

Section 15:
Interactions of the
Foregoing

15.1 INTRODUCTION

All environmental factors are inter-related to some extent. Interactions within the study area can be one-way interactions, two-way interactions and multiple-phase interactions may be influenced by the proposed development.

This purpose of this Chapter is to draw attention to significant interaction and interdependencies in the existing environment. This section has been prepared by **John Spain Associates, Planning & Development Consultants**, and deals with the likely interactions between effects predicted as a result of the proposed development. This is required by Part X of the Planning and Development Act 2000 and Schedules 5, 6 and 7 of the Planning and Development Regulations 2001.

The aspects of the environment likely to be significantly affected by the proposed development, during both the construction and operational phases, have been considered in detail in the relevant Chapters of this EIS document. In addition, likely interactions between one topic and another have been discussed under each topic Chapter by the relevant specialist consultant.

As this EIS document has been prepared by a number of specialist consultants an important aspect of the EIA process is to ensure that interactions between the various disciplines have been taken into consideration. In order to demonstrate the areas in which significant interactions are likely to occur and to grade these interactions, a matrix has been prepared and is presented in Table 15.1.

Where any environmental topic in the top row of the matrix (the receptors) is likely to be affected in any way by any element in the left-most column (the impactor), which contains the list of aspects of the environment likely to be significantly affected by the proposed development, the impact is described at the relevant intersection point on the matrix.

As demonstrated by the matrix, most inter-relationships are neutral in impact; however, certain inter-relationships are discussed further herein. All residual impacts are described with reference to the implementation of the mitigation measures described in this EIS document.

TABLE 15.1: ENVIRONMENTAL FACTORS INTER-RELATIONSHIP MATRIX

Impactor	Receptor								
	Human Beings	Cultural Heritage	Flora and Fauna	Soils, Water, etc	Air Quality & Climate	Noise & Vibration	Landscape & Visual Impact	Daylight & Sunlight	Material Assets
Human Beings		N/A	N/A	-	-	-	✓M	✓M	-
Cultural Heritage	-		N/A	-	N/A	N/A	N/A	N/A	N/A
Flora and Fauna	-	N/A		-	N/A	N/A	✓M	N/A	N/A
Soil, Water, Hydrology & Hydrogeology	-	N/A	-		N/A	N/A	N/A	N/A	N/A
Air Quality & Climate	-	N/A	-	-		N/A	N/A	N/A	N/A
Noise & Vibration	X SL*†	N/A	N/A	N/A	N/A		N/A	N/A	N/A
Landscape & Visual Impact	✓M	✓M	✓M	✓SI	N/A	N/A		N/A	N/A
Daylight and Sunlight	✓M	N/A	✓M	N/A	N/A	N/A	✓M		N/A
Material Assets	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Key	Potential Impact	Definition
-	Neutral	An interaction which does not affect the quality of the environment
✓	Positive	An interaction change which potentially improves the quality of the environment
x	Negative	An interaction change which potentially reduces the quality of the environment
N/A		Not Applicable

Key	Likely Significance	Definition
I	Imperceptible	Capable of measurement but without noticeable consequences
SI	Slight	Causes noticeable changes in the character of the environment without affecting sensitivity
M	Moderate	Alters character of environment consistent with existing and emerging trends
SIG	Significant	By its character, magnitude and duration or intensity alters a sensitive aspect of the environments
P	Profound	Obliterates sensitive characteristics

*Construction phase only

15.2 DISCUSSION OF IMPACTS

The rationale behind interactions which are given a neutral rating are set out below. As discussed above, all residual impacts are described with reference to the implementation of the mitigation measures described in this EIS document.

15.2.1 HUMAN BEINGS

Archaeological and Architectural Heritage

The proposed development has the potential to impact on the cultural heritage. The detailed range of mitigation measures provided in this EIS document, including comprehensive avoidance measures will ensure that the impact is likely to be 'Neutral'.

