HALSTON

APPENDIX 8.3

ENVIROLOGIC

HYDROGEOLOGICAL · HYDROLOGICAL CONSULTING

Response to Further Information Item 12(i)

LOCATION:	Kiltotan and Collinstown, Oldtown, Gneevebane, Farthingstown, Co. Westmeath
PREPARED FOR:	Halston Environmental & Planning Ltd.
PREPARED BY:	Cian O'Sullivan MEngSc (Hydrology)
REVIEWD BY:	Colin O'Reilly PhD (Hydrology)
DATE:	2nd March 2026
REFERENCE:	3151C

Contents

1 INTRODUCTION

The following summary report has been prepared by Cian O'Sullivan MEngSc (Hydrology) and reviewed by Colin O'Reilly PhD (Hydrology) of Envirologic Ltd. on behalf of Halston Environmental & Planning Ltd.

This summary report is intended to satisfy the requirements of Westmeath County Council in response to a request for further information issued on 1st September 2025 under Pl. Ref. 25/60344, with relevant item as follows:

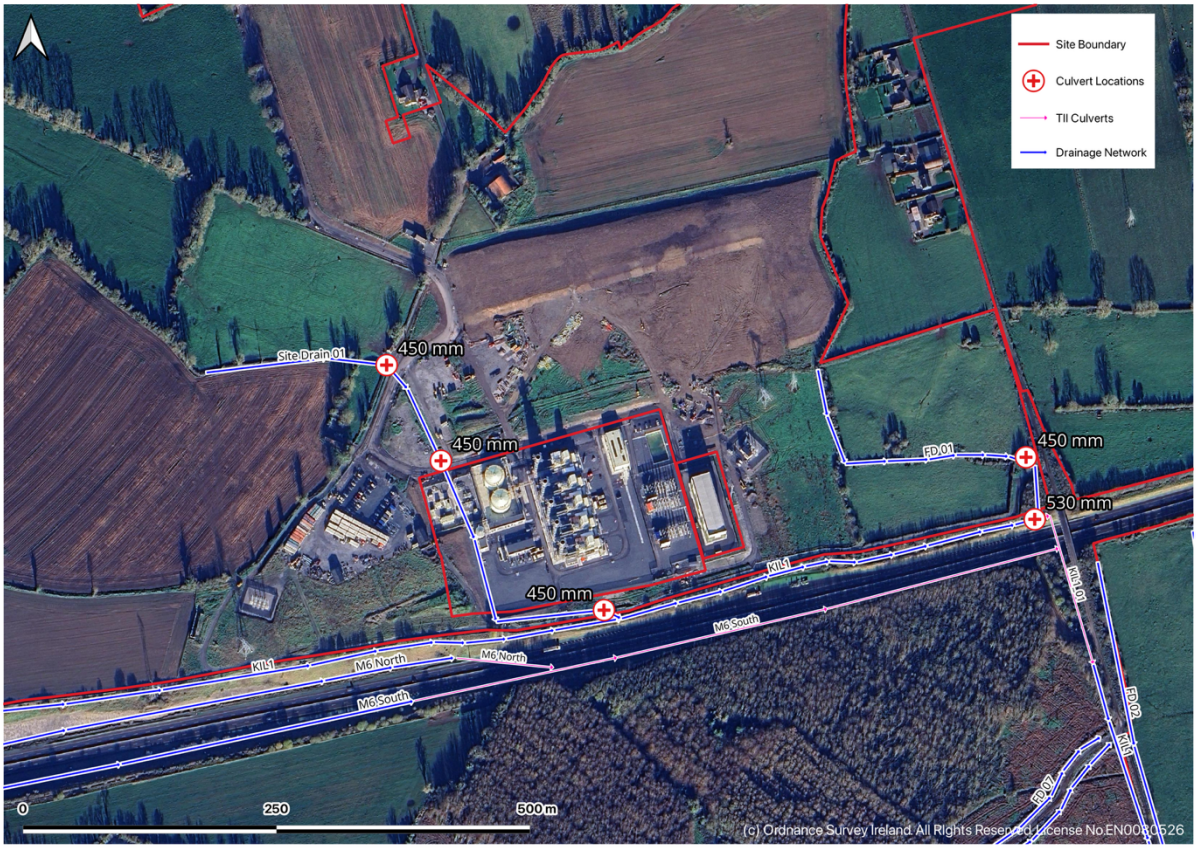
12. (i) *'It is noted that it is proposed to divert all associated stormwater through bypass separators, habitat ponds, firewater/attenuation ponds with hydro brake overflows or cellular storage discharging to existing 450 diameter pipe on the eastern side of the site. There is insufficient information with regards to this outfall pipe, you are requested to address this issue'.*

2 FI ITEM 12(I) RESPONSE

2.1 DRAINAGE OVERVIEW

As shown in Figure 1 'Site Drain 01' is currently an open field serving land parcels in the northwest corner of the site which are currently in greenfield condition.

Figure 1 – Location of Drains and Culverts within the site boundary



Engineering drawing CLDC-HAL-DC-XX-DR-3080 (Appendix B) demonstrates the proposal to construct 6 no. buildings and a number of other structures in this area. It is proposed to install 4 no. attenuation ponds and 2 no.

habitat ponds to manage rainfall-runoff generated in this area. The outflow from the final two attenuation ponds in this sequence is culverted beneath an internal access road via a 450 mm diameter pipe (IL = 99.86 mOD) before entering a short open channel section for 80 m. Surface waters then enter a 450 mm diameter pipe for a distance of 280 m. This culverted water outfalls to a rip-rap section (see Plate 1).

Plate 1 – Rip-rap section on Site Drain_01

Surface waters leaving the short rip-rap section enters a 450 mm (IL = 94.89 mOD) culvert which diverts water beneath a public right of way before entering an open drain which runs in an easterly direction along the northern side of the motorway for a distance of 420 m. This is the start of the Kil1 network as referred to in the FRA. These surface waters are directed southwards beneath the motorway via a 530 mm TII culvert, referred to as 'Culvert Kil1_01' in the FRA. This 530 mm inlet diameter is enlarged beneath the M6 Motorway, with a 900 mm culvert having been surveyed at the outlet. Further specifications of the culvert crossing the motorway are presented below in Table 1.

Separate to this, rainfall-runoff generated in the eastern part of the northern portion of the site is collected in an open channel, highlighted in Figure 1 as FD01. This open channel is culverted beneath the public right of way (close to junction with public road) via a 450 mm diameter pipe (IL = 92.67 mOD). These waters do not enter the inlet of the 530 mm culvert, but it is assumed they join the TII network underneath the M6 motorway.

Table 1 – Summary Details of the TII M6 Motorway Culvert

Culvert Ref.	Location	Culvert Invert U/S (mOD)	Culvert Crown U/S (mOD)	Culvert Invert D/S (mOD)	Culvert Crown D/S (mOD)	Culvert Diameter (mm)	Culvert Length (m)
Kil1_01	TII M6 Motorway	90.56	91.09	86.37	87.27	530 U/S 900 D/S	160

2.2 UPDATE TO FLOOD SIMULATIONS

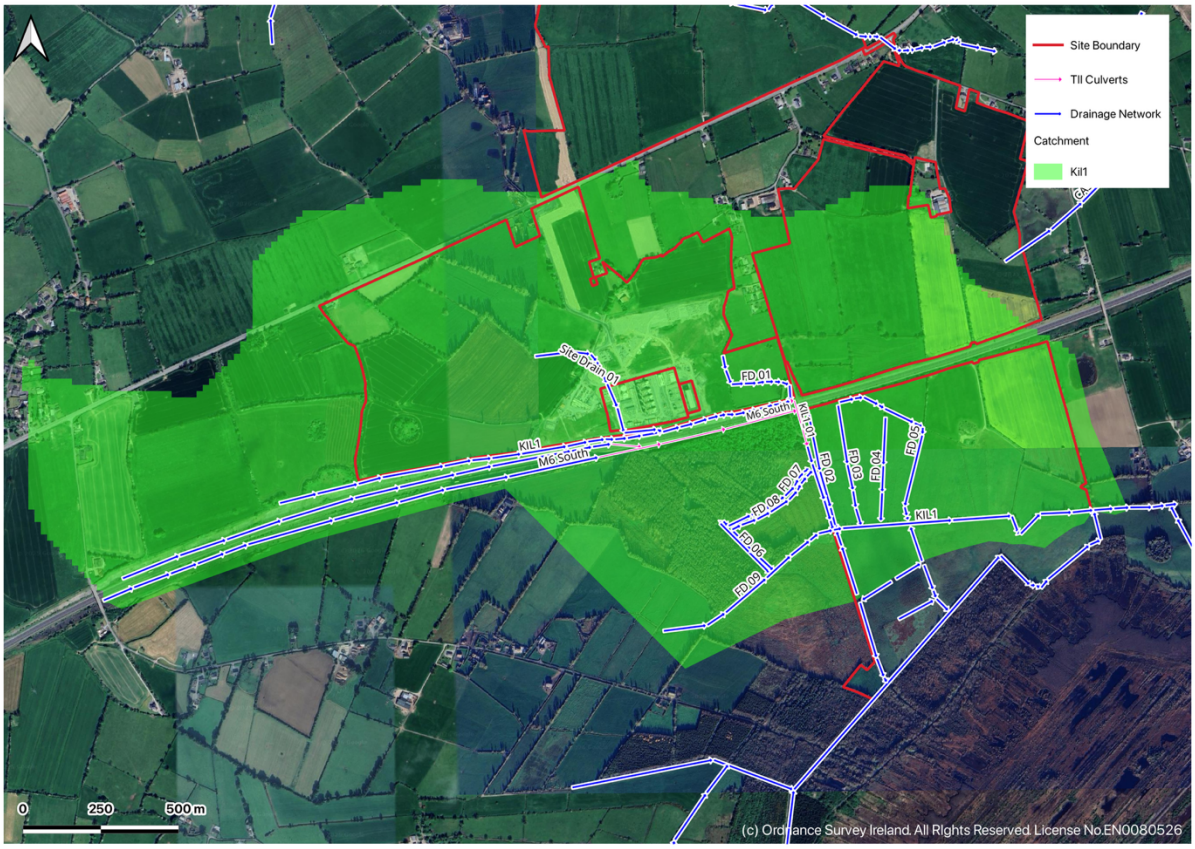
Halston have compiled a response to FI Item 12(ii) which related to stormwater management. The response includes comprehensive stormwater attenuation calculations. For consistency these attenuated flows have been integrated into the catchment based flows applied in the FRA. The updated Q_{100} and Q_{1000} simulations are included below.

2.2.1 Catchment Description

As outlined in Section 2.5.1 of the Flood Risk Assessment (issued 10th June 2025), there are four distinct catchments across the entire application site. The catchment relevant to this FI response is Kil1.

The Kil1 catchment is delineated in Figure 2 and has a total area of 3.47 km^2.

Figure 2 - Kil1 Catchment



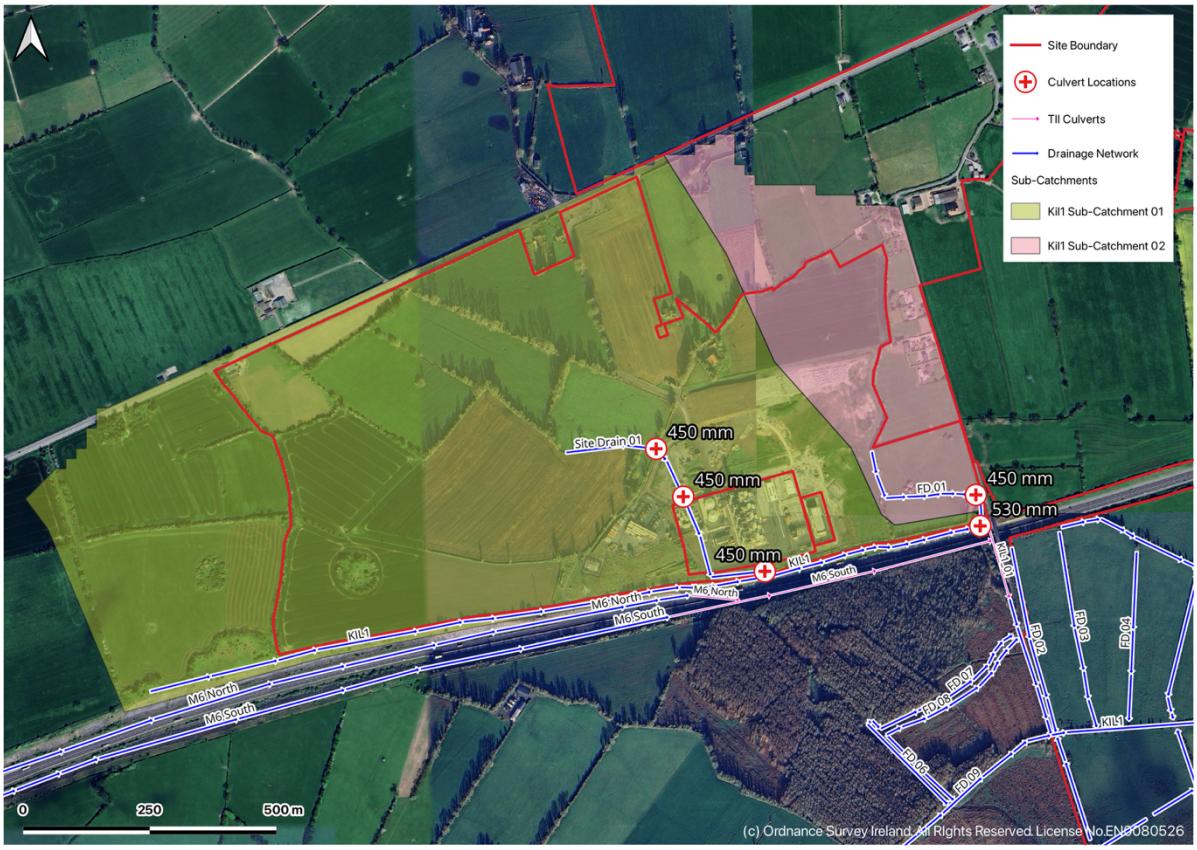
2.2.2 Kil1 Sub-catchment Description

It was deemed necessary to sub-divide the Kil1 catchment further to determine contributing catchments at site scale. This was done using a Digital Terrain Model (DTM).

This approach yielded a catchment area of 0.94 km^2 which is the area draining to the 530 mm TII culvert described above (Kil1_01).

The smaller catchment described above which drains to FD01 has an area of 0.09 km^2 to the inlet of the 450 mm culvert beneath the public right of way adjacent to the junction with the local road. Both of these sub-catchment areas are illustrated below in Figure 3.

Figure 3 – Kil1 sub-catchments



2.2.3 Kil1 Sub-Catchments Surface Water Management

As per FI Item 12 habitat ponds and attenuation ponds fitted with hydro-brakes are proposed to be constructed within the application site. Additional surface water management drawings issued by Halston have further divided the catchment to Site Drain_01 to represent areas within which rainfall-runoff shall be attenuated and those that will remain in greenfield condition. These areas are clarified in Figure 4.

With respect to the 0.94 km^2 that drains to the 530 mm diameter TII culvert, 0.19 km^2 of this area will be attenuated (blue polygons, Figure 4). The controlled outflows are 51 l/s (0.051 m^3/s) and 0.7 L/s (0.0007 m^3/s) from the larger and smaller blue polygons, respectively. This attenuated outflow will enter the Site Drain_01 and Kil1 channels.

With respect to the 0.09 km^2 that drains to FD_01, 0.004 km^2 of this area will be attenuated (purple polygon, Figure 4). The controlled outflows are 1.1 l/s (0.0011 m^3/s). This attenuated outflow will enter FD_01.

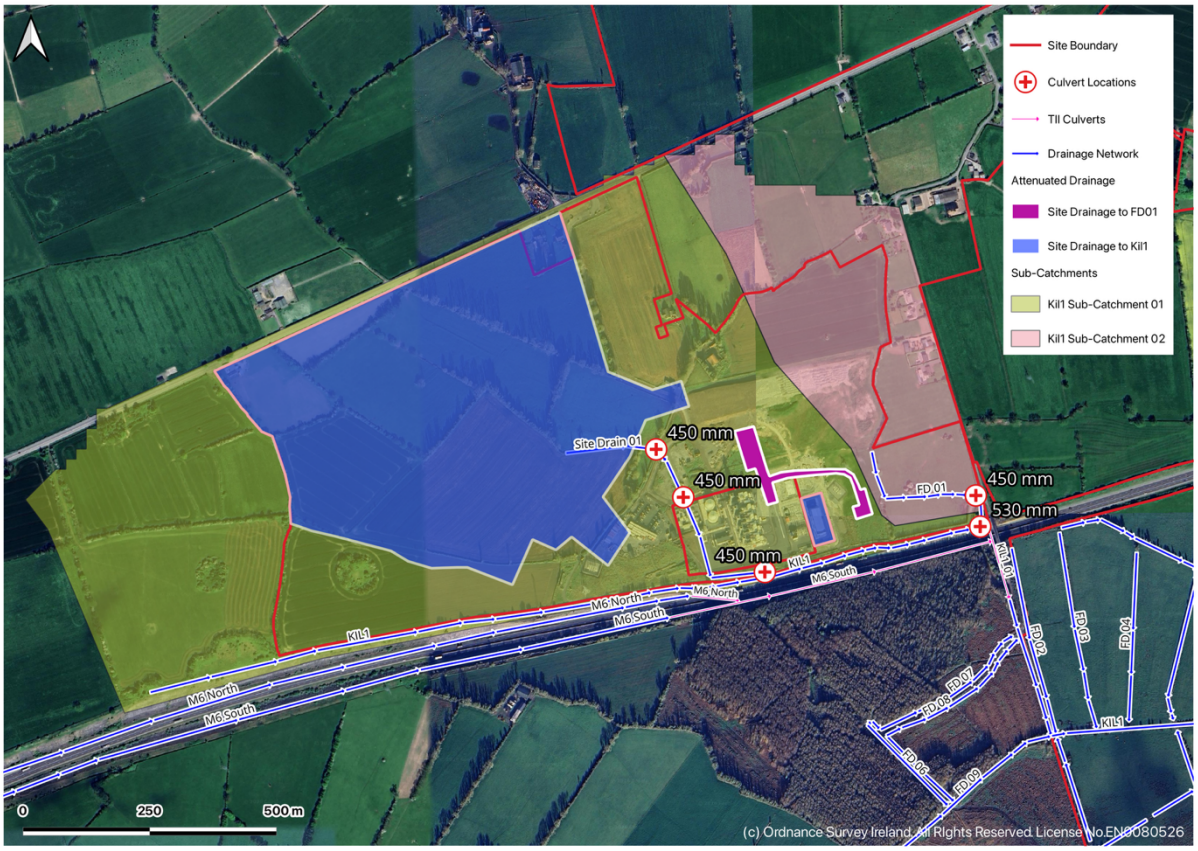
Halston have performed stormwater calculations to determine $Q_{BAR,}$ i.e. greenfield runoff rates for specified hardstanding areas. Stormwater generated during rainfall events in excess of these Q_{BAR} values will now be withheld in storage ponds. Hence there will be no uncontrolled Q_{100} or Q_{1000} flows released from any hardstanding areas. The Q_{BAR} outfall rates from these areas has been provided.

During an intense rainfall event, rainfall-runoff generated on the now smaller, unmanaged greenfield areas will enter the Site Drain_01 and FD_01 drainage networks at rates in line with the results of the IH124/FSU calculations. The flows from Site Drain_01 enter the 530 mm culvert inlet; the flows from FD_01 enter the 450 mm culvert inlet and it is assumed this subsequently joins the 900 mm culvert beneath the motorway.

Using percentages to represent the change in area now being attenuated against that which remains unattenuated the following is estimated:

- Attenuated area Kil1 Sub-Catchment01 = blue polygons = 0.19 km^2
- Attenuated area diverted to Kil1 Sub-Catchment02 = purple polygon = 0.004 km^2
- Attenuated area as a percentage of contributing area = 0.19 km^2 / 0.94 km^2
- Attenuated area as a percentage of contributing area = 20%
- Unattenuated area as a percentage of contributing area = 80%

Figure 4 – Areas where rainfall-runoff is to be attenuated (blue and purple polygons)



2.3 HYDROLOGICAL AND HYDRAULIC ASSESSMENT OF KIL1 CHANNEL

The flood flows that were used to assess the hydraulic capacity of the 530 mm TII culvert (labelled Kil1_01) in the previously issued Flood Risk Assessment (Table 15) are outlined in Table 2.

