent's University Hospital Campus:

- Safe care;
- Women, baby and family focused care;
- High quality care delivery, and;
- Excellent clinical outcome and good patient experience.

1.3.1 Existing Service Provision

1.3.1.1 Infrastructure

The existing National Maternity Hospital is located on the eastern corner of Merrion Square at Holles Street, Dublin 2 in an old building, the original purpose of which was to serve the poor people of the districts surrounding Holles Street. The National Maternity Hospital on Dublin's Holles Street was established in 1894 and is the largest maternity hospital in the State as measured by annual deliveries and also one of Europe's largest maternity hospitals. The Hospital mainly provides obstetric, gynaecology and neonatal services and delivers over 9,000 babies a year. The Hospital is recognised as a national referral centre for complicated pregnancies, premature babies and sick infants.

The scale of the Holles Street site, however, is significantly constrained and services have, in effect, been '*shoe-horned*' into the existing historical building and associated structures³. The existing hospital and site suffer from significant infrastructural constraints and, as a result of this, the Hospital faces ongoing and significant challenges to ensure the delivery of best quality healthcare to modern standards. Some of the challenges that the existing Hospital faces at the Holles Street site include:

- Lack of any Intensive Care Unit facilities for women. As a result very ill patients, such as women who become ill during childbirth, are being transferred via ambulance to St. Vincent's University Hospital for intensive care.
- Significant overcrowding, and notwithstanding the fact it is 2017, the '*nightingale wards*' (i.e. one large room without subdivisions for patient occupancy) are still in existence within the Hospital.
- Lack of basic general facilities such as toilets and bathrooms throughout, including appropriate ensuite facilities for in-patient accommodation.
- Some structural defects in the buildings.
- Every year, hundreds of patients are being referred off-site to other hospitals for investigations or treatment not available in the Hospital.
- Optimum clinical proximities are difficult to achieve due to the constraints of the existing site.
- There are operational risk issues in addressing the structural defects and renovations required to maintain the existing building.

³ Letter submitted to ABP dated 18/12/214, Case Reference PL29S.PC0185

An independent review of maternity services in the Greater Dublin Area carried out by KPMG highlighted the existing infrastructural constraints stating, *inter alia*:

“Poor infrastructure at the three hospitals⁴ means that maintaining the status quo is not an option. The facilities at the three hospitals pose risks to health, safety, privacy and dignity⁵”.

This assertion was confirmed in a recent inspection report published by HIQA⁶ regarding the National Maternity Hospital at Holles Street, in which a number of risks were identified, some of which directly relate to the existing infrastructure and facilities. Whilst HIQA acknowledged that numerous improvements to the National Maternity Hospital at Holles Street have taken place, the fundamental challenges posed by the constraints of the current site nonetheless remain. It was noted in the HIQA inspection report that *“the age and limited footprint of the hospital building is a key barrier to improvement”* and the existing Hospital infrastructure *“does not meet international best practice guidelines”*. In its review, HIQA further noted that the current infrastructure of the National Maternity Hospital at Holles Street *“does not facilitate patient’s dignity, confidentiality or privacy and does not facilitate effective infection prevention and control”*.

1.3.1.2 Increasing Demand in Maternity Services

The three existing maternity hospitals in Dublin are under considerable pressure due to increasing growth in demand for maternity services. Over the past twenty years the number of babies delivered at the existing National Maternity Hospital at Holles Street has increased by almost 50%⁷. The existing National Maternity Hospital at Holles Street cares for over 10,000 women every year, delivering over 9,000 babies annually, making it one of the busiest maternity hospitals in Europe. The capacity of the existing Hospital is no longer sufficient to meet the service needs required by population growth⁸. The growth in deliveries in combination with inadequate healthcare infrastructure has placed considerable strain on the current system.