Flora & Fauna

The new urban population which will be delivered as a result of the proposed development has the potential to impact directly and indirectly on Flora & Fauna. However, with the suggested mitigation in place, the ecological impacts by this proposed development will be largely neutral and the mitigation measures will ensure that the impact of human beings on Flora & Fauna is likely to be 'Neutral'.

Soils, Water, Hydrology and Hydrogeology

The proposed infrastructure has the potential to impact directly and indirectly on both surface and subsurface water with respect to quality, quantity and flows. However, the detailed range of mitigation measures provided in this EIS document will ensure that the impact is likely to be neutral.

Air & Climate

The new urban population which will be delivered as a result of the proposed development has the potential to impact on air quality, primarily as a result of traffic movements. However, the detailed range of mitigation measures provided in this EIS document will ensure that the impact is likely to be 'Neutral'.

Noise & Vibration

The new urban population which will be delivered as a result of the proposed development has the potential to impact on noise and vibration, primarily as a result of traffic movements but also as a result of new residential dwellings and mixed use development. The detailed range of mitigation measures provided in this EIS document will ensure that the residual impact of the operational phase is likely to be 'Neutral'.

The demolition and construction phases of the development will result in short term increases in ambient noise levels as a result of construction activities; however the detailed range of mitigation measures provided in this EIS document will ensure that the impact is likely to be 'Slight'.

Landscape & Visual Impact

The proposed infrastructure which will be delivered as a result of the proposed development has the potential to impact on the landscape. The landscape character and local visual amenity will experience short-term moderately negative impacts arising from each phase of the mixed use development on account of the transitory and rapidly changing character of the proposed development site. Temporary hoardings/fencing at the perimeter of each phase of development will have a slightly negative visual impact, while incomplete structures and operational plant visible above the perimeter fencing will feature on the skyline in selected views during the remainder of each construction phase.

The detailed range of mitigation measures provided in this EIS document, including comprehensive landscaping measures will ensure that the impact is likely to be positive, representing an improvement on the current derelict and run-down appearance of the area.

Daylight and Sunlight

There will be a positive impact for future residents of the proposed development through the provision of open space areas which benefit from a good standard of sunlight access. It has been set out in Chapter 13 that the reduction daylight and sunlight access to surrounding properties is considered to be acceptable and is not attributable partly to the design of the neighbouring development. Taking into account all of the above, there will be a 'Neutral' impact on human beings as a result of the interaction with daylight and sunlight.

Material Assets

The new urban population which will be delivered as a result of the proposed development has the potential to impact on material assets, primarily as a result of increased loading on both natural and manmade infrastructure. The detailed range of mitigation measures provided in this EIS document, together with the fact that the development is largely supplying a need generated by the existing population, will ensure that the residual impact is likely to be 'Neutral'.

15.2.2 CULTURAL HERITAGE (ARCHAEOLOGICAL AND ARCHITECTURAL HERITAGE)

Human Beings

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with human beings.

Flora and Fauna

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with flora and fauna.

Soils, Water, Hydrology and Hydrogeology

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with the soils, water, hydrology and hydrogeology.

Air & Climate

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with the cultural heritage.

Noise & Vibration

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with noise and vibration.

Landscape & Visual Impact

The proposed development has the potential to have direct and indirect impacts on cultural heritage. It is considered that the proposed development, which will see the construction of a high-quality mixed use development will be sympathetic to the existing character and appearance of the area and will represent a significant improvement on the existing environment. It is therefore considered that there will be a positive impact on cultural heritage as a result of landscape and visual impact.

Daylight and Sunlight

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with daylight and sunlight.

Material Assets

There is unlikely to be any impact on cultural heritage as a result of the proposed development and interactions with material assets.

15.2.3 FLORA & FAUNA

Human Beings

Flora & Fauna has a positive direct and indirect impact on Human Beings improving the quality of their environment and providing irreplaceable indirect eco-system services. The proposed landscaping strategy for the site is likely to have a significant 'Positive' impact on Human Beings.

Archaeological and Architectural Heritage

There is unlikely to be any impact on flora and fauna as a result of the proposed development and interactions with archaeological and architectural heritage.

