AIR QUALITY ASSESSMENT

FOR

LARGE-SCALE RESIDENTIAL DEVELOPMENT (LRD)

AT

PARKMORE INDUSTRIAL ESTATE

LONGMILE ROAD

ROBINHOOD

DUBLIN 12

Prepared for

Watfore Limited

Prepared by:

Traynor Environmental Ltd

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This report refers, within the limitations stated, to the condition of the site at the time of the report. No warranty is given as to the possibility of future changes in the condition of the site. The report as presented is based on the information sources as detailed in this report, and hence maybe subject to review in the future if more information is obtained or scientific understanding changes.

CONTENTS

1.0 INTRODUCTION

Traynor Environmental Ltd have assessed the potential air quality impacts that the proposed development may have on the receiving environment during the construction and operational phases of the project. The assessment includes a comprehensive description of the existing air quality in the vicinity of the subject site; a description and assessment of how construction activities and the operation of the development may impact existing air quality; the mitigation measures that will be implemented to control and minimise the impact that the development may have on local ambient air quality and reduce the impact on the local micro climate; and, finally, a description as to how the development will be constructed and operated in an environmentally sustainable manner.

2.0 STUDY METHODOLOGY

2.1 Legislation and Guidelines

The general assessment methodology of the potential impact of the project on air quality and climate has been conducted in accordance with:

- Dublin City Council Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition Guidelines.
- Climate Action and Low Carbon Development Act 2015
- The Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (2011)
- Directive 2011/92/EU of the European Parliament and Council of the 13th December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) as amended by Directive 2014/52/EU of the European Parliament and Council of the 16th of April 2014

2.2 Air Quality Assessment Methodology

2.2.1 Legislation and Guidelines

Air quality standards and guidelines are available from a number of sources. The guidelines and standards referenced in this report include those from Ireland and the European Union.

In order to reduce the risk to health from poor air quality, National and European statutory bodies have set limit values In ambient air for a range of air pollutants. These limit values or "Air Quality Standards" are health or environmental- based levels for which additional factors may be considered. For example, natural background levels, environmental conditions and socio-economic factors may all play a part in the limit value which is set (Ref Table 1).

Air quality significance criteria are assessed on the basis of compliance with the appropriate standards or limit values. The applicable standards in Ireland include the National Air Quality Standards Regulations 2011 (S.I No. 180 of 2011), which implement European Commission Directive 2008/50/EC which has set limit values for the pollutants SO_2, NO_2, PM_{10}, benzene and CO. Council Directive 2008/50/EC replaces the previous Air Quality Framework Directive (96/62/EC) and its subsequent daughter directives (including 1999/30/EC and 2000/69/EC). Provisions are also made for the inclusion of new ambient limit values relating to $PM_{2.5}$. The European 2008/50/EC Clean Air for Europe (CAFÉ) Directive is the current air quality directive for Europe which supersedes the European Directives 1999/30/EC and 2000/69/EC. The Directive is implemented by the Air Quality Standards Regulations 2011 which replace the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999.

In order to assess a wider range of air pollutants in the development area it is necessary to review current air quality monitoring data from published sources such as the most recent EPA's 2023 Annual report entitled Air Quality in Ireland. This EPA report provides detailed monitoring data collected from a number of monitoring locations throughout Ireland on an annual basis to assess national compliance with National Air Quality Regulations. Given the location of the site within Dublin it is characterised as a Zone A area as defined by the EPA.

EU legislation on air quality requires that Member States divide their territory into zones for the assessment and management of air quality. The zones currently in place in Ireland in are as follows:

- Zone A is the Dublin conurbation,
- Zone B is the Cork conurbation.
- Zone C comprising 23 large towns in Ireland with a population >15,000.
- Zone D is the remaining area of Ireland.

The air quality in each zone is assessed and classified with respect to upper and lower assessment thresholds based on measurements over the previous five years. Upper and lower assessment thresholds are prescribed in the legislation for each pollutant. The number of monitoring locations required is dependent on population size and whether ambient air quality concentrations exceed the upper assessment threshold, are between the upper and lower assessment thresholds, or are below the lower assessment threshold. A summary of the EPA's Annual report entitled Air Quality in Ireland 2023 is detailed below.

Table 1: Air Quality Standards Regulations 2011 (based on EU Council Directive 2008/50/EC)

Pollutant	Regulation	Limit Criteria	Tolerance	Limit Value
Nitrogen Dioxide	2008/50/EC	Hourly limit for the protection of human health not to be exceeded more than 18 times/year.	40% until 2003, reducing linearly to 0% by 2010.	200 µg/m^3
		Annual limit for the protection of human health	40% until 2003, reducing linearly to 0% by 2010.	40 µg/m^3
		Annual limit for the protection of vegetation	None	400 µg/m^3 NO & NO_2
Lead	2008/50/EC	Annual limit for the protection of human health	100%	0.5 µg/m^3
Sulphur Dioxide	2008/50/EC	Hourly limit for protection of human health not to be exceeded more than 24 times/year	150 µg/m^3 None	350 µg/m^3 125 µg/m^3
		Daily limit for protection of human health not to be exceeded more than 3 times/year	None	20 µg/m^3
		Annual and Winter limit for the protection of ecosystems		
Particulate Matter PM_{10}	2008/50/EC	24-hour limit for protection of human health not to be exceeded more than 35 times/year	50%	50 µg/m^3
		Annual limit for the protection of human health	20%	40 µg/m^3
Particulate Matter $PM_{2.5}$ Stage 1	2008/50/EC	Annual limit for the protection of human health	20% from June 2008. Decreasing linearly to 0% by 2015	25 µg/m^3
Particulate Matter $PM_{2.5}$ Stage	2008/50/EC	Annual limit for the protection of human health	None	20 µg/m^3
Benzene	2008/50/EC	Annual limit for the protection of human health	20% until 2006. Decreasing linearly to 0% by 2010	5 µg/m^3
Carbon Monoxide	2008/50/EC	8-hour limit (on a rolling basis) for protection of human health	60%	10 mg/m^3
Dust Deposition	German TA Luft Air Quality Standard Note 1	30 Day Average	None	350 mg/m^2/day

Note 1: Dust levels in urban atmospheres can be influenced by industrial activities and transport sources. There are currently no national or European Union air quality standards with which these levels of dust deposition can be compared. However, a figure of 350 mg/m2-day (as measured using Bergerhoff type dust deposit gauges as per German Standard Method VDI 2129 for determination of dust deposition rate, is accepted as best practice to ensure that no nuisance effects will result from industrial or construction activities.

Table _2: World Health Organisation Air Quality Guidelines (non-mandatory)

Pollutant	Limit Parameter	Value
Nitrogen Dioxide	Hourly Limit	200 µg/m³
	Annual Limit	40 µg/m³
Sulphur Dioxide	24-hour limit	20 µg/m³
	10-minute limit	500 µg/m³
Particulate Matter PM_{10}	24-hour limit	50 µg/m³
	Annual Limit	20 µg/m³
Particulate Matter $PM_{2.5}$	24-hour limit	25 µg/m³
	Annual Limit	10 µg/m³

Table 3: EPA 2023 Assessment Zone A Classification

Pollutant (Annual Mean)	EPA 2021 Assessment Classification
NO_2 Zone A	Below lower assessment threshold)
SO_2 Zone A	Below lower assessment threshold
CO Zone A	Below lower assessment threshold
Ozone Zone A	Below lower assessment threshold
PM_{10} Zone A	Below lower assessment threshold
$PM_{2.5}$ Zone A	Below lower assessment threshold
Benzene Zone A	Below lower assessment threshold
Heavy Metals (As, Ni, Cd, Pb) Zone A	Below lower assessment threshold
Poly Aromatic Hydrocarbons (PAH) Zone A	Below lower assessment threshold

2.2.2 Construction Impact Assessment Criteria

Transport Infrastructure Ireland's 'Guidelines for Treatment of Air Quality during the Planning and Construction of national Road Schemes' (Revision 1, 2011) States that "it is very difficult to accurately quantify dust emissions arising from construct ion activities" and that "it is thus not possible to easily predict changes to dust soiling rates or PM_{10} concentrations. "The guidance advises the use of a semi--quantitative approach to determine the likelihood of a significant impact which should be combined with an assessment of the proposed mitigation measures

The construction assessment criteria, reproduced from the TII guidance, are set out in Table 4 below.

