21 SUMMARY OF RESIDUAL IMPACTS

21.1 INTRODUCTION

This Chapter of the EIAR collates the predicted residual impacts on the environment as identified in Chapters 5 to 18, arising from the Proposed Development, during Construction and Operational Phases.

Residual Impacts, according to the Draft EPA Guidelines (2017, p.3) are: -

> *"The final or intended effects which occur after the proposed mitigation measures have been implemented."*

A summary of the Proposed Mitigation Measures are outlined under Chapter 19: Summary of Mitigation Measures.

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20.1.1 Population & Human Health (Chapter 5)

Proposed Development

In relation to population, the residual impacts of a large population increase are long term and positive. For Human Health, the potential for improvements in health relate to the improved access to open space and services.

Construction Phase

Effects on population and health during the Construction Phase are expected under different environmental topics and will be mitigated as described in the other relevant chapters throughout this EIAR. Once mitigation measures have been implemented the residual effects are expected to be limited to minor or insignificant levels as described in other associated residual impacts sections relating to the Construction Phase.

Operational Phase

The effects for an increase in population as a result of the Operational Phase are expected to be positive, long term and significant. No mitigation measures are expected during operation of the Proposed Development that would alter the anticipated impacts therefore they remain as described.

As above, potential effects to human health are considered elsewhere in this EIAR and the discussion will not be repeated in this chapter. Following the implementation of the mitigation measures described in the respective chapters, the operational effects on human health are not expected to be significant.

Worst Case Impact

The precautionary principle has been applied throughout this assessment and as such the worst-case scenario has been accounted for.

20.1.2 Biodiversity (Chapter 6)

Proposed Development

There will be a limited loss of feeding within the Site for bats and birds and a loss of nesting areas for birds. Vegetation will establish over time and these losses will be reduced considerably. There will still be less cover for birds following all mitigation. There will be very limited (neutral to slight negative) long-term impact upon bats within the Site given the low level of bat activity noted. There will be no loss of roost potential as the Site develops.

The biodiversity-focused planting, as set out in the landscape specifications that accompany the application, will ultimately enhance the biodiversity value of the completed development.

Cumulative

Neither the development proposed (Phase 1F) nor any other developments will give rise to any significant impacts on biodiversity and there are no predicted cumulative impacts in relation to biodiversity, for example in terms of habitat loss or disturbance to protected species, as a result of the Proposed Development in combination with existing / proposed plans or projects.

20.1.3 Land, Soils and Geology (Chapter 7)

The residual effects are the final predicted or intended effects that occur after the proposed mitigation measures have been implemented to avoid or reduce adverse impacts. There are no significant residual impacts on land, soils, geology and hydrogeology anticipated for the Proposed Development.

Construction Phase

The predicted overall residual impact of the Proposed Development on land soils and hydrogeology during the Construction Phase will be neutral / imperceptible.

The magnitude of impact of Accidental Spillages with respect to both soils and groundwater water quality is considered to reduce to negligible as a result of good construction practice and management of hazardous materials/fuels etc. on site, and as consequence the significance of impact is considered to be imperceptible.

Source	Impact / Path	Potential Receptor	Significance
Earthworks	Loss of Soil Cover, Soil Erosion, Compaction	Land, Soils, Geology	Imperceptible
	Excavation	Land, Soils, Geology	Imperceptible
		LI Aquifer	Imperceptible
	Surplus and Unsuitable Soils	Land, Soils, Geology	Imperceptible
Accidental Spillages	Infiltration	Land, Soils Geology	Imperceptible
		LI Aquifer	Imperceptible

Table 7-16: Summary of Residual Impacts of the Proposed Development – Construction Phase.

Operational Phase

The predicted overall residual impact of the Proposed Development on land soils and hydrogeology during the Operational Phase will be neutral / imperceptible.

Source	Impact / Path	Potential Receptor	Significance
Reduction in Recharge	Increase in Impermeable Area	LI Aquifer	Imperceptible

Table 7-17: Summary of Residual Impacts of the Proposed Development – Operational Phase.

Cumulative

The predicted overall residual impact of the cumulative development on land, soils, geology and hydrogeology during the Construction and Operational Phases will be imperceptible.