Soils, Water, Hydrology and Hydrogeology

There is a potential impact in terms of dust and soil run-off generated during the construction phase impacting on water quality and, as a result, flora and fauna. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral Impact'.

Air & Climate

The new urban population which will be delivered as a result of the proposed development has the potential to impact on flora and fauna, due to decreased air quality primarily as a result of construction. However, the detailed range of mitigation measures provided in this EIS document will ensure that the impact is likely to be 'Neutral'.

Noise & Vibration

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with the flora and fauna.

Landscape & Visual Impact

The provision of improved hard and soft landscaping, as part of the wider landscaping scheme for the area in conjunction with the proposed Phase 1 development will have beneficial impact in terms of the flora and fauna of the area.

Daylight and Sunlight

There will be a positive impact on flora and fauna as a result of its interaction with daylight and sunlight. Chapter 13 demonstrates that the public spaces proposed within the Phase 1A development have

good sunlight access, thus improving the opportunity for the introduction of flora in these spaces.

Material Assets

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with the flora and fauna.

15.2.4 SOIL, WATER, HYDROLOGY AND HYDROGEOLOGY

Archaeological and Architectural Heritage

Soil and subsoil will be excavated on site to facilitate the construction of the proposed development. This has the potential to impact negatively on subsurface archaeological features. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral Impact' on Cultural Heritage as a result of Soils & Geology.

Human Beings

There is a potential impact in terms of dust generated during the construction phase. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral' impact.

Flora & Fauna

There is a potential impact in terms of dust and soil run-off generated during the construction phase impacting on water quality and, as a result, Flora & Fauna. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral Impact'.

Air & Climate

There is a potential impact in terms of dust generated during the construction phase impacting on local air quality. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral Impact'.

Noise & Vibration

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with the soils, water, geology and hydrogeology.

Landscape & Visual Impact

Soil and subsoil will be excavated on site to facilitate infrastructure works and flood optimisation measures. Most soil excavated will be re-used on site in accordance with the mitigation measures. However, the range of mitigation measures proposed in this EIS

document is likely to ensure that there is a 'Neutral Impact' on Landscape as a result of soils and geology.

Daylight and Sunlight

There is unlikely to be any impact on soils, water, hydrology and hydrogeology as a result of the proposed development and interactions with daylight and sunlight.

Material Assets

There is unlikely to be any impact on soils, water, hydrology and hydrogeology as a result of the proposed development and interactions with material assets.

15.2.5 AIR QUALITY & CLIMATE

Human Beings

The proposed development has the potential to have a negative impact on air quality and climate during the construction phase. Such impact would be moderate and short term. However, the range of mitigation measures proposed in this EIS document is likely to ensure that there is a 'Neutral Impact' on Landscape as a result of air quality and climate.

Archaeological and Architectural Heritage

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with archaeological and architectural heritage.

Flora & Fauna

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with flora and fauna.

Soils, Water, Hydrology and Hydrogeology

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with the soils, water, hydrology and hydrogeology.

Noise & Vibration

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with noise and vibration.

Landscape & Visual Impact

There is unlikely to be any impact on landscape and visual impact as a result of the proposed development and interactions with the air quality and climate.

Daylight and Sunlight

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with daylight and sunlight.

Material Assets

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with the air quality and climate.

15.2.6 NOISE & VIBRATION

Human Beings

The proposed development has the potential to impact on human beings, due to increased noise & vibration primarily as a result of construction activity. However, the detailed range of mitigation measures provided in this EIS document will ensure that the impact is likely to be 'Neutral'.

Archaeological and Architectural Heritage

There is unlikely to be any impact on archaeological and architectural heritage as a result of the proposed development and interactions with the noise and vibration.

Flora & Fauna

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with flora and fauna.

Soils, Water, Hydrology and Hydrogeology

There is unlikely to be any impact on soils, water, hydrology and hydrogeology as a result of the proposed development and interactions with the noise and vibration.

Air & Climate

There is unlikely to be any impact on air quality and climate as a result of the proposed development and interactions with noise and vibration.

Landscape & Visual Impact

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with landscape and visual impact.