Table 2 – Modelled Q_{100+cc} and $Q_{1000+cc}$ flood flows for the 530 mm TII Culvert

Structure	Q_{100+cc} Flow (m^3/s)	Q_{1000} Flow (m^3/s)
Kil1 (530 mm TII Culvert)	0.79	0.88

2.3.1 Flood Flow Calculations: Updated Site Drainage

These flows can now be updated as follows.

- Q_{100+cc} flow

  = (0.79 m^3/s x 80%) + (0.051 m^3/s + 0.0007 $m^3/s)^{blue\ polygons}$ – (0.0011 $m^3/s)^{pink\ polygon}$ = 0.68 m^3/s

- Q_{1000} flow

  = (0.88 m^3/s x 80%) + (0.051 m^3/s + 0.0007 $m^3/s)^{blue\ polygons}$ – (0.0011 $m^3/s)^{pink\ polygon}$ = 0.76 m^3/s

Adopting a conservation approach, a 1D model using a steady state flow for the Q_{100+cc} and Q_{1000} flood flows will be utilised.

2.3.2 Simulation Results: Kil1

The predicted peak surface water elevations from the Flood Modeller 1D simulation during steady state conditions are presented below in Table 3.

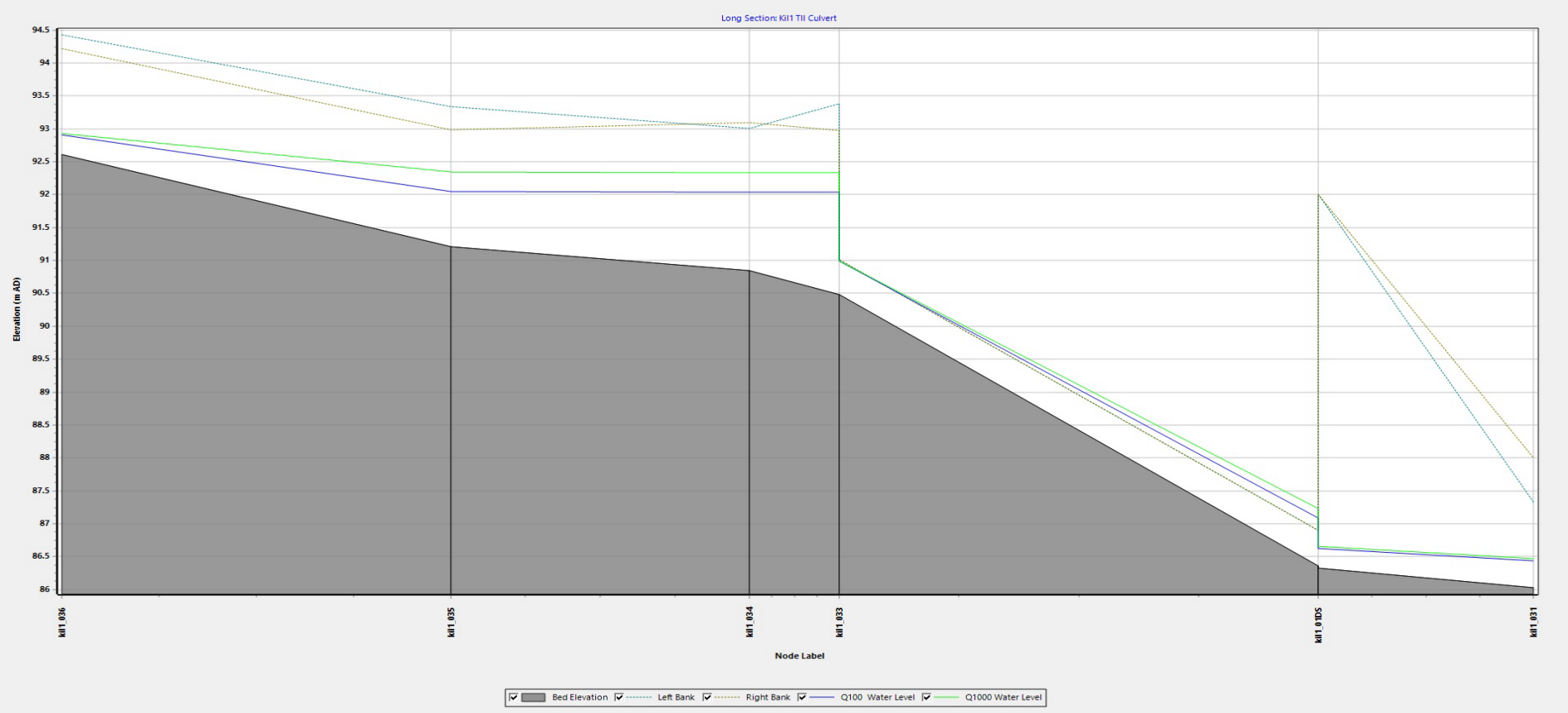
Table 3 - Predicted surface water elevations for Q_{100+cc} and Q_{1000} flood flows: Kil1

Cross Section	Kil1			
	Q_{100+cc} Flow (m^3/s)	Q_{100+cc} fluvial flood levels (mOD)	Q_{1000} Flow (m^3/s)	Q_{1000} fluvial flood levels (mOD)
Kil1_036	0.68	92.91	0.76	92.93
Kil1_035	0.68	92.05	0.76	92.34
Kil1_034	0.68	92.03	0.76	92.33
Kil1_033	0.68	92.03	0.76	92.33
Kil1_01US	0.68	90.98	0.76	91.01
Kil1_01DS	0.68	87.08	0.76	87.23
Kil1_032	0.68	86.63	0.76	86.65
Kil1_031	0.68	86.44	0.76	86.47

The results show that there is surcharge upstream of the TII culvert inlet (940 mm and 1024 mm above the culvert crown under Q_{100+cc} and Q_{1000} flood flows, respectively) but no out of bank flooding occurs. The longitudinal section indicates that the right bank has an elevation of 92.98 mOD directly upstream of the culvert. This indicates that the right bank is 0.65 m and 0.95 m higher than the Q_{1000} and Q_{100+cc} flood levels, respectively.

The proposed attenuation reduces the surcharge level when compared with unattenuated flows used in the FRA. It can therefore be confirmed that the proposed development works do not result in any increase in flood risk to the M6 Motorway.

APPENDIX A - LONGITUDINAL PROFILE: KIL1 – TII CULVERT



APPENDIX B - ENGINEERING DRAWING

HALSTON

APPENDIX 8.4

ENVIROLOGIC

HYDROGEOLOGICAL · HYDROLOGICAL CONSULTING

Water Framework Directive Assessment Report

LOCATION:	Kiltotan and Collinstown, Oldtown, Gneevebane, Farthingstown, Co. Westmeath
PREPARED FOR:	Halston Environmental & Planning Ltd.
PREPARED BY:	Cian O'Sullivan MEngSc (Hydrology)
REVIEWD BY:	Colin O'Reilly PhD (Hydrology)
DATE:	3rd February 2025
REFERENCE:	3151C

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Contents

1 INTRODUCTION

1.1 BRIEF

The following Water Framework Directive Assessment Report has been prepared by Cian O'Sullivan (MEngSc) of Envirologic Ltd. on behalf of Halston Environmental and Planning Ltd., in relation to proposed development works at Kiltotan and Collinstown, Oldtown, Gneevebane, Farthingstown, Co. Westmeath. The applicant is Red Admiral DC and the proposed development, which is being referred to as 'Project Admiral', is to consist of:

- Data Centre Facility;
- Decentralised Energy Resource comprising of Solid Oxide Fuel Cell (SOFC) Power System, Battery Energy Storage System (BESS), Solar Photovoltaic (PV) installation and Grid Connection to the high voltage (220 kV) electricity network.

The purpose of this WFD assessment is to determine whether the proposed development will result in a deterioration in the status of any river waterbody or groundwater body, or compromise WFD objectives and the achievement of at least good surface water or groundwater status, or restoration to High Status waters where required by the River Basin Management Plan 2022 - 2027 (DoEHLG, 2024) and the associated Water Action Plan (2024). This assessment will identify any water bodies that could potentially be impacted upon, prescribe any mitigation measures required and assess any residual impacts of the development. The potential impacts to designated sites in the region are also assessed.

The WFD Assessment Report is intended to supplement a wider and more detailed assessment of potential impacts that the development may have on ecological, hydrological and hydrogeological receptors as set out in the accompanying EIAR. This WFD Assessment Report has been completed with full consideration of the report detailing the AA Screening for the application.

1.2 STATEMENT OF AUTHORITY

The WFD Assessment has been prepared by Cian O'Sullivan of Envirologic Ltd. Cian has an undergraduate degree in Earth Sciences and a master's degree in Water Waste and Environmental Engineering, awarded by the School of Civil Engineering, UCD. He was the recipient of the Michael Mac Carthaigh research project award for his work on hydrological modelling in various climate change scenarios. He has four year's professional and field based experience working in the field of Hydrology. Cian is an active member of the International Association of Hydrogeologists (Irish Group).

The WFD Assessment has been reviewed by Dr. Colin O'Reilly of Envirologic Ltd. Dr. Colin O'Reilly has a doctorate degree in soil systems and hydrology, awarded by the Centre for Water Resources Research, School of Architecture, Landscape and Civil Engineering, UCD, while a recipient of a Teagasc Walsh Fellowship. He has over 20 years of professional and field-based experience.

Since 2010 Colin has been the managing director of Envirologic, which has key competencies in hydrogeology and hydrology with expertise in flood risk assessments in addition to assessment of quarries and industrial facilities across a range of diverse hydrogeological conditions across Ireland. Colin is a current and active member of Engineers Ireland and International Association of Hydrogeologists (Irish Group).

Envirologic have compiled, or participated in the compilation of WFD assessments for bedrock quarry extensions in coastal and inland settings, meat processing plants and energy facilities.

1.3 WATER FRAMEWORK DIRECTIVE

The EU Water Framework Directive (2000/60/EC), as amended by Directives 2008/105/EC, 2013/39/EU and 2014/101/EU ('WFD'), was established to protect and, where necessary, restore water bodies in order to reach at least Good Status and to prevent deterioration. The Directive was transposed in Ireland by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) and subsequent other associated legislation referred to as the Surface Water Regulations (2009, as amended), the Groundwater Regulations (2010, as amended) and the Water Abstraction and Impoundments Regulations (2024).

The WFD requires that all member states protect and improve water quality in all waters, with the aim of achieving at least good status by 2027. Good status refers to both hydromorphological, physical, chemical, ecological and quantitative characteristics of water bodies, be they surface water or groundwater. The potential for any new development to impact upon the status of waterbodies and achievement of WFD objectives must be considered.

The WFD is implemented through the River Basin Management Plans (RBMP) which comprises a six-yearly cycle of planning, action and review. RBMPs include details identifying river basin districts, water bodies, protected areas, pressures and risks, monitoring and environmental objectives. In Ireland the first RBMP covered the period from 2010 to 2015 with a second cycle plan covering the period from 2018 to 2021. The current plan covering the period 2022 to 2027 was published on 4 September 2024 with an associated Water Action Plan 2024.

The key objectives of the River Basin Management Plan (2022 - 2027) include:

- Ensure full compliance with relevant EU legislation;
- Prevent deterioration;
- Meet the water standards and objectives for designated protected areas;
- Protect high-status waters;
- Implement targeted actions and pilot schemes in focus sub-catchments aimed at (i) targeting water bodies close to meeting their objective and (ii) addressing more complex issues that will build knowledge for future cycles.

More details are available at https://www.gov.ie/en/policy-information/8da54-river-basin-management-plan-2022-2027/.

1.4 RIVER BASIN PLAN, PROGRAMMES OF MEASURES & PRIORITY AREAS FOR ACTION

In September 2024 the Department of Housing, Local Government and Heritage launched The Water Action Plan 2024 and its launch stated that the "River Basin Management Plan for Ireland sets out the measures that are necessary to protect and restore water quality in Ireland. The overall aim of the plan is to ensure that our natural waters are sustainably managed and that freshwater resources are protected so as to maintain and improve Ireland's water environment. The principal causes of the decline in Ireland's water quality are the increasing loss

into water of polluting phosphorus and nitrogen from farmland, inadequately treated waste water and physical impacts on water bodies, due to river barriers, and drainage of lands and rivers".

The Water Action Plan (WAP) 2024 is available at https://www.gov.ie/en/policy-information/8da54-river-basin-management-plan-2022-2027/ and there is an Appendix series: Appendix 2 sets out the Programme of Measures with an associated excel spreadsheet. To date, no practical measures have been published. The WAP and the POMs are management documents describing how civil servant departments will meet and manage groups discussing issues and proposals.

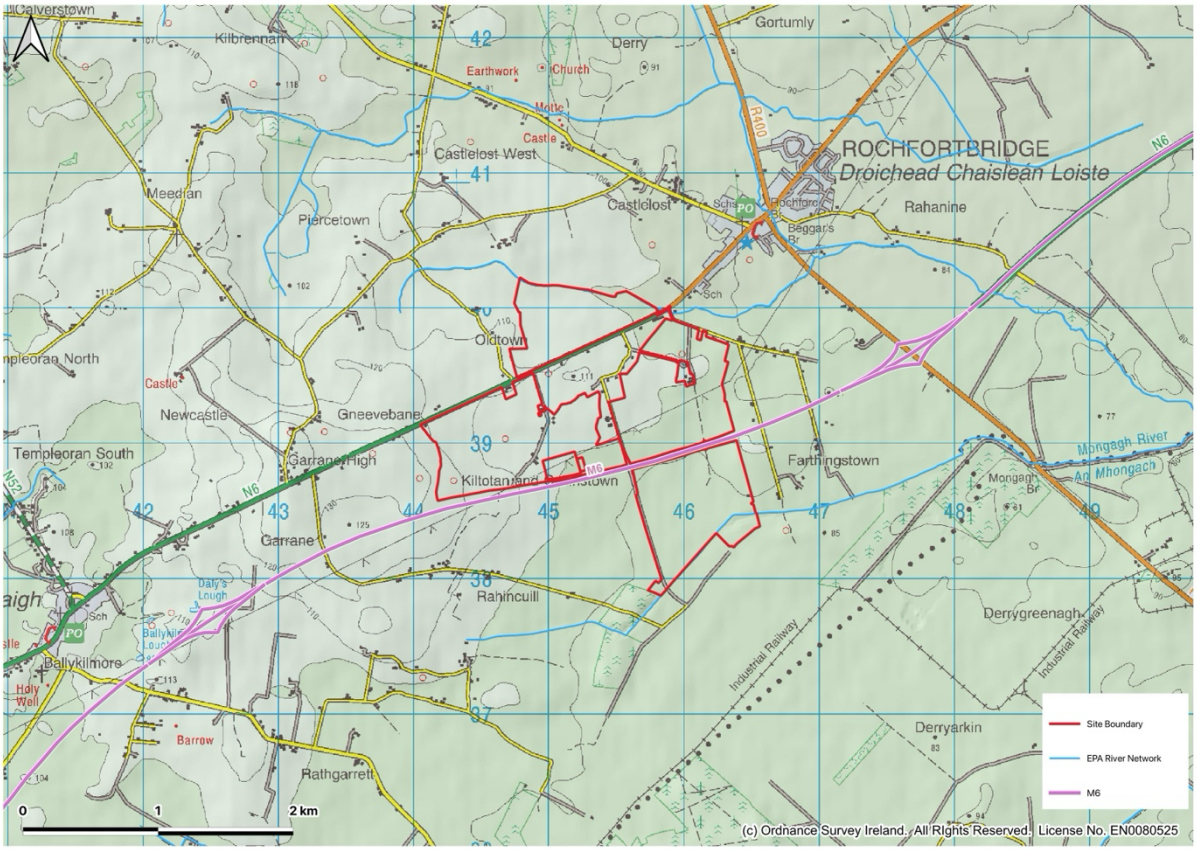
2 SITE LOCATION & ENVIRONMENTAL SETTING

2.1 SITE LOCATION

The subject site is located in the townlands of Oldtown, Gneevebane, Farthingstown, Kiltotan and Collinstown, between the towns of Tyrellspass and Rochfortbridge (Figure 1). The M6 Galway to Dublin motorway and the N6 national road divides the site boundary into three discrete areas which will be henceforth referred to as the northern, central and southern portions.

Regional topography is considered to be undulating. There is a general gradient through the site from a local hill at Garrane High (140 mOD), 1 km to the west, in an east-southeast direction towards the Mongagh River. The 1:50,000 OS Discovery map shows that the 120 mOD contour line passes through the western site boundary and the 90 mOD contour line passes through the eastern site boundary. A 111 mOD spot height is found inside the northern portion of the site boundary, whilst a 90 mOD spot height is located 770 m to the east of the site boundary. The surrounding landscape is dominated by moderate intensity grassland agriculture with some tracts of forestry plantation on the southern side of the M6.

Figure 1 - Site Location and Topography



2.2 REGIONAL & LOCAL TOPOGRAPHY

The proposed development site has an area of 240 ha (Figure 2). The site can be described as having an irregular shape comprised of:

i. The northern portion which is bounded to the south by the N6 and to the north by the Castlejordan River. This portion is entirely in greenfield condition, consisting moderate intensity grasslands.

ii. The central portion which is bounded by the N6 to the north and the M6 to the south. This area contains the primary development features and has an east-west width of approximately 2,300 m and a north-south length of 2,500 m. Areas containing ribbon developments and one-off houses are excluded.

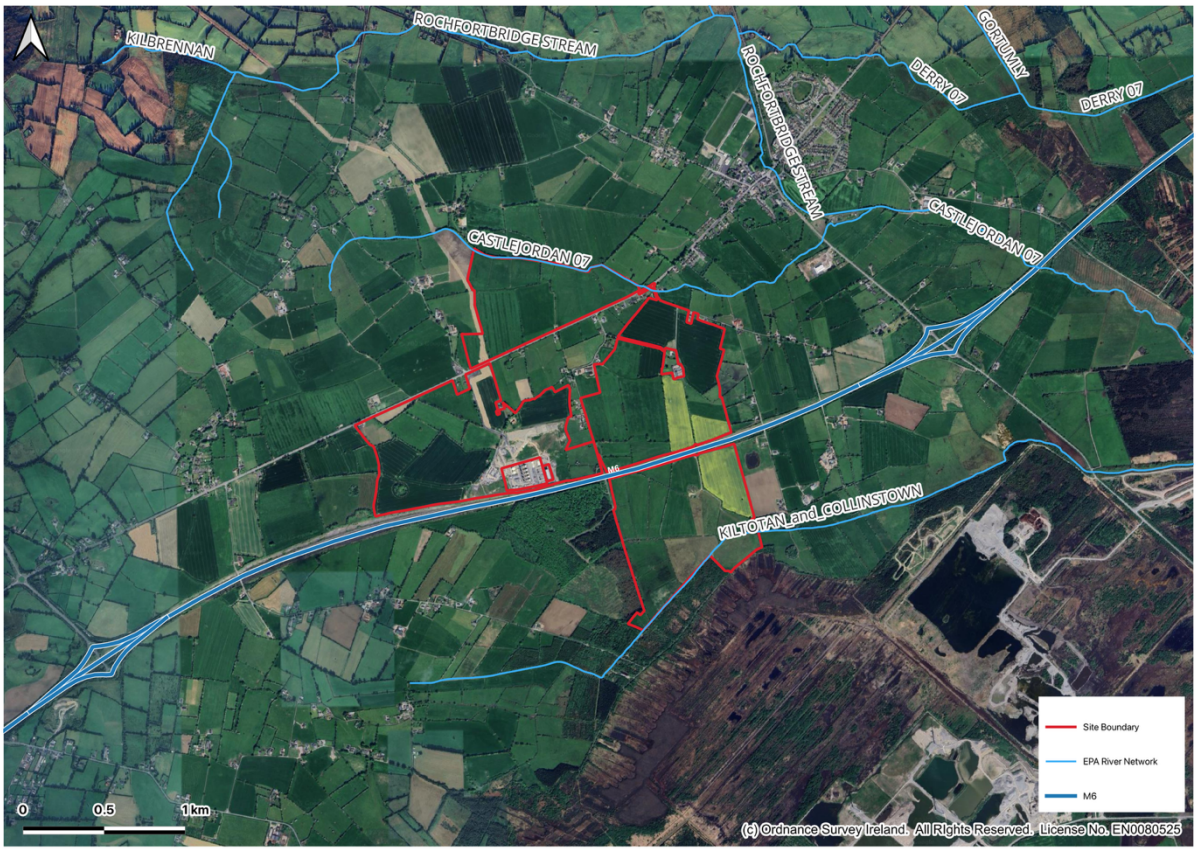
iii. The southern portion which is south of the M6. This portion is entirely in greenfield condition, consisting moderate intensity grasslands. Forestry plantation to the west of this portion with cutaway noted to the south.