20.1.4 Water (Chapter 8)

Proposed Development

Construction Phase

With the introduction of the proposed mitigation measures, the significance of the potential effects are considered to reduce/remain as follows: -

Source	Path	Potential Receptor	Significance
Earthworks	Combined with Runoff – drain network, ditches, overland	Baldoyle / Mayne Estuary, Mayne River Sluice River	Imperceptible
			Imperceptible
			Imperceptible
Oils, Fuels, Chemicals	Direct to or combined with Runoff – drain network, ditches, overland	Baldoyle / Mayne Estuary, Mayne River Sluice River	Imperceptible
			Imperceptible
			Imperceptible
Concreting Operations	Combined with Runoff – drain network, ditches	Baldoyle / Mayne Estuary, Mayne River Sluice River	Imperceptible
			Imperceptible
			Imperceptible

Table 8-9: Significance of Potential Effects of the Proposed Development – Construction Phase with Mitigation.

The predicted overall residual effect of the Proposed Development on hydrology during Construction Phase will be imperceptible.

Operational Phase

With the incorporation of the proposed design features and mitigation measures, the significance of the potential effects are considered to reduce as follows: -

Source	Path	Potential Receptor	Significance
Flooding	Combined with flood waters – drain network, ditches, overland	Baldoyle/Mayne Estuary, Sluice River/Mayne River Development Vulnerability	Imperceptible
			Imperceptible
			Imperceptible

Oils and Fuels	Direct to or combined with Runoff – drainage network.	Baldoyle/Mayne Estuary, Mayne River	Imperceptible
			Imperceptible
Emergency Foul Overflows & Leaks	Combined with Surface Water – drain network, ditches, overland	Baldoyle/Mayne Estuary, Mayne River Sluice River	Imperceptible
			Imperceptible
			Imperceptible

Table 8.10: Significance of Potential Effects of the Proposed Development – Operational Phase with Mitigation.

The predicted overall residual effect of the Proposed Development on hydrology during the Operational Phase will be imperceptible.

Cumulative

Construction Phase

The predicted overall residual effect of the proposed cumulative development on hydrology during the Construction and Operational Phases will be imperceptible.

20.1.5 Climate (Air Quality) (Chapter 9)

Proposed Development

Construction Phase

To minimise dust emissions during construction, a series of mitigation measures have been prepared as outlined in Section 9.6.1 Provided the dust minimisation measures are adhered to, the predicted residual air quality impacts during the construction phase are ***direct, short-term, negative, imperceptible*** and ***not significant***.

Human Health

Best practice mitigation measures are proposed for the construction phase of the proposed development, which will focus on the proactive control of dust and other air pollutants, to minimise generation of emissions at source. The mitigation measures that will be put in place during construction will ensure that the impact complies with all EU ambient air quality legislative limit values (set out in Directive 2008/50/EC), which are based on the protection of human health (Table 9.1). Therefore, the predicted residual, dust-related, human health impact of the construction phase of the proposed development is ***direct, short-term, negative, imperceptible*** and ***not significant***.

Operational Phase

Air Quality

The operational traffic associated with the proposed development was reviewed and a detailed air quality assessment has been scoped out as none of the road links impacted by the Proposed Development satisfy the TII scoping assessment criteria in Section 9.2.2.1. Therefore, the operational phase impact to air quality is ***direct, long-term, negative, imperceptible*** and ***not significant.***

Human Health

A detailed air quality assessment of operational phase traffic has been scoped out as there is no potential for significant impacts to air quality with respect with human receptors. Section 9.2.2.1 determined that the impact to air quality during the operational phase of the proposed development is ***direct, long-term, negative, imperceptible*** and ***not significant***.

20.1.6 Climate (Climate Change) (Chapter 10)

Proposed Development

The proposed development will result in some impacts to climate through the release of GHGs. TII state that the crux of assessing significance is *"not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".* The proposed development has proposed some best practice mitigation measures and is committing to reducing climate impacts where feasible. As per the assessment criteria in Table 10.3 the impact of the proposed development in relation to GHG emissions is considered ***direct, long-term, negative*** and ***not significant*** provided the final design and construction phase take account of GHG mitigation measures set out in Section 10.7 and local and national Climate Action Plans.

In relation to climate change vulnerability, it has been assessed that there is a low risk due to future climate change hazards. This risk will be mitigated where possible to reduce the vulnerability of the site. The residual effect of climate change on the proposed development is considered ***direct, long-term, negative*** and ***not significant***.