⁴ The three hospitals are: National Maternity Hospital, Holles Street; The Rotunda Hospital; and Coombe Women & Infants University Hospital

⁵ Independent Review of Maternity and Gynaecology Services in the greater Dublin Area, KPMG, 2008, pg. 51

⁶ Report of Inspections at the National Maternity Hospital, Holles St, Dublin 2 (7 October & 17 November 2015) – The Health Information and Quality Authority

⁷ Press Release - Minister for Health Announces Relocation of the National Maternity Hospital, Holles Street, Dublin, Department of Health, 2013.

⁸ Independent Review of Maternity and Gynaecology Services in the greater Dublin Area, KPMG, 2008, pg. 6.

1.3.1.3 Catchment Areas and Accessibility

The three existing maternity hospitals in Dublin are all located within the canals of the City Centre; this is a sub-optimal configuration in terms of the catchment areas they serve and their accessibility. This service configuration does not adequately cater for user access needs. Given the marked population growth in the Greater Dublin Area, the current maternity hospital service configuration needs to be addressed to enhance the existing catchment areas and provide improvement in access for the women who will need to avail of such services.

1.3.2 Healthcare Policy

Healthcare policy in Ireland has evolved significantly in recent times and is now in line with international best practice; however, there is a significant gap that exists between Ireland's healthcare policy and its healthcare infrastructure. A principal objective of the proposed development is the provision of a building that delivers the best level of maternity care for the women of Ireland in line with the provisions of the recently published National Maternity Strategy 2016-2026. The following are some of the main points of healthcare policy that the development of the new National Maternity Hospital at St. Vincent's University Hospital will address.

1.3.2.1 The Current Model of Service Delivery and International Best Practice

The existing service configuration of maternity hospitals in Dublin is relatively unique, comprising three large, tertiary, stand-alone maternity hospitals. Based on international evidence, most maternity services have evolved and developed over time and in the main, large tertiary maternity hospitals tend to be co-located on acute hospital sites⁹. The present situation of having three stand-alone maternity hospitals in Dublin does not facilitate providing optimal care arrangements for high-risk mothers¹⁰. It is now well recognised and accepted that for optimal clinical outcomes maternity services should be co-located with adult acute healthcare services¹¹.

⁹ Independent Review of Maternity and Gynaecology Services in the greater Dublin Area, KPMG, 2008, pg. 62.

¹⁰ Independent Review of Maternity and Gynaecology Services in the greater Dublin Area, KPMG, 2008, pg. 63.

¹¹ Independent Review of Maternity and Gynaecology Services in the greater Dublin Area, KPMG, 2008, pg. 119.

1.3.2.2 The Benefits of Co-Location

The co-location of maternity services with adult acute services is a very significant step and necessary, in order to provide the optimal setting in which the women of Ireland can deliver their babies with safety and with dignity¹². Co-location provides mothers with access to a full range of medical and support services should the need arise; for example, for cardiac and vascular surgery, diabetes services, intensive care facilities, haematology services, psychiatric services and many others¹³. Life threatening emergencies in maternity hospitals arise frequently and unpredictably and every minute matters in terms of the overall outcome¹⁴. Co-location with the full range of medical and surgical facilities of an adult acute hospital enables immediate access between the different service departments for both critical situations and routine medical issues.

1.3.2.3 Hospital Groups

In May 2013, the then Minister for Health published two reports on Irish Hospitals, *'The Establishment of Hospital Groups as a Transition to Independent Hospital Trusts'* and, *'The Framework for Development – Securing the Future of Smaller Hospitals'*. The publication of these Reports signalled the beginning of the formation of six Hospital Groups as the initial step in the creation of statutory hospital trusts, and thus, in the implementation of a key pillar of Government policy on transforming the Irish health service.

One of the main objectives of the Hospital Groups is the establishment of a managed clinical maternity network within each Group to address on-going safety concerns in maternity services. The new National Maternity Hospital at St. Vincent's University Hospital will lead the managed clinical maternity network for the Ireland East Group and it will support the smaller maternity units in the Group to provide a safe and high quality service.