Table 4: Assessment criteria for the impact of duct emissions from construction activities with standard mitigation in place (TII 2011)

Source		Potential distance for significant effects (Distance from source)		
Scale	**Description**	**Soiling**	**PM_{10}**	**Vegetation effects**
Major	Large construction sites, with high use of haul routes	100m	25m	25m
Moderate	Moderate sized construction sites, with moderate use of haul routes	50m	15m	15m
Minor	Minor construction sites, with limited use of haul routes	25m	10m	10m

The impact of construction related dust emissions is assessed by estimating the area over which there is a risk of significant impacts as per the TII guidance. The significance of impact is assessed in terms of the significance criteria in the EPAs 2023 Guidelines on the information to be contained in Environmental Impact Assessment Reports.

In relation to construction related traffic, air quality significance criteria are assessed on the basis of compliance with the appropriate standards air limit values. The Air Quality Standards Regulations 2011 replace the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999.

2.2.3 Operational Impact Assessment Criteria

Once operational, the proposed residential development at Parkmore Industrial Estate has the potential to impact on local air quality as a result of the requirements of new buildings to be heated and with the increased traffic movements associated with the development.

Air quality significance criteria are assessed on the basis of compliance with the national air quality limit values. The Air Quality Standards Regulations 2011 replace the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999.

2.3 Climate Assessment Methodology

Climate has implications for many aspects of the environment from soils to biodiversity and land use practices. The proposed development may impact on both the macro-climate and micro-climate. The macro-climate is the climate of a large geographic area such as Ireland. The micro-climate refers to the climate in the immediate area.

The impact of the proposed scheme upon the macro-climate is assessed through the consideration of the change in CO2 emissions that will occur due to the changes in traffic flow that occur in response to the proposed scheme.

2.3.1 Conference of the Parties

The Conference of the Parties to the Convention (COP26) occurred in Glasgow in November 2021 with the following outcomes.

2.3.1.1 Emissions

One of the key aims of COP26 was to create a timetable for agreeing to more ambitious National Determined Contributions (NDCs), as the current NDCs are inadequate to limit temperature rises to 1.5C and, prior to COP26, nations were only required to set new NDCs every five years. While only one major emitter - India - produced a new NDC at COP26, the aim of the summit was not for numerous countries to produce new NDCs, but to agree to the faster roadmap. The Glasgow Climate Pact ensures that the question of revising NDCs will be discussed at COP27 in Egypt in 2022 and again for the following COP in 2023, providing a lever for more ambitious countries to ensure slower countries make the step up.

2.3.1.2 Fossil Fuels

The use of coal provided the most contentious moment of the negotiations, as India and China insisted on changing the wording of the final text from s commitment to "phase out" coal power, which the EU and US both accepted, angering the UK and smaller island nations. However, it is notable that this is the first COP agreement that has made a direct reference to phasing down fossil fuels, including a statement that inefficient subsidies for all fossil fuels should be removed and an acknowledgement of the need for a "just transition" to a clean energy system. Nations are also "invited" to reduce methane emissions and decade, again the first-time methane has been mentioned in a COP final agreement.

2.3.1.3 Climate Finance and Adaption

In 2009, it was agreed that developing nations would receive at least $100bn a year from public and private sources to help them cut emissions and cope with the impacts of the climate crisis. However, in 2019, it was found that only $80bn had been made available, and the Glasgow Climate Pact urges development countries to "fully deliver" the $100bn goal through to 2025. The Glasgow Climate Pact also agrees to double the proportion of climate finance going towards adaptation following pressure from developing nations who argue that too much of climate finance is spent on funding emissions-cutting projects in middle-income countries that don't need the funding.

2.3.1.4 Loss and Damage

The EU and the US reportedly managed to veto the expansion of the loss and damage finance facility from the final agreement. The facility originated at the Paris Agreement and was designed to provide financial assistance for developing countries to deal with environmental damage incurred as a result of climate change. Going into the negotiations, nations including China and the G77, which represents 134 developing and emerging economies, expressed frustration that no further financial commitments to combatting loss and damage had been made. Despite this lack of progress, the Pact does confirm the damage in relation to climate change in developing countries and will fall under the Santiago Network from the UNFCCC.

2.3.1.5 Carbon Markets

The Glasgow Climate Pact also resolves some key issues in Article 6 of the Paris Agreement, the section pertaining to carbon markets and how emissions reductions under NDCs can and should be accounted for. The final text states that carbon offsetting should rely on "real, verified and additional" emissions removal taking place from 2021 onward and there is a requirement for co-benefits in terms of adaptation and the economy, and for nations to put at least 5% of the proceeds into adaptation. Plans for a potential two-tier system, and to transfer existing forest credits into Article 6, were deleted from drafts, in a move most green groups have praised.

2.3.1.6 Reaffirming the Paris Agreement

Prior to the summit, some nations opposed to stronger action had criticised the focus at COP26 on 1.5C as 'reopening the Paris agreement'. The main goal of which is to hold temperature rises 'well below' 2C above pre-industrial levels while 'pursuing efforts' to limit rises to 1.5C.

European Commission Directive 2001/81/EC, the National Emissions Ceiling Directive (NECD) (2014), prescribes the same emission limits as the 1999 Gothenburg Protocol. A National Programme for the progressive reduction of emissions of these four transboundary pollutants has been in place since April 2005 (DEHLG, 2007a; 2004). Data available from the EU in 2010 indicated that Ireland complied with the emissions ceilings for SO_2, VOCs and NH_3 but failed to comply with the ceiling for NO_X (EEA,2012). Directive (EU) 2016/2284 "on Reduction of National Emissions of Certain Atmospheric Pollutants and Amending Directive 2003/35/EC and Repealing Directive 2001/81/EC" was published in December 2016. The directive will apply the 2010 NECD limits until 2020 and establish new national emission reduction commitments which will be applicable from 2020 and 2030 for SO_2, NO_X, NMVOC, NH_3, $PM_{2.5}$ and CH4. In relation to Ireland, 2020-29 emission targets are for SO_2 (65% below 2005 levels), for NO_X (49% reduction), for VOCs (25% reduction), for NH_3 (1% reduction) and for $PM_{2.5}$ (18% reduction). In relation to 2030, Ireland's emission targets are for SO_2 (85% below 2005 levels), for NO_X (69% reduction), for VOCs (32% reduction), for NH_3 (5% reduction) and for $PM_{2.5}$ (41% reduction).

The following guidelines and EU Directives relating to Climate Change aspects of EIA reports have been applied to this assessment in order to determine the potential impacts/effects that the proposed development may have on climate change.

- EPA Guidelines on information to be contained in Environmental Impact Assessment Reports 2022
- European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018)
- Directive 2011/92/EU of the European Parliament and Council of the 13th December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) as amended by Directive 2014/52/EU of the European Parliament and Council of the 16th April 2014 The Irish Building Regulations Technical Guidance Document L - Conservation of Fuel & Energy – Dwellings amended in 2017 includes requirements for all residential dwelling to be "Nearly Zero Energy Buildings" (NZED's) by 31st December 2020.
- Irelands National Energy and Climate Plan 2021 – 2030.

In order to meet the commitments under the Paris Agreement, the EU enacted Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No. 525/2013 (the Regulation). The Regulation aims to deliver, collectively by the EU in the most cost-effective manner possible, reductions in GHG emissions from the Emission Trading Scheme (ETS) and non-ETS sectors amounting to 43% and 30%, respectively, by 2030 compared to 2005. Ireland's obligation under the Regulation is a 30% reduction in non-ETS greenhouse gas emissions by 2030 relative to its 2005 levels.