Cumulative

With respect to the requirement for a cumulative assessment PE-ENV-01104 (TII, 2022a) states that *"for GHG Assessment is the global climate and impacts on the receptor from a project are not geographically constrained, the normal approach for cumulative assessment in EIA is not considered applicable".*

However, by presenting the GHG impact of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. Therefore, the assessment approach is inherently cumulative. In addition, the IEMA guidance has addressed the issue of cumulative assessment and has stated that *"all global cumulative GHG sources are relevant to the effect on climate change, and this should be taken into account in defining the receptor (the atmospheric concentration of GHGs) as being of 'high' sensitivity to further emissions. Effects of GHG emissions from specific cumulative projects therefore in general should not be individually assessed, as there is no basis for selecting any particular (or more than one) cumulative project that has GHG emissions for assessment over any other." (IEMA, 2022).*

20.2 CLIMATE (SUNLIGHT AND DAYLIGHT) (CHAPTER 11)

Proposed Development

Construction Phase

As no ameliorative, remedial, or reductive development is proposed, the residual impact of the Proposed Development on sunlight access is predicted to be as described under Section 10.5.1.1 above.

Operational Phase

As no ameliorative, remedial, or reductive development is proposed, the residual impact of the Proposed Development on sunlight access is predicted to be as described under Section 10.5.1.2 above

20.2.1 Air (Noise and Vibration) (Chapter 12)

This section summarises the likely noise impact associated with the Proposed Development, taking into account the mitigation measures.

Proposed Development

Construction Phase

During the Construction Phase of the project there will be a short-term noise impact on nearby noise sensitive properties from site activities and the close proximity of adjacent buildings. The application of binding noise limits, hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration are kept to minimised. At location N1 a negative, slight to significant and temporary effect is likely depending, with the most significant effects occurring when works take place at the closest boundary to the receptor.

All other identified noise sensitive locations at greater distances from the Proposed Development will experience a negative, slight and short-term effect.

Operational Phase

Additional Traffic on Surrounding Roads

The predicted change noise levels associated with additional traffic is predicted to be of imperceptible impact along the existing road network. In the context of the existing noise environment, the overall effect from noise contribution of increased traffic is considered to be of neutral, imperceptible and long-term effect to nearby noise sensitive locations.

Building Services Plant

With the installation of Logic Air heat pumps (or an equivalent heat pump) for building services noise as described in Section 12.4.4 the range of potential noise levels is not expected to add significantly to the existing noise environment. The resultant noise effect from this source once plant is considered will be of negative, not significant, long-term impact.

Worst Case Impact

Impact on nearby noise sensitive properties from site activities and the close proximity of adjacent buildings if all items of plant assessed will be in operational simultaneously. However, this is unlikely to occur in practicality and would only be momentary to brief in occurrence.

Cumulative

Given that a cumulative assessment of operations has been considered, impact remain the same as those identified above.

Construction Phase

As per Section 12.8.1.1.

Operational Phase

As per Section 12.8.1.2.

Worst Case Impact

As per Section 12.8.1.3.

20.2.2 Landscape and Visual Impact (Chapter 13)

Proposed Development

Construction Phase

Any development will give rise to some degree of landscape and visual impact. The greatest impacts tend to occur during the temporary / short-term Construction Phase when site disturbance associated with stripping of soils and movement of machinery may be unfamiliar and draws particular visual attention to the Site.

No trees or hedgerows are impacted.

The Phase 1F Site is limited in extent and in part has been previously disturbed by construction and related works associated with Phases 1D & 1E. Construction works will be most be most visible from properties within the adjoining Phases 1B, 1C, 1D & 1E at St. Marnock's Bay and from the adjoining ecological and landscape buffer lands to the north and east, as well as from more distant viewpoints on coast road and east of Baldoyle Bay. Construction works will also be visible from the rear of 8 existing properties on R106 Coast Road / Station Road to the north and east of the site. Views of similar construction activity is already a feature of these views. The degree of landscape and visual change associated with the Construction Phase is Medium.

As set out at section 13.3.4, the sensitivity of the receiving Phase 1F landscape is assessed as being Moderate and the Magnitude of Change is considered Medium. The landscape impact of the Construction Phase is assessed as being of Slight to Moderate Negative Short-term Significance.

