

23.0 CONSTRUCTION PHASES.

23.1 Development Phase.

23.1.1 There are three phases to development as outlined in Chapter 2 (The Planning Scheme).

23.1.2 The period of construction will be determined by the availability of services including transport, water and sewerage, which in turn determine phasing.

23.2 Construction Methods.

23.2.1 The development on the Poolbeg Peninsula will commence with site clearing and excavation and may involve the removal, treatment or capping of contaminated materials. Removal of groundwater for excavations for underground car-parking is likely to be required. There will also be a requirement to lay extensive networks of new pipes and utility services and possibly for the diversion or replacement of existing services. Soil compaction or stabilisation may be required and while some strip or raft foundations are likely it is almost certain that extensive piling will be required. New roads will be constructed and ultimately new Luas tracks may be constructed.

23.2.2 It is only possible at this stage to estimate the scale, height, use, location and phasing of the draft planning scheme and use this to inform the basis of the construction programme which will be determined as part of the Section 25 process. A Construction Management Plan will also be required of developers as part of the section 25 application process. Construction materials are likely to include traditional block, timber frame construction, reinforced concrete and structural steel. Working with or near existing structures will impose particular constraints.

23.2.3 While there will certainly be engineering challenges involved in the construction works on the peninsula, it is not envisaged that anything will be required that has not already been done elsewhere. None of the construction methods we can now foresee would be particularly unusual and the construction industry will be well placed to provide this development in a safe, efficient and timely manner.

- 23.2.4 Developers will be required to demonstrate that appropriate engineering and construction methods are in place to prevent harm to protected natural habitats and where necessary will require the commissioning of the appropriate ecological reports outlining suitable construction methodologies.

23.3 Transportation of Building Materials.

- 23.3.1 The Draft Planning Scheme requires that a site specific Transport Impact Assessment be prepared in support of Applications for Certification. The TIA will include an assessment of the volume of construction traffic, construction method and materials that will be used along with the origin and type of transport vehicle.

- 23.3.2 Construction vehicle movements will be monitored and controlled. Measures will be taken, such as the identification of suitable construction traffic routes. It is recommended that the Port tunnel to the M50 route be used where appropriate to avoid as many residential areas as possible within the city.

23.4 Transportation of Excavation Materials.

- 23.4.1 When soil is excavated and removed off site it becomes a waste (although treatment in situ will be the preferred option). The EU Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills, which formed an annex to the Landfill Directive (1999/31/EC), took effect in Ireland on 12 July 2005. This Council Decision sets limit values on waste for each landfill type based on total pollutant contents and leachate concentrations.

- 23.4.2 The transport of contaminated soils of a hazardous nature for onward disposal/recovery requires compliance with the 'C1' Waste Management (Movement of Hazardous Waste) Regulations 1998 for movement between counties, or the Waste Management (Shipment of Waste Regulations), 2007 for movement between countries in the EU. Where soil has non-hazardous concentrations of contaminants, its movement off-site is subject to the *Waste Management (Collection Permit) Regulations 2007 and 2008 amendments* which require the haulier to hold a waste collection permit issued by a Local Authority. The waste collection permit specifies which facilities a haulier is permitted to transport waste to and lists the registration numbers of the vehicles to be

used. Hauliers are liable to prosecution if they transfer waste to a site not listed on their waste collection permit.

- 23.4.3 During site investigations, waste soil for removal will be categorised accordingly. If material is to be shipped out, then a deepwater berth is available at Poolbeg and therefore the route will be within the peninsula. However it may be categorised for landfill or treatment in Ireland and therefore trucks will have to be covered with tarpaulin and a wheelwash will be required on site. It is recommended that the Port tunnel to the M50 route be used to avoid as many residential areas as possible within the city.