1.3.2.4 Academia and Professional Synergies

The existing National Maternity Hospital and St. Vincent's University Hospital both have established and successful relationships with the academic partner of the Ireland East Group; University College Dublin. It is central to future healthcare provision that such synergies are fostered and capitalised on. They maximise the economic potential for the wider community and optimise collaboration between academic medical function, clinical leadership and service management. The learning and development strategy will produce skilled staff, competent in the areas of leadership training and education and will support the continual improvement in the provision of clinical care.

¹² Letter submitted to ABP dated 18/12/214, Case Reference PL29S.PC0185.

¹³ Independent Review of Maternity and Gynaecology Services in the Greater Dublin Area, KPMG, 2008, pg. 10

¹⁴ Letter submitted to ABP dated 18/12/214, Case Reference PL29S.PC0185

1.3.2.5 A New Model of Care

A “model of care” is a clinical and organisational framework for how and where healthcare services are delivered, managed and organised. It outlines best practice health care delivery through the application of a set of service principles across identified clinical streams and care pathways.

The development of the new National Maternity Hospital at St. Vincent’s University Hospital involves the coming together of two of Ireland’s larger hospitals, both in terms of staff and activity, on the one campus in a co-located model of service provision. As such it is important that there is a coherent and agreed methodology for the delivery of services on the campus and clarity with respect to the patient journey. It is the delivery of a new *Model of Care* that will fulfil such requirements.

The proposed new National Maternity Hospital at St. Vincent’s University is underpinned by a new *Model of Care* (attached as Appendix 1.1 of this EIS). The *Model of Care* presented in this EIS is based on current best practice and evidence designed to respond to the emergence of new evidence and standards. It will continue to change, adapt and develop in the future. There will be an ongoing programme of review and innovation allied to an institutional framework which ensures the involvement of clinicians and users at all stages.

1.3.2.6 National Maternity Strategy 2016-2026

The National Maternity Strategy, 2016-2026, is Ireland’s first Maternity Strategy and is intended to provide the framework for a new and better maternity service for Ireland. It sets out a vision for maternity services where, *“women and babies have access to safe, high quality care in a setting that is most appropriate to their needs; women and families are placed at the centre of all services, and are treated with dignity, respect and compassion; parents are supported before, during and after pregnancy to allow them give their child the best possible start in life¹⁵”*.

With regard to maternity service provision, and specifically the co-location of maternity hospitals with adult-acute hospitals, the Strategy recognises the plans to redevelop the National Maternity Hospital at the St. Vincent’s University Hospital campus, stating that:

¹⁵ National Maternity Strategy, 2016 - 2026, pg. 13.

“Four of our maternity hospitals are standalone facilities - the National Maternity Hospital, the Rotunda Hospital, the Coombe Women & Infants University Hospital and University Maternity Hospital Limerick. However, plans to redevelop the National Maternity Hospital on the St Vincent’s Hospital campus are well advanced and a planning application is imminent. In addition, the increased funding available to the Department of Health under the Government’s six year capital investment framework, Building on Recovery 2016 -2021, will enable a wider maternity capital programme towards the later years of the plan, involving the relocation of the Rotunda Hospital to the Connolly Hospital campus in Blanchardstown, and Limerick Maternity Hospital to the University Hospital Limerick campus at Dooradoyle. The Plan also includes the redevelopment of the Coombe Women & Infants University Hospital on the St James’s Hospital campus, the site for the proposed children’s hospital, thus ensuring the development of a tri-located adult/paediatric/maternity facility. A plan is therefore in place to ensure that all maternity hospitals in the country will be co-located with an adult acute hospital in the medium term.”¹⁶ (GVA Emphasis Added)

1.4 Government Decision on the New National Maternity Hospital

In May 2013, the Government announced its intention to relocate the National Maternity Hospital, Holles Street, to the St. Vincent’s University Hospital Campus stating that:

“The proposed relocation addresses a key recommendation in the 2008 KPMG Independent Review of Maternity and Gynaecology Services in the Greater Dublin Area Report that Dublin maternity hospitals should be located alongside adult acute services. Co-location of maternity hospitals with adult acute services is the optimal solution for the provision of hospital-based maternity services, as it can provide access to the full range of medical and surgical specialties and clinical support services in sufficient volume and complexity to provide added value. This is particularly important for high-risk mothers and babies.”¹⁷

¹⁶ National Maternity Strategy, 2016 – 2026, pg.14-15.