In 2015, the Climate Action and Low Carbon Development Act 2015 (No. 46 of 2015) (Government of Ireland, 2015) was enacted (the 2015 Act). The purpose of the Act was to enable Ireland 'to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050' (section 3(1) of the 2015 Act. This is referred to in the Act as the 'national transition objective'. The Act made provision for, inter alia, a national adaptation framework. In addition, the Act provided for the establishment of the Climate Change Advisory Council with the function to advise and make recommendations on the preparation of the national mitigation and adaptation plans and compliance with existing climate obligations. The 2015 Act was amended by the Climate Action and Low Carbon Development (Amendment) Act 2021 (the 2015 Act as amended).

The key duty imposed on planning authorities by section 15 of the Climate Action and Low Carbon Development Act 2015 (as amended) is:

A relevant body [e.g., a planning authority] shall, in so far as practicable, perform its functions in a manner consistent with

a) the most recent approved climate action plan,
b) the most recent approved national long term climate action strategy,
c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
d) the furtherance of the national climate objective, and
e) The objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the state.

The 2019 Climate Action Plan (CAP) was published by the Irish Government in June 2019 (Government of Ireland, 2019a). The Climate Action Plan 2019 outlined the current status across key sectors including Electricity, Transport, Built Environment, Industry and Agriculture and outlined the various broadscale measures required for each sector to achieve ambitious decarbonisation targets. The 2019 CAP also detailed the required governance arrangements for implementation including carbon-proofing of policies, establishment of carbon budgets, a strengthened Climate Change Advisory Council and greater accountability to the Oireachtas. The Government published the next Climate Action Plan in November 2021 (Government of Ireland, 2021a). The plan contains similar elements as the 2019 CAP and aims to set out how Ireland can reduce our greenhouse gas emissions by 51% by 2030 (compared to 2018 levels) which is in line with the EU ambitions, and a longer-term goal of to achieving net-zero emissions no later than 2050. The 2021 CAP outlines that emissions from the Built Environment sector must be reduced to 4 -5 MtCO2e by 2030 in order to meet our climate targets. This will require further measures in addition to those committed to in the 2019 CAP. This will include phasing out the use of fossil fuels for the space and water heating of buildings, improving the fabric and energy of our buildings, and promoting the use of lower carbon alternatives in construction.

Following on from Ireland declaring a climate and biodiversity emergency in May 2019 and the European Parliament approving a resolution declaring a climate and environment emergency in Europe in November 2019, the Government approved the publication of the General Scheme for the Climate Action (Amendment) Bill 2019 in December 2019 (Government of Ireland 2019b) followed by the passing of the Climate Action and Low Carbon Development (Amendment) Act 2021 (No. 32 of 2021) (hereafter referred to as the 2021 Climate Act) in July 2021 (Government of Ireland, 2021b). The 2021 Climate Act was prepared for the purposes of giving statutory effect to the core objectives stated within the CAP

The purpose of the 2021 Climate Act is to provide for the approval for the plans 'for the purpose of pursuing the transition to a climate resilient, biodiversity rich and climate neutral economy by no later than the end of the year 2050'. The 2021 Climate Act will also 'provide for carbon budget as 'the total amount of greenhouse gas emissions that are permitted during the budget period', The 2021 Climate Act removes any reference to a national mitigation plan and instead refers to both the Climate Action Plan, as published in 2019, and a series of National Long Term Climate Action Strategies. In addition, the Environmental Minister shall request each local authority to make a 'local authority climate action plan' lasting five years and to specify the mitigation measures and the adaptation measures to be adopted by the local authority.

3.0 RECEIVING ENVIRONMENT (BASELINE SCENARIO)

The subject development site is located in an area which includes, commercial and residential developments. It is situated at Parkmore Industrial Estate, Long Mile Road, Robinhood, Dublin 12

The development comprising of the demolition of the existing industrial units on site and the construction of 436 no. residential apartment units in 4 blocks (A-D) ranging in height from 6 to 10 storeys.

The subject site is located on the southern side of Longmile Road within the Parkmore Industrial Estate in Robinhood. The overall site is generally triangular in shape with the northern boundary fronting onto the Longmile Road. The eastern/southeastern boundary bounds with an existing estate road (cul-de-sac with turning head to the southern end) which serves a number of established commercial units on the opposite side of the road to the east of the subject site.

A section of the northwestern boundary of the subject site fronts onto Robinhood Road, with the remaining portion of the western boundary forming a common boundary with existing commercial units. The southern boundary of the site contains a boundary wall which borders Walkinstown stream (which is a tributary of the Camac River) to the south. Walkinstown Park, which is located within the administrative area of DCC, is located to the southeast of the site along the river/stream corridor. The overall site (within Parkmore Industrial Estate) is characterised by a number of existing commercial and industrial units with a mix of uses including vehicle test center and vehicular/truck sale. The industrial units are located set back from the roadside edge of the Longmile Road, with the area to the front currently consisting of hard standing vehicles parking and display areas. The wider area contains a conglomeration of industrial estates and business parks within a pattern of low-medium intensity development with smaller pockets of residential development located to the south/southwest of the site adjacent to the junction with Robinhood Road and the Longmile Road.

The general area surrounding the subject site is currently comprised of residential and commercial developments which will generate emissions to air associated with heating. The local road network will also have an impact on local air quality arising from combustion engine emissions.

3.1 Description of Existing Air Quality

The existing ambient air quality in the vicinity of the site has been characterised with information obtained from a number of sources as follows:

- Environmental Protection Agency's Annual Air quality in Ireland Report 2023
- Site specific air quality monitoring surveys.

The ambient air quality data collected and reviewed for the purpose of this study focused on the principal substances (dust, vehicle exhaust emissions and boiler emissions) which may be released from the site during the construction and operation phases, and which may exert an influence on local air quality.

The existing ambient air quality at and in the vicinity of the site is typical of an urban location and as such, domestic and commercial heating sources and road traffic are identified as the dominant contributors of hydrocarbon, combustion gases and particulate emissions to ambient air quality.

3.2 Trends in air quality

Annual air quality monitoring programs have been undertaken in recent years by the EPA and Local Authorities. The most recent annual report on air quality 'Air Quality in Ireland 2023 (Published 2024) details the range and scope of monitoring undertaken throughout Ireland. The Dublin Conurbation is categorised as Zone A.

The most recent 2023 EPA publication includes a number of Zone A monitoring locations which would be comparable to the expected air quality at the subject site at Parkmore Industrial Estate. The various Zone A air quality monitoring stations within Dublin provide a comprehensive range of air quality monitoring data sets which have been selected as part of this assessment to describe the existing ambient air quality at the subject site.

3.3 Nitrogen Dioxide

The Air Quality Standards Regulations 2011 specify a limit value of 40 µg/m^3, for the protection of human health, over a calendar year. The standard, taken from the 2008 CAFÉ Directive 2000/69/EC, came into force in 2011.

Long term NO_2 monitoring was carried out at 14 Zone A locations in 2023. The NO_2 annual mean for these sites ranged from 10.30 – 38.8 µg/m^3 compared against the annual average limit of 40 µg/m^3.

3.4 Sulphur Dioxide

The Air Quality Standards Regulations 2011 specify an annual limit value of 20µg/m^3 for the protection of human health. The standard, taken from the 2008 CAFÉ Directive 2000/69/EC, came into force in 2011.

Long term SO_2 monitoring was carried out at 5 Zone A locations in 2023. The annual SO_2 daily means in 2023 for these sites ranged from 1.6 – 5.3 µg/m^3.

3.5 Carbon Monoxide

The Air Quality Standards Regulations 2011 specify an 8-hour limit value (on a rolling basis) for the protection of human health of 10,000 µg/m^3. The standard, taken from the 2008 CAFÉ Directive 2000/69/EC, came into force in 2011.

