20 SUMMARY OF RESIDUAL IMPACTS AND CUMULATIVE IMPACTS

20.1 Introduction

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

Residual Impacts, according to the EPA Guidelines (2022) 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 23: Summary of Mitigation Measures.

20.2 Population & Human Health (Chapter 5)

This section refers to both plots of the Proposed Development.

Construction Stage

Residual Impacts are defined *as "effects that are predicted to remain after all assessments and mitigation measures"*. Based on the fact there are no mitigation measures proposed for population and human health, the residual impacts will be the same as those detailed in Section 4.5 of this chapter.

Construction stage residual effects are outlined in Table 20.1 below. These are applicable to both Plot 1 and Plot 2.

Operational Stage

Residual Impacts are defined *as "effects that are predicted to remain after all assessments and mitigation measures"*. Based on the fact there are no mitigation measures proposed for population and human health, the residual impacts will be the same as those detailed in Section 4.5 of this chapter.

Operational stage residual effects are outlined in Table 5-23 below. These are applicable to both Plot 1 and Plot 2.

Cumulative Effects

A number of cumulative schemes were considered as identified in Chapter 3.

Cumulative impacts often arise due to potential pollution and nuisance during the construction phase in the absence of mitigation measures. However, good construction management practices, as outlined within the CEMP and RWMP will minimise the risk of pollution from construction activities at the site. Due to the full implementation of management controls to avoid adverse environmental impacts from the current Proposed Development and the permitted off-site projects, it is not expected that cumulative effects from these developments are likely to result in significant adverse effects on the population and human health.

During the operational phase, it is not expected that the proposed development will have a cumulative effect, together with the cumulative schemes, on the surrounding environment.

Table 20-1 – Construction Stage Residual Impacts

Activity	Receptor	Predicted Impact	Quality	Significance	Duration	Type	Mitigation Measures	Residual Effect
Construction Phase								
Construction phase noise	Noise Sensitive Locations	Noise impacts	Neutral	Slight	Short term	Direct	Mitigation measures proposed in Chapter 12.	Slight
Construction phase related traffic	Sensitive Receptors	Air quality impacts Nuisance	Negative	Slight	Short term	Direct	Mitigation measures proposed in Chapter 9 and CEMP.	Slight
Construction Phase Employment	Study Area	Local Employment	Positive	Slight	Short term	Direct	N/A	Slight
Operational Phase								
Operational phase noise	Noise Sensitive Locations	Noise impacts	Neutral	Imperceptible	Long term	Direct	Mitigation measures proposed in Chapter 12.	Imperceptible
Operational phase related traffic	Receptors within 250m	Air quality impacts	Negative	Negligible	Medium to long term	Direct	Mitigation measures proposed in Chapter 9.	Imperceptible
Operational phase related traffic	Noise Sensitive Receptors (listed in Chapter 9)	Noise impacts	Negative	Low	Medium to long term	Direct	Mitigation measures proposed in Chapter 12.	Slight

20.3 Biodiversity (Chapter 6)

The residual impacts are the same for Plot 1 (Luttrellstown Gate Phase 2), Plot 2 (St. Mochta's LRD) and the cumulative of both Sites of the Proposed Development. Therefore, **Error! Reference source not found.** below outlines information for all three aspects of the Proposed Development.

Residual impacts are defined as '*effects that are predicted to remain after all assessments and mitigation measures*'. They are the remaining 'environmental costs' of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts. Potential residual impacts from the proposed development were considered as part of this environmental assessment. **Error! Reference source not found.** in Chapter 6 provides a summary of the impact assessment for the identified KERs and details the nature of the impacts identified, mitigation proposed and the classification of any residual impacts.

All mitigation measures detailed in this Chapter will be implemented in full and will remain effective throughout the lifetime of the facility. Therefore, no significant negative residual impacts on the local ecology or on any designated nature conservation sites will result from the Proposed Development.

20.4 Land, Soils and Geology (Chapter 7)

Residual Impacts are defined as 'effects that are predicted to remain after all assessments and mitigation measures'. They are the remaining 'environmental costs' of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts.

Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Construction Stage

Residual Impacts are defined as 'effects that are predicted to remain after all assessment and mitigation measures'. They are the remaining 'environmental costs' of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts.

The predicted impacts of the construction phase and operational phase of the Proposed Development are described in Table 20 in terms of quality, significance, extent, likelihood, and duration. The relevant mitigation measures are detailed, and the residual impacts are determined which take account of the avoidance, remedial and mitigation measures.

The excavation of soils impacted with low levels of anthropogenic contamination (i.e., PAH's and petroleum hydrocarbons) and permanent removal off-site will have an overall positive impact on the quality of shallow soils underlying the site.

Overall, there are no significant residual impacts on land, soils and geology anticipated regarding the construction stage of the Proposed Development.