¹⁷ Press Release - Minister for Health Announces Relocation of the National Maternity Hospital, Holles Street, Dublin, Department of Health, 2013.

In the interim period since this announcement, the Government has reiterated its support and commitment for the proposed development on numerous occasions and it is part of the Government's Capital Plan '*Building on Recovery: Infrastructure and Capital Investment 2016-2021*'. The Capital Plan supports a reorganisation of national maternity services in Ireland and forming part of this strategy is the relocation of the National Maternity Hospital to the St. Vincent's University Hospital Campus.

This decision was supported further by the preparation of the National Maternity Strategy 2016-2026. The strategy, prepared subsequent to the decision to relocate the National Maternity Hospital to the St. Vincent's University Hospital Campus, is a *de facto* policy endorsement of the Ministerial decision.

1.4.1 Background to the Government Decision – Consideration of Alternatives

This decision to locate the new National Maternity Hospital has been informed by a detailed consideration of the alternative models of care and locations available to the Government (including the "do nothing" option). This process is summarised in the following sections.

1.4.2 KPMG Report 2008

The KPMG Report, 2008, set out to undertake an independent review of maternity and gynaecology services in the Greater Dublin Area. The Report contains an assessment of the existing model of care, recommendations for a future model of care and a preferred service configuration to comply with a new model of care. A significant assessment was carried out that included: ability to deliver co-location; accessibility; demographics; and, catchment, and based on the findings a recommendation was made. The assessment found that there should be three new facilities developed in the Greater Dublin Area to deliver maternity and gynaecology services and that the new National Maternity Hospital services at Holles Street would move to St. Vincent's University Hospital Campus.

1.4.3 Review of the KPMG Report 2012

Following a Government decision in 2012 that the National Paediatric Hospital Project would be located at the St. James's Hospital Campus, a review of the recommendations of the 2008 KPMG Report was carried out. As the plans to relocate the National Maternity Hospital at Holles Street to St. Vincent's University Hospital were at an advanced stage, the review did not re-visit this decision but considered the following:

1. Whether the Coombe or Rotunda would move to St. James's Hospital; and,
2. Where the third maternity hospital would be located in order to optimise access for women while taking account of clinical and other relevant criteria.

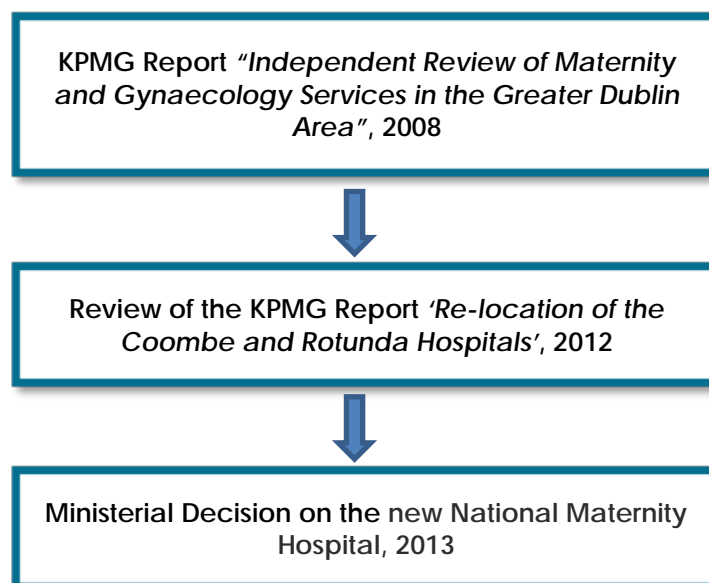
Ultimately, the Review of the KPMG Report, 2008 served two important purposes:

1. To endorse the proposed service configuration of two co-located maternity hospitals and one tri-located maternity hospital as per the key recommendation in the KPMG Report, 2008; and,
2. To review and update the locations of the services to ensure that the optimal configuration is achieved in order to achieve the delivery of an optimum, safe service for mothers and babies in Ireland

The Review has maintained a consistent approach, in line with that endorsed in the KPMG Report, 2008, with regard to the interdependence of the service configuration and ensuring greater access to services and provide women with greater choice.