The sensitivity of the receiving visual environment and the Magnitude of Change are considered Medium. The visual impact of the Construction Phase is assessed as being of Moderate Negative Short-term Significance.

Operational Phase

On completion of the Construction Phase a new development will establish its presence on the environmental, physical and visual character of its environs. In this regard landscape and visual impacts must also be considered within the context of existing, planned, emerging and likely future development proposals for the area. The Phase 1F development is being provided in accordance with the approach and principles established in the Portmarnock South LAP. The LAP provided a detailed analysis of the area and provided a development framework for the lands, identifying development zones, as well as open spaces, green networks, connections and linkages, etc. The previous phases (1A, 1B, 1C, 1D & 1E) and the current Proposed Development (Phase 1F) are provided in accordance with these requirements, which are also included in Objective CSO66 in the Fingal Development Plan 2023-2029.

Landscape Impact

It is considered that the Proposed Development is appropriately sited, designed and laid out so as to be capable of being fully integrated into the new emerging residential character of the wider area. This integration is underpinned by the architectural approach and by the landscape masterplan and landscape strategy that acknowledges and builds on the requirements of the former LAP, the Development Plan and the emerging character and finishes established in Phases 1A to 1E.

Therefore, the Proposed Development will have a positive impact on the emerging local character, and will not adversely impact on sensitive landscape characteristics, *e.g.* coastal setting and character or views to and from this landscape. It is considered that the Operational Phase of the development will make a continued positive contribution to the emerging residential community of the wider area. The degree of landscape change associated with the Construction Phase is Medium.

As set out at section 13.3.4, the sensitivity of the receiving landscape environment is assessed as being Moderate and the Magnitude of Change is considered Medium. The landscape impact of the Operation Stage is assessed as being of Moderate Positive Medium to Long-term Significance.

Visual Impact

The Proposed Development is situated to the east of the existing Phases 1B and 1C development and north of Phases 1D and 1E (under construction) and will complete the northern and eastern extent of residential development on zoned lands in the Portmarnock South area.

The design and layout of the Proposed Development is in-keeping with the development framework for the lands and in-keeping with the architectural design and detailing of previous phases of permitted / constructed residential development on the lands.

As such, initially while prominently visible, the Phase 1F development will eventually be subsumed into the physical and visual build-out of the wider masterplan. Properties which define the northern and eastern edge of the Phase 1F development will be more visible from the north and east and as such, have been specifically designed as 'edge properties' with a distinctive design and material finish, which is in-keeping with the approach permitted under Phase 1E to the south. Likewise the proposed properties at the southeast corner of the site are laid out in a crescent – as per the adjoining section in Phase 1E – defining the open space and protected landscape of the Recorded Monument located at the southern end of 'Monumental Way'.

As with Phase 1A to 1E, the Proposed Development follows the framework and principles established in the now lapsed Portmarnock South LAP and is also consistent with the requirements of Objective CSO66 of the Fingal Development Plan. The degree of visual change associated with the Construction Phase is Medium.

As set out at section 13.3.4, the sensitivity of the receiving visual environment and the Magnitude of Change are considered Medium. The visual impact of the Operation Phase is assessed as being of Moderate Positive Medium to Long-term Significance.

Photomontages

Photomontages of the Proposed Development have been prepared and included in Appendix 13.1 of the EIAR. Each view is presented in an 'As Existing' and 'As Proposed' version. The location of the Photomontage Views are shown on Figure 13.4. The views have been selected on the basis that they present the highest potential for visual impact within the existing landscape.

Figure 21.4: Location of Photomontages (extract from Figure 1.0 Photomontages Booklet, BSM, 2025).

View 1: Golf Links Road opposite Public Carpark, Portmarnock

The existing view is expansive and wide-ranging across the flat saltmarsh landscape of Baldoyle Bay. The view runs from existing development at Portmarnock and Portmarnock South (Phase 1A, 1B 1C & 1D) to the Dublin Mountains further south (out of view on left-hand side). Higher apartment development at Marrsfield / Beltree in Clongriffin is visible south of (beyond) the Portmarnock South lands.

The proposed view sees the continuation east of the existing residential development at St. Marnock's Bay. The proposed view is in-keeping with the character of existing and emerging nature of development in the area and the Phase 1E development does not alter or adversely impact the sensitivity or significance of landscape or visual characteristics in the area.