Table 20.2: Summary of Residual Impact During the Construction Stage of the Proposed Development

Construction Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
Construction of the Proposed Development	Land Take and Land Use	The Proposed Development will require land take of approximately 3.72ha and will change from undeveloped open grassland to residential land use.	Negative	Moderate to Significant	Permanent	Direct	Unavoidable and no mitigation. The Proposed Development will develop lands in line with the land zoning as set out in the Fingal County Development Plan 2023-2029.	Moderate to Significant
Excavation of In-situ Soils	Soils	There will be an unavoidable loss of excavated topsoil and subsoil through excavation works to achieve the formation levels for the Proposed Development including building foundations, roadways, parking, drainage infrastructure and landscaping.	Negative	Slight to Moderate	Permanent	Direct	None required. It is intended to reuse suitable excavated subsoil for engineering fill and landscaping. The removal of all surplus soil will be undertaken in accordance with the RWMP and all applicable statutory legislation.	Slight to Moderate
Excavation of Contaminated Soils	Soil Quality	The excavation of soils impacted with low levels of anthropogenic contamination (i.e., PAHs and petroleum hydrocarbons) and permanent removal off-site is a design requirement of the Proposed Development.	Positive	Slight to Moderate	Permanent	Direct	None required.	Positive
Removal of Surplus Soil	Land, Soil and Geology at Receiving Facility	Excavated soil and subsoil during the construction stage of the Proposed Development could potentially be directed to the same receiving waste facilities for recovery / disposal as excavated	Neutral	Imperceptible	Permanent	Cumulative	None required. All surplus soils and subsoils from the Site will be removed offsite in accordance with the RWMPP and all applicable statutory legislation.	Imperceptible

Construction Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
		materials from other developments.						
Use of Cementitious Materials	Soils and Subsoils	Potential release of cementitious material during construction works for foundations, pavements and infrastructure to the land, soil, and geological environment.	Negative	Moderate to Significant	Long Term	Direct	Where cast-in-place concrete is required, all work will be carried out to avoid any contamination of the receiving land, soil and geological environment through the use of appropriate design and methods implemented by the main contractor and in accordance with the CEMP and relevant industry standards	Imperceptible
Accidental Release of Deleterious Materials (e.g., Fuels or Other Hazardous Materials Being Used Onsite).	Soils, Subsoils and Bedrock	Potential (albeit low) for uncontrolled release of deleterious materials including fuels and other materials being used onsite, through the failure of secondary and tertiary containment or a materials handling accident, to the land, soil, and geological environment.	Negative	Moderate to Significant	Long Term	Direct / Worst Case	Refuelling of plant and storage of any deleterious materials including fuels will be undertaken in accordance with the requirements and procedures outlined in the CEMP.	Imperceptible
Stockpiling of Excavated Soil and Subsoils	Soil Structure	The temporary stockpiling of excavated soils will result in exposure of the materials to various elements including weather.	Negative	Slight	Long-term	Direct	The segregation and stockpiling of soil and stone at the Site pending reuse or removal offsite will be carefully managed and maintained in order to minimise potential impact on soil quality.	Imperceptible
Import of Required	Land, Soil and Geology at the Source Site	The Proposed Development will require the importation of aggregates for the construction of	Negative	Slight	Permanent	Indirect / Cumulative	Only certified materials from authorised sources will be used.	Imperceptible

Construction Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
Aggregates and Materials		roads and utility infrastructure. The potential impacts may include loss of attribute and changes in geological setting at the source site.						

Operational Stage

During the operational stage of the Proposed Development, there is a limited potential for a significant residual impact on the receiving land, soil and geological environment taking account of the proposed design measures.

Proposed Development- Plot 2 (St Mochta's LRD)

Construction Stage

The Proposed Development will require a land take of approximately 4.38ha and will change from amenity /community use to residential land use. As with the Plot 1 (Sub 100 Scheme) development, the lands across the site are zoned as 'RA - Residential Area' and therefore the Proposed Development (i.e., the Plot 2 (LRD Scheme)) will also have an unavoidable 'moderate to significant' residual impact associated with land take and loss of land and soil at the site.

As with the Plot 1 (Sub 100 Scheme) development, the soils underlying the site are considered to have a 'low' to 'medium' geological importance. Therefore, the excavation and removal of surplus soil and subsoil during groundworks for the Proposed Development (i.e., the - Plot 2 (LRD Scheme)) will also have an unavoidable 'slight' to 'moderate' residual impact on the underlying soils at the site.

All remaining residual Impacts during the construction stage of the Proposed Development (i.e., Plot 2 (LRD Scheme) are the same as the residual impacts stated above in Table 20 of Section 0 for the construction stage of Plot 1 (Sub 100 Scheme) development.

Operational Stage

As with the operational stage of the Plot 1 (Sub 100 Scheme) development, there is a limited potential for a significant residual impact on the receiving land, soil and geological environment during the operational stage of the Proposed Development (i.e., Plot 2 (LRD Scheme) taking account of the proposed design measures

Cumulative

Construction Stage

Excavated soil and subsoil during the construction stage of the Proposed Development will be removed offsite in accordance with all statutory legislation.

Contract and procurement procedures will ensure that the importation of aggregates to the Proposed Development are sourced from reputable authorised suppliers operating in a sustainable manner and in accordance with the necessary statutory consents.

Therefore, there will be no cumulative residual impact during the construction stage of the Proposed Development (i.e., both Plot 1 (Sub 100 Scheme) and Plot 2 (LRD Scheme)).

Operational Stage

There will be no cumulative effects on land, soil and geology during the operational stage of the Proposed Development (i.e., both Plot 1 (Sub 100 Scheme) and Plot 2 (LRD Scheme)).

20.5 Water (Chapter 8)

Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Residual impacts are defined as 'effects that are predicted to remain after all assessments and mitigation measures'. They are the remaining 'environmental costs' of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts.

The predicted impacts of the construction stage and operational stage of the Proposed Development are described in Table 20.3 and Table 20.4 in terms of quality, significance, extent, likelihood, and duration. The relevant mitigation measures are detailed, and the residual impacts are determined which take account of the avoidance, remedial and mitigation measures.