Energy-related infrastructure (permitted under Pl. Ref. 21/515, 21/532, 23/60442, 24/60053) is in place in the southern part of the central portion and consists briefly of:

- Five open cycle gas turbine electrical generating units;
- 220 kV gas insulated switchgear electrical substation;
- Open area battery storage system compound.

To facilitate the proposed development works and provide access within the site boundary, two new bridge crossings are proposed across watercourses in the southern portion of the site.

Figure 2 – Site boundaries with EPA river network overlain



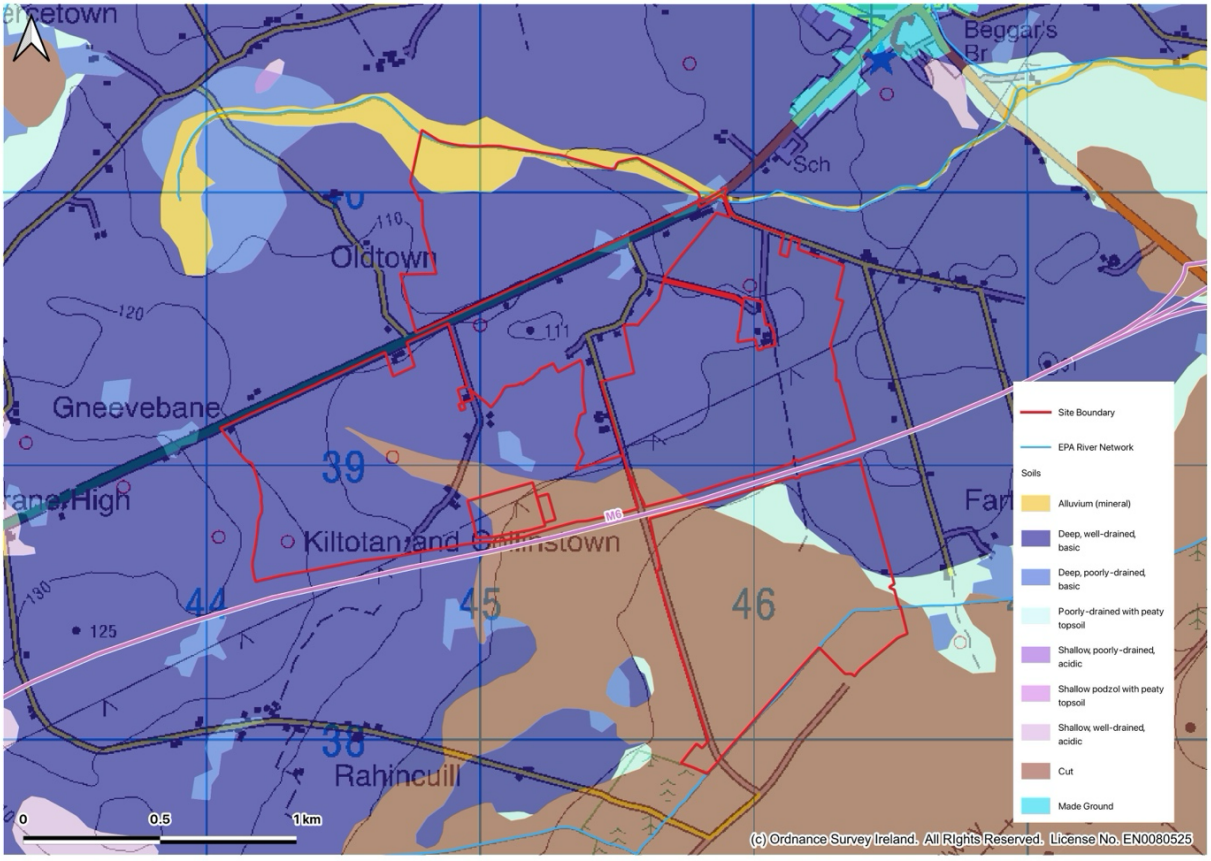
2.3 SOILS & GEOLOGY

2.3.1 Soils

Teagasc soil maps indicate that the soil types within the application boundary vary (**Figure 3**). Deep, well-drained soils dominate the northern and central portions of the site, with alluvium deposits underlying and flanking the Castlejordan River. A linear band of peat deposits extend into the southern area of the central portion.

The southern portion of the site is underlain by peat, with podzols mapped along the margins. It was noted during the site walkover that the southern site portion has undergone land improvement works which involved raising of ground levels, presumably by means of infill deposition to facilitate motorway construction.

Figure 3 - General Soil Classification

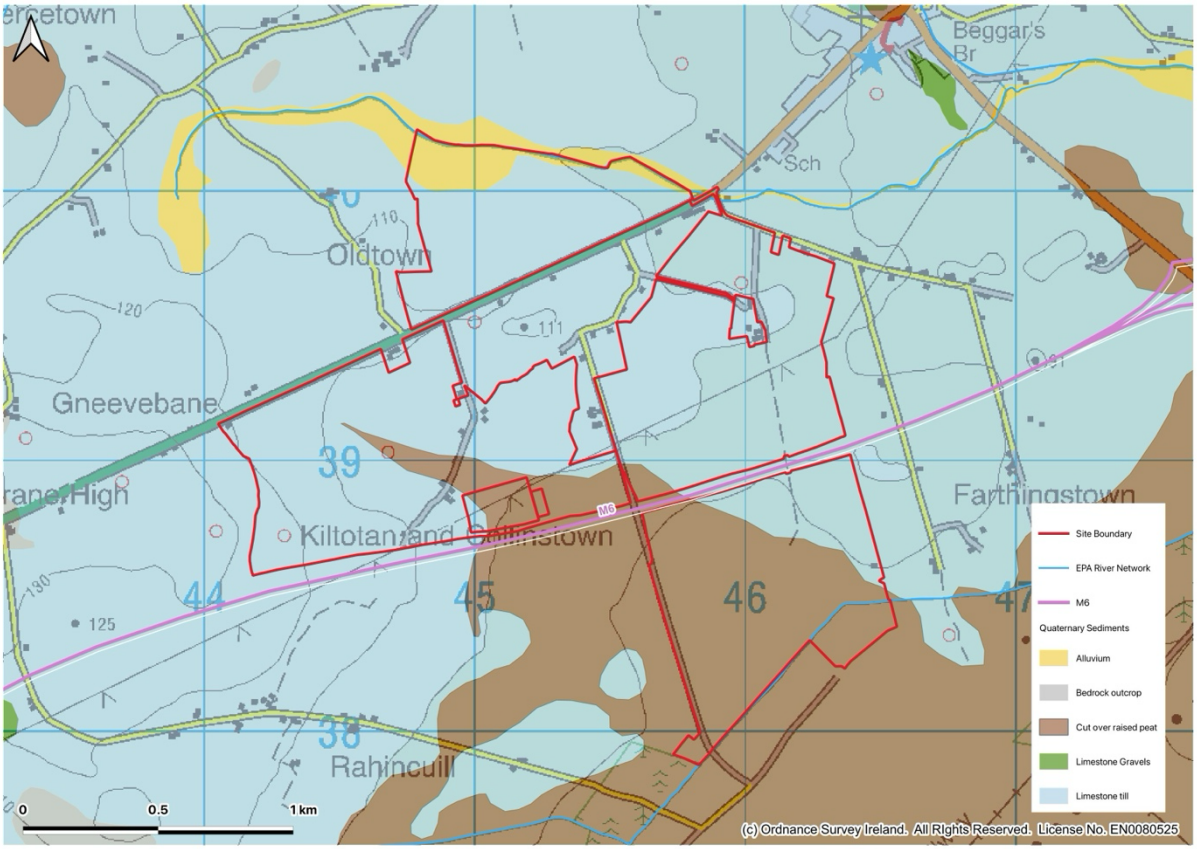


2.3.2 Quaternary Deposits

The quaternary period encompasses the last 1.6 million years and deals with the subsoils and sediments that were deposited over the bedrock described below. The Pleistocene (1.6 million years – 10,000 years ago) is commonly known as the last Ice Age, which was a period of intense glaciation separated by warmer inter-glacial periods, and it is during this period that the quaternary sediments seen today were deposited. Large amounts of ponded water were present at this stage resulting in considerable fluvioglacial sedimentation.

The quaternary deposits map shows that the site is predominantly underlain by limestone till (Figure 4). This combination of deposit type is characteristic of sub-glacial regimes. There are no significant sand and gravel or esker deposits in the area.

Figure 4 - Quaternary Deposits



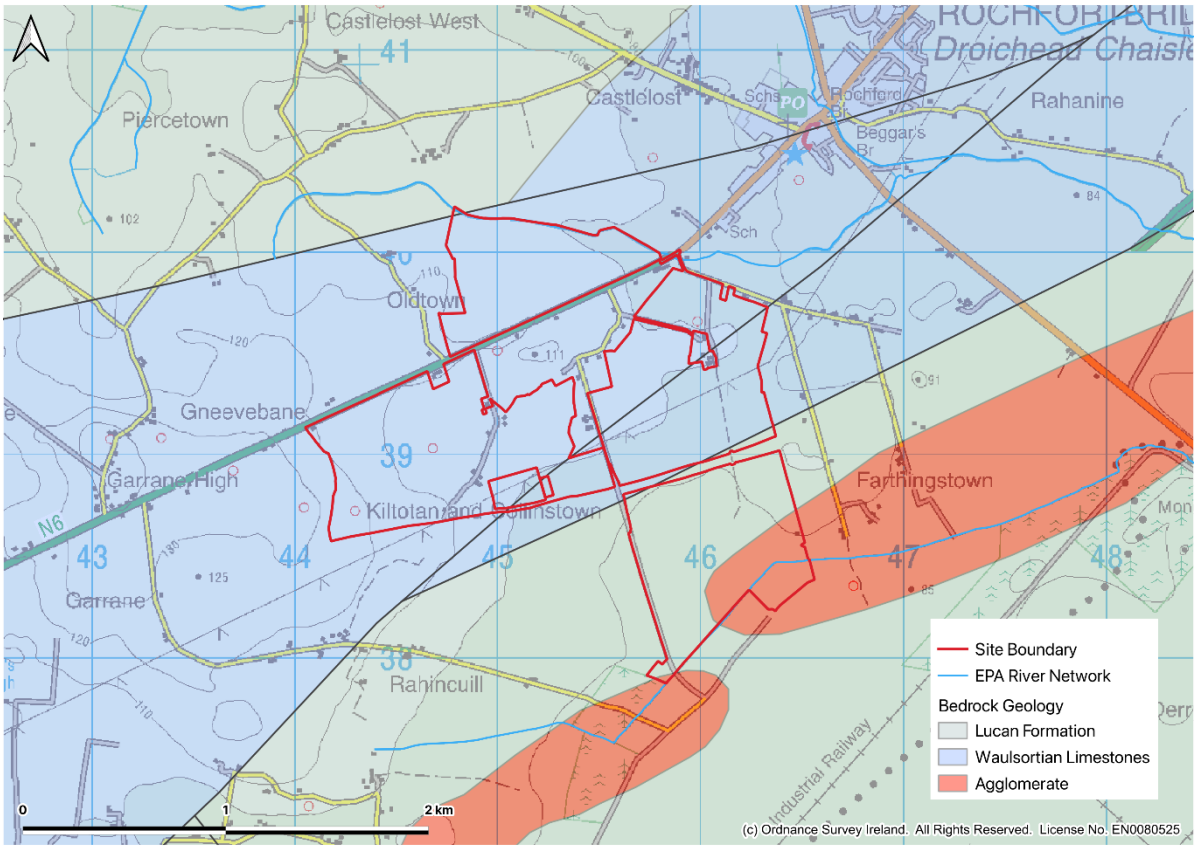
2.3.3 Bedrock & Structural Geology

The southern portion of the is underlain by the Lucan Formation. This formation consists of impure bedded limestone with shale and/or clay impurities. The northern and central portions of the site are underlain by Waulsortian Limestone, which are characterised by massive, unbedded lime and mudstone deposits.

There are numerous structural geological features such as structural faulting mapped throughout the site boundary, as demonstrated in Figure 5.

The limestone formation is well exposed in a roadside cutting on the M6 southwest of the application site.

Figure 5 – Bedrock & Structural Geology



2.4 HYDROLOGY

2.4.1 WFD Catchments

The application site is located in the Boyne WFD catchment (Hydrometric Area 07).

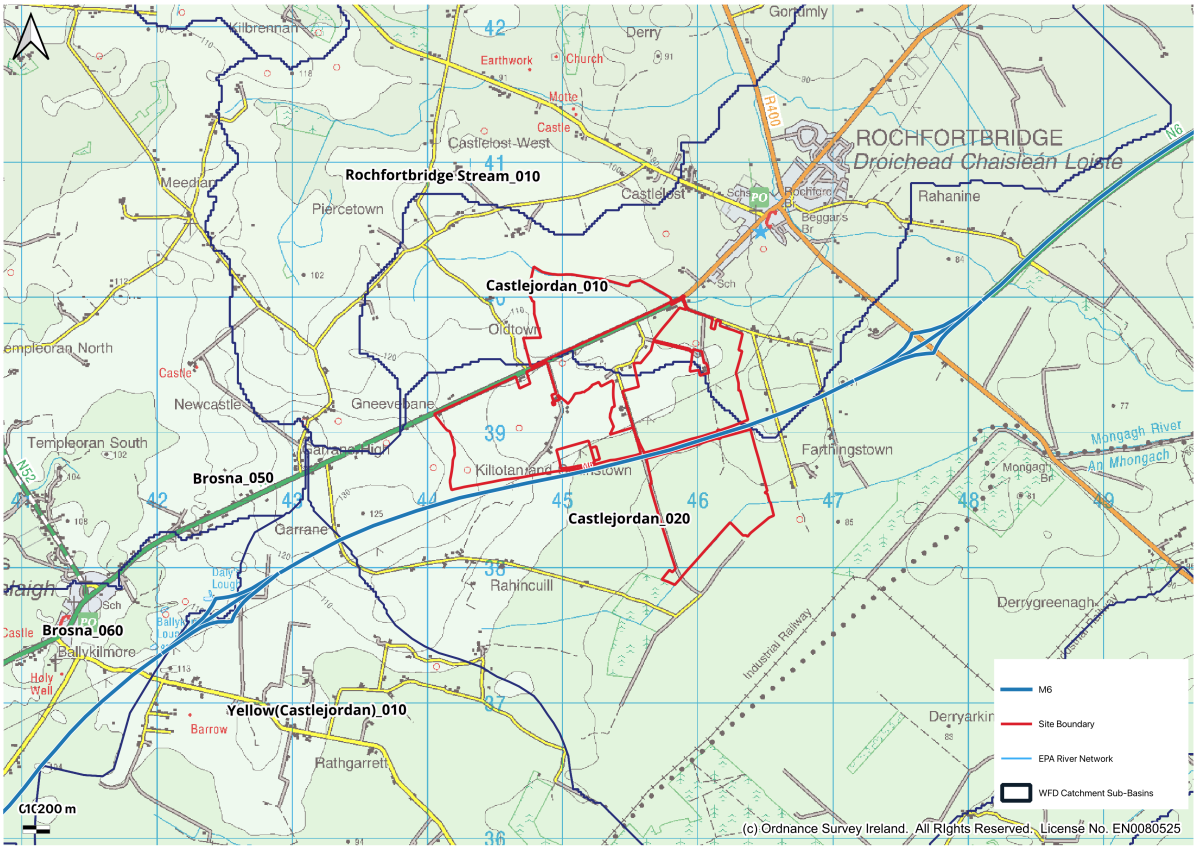
2.4.2 WFD Sub-Catchments

At the WFD sub-catchment scale, the site boundary is located in the Yellow[Castlejordan]_SC_010 sub catchment (Sub-catchment ID: 07_11).

2.4.3 WFD Sub-Basins

At the WFD sub-basin scale, the site boundary is separated by two sub basins, the Castlejordan_010 to the north and the Castlejordan_020 to the south, as shown in Figure 6.

Figure 6 – WFD River sub-basins



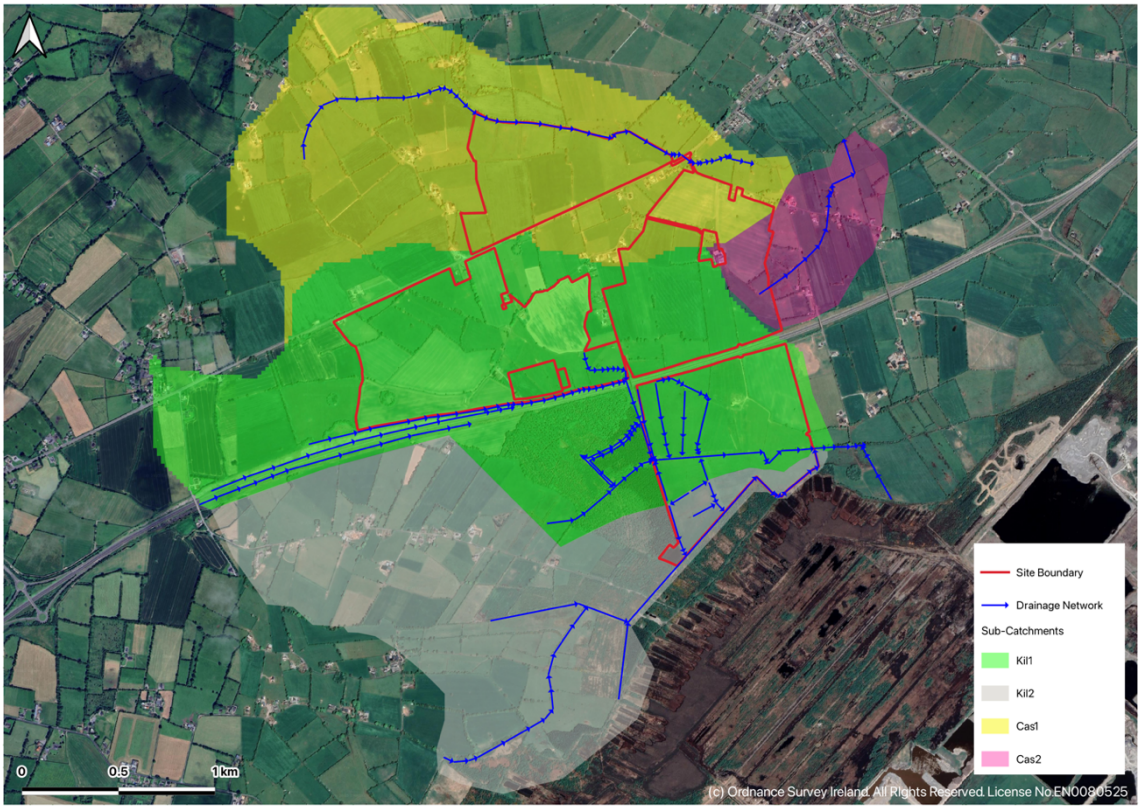
2.4.4 Catchment Description

The application site is located in the upper reaches of the Boyne Catchment (Hydrometric Area 07). Two mapped WFD sub-basins bisect the site boundary, the Castlejordan to the north (07_1400) and the Kiltotan and Collinstown to the south (07_564). These rivers drain to the east where they outfall to the Yellow River, which itself joins the main River Boyne channel 14 km east of the site boundary.

The EPA River Network database suggests that the divide between the Castlejordan and Kiltotan and Collinstown (Mongagh) river catchments lies within the site boundary, broadly tracking along the N6 road and along elevated lands in the central portion of the site (Figure 2)

Subsequent ground truthing revealed there are four distinct sub-catchments within the site boundary (Figure 7). Natural flow pathways may have been disrupted through agricultural drainage and recent development works, the primary example of this being the M6 and its associated drainage system. The most significant flow pathways associated with each catchment are also highlighted.