Long term CO monitoring was carried out at 2 Zone A location in 2023. The 8-hour CO concentrations were 100 - 200µg/m^3 which is below the 8-hour limit value (on a rolling basis) of 10,000 µg/m^3.

3.6 Particulate Matter PM_{10}

The Air Quality Standards Regulations 2011 specify a PM_{10} limit value of 40 µg/m^3 over a calendar year. The standard, taken from the 2008 CAFÉ Directive 2000/69/EC, came into force in 2011.

Long term PM_{10} monitoring was carried out at 19 Zone A locations in 2023. The PM_{10} annual mean in 2023 for these sites ranged from 9.1 – 15.4µg/m^3.

3.7 Particulate Matter PM2.5

The Air Quality Standards Regulations 2011 specify a $PM_{2.5}$ limit value of 25 µg/m^3 over a calendar year.

Long term $PM_{2.5}$ monitoring was carried out at 18 Zone A locations in 2023. The $PM_{2.5}$ average in 2023 for these sites ranged from 5.8 – 7.8µg/m3.

3.8 Benzene

The Air Quality Standards Regulations 2011 specify a benzene limit value of 5 µg/m^3 over a calendar year. The standard, taken from the 2008 CAFÉ Directive 2000/69/EC, came into force in 2011. Long term benzene monitoring was carried out at one Zone A location. The benzene average in 2023 for this site was 0.60 µg/m^3. Therefore, long term averages were below the limit value 5 µg/m^3

Table 5 below presents a summary of the 2023 Air Quality data obtained from the Zone A which may be considered to be broadly similar to that of the subject site in which the subject development site is located.

Table 5: Summary of the 2023 Air Quality data obtained from Zone A area

Pollutant	Regulation	Limit type	Limit value	EPA monitoring data 2023
Nitrogen dioxide	2008/50/EC	Annual limit for protection of human health	40 µg/m^3	10.30 – 38.80µg/m^3
Sulphur dioxide	2008/50/EC	Daily limit for protection of human health (not to be exceeded more than 3 times per year)	125 µg/m^3	1.6 – 5.3 µg/m^3
Carbon monoxide	2008/50/EC	8-hour limit (on a rolling basis) for protection of human health (Zone C)	10,000 µg/m^3	100 - 200µg/m3
Particulate matter (as PM_{10})	2008/50/EC	Annual limit for protection of human health	40 µg/m^3	9.1 – 15.4µg/m3
Particulate matter (as $PM_{2.5}$)	2008/50/EC	Annual limit for protection of human health	25 µg/m^3	5.8 – 7.8µg/m^3
Benzene	2008/50/EC	Annual limit for protection of human health	5 µg/m^3	0.60µg/m^3

3.9 Site Specific Baseline air quality monitoring

A site-specific short-term monitoring study was conducted for PM_{10} & $PM_{2.5}$ at the site using DustTrak II Aerosol Monitor 8530. Figure 1 identifies the monitoring location. The baseline survey was conducted during January 2025.

This location was chosen in order to obtain representative short-term sample concentrations for the identified parameters.

The survey was indicative only and results obtained cannot be used to demonstrate compliance with short-term or annual limit values detailed in Table 1 above. The results are however within the concentration range of EPA long- term air quality data in this zone. The results from the monitoring surveys are presented in Table 6.

The concentrations of PM_{10} & $PM_{2.5}$ levels measured during the short-term measurement survey were below their respective annual limit values and comparable with levels reported by the EPA.

Table 6: Monitoring Results of PM_{10} & $PM_{2.5}$

Pollutant	Sampling period	Average Measured Concentration	Assessment criteria
PM_{10}	January 2025	9.00µg/m^3	40 µg/m^3 (As annual average)
$PM_{2.5}$	January 2025	6.00µg/m^3	25 µg/m^3 (As annual average)

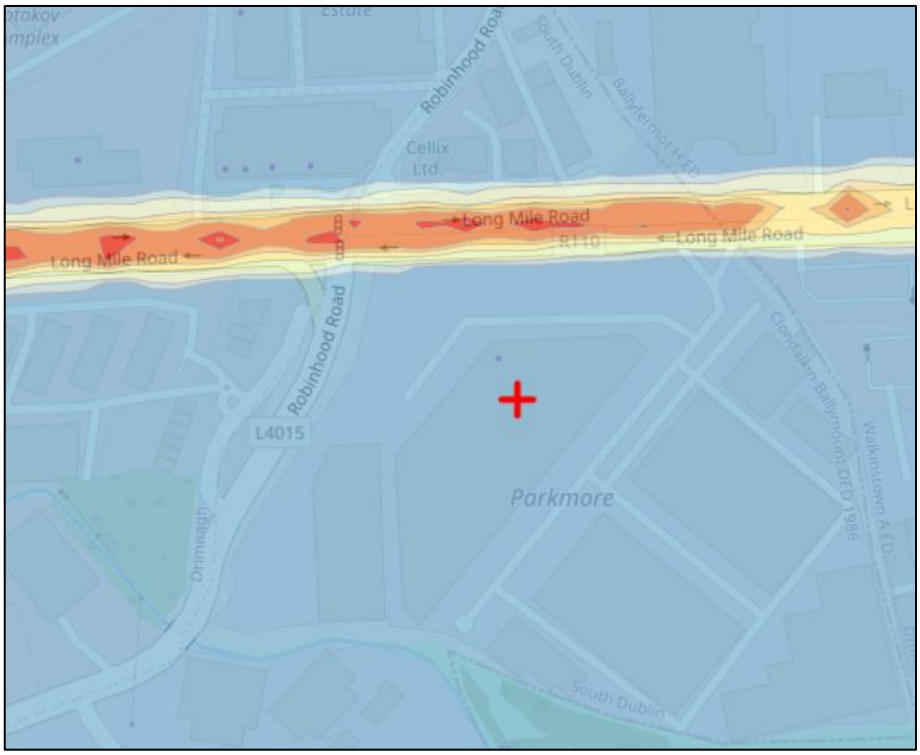
Figure 1: Monitoring Locations for PM_{10} – $PM_{2.5}$

3.10 Review of EPA modelled NO_2, PM_{10} and $PM_{2.5}$

The EPA's unified CIS Framework provides traffic emission data based on traffic volumes and the proximity of receptors to the source, in this case the local road network in the Inchicore area. Figures 2 to 4 present the EPA modelled concentration contours for NO_2, PM_{10} and $PM_{2.5}$ with an associated concentration for each at the Parkmore Industrial Estate. The EPA data indicates that air quality parameters at the Parkmore Industrial Estate site are below the Air Quality Standards for NO_2, PM_{10} and $PM_{2.5}$.

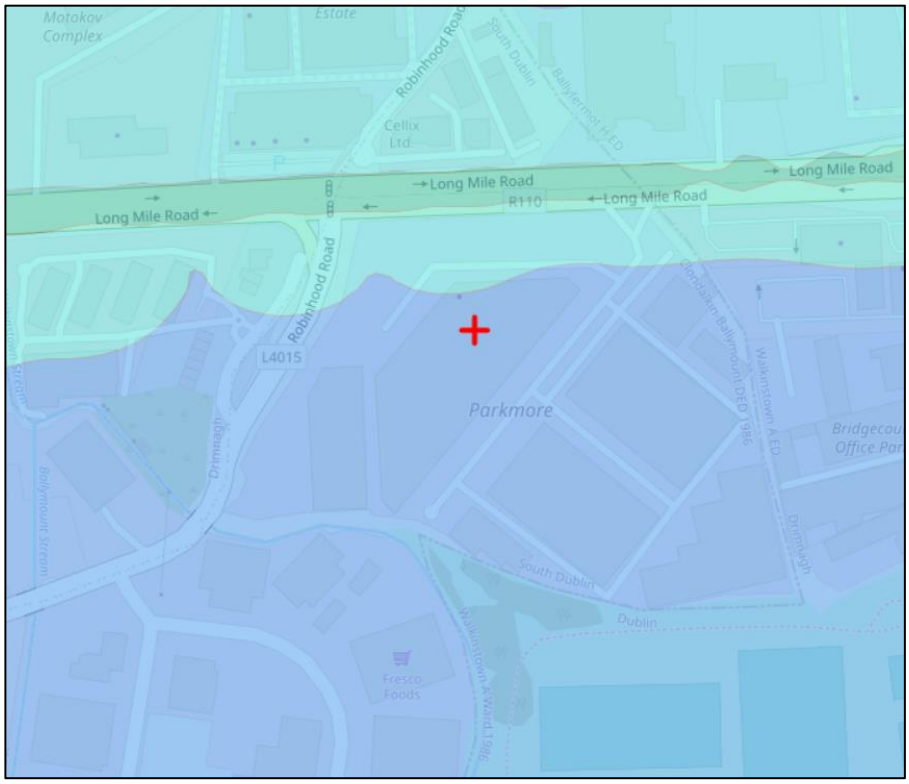
The background EPA NO_2 Model give a range of <28µg/m^3 for the site. As can be seen in the figure below.