View 2: Golf Links Road opposite Strandmill Road, Portmarnock

The existing view is expansive and wide-ranging across the flat saltmarsh landscape of the northern end of Baldoyle Bay. The view runs from existing development at Portmarnock and Portmarnock South to the Dublin Mountains in the background further south.

The proposed view sees the continuation east of existing residential development at St. Marnock's Bay. The proposed view is in-keeping with the character of existing and emerging nature of development in the area. The Phase 1E development does not alter or adversely impact the sensitivity or significance of landscape or visual characteristics in the area.

View 3: Strand Road, Portmarnock (north of Portmarnock Bridge)

The eastern part of the existing view is south across the low grasslands edging the saltmarsh landscape of Baldoyle Bay. Moving west the view is along Strand Road to existing residential development fronting the junction between Strand Road and Station Road. Roofs of buildings within Phase 1B / 1C at St. Marnock's Bay are visible over the houses.

The proposed continuation east of residential development at St. Marnock's Bay in Phase 1E is not visible from this viewpoint – screened as it is by foreground vegetation. The Phase 1E development has no impact on the sensitivity or significance of landscape or visual characteristics in the area.

View 4: Baldoyle to Portmarnock Greenway, Portmarnock South

The existing view is southwest from the Baldoyle to Portmarnock Greenway to the immediate north of the residential zoned lands at St. Marnock's Bay. The view includes existing residential development and on-going construction works at Portmarnock South.

The proposed view sees the continuation east of residential development at St. Marnock's Bay. While the Proposed Development will be visible in the view, it will be in-keeping with the character of existing and emerging nature of residential development in the area. The Phase 1E development does not alter or adversely impact the sensitivity or significance of landscape or visual characteristics in the area.

View 5: Baldoyle to Portmarnock Greenway, Portmarnock South

The existing view is west from the Baldoyle to Portmarnock Greenway located on open space lands to the immediate east of the residential zoned lands at St. Marnock's Bay. The view includes existing residential development and on-going construction works at Portmarnock South. The palisade fence, which encloses the recorded monument, is visible from the Greenway.

The proposed view sees the continuation east (toward the viewer) of residential development at St. Marnock's Bay – in effect completing the south-eastern extent of residential development on zoned

lands. The edge of new development will be visible in the background of the recorded monument. While the Proposed Development will be visible in the view, it will be in-keeping with the character of existing and emerging nature of development in the area and does not alter or adversely impact the sensitivity or significance of landscape or visual characteristics in the area.

View 6: R106 Coast Road, south of junction with Mayne Road

The existing view is north along the R106 Coast Road from south of the junction with Moyne Road. Existing residential development in St. Marnock's Bay is either not visible or barely visible in the background.

The Phase 1E will be slightly more visible in the proposed view. However, the Phase 1E development does not alter or adversely impact the sensitivity or significance of landscape or visual characteristics in the area.

View 7: Southern end of Baldoyle to Portmarnock Greenway (close to Red Arches Road junction with R106 Coast Road)

The existing view is north along the recently completed greenway, which parallels the R106 Coast Road. Existing residential development in St. Marnock's Bay is visible in the background.

The Phase 1E development will be visible as it moves further east on the ridge – however, in the context of wide-ranging view, the development does not alter or adversely impact the sensitivity or significance of any landscape or visual characteristics in the area.

Worst Case Impact

In a scenario where mitigation measures were not implemented or failed the worst-case landscape and visual impact of the Construction Phase is assessed as being of Moderate Negative Short-term Significance.

In a scenario where mitigation measures were not implemented or failed the worst-case landscape and visual impact of the Operational Phase is assessed as being of Moderate Negative Medium to Long-term Significance.

Cumulative

Construction Phase

The sensitivity of the receiving wider landscape and visual environment is assessed as being Medium and the Magnitude of Change is considered Medium. The cumulative landscape and visual impact of the Construction Phase is assessed as being of Moderate Negative Short-term Significance.

Operational Phase

The sensitivity of the receiving wider landscape and visual environment is assessed as being Medium and the Magnitude of Change is considered Medium. The cumulative landscape and visual impact of the Operation Stage is assessed as being of Moderate Positive Medium to Long-term Significance.

Worst Case Impact

In a scenario where mitigation measures were not implemented or failed the worst-case cumulative landscape and visual impact of the Construction Phase is assessed as being of Moderate Negative Short-term Significance.