Figure 7 – Sub-catchments associated with the site boundary



2.4.5 Sub-catchment description: Kil1

Kil1 is characterised by a relatively dense network of field drains from agricultural lands and culverts. Crucially, the main channel is considered to be that which directs water under the M6. This sub-catchment has an area of 3.47 km^2. A detailed description of the flow network as surveyed is illustrated in Figure 8. The main channel, Kil1, rises in the centre of the catchment as a small field drain with an invert elevation of 110 mOD. It was noted across multiple site visits in May 2025 that the channel was dry at this elevation. Kil1 flows eastwards before being culverted southwards beneath the M6 motorway (Kil1_01). Water was observed in the channel at an elevation of 92.73 mOD and a small flow was noted to be entering the culvert (approx. 0.5 l/s). A field drain which joins Kil1 at the inlet of the M6 culvert Kil1_01 was noted as being dry for its entirety. A 450 mm culvert connects FD01 to Kil1_01 where it enters the TII culvert network.

Two open drainage channels are present alongside the M6 (M6 North & M6 South), to the west of Kil1_01, with 450 mm culverts connecting road runoff to the TII drainage network. The 450 mm culvert serving the M6 North channel was noted to be orientated in a south-east direction as it passes underneath the M6. The 450 mm culvert servicing the M6 South channel was oriented due east. Following an extensive walkover no outfall for either of these two culverts was identified in the forestry and agricultural lands south of the M6. A short salt tracing exercise was attempted to confirm the presence or otherwise of hydraulic connections between the M6 North and M6 South culvert inlets and the Kil1_01 culvert outlet. This test yielded no detectable results but it was observed that water entering the M6 North and South culverts outfall to a sedimentation tank which would significantly dilute the salt introduced. This also confirms that these culverts are part of a constructed drainage network. Without additional drainage network maps it has been assumed that these culvert inlets connect at subsurface junctions and outfall

to Kil1_01 culvert outlet (900 mm). In addition French drains track along both sides of the M6 (Figure 9) and slope towards Kil1_01 culvert outlet.

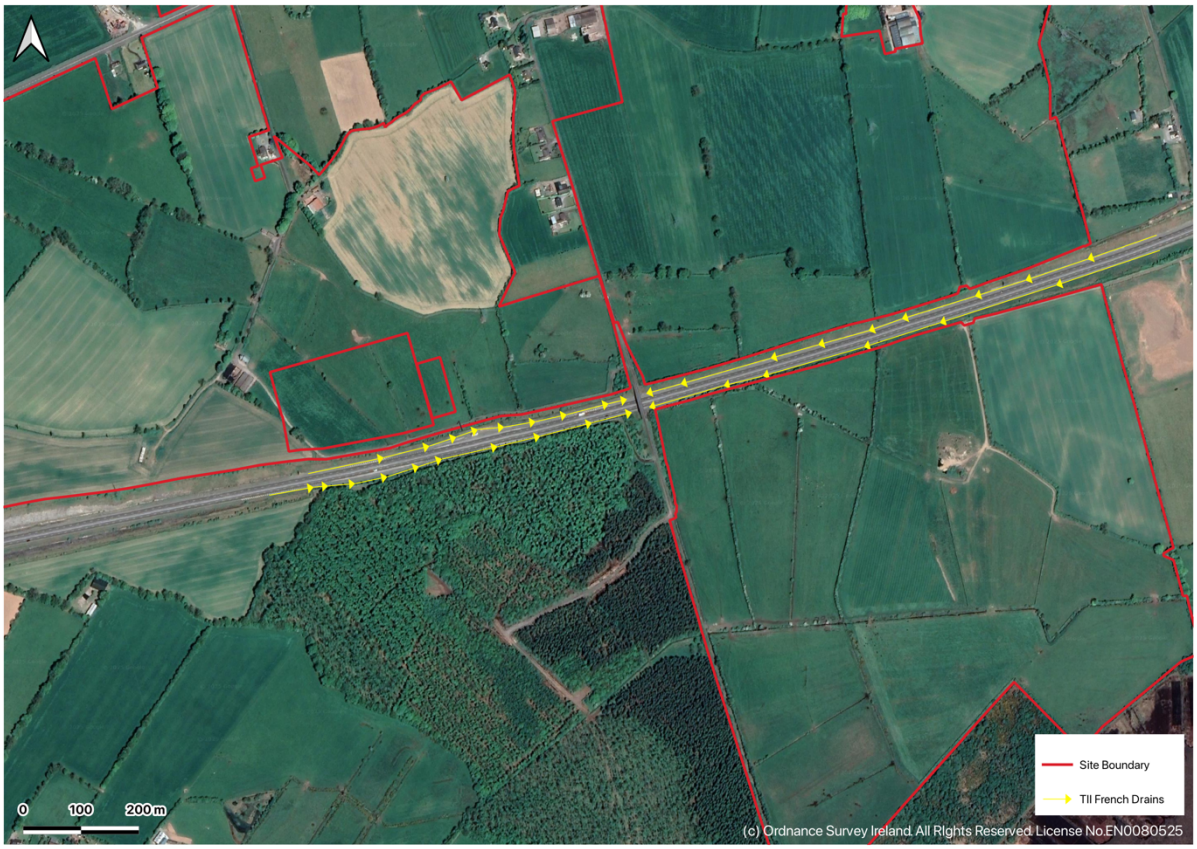
Downstream of the M6 motorway, the Kil1 channel is fed by multiple field drains. These drains are not hydraulically connected to any sources upgradient (north) of the M6. It has been assumed that these were installed during raising of lands during motorway construction. The presence of standing water observed in FD02, FD03, FD04 and FD05 reinforces this. Surveyed water elevations confirm a general flow direction south towards Kil1. The channels would benefit from drainage maintenance works to remove vegetation and silt that has accumulated in places. Similarly FD06, FD07, FD08 and FD09 contained standing water, though surveyed water elevations implied an easterly flow direction towards Kil1.

Figure 8 – Kil1 detailed drainage network

2.4.6 Sub-catchment description: Kil2

Kil2 is comprised of three channels maintained by the OPW as part of the Boyne East Arterial Drainage Scheme (C1/64/1, C1/64/1/16 and C1/64/1/18). This sub-catchment has an area of 2.59 km^2 and acts as a tributary to the main Kil1 channel. The confluence of these two watercourses is at the southeast corner of the application site boundary. The main channel is known as the Kiltotan and Collinstown (EPA code: 07K04) and is characterised by steep banks as a result of regular OPW maintenance. Contrary to the mapped EPA River Network and OPW Drainage Network databases, the walkover confirmed that this channel runs alongside the southern site boundary (Figure 7) and does not cut across the south east corner as is mapped in Figure 2. No major inflows to the channel were noted during site visits.

Figure 9 – French drains and their flow direction along the M6 towards Kil1



2.4.7 Sub-catchment description: Cas1

Cas1 is the northernmost catchment that interacts with the application site, flowing alongside the northern site boundary. The channel is named the Castlejordan Stream (EPA code: 07C04) and has an area of 2.59 km^2. It is characterised by steep banks following regular drainage maintenance (C1/64/1/13/4). There are multiple field drains that direct surface water into the main channel, but none contained water during multiple site visits through May 2025. There were no other major inflows to the channel as it passes through the site boundary. The channel is culverted under the R446, where it continues downstream before joining the Rochfortbridge Stream, approximately 1.4 km east of the site boundary.

2.4.8 Sub-catchment description: Cas2

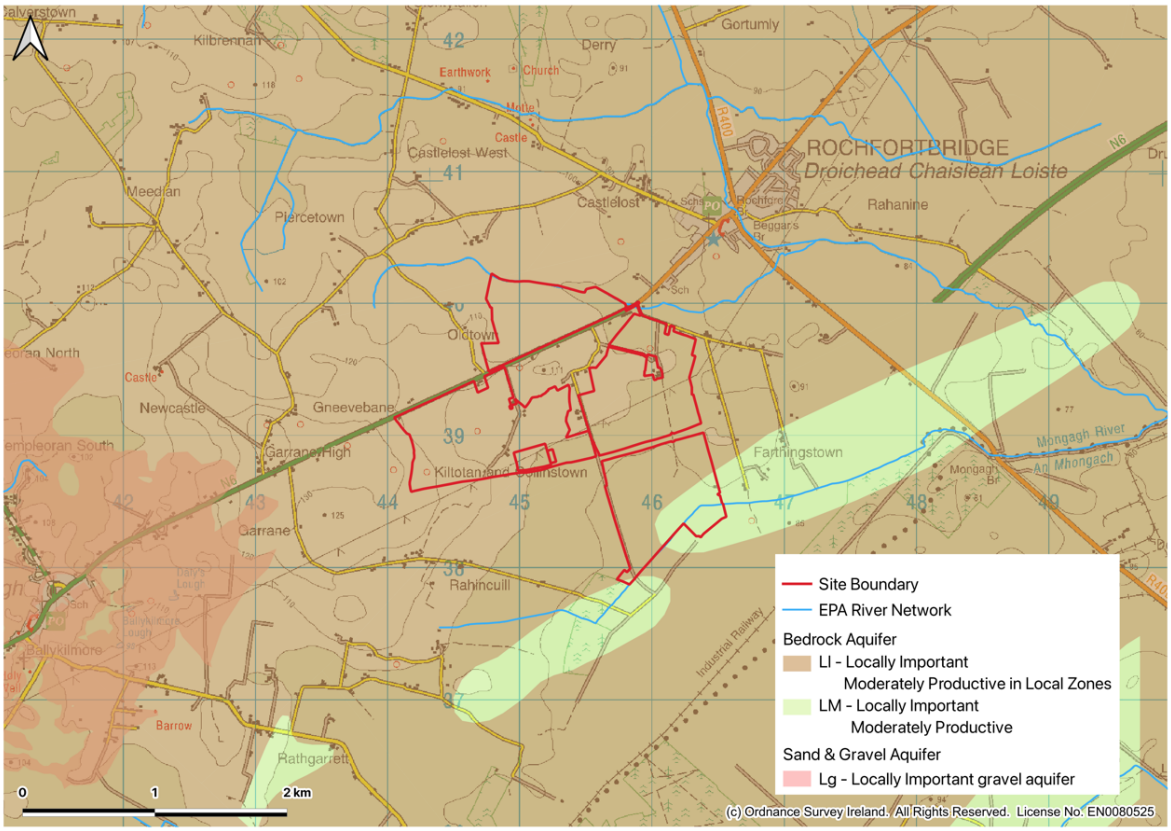
Cas2 is the easternmost catchment and only interacts with a very small part of the application site. It has an area of 0.52 km^2, of which only 0.1 km^2 lies within the site boundary. It is essentially a field drain within the eastern portion of the site which directs surface water north towards the Castlejordan stream. The catchment is within agricultural lands. In a manner consistent with Kil2 and Cas1, the channel banks are steep following drainage works aimed at containing water within the channel.

2.5 HYDROGEOLOGY

2.5.1 Aquifer Classification

The Waulsortian limestones underlying the site typically have a low-moderate permeability depending on presence or otherwise of karstification. No karst features or springs are mapped proximal to the site boundary. Figure 10 highlights that the bedrock aquifer underlying the site is locally important and moderately productive only in local zones (Ll), with a small portion of the south east corner of the site described as being generally moderately productive (Lm).

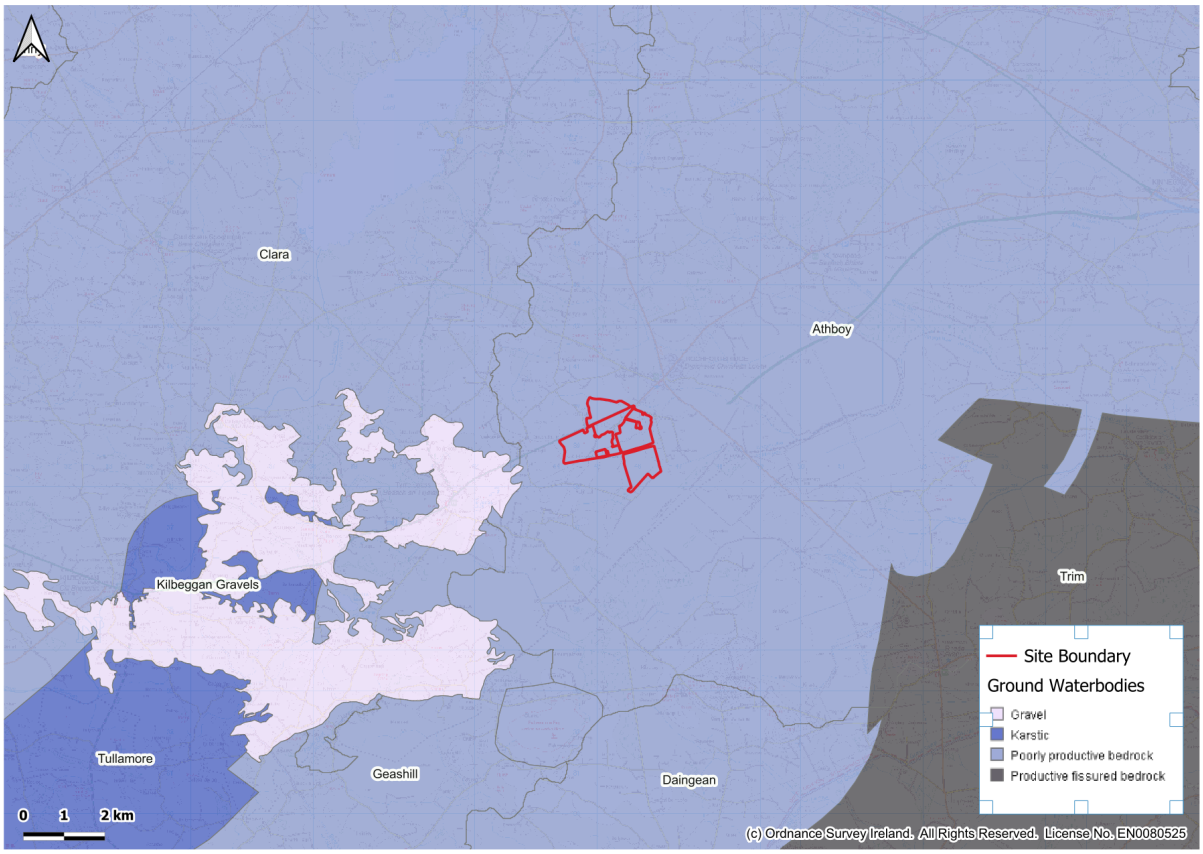
Figure 10 – Aquifer Classification



2.5.2 WFD Groundwater Body

The site lies within the Athboy (IE_EA_G_001) groundwater body, as shown in Figure 11. This large GWB body extends from Navan in Meath to Tyrellspass in Westmeath. The area is typical of the midlands of Ireland with little relief. There are some isolated hills which rarely rise above 150 m OD. In general the elevation falls from northwest to southeast, reflected in the overall drainage pattern. In a large limestone aquifer such as the Athboy GWB the bedrock is of high heterogeneity and the depth to which major groundwater flows are encountered varies.

Figure 11 – WFD Groundwater Bodies Map



2.5.3 Groundwater Vulnerability

Groundwater vulnerability is a measure of the risk that a potential groundwater contamination event may have on the groundwater beneath. It is a measure of how vulnerable groundwater is to a potential contamination event. The vulnerability of groundwater is a function of the nature of the underlying soil cover, the presence and nature of the subsoil, the nature of strata, and the thickness of overburden above the water table.

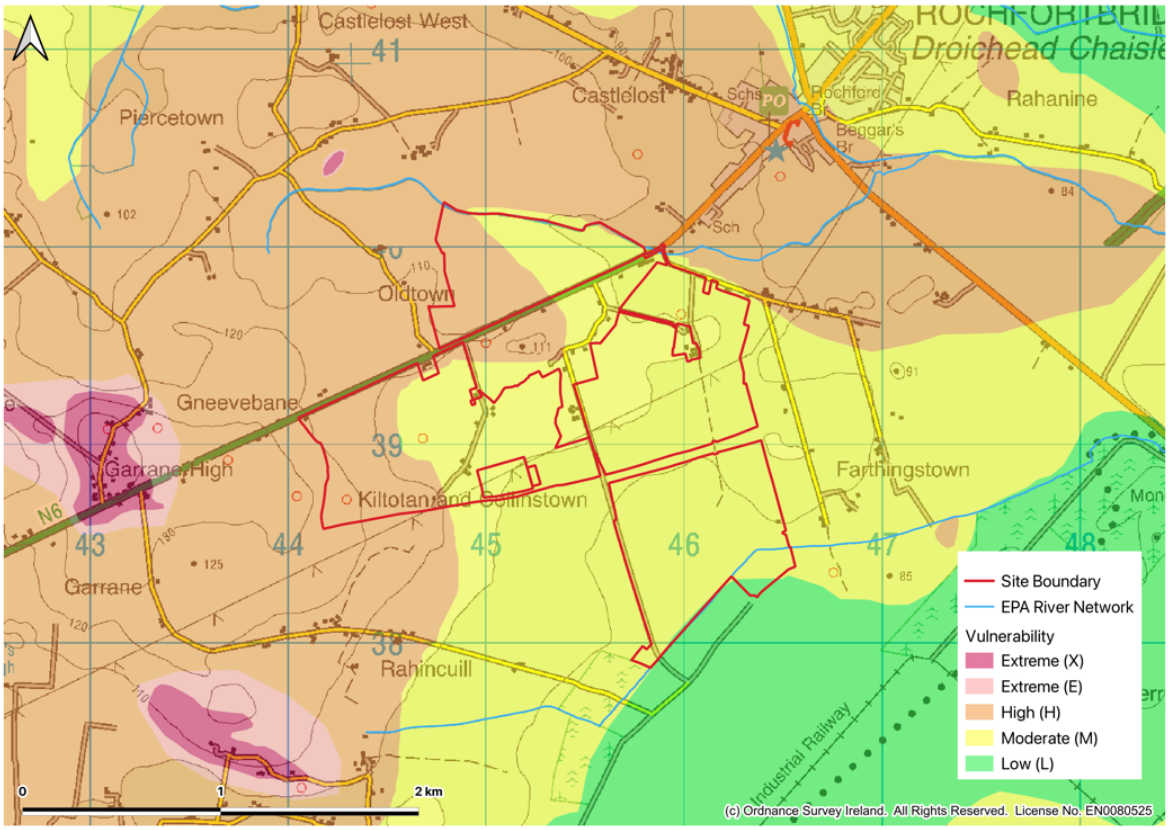
The vulnerability categories, and methods for determination, are presented in Groundwater Protection Schemes (GSI, 1999). The guidelines state that 'as all groundwater is hydrologically connected to the land surface, it is the effectiveness of this connection that determines the relative vulnerability to contamination. Groundwater that readily and quickly receives water (and contaminants) from the land surface is considered to be more vulnerable than groundwater that receives water (and contaminants) more slowly and in lower quantities. The travel time, attenuation capacity and quantity of contaminants are a function of the following natural geological and hydrogeological attributes of any area:

1. the subsoils that overlie groundwater;
2. the type of recharge - whether point or diffuse;
3. the thickness of the unsaturated zone through which the contaminant moves.

Groundwater vulnerability across the site is classed by the GSI as varying from High to Moderate (Figure 12). In the northwest portion of the site, groundwater has been classified as being of High vulnerability. The remainder,

and majority of the site, is classified as having Moderate groundwater vulnerability, representing moderately permeable till deposits greater than 10 m depth.

Figure 12 – Groundwater Vulnerability



2.5.4 Hydrogeology and its Influence on Hydrology

In general the aquifer is mapped as consisting of moderately permeable till deposits, however there may be localised areas where permeability and storativity in the aquifer is high. In a more permeable setting, and where the water table lies below the local river network it is likely that some stream water may pass into the aquifer. Where the water table is above the river stage, groundwater will leave the aquifer as baseflow. At lower elevations and depressions, groundwater seepage may occur as springs. Discharge of baseflow from the aquifer to the stream networks within the site boundary is not flashy and therefore likely to be sustained through drier periods of the year. During flooding the inverse occurs, and the aquifer offers large storage potential for flowing water to seep into it. When the flooding and associated high river flows subside, the hydraulic gradient is reversed and water will flow from the aquifer back into the river. This phenomenon is known as bank storage and is indicative of a highly interactive surface water groundwater system. It also accounts for the fact that streams bounded by permeable deposits exhibit less flashy flooding and higher baseflow in periods of dry weather.