Figure 1.1 below helps to articulate the chronology and relationship between the Reports that have directly informed the location for the new National Maternity Hospital and the consideration of alternative approaches to the delivery of maternity services.

Figure 1.1: Review of Alternative Locations



1.5 Locational Considerations on the St. Vincent's Campus

Following the site selection, a detailed analysis of the alternative options with respect to the St. Vincent's University Hospital site was undertaken. The campus at St. Vincent's University Hospital has developed over time and has been the subject of a number of campus plans and strategies; there has been, and continues to be, a planned approach to its ongoing development. The detailed consideration of the alternative locations on the Campus is set out in Chapter 4 of this EIS. The following provides an overview as to how the proposed location was selected having regard to the ongoing campus development strategy.

1.5.1 St. Vincent's Ongoing Campus Planning

A non-statutory Outline Development Control Plan for St. Vincent's University Hospital Campus was prepared by Scott Tallon Walker Architects in 1997 and was updated in 2005. This Outline Development Control Plan (ODCP) was a strategy for future development of the campus in order to ensure that investment and development plans for the campus were carried out in a planned and effective manner. The 2005 ODCP addressed, *inter alia*:

- The identification of low density underutilised sites at the Campus;
- The identification of campus zones for stand-alone development, high technology development and low technology development; and,
- A future development strategy.

1.5.2 Outline Feasibility Study for the new National Maternity Hospital

Further to the above, an Outline Feasibility Study for the co-location of the National Maternity Hospital at the St. Vincent's University Hospital Campus was carried out in 2013. The Study looked at 4 no. principal locations and various layout options on the Campus and reviewed their suitability for accommodating the new National Maternity Hospital – with specific reference to the healthcare policy requirements for co-location and direct links to adult theatres.

The current proposal for the National Maternity Hospital generally aligns with the development envisaged in the 2005 ODCP and the outcomes of the subsequent Feasibility Study. It involves the intensification of use of an underdeveloped site and represents the next logical step in the campus' development and satisfies the locational requirements of the National Maternity Strategy.

1.6 Content of this EIS

Environmental Impact Assessment is a systematic integrated evaluation of both direct and indirect potential impacts of a project on the natural environment, on beneficial uses of the environment, including man-made structures, amenities and facilities, and the socio-cultural environment.

The aim of the EIS is identify, describe, assess, examine, analyse and evaluate, in accordance with the relative requirements of EU and Irish law, the direct and indirect effects of the proposed development of the National Maternity Hospital at St. Vincent's University Hospital on:

- (a) human beings, flora and fauna;
- (b) soil, water, air, climate and the landscape;
- (c) material assets and the cultural heritage, and;
- (d) the interaction between the factors.

In addition, the EIS identifies measures where necessary to avoid, reduce and, if possible, offset any significant impacts on the environment arising from the proposed development.

Specifically, the environmental areas that may be impacted by the proposed development are: Human Beings, Flora and Fauna, Soil and Geology, Hydrogeology and Hydrology, Air Quality and Climate, Noise and Vibration, Waste Management, Visual Impact Assessment, Archaeological, Architectural and Cultural Heritage, Material Assets - Utilities and Traffic and Transportation. This EIS addresses the potential environmental impacts of the proposed development of the new National Maternity Hospital at St. Vincent's University Hospital Campus under these headings, having regard to an informal, non-statutory scoping exercise conducted as outlined below.

The content of this EIS has been informed by all available guidance and legislation¹⁸.