In a scenario where mitigation measures were not implemented or failed the worst-case cumulative landscape and visual impact of the Operation Phase is assessed as being of Moderate Negative Short to Medium-term Significance.

20.2.3 Material Assets (Transportation) (Chapter 14)

Proposed Development

Construction Phase

There will be minor impacts on the safety or operation of the road network as a result of the construction stage of all phases (proposed and future) of the development. Having consideration for the mitigation measures outlined above, any impacts during the construction stage will be negligible. All construction related traffic will be outside the morning and evening peak hours and will not have a significant impact the operation of the adjoining junctions. Furthermore, they will be temporary in nature and of relatively short duration.

Operational Phase

2028 Opening Year (Phase 1F Development)

In the 2028 opening year (Phase 1F development), Junction 2 to Junction 4 will operate within the normal design threshold except the following scenarios:

- Junction 2 in the evening peak hour in 2028 for the "with" Phase 1F development scenario (but still not greater than its theoretical capacity of 1.0), resulting in queues and delays for motorists, and
- Junction 3 in the morning peak hour in 2028 for both the "without" development and "with" Phase 1F development scenarios (but still not greater than its theoretical capacity of 1.0), resulting in queues and delays for motorists.

For Junction 1, it will exceed the normal design threshold in both the morning and evening peak hours in 2028 for both the "without" development and "with" Phase 1F development scenarios, resulting in substantial queues and delays for motorists. The analysis concurs with the observations made in the South Fingal Transport Study (2012) referenced previously in the now expired Portmarnock South LAP. The study concludes that this junction will undergo capacity issues in the future and recommended that an upgrade of the junction is explored.

However, the analysis indicates that the impact on those concerned junctions will be mainly due to regular background traffic growth but not the proposed development per se. Therefore, traffic from the proposed Phase 1F development will not cause a significant impact on Junctions 1 to 4 inclusive for the 2028 opening year (Phase 1F development).

2043 Design Year (Phase 1F Development and Entire Development)

In 2043 design year (Phase 1F Development and Entire Development), Junction 4 will operate within the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1F/Entire Development scenarios.

Junction 1 to Junction 3 will exceed the normal design threshold in both the morning and evening peak hours in 2043 for both the "without" development and "with" Phase 1F/Entire Development scenarios, but the following junctions and scenarios with RFC/DOS not greater than its theoretical capacity of 1.0:

- Junction 2 in the morning peak hour in 2043 for both the "without" development and "with" Phase 1F/Entire Development scenarios,
- Junction 2 in the evening peak hour in 2043 for the "without" development scenario, and

- Junction 3 in the evening peak hour in 2043 for both the "without" development and "with" Phase 1F/Entire Development scenarios.

However, the analysis indicates that the impact on those concerned junctions will be mainly due to regular background traffic growth but not the proposed Phase 1F/Entire Development per se. Therefore, traffic from the proposed Phase 1F/Entire Development will not cause a significant impact on Junctions 1 to 4 inclusive for the 2043 design year (Phase 1F/Entire Development).

Conclusion

The analysis indicates that the impact on those concerned junctions will be mainly due to regular background traffic growth but not the proposed development per se. Therefore, traffic from the proposed Phase 1F/Entire development will not cause a significant impact on Junctions 1 to 4 inclusive for the 2028 opening year and 2043 design year (Phase 1F/Entire development).

The residual impacts from both the Proposed Development (Phase 1F/Entire) and background traffic growth will be mitigated with the improvements of the public transport network (DART and BusConnects) and cycling infrastructure throughout Dublin. The proposed development will provide adequate pedestrian and cycle linkages to both existing and future sustainable travel facilities and modes which will encourage a greater number of Portmarnock residents to choose sustainable transport modes.

Worst Case Impact

It is noted that the junction analysis for the Entire Development is a robust and conservative analysis.

The Entire Development 2043 analysis assumes that little additional transport interventions have been applied to the road network in the Fingal area and presents a "worst-case" situation where the full impact of population growth and employment distribution is assigned to the existing road network.

Nevertheless several committed road schemes and junction upgrades in the Fingal / North Dublin City area are to be implemented in the coming years. It is difficult to quantify the exact impact these upgrades will have on the surrounding road network, but it is clear it will be positive. These road/junction upgrades will likely take traffic away from the smaller junctions around the entire development.