2.5.5 Source Protection Area

There are no source protection areas proximal in the Athboy GWB that are proximal to the application site. The nearest source protection area is Toberdaly PWS (IE_GSI_SPA_275), approximately 7 km to the south east. This abstraction is located in the Trim GWB (IE_EA_G_002).

3 WFD SETTING

3.1 WFD RIVER WATERBODIES

The Kiltotan and Collinstown Stream as well as the Castlejordan Stream lie within two distinct Castlejordan WFD sub-basins. The Kiltotan and Collinstown stream are part of the Castlejordan_020 sub-basin (IE_EA_07C040100) whilst the Castlejordan Stream is located in the Castlejordan_010 sub-basin (IE_EA_07C050050).

3.1.1 WFD River Waterbody Status & Risk

WFD surface water body status and risk for local streams and sub-catchments are summarised in Table 1.

Table 1 – Summary of WFD River Waterbody Status & Risk

WFD River Waterbody	CASTLEJORDAN_010	CASTLEJORDAN_020
WFD Sub-Catchment	Yellow[Castlejordan]_SC_10	Yellow[Castlejordan]_SC_10
Risk Status (2nd Cycle)	At Risk	At Risk
Risk Status (3rd Cycle)	At Risk	Review
Overall Status (2013-2018)	Poor	Good
Overall Status (2016-2021)	Poor	Good
Overall Status (2019-2024)	Poor	Moderate
Significant Pressures (3rd Cycle)	Extractive Industry, Urban Waste water, Urban Run- Off	Extractive Industry

The EPA characterisation Report entitled WFD Cycle 2 Catchment Boyne Sub-catchment Yellow Castlejordan_SC_010 provides an evaluation of priority sub-catchment issues as follows on the CASTLEJORDAN_010 Waterbody:

- Eight out of nine river water bodies within this sub-catchment are AT RISK: Castlejordan_010 and Rochfortbridge Stream_010 due to less than Good biological status and elevated phosphate and ammonia; Castlejordan_020 and Milltownpass_010 due to less than Good biological status and elevated ammonia; Castlejordan_030 and Yellow (Castlejordan)_020 due to elevated ammonia; Yellow (Castlejordan)_010 due to a drop in biological status from Good to Moderate. Biological status was driven by invertebrates for all water bodies.
- Peat extraction is the significant issue throughout the sub-catchment. In addition, urban waste water treatment and urban diffuse is likely to be also impacting Castlejordan_010. Yellow (Castlejordan)_010 and Yellow (Castlejordan)_020 are also impacted by diffuse agriculture (particularly as located on peaty soils).

Across the Boyne Catchment, the following is presented:

- Agriculture is the top significant pressure impacting 66% of the 87 At Risk waterbodies within the Boyne Catchment, followed by 39% impacted by hydromorphological pressures and 16% by domestic wastewater.
- A total of 87 (51%) waterbodies are At Risk of not meeting their environmental objective in the Boyne catchment, while 31 (18%) are under review and 54 (31%) are Not At Risk.
- A total of 29% of surface waterbodies were at Good or High Ecological Status in the 2016-2021 monitoring period. Ninety percent of groundwater bodies were at Good status.

3.2 WFD GROUNDWATER BODIES

WFD groundwater body (GWB) status and risk are summarised in **Table 2**. There are no GWB monitoring points associated with the Athboy GWB proximal to the application site.

Table 2 – Summary of WFD Ground Waterbody Status & Risk

WFD Groundwater Body	Athboy
Risk Status (2nd Cycle)	Review
Risk Status (3rd Cycle)	Not at Risk
Overall Status (2013-2018)	Good
Overall Status (2016-2021)	Good
Overall Status (2016-2021)	Good

4 DESIGNATED SITES

The site itself is not located within any Special Area of Conservation (SAC), Special Protection Area (SPA), Natural Heritage Area (NHA) or proposed Natural Heritage Area (pNHA). The closest Conservation Objective (CO) site features are outlined below.

4.1 NATURE CONSERVATION DESIGNATIONS

Figure 13 shows that, with respect to designations, none of the watercourses in the vicinity of the site are designated areas. However the CASTLEJORDAN_010 and CASTLEJORDAN_020 contribute to the River Boyne system. The River Boyne and River Blackwater SPA & SAC are connected to the site at a hydrological distance of 30 km.

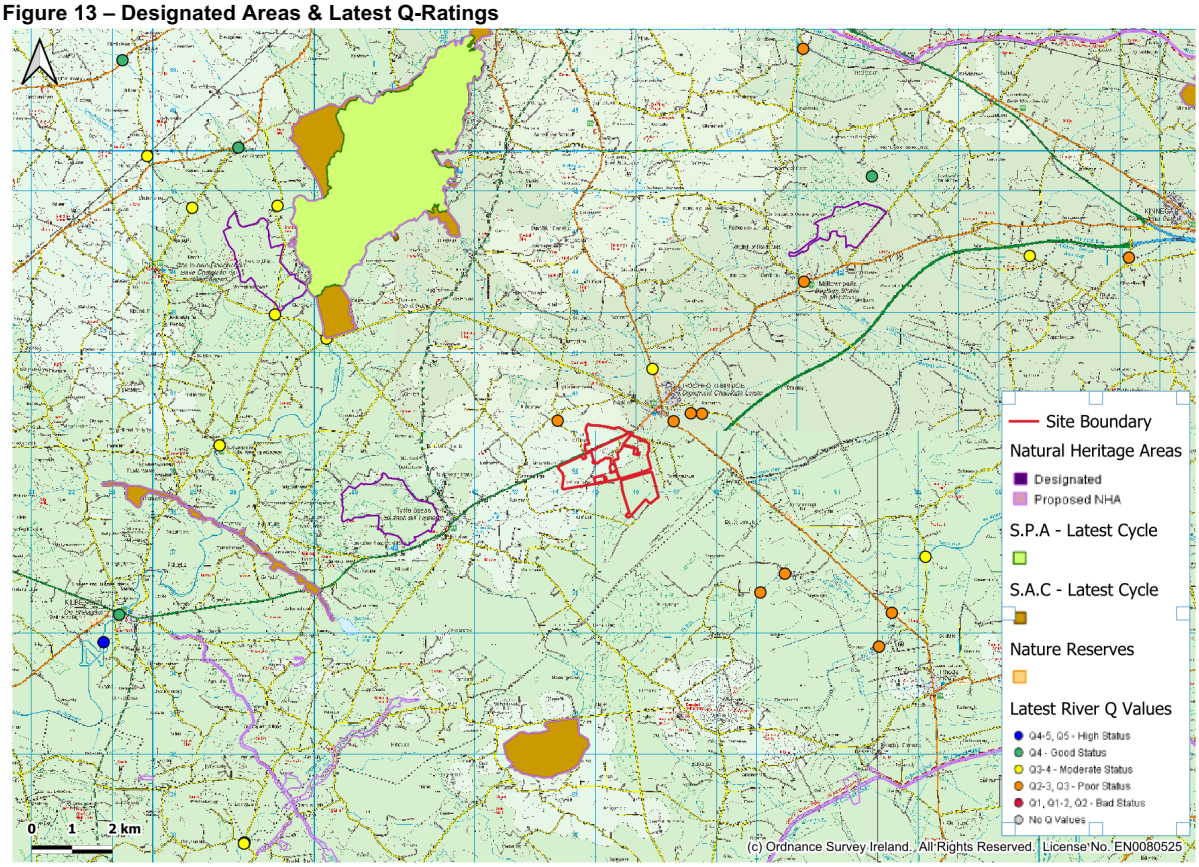
Table 3 – Summary of Designated Sites Within a 15 km Radius of the Site

Ecological Designated Sites	Site Code	Location at Closest Point to the Proposed Project
Cloncrow Bog NHA	000677	3 km west
Lough Ennell SAC & pNHA	000685	6 km northwest
Raheenmore Bog SAC & pNHA	000582	6 km south
Milltownpass Bog NHA	002323	7 km northeast
Black Castle Bog NHA	000570	12 km southeast
River Boyne and River Blackwater SPA	004232	30 km east
River Boyne and River Blackwater SAC	002299	30 km east

Moore Group Environmental Services state in the Appropriate Assessment report that:

> "As such, at this great distance downstream, the River Boyne European sites are deemed outside the zone of influence and are both excluded from the assessment at this preliminary stage"

Figure 13 – Designated Areas & Latest Q-Ratings



4.2 BATHING WATER

Bathing waters identified under the Bathing Water Regulations (2008) are applicable to surface waters where the local authority expects a large number of people to bathe. There are no bathing water sites hydrologically connected to the application site.

4.3 NUTRIENT SENSITIVE AREA

Nutrient Sensitive Areas (NSA) comprise Nitrate Vulnerable Zones and polluted waters designated under the Nitrates Directive (91/676/EEC and areas designated as sensitive areas under the Urban Wastewater Treatment Directive (UWWTD)(91/271/EEC). Sensitive areas under the UWWTD are water bodies affected by eutrophication associated with elevated nitrate concentrations and act as an indication that action is required to prevent further pollution caused by nutrients.

The nearest nutrient sensitive area hydrologically connected to the site boundary is the River Boyne downstream of Navan town. This is at a distance in excess of 55 km from the site boundary

4.4 SHELLFISH AREAS

The Shellfish Waters Directive (2006/113/EC) aims to protect or improve shellfish waters in order to support shellfish life and growth.

There are no shellfish protected area sites within the vicinity of the site boundary. The closest shellfish protected area is at the Irish Sea, between Skerries and Drogheda.

4.5 DRINKING WATER PROTECTION AREAS

All groundwater bodies are considered as Drinking Water Protection Areas (DWPA). There are no public drinking water supply sources or source protection zones located in the Athboy GWB within 50 km of the site boundary.

Table 4 – Drinking Water Protection Areas (DWPA)

Name	Drinking Protection Type	EU Priority Area (PA) Type	EU PA Code
Athboy GWB	Groundwater	Article 7 Abstraction for Drinking Water	IEPA1_EA_G_001

5 WFD SCREENING

5.1 SURFACE WATER BODIES

As described in Section 3.1, the Castlejordan_010 and Castlejordan_020 surface water bodies are to be screened in as they flow through the site boundary.

5.2 GROUNDWATER BODIES

As described in Section 3.2, the GWB underlying the site boundary is the Athboy (IE_EA-G-001). This will be screened in.

5.3 TRANSITIONAL WATERS

There are no transitional waters or coastal waters to be screened in as part of this WFD assessment.

5.4 PROTECTED AREAS

Protected areas and designated sites have been discussed through Section 4. An Appropriate Assessment report prepared by Moore Group Environmental Services (submitted 5th June 2025) concluded:

- *"The majority of the NHAs and pNHAs identified are located outside the Zone of Influence. There are no areas of supporting habitat that will be affected by the proposed development. There are no other areas of conservation concern that would be affected by the proposed development"*

5.5 DRINKING WATER

The proposed groundwater abstraction volume of 40 m^3 per day is estimated to support site activities (EIAR Volume 1: Section 8.3). The analysis by Envirologic, with respect to connectivity of the application site to any Drinking Water Sources or Protection Areas, is included as Table 5.

Table 5 – Drinking Water Abstractions

Name	EU PA Code	Envirologic Screening Note
Athboy GWB	IEPA1_EA_G_001	There are three proposed onsite wells located within the site boundary that will be used for operational purposes.

The site is sufficiently remote from any NFGWS Group Scheme Source Protection Areas.

6 WATER FRAMEWORK DIRECTIVE SCREENING SUMMARY

Table 6 – Primary Water Sources associated with the Application Boundary

Feature Type	WFD Classification	Feature Name/ID	Included in Screening (Y/N)	Justification
Surface Water Body	River	CASTLEJORDAN_010 [IE_EA_07C040050] in Sub Catchment Yellow[Castlejordan]_SC_010	Y	The CASTLEJORDAN_010 surface water body has been screened in as it flows through the site boundary.
Surface Water Body	River	CASTLEJORDAN_020 [IE_EA_07C040100] in Sub Catchment Yellow[Castlejordan]_SC_010	Y	The CASTLEJORDAN_020 surface water body has been screened in as it flows through the site boundary.
Groundwater Body	Groundwater	Athboy GWB (IE_EA_G_001)	Y	The Athboy GWB has been screened in as it directly underlies the proposed development site. There is potential for a quantitative impact to this GWB due to the proposed three on-site wells having a combined groundwater abstraction of approximately 40 m^3 per day.

7 WFD COMPLIANCE ASSESSMENT

7.1 DEVELOPMENT PROPOSAL

This assessment relates to the proposed development which is referred to as 'Project Admiral. The total application area is 243 ha, spread across the townlands of Kiltotan and Collinstown, Oldtown, Gneevebane, Farthingstown, Co. Westmeath. The proposed development will consist of;

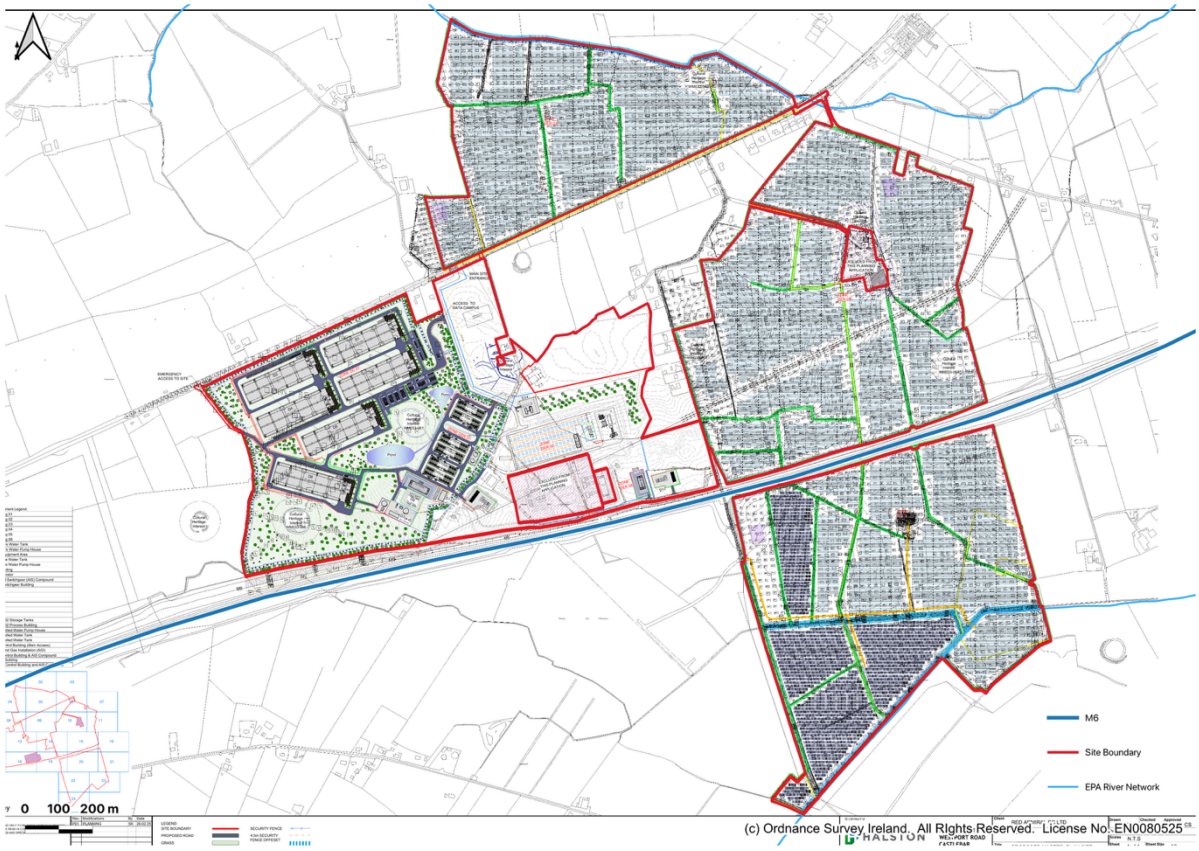
- Data Centre (DC) Facility
    - Data halls fitted with server racks and distribution units
    - Mechanical and electrical plant rooms
    - Administration and support areas
- Decentralised Energy Resource (DER)
    - Solid Oxide Fuel Cell (SOFC) Power System,
    - Battery Energy Storage System (BESS),
    - Solar Photovoltaic (PV) installation
    - Grid connection to the high voltage (220 kV) electricity network.

The DER will optimise the use of these assets to support operations at the DC facility and provide clean, dedicated power that tracks the DC facility's load requirements.

With respect to surface watercourses, there are no proposed changes to surface watercourses within the site boundary, such as stream realignments or culverting and backfilling of open channels. There are two proposed bridge structures along the Kiltotan and Collinstown stream, in the southern portion of the site boundary. These structures will be constructed of precast concrete decks that span from bank to bank across the channels.

With respect to groundwater, there are three proposed groundwater wells located within the site boundary to support operational procedures. Groundwater abstraction volumes are estimated to be 40 m^3 per day.

Figure 14 – Proposed Site Layout



7.2 POTENTIAL EFFECTS

7.2.1 Construction Phase (Unmitigated)

7.2.1.1 River Water Bodies: Qualitative Impacts

Sediment Loss

In an unmitigated scenario there is potential for sediment-laden waters from subsoils exposed during the construction phase to enter the Castlejordan_010 and Castlejordan_020 watercourses.

Hydrocarbon Loss

In an unmitigated scenario there is potential for leakages and spillages of hydrocarbons from construction traffic to enter the Castlejordan_010 and Castlejordan_020 watercourses.

Substrate Quality

In an unmitigated scenario, there is potential for bridge crossing construction works to negatively impact surface water quality. Mitigation and substrate improvement measures have been presented in the method statement contained in the Flood Risk Assessment (appended to EIAR).

7.2.1.2 River Water Bodies: Qualitative Impacts

There will be no alteration of surface water catchment boundaries during the construction phase.

7.2.1.3 Groundwater Body: Qualitative Impacts

There is potential for impact to groundwater quality with the use of machinery and equipment during the construction with possible loss/spillage of hydrocarbons to the environment, where they may enter the underlying groundwater body. The quantity of hydrocarbons present in machinery and plant is relatively minor, however, and the potential risk and severity associated with construction phase activities is therefore deemed low.

7.2.1.4 Groundwater Bodies: Quantitative Impacts

There will be no significant groundwater abstractions or discharges to groundwater during the construction phase.

7.2.2 Operational Phase (Unmitigated)

7.2.2.1 River Water Bodies: Qualitative Impacts

Sediment Loss

In an unmitigated scenario there is potential for sediment-laden waters to enter the Castlejordan_010 and Castlejordan_020 watercourses from trafficked areas or exposed overburden.

Hydrocarbon Loss

In an unmitigated scenario there is potential for hydrocarbons from employee vehicles and haulage vehicles to enter the Castlejordan_010 and Castlejordan_020 watercourses.

Stream Gradient and Substrate Quality

In an unmitigated scenario, there is potential for the realigned stream to negatively impact stream substrate quality.

7.2.2.2 Groundwater Body: Qualitative Impacts

There is a potential impact to groundwater quality with the use of machinery and equipment during the operational phase with possible loss/spillage of hydrocarbons to the environment, where they may enter the underlying groundwater body. The quantity of hydrocarbons present in machinery and plant is relatively minor, however, and the potential risk and severity associated with construction phase activities is therefore deemed low.

7.2.2.3 River Water Bodies: Quantitative Impacts

In its greenfield condition, i.e. prior to any development, the application site sat within the sub-catchment Yellow [Castlejordan]_SC_010. Commencement and progression of the proposed development will not result in any alterations to existing surface water catchment boundaries, i.e. there will be no alteration to areas contributing to run-off for either catchment. There will be no transfer of surface waters across existing catchment boundaries.

Surface waters released from proposed settlements ponds ensure that discharge rates are equal to or below pre-development greenfield run-off rates. Excess waters will be stored in SuDS devices accordingly.