There are no significant residual impacts on hydrology and hydrogeology anticipated regarding this Proposed Development.

There will be no impact to the existing WFD Status of water bodies associated with the Proposed Development including the Liffey_180, the Liffey_190, the Liffey Estuary Upper, the Liffey Estuary Lower, the Tolka Estuary, Dublin Bay and the Dublin GWB as a result of the Proposed Development taking account of design avoidance and mitigation measures where required.

Table 20.3: Summary of Residual Impact During the Construction Stage of the Proposed Development

Construction Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
Groundworks and Management of Water	Hydrogeological Regime	Localised temporary impacts within the site only on the hydrogeological regime.	Negative	Imperceptible	Temporary	Direct	None Required.	Imperceptible
Use of Cementitious Materials	Water Quality	Potential release of cementitious material during the construction of foundations, pavements, and other structures.	Negative	Significant	Medium Term	Direct	The design will incorporate the use of pre-cast concrete structures where appropriate. The Contractor will carry out works in accordance with industry standards.	Imperceptible
Surface Runoff Containing Contaminants or Suspended Solids	Surface Water	Potential for contaminants entrained in surface runoff to enter the receiving drainage channels on lands adjoining the Proposed Development Site.	Negative	Slight to Moderate	Short term	Direct / Indirect	Site works will be managed to prevent runoff migrating offsite. Wheel wash facilities will be used to prevent tracking of debris to haul routes that may runoff to water courses.	Imperceptible
Accidental Release of Deleterious Materials Including Fuel and Other Materials Being Used Onsite	Groundwater / Surface Water	Potential to impact on a localised zone of the aquifer. It is deemed unlikely to impact on receiving surface water bodies.	Negative	Moderate Significant	Long Term	Direct	Refuelling of plant during the Construction stage will only be carried in a designated impermeable area onsite equipped with spillage kits. Any other diesel, fuel or hydraulic oils stored onsite or within fuel containing equipment will be stored in bunded storage tanks / drip trays.	Imperceptible
Construction of Foul Drainage and Connection to Live Sewers	Groundwater	The release of foul water during connection to the live sewers could result in a release of contaminants to ground or as overland runoff.	Negative	Moderate	Short Term	Direct	Foul water drainage infrastructure will be designed and constructed in accordance with current guidelines. Procedures will be in place for the	Imperceptible

Construction Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
							connection to prevent any accidental release during works.	
Earthworks – Removal of Surplus Material and Waste	Water Quality	Potential for impact on water environment at destination site/facility.	Negative	Slight to Moderate	Medium-Term	Indirect	All surplus material and waste material will be removed offsite in accordance with detailed procedures in strict accordance with all waste management legislation and the procedures outlined in the CEMP/RWMP.	Imperceptible
Construction Activities	Water Quality / WFD Status	Potential for impact on Dublin GWB within a localised zone in the event of a worst-case scenario occurring.	Negative	Significant	Medium Term	Direct / Worst Case	Appropriate mitigation measures to prevent the worst-case scenario occurring will be implemented by the Contractor.	Imperceptible

Table 20.4: Summary of Residual Impact during the Operational Stage of the Proposed Development

Operational Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
Modification of the Surface Cover	Hydrogeological Regime	Potential for localised variations in recharge potential within the Dublin GWB, therefore, a localised impact only may occur.	Negative	Imperceptible	Long Term	Direct	None Required.	Imperceptible
Surface Water Drainage / Proposed Development	Flood Risk	The Site-Specific FRA identified that there is no risk of flood associated with the Proposed Development.	Neutral	Imperceptible	Long Term	Direct	None Required. Ongoing maintenance of the SUDS and drainage network will be undertaken.	Imperceptible
Surface Drainage	Water Quality	Potential for impact on the receiving water quality	Negative	Significant	Short Term	Direct (also Cumulative)	The surface water management strategy includes a number of	Imperceptible

Operational Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
		associated with the discharge of surface water runoff from the Proposed Development.					measures that will capture any potentially contaminating compounds (petroleum hydrocarbons, metals, and suspended sediments) in surface water runoff from the Proposed Development. Ongoing maintenance of the SUDS and drainage network will be undertaken.	
Surface Drainage	Water Quality	The discharge of surface water from the Proposed Development to the mains drainage network for the GDRS will not result in any impact on the receiving water quality.	Neutral	Imperceptible	Long Term	Direct (also Cumulative)	None Required.	Neutral
Foul Drainage	Water Quality	The discharge of foul water from the Proposed Development to the mains foul network under the appropriate consent from UE will not result in any impact on the receiving water quality.	Neutral	Imperceptible	Long Term	Direct (also Cumulative)	None Required.	Neutral
Surface Drainage / Foul Drainage	WFD Status	In the absence of design and mitigation measures there could be a potential impact, on the receiving water quality and potentially WFD Status of the associated downstream waterbodies.	Negative	Significant	Short Term	Direct	The surface water management strategy includes a number of measures that will capture any potentially contaminating compounds (petroleum hydrocarbons, metals, and suspended sediments) in	Imperceptible

Operational Stage								
Activity	**Attribute**	**Predicted Impact**	**Quality**	**Significance**	**Duration**	**Type**	**Mitigation**	**Residual Impact**
							surface water runoff from the Proposed Development. Ongoing maintenance of the SUDS and drainage network will be undertaken.	