¹⁸ Including the provisions of the *Revised Guidelines on the Information to be Contained in Environmental Impact Statements, Draft*, September 2015, Environmental Protection Agency and the associated Advice Note.

1.7 Informal Scoping

An informal scoping exercise was conducted to establish the parameters of the issues to be addressed in the EIS. The receiving environment of the St. Vincent's University Hospital Campus (including existing activities on site were examined) as were other comparable developments. The informal scoping of the EIS also had regard to the following:

- Guidelines published by European Union and Irish institutions;
- Guidance provided by An Bord Pleanála as part of pre-application consultations;
- Policies and objectives of the Development Plans in force in the functional areas of Dublin City Council and Dún Laoghaire-Rathdown County Council;
- The existing environment, including any vulnerable or sensitive features, including ecological features and items of archaeological significance;
- The likely and any significant impacts of the proposal on the environment, and;
- Available methods of reducing or eliminating undesirable impacts.

The EIS covers both the construction and operation periods for the proposed development. It is anticipated that the construction period for the development of the new National Maternity Hospital at St. Vincent's Hospital Campus will take c. 56 months. The operational phase will commence once the new National Maternity Hospital is fully equipped and commissioned. The scope of the operation phase is extended beyond the opening date to ensure account is taken of the longer term nature of some impacts.

1.8 Consultation

Consultation was undertaken that identified the environmental and community issues that needed to be taken into consideration in designing the proposed development and in assessing any of its potential effects. This consultation was informed by the specific requirements for Strategic Infrastructure Developments and took two separate forms:

Statutory Consultation with:

- An Bord Pleanála
- Dublin City Council
- Dún-Laoghaire-Rathdown County Council

On-going Consultation with:

- National Transport Authority
- External Non-Clinical Groups
- Local Residents
- Local Community Groups
- Dublin City Council Local Area Councillors
- Clinical Staff / Clinical Support Staff / Non-Clinical Staff (from both St. Vincent's University Hospital and the existing National Maternity Hospital at Holles Street)
- Department User Groups
- Utilities providers (Irish Water, ESBN and others)

In addition to the above, consultation was undertaken with some prescribed bodies and other stakeholders including utility providers. Regard has been had to the comments, suggestions and information provided by the above mentioned bodies, groups and individuals as part of the overall consultation process in the preparation of this EIS. A full and detailed record of the consultation process is set out in Appendix 1.2 of this EIS, which outlines the dates, nature and extent of the consultations and manner in which they were undertaken.

In relation to the Environmental Impact Assessment process, the consultation undertaken focused on the following;

- Early consultation to inform and help define the scope of the EIS in terms of what needed to be examined.
- Consultation during the process to identify any emerging issues, to clarify any concerns and to ensure that all such issues were considered as part of the EIS.

The planning application documentation contains the details of the consultation undertaken which will inform the Environmental Impact Assessment process. These matters are also discussed in the Planning Report submitted as part of the Application.

1.9 List of Contributors and Experts

The following is a list of contributors and specialists involved in compilation of the EIS.

Table 1.1: List of Contributors and Experts

Chapter	Aspect of EIS Provided	Specialist Consultant	Authors
1	Introduction	GVA and Applicant	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist) The National Maternity Hospital / Health Service Executive
2	Description of the Development	GVA in conjunction with the Design Team	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist) Sean Mahon MRIA RIBA, (Project Architect, Managing Director at O'Connell Mahon Architects) Fergus Monaghan, BSc, MSc, Dip Eng, CEng (Project Engineer, Director, ARUP) Dan Moran, BE, CEng, FIEI, MStructE (Project Engineer, Associate, ARUP)
3	Planning and Development Context	GVA	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist)
4	Examination of Alternatives	GVA in conjunction with the Design Team	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist) Sean Mahon MRIA RIBA, (Project Architect, Managing Director at O'Connell Mahon Architects)
5	Human Beings	GVA	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist)
6	Traffic and Transportation	Arup	Donal McDaid, BE, MSc, CEng (Transportation, Director, ARUP)
7	Soils, Geology and Hydrogeology	Arup	Marie Fleming BSc MSc DIC PGcert PGeo EurGeol FGS (Senior Engineer, ARUP) Catherine Buckley, MSc BA PGeo EurGeol MIAH (Senior Engineer, ARUP)
8	Hydrology	Arup	Clodagh O'Donovan, BE MEngSc CEng FIEI FConSEI MCIWEM C.WEM (Associate, ARUP) Wolfram Schluter, BSc MSc PhD CEng MCIWEM (Senior Engineer, ARUP)