7.2.2.4 Groundwater Bodies: Quantitative Impacts

It is a usual part of an impact assessment to complete a GWB and aquifer scale hydrogeological quantitative impact assessment. As previously discussed, there are three groundwater wells located within the site boundary to support operational procedures. Abstraction volumes are estimated to be 40 m^3 per day.

Table 7 and Table 8 provide an assessment of how operating procedures interacts with the Athboy GWB.

Table 7 – Quantitative analysis of flows in groundwater bodies

GWB FLOWS		
Key areas		
GSI assigned area for Athboy GWB	km^2	964
GSI assigned area for Athboy GWB	m^2	964,000,000
GWB Annual Average Rainfall/Recharge Rates		
GSI Effective Rainfall	mm/yr	532
GSI Groundwater Recharge	mm/yr	319
GSI Groundwater Recharge Cap	mm/yr	200
GSI GWB Groundwater Recharge Rate	m/yr	0.2
Recharge to WFD GWB		
Average daily groundwater recharge to Athboy GWB	m^3/yr	192,800,000
Average daily groundwater recharge to Athboy GWB	m^3/d	528,219
Development Abstraction		
Future anticipated maximum daily GW abstraction from the development	m^3/d	40
Annual abstraction	m^3/yr	14,600
Envirologic Calculation		
Proportion of development abstraction volume as % of Athboy GWB annual recharge to bedrock aquifer	%	0.0075
EPA Register of all other known abstractions from Athboy GWB	m^3/yr	2,869,630
Existing abstractions + proposed development abstraction as a percentage of available groundwater in the Athboy GWB	%	1.49

With reference to the GW5 (WFD Irl, 2004) evaluation criteria reproduced as Table 8, the preliminary 'Groundwater Body' quantitative test results of Table 8 suggests that the volume of groundwater being abstracted at the proposed development might account for only 0.0075% of the annual average recharge to the GWB. It is taken that the calculated % is in the <2% bracket according to GW5 criteria, resulting in a conclusion of '**No Potential Impact'**.

Table 8 - Groundwater Thresholds for rivers and large lakes (Table 4, GW5 Guidance Document: Guidance on Abstractions; WFD Working Group, 2004).

	Average Specific Yield or Storage of GW Screening Unit	
Groundwater Abstraction vs Average Recharge	**Low Storage (< 5%)**	**High Storage (>=10%)**
>30%, i.e. if groundwater abstraction is greater than 30% of long-term recharge	High Potential Impact	High Potential Impact
	High Potential Impact	Moderate Potential Impact
10 – 20%	Moderate Potential Impact	Low Potential Impact
2 – 10%	Low Potential Impact	Low Potential Impact
< 2%	**No Potential Impact**	No Potential Impact

8 MITIGATION

The potential negative effects posed by the development to the WFD Surface Waterbodies and Groundwater Bodies in terms of quantitative and quantitative status have been outlined above. Where required the following measures will be implemented to mitigate against any identified effects. Mitigation measures have been proposed in the following documents submitted with the planning application:

- '*Admiral EIAR Volume 2: Section 8.9 Mitigation Measures*' prepared by Halston;
- '*Stage 3 Flood Risk Assessment: Section 6*' prepared by Envirologic.

Mitigation measures for each associated potential effect during the construction and operational phases are listed in Table 9 and Table 10, respectively. Measures to mitigate against unplanned events are outlined in Table 11.

Table 9 – Mitigation Measures: Construction Phase

POTENTIAL IMPACT				MITIGATION MEASURES	RESIDUAL EFFECT FOLLOWING MITIGATION	
Scenarios where impacts may arise	**Activity**	**Attribute**	**Character of Potential Impact**	**Description of Mitigation**	**Significance or quality of Effect**	**Probability**
Construction Phase	Contamination from spills or leaks of fuel/oil and hazardous substances stored onsite	Groundwater Bodies: Athboy GWB Surface Water Bodies: Castlejordan_010 Castlejordan_020	Deterioration in groundwater and surface water quality Moderate Impact	Construction compounds will be located at least 30 m from any surface watercourses within the site boundary. Dedicated area of hard standing for material deliveries separated a minimum of 10m from adjacent watercourses. Concrete will be mixed off–site and imported to the site. Dedicated area of hard standing for vehicle washout. Specific areas for oil storage and refueling, separated a minimum of 10m from adjacent watercourses and comply with legislation, including providing bunds which contain 110% of on-site fuel storage capacity. Use spill kits, fill point drip trays, bunded pallets and secondary containment units. Enclosed and secured site and fuel storage areas will be secondarily secured.	Imperceptible	Unlikely

				Develop a Construction Waste Management Plan. Develop a site-specific Incident Response Plan. Works involving the use of chemicals which are potentially harmful to the aquatic environment will be undertaken in a contained or lined area. Excavation and disposal off-site of contaminated soils (where required). Good housekeeping (daily site clean-ups, use of disposal bins, etc.) on the project site, and the proper use, storage and disposal of many substances used on construction sites, such as lubricants, fuels and oils and their containers can prevent soil contamination. Implement a robust spill response plan that includes accessible spill kits, immediate containment procedures and predefined cleanup protocols. Regularly train all site personal on spill response actions.		
Construction Phase	Construction of 2 bridge crossings over surface watercourses	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Deterioration of Surface water quality from sediment input disrupting sensitive riverine and lacustrine habitats Moderate Impact	As the stream is a part of an arterial drainage scheme, OPW will be consulted in advance of the proposed works. A method statement will be developed and agreed with all stakeholders. Silt fencing and other controls such as check dams will be installed to prevent any impact on the downstream receptor.	Imperceptible	Unlikely

Construction Phase	Earthworks have the potential to result in overland run-off of sediment laden water to watercourses	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Deterioration of Surface Water quality from sediment input disrupting sensitive riverine and lacustrine habitats Moderate Impact	Develop and document a site-specific Stormwater Pollution Prevention Plan (SWPPP) or construction management plan that integrates BMPs and regulatory requirements. Minimization of exposed ground and soil stockpiles, through careful earthworks design. Minimising the time that ground is exposed and excavations are open through careful construction programming. Stockpiles will be located away from watercourses, limited in height to 3m (topsoil) and the surface smoothed. Silt fences will be placed around the stockpiles where required to limit the potential for rainfall to wash fines into the drainage system (GIS compound area). These comprise a technical filter fabric positioned as a fence around the exposed soil and sediment to catch fines within the runoff and reduce the input of fine sediment to the drainage system. Stockpiles which may be present for some time will be covered or seeded. Areas around infrastructure will be landscaped and restored with topsoil and revegetated as soon as possible. Track drainage, designed to prevent the interception of large volumes of water, will be porous and act as soak ways thereby minimising any direct discharge to watercourses. Wheel washing activities will be conducted in designated areas, with runoff waters being conducted to soak ways constructed according to best practice.	Imperceptible	Unlikely

				Use of buffer zones, silt traps and settlement ponds to avoid sediment reaching watercourses. Incorporate small, strategically placed check dams within drainage channels to slow water movement within the site boundary.		
Construction Phase	Contamination of groundwater by concrete, cement paste or grout	Groundwater Bodies: Athboy GWB	Deterioration of groundwater quality Moderate Impact	A suitable casing will be used where wet concrete is proposed to ensure protection of groundwater until concrete has set.	Imperceptible	Unlikely
Construction Phase	Increased vulnerability of the aquifer as a result of soil removal	Groundwater Bodies: Athboy GWB	Deterioration of groundwater quality. Moderate Impact	Land disturbance is expected to be minimised and quickly re-stabilised during the construction. Due to the limited soil and superficial cover present onsite, it is not thought that large quantities of soils and superficial deposits will be moved during construction. During construction, areas where the bedrock aquifer is exposed should be protected from surface activities through utilisation of appropriate surface coverings.	Imperceptible	Unlikely

Table 10 – Mitigation Measures: Operational Phase

POTENTIAL IMPACT				MITIGATION MEASURES	RESIDUAL EFFECT FOLLOWING MITIGATION	
Scenarios where impacts may arise	**Activity**	**Attribute**	**Character of Potential Impact**	**Description of Mitigation**	**Significance or quality of Effect**	**Probability**
Operational Phase	Site drainage and its interaction with groundwater recharge	Groundwater Bodies: Athboy GWB	Reduced infiltration as a result of increased hard standing area and solar farm soil compaction. Moderate Impact	Design the sites grading to encourage water to flow slowly towards infiltration zones rather than rapidly directed off-site via sealed channels. Design shallow basins or trenches that store stormwater temporarily and allow water to percolate slowly through the soil into the groundwater system. Incorporate green infrastructure (e.g., permeable pavements, bioswales) on-site to promote natural water infiltration and counterbalance the water extracted from groundwater. Construct small-scale detention ponds or retention areas that hold water for a controlled period. Gradual release from these features pavements sudden surges that bypass natural infiltration areas and helps align discharge volumes with the soil's absorption capacity. Landscape with native vegetation such as deep-rooted variants. This will help increase soil porosity and promote water infiltration.	Imperceptible	Unlikely

Operational Phase	Contamination from spills or leaks of fuel/oil and hazardous substances stored onsite	Groundwater Bodies: Athboy GWB Surface Water Bodies: Castlejordan_010 Castlejordan_020	Deterioration in groundwater and surface water quality. Moderate Impact	Dedicated indoor chemical storage areas within the three projects are provided for the storage of chemicals. The secondary fuel and other oils will be stored in bunds. Specific areas for oil storage and refueling are provided and are separated from local drainage. Secondary containment (bunding) is designed to comply with best practice – the greater of (a)110% of the largest tank or drum within the bund or 25% of the total volume of substance within the bund. Bunds floor fall to internal sump areas which will allow bunds to be emptied via pump only. Bund sumps will have impermeable surfaces. Site drainage networks are designed in consideration of SUDS principles. Stormwater moving through 'dirty' site areas (e.g., parking, deliveries) to pass through oil interceptor prior to being infiltrated. Spill kits, fill point drip trays, bunded pallets and secondary containment units provided will be provided across all projects. Enclosed and secured site and fuel storage areas will be secondarily secured. A site-specific Incident Response Plan will be put in place for each project. Works involving the use of chemicals which are potentially harmful to the aquatic environment will be undertaken in a contained or lined area. All roads are designed to drain to the filter drains running parallel with the proposed internal roads and shown on the drainage drawings. This	Imperceptible	Unlikely

				system shall allow runoff to filter down through the stone media providing filtering and delay and storage action. This stone shall be wrapped in a permeable membrane allowing runoff to infiltrate into the surrounding soils thus providing reduction action.		
Operational Phase	Contamination of waters due to leaks/spills from pipework and storage plant/tanks	Groundwater Bodies: Athboy GWB Surface Water Bodies: Castlejordan_010 Castlejordan_020	Deterioration in groundwater and surface water quality. Moderate Impact	Engineered controls included within the design to contain and recover spills. Water-efficient techniques will be used at source where possible to maximise reuse. Water will be recycled within the process from which it issues. The drainage system is designed to ensure separation and isolation of 'contaminated' surface water with 'uncontaminated' surface water. In order to ensure that uncontaminated surface drains are not mixing with possibly contaminated surface drains, risk areas will be discharged into a separate system. Small areas that have the potential for causing contamination of surface drain water are separated from the overall surface water drainage. Appropriate surfacing and containment or drainage facilities for all operational areas are designed taking into consideration collection capacities, surface thicknesses, strength/reinforcement, falls, materials of construction, permeability, resistance to chemical attack, and inspection and maintenance procedures. Bunded (secondary containment) is provided for all storage tanks – site areas where tanks located fully bunded. Interceptors containing oil contaminated rainwater will be contained before being exported off-site for suitable disposal.	Imperceptible	Unlikely

Operational Phase	Use of settlement ponds	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Removal and entrapment of particulate matter entrained in site waters. Moderate Impact	Surface water generated on hard standing will pass through multiple settlement ponds. This feature will clarify waters prior to them entering surface watercourses.	Imperceptible	Unlikely
Operational Phase	Cleaning of settlement ponds	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Improves efficiency of settlement ponds and capacity. Moderate Impact Mobilisation and migration of suspended solids	Particulate matter captured in settlement ponds to be transferred to landscaped perimeter bunds.	Imperceptible	Unlikely
Operational Phase	Use of wheel wash	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Removal and entrapment of particulate matter attached to vehicles. Positive Impact	Positive impact so no mitigation required.	Positive	Unlikely
Operational Phase	Wheelwash maintenance	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Improves of wheel wash Mobilisation and migration of suspended solids. Moderate Impact	The wheel wash is to be maintained in accordance with manufacturer's specifications.	Imperceptible	Unlikely

Operational Phase	Use & maintenance of hydrocarbon interceptors	Surface Water Bodies: Castlejordan_010 Castlejordan_020	Entrapment of hydrocarbons lost during movement of site waters. Positive Impact	Positive impact so no mitigation required. Oil that accumulates within hydrocarbon interceptors shall be regularly removed by an appropriately licensed contractor. The hydrocarbon interceptors shall be appropriately maintained in accordance with the manufacturer's specifications.	Positive	Unlikely
Operational Phase	Monitoring	Groundwater Bodies: Athboy GWB Surface Water Bodies: Castlejordan_010 Castlejordan_020	Monitoring of surface water quality, groundwater quality Positive Impact	Regular visual monitoring of the settlement ponds ensure no visual oil or fuel contamination. Monitoring will continue as per proposed regime.	Imperceptible	Unlikely
Operational Phase	Abstraction	Groundwater Bodies: Athboy GWB	Dewatering of Groundwater Body	As specified in Table 7 and Table 8, the operational requirement of Project Admiral accounts for only 0.0075% of the annual average recharge to the Athboy GWB	Imperceptible	Unlikely

Table 11 – Mitigation Measures: Unplanned Scenarios

POTENTIAL IMPACT				MITIGATION MEASURES	RESIDUAL EFFECT FOLLOWING MITIGATION	
Scenarios where impacts may arise	**Activity**	**Attribute**	**Character of Potential Impact**	**Description of Mitigation**	**Significance or quality of Effect**	**Probability**
Unplanned Scenario	Major Spillage	Groundwater Bodies: Athboy GWB Surface Water Bodies: Castlejordan_010 Castlejordan_020	Hydrocarbon contamination. Significant impact.	All runoff generated on potentially at-risk areas pass through a hydrocarbon interceptor prior to leaving the site. The outlet of the hydrocarbon interceptor will be fitted with a shutoff valve to facilitate manual containment of a significant spill. A contained spillage will be disposed of appropriately by a licensed contractor. Potentially harmful chemicals stored on site (e.g. lubricants) to be stored under cover on bund trays.	Imperceptible	Unlikely
	Intense Rainfall Events	Surface Water Bodies: Castlejordan_010 Castlejordan_020	On-site & off-site flooding. Significant impact.	The flood risk assessment submitted as part of the planning application has adopted a conservative approach which incorporates the Q_{100} and Q_{1000} flood event. An allowance for climate change has also been included in the flood flow calculations for each catchment. There is no increased risk to downstream receptors as a result of the proposed development.	Imperceptible	Unlikely

9 SUMMARY

The proposed development, as outlined in this document, involves the construction of a Data Centre Facility and a Decentralised Energy Resource (DER) in the townlands of Kiltotan and Collinstown, Oldtown, Gneevebane, Farthingstown, Co. Westmeath. The DER will optimise the use of these assets to support operations at the DC facility and provide clean, dedicated power that tracks the DC facility's load requirements.

Table 12 provides summary confirmation that the proposed development, along with its predicted abstraction volume, will not propagate a change to current WFD status of the Athboy GWB or local surface waterbodies.

Table 12 – Potential Impacts to Qualitative and Quantitative Status of WFD Water Bodies

WFD Water Body	Athboy GWB	CASTLEJORDAN_10	CASTLEJORDAN_20
Current Overall WFD Status	Good	Poor	Moderate
Predicted Overall WFD Status	Good	Poor	Moderate

Predicted status change to the receiving watercourses and local sub-catchments, arising from quantitative and qualitative impacts during the construction and operational stages of the proposed development is outlined in Table 12, which concludes no potential to change the current status.

In summary, the proposed development:

- Will not cause deterioration to any flowing surface water body, transitional water body or coastal waterbody.
- Will not impact any mapped or reported Drinking Water Area, Bathing Water, Shellfish Water or any other site.
- Will not cause a deterioration in the mapped 'Good' status of the underlying Athboy GWB.
- Will not jeopardise the objectives to maintain the current status of the Athboy GWB, the Castlejordan_010 waterbody and the Castlejordan_020 waterbody.
- Will not jeopardise the condition or protections provided to any downgradient designated site, or their future enhancement.
- Does not present any potential for impediment to the Programme of Measures associated with the River Basin Management Plan 2022 – 2027 or the Water Action Plan (WAP) 2024. The site boundary is not within any mapped Zones of Contribution or Source Protection Areas of any Water Supply Sources.
- Similarly, there are no High Status Objective sites proximal to the development site.
- Is compliant with the requirements of the Water Framework Directive (2000/60/EC).

This document has been prepared by Envirologic for sole use by our client in accordance with generally accepted consultancy principles, the budget for fees and the agreed terms of reference. No third party may rely upon this document without the prior and express written agreement of Envirologic.

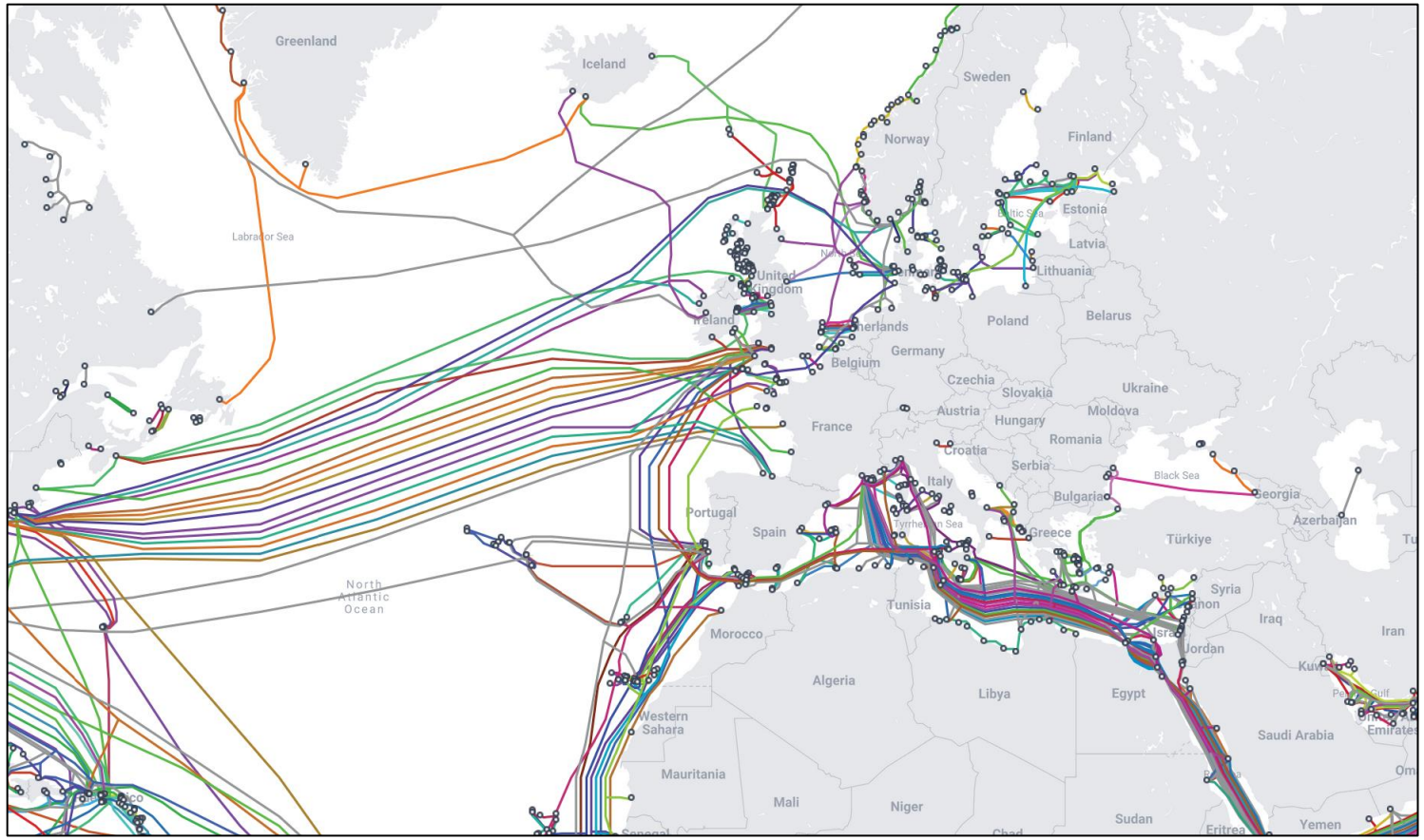
This report refers, within the limitations stated, to the condition of the site(s) at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the sites(s). The report is based on a visual site inspection and the physical investigation as detailed. Envirologic take no responsibility for conditions that have not been revealed due to lack of access. Whilst every effort has been made to interpret the conditions observed, such information is only indicative, and liability cannot be accepted for its lack of accuracy in representing geological/hydrological/hydrogeological conditions.

