



Greater Dublin Drainage Project Addendum

**Environmental Impact Assessment Report Addendum:
Volume 3A Part A of 6**

Chapter 23A Cumulative Impacts and Environmental Interactions

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23. Cumulative Impacts and Environmental Interactions

23.1 Introduction

As detailed in Chapter 1A (Introduction) in Volume 2A Part A of this Environmental Impact Assessment Report (EIAR) Addendum, we have reviewed Chapter 23 (Cumulative Impacts and Environmental Interactions) in Volume 3 Part A of the EIAR submitted with the original 2018 planning application, in the light of:

- Changes to the baseline environment;
- The requirement for updated surveys; and
- Changes to the law, policy, and industry standards and guidance in the intervening period.

Table 23.1 includes a summary of the project elements which were incorporated into the planning design for the Greater Dublin Drainage Project (hereafter referred to as the Proposed Project) following direction at the Oral Hearing in 2019 and the subsequent planning conditions applied to the 2018 planning application submission. A full description is included in Chapter 4A (Description of the Proposed Project) in Volume 2A Part A of the EIAR Addendum. The remaining elements of the Proposed Project included in the 2018 planning application remain unchanged.

Table 23.1: Updated Proposed Project Elements

Updated Element	Outline Description of Updated Element
Ultraviolet (UV) Treatment	<ul style="list-style-type: none"> • UV Treatment is to be included in the treatment process at the proposed wastewater treatment plant (WwTP) in the northern section of the WwTP site. • The UV treatment system will be designed for the expected flows at the plant and will be installed on the final effluent line. UV treatment will be in operation 24 hours a day, 365 days a year. • The UV system will consist of a minimum of three and a maximum of four treatment units located below or partially below ground level with an above-ground Motor Control Centre (MCC) (in a kiosk) along with minor maintenance and control equipment (e.g. shut-off button, frame for supporting, retracting and cleaning of UV lamps etc.).
River Mayne Culvert Extension	<ul style="list-style-type: none"> • Extension of the River Mayne Culvert on the proposed access road to the WwTP by 4m (from 21m to 25m) to cater for the full width of the future north south link road.

This Addendum Chapter should be read in conjunction with Chapter 23 (Cumulative Impacts and Environmental Interactions) in Volume 3 Part A of the EIAR submitted with the original 2018 planning application. The updated assessments for the proposed Regional Biosolids Storage Facility element are included in Section 16 and Section 19 of Volume 4A Part A of the EIAR Addendum.

The only additional amendment to this Section of the EIAR in the 2018 planning application is the cut-off date for the 'other developments' considered. Developments have been considered between the original cut-off date of 15 March 2018, applied to the cumulative assessment in the 2018 planning application, to a new cut-off date of 31 July 2023, in order to provide an up-to-date assessment of potential cumulative impacts with other developments.

Please note that any of the 'other developments' identified in Chapter 23 (Cumulative Impacts and Environmental Interactions) in Volume 3 Part A of the EIAR in the 2018 planning application that have been constructed since the submission of the 2018 planning application, are now considered in the updated baseline environment throughout this EIAR Addendum, as relevant and applicable.

23.2 Methodology and Impact Assessment

In 2022, the Environmental Protection Agency (EPA) published an updated set of Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereafter referred to as the updated EPA Guidelines) (EPA 2022). The updated EPA Guidelines have been considered as part of this Addendum Chapter and define cumulative impacts as:

'The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects'.


It should be noted that the updated EPA Guidelines use the terms impacts and effects interchangeably.

This Addendum Chapter identifies and provides an assessment of the potential likely significant cumulative impacts that could result from the Proposed Project in combination with the updated list of other developments.

23.2.1 Stage 1 – Identification of ‘Other Developments’

The first step in determining cumulative impacts for this Addendum Chapter, comprised the identification of an updated long list of ‘other developments’ which may have the potential to overlap with the Proposed Project, based on available information. The Stage 1 approach followed in this Addendum assessment remains the same as outlined in this Section of the EIAR in the 2018 planning application. This involved a desk-based study of the latest planning applications, development plan documents, relevant development frameworks and any other available sources to identify an updated list of other developments which may have the potential to interact with the Proposed Project. A ‘tier’ (1 or 2) was assigned to the development to indicate the level of certainty associated with its implementation, as detailed in Table 23.2.