The analysis also does not consider that by 2043 further sustainable transport improvements in the Fingal area such as improved DART services, Bus Connects, cycle schemes and additional government initiatives are likely to be in place, which in turn will all have a positive effect on the modal split, reducing the impact on surrounding junctions.

Cumulative (Entire Development)

Construction Phase

As per Section 14.7.1.1.

Operational Phase

As per Section 14.7.1.2.

Worst Case Impact

As per Section 0.

20.2.4 Material Assets (Waste) (Chapter 15)

The implementation of the mitigation measures outlined in Section 16.6 will ensure that targeted rates of reuse, recovery and recycling are achieved at the site of the Proposed Development during the construction and operational phases. It will also ensure that European, National and Regional legislative waste requirements with regard to waste are met and that associated targets for the management of waste are achieved.

Construction Phase

A carefully planned approach to waste management as set out in Section 16.6.1 and adherence to the RWMP (which includes mitigation) (Appendix 16.1) during the construction phase will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of prevention reuse, recycling and recovery is achieved, the predicted impact of the construction phase on the environment will be **short-term, imperceptible** and **neutral.**

Operational Phase

During the operational phase, a structured approach to waste management as set out in Section 16.6.2 and adherence to the OWMP (which includes mitigation) (Appendix 16.2) will promote resource efficiency and waste minimisation. When the mitigation measures are implemented and a high rate of reuse, recycling and recovery is achieved, the predicted impact of the operational phase on the environment will be **long-term, imperceptible** and **neutral.**

Worst Case Impact

In a worst-case scenario, if no mitigation measures found in section 16.6 or in Appendixes 16.1 and 16.2 are followed, lack of waste prevention, poor onsite waste management, non-permitted waste contractors or unauthorised waste facilities could give rise to inappropriate management of waste offsite and result in negative environmental impacts or pollution as shown in section 16.5.

20.2.5 Material Assets (Utilities) (Chapter 16)

Proposed Development

Construction Phase

Implementation of the measures outlined in Section 16.6 will ensure that the potential impacts of the proposed development on the site's material assets do not occur during the Construction Phase and that any residual impacts will be short term.

Operational Phase

The demand on power supply, water services, telecommunications and broadband will all increase due to the development of the lands. The development of the lands is expected to be finalised in Q2 2027.

Residual impacts will be permanent and imperceptible.

20.2.6 Cultural Heritage (Architectural & Archaeological) (Chapter 17)

Proposed Development

Construction Phase

No residual effects during Construction Phase were identified during the course of the assessment on archaeological or cultural heritage. Should any archaeological remains be uncovered, they will be

fully resolved by preservation in situ or by record under advice from the National Monuments Service prior to the main Construction Phase.

Operational Phase

No residual effects were identified during operation stage.

Worst Case Impact

Within the worst case scenario an archaeological site would be removed without full recording taking place and there would be no record or archive of the Site. Archaeological monitoring mitigates against scenario from occurring.

Cumulative

Construction Phase

There are no significant residual, cumulative impacts anticipated to archaeological, built heritage and cultural heritage assets as a result of the construction of Phase 1E.

The monument (DU015-055, a below ground enclosure and projecting linear parallel ditches that extend out towards the coast, which lies adjacent to the west but outside the proposed Phase 1E development, will be retained in situ in a designed public open space that will reflect the physical expression of this subsurface archaeological monument. The application for this park was submitted by Fingal County Council and approved by An Bord Pleanála (ABP Case Ref. JP06F.311315). While this public space area does not form part of Phase 1E development, it will enhance the development and provide protection to the subsurface archaeological remains and as such is seen as a potential positive cumulative and residual impact.

Operational Phase

No cumulative mitigation measures were identified in relation Phase 1E during the Operational Phase.

Worst Case Impact

Within the worst case scenario an archaeological site would be removed without full recording taking place and there would be no record or archive of the Site. The extent of archaeological investigation including excavation within the Portmarnock lands protects against this scenario from occurring. Archaeological monitoring mitigates against this scenario from occurring.

20.2.7 Risk Management (Major Accidents & Disasters) (Chapter 18)

The risk of a major accident and / or disaster during the Construction Phase of the Proposed Development is considered low.

The risk of a major accident and / or disaster during the Operational Phase of the Proposed Development is considered medium.