Daylight and Sunlight

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with daylight and sunlight.

Material Assets

There is unlikely to be any impact on noise and vibration as a result of the proposed development and interactions with material assets.

15.2.7 LANDSCAPE & VISUAL IMPACT

Human Beings

The local urban landscape character is likely to experience short-term moderately negative impacts arising from each phase of construction on account of the transitory and rapidly changing nature of the proposed development site during construction.

Temporary hoardings/fencing at the perimeter of each phase of development will have a slightly negative visual impact, while incomplete structures and construction plant visible above the perimeter fencing will feature on the skyline in selected views during the remainder of each construction phase, and are likely to have a moderately or highly negative impact on visual amenity in the short term.

However, the completed development will comprise a more natural extension to the surrounding residential areas and will enhance the visual environment for local residents, replacing the existing outdated buildings with contemporary houses and apartments as part of a larger mixed use development, including high-quality public open space by means of hard and soft landscape measures.

The impact is likely to be positive and moderate.

Archaeological and Architectural Heritage

The proposed development is likely to improve the setting and interface with adjoining Residential Conservations Areas and Protected Structures by way of adopting a more traditional layout and street pattern and by the use of complementary contemporary buildings styles.

Flora & Fauna

Existing habitat appears poor for bats, while the introduction of street trees and other green space should increase opportunities for foraging bats. Opportunities for foraging and shelter should also be increased for other fauna, including insects and birds, on account of proposed extensive tree and shrub planting, the use of native tree and shrub species where possible and the inclusion of flowering shrubs in proposed planting. Avoiding or minimising lighting in quieter parts of the site will be addressed at the detailed design stage, in combination with proposed planting, to afford opportunities for songbirds to nest.

Soils, Water, Hydrology and Hydrogeology

Opportunities to integrate sustainable urban drainage systems (SUDS) into the landscape design will be sought at the detailed design stage and are likely to have neutral or slightly positive impacts upon urban landscape character and visual amenity.

Air & Climate

As there are no significant areas of trees and shrubs within the existing site, the inclusion of trees and tall shrubs within the proposed development is likely to produce a slight reduction in wind-speeds and improve comfort within streets and public open spaces.

Noise & Vibration

There is unlikely to be any impact on landscape and visual impact as a result of the proposed development and interactions with noise and vibration.

Daylight and Sunlight

The good sunlight access to open spaces within the proposed Phase 1A development will increase opportunities for the use of these spaces, and will in turn create a vibrant and useable space. This will have a moderate positive impact upon the landscape and visual impact of the area.

Material Assets

There is unlikely to be any impact on landscape and visual impact as a result of the proposed development and interactions with material assets.

15.2.8 MATERIAL ASSETS

Human Beings

Soil and subsoil will be excavated on site to facilitate construction works. Most soil excavated will be re-used on site in accordance

with the mitigation measures. As a result, there will be a neutral impact on Material Assets.

Archaeological and Architectural Heritage

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with archaeological and architectural heritage.

Flora & Fauna

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with flora and fauna.

Soils, Water, Hydrology and Hydrogeology

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with soils, water, hydrology and hydrogeology.

Air & Climate

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with air quality and climate.

Noise & Vibration

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with noise and vibration.

Landscape & Visual Impact

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with landscape and visual impact.

Daylight and Sunlight

There is unlikely to be any impact on material assets as a result of the proposed development and interactions with daylight and sunlight.

15.2.9 DAYLIGHT AND SUNLIGHT IMPACT

Human Beings

There will be a positive impact for future residents of the proposed development through the provision of open space areas which benefit from a good standard of sunlight access.

Archaeological and Architectural Heritage

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with archaeological and architectural heritage.

Flora & Fauna

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with flora and fauna.

Soils, Water, Hydrology and Hydrogeology

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with soils, water, hydrology and hydrogeology.

Air & Climate

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with air quality and climate.

Noise & Vibration

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with noise and vibration.

Landscape & Visual Impact

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with landscape and visual impact.

Material Assets

There is unlikely to be any impact on daylight and sunlight as a result of the proposed development and interactions with material assets.