Table 23.2: Tier 1 and Tier 2 Classification for Other Developments

Tier 1	Under construction	Decreasing level of detail likely to be available 
	Permitted application(s) but not yet implemented	
	Submitted applications(s) but not yet determined	
Tier 2	Identified in the relevant Development Plans, recognising that much information on any relevant proposals will be limited	
	Identified in other plans and programmes (as appropriate) which set the framework for future development consents/ approvals, where such development is reasonably likely to come forward	

The updated long list was scrutinised to identify which of the other developments were within the zone of influence (Zol) of the Proposed Project. The Zol for the purpose of this Addendum assessment was set at 20km (kilometres) from the Proposed Project planning boundary, which remains the same as the approach taken for the cumulative assessment completed for the EIAR in the 2018 planning application. This involved the determination of which environmental factors have the potential to lead to overlap. This determination was used to screen out other developments where no overlap with the Proposed Project was considered. This allowed a ‘short list’ of potentially applicable developments for further assessment to be derived.

23.2.2 Stage 2 – Shortlisting

The Stage 2 approach followed in this Addendum assessment remains the same as outlined in this Section of the EIAR in the 2018 planning application. This involved applying inclusion and exclusion criteria to the shortlisted other developments to determine whether they had any potential to give rise to significant cumulative impacts, with respect to the following:

- Temporal scope – Is there any overlap and potential for interactions due to the construction, operation and decommissioning programmes of the other developments; and
- Scale and Nature – Due to the scale and nature of the other developments, are they likely to interact with the Proposed Project to result in a cumulative impact? Statutory definitions and Environmental Impact Assessment screening thresholds were considered in determining issues of scale.

Professional judgement was used in applying these threshold criteria.

The updated identification and shortlisting process, in addition to reasons for excluding any development from further consideration, are documented in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum. Where other developments with the potential to give rise to significant cumulative effects were identified, these were taken forward to Stage 3.

23.2.3 Stage 3 – Information Gathering

The Stage 3 approach followed in this Addendum assessment remains the same as outlined in this Section of the EIAR in the 2018 planning application. For the updated short list of other developments, sufficiently detailed information was compiled to inform the Stage 4 assessment. This included information such as:

- Proposed design and location;
- Proposed programme of construction, operation and decommissioning, where available; and
- Environmental assessments, where applicable and available.

The relevant information was sourced from the websites of relevant planning authorities and through general internet searches and project team knowledge. Figure 23.1 (Other Developments Considered – Study Area Overview) and Figure 23.2 (Other Developments Considered) in Volume 5A of this EIAR Addendum provide an overview of the locations of each of the developments taken forward for cumulative impact assessment.

23.2.4 Stage 4 – Assessment

The Stage 4 approach followed in this Addendum assessment remains the same as outlined in this Section of the EIAR in the 2018 planning application. The cumulative impacts of the Proposed Project with each of the other developments were assessed to a level of detail commensurate with the information that was available at the time of assessment. Where information regarding the other developments was limited, these gaps were acknowledged within the assessment and the associated uncertainty in these cases is documented in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum.

It is acknowledged that certain assessments, such as transport and associated operational assessments for vehicular emissions (including air and noise), are inherently cumulative assessments. This is because they have incorporated modelled traffic data growth for future traffic flows. As these assessments are comprehensive, no additional cumulative assessment of these topics has been undertaken.

The significance criteria used to assess likely cumulative impacts followed the criteria included in the updated EPA Guidelines (EPA 2022), and considered the capacity of environmental resources and receptors to accommodate changes that are likely to occur. These include:

- The duration of impact (i.e. temporary or permanent);
- The extent of impact (e.g. is geographical area);
- The type of impact (e.g. whether additive (i.e. the loss of two pieces of woodland of 1ha (hectare), resulting in 2ha cumulative woodland loss) or synergistic (i.e. two discharges combine to have an effect on a species not affected by discharges in isolation));
- The frequency of the impact;
- The 'value' and resilience of the receptor(s) affected; and
- The likely success of proposed mitigation.

The results of the updated assessment for this Addendum Chapter are included in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum.

23.3 Summary of Cumulative Impacts

The long list of developments considered are presented in Table 1 in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum. Table 2 in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum presents the assessment of potential cumulative impacts for each of the 'other developments' carried forward for Stage 4 assessment. Table 2 in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum provides a breakdown of the assessment per environmental topic.

Of the initial long list of 190 'other developments' considered to have the potential to overlap with the Proposed Project, 159 developments were assessed for potential cumulative impacts with the Proposed Project.

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All environmental factors were considered for potential cumulative impacts with the Proposed Project, in the absence of mitigation. There is limited potential for cumulative impacts during the Operational Phase, on the basis that fewer impacts are anticipated during this phase.

