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14 Interactions of the Foregoing

14.1 Introduction

The construction, operational and cumulative impacts of the proposed development have been assessed within each chapter of the EIAR. This chapter considers the significant interactions of impacts between each of the separate disciplines.

In practice many impacts have slight or subtle interactions with other disciplines. This chapter highlights those interactions which are considered to potentially be of a significant nature. Discussions of the nature and effect of the impact is primarily undertaken within each of the relevant chapters, while this chapter identifies the most important potential interactions.

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14.2 Description of Significant Interactions

14.2.1 Population and Human Health

During the construction phase, the following aspects would interact with population and human health and in the absence of mitigation may give rise to likely significant effects;

- **Material Assets - Traffic:** Traffic flow for construction vehicles in the locality has potential to impact upon road safety;
- **Noise & Vibration**: There is potential for impact on human health associated with noise during the construction phase; and,
- **Air Quality & Climate:** There is potential for impact on human health from dust associated with construction activities.

During the operational phase the potential interactions are;

- **Landscape**: The landscape plan will impact on the quality of the private and public open spaces, which could impact on people's health and well-being;
- **Material Assets - Traffic:** Traffic flows within the site has the potential to create safety risks for pedestrians and cyclists;
- **Air Quality & Climate:** There is potential for impact on human health from a deterioration in air quality associated with emissions from vehicles.

The potential significant impact on human health have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.2 Landscape & Visual

During the construction phase, the following aspects would interact with landscape and visual and in the absence of mitigation may give rise to likely significant effects;

- **Land & Soils:** There is potential for impact on landscaping from the reuse of fill material and the appropriateness of available soils during the construction phase;

During the operational phase the potential interactions are:

- **Population & Human Health:** The landscape plan will impact on the quality of the private and public open spaces, which will impact on people's health and well-being;
- **Biodiversity:** The landscaping has significant interaction with biodiversity in relation to the planting; and

The potential significant impacts of landscape and visual have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.3 Material Assets: Traffic & Transport

During the construction phase, the following aspects would interact with traffic and transport and in the absence of mitigation may give rise to likely significant effects;

- **Noise & Vibration:** Construction traffic may give rise to localised noise and vibration effects; and,
- **Air Quality and Climate:** Emissions from construction traffic may impact local air quality and climate in terms of increased emissions of greenhouse gases from vehicles.

During the operational phase the potential interactions are;

- **Air Quality and Climate:** Emissions from traffic associated with future occupants may impact local air quality and climate in terms of increased emissions of greenhouse gases from vehicles.

The potential significant impacts of landscape and visual have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.4 Material Assets: Built Services

During the construction phase, the following aspects would interact with built services and in the absence of mitigation may give rise to likely significant effects;

- **Population & Human Health**: Connections to existing services may require a temporary interruption to existing services in the local area.
- **Water & Hydrology:** The construction of the proposed services (water supply, drainage and IT etc.) may affect the local hydrological and hydrogeological environment as there is a risk of suspended solids run off.

During the operational phase the potential interactions are;

- **Water & Hydrology:** There will be an increased demand on water supply.
- **Air Quality and Climate**: The built services have an interaction with climate in the availability and use of non-greenhouse gas reliant power and heat sources.

The potential significant impacts of built services have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.5 Land & Soils

During the construction phase, the following aspects would interact with land and soils and in the absence of mitigation may give rise to likely significant effects;

- **Land & Soils:** There is potential for impact on landscaping from the reuse of fill material and the appropriateness of available soils during the construction phase;
- **Water & Hydrology:** Site preparatory works (i.e. site clearance, re-profiling etc.) during the construction stage have the potential to impact on the hydrology and hydrogeology due to the risk of suspended solids becoming entrained in surface water runoff and accidental spills etc.
- **Biodiversity:** Site preparatory works have the potential to cause impact on the biodiversity of the site, through removal and disturbance of habitats and species.
- **Cultural Heritage:** Site clearance works may impact on sub-surface archaeology.

No potential operational interactions were identified.

The potential significant impacts of land and soils have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.6 Water & Hydrology

During the construction phase, the following aspects would interact with water and hydrology and in the absence of mitigation may give rise to likely significant effects;

- **Material Assets Built Services:** The construction of the proposed services (water supply, drainage and IT etc.) may affect the local hydrological and hydrogeological environment as there is a risk of suspended solids run off.
- **Land & Soils:** Site preparatory works (i.e. site clearance, re-profiling etc.) during the construction stage have the potential to impact on the hydrology and hydrogeology due to the risk of suspended solids becoming entrained in surface water runoff and accidental spills etc.
- **Biodiversity:** Any negative impact on water quality may impact biodiversity.

During the operational phase the potential interactions are;

- **Built Services:** There will be an increased demand on potable water supply and on the municipal drainage system.

The potential significant impacts of water and hydrology have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.7 Biodiversity

During the construction phase, the following aspects would interact with biodiversity and in the absence of mitigation may give rise to likely significant effects;

- **Land & Soils:** Site preparatory works have the potential to cause impact on the biodiversity of the site, through removal and disturbance of habitats and species.

- **Water & Hydrology:** Any negative impact on water quality arising from accidental spillages etc. may impact biodiversity.

During the operational phase the potential interactions are;

- **Landscape & Visual**: They quality of the landscaping plan and appropriateness of the species may significantly impact biodiversity.

The potential significant impacts of biodiversity have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.8 Noise & Vibration

During the construction phase, the following aspects would interact with noise and vibration and in the absence of mitigation may give rise to likely significant effects;

- **Population & Human Health:** There is potential for impact on human health associated with noise generated during the construction phase.
- **Traffic & Transport:** Construction traffic may give rise to localised noise and vibration effects.

No potential operational interactions were identified.

The potential significant impacts of noise and vibration have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.

14.2.9 Air Quality and Climate

During the construction phase, the following aspects would interact with air quality and climate and in the absence of mitigation may give rise to likely significant effects;

- **Population & Human Health:** There is potential for impact on human health from dust associated with construction activities.
- **Traffic & Transport:** Emissions from construction traffic may impact local air quality and climate in terms of increased emissions of greenhouse gases from vehicles.

During the operational phase the potential interactions are;

- **Population & Human Health:** There is potential for impact on human health from a deterioration in air quality associated with emissions from vehicles.
- **Traffic & Transport:** Emissions from traffic associated with future occupants may impact local air quality and climate in terms of increased emissions of greenhouse gases from vehicles.
- **Built Services:** The built services have an interaction with climate in the availability and use of non-greenhouse gas reliant power and heat sources.

14.2.10 Cultural Heritage

During the construction phase, the following aspects would interact with cultural heritage and in the absence of mitigation may give rise to likely significant effects;

- **Cultural Heritage:** Site clearance works may impact on sub-surface archaeology.

No potential operational interactions were identified.

The potential significant impacts of cultural heritage have been considered within the relevant discipline and mitigation measures outlined where required. With mitigation measures in place, no significant residual negative impacts are predicted.