APPENDIX 9.1

Overview of Telecommunications Infrastructure serving the Red Admiral DC

International submarine Cables

- Ireland is well served by international submarine fibre cables
- Multiple submarine cables connecting Ireland directly (and indirectly) to:
  - United States
  - UK
  - Europe
- Connectivity to international datacentre clusters such as:
  - Frankfurt
  - London
  - Amsterdam
  - Paris
  - New York
  - North Virginia



LUMCLOONENERGY

Source: https://www.submarinecablemap.com/

National Fibre Networks

- Several wholesale fibre networks in Ireland, with some offering dark fibre:
  - Aurora
  - BT Wholesale
  - e net
  - ESB Telecoms
  - Open eir
  - PiPiper
- Networks generally follow the existing transport routes and utility network routes
- Datacentres prefer dark fibre to meet their requirements to control capacity and performance.
- Connection to multiple providers with multiple routes to achieve fully diverse fibre connectivity is also preferred to provide redundancy.

- Examples of wholesale fibre networks:

Source: https://www.enet.ie/coverage/
https://esb.ie/what-we-do/esb-telecoms/national-network#

Dark Fibre connectivity serving the Red Admiral DC site

- Several dark fibre options available near the site which meet the capacity and performance requirements.
- Aurora
  - Direct private access to low latency high-capacity dark fibre network which runs along the gas pipeline route to the site.
  - Ring network provides diverse fibre routes feeding the Dublin datacentre cluster.
  - Multiple designated fibre pairs available.
- PiPiper
  - Direct private access to low latency high-capacity network which is planned along the M6 motorway to the south of the proposed development.
  - Ring networks provides diverse fibre routes feeding the Dublin datacentre cluster.
  - Multiple designated fibre pairs available.

	Aurora	PiPiper
Direct Access	< 100m	< 50m
Ultra Low Latency	< 1ms	< 1ms
Very High Capacity	> 1 TB/s	> 1 TB/s
Route Diversity	Gas Pipeline	Motorway
Dark Fibre	Yes	Yes
Designated Fibre pair(s)	Multiple	Multiple
Dedicated fibre network	Yes	Yes

Dark Fibre network map at the Red Admiral DC site

LUMCLOONENERGY

APPENDIX 10.1

Appendix 10.1

BASELINE AIR QUALITY SURVEY LABORATORY TEST CERTS

Test Report Air Pollution Measurement

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information		passive samplers		analysis		test report	
customer:	TMS Environment Ltd	date received:	24.04.2025	method:	SP12-S photometer, Salzmann	created on:	02.05.2025
customer ID:	IDT	type:	tube (Palms)	analyte:	[NO]-	created by:	U. Kunz
contact person:	Graham Adams	pollutant:	NOx (NO+NO2)	date:	02.05.2025	checked on:	02.05.2025
project:	No.1	protective filter:	yes	place:	passam ag	checked by:	N. Spichtig
reference:	2 weeks	limit of detection:	NO: 2.5 ug/m3 (14 days)			file name:	IDT12-S-2501
			NO2: 0.5 ug/m3 (14 days)			pages:	1

note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025 measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
AS-101	IDT-2	IDT-12	45713	45740	04/04/2025	11:43	333.1	0.06	0.09	0.16	3.4	6.4	9.7	
AS-102	IDT-6	IDT-8	45713	45740	04/04/2025	11:25	333.8	0.20	0.14	0.34	10.3	9.8	20.1	
AS-103	IDT-5	IDT-11	45713	45740	04/04/2025	11:10	335.0	0.05	0.11	0.16	2.8	7.2	10.0	
AS-104	IDT-4	IDT-6	45713	45740	04/04/2025	11:59	333.8	0.11	0.14	0.25	5.8	9.2	15.0	
AS-105	IDT-3	IDT-10	45713	45740	04/04/2025	10:40	335.8	0.11	0.07	0.18	5.7	5.0	10.6	
BLANK	IDT-10	IDT-5	45713	45740	04/04/2025	12:15	334.8	< 0.05	< 0.01	< 0.04	< 2.5	< 0.5	< 2.5	

Sampling information

Annex: Test Report Air Pollution Measurement IDT12-S-2501

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
			start		end		Temp	air pressure	Comment on sampling
	label	label							
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
AS-101	IDT-2	IDT-12	04/04/2025	11:43	18/04/2025	08:47	7	101.2	
AS-102	IDT-6	IDT-8	04/04/2025	11:25	18/04/2025	09:15	7	101.2	
AS-103	IDT-5	IDT-11	04/04/2025	11:10	18/04/2025	10:09	7	101.2	
AS-104	IDT-4	IDT-6	04/04/2025	11:59	18/04/2025	09:44	7	101.2	
AS-105	IDT-3	IDT-10	04/04/2025	10:40	18/04/2025	10:27	7	101.2	
BLANK	IDT-10	IDT-5	04/04/2025	12:15	18/04/2025	11:00	7	101.2	

Test Report Air Pollution Measurement

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information
customer: TMS Environment Ltd
customer ID: IDT
contact person: Graham Adams
project: No.2
reference: 2 weeks

passive samplers
date received: 09.05.2025
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.5 ug/m3 (14 days)

analysis
method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 13.05.2025
place: passam ag

test report
created on: 13.05.2025
created by: N. Spichtig
checked on: 13.05.2025
checked by: T. Hangartner
file name: IDT12-S-2502
pages: 1

note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025 measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
AS-101	IDT-1	IDT-4	45713	45740	18/04/2025	08:47	336.1	0.06	0.07	0.12	3.0	4.5	7.5	
AS-102	IDT-12	IDT-2	45713	45740	18/04/2025	09:15	336.1	0.08	0.10	0.18	4.4	6.6	11.0	
AS-103	IDT-9	IDT-7	45713	45740	18/04/2025	10:09	336.6	0.09	0.08	0.18	4.8	5.5	10.4	
AS-104	IDT-8	IDT-9	45713	45740	18/04/2025	09:44	336.4	< 0.05	0.09	0.09	< 2.5	6.1	6.1	
AS-105	IDT-7	IDT-3	45713	45740	18/04/2025	10:27	337.1	0.31	0.15	0.46	16.2	10.0	26.2	
BLANK	IDT-11	IDT-1	45713	45740	18/04/2025	11:00	336.7	< 0.05	< 0.01	< 0.04	< 2.5	< 0.5	< 2.5	

Sampling information

Annex: Test Report Air Pollution Measurement IDT12-S-2502

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
			start		end		Temp	air pressure	Comment on sampling
	label	label							
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
AS-101	IDT-1	IDT-4	18/04/2025	08:47	02/05/2025	08:50	10	101.1	
AS-102	IDT-12	IDT-2	18/04/2025	09:15	02/05/2025	09:20	10	101.1	
AS-103	IDT-9	IDT-7	18/04/2025	10:09	02/05/2025	10:43	10	101.1	
AS-104	IDT-8	IDT-9	18/04/2025	09:44	02/05/2025	10:10	10	101.1	
AS-105	IDT-7	IDT-3	18/04/2025	10:27	02/05/2025	11:30	10	101.1	
BLANK	IDT-11	IDT-1	18/04/2025	11:00	02/05/2025	11:40	10	101.1	

Test Report Air Pollution Measurement

passam ag

air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

customer information
customer: TMS Environment Ltd
customer ID: IDT
contact person: Graham Adams
project: No.3
reference: 2 weeks

passive samplers
date received: 20.05.2025
type: tube (Palms)
pollutant: NOx (NO+NO2)
protective filter: yes
limit of detection: NO: 2.5 ug/m3 (14 days)
NO2: 0.5 ug/m3 (14 days)

analysis
method: SP12-S photometer, Salzmann
analyte: [NO]-
date: 27.05.2025
place: passam ag

test report
created on: 28.05.2025
created by: C. Panier
checked on: 28.05.2025
checked by: T. Hangartner
file name: IDT12-S-2503
pages: 1

note: applies to the sample as received; results below the detection limit are indicated with "<" and the associated value; this method is accredited to ISO/IEC 17025 measurement uncertainty <30%; sampling rate related to 20 °C; further information at www.passam.ch

measuring site	passive sampler				measuring period			result						Comment on the analysis
	label		lot no.		start		exp. time	m / sampler			Conc			
	NO2	NOx	NO2	NOx	date	time	h	NO ug	NO2 ug	NOx ug	NO ug/m3	NO2 ug/m3	NOx ug/m3	
AS-101	IDT-16	IDT-16	45713	45755	02/05/2025	10:23	336.2	0.15	0.10	0.25	7.6	7.1	14.7	
AS-102	IDT-13	IDT-13	45713	45755	02/05/2025	10:07	336.2	0.17	0.11	0.28	8.6	7.5	16.1	
AS-103	IDT-14	IDT-14	45713	45755	02/05/2025	09:34	336.2	< 0.05	0.08	0.08	< 2.5	5.7	5.7	
AS-104	IDT-15	IDT-15	45713	45755	02/05/2025	09:52	336.2	0.10	0.08	0.18	5.3	5.3	10.6	
AS-105	IDT-	IDT-	45713	45755	02/05/2025	09:15	336.3							sampler not received
BLANK	IDT-17	IDT-17	45713	45755	02/05/2025	11:00	336.0	< 0.05	< 0.01	< 0.04	< 2.5	< 0.5	< 2.5	

Sampling information

Annex: Test Report Air Pollution Measurement IDT12-S-2503

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air quality monitoring

NOx (NO+NO2) Nitrogen oxides measurement by means of passive sampler

measuring site	passive sampler		measuring period				Optional information		
			start		end				
	label	label					Temp	air pressure	Comment on sampling
	NO2	NOx	date	time	date	time	[°C]	[hPa]	
AS-101	IDT-16	IDT-16	02/05/2025	10:23	16/05/2025	10:33	15	1016	N/A
AS-102	IDT-13	IDT-13	02/05/2025	10:07	16/05/2025	10:18	15	1016	N/A
AS-103	IDT-14	IDT-14	02/05/2025	09:34	16/05/2025	09:47	15	1016	N/A
AS-104	IDT-15	IDT-15	02/05/2025	09:52	16/05/2025	10:06	15	1016	N/A
AS-105	IDT-	IDT-	02/05/2025	09:15	16/05/2025	09:35	15	1016	Tubes vandalised or stolen
BLANK	IDT-17	IDT-17	02/05/2025	11:00	16/05/2025	11:00	15	1016	N/A

APPENDIX 10.2

Appendix 10.2

AIR QUALITY IMPACT ASSESSMENT DISPERSION MODELLING REPORT

tms environment ltd

TMS Environment Ltd, 53 Broomhill Drive, Tallaght, Dublin 24

tms environment ltd

Specialists in laboratory analysis, monitoring and environmental consultancy

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DISPERSION MODELLING ASSESSMENT OF AIR QUALITY IMPACTS OF PROPOSED DATA CENTER AND DECENTRALISED ENERGY RESOURCE AT CASTLELOST

Report Ref. 34469-2

TMS Environment Ltd.

June 2025

Approved By: Imelda Shanahan

Dr Imelda Shanahan

Technical Manager

Contents

1.0 INTRODUCTION AND SCOPE

This report deals with an assessment of the potential impacts on air quality of emission to atmosphere from the proposed Data Centre facility at Castlelost. The purpose of the report is to provide information in relation to the quantitative assessment of air quality impacts associated with the emissions from the facility. The report presents the results of air quality dispersion modelling to evaluate the impact of potential emissions from the facility on ambient air quality, human health and ecosystems.

2.0 DESCRIPTION OF PROCESS AND SOURCES OF EMISSIONS TO ATMOSPHERE

2.1 Site location and layout

The facility is located on lands at Collinstown Oldtown, Co. Westmeath. The general layout of the site is shown in Figure 2.1 which shows the final layout. The facility will be constructed in phases over 5 years.

2.2 Process Description

The proposed development will consist of a Data Centre, which will be constructed and secured within a 48ha site which includes six two-storey data halls – each 225m(l) x 65m(w) x 22m(h), and a Decentralised Energy Resource (DER), which will be constructed across 192ha and comprise a number of power assets which will provide, store and manage electricity close to the Data Centre rather than relying on the existing electricity network. A detailed description of the proposed development is presented in Chapter 2 of this EIAR.

The DER comprises the following assets:

1. Solid Oxide Fuel Cell (SOFC) Power System (hereafter referred to as Fuel Cell),
2. Battery Energy Storage System (BESS),
3. Solar PV installation, and
4. Grid connection.

The proposed development to be located on a 240-hectare (ha) site which is greenfield and currently in agricultural use.

2.2 Sources and characteristics of emissions to atmosphere

The most significant potential impacts remain the same as those associated with existing activities at and in the vicinity of the site - emissions of particulate matter and combustion gases such as carbon monoxide (CO), sulfur dioxide (SO2) and nitrogen oxides (NO2) from traffic. There is no combustion process associated with the proposed SOFC and therefore emissions to atmosphere are negligible. There are six fuel cell towers from which a small amount of nitrogen oxides is released, the amount being proportional to the power output of the plant.

There is a 1MW generator that will operate for less than 100 hours per year. The operation will be to ensure ongoing operability in the event of an emergency requirement. There are emissions of particulate matter and combustion gases such as carbon monoxide (CO), sulfur dioxide (SO2) and nitrogen oxides (NO2) associated with operation of the generator.

There are no emissions to atmosphere associated with operation of the Battery Energy Storage System (BESS) or the solar farm.

The emissions to atmosphere arise due to the combustion process for the emergency generator and as a by-product of the fuel cell activity. The generator may be required in emergency situations to provide power in the event of an emergency; their operation is therefore very limited and will not exceed 100 hours per year.

The dispersion model considered the following operating scenario.

(i) Operating Scenario: Normal Operation at full load

A conservative assumption of 100 operating hours per year was made for the emergency generator. An assumption of 2 hours operation per week during the morning (06:00 – 08:00) or evening (16:00 – 19:00) peak demand periods was made.

Continuous operation of the fuel cells with a low level emission of NOx was assumed. For this scenario, 1.4MkWhr/year results in a low emission rate of 1.081 tonne NOx emitted per year.

(ii) Operating Scenario: Normal Operation at 10% base load and intermittent full load

A conservative assumption of 100 operating hours per year was made for the emergency generator. An assumption of 2 hours operation per week during the morning (06:00 – 08:00) or evening (16:00 – 19:00) peak demand periods was made.

Continuous operation of the fuel cells with a low level emission of NOx was assumed. For this scenario, 10% baseload operation and intermittent full load for ca 50% of the time was assumed. This scenario results in a low emission rate of 0.594 tonne NOx emitted per year.

The only pollutant of concern is NO2 and NOx so these pollutants are modelled due to the potential impact on ambient air quality and the ecological environment. The emissions from the emergency generator are insignificant given the very limited operating hours so only nitrogen dioxide and nitrogen oxides from the generator ais modelled due to the potential for cumulative impacts with the low level emissions from the fuel cell.

3.0 AIR QUALITY IMPACT ASSESSMENT METHODOLOGY

3.1 Impact assessment methodology

The impact of emissions to atmosphere on air quality is assessed using a dispersion modelling assessment approach. This approach involves computation of predicted incremental contributions to ground level concentrations of pollutants over defined averaging intervals as a result of emissions from the combustion plant. The predictions are then compared with relevant Air Quality Standards to determine whether the impact on air quality meets the requirements of the Standards. The general approach is summarised as follows:

- Review of local air quality data in the area surrounding the site;
- Review of the nearest building arrangements and locations of human receptors in the area;
- Identification of non-statutory ecological receptors within 2 km of the site and statutory ecological receptors within 15 km of the site;
- Dispersion modelling of combustion plant emissions to predict process contributions (PCs) at identified sensitive receptors for comparison against relevant Air Quality Standards;

Guidance on air emissions risk assessments was published by the UK Government for developments which require an environmental permit under the Environmental Permitting (as Amended) Regulations 2016 (EPR). For those emissions that cannot be screened out the guidance states that detailed modelling must be carried out of the emissions. The screening assessment screened out emissions of particulate matter (including PM_{10} and $PM_{2.5}$), carbon

monoxide and sulfur dioxide as insignificant. Nitrogen oxides were considered relevant as they are regulated pollutants and a detailed dispersion modelling assessment was carried out for those pollutants.

Guidance has also been issued by the EPA in the AG4 Guidance Note and this Guidance was followed in the assessment.

3.2 Impact assessment criteria

The assessment of impact significance is based on a comparison of predicted impacts with air quality standards and guidelines, and consideration of the magnitude and duration of the potential impact.

Air Quality Standards in Ireland have been defined to ensure compliance with EC Directives; they are developed at different levels for different purposes. European legislation on air quality has been framed in terms of two categories, limit values and guide values. Limit values are concentrations that cannot be exceeded and are based on WHO guidelines for the protection of human health. Guide values are set as a long-term precautionary measure for the protection of human health and the environment. The WHO guidelines differ from EU air quality standards in that they are primarily set to protect public health from the effects of air pollution, whereas Air Quality Standards are recommended by governments, and other factors such as socio-economic factors, may be considered in setting the standards.

Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (Clean Air for Europe Directive) is an amalgamation of Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management (Air Quality Framework Directive) and its subsequent daughter Directives and sets out limit and target values for named air quality parameters. The Clean Air for Europe Directive was transposed into Irish legislation by the Ambient Air Quality Standards Regulations 2022 (S.I. No. 739 of 2022) published on January 10th, 2023. Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (Fourth Daughter Directive) was transposed into Irish legislation by the Arsenic, Cadmium,

Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Quality Standards Regulations 2022 (S.I. No. 739 of 2022). These Directives and the Irish Regulations set out the main standards against which the potential impacts of the proposed project on air quality are assessed, as summarised in Table 3.1.

In addition to the Ambient Air Quality Standards Regulations 2022 and the Clean Air for Europe Directive standards, it is also appropriate to consider the WHO Guidelines. These Guidelines were developed by the WHO to provide appropriate air quality targets worldwide, based on the latest health information available. The air quality guidelines for PM10, NO2 and SO2, and PM2.5 are considered in this Chapter. While the WHO Guidelines are not mandatory, they represent the current informed opinion on the levels to which we should be aspiring in order to minimise the adverse health impacts of air pollution. The WHO guidelines referenced in this report are summarised in Table 3.2. The potential impact of the emissions on ecosystems is considered using the gaseous nitrogen oxides concentration. An Air Quality Standard expressed in concentration terms has been defined for the protection of vegetation and this standard is one of the benchmarks against which the impact of the facility is assessed.

The potential impact of nitrogen deposition in sensitive ecosystems was evaluated by comparing the modelled nitrogen deposition rate with the critical loads for the relevant habitat. The most sensitive habitat for this purpose is bog ecosystems and a recommendation of 5kg N ha-1 year-1 has been made as the critical load for habitat protection [UNECE 5 – 10 kg N ha-1 year-1 and EPA Research Report 390: Nitrogen–Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitats (2016-CCRP-MS.43) 5kg N ha-1 year-1].

3.3 Dispersion Model Selection

Computerised mathematical dispersion models are used to predict the incremental additions to ground level concentrations of relevant criteria pollutants as a result of emissions from a given development. A detailed modelling assessment was undertaken using the US EPA Model AERMOD Prime, AERMOD, which is the current regulatory version of this Model. AERMOD is currently the most widely used air quality modelling tool and has been widely used in studies of this type in relation to regulated facilities.