			Kevin Barry, BE MEngSc MIEI (Senior Engineer, ARUP) Kieran Dowdall, BE MEngSc MIEI (Associate, ARUP)
9	Flora and Fauna	Scott Cawley	Paul Scott, CEcol CEnv MCIEEM (Chartered Ecologist, Director, Scott Cawley) Kate-Marie O'Connor, BA, MSc, ACIEEM (Consultant Ecologist, Scott Cawley)
10	Waste Management	AWN Consulting Ltd	Robert Hunt, MSc in Environmental Engineering, BEng in Civil Engineering, MIEI, AIEMA (Senior Environmental Consultant) Elaine Neary, BA in Natural Sciences, MAppSc in Environmental Science, CIWM, AIEMA (Principal Consultant and Chartered Waste Manager)
11	Noise and Vibration	AWN Consulting Ltd	Ronan Murphy, BSc Environmental Management, Dip. Acoustics and Noise Control, IOA (Senior Acoustic Consultant)
12	Air Quality and Climate	AWN Consulting Ltd	Dr. Avril Challoner, BE Environmental Engineering, Dip. Statistics, PhD Air Quality (Environmental Consultant)
13	Micro Climate	BRE and RWDI	Dr. Paul Littlefair MA PhD CEng MCIBSE MSLL MILP (Director, BRE) Cosmin Ticleanu BSc PhD MBA MSLL (Principal Lighting Consultant, BRE) Gareth Howlett BSc. (Lighting Consultant, BRE) Tomi Odunbaku BSc. Aerospace Engineering (Project Engineer, RDWI) Daniel Hackett MEng Aerospace Engineering (Senior Engineer, RDWI) Ender Ozkan PhD (Civil Engineering) CEng, MIMechE (Principal, RDWI)
14	Visual Impact Assessment	Arc Consultants	WH Hastings FRIAI, B.Arch, RIAI accredited Grade 1 Conservation Architect, Lecturer University College Dublin
15	Material Assets: Archaeological, Architectural and Cultural Heritage	Irish Archaeological Consultancy	Faiht Bailey BA (Archaeology), MA Cultural Landscape Management (Archaeology and Built Heritage), Member of the Chartered Institute of Field Archaeologists. (Associate Director and Senior Archaeologist)
16	Material Assets: Utilities	Arup	Edith Blennerhassett, BE MUBC CEng MIEI (Associate, ARUP)
17	Interactions and Potential Cumulative Impacts	GVA in conjunction with the EIS Consultants	Paul O'Neill, BA, MRUP, MRTPI, MIPI (Associate at GVA, Chartered Town Planner and Urban Geographer) Brian Wynne, BA, MRUP, MIPI (Senior Planner at GVA, Town Planner and Economist)

1.10 Difficulties in Compiling Specified Information

No significant difficulties were experienced in compiling the necessary information for the proposed development. Where appropriate, surveys and references are provided.

1.11 Natural Resources

As the proposed development will not require the use of natural resources that are in short supply, nor will the development result in the emission of pollutants that will create nuisance or hazard, the matters referred to in Paragraph 2(a)(iii) of the Second Schedule of European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999 (S.I. No. 93, of 1999) do not apply.

1.12 Non-Technical Summary

A copy of the Non-Technical Summary of the EIS is provided as a separate and self-contained document, and is available to the public at the offices of An Bord Pleanála and also on the website at www.nmhplanning.ie. It is clearly identified on the website and in the EIS in order to assist in its dissemination to interested parties.