Proposed Development- Plot 2 (LRD Scheme)

Residual Impacts during the construction stage and operational stage of the Proposed Development (i.e., Plot 2 (LRD Scheme) are the same as the residual impacts stated above in Table 20 and Table 20

Cumulative

The Proposed Development will connect to the existing water supply mains, with the connection proceeding only under agreement with UE and in compliance with statutory consents, ensuring no cumulative impacts on the water supply network.

Surface water will be treated and managed through SuDS and GDSDS principles, ensuring no cumulative impacts on water quality and flood risk.

Foul water will be treated at the Ringsend WWTP and discharged under statutory consents, ensuring no cumulative impacts on the Ringsend WWTP or the receiving water quality

Therefore, there will be no cumulative residual impact during the construction stage and operational stage of the Proposed Development (i.e., both Plot 1 (Sub 100 Scheme) and Plot 2 (LRD Scheme)).

20.6 Climate (Air Quality) (Chapter 9)

The IAQM recommends that significance is only assigned to dust effect after considering the construction activity mitigation. The risk of dust impacts has been determined in Step 2C and the appropriate dust mitigation measures identified in Step 3 (Section 9.6.1 of this chapter) and the final step is to determine whether there are significant effects arising from the construction phase of the Proposed Development. The proposed mitigation measures will reduce the effects to be not significant for both Plot 1 and Plot 2.

The traffic generated by the Proposed Development (Plot 1 and Plot 2) has been assessed for its impact on air quality and it has been determined to have an overall not significant impact in terms of local air quality with the implementation of the proposed mitigation measures. Therefore, no significant adverse residual effects are anticipated from the Proposed Development in the context of air quality.

Worst Case Impact

A worst-case scenario has been applied in Step 2A (defining the potential dust emission magnitude) of the construction dust impact assessment and the highest risk category has been applied when selecting the mitigation measures that are general for the Proposed Development (Plot 1 and Plot 2).

It is expected that adequate mitigation measures, as outlined in Section 9.6.1, will assist in preventing nuisance dust from resulting in any significant effects. However, even with the most rigorous DMP in place, it is not possible to guarantee that the dust mitigation measures will be effective all the time, and if, for example, dust emissions occur under adverse weather conditions, or there is an interruption to the water supply used for dust suppression, the local community may experience occasional, short-term dust annoyance. The likely scale of this would not be considered sufficient to change the conclusion that with mitigation the effects will be 'not significant'.

A worst-case scenario has been applied to the operational phase traffic emissions assessment in terms of traffic volumes experienced on the surrounding road network and associated air emissions. The worst-case contributions predicted by the tool are added to the existing background concentration to provide a worst-case predicted ambient concentration. The compliance of the Proposed Development with the relevant ambient air quality standards is subsequently assessed by comparison with the worst-case ambient concentrations. Associated impacts have been determined as negligible in this case.

Cumulative

Cumulative Impacts can be defined as "impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project". Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor.

Cumulative air quality impacts have the potential to arise locally when construction activities associated with the Proposed Development take place at the same time as other developments in a specific location.

A review of other off-site developments was completed as part of this assessment. Chapter 3 of this EIAR details the planning permissions on record in the area, a review of these planning permissions has been completed as part of this assessment.

The cumulative effects on the air quality of the current Proposed Development (Plot 1 and Plot 2) and other permitted or existing developments have been considered, through the generation of air pollutants and GHG emissions. The potential impacts on air quality are assessed in Section 9.5 and it is considered that there are no other potential significant cumulative impacts associated with the Proposed Development and considered offsite permitted developments.

In terms of dust, no significant impacts are predicted; good construction practice, which incorporates the implementation of the identified mitigation measures, will be employed at the Proposed Development site. Due to the implementation of good construction practices at the Site of the Proposed Development and these offsite permitted developments, it is not anticipated that significant cumulative impacts will occur.

Assessment of road traffic emission impacts on air quality involved traffic data which is inclusive of traffic associated with other existing and permitted developments on the road networks surrounding the site. Therefore, cumulative impacts have been assessed in this regard and the impact on ambient air quality has been determined as not being significant.

It is considered that there are no other potential significant cumulative impacts associated with the Proposed Development and considered offsite permitted developments.

20.7 Climate (Climate Change) (Chapter 10)

Proposed Development

The impact to climate as a result of a proposed development must be assessed as a whole for all phases. The proposed development will result in some impacts to climate through the release of GHGs. TII reference the IEMA guidance which states 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 and will continue to investigate further measures during detailed design. As per the assessment criteria in **Error! Reference source not found.**, the residual impact of the proposed development in relation to GHG emissions is considered direct, long-term, negative and slight, which is overall not significant in EIA terms.

In relation to climate change vulnerability, it has been assessed that there are no significant risks to the proposed development as a result of climate change. The residual effect of climate change on the proposed development is considered direct, long-term, negative and imperceptible, which is overall not significant in EIA terms.

Cumulative

With respect to the requirement for a cumulative assessment the IEMA (IEMA, 2022) and TII (TII, 2022a) guidance on which the assessment is based states that:

"*the identified receptor for the 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. 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. This assessment approach is considered to be inherently cumulative*".

The traffic data used for the operational phase assessment included cumulative traffic from existing and permitted developments in the surrounding area. Therefore, this impact assessment is cumulative.

As per the above, the cumulative impact of the proposed development in relation to GHG emissions is considered direct, long-term, negative and slight, which is overall not significant in EIA terms.