Figure 2: EPA NO_2 Model at the site (Site marked at X)



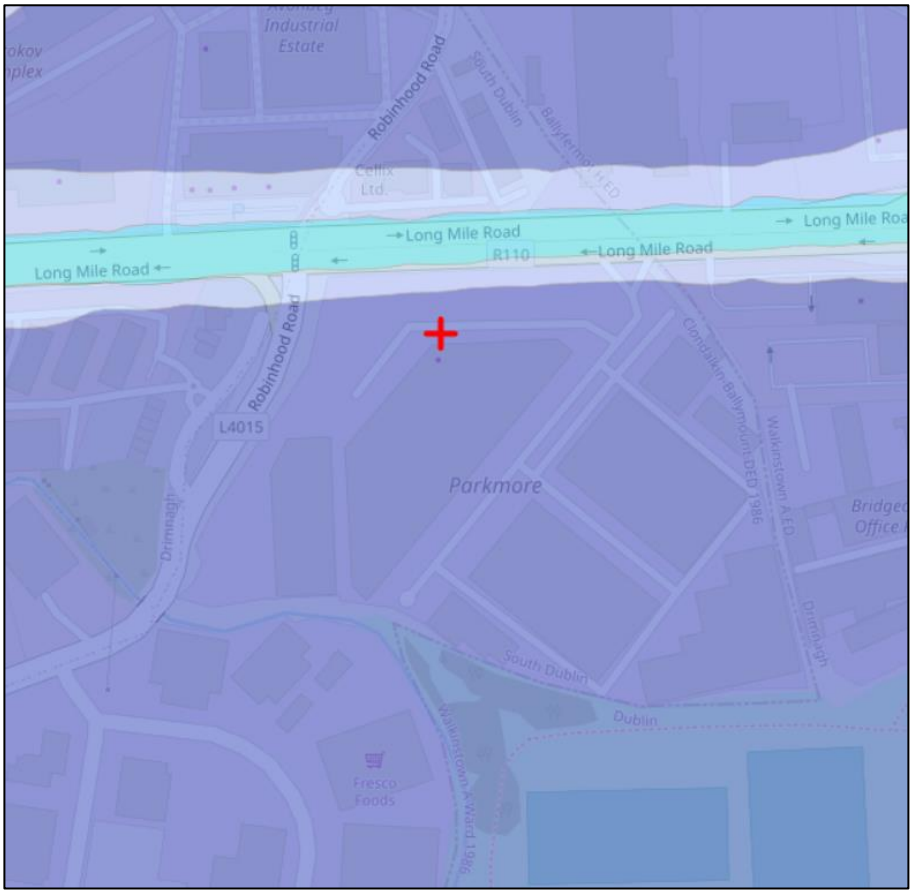
The background EPA $PM_{2.5}$ Model give a range of 7-10µg/m³ for the site. As can be seen in the figure below.

Figure 3: EPA $PM_{2.5}$ Model at the site (Site marked at X)



The background EPA PM_{10} Model give a range of <12 - 14µg/m^3 for the site. As can be seen in the figure below.

Figure 4: EPA PM_{10} Model at the site (Site marked at X)



3.11 Significance

Based on published 2023 EPA air quality data for the Zone A (Dublin) area in which the subject site is located together with site specific monitoring data and a review of the EPA's GIS Framework modelling data, it may be concluded that the existing baseline air quality at the subject site may be characterised as being good with no exceedances of the National Air Quality Standards Regulations 2011 (S.I No. 180 of 2011) limit values of individual pollutants. There is therefore currently sufficient atmospheric budget to accommodate the development without adversely impacting existing ambient air quality. The quality of existing air quality at the subject site must be maintained and improved where possible as a result of the proposed development to ensure that local human health and the receiving environment is not adversely affected.

4.0 EXISTING CLIMATE RECEIVEING ENVIRONMENT (BASELINE SCENARIO)

4.1 Meteorological Data

A key factor in assessing temporal and spatial variations in air quality is the prevailing meteorological conditions. Depending on wind speed and direction, individual receptors may experience very significant variations in pollutant levels under the same source strength (i.e., traffic levels). Wind is of key importance in dispersing air pollutants and for ground level sources, such as traffic emissions, pollutant concentrations are generally inversely related to wind speed. Thus, concentrations of pollutants derived from traffic sources will generally be greatest under very calm conditions and low wind speeds when the movement of air is restricted. In relation to PM_{10}, the situation is more complex due to the range of sources of this pollutant. Smaller particles (less than $PM_{2.5}$) from traffic sources will be dispersed more rapidly at higher wind speeds. However, fugitive emissions of coarse particles ($PM_{2.5}$ - PM_{10}) will actually increase at higher wind speeds. Thus, measured levels of PM_{10} will be a non-linear function of wind speed.

4.2 Description of Existing Climate

The representative meteorological station to the subject site is at Casement Aerodrome which is located approximately 6.5km southwest of the site and as such, long-term measurements of wind speed/direction and air temperature for this location are representative of prevailing conditions experienced at the subject site. Recent meteorological data sets for Casement Aerodrome were obtained from Met Éireann for the purposes of this assessment study.

4.3 Rainfall

Precipitation data from the Casement Aerodrome meteorological station for the period 2022-2024 indicates a mean annual total of about 749.46 mm. This is within the expected range for most of the eastern half of Ireland.

4.4 Temperature

The annual mean temperature at Casement Aerodrome (2022-2024) is 10.56°C. Given the relatively close proximity of this meteorological station to the proposed development site, similar conditions would be observed. Table 7 sets out meteorological data for Casement Aerodrome from 2022-2024

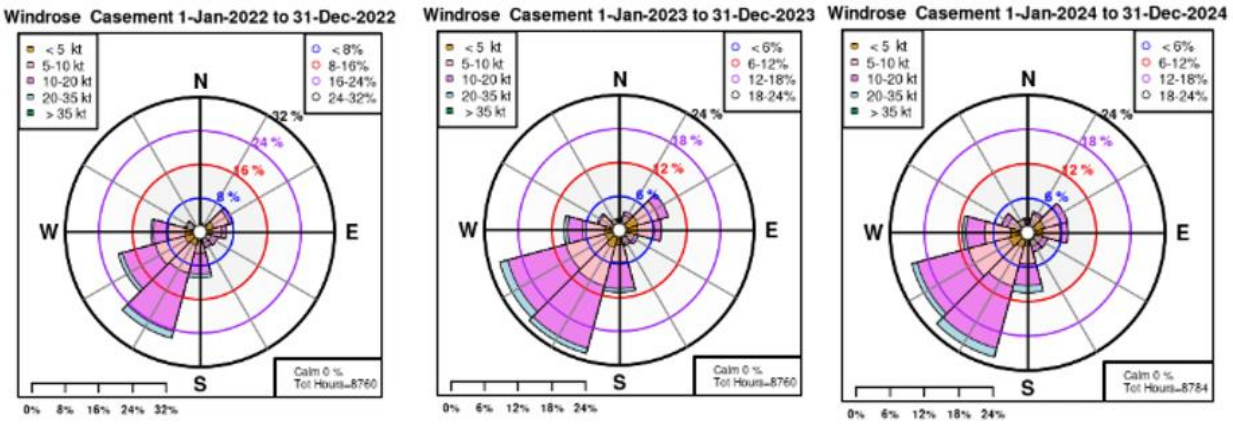
Table 7: Meteorological Data for Casement Aerodrome 2022-2024

Year	Period	Rainfall (mm)	Mean Temperature (0C)
2022	Annual Mean	768.2	10.5
2023	Annual Mean	870.0	10.8
2024	Annual Mean	670.2	10.4
Mean		**749.46**	**10.56**

4.5 Wind

Wind is of key importance for both the generation and dispersal of air pollutants. Casement Aerodrome met data has been examined to identify the prevailing wind direction and average wind speeds over a three-year period (see Figure 5). For data collated during three representative years 2022, 2023 & 2024. The predominant wind direction is westerly to south-westerly with predominately moderate wind speeds.