23.5 Energy and Water Demands.

- 23.5.1 The construction phase of the Draft Planning Scheme will require energy and water provision and sewage disposal. Electricity is required for site offices/ welfare facilities and for plant operations. Water will be required for staff on the sites and possibly for concrete production, washing facilities etc. The presence of operatives on site will create a demand for sewage services but temporary facilities can be used if required. It has already been highlighted that there are infrastructure constraints on the peninsula.
- 23.5.2 These constraints will not be resolved prior to construction commencing though construction is expected to take up to 20 years and most of these issues will be addressed as the construction proceeds. In any case, the demand associated with the initial construction phase is considerably less than the ultimate demand. The utility infrastructure already on the peninsula to service existing industry should be adequate to serve the early construction phase of the anticipated development works.

23.6 Health & Safety.

23.6.1 *General.*

23.6.1.1 The aims and provisions of the Safety, Health and Welfare at Work Act 2005 and the Regulations made under the Act must be complied with to ensure the health and safety of construction workers.

23.6.1.2 The new Safety, Health and Welfare at Work (Construction) Regulations (S.I. No. 504 of 2006) that came into effect on the 6th November of 2006 must be complied with. These regulations require the appointment of the statutory role of Project Supervisor Design Process (PSDP) to prepare preliminary safety reports and a Project Supervisor Construction Stage (PSCS) to prepare detailed safety reports during construction.

23.6.1.3 At a minimum, a site specific safety and health plan will be required for site development and construction works.

23.6.2 *Contaminated Soil and Gases.*

24.6.2.1 The Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 will be complied with to prevent exposure of workers to chemicals arising from the presence of contaminated soils, waters and also gases.

23.6.3 *Asbestos.*

23.6.3.1 The Safety Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 transpose for the first time Directive 2003/18/EC and gives further effect to the Council Directive 83/477/EEC on the protection of workers from the risks related to exposure to asbestos at work and Council Directive 87/217/EEC on the prevention and reduction of environmental pollution by asbestos.

23.6.3.2 All work with asbestos materials requires a documented risk assessment. Based on the written risk assessment, where the planned asbestos-related work activity will expose or could expose workers to a concentration of asbestos fibres in air in excess of the exposure limit value (i.e. 0.1 fibres / cm³), an employer must submit a written notification to the Health and Safety Authority, 14 days before commencing any work.

The site specific plan of work (also known as a method statement) for the proposed work must be submitted along with the notification.

23.7 Building Materials.

23.7.1 Materials used in development associated with the Draft Planning Scheme shall conform with the relevant health and safety specifications and the relevant Codes of Practice. A large amount of the building materials including sand, concrete and timber are readily available in the local and national economy.

23.8 Personnel Resources and Employment.

23.8.1 The development of the Draft Planning Scheme Area represents a capital investment of approximately €3.4bn and is a significant positive contribution to the City, regional and national economy. Phase 1 has a €1.3bn projected for it and the number of people employed in construction related activity would be approximately 455 persons per year.

23.8.2 Direct and indirect construction related services, off site manufacture and the supply of materials will also help Dublin's regional economy as most of the basic materials (concrete, blocks, plasterboard etc.) will be Dublin sourced. The economic impact of this will benefit the Dublin region and probably the local area as there are suppliers of these materials in the locality.

23.8.3 The local economy (corner shops, restaurants, public houses etc.) will benefit indirectly from the construction of the Draft Planning Scheme from the estimated presence of 455 construction workers during Phase 1. In addition, local employment opportunities will be greatly enhanced by structured liaison between the DDDA, developers and local communities. The DDDA itself will use, and will seek to ensure that all developers implement the local Labour Initiative/Charter which has been successfully operated in the past. This Initiative/Charter seeks to ensure that 20% of construction related activities are sourced locally.

23.9 Construction Traffic Noise.

- 23.9.1 The Draft Planning Scheme requires that a site specific Transport Impact Assessment be prepared in support of Applications for Certification. The TIA will include an assessment of the volume of construction traffic, construction method and materials that will be used along with the origin and type of transport vehicle. Avoidance of transport routes for construction traffic through residential areas will be recommended and dealt with in the TIA. However as construction vehicle movements are likely to be during the day it is not envisaged that significant impact will occur from passing trucks on the ambient day time noise environment.