Worst Case Impact

Conservative assumptions have been made throughout the assessment. Specifically, as part of the GHG assessment, where specific materials were not available conservative equivalent material types were used instead. Additionally, in places, where exact material types were not known for the GHG assessment, the standard average material was assumed which can have a higher embodied carbon associated with it. Therefore, the assessment has been conservative in nature and is likely worst-case.

20.8 Climate (Sunlight & Daylight) (Chapter 11)

Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Construction Stage

The potential impact to both daylight and sunlight during the construction stage will gradually increase until it reaches that of the completed development (Operational Stage).

Operational Stage

The main Dublin-Maynooth-Sligo rail line and Royal Canal bound the site to the north and the area to the west is existing farmland. The area to the east and south has received planning permission under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3, and is currently under construction. There is a green band of open space and retained hedgerow between this scheme and the proposed development which provides a distance of circa 30m-40m between the dwellings of the schemes.

Using the decision chart detailed in section **Error! Reference source not found.** above, existing and proposed dwellings in the vicinity of the proposal site were assessed for potential impact to daylight. Given the rural nature of the site and the distance the proposed buildings are from existing dwelling, or the scheme currently under construction to the east and south, no dwellings fell within the criteria requiring a detailed assessment. Therefore, the impact would be imperceptible.

Sunlight Impact Analysis

Similar to the Daylight impact assessment above, no dwellings fell within the criteria requiring a detailed assessment. Therefore, the impact would be imperceptible.

Sunlight to Amenity areas

The neighbouring environment was reviewed for potential impact to sunlight on gardens or amenity spaces, however there were none close enough to the development site to be impacted by overshadowing.

Do-Nothing Impact

In a Do-Nothing scenario, no construction would occur on the site and therefore the impact on neighbouring properties would be neutral as the existing daylight and sunlight levels would remain unchanged.

Worst Case Impact

This assessment is based on the proposed scheme being completed in its entirety and therefore, with respect to potential effects to daylight and sunlight, represents the worst case impact.

Proposed Development- Plot 2 (St. Mochta's LRD)

Construction Stage

The residual impacts will be similar to that described for Plot 1 above.

Operational Stage

Using the decision chart detailed in section **Error! Reference source not found.**, all existing dwellings and those that have received planning permission in the vicinity of the site have been assessed for potential impact to daylight and sunlight. However, given the rural nature of the site and its distance from existing buildings, the number of dwellings impacted will be limited to:

1. Block A of the scheme to the south of the proposed which has received planning permission under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3.
2. Two dwellings in the Traveller Accommodation site to the west.

Table 20.5 Daylight Exposure Results Summary

Surrounding	Floors Assessed	No. of Units	No. of Rooms	% Meets BRE Criteria	Impact Assessment
Block A	Gnd, 01, 02, 03, 04, 05	17	51	86%	Slight
Traveller Accommodation	Gnd	2	2	100%	Not Significant

Block A

Seventy-three windows serving 51 rooms were assessed and 86% of these meet the BRE criteria. Of the 10 windows which failed compliance, three had a VSC of 26%, just below the compliance value of 27%, and a further four had a ratio of proposed to existing VSC of 0.70-0.79, just below the compliance value of 0.8. The impact on this block is assessed as Slight.

Traveller Accommodation

Two units required assessment as they both had a main window facing east, directly towards the proposal site. The window of units 1 (TA 001) achieved BRE compliance with a VSC of 27%. The main window of unit 2 failed to achieve BRE compliance when assess individually. However, as recommended by the BRE Guide (Section: 2.2.8), as there are four windows serving the main living space, a weighted average VSC was calculated, and this resulted in the room achieving compliance. Therefore, the impact on both units is assessed as Not Significant.

Sunlight Impact Analysis

The neighbouring buildings requiring a detailed assessment for sunlight were the same as those assessed for daylight.

1. Block A of the scheme to the south of the proposed which has received planning permission under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3.
2. Two dwellings in the Traveller Accommodation site to the west.

Table 20.6 Sunlight Exposure Results Summary

Building Ref	Rooms Assessed	APSH Meets BRE Criteria	WPSH Meets BRE Criteria	Meets APSH & WPSH Criteria	Building Use	Impact Assessment
Block A	51	99%	100%	99%	Residential	Not Significant
Traveller Accommodation	2	Yes	Yes	Yes	Residential	Not Significant

Block A

Fifty-one rooms were assessed and 99% achieved compliance with the BRE criteria for Annual Probable Sunlight Hours, 100% were compliant for Winter Probable Sunlight Hours, and 99% for both. While some windows recorded a measurable reduction in sunlight, this reduction was small and relative few windows were impacted. The impact on this block is assessed as **Not Significant**.

Traveller Accommodation

Two units required assessment as they both had a main window facing east, directly towards the proposal site. Both windows assessed recorded a reduction in sunlight however both the APSH and WPSH were both well within the BRE guide thresholds. Therefore, the impact on both units is assessed as **Not Significant**.

Sunlight to Amenity areas

The neighbouring environment was reviewed for potential impact to sunlight on gardens or amenity spaces, however there were none close enough to the development site to be impacted by overshadowing.

Worst Case Impact

The residual impact will be similar to that detailed above for Plot 1.

Cumulative

Construction Stage

The residual impacts will be similar to that described for Plot 1 above.

Operational Stage

There is no additional cumulative impact when both Plot 1 and 2 are completed, therefore the residual impacts will be similar to those detailed in Plot 1 and 2 above.