Figure 5: Casement Aerodrome Windrose 2022, 2023 & 2024



5.0 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The development includes the construction of a residential scheme on a commercial site. The site is bounded to the north by Long Mile Road, to the west by a Robinhood road and to the south and east by commercial units.

The proposed development will comprise of the demolition of the existing industrial units on site and the construction of 436 no. residential apartment units in 4 blocks (A-D) ranging in height from 6 to 10 storeys.

6.0 POTENTIAL IMPACTS/EFFECTS OF THE PROPOSED DEVELOPMENT

6.1 Potential Impacts/Effects Construction Phase

6.1.1 Air quality

The development of the site will be conducted in the following phased stages:

- Enabling works - Site set up and Site clearance including demolition of structures and buildings.
- Construction works including site infrastructure, apartments, commercial buildings, and landscaping.

Construction impacts/effects associated with both of these phased stages are considered below.

6.1.2 Enabling works - Site Set Up and Clearance

Works activities associated with the 'Site set up' will be undertaken prior to construction works commencing in each sub-phase. The setting up of the site shall involve the construction of site security hoarding and site compounds, site offices, materials and waste storage areas and staff welfare facilities. These temporary activities will have a minimal potential to generate fugitive dust emissions or combustion gas emissions.

Site clearance, building and structure demolition and ground excavation works will be undertaken in separate phases and these activities have the potential to generate fugitive windblown dust emissions rising from the operation of mechanical plant such as excavators and tipper trucks and the movement of these vehicles on exposed surfaces at the site. Infrastructural works will be required to facilitate site services.

With regard to the volume of waste material (sub soils) generated during site clearance, there will be a requirement for HGV trucks to remove the material from the site. Stripped soils shall be stockpiled and covered on site for re-use during final landscaping works. Trucks shall be loaded with material on-site by mechanical excavators and loading shovels which will generate fugitive dust emissions as a result of the transfer of the excavated materials comprised principally of soils and stones from stockpile to truck.

The movements of construction vehicles on the site shall also generate windblown dust emissions. Where dusty waste material is loaded onto exposed open trucks, fine dusts may be released as the truck travels along public roads.

6.1.3 Building and Site Infrastructure Construction Works

During the construction phase there will be extensive site works, involving construction machinery and activities which have the potential to generate fugitive windblown dust emissions.

Construction equipment including generators and compressors will also give rise to diesel and petrol engine exhaust emissions.

Construction traffic to and from the site shall result in a short-term increase in the volume of diesel HGVs along the local road network which will generate additional hydrocarbon and particulate emissions from the vehicle exhausts.

During the construction phase CO_2 will be released into the atmosphere as a result of the movement of construction vehicles and the use of construction plant including generators and cranes.

6.2 Potential Operational Phase Impacts/effects

6.2.1 Air quality

The operational phase of the proposed development has the potential to have a slight, long-term impact on local air quality as a result of the requirements for new buildings to be heated and with the increased traffic movements associated with the development.

6.2.2 Climate

The overall site area of the development lands is c. 1.90 hectares which will include open space, and landscaped areas. The overall development includes the construction of buildings which may have the potential effect of marginally raising localised air temperatures, especially in summer.

The proposed development includes apartment structures which may impact on the local micro-climate by means of wind shear effects. Motor vehicles are a major source of atmospheric emissions which contribute to climate change and vehicle exhaust emissions may have a potential to impact the macro-climate.

7.0 AVOIDANCE, REMEDIAL AND MITIGATION MEASURES

This section provides the measures that shall be implemented during the construction and operational phases of the development and into the design of the development to minimise the impacts/effects on ambient air quality in the receiving environment, on local population and human health, on local flora and fauna and on climate.

7.1 Demolition Phase

If asbestos is present on site, a licensed asbestos contractor shall be appointed to remove all asbestos containing material (ACM's) in accordance with the Health and Safety Authority's Guidelines on ACM Management and Abatement.

Demolition activities including concrete breaking, which shall include the use of water suppression techniques to minimise the generation of dust.

7.2 Construction Phase

- Use of rubble chutes and receptor skips during construction activities.
- During dry periods, dust emissions from heavily trafficked locations (on and off site) will be controlled by spraying surfaces with water and wetting agents.
- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un- surfaced roads will be restricted to essential site traffic only.
- Re-suspension in the air of spillages material from trucks entering or leaving the site will be prevented by limiting the speed of vehicles within the site to 10kmh and by use of a mechanical road sweeper.
- The overloading of tipper trucks exiting the site will not be permitted. Aggregates will be transported to and from the site in covered trucks.
- Where the likelihood of windblown fugitive dust emissions is high and during dry weather conditions, dusty site surfaces will be sprayed by a mobile tanker bowser.
- Wetting agents should be utilised to provide a more effective surface wetting procedure.
- Exhaust emissions from vehicles operating within the construction site, including trucks, excavators, diesel generators or other plant equipment, will be controlled by the contractor by ensuring that emissions from vehicles are minimised by routine servicing of vehicles and plant, rather than just following breakdowns; the positioning of exhausts at a height to ensure adequate local dispersal of emissions, the avoidance of engines running unnecessarily and the use of low emission fuels.
- All plant not in operation shall be turned off and idling engines shall not be permitted for excessive periods. Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods.
- Material stockpiles containing fine or dusty elements including soils shall be covered with tarpaulins. Where drilling or pavement cutting, grinding or similar types of stone finishing operations are taking place, measures to control dust emissions will be used to prevent unnecessary dust emissions by the erection of wind breaks or barriers. All concrete cutting equipment shall be fitted with a water dampening system.
- A programme of air quality monitoring shall be implemented at the site boundaries for the duration of construction phase activities to ensure that the air quality standards relating to dust deposition and PM_{10} are not exceeded. Where levels exceed the specified air quality limit values, dust-generating activities shall immediately cease, and alternative working methods shall be implemented.
- A complaints log shall be maintained by the construction site manager and in the event of a complaint relating to

dust nuisance, an investigation shall be initiated.

- Dust netting and site hoarding shall be installed along the north, south, east, and western site boundaries to minimise the propagation of fugitive windblown dust emissions falling on third party lands and existing residential areas.

7.3 Operational Phase

The Operational Phase of the Parkmore Industrial Estate development will not generate air emissions that would have an adverse impact on local ambient air quality or local human health. The operational phase includes mitigation by design of the development to minimise the impact of the operational phase of the development on air quality and climate are as follows:

AC-O1 Climate Impact Mitigation Measures by Design

- Energy Efficiency All residential units shall be designed and constructed in accordance with The Irish Building Regulations Technical Guidance Document L Conservation of Fuel & Energy Dwellings includes requirements for all residential dwellings to be "Nearly Zero Energy Buildings" (NZEB's) by December 2020.
- Energy Consumption - The following key design features have been integrated into the design and construction of the residential units to reduce energy consumption:
    - Photovoltaic Cells will be installed on all roofs.
    - The use of green building materials: low embodied energy & recycled materials will be utilised where possible.
    - Energy efficient window units and frames with certified thermal performance shall be used.
    - Building envelope air tightness will reduce the loss of warm air to the external environment.
    - Thermal insulation of walls and roof voids of all units.