Potential cumulative impacts that could arise in the absence of mitigation include:

- Population: Potential for temporary cumulative impacts from traffic, noise and vibration, dust and construction activity combustion emissions, if construction phases were to overlap or run consecutively;
- Marine Water Quality: Potential for cumulative impacts as a result of increased suspended sediment concentrations to occur if dredging activities were to overlap within the vicinity of the outfall pipeline route (marine section);
- Biodiversity (Freshwater Aquatic): Potential for cumulative impacts from sedimentation and accidental pollution effects on freshwater biodiversity to occur in surface waters, in the absence of mitigation, if construction phases were to overlap within the vicinity of the same water bodies;
- Traffic and Transport: Potential for cumulative impacts if construction phases were to overlap due to an increase of construction vehicles on the road network;
- Air Quality: Potential for cumulative impacts on air quality, if construction phases were to overlap;
- Noise: Potential for cumulative impacts as a result of noise, if construction phases were to overlap;
- Landscape and Visual: Potential for Construction Phase cumulative landscape and visual impacts in the vicinity of the proposed WwTP from construction activities / temporary structures and material storage, should construction phases overlap with another nearby development. There is also the potential for Operational Phase cumulative landscape and visual impacts in the vicinity of the proposed WwTP due to the permanent presence of structures from the Proposed Project and other nearby developments contributing to the intensity and scale of infrastructure development in this urban rural interface setting;
- Agronomy: Potential for cumulative impacts on specific land parcels for which the Proposed Project and the other development require temporary land take for their construction phases, if construction phases were to overlap; and
- Waste: Potential for cumulative impacts if construction phases were to overlap due to an increase in construction waste for disposal.

23.4 Mitigation Measures

The results of the assessment presented in Table 2 in Appendix A23.1 in Volume 3A Part B of this EIA Addendum indicate that for the majority of environmental factors, no additional mitigation measures other than those provided in the EIA in the 2018 planning application (as summarised in Chapter 24 (Summary of Mitigation Measures) in Volume 3 Part A of the EIA in the 2018 planning application) and those additional mitigation measures outlined in this EIA Addendum (as summarised in Chapter 24A (Summary of Mitigation Measures) in Volume 3A Part A of this EIA Addendum), are required to mitigate the identified cumulative impacts.

The only exceptions are as follows:

- Other development application number F21A/0368 (under appeal) - This other development will involve dredging, stabilisation of dredge material, reclamation of land, embankment construction, slipway construction, provision or storage and services at Howth Harbour, County Dublin. As outlined in Table 2 in Appendix A23.1 in Volume 3A Part B of this EIA Addendum, dredging activities for this other development and the Proposed Project will be required to be scheduled to occur at different times to avoid any adverse cumulative impacts which may occur on marine water quality as a result of increased suspended sediment from both projects. The appointed contractor and Uisce Éireann will actively engage with the Department for Agriculture, Food and the Marine to ensure that dredging activities do not overlap and that a sufficient period will be maintained between these dredging activities;
- CP1021 East Meath-North Dublin EirGrid Project (not yet lodged for planning) – This other development will involve the installation of a new 400 kilovolt underground cable between

Woodland substation in County Meath and Belcamp substation in Fingal and will cross the proposed orbital sewer route in the vicinity of the proposed WwTP site. As outlined in Table 2 in Appendix A23.1 in Volume 3A Part B of this EIA Addendum, should there be a temporal overlap between the two projects, a coordinated approach between the two project teams will be required to minimise potential soils and geology impacts in the vicinity of the proposed WwTP site; and

- Other development application number 311315 (approved) – This other development is a park development project at the Racecourse Park comprising new walking and cycling routes including a bridge over the River Mayne and repair to the railway underpass on lands located between Baldoyle and Portmarnock. As outlined in Table 2 in Appendix A23.1 in Volume 3A Part B of this EIA Addendum, both projects will need to be coordinated to ensure that they do not take place at the same time in this location. A coordinated approach between the two project teams when each project's Construction Phase is taking place will also be required to minimise potential impacts on soils and geology in this vicinity.

23.5 Residual Impacts

With the implementation of the specified mitigation measures, there are no significant residual cumulative impacts anticipated.

23.6 Environmental Interactions

The potential interactions between environmental aspects arising from the Proposed Project remain as outlined in this Section of the EIA in the 2018 planning application.

23.7 Difficulties Encountered in Compiling Required Information

There were no specific difficulties encountered when carrying out this updated Addendum assessment.

23.8 References

EPA (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment Reports