Worst Case Impact

The residual impact will be similar to that detailed above for Plot 1.

20.9 Air (Noise & Vibration) (Chapter 12)

This section assesses potential significant environmental impacts which remain after mitigation measures are implemented.

Proposed Development - Plot 1 (Luttrellstown Gate Phase 2) and Plot 2 (St. Mochta's LRD)

Construction Stage

As the construction phase is temporary, there will be no long-term/permanent noise impacts on the surrounding area from construction noise. Section 12.8.1.1 above outlines mitigation measures which if used in full will reduce the construction noise impact on the surrounding sensitive receptors.

Operational Stage

Operational noise sources include plant and equipment, external amenity spaces and traffic movements in and out of the site. Based on the noise impact assessment it is not likely that these sources will have a negative noise impact on the surrounding area.

Cumulative Development

The application sites for Plot 1 (Luttrellstown Gate Phase 2) and Plot 2 (St. Mochta's LRD) form part of a larger landholding in the townlands of Kellystown, Porterstown and Diswellstown, Clonsilla, Dublin 15, which has been subject to a number of recent planning permissions, summarised below. The consented Kellystown SHD scheme ABP-312318-21 was granted (with 27no. conditions) on 2 March 2023, under section 9(4) of the Planning and Development (Housing) and Residential Tenancies Act 2016 for a Strategic Housing Development. The consented scheme includes 346no. dwellings (123no. houses and 3no. apartment buildings accommodating 223no. apartment units)1 , 1no. childcare facility (c. 528 sq m) and 1no. retail unit (c. 236 sq m), in buildings ranging from 2 to 8-storeys, and associated site works and 2.1ha public park amenity. The overall gross site area of the entire consented scheme amounts to c. 9.73 ha, at land zoned 'RS' residential, in Eastern Development Area 1 and land zoned 'OS' open space to the south of permitted Kellystown Link Road. The site is otherwise generally bounded by the existing Kellystown Link Road and schools to the south; the Old Porterstown Road and existing St Mochta's FC grounds to the east; Dr Troy Bridge/L3036 Porterstown Link Road also to the east; the Dublin Maynooth rail line and Grand Canal to the north and undeveloped (Luttrellstown Gate) lands to the west.

Amendments to the consented SHD scheme **ABP-312318-21** was granted on 21 August 2024 under **Reg. Ref. LRD0034-S3** for development comprising of the reconfiguration of Block A, located in the eastern corner of the site, to accommodate 193no. dwellings in total (an increase of 28no. dwellings) in buildings ranging between 2 and 8-storeys in height, with the following residential unit mix: 82no. 1- bed apartment units, 108no. 2-bed apartment units, and 3no. 2-bed duplex units. Associated reconfiguration of internal floor plans to accommodate an increase from 31no. to 34no. apartment units per floor. Reduced floor area of the internal residential amenity area (from c.405.7 sq m to c.120.9 sqm). Reduced floor area of the retail unit (from c.236 sq m to c.200.6 sq m). And all associated and ancillary site development, infrastructural, hard and soft landscaping and boundary treatment works.

A live planning application, currently at Further Information Stage under **FW25A/0033E** seeks the relocation of St. Mochta's Football Club grounds, to 'OS' zoned lands to the south of Kellystown Link Road and north of the Cemetery lands and Luttrellstown Road, within the new emergent residential neighbourhood of Kellystown, Dublin 15. This isin accordance with Key Objective DA 1.1 for the Eastern Development Area of the Kellystown Local Area Plan. In November 2020, Fingal County Council published proposals for the development of a link road through the Kellystown lands for public consultation, under the **Part 8 development process**. Note that the consented Kellystown SHD scheme **ABP-312318-21** includes the extension of the 'Kellystown Link Road' west from its

existing section serving the school campus and cemetery lands. A single new vehicular access point to residential development in the Kellystown Eastern Development Area extends north from the 'Kellystown Link Road', under SHD ABP-312318-21. Upgrade works to the existing segment of the 'Kellystown Link Road' and its junctions with Porterstown Road and Diswellstown Road/Overbridge are also included in the Kellystown SHD permission. In the wider surrounding area, the following developments are subject of live planning permissions:

- **ABP Reg. Ref. 320886-24 (FCC Reg. Ref. LRD0021/S3E)** (north of the Dublin-Maynooth Railway Line) issued with a Grant of Permission on 21 January 2025 for the construction of 170 residential units, a café, and a childcare facility, and all associated development works including the demolition of structures, site clearance, and ground levelling.
- **ABP Reg. Ref. 315707-23 (FCC Reg. Ref. FW22A/0152)** (north of the Dublin-Maynooth Railway Line) issued with a Grant of Permission on 19 December 2023 comprises the construction of a mixed use retail and residential development comprising 1no. food store (2,500sqm GFA), 3 no. retail units (611.8sqm GFA) and 67 no. residential units.2

Cumulative Assessment - Plot 1 (Luttrellstown Gate Phase 2) and Plot 2 (St. Mochta's LRD)

The cumulative residual effects of the overall proposed development (Plot 1: Luttrellstown Gate Phase 2 and Plot 2: St. Mochta's LRD), considering both the construction and operational phases, are primarily related to noise. Construction activities such as demolition and substructure will inevitably introduce noise into the environment. However, recommended mitigation measures outlined in Section 12.9 of this chapter will ensure that construction noise impacts will be imperceptible at NSL's. During the operational phase, a marginal increase in traffic associated with the development is expected to result in a slight rise in ambient noise levels of up to 1dBA at certain NSL's. Operational external amenity area noise levels will not have an impact on NSL's.