AC-O2 Air Quality Mitigation Measures

- A centralised air source heat pump is proposed to provide the heating load for the development. Inclusion of electric car charging points to encourage electric vehicle ownership
- There will be reduced car parking at the development site given the quality of and proximity to Public designed for walking and cycling.
- Provision of open landscaped areas, to encourage residents to avail of active lifestyle options which will contribute albeit in a minor way to the adsorption of Carbon Dioxide from the atmosphere and the release of Oxygen into the atmosphere.

8.0 PREDICTED IMPACTS/EFFECTS OF THE PROPOSED DEVELOPMENT

8.1 Predicted Construction Phase Impacts/effects

Various elements associated with the construction phase of the proposed development have the potential to impact local ambient air quality, human health, and climate. However, the potential construction phase impacts will be mitigated as detailed above to ensure there is no adverse impact on ambient air quality for the duration of all construction phase works. It is predicted that the operational phase of the development will not generate air emissions that would have an adverse impact on local ambient air quality or on local human health or on the local micro-climate or the wider macro-climate. Table 8 below summarises the identified likely residual effects of the project during the construction phase.

Table 8: Summary of Construction Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Construction Phase Air Quality	Negative	Slight	Local	Likely	Short-Term	Residual
Construction Phase Climate	Negative	Imperceptible	Local	Likely	Short-Term	Residual

With regard to the predicted cumulative construction phase impacts/effects, the subject development together with all other proposed developments in the local area will require a Construction Environmental Management Plan detailing how construction phase air emissions shall be controlled and mitigated in order to minimise the impacts and effects on the receiving environment. It is predicted that the likely significant effects with mitigation for the cumulative scenario will be as per Table 8 above.

8.2 Predicted Operational Phase Impacts/Effects

The sustainable features that are incorporated into the design of all residential units will ensure that the operational phase of the development will not have an adverse impact on human health, local air quality or on local or global climate patterns. The residential units will be designed to ensure that they can withstand the potential changes in climate which may generate more extreme and prolonged meteorological events in the future. It is predicted that fossil fuel combustion gas emissions including Carbon Dioxide, Sulphur Dioxide, Nitrogen Oxides, Carbon Monoxide and hydrocarbon particulate emissions will be negligible as the proposed heating scheme will be accordance with the latest building regulations and will not have an adverse significant impact on the existing ambient air quality in the vicinity of the proposed development site.

Greenhouse gases occur naturally in the atmosphere (e.g., carbon dioxide, water vapor, methane, nitrous oxide, and ozone) and in the correct balance, are responsible for keeping the lower part of the atmosphere warmer than it would otherwise be. These gases permit incoming solar radiation to pass through the Earth's atmosphere but prevent most of the outgoing infrared radiation from escaping from the surface and lower atmosphere into the upper levels. However, human activities are now contributing to an upward trend in the levels of these gases, along with other pollutants with the net result of an increase in temperature near the surface.

Motor vehicles are a major source of atmospheric emissions which contribute to climate change, however, vehicle exhaust emissions generated from vehicles associated with the development will have a negligible impact on the macro-climate given modern technological developments in cleaner and more efficient vehicle engines. The development has been designed to limit the reliance on cars and promote more sustainable transport solutions as evidenced by the reduced car-

parking provision and the inclusion of a mobility hub. Current trends suggest that vehicle manufacturers are ceasing the manufacture of large diesel engines for private cars and instead adopting hybrid engine and all electric technologies which will contribute to the reduction of engine exhaust emissions including particulate matter, Nitrogen Oxides, Sulphur Dioxide, Carbon Dioxide and Carbon Monoxide. The UK DMRB guidance (UK Highways Agency, 2020), on which the TII Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes is based, states that road links meeting one or more of the following criteria can be defined as being 'affected' by a proposed development and should be included in the local air quality assessment:

- Road alignment change of 5 meters or more.
- Daily traffic flow changes by 1,000 AADT or more.
- HDV flows change by 200 vehicles per day or more.
- Daily average speed changes by 10 km/h or more; or
- Peak hour speed changes by 20 km/h or more.

There will be an imperceptible impact on local air quality as a result of increased traffic movements associated with the proposed development as none of the above criteria will be reached or exceeded. To further reduce the climatic impact of the operational phase of the development, electric vehicle charging points shall be installed in dedicated parking spaces to facilitate residents who own electric vehicles and to encourage other residents to purchase electric vehicles.

The scheme has been designed to provide thermally efficient buildings which will reduce the consumption of fossil fuels within each individual dwelling. This will reduce the impact the operational phase of the development will have on the micro and macro climate. In particular, there will be no "traditional" passive air vents in the apartments which are both thermally and acoustically inefficient. As per the Energy Sustainability Statement prepared by EDC Progressive Engineering the Scheme will fully comply with Technical Guidance Document Part L (Conservation of Fuel and Energy) of the Building Regulations sets the energy and carbon performance requirements to achieve Nearly Zero Energy Buildings performance as required by the EU Energy performance in Buildings Directive 2010/31/EU of 19 May 2010 and amending directive 2018/844 of May 2018.

The thermal efficiency of the buildings will ensure that the development will be sustainable and will be protected against the impacts of future climate change which may include storm events and prolonged colder periods during the winter season. These factors will contribute to reducing the impact the operational development has on the local and global climate which will ultimately contribute in a positive manner in reducing the impact on local and further afield human health. Table 9 below summarises the identified likely significant residual effects of the proposed operational phase of the development.

Table 9: Summary of Operational Phase Likely Significant Effects with Mitigation

Likely Significant Effect	Quality	Significance	Extent	Probability	Duration	Type
Operational Phase Air Quality	Neutral	Imperceptible	Local	Likely	Long-Term	Residual
Operational Phase Climate	Neutral	Imperceptible	Local	Likely	Long-Term	Residual

As the National and EU standards for air quality are based on the protection of human health, and concentrations of pollutants for both the construction and operational stages of the proposed development are predicted to be significantly below these standards, the impact to human health is predicted to be negative but overall imperceptible in the short and long term. No significant impacts/effects to either air quality or climate are predicted during the construction or operational phases of the proposed development.

9.0 MONITORING

9.1 Construction Phase

This section describes the dust monitoring methodologies that shall be implemented at the site during the construction phases to ensure that dust and particulate matter (PM_{10} and $PM_{2.5}$) generated by site activities does not cause nuisance or cause adverse health effects to residential areas and other receptors located in the vicinity of the site boundaries.

9.1.1 Dust Deposition Monitoring Methodology

Dust deposition levels will be monitored to assess the impact that site construction site activities may have on the local ambient air quality and to demonstrate that the environmental control measures in place at the site are effective in minimising the impact of construction site activities on the local receiving environment including existing residential developments and lands bordering the site. The following procedure will be implemented at the site on commencement of site activities:

The dust deposition rate will be measured by positioning Bergerhoff Dust Deposit Gauges at strategic locations near the boundaries of the site for a period of 30 +-2 days. Monitoring shall be conducted on a monthly basis during the construction phase. The proposed monitoring locations (D1-D4) are presented below.

The selection of sampling point locations will be completed after consideration of the requirements of Method VDI 2119 with respect to the location of the samplers relative to obstructions, height above ground and sample collection and analysis procedures. The optimum locations will be determined by a suitably qualified air quality expert to ensure that the dust gauge locations are positioned in order to best determine potential dust deposition in the vicinity of the site boundaries and existing on-site buildings.

After each (30 +-2 days) exposure period, the gauges will be removed from the sampling location, sealed and the dust deposits in each gauge will be determined gravimetrically by an accredited laboratory and expressed as a dust deposition rate in mg/m2-day in accordance with the relevant standards.