Noise impacts are anticipated to be negligible, localised, and compliant with relevant criteria, ensuring that they remain within acceptable levels. No other significant residual effects are expected following the implementation of appropriate mitigation measures during the construction phase.

Worst Case Impact

This assessment assumes a worst-case scenario when assessing the construction and operational noise impacts of both Plot 1: Luttrellstown Gate Phase 2 and Plot 2: St. Mochta's LRD), on the surrounding noise sensitive locations. The dominating noise source in the area is road traffic noise, even with the additional traffic from the construction and operational phases the predicted increase is likely less than 1dB(A) at each NSL.

The operational phase of both Plot 1: Luttrellstown Gate Phase 2 and Plot 2: St. Mochta's LRD), will see an increase of traffic volumes on all link roads assessed, however due to the construction of the development, some NSL's will benefit from screening because of the overall proposed development and will in turn be predicted to achieve lower onset noise levels from traffic noise.

20.10 Townscape, Landscape and Visual Landscape (Chapter 13)

The predicted negative impacts as shown in photomontages 6 & 15 are primarily at the construction stage where the land is transformed from recreational and agricultural use into a medium density residential area. The existing publicly accessible development to the south and east of the site provides the context into which the development is set and where it will be visually integrated with the existing landscape. The green fields to the west are zoned Residential and Open Space and will probably be developed into residential and open space areas over time. The photomontages 3, 4, 5, 8, 9, 10, 13 & 14 show that the proposed development is effectively screened by existing vegetation and buildings to the north, west and south and therefore the negative visual impacts are restricted to a relatively small area albeit the areas where there is existing residential development, educational facilities and busy roads. The mitigating factors

include the retention of trees and hedgerows particularly on the western edge of the site but also on the Porterstown Road. The increase in density allows for the provision of enhanced open space. It is considered that the proposed development is in accordance with the various landscape and visual objectives, policies and land use zonings pertaining to the site and as set out in the Fingal County Development Plan Objectives relating to Kellystown.

Cumulative Impact

The area to the north of the site associated with the neighbourhood of Clonsilla is fully developed with only small-scale developments proposed. The lands to the west are in the Kellystown LAP Area and it will be some time before they are developed. The lands around Luttrellstown Castle and Luttrellstown and Castleknock Golf Clubs are unlikely to be developed in the future. The area to the east of the site is at Annefield and Woodbrook are fully developed. There is ongoing residential development to the east of the Diswellstown overbridge, but it is likely that this will be largely complete in the near future. It is therefore considered that there is little likelihood of cumulative development occurring close to the subject lands.

20.11 Material Assets (Transport) (Chapter 14)

Proposed Development- Plot 1 (Luttrellstown Gate Phase 2)

Construction Stage

In line with their experience working on projects of this scale in similar locations and in consideration of the reduced number of car parking spaces that should be available as outlined in the Mitigation Measures, the developer will construct a limited car park at the start of works by laying a temporary surface for vehicles.

Nevertheless, it is probable that there will be an increase in surrounding traffic particularly during the PM peak hour. It is likely that staff will arrive on site before 8am (before the morning peak of 8-9am) and it is likely that they will leave during the evening peak of 5-6pm. However, the mentioned increased traffic will be occurred during a short term.

Care will be taken to ensure existing pedestrian and cycling routes are suitably maintained or appropriately diverted as necessary during the construction period, which will be addressed by the Contractor as part of the Construction Traffic Management Plan, and which will be approved by Fingal County Council. On this basis construction will likely have a negligible impact on pedestrian and cyclists. Due to the proposed mitigation measures outlined above, the impact of the proposed development will be temporary and minimised during the construction phase.

Operational Stage

There will be an increase in the use of the road network by private vehicles. However, a Mobility Management Plan will promote more sustainable forms of transport to help reduce the use of private vehicles by the residents of the proposed development.

There is likely to be an increase in the number of pedestrians and cyclists arising from the development. Footpaths and cycling paths, both internally and externally (along the site frontage) are provided as part of the development, thus, the impact should be minimal.

The traffic modelling undertaken includes growth in background traffic flows which accounts for other developments in the area.

The increase in traffic volumes as a result of the proposed development will impact the adjacent existing developments as the traffic flows through access and egress from the site will increase. The transport assessment carried out indicates that all assessed junctions, operating with improved layouts as proposed as part of the subject application, would operate within the capacity and the impact arising from the proposed development would be considered negligible.

Worst Case Impact

The application of traffic growth rates assumes a worst case for the future year scenarios. The worst-case scenario for this development is assumed to be 2045 + Proposed Development + junctions not being upgraded.

Proposed Development- Plot 2 (St. Mochta's LRD)

Construction Stage

Refer to **Section 20.11.1** above

Operational Stage

Refer to **Section 20.11.1** above

Worst Case Impact

Refer to **Section 20.11.1** above

Cumulative

Construction Stage

Refer to **Section 20.11.1** above

Operational Stage

Refer to **Section 20.11.1** above

Worst Case Impact

Refer to **Section 20.11.1** above

20.12 Material Assets (Waste) (Chapter 15)

This section assesses the potential significant impacts which remain after the mitigation measures are implemented at the Proposed Development (Plot 1 and Plot 2).

Construction Phase

The residual effects on waste management are considered slight, neutral, direct and short-term, this is due to:

- The prevention and mitigation measures proposed within this and other chapters of the EIAR;
- Compliance with national legislation and the allocation of adequate time and resources dedicated to efficient waste management practices; and
- Continued use of permitted/licensed waste hauliers and facilities. Waste removed from the facility will be managed appropriately and will avoid environmental impacts or pollution. In addition, the correct management and storage of waste will avoid litter or pollution issues at the site.

Operational Phase

Waste materials will be generated on an ongoing basis during the operational phase; these will for the most part consist of municipal waste and recyclable materials. Careful management of these, including segregation at source, will help to ensure a high level of waste recycling, reuse, and recovery at the development. Given the provision of appropriate facilities, and their correct use by residents, environmental impacts (e.g. litter, contamination of soil or water, etc.) arising from operational waste storage and removal are expected to be minimal. The use of suitably licensed waste contractors will ensure compliance with relevant legal requirements and appropriate off-site management of waste. With the implementation of the proposed operational waste management measures, the Proposed Development is not expected to have a significant environmental impact with respect to operational waste. The likely effect of the operational phase on waste management will be neutral, direct and slight in the long-term.

Worst Case Impact

A worst-case scenario would be where a previously unclassified hazardous waste stream arose on the site during excavations, which was not identified and segregated appropriately and resulted in the contamination of a non-hazardous waste stream, such as soil and stones, resulting in a large volume of hazardous waste that would require specialist removal and treatment. Additionally, the contaminated soil and stones would no longer be fit for use for fill and landscaping and would need to be replaced with imported materials.

Cumulative

Cumulative Impacts can be defined as “impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project”. Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor.

A review of other off-site developments was completed as part of this assessment. Chapter 3 of this EIAR details the existing, proposed and granted planning permissions on record in the area, a review of these planning permissions has been completed as part of this assessment.

With regard to the other developments under construction and proposed permitted in the vicinity of the site of the Proposed Development, there will be a greater demand on existing local waste management services and on regional waste acceptance facilities.

The capacity of waste collection companies and waste management facilities in Fingal have been designed with forward planning and expansion in mind to cater for a growing population. It is necessary that all the developments provide the infrastructure and services to assist residents to segregate domestic waste at source, in order to reduce the generation and disposal of non-recyclable mixed waste. Existing waste collections currently take place in the local area and during the operational phase, the Proposed Development (Plot 1 and Plot 2) will be added to an existing collection route. The likely effect will be neutral and not significant on waste management facilities in the area in the long term.

Do-Nothing Impact

In the ‘Do Nothing’ scenario, the Proposed Development does not proceed and there would be no excavation, construction or operational waste generated at the site. There would, therefore, be no additional demand or loading on waste management infrastructure locally or nationally and thus there would be a neutral effect on the environment in terms of waste.

20.13 Material Assets (Utilities) (Chapter 16)

Proposed Development - Plot 1 (Luttrellstown Gate Phase 2)

Construction Stage

There are no environmental impacts envisaged as part of the proposed works provided all mitigation measures are fully implemented. This should include any mitigation measures proposed in respect of flora and fauna which is dealt with separately in this report. Caution will be exercised with construction surface water runoff towards the existing stream. Appropriate slit trenching and silt fences would be in place to filter runoff. There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

There will be a minor water demand for site offices. There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

The implementation of the mitigation measures set out in this chapter and other chapters of this EIAR ensure that significant residual impacts are unlikely during the construction phase. Therefore, impacts are likely to be temporary and neutral.

Operational Stage

There is no gas supplied to the site and therefore no impact in demand on the gas distribution network.

The proposed development will result in an increase in demand on the ESB network.

The proposed development will result in an increase in demand on the telecommunications network.

Worst Case Impact

The worst-case impact, were the proposed mitigation measures not implemented, would be potential disruption to local natural and human material assets.

Proposed Development- Plot 2 (St. Mochta's LRD)

The residual impacts are as per Section 20.13.1 above.

Cumulative

Construction phase

There are no environmental impacts envisaged as part of the proposed works provided all mitigation measures are fully implemented. This should include any mitigation measures proposed in respect of flora and fauna which is dealt with separately in this report.

There will be minor traffic disruption when excavation works are being carried out. Damage could be caused to existing services during excavation.

Operational Phase

During the operational stage, there would be a significant load on the local Water, ESB and Foul network. However, it is anticipated that ongoing upgrades to local existing infrastructure, as well as the implementation of new infrastructure should alleviate any adverse impacts on the existing networks.

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

Construction Stage – Plots 1 and 2

No significant residual impacts were identified for either Plot 1 or Plot 2.

Any archaeological features present that require excavation will thus be permanently removed, in whole or in part from the landscape. However, the archaeological excavation of the sites or parts thereof that lie within the proposed development, will involve full recording of all archaeological features, finds and deposits. The results of the excavations will add to the body of knowledge, resulting in a slight positive residual impact.

Operational Stage – Plots 1 and 2

No residual impacts were identified for operational phase for Plot 1 or Plot 2.

Cumulative Impact – Plots 1 and 2

Construction Stage

All permitted and proposed developments within the study area have been assessed in conjunction with the proposed development. As it is proposed to preserve all archaeological remains by record, no cumulative impacts have been identified upon the archaeological resource. No cumulative impacts have been identified in relation to the cultural heritage resource.

Operational Stage

Not applicable.

20.15 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 low.