Technical monitoring reports detailing all measurement results, methodologies and assessment of results shall be subsequently prepared and maintained by the Site Manager. Monitoring reports shall be made available to the Local Authority as requested.

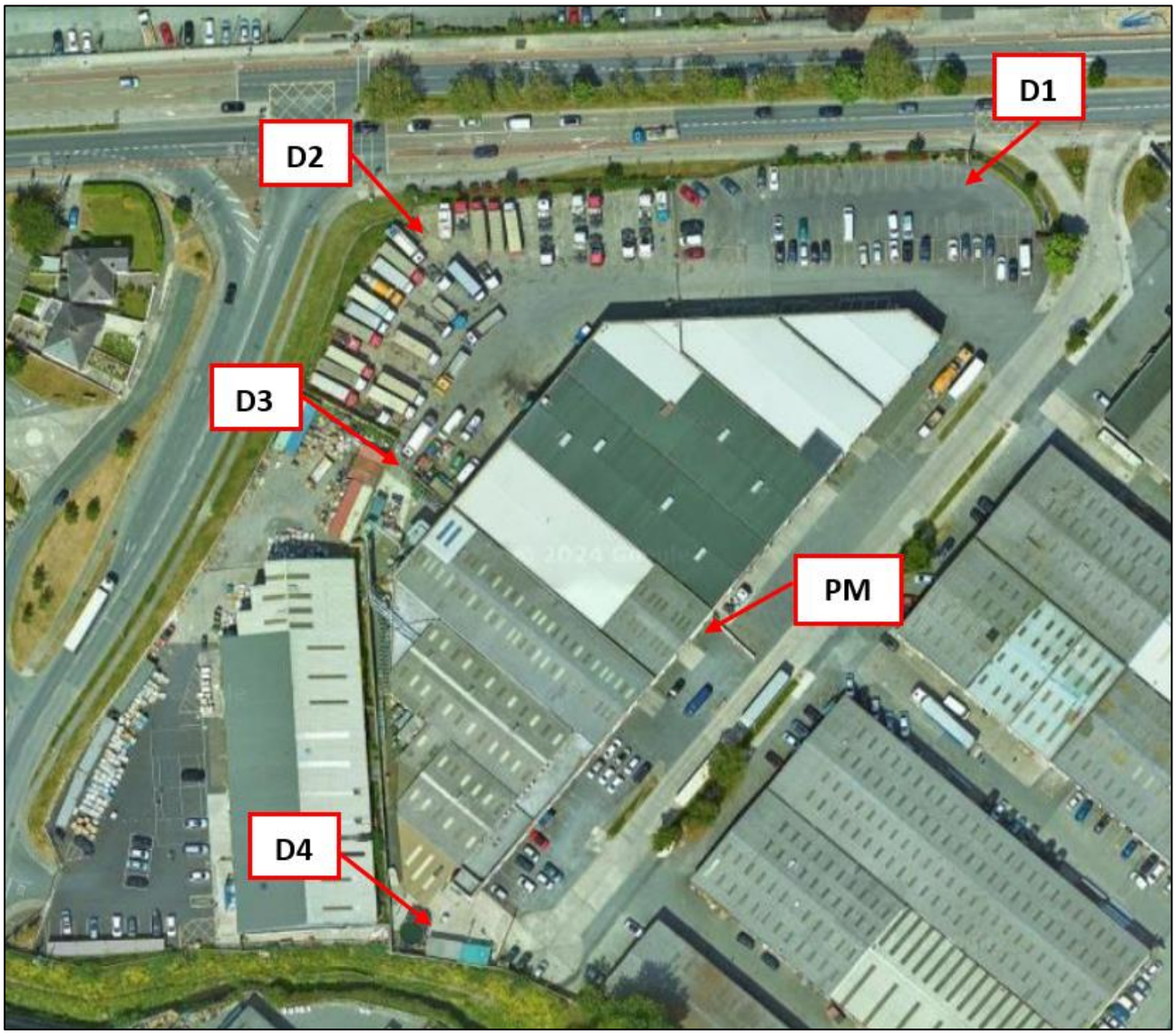
A dust deposition limit value of 350 mg/m^2-day (measured as per German Standard Method VDI 2119 Measurement of Particulate Precipitations Determination of Dust Precipitation with Collecting Pots Made of Glass (Bergerhoff Method) or Plastic. is commonly specified by Local Authorities and by the EPA to ensure that no nuisance effects will result from specified activities, and it is to this Best Practice standard method that this programme of dust monitoring and control has been prepared.

The German Federal Government Technical Instructions on Air Quality Control - TA Luft specifies an emission value for the protection against significant nuisances or significant disadvantages due to dustfall. This limit value is 350 mg/m^2-day and it is to this limit value that all measured dust deposition levels shall be assessed. This limit value is commonly specified by Local Authorities at construction sites.

PM_{10} & $PM_{2.5}$ Monitoring Methodology

Fine particulate matter as PM_{10} and $PM_{2.5}$ shall be monitored using continuous data logging air quality monitoring instrumentation during the stripping and excavation of soils at the site. The monitoring system shall be located at the south eastern site boundary at location PM as shown in Figure below.

Figure 6: Construction Phase Monitoring Locations



9.2 Operational Phase

Air quality monitoring is not required for the operational phase of the proposed development.

10.0 CUMULATIVE IMPACTS/EFFECTS

This section has considered the cumulative impact/effects of the proposed development in conjunction with future and current developments in the vicinity of the subject site.

The cumulative air quality impact of the proposed Parkmore Industrial Estate development, on other developments and existing local transport infrastructure is assessed with regard to having established the baseline air quality and then predicting the impact that the proposed development will have on the baseline air quality.

It is considered that, in the absence of mitigation measures, there will be the potential for a short term slight negative cumulative impact associated with the construction phase of the subject development and other local developments on ambient air quality and climate.

Should the construction phase of the proposed Parkmore Industrial Estate development coincide with the construction phase of other local proposed developments including:

- Planning Ref. SD24A/0217W - Unit 12, Robinhood Industrial Estate, Robin hood road, Dublin 22, D22E894.
- Planning Ref. SD24A/0203W - 22, Robinhood Road, Drimnagh, Dublin 12.
- Planning Ref. SD13A/0157/EP - Fox & Geese, Robinhood Road, Clondalkin, Dublin 22.

There is the potential for cumulative dust emissions to impact the nearby sensitive receptors if appropriate air quality mitigation and control measures are not implemented.

11.0 Risk to Human Health

11.1 Construction Phase

Best practice mitigation measures are proposed for the construction phase of the proposed development which will focus on the pro-active 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 of the proposed development will ensure that the impact of the development complies with all EU ambient air quality legislative limit values which are based on the protection of human health. Therefore, the impact of construction of the proposed development is likely to be negative, short-term, and imperceptible with respect to human health.

11.2 Operational Phase

Operational traffic emissions as a result of the proposed development are compliant with all National and EU ambient air quality limit values which are set for the protection of human health and therefore, will not result in an adverse or harmful impact on human health.

12.0 CONCLUSION

Traynor Environmental Ltd was commissioned by Watfore Ltd to undertake an Air Quality Assessment Report in support of a planning application for a proposed development on land at Parkmore Industrial Estate, Longmile Road, Robinhood, Dublin 12.

The proposals have the potential to cause air quality impacts as a result of fugitive dust emissions during construction/demolition and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. As such, an Air Quality Assessment was required in order to determine baseline conditions and assess potential effects as a result of the scheme.

During the construction/demolition phase of the development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the general assessment methodology. Assuming good practice dust control measures are implemented, the residual significance of potential air quality impacts from dust generated by earthworks, construction activities was predicted to be slight - imperceptible.

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site and the development itself. Review of published 2023 EPA air quality data for the Zone A area, site specific monitoring data and a review of the EPA's GIS Framework modelling data was therefore undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the development. Review of the operational phase was predicted to be imperceptible.

Based on the assessment results, air quality factors are not considered a constraint to the development.