The model computes average ground-level concentrations of pollutants emitted from either elevated or ground-level emission sources. Separate utilities associated with the dispersion

modelling software allow computation of ground-level concentrations of pollutants over defined statistical averaging periods, and additional features permit suitable consideration to be given to building downwash effects and the effects of elevated terrain in the vicinity of the plant.

Table 3.1 Air Quality Standards Regulations 2011 (based on EU Clean Air For Europe [CAFE] Directive 2008/50/EC)

Pollutant	EU Regulation	Limit Type	Margin of Tolerance	Value
Nitrogen Dioxide	2008/50/EC	Hourly limit for protection of human health - not to be exceeded more than 18 times/year	None	200 µg/m^3 NO_2
		Annual limit for protection of human health	None	40 µg/m^3 NO_2
		Annual limit for protection of vegetation	None	30 µg/m^3 NO +NO_2
Sulfur Dioxide	2008/50/EC	Hourly limit for protection of human health - not to be exceeded more than 24 times/year	150 µg/m^3	350 µg/m^3
		Daily limit for protection of human health - not to be exceeded more than 3 times/year	None	125 µg/m^3
		Annual & Winter limit for the protection of human health and ecosystems	None	20 µg/m^3
Particulate Matter (as 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 protection of human health	20%	40 µg/m^3
Particulate Matter (as $PM_{2.5}$)	2008/50/EC	Annual limit for protection of human health (Stage 1)	20% from June 2008. Decreasing linearly to 0% by 2015	25 µg/m^3
		Annual limit for protection of human health (Stage 2)	None To be achieved by 2020	20 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 (8.6 ppm)

NOTE
The Air Quality Standards Regulations 2011 (SI 180 of 2011) transposed EU Directive 2008/50/EC (CAFE) into Irish law.

Table 3.2 WHO Air Quality Standards

Pollutant	Limit Type	Value
Nitrogen Dioxide	Hourly limit for protection of human health	200 μg/m^3
	Annual limit for protection of human health	10 μg/m^3
Sulfur Dioxide	Daily limit for protection of human health	40 μg/m^3
	10-minute limit for protection of human health	500 μg/m^3
Particulate matter (as PM_{10})	24-hour limit for protection of human health	45 μg/m^3
	Annual limit for protection of human health	15 μg/m^3
Particulate matter (as $PM_{2.5}$)	24-hour limit for protection of human health	15 μg/m^3
	Annual limit for protection of human health	5 μg/m^3
Carbon Monoxide (CO)	8-hour limit for protection of human health	10,000 μg/m^3
	1-hour limit for protection of human health	35,000 μg/m^3
	15-minute limit for protection of human health	100 mg/m^3

3.4 Dispersion Model Assumptions and Limitations

The inherent assumptions of the dispersion Model and associated limitations are summarised as follows.

- The model is based on a five-year meteorological dataset collected from the nearest meteorological stations. Since the meteorological data are not collected at the specific facility location being assessed, this is a limitation of the Model. This is not a significant factor for the current study as the data was sourced from a nearby recording station which is considered representative of the site.
- The model assumes steady-state meteorological conditions that are invariant over the entire model space for each hour modelled, and as such, has reduced accuracy in areas where significant variations in meteorological conditions exist. For instance, AERMOD cannot be used to incorporate highly variable wind patterns caused by changes in terrain elevations, and modelling across complex terrains may result in over-predictions. This is not a significant factor for the current study.
- AERMOD is the Gaussian model recommended by the US EPA for short-range transport of pollutants, up to 50 km from the source. At distances beyond 50 km, steady-state Gaussian plume models like AERMOD tend to over-estimate pollutant ground concentrations, because the model maintains constant wind patterns that are unlikely to persist over long distances. This is not considered significant for the current study due to the relatively low stack height and emission rates and the anticipated dispersion pattern.
- The model cannot be used to model reactive pollutants (e.g., ozone). This is not significant for the current study.

An evaluation of the impact of these limitations concluded that there is no significant adverse impact on the reliability of the Model for the current study.

3.5 Dispersion Modelling Protocol

3.5.1 Dispersion Model Inputs

Evaluation of the impact of a proposed development on air quality using dispersion modelling requires information on the following:

- Emissions characteristics
- Site layout and topography
- Meteorological data
- Averaging intervals
- Receptor locations

Of these, the most significant input parameters are the emissions characteristics and the site layout and topography and surrounding terrain features.

3.5.2 Emissions Characteristics and special treatments

Emission characteristics predicted for the emission sources are summarised in Section 2.2. Information on dimensions and physical characteristics of the main emission sources was obtained from the developer and from a consideration of the nature and scale of the processes that will be carried out at the plant, the chemical composition of the fuels, information supplied by the manufacturers of the plant, and consideration of the levels of emissions that would normally be expected from a plant of this type.

The worst possible emissions scenario is one where the maximum permissible emission rates from the plant occur. For the purposes of modelling and air quality impact assessment, the maximum possible emission values were used in accordance with relevant Guidance. Best practice guidance requires that the impact assessment must represent a worst-case emissions scenario, thereby determining the maximum potential impact of plant emissions on ground level concentrations of pollutants in the vicinity of the plant. The only pollutant of significance is nitrogen oxides and this is what was modelled in the assessment.

In most combustion processes, NO_x is emitted almost totally in the form of nitric oxide (NO). Nitrogen oxides are very reactive and also contribute, due to the formation of nitrogen dioxide from nitric oxide, to the phenomenon of photochemical ozone formation. These transformations are generally of greatest concern in the areas where the highest ozone

concentrations occur – for example, in rural areas in late afternoon in summer time. Unless photochemical dispersion models are used for the assessment of impacts associated with the release of nitrogen oxides from point emissions sources, then assumptions must be made regarding the rate and extent of conversion of NO to NO_2. For the current study, Guidance from the EPA taken from the Air Dispersion Modelling Guidance Note AG4 was followed whereby default annual ratio of 1.00 and a default 1-hour NO_2/NO_X ratio of 0.50 was used for the conversion of NO_X to NO_2.

The EPA Guidance notes that a site-specific ratio at the point of maximum concentration may be used if extensive continuous monitoring data (one-year or greater) is available at this location, but the site-specific ratio will only be valid for locations which are a similar distance from the source as the monitoring station. The limited on-site data suggests a ratio close to 1 for the long term data which is consistent with the EPA default values.

3.5.3 Site Layout and Topography

The layout and area of the site and the dimensions of the various buildings on site were taken from the drawings of the site. Topographical information was obtained from a site survey and from Ordnance Survey maps and from digital terrain data. Building downwash effects might be expected as a result of the proximity of the buildings on site to the plant stack. These effects were modelled using the modelling facility, BPIP, which is part of the AERMOD modelling suite.

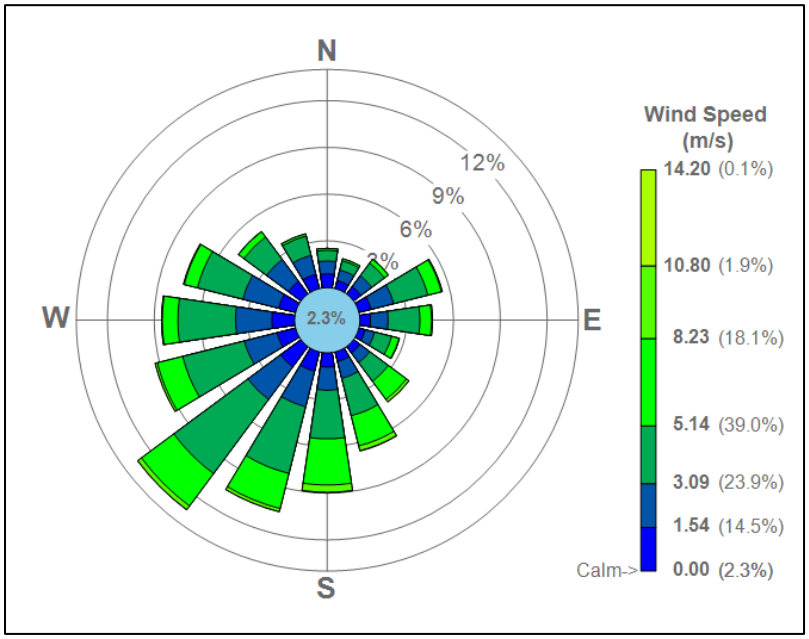
The presence of complex terrain features can lead to significantly higher ambient concentrations than would occur in the absence of terrain features, especially if there is a significant relative difference in elevation between the source and off-site receptors. International Guidance suggests that when modelling in a region of flat terrain, no digital mapping of terrain will be necessary. General guidance is that digital mapping of terrain should be conducted where terrain features are greater than 10% of the effective stack height within 5km of the stack (for effective stack heights of 100m or less). From a review it is concluded that digital terrain data is required to ensure that a reliable assessment is completed. This data was acquired and used in the dispersion model.

3.5.4 Meteorological Data

The magnitude of potential impacts of emissions from the facility will be substantially influenced by the local meteorological conditions, in particular by wind speed and direction and also by precipitation rates. Comprehensive monitoring data is available for Mullingar which is located approximately 16km north of the facility. The wind roses are presented in Appendix II and a representative windrose for 2016 - 2020 is shown in Figure 3.1. The dominant wind direction is from the south west quadrant.

For the purpose of obtaining information about the climatological conditions at the site, five years of meteorological data for the period 2016 - 2020 was analysed. This data was selected for use in the dispersion modelling study for the facility, and is expected to be a reliable indicator of conditions at the site. Analysis of the monitoring data shows that the dominant wind direction is from the S-SW-W quadrant, with in excess of 50% of wind directions in this quadrant. Individual Windroses for each of the years 2016 - 2020 are presented in Appendix II.

Figure 3.1 2016 - 2020 composite Windrose for Mullingar



3.5.5 Averaging Intervals

The dispersion model was used to predict the incremental additions to ground level concentrations of the main pollutants emitted from the plant over defined averaging periods. These averaging periods were chosen to allow direct comparison of predicted ground level concentrations with the relevant assessment criteria as outlined in Table 3.5. In particular, 1-hour, 24-hour and annual average ground level concentrations (GLCs) of various pollutants were calculated at various distances from the site; percentiles of these average GLCs were also computed for comparison with the relevant Air Quality Standards.

3.5.6 Receptor Locations

Two nested uniform cartesian receptor grids centred on the site were used for the modelling domain as follows:

- A coarse outer grid of 15 km x 15 km of receptors with a spacing of 250 meters was used to cover the whole study area
- A fine inner grid of 4 km x 4 km of 6,561 receptors (81 x 81 receptors with a spacing of 50 meters) was used to better characterise the zones where the maximum predicted air quality impact from the Project emissions are expected.

In line with expectations, the highest predicted ground level concentrations occur at the receptors closer to the source.

Sensitive receptors in the vicinity of the plant were also input to the Model to evaluate the impact on air quality at those sensitive locations. These sensitive receptors are shown in Figure 3.2.

3.6 Background ambient air quality

The site is located in agricultural fields immediately south west of Rochfortbridge. The M6 Motorway runs east-west along the southern boundary of the site. The dominant influences on air quality in the area are emissions from domestic heating and traffic. Emissions from traffic sources are expected to be the principal contributors to ambient air quality in the vicinity of the site.

The main substances which are of interest in terms of existing air quality are sulfur dioxide, nitrogen oxides (nitric oxide, NO and nitrogen dioxide NO_2, collectively referred to as NO_x), fine particulate matter including PM_{10} and $PM_{2.5}$ which could originate from combustion sources and traffic. Carbon monoxide is also potentially of interest, and benzene may also be of interest from traffic sources. There are no significant new substances expected to be present in emissions released from the proposed development relative to the existing situation.

A description of existing levels of the various substances in ambient air is required to allow completion of the evaluation of air quality impacts associated with the development. The available data from the National Ambient Air Quality Network is a reliable data set for consideration in this study.

The Environmental Protection Agency (EPA) and local authorities maintain and operate a number of ambient air quality monitoring stations throughout Ireland in order to implement EU Directives and to assess the country's compliance with national air quality standards. Ireland's small population and generally good air quality means that a relatively small number of monitoring stations are sufficient across the country for the purposes of implementing the EU Air Directives. For ambient air quality management and monitoring in Ireland, four zones, A, B, C and D are defined in the Ambient Air Quality Standards (AQS) Regulations (S.I. No. 739 of 2022) and are defined as follows:

- Zone A: Dublin Conurbation.
- Zone B: Cork Conurbation.
- Zone C: 24 cities and large towns. Includes Limerick, Galway, Waterford, Drogheda, Dundalk, Bray, Navan, Ennis, Tralee, Kilkenny, Carlow, Naas, Sligo, Newbridge, Mullingar, Wexford, Letterkenny, Athlone, Celbridge, Clonmel, Balbriggan, Greystones, Leixlip and Portlaoise.
- Zone D Rural Ireland, i.e. the remainder of the State excluding Zones A, B & C.

The Proposed Development site is located within County Westmeath and Air Quality Data from representative air monitoring stations in Zone D are therefore considered representative

of air quality at the subject site. The EPA publishes Ambient Air Quality Reports every year which details the air quality in each of the four zones. The most recent report, published by the EPA in 2024, is the Air Quality in Ireland 2023, which contains monitoring data collected during 2023. Best practice requires that an average of at least three years of recent monitoring data is used for assessments of this type and therefore data from 2021 to 2023 has been reviewed.

The EPA maintains monitoring stations in a number of rural locations including Castlebar, Claremorris, Emo, Enniscorthy, Kilkitt and Longford to monitor rural background air quality. Other monitoring stations have operated at various times and some new stations have been added to the network, but long-term data is available for the above stations. Data from the Air Quality Monitoring Annual reports for 2021 to 2023 was reviewed and a summary of the data for representative stations for the three most recent years is presented for each parameter of interest in Table 3.3.

The approach taken is to take the average of the three most recent years for each of the Zone D rural stations detailed above and the averages of the values for the stations are reported in Table 3.3. This is the data set which is used in the assessment of the potential impact of the proposed development on air quality. A graphical presentation comparing the data with the relevant Air Quality Standards (discussed further below) is presented in Figure 3.2.

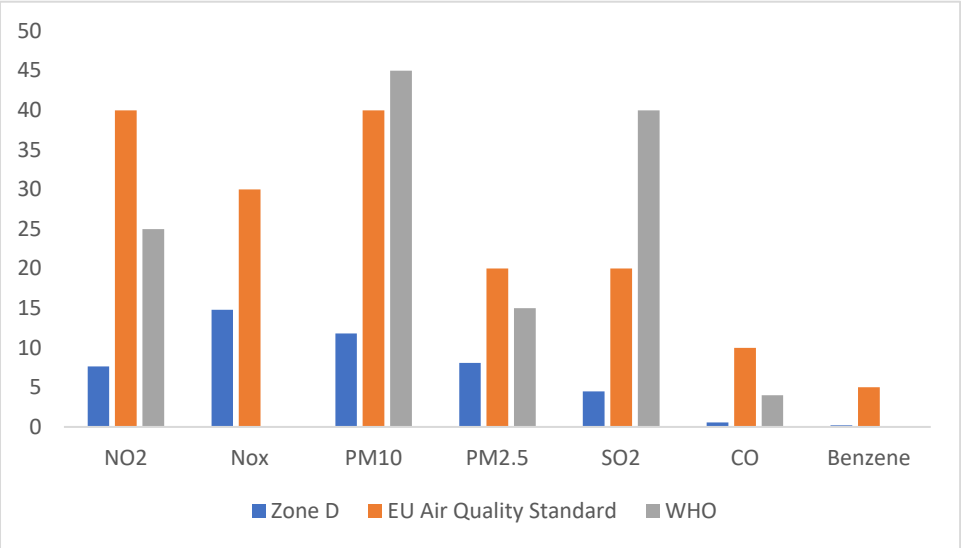
It is noted from the data that existing ambient air quality is good for all health-related pollutants. All concentration levels are well within the EU Standards for all parameters of interest.

Table 3.3: Summary Background Air Quality for Stations in Zone D (2021-2023)

Data Set	Parameter and Averaging Interval		Concentration µg/m^3
Rural Ireland (Zone D)	Nitrogen dioxide NO_2	Annual Mean, µg/m^3	7.7
Rural Ireland (Zone D)	Nitrogen oxides, NO_x	Annual Mean, µg/m^3	14.8
Rural Ireland (Zone D)	Particulate Matter PM_{10}	Annual Mean, µg/m^3	11.8
Rural Ireland (Zone D)	Particulate Matter $PM_{2.5}$	Annual Mean, µg/m^3	8.1
Rural Ireland (Zone D)	Sulfur dioxide, SO_2	Annual Mean, µg/m^3	4.5
Rural Ireland (Zone D)	Carbon Monoxide CO	Annual Mean 8-hour, mg/m^3	0.6
Kilkenny (Zone C)[2]	Benzene	Annual Mean, µg/m^3	0.2

NOTE
1. Data summarised from the EPA Annual Ambient Air Quality Monitoring Reports 2021 to 2023.
2. No Zone D measurements recorded during this interval but a value of 0.2 µg/m^3 was recorded for Zone C.

Figure 3.2: Comparison of Zone D Background Air Quality Data with Ambient Air Quality Standards



4.0 DISPERSION MODELLING PREDICTIONS

4.1 Modelling predictions

Model executions were completed to assess the incremental additions to ground level concentrations of NO_2 and NO_x over specified averaging intervals to allow comparison of the predictions with the relevant Air Quality Standards, which have been defined for all of these pollutants as set out in Table 3. These pollutants have been selected as a screening analysis identified these as the most sensitive parameters for assessing the impact on air quality of the emissions.

4.2 Assessment of air quality impact on human health

A summary of the dispersion modelling results for the maximum predicted Process Contributions using the worst case meteorological year is presented in Table 4.1. The results are presented for the worst case operating scenario. The most sensitive pollutant is nitrogen dioxide so the detailed discussion presented here is for nitrogen dioxide. All other substances are emitted at lower concentrations and the impacts are insignificant.

The modelling predictions show that the predicted concentrations are all significantly lower than the relevant air quality standard. For the most sensitive pollutant, nitrogen dioxide, the predicted ambient concentrations expressed as the Process Contribution for the 99.8-percentile of 1-hour concentrations will not exceed 0. 1% of the air quality standard.

The cumulative air quality impact expressed in terms of the Predicted Environmental Concentration (PEC) is assessed by considering the background air quality in the area and the incremental contribution to ambient concentrations from the proposed process. The modelling predictions indicate that the cumulative impact of the operation of the facility with existing activities will not exceed the Air Quality Standards. The highest predicted Process Contributions (PCs) are close to the facility with concentrations reducing with distance from the source as expected.

Table 4.1 Predicted NO_2 concentrations for Normal Operation (Scenario #1)

Met data	Averaging interval	Process Contribution (PC) µg/m³	Background concentration µg/m³	Predicted Environmental Concentration (PEC) µg/m³	Air Quality Standard µg/m³	PC as % of Air Quality Standard
2016	99.8th %ile of 1-hour means	0.21	15.4	15.6	200	0.1
	Annual mean	0.11	7.7	7.8	40	0.3
2017	99.8th %ile of 1-hour means	0.22	15.4	15.6	200	0.1
	Annual mean	0.11	7.7	7.8	40	0.3
2018	99.8th %ile of 1-hour means	0.22	15.4	15.6	200	0.1
	Annual mean	0.12	7.7	7.8	40	0.3
2019	99.8th %ile of 1-hour means	0.27	15.4	15.7	200	0.1
	Annual mean	0.11	7.7	7.8	40	0.3
2020	99.8th %ile of 1-hour means	0.20	15.4	15.6	200	0.1
	Annual mean	0.13	7.7	7.8	40	0.3

NOTE

The background concentration is the annual mean when evaluating annual or daily predictions. The background concentration is twice the annual mean when evaluating hourly predictions.

4.3 Impact of emissions to atmosphere on ecosystems

The impact of nitrogen oxides (NOx) emissions on sensitive ecosystems was assessed by modelling the NOx emissions from the worst case operating scenario with maximum emissions. The impact predictions are presented in Table 4.2.

The assessment of impact is based on consideration of the predicted ground level airborne concentration of nitrogen oxides on the environment and on designated ecological sites as well as considering the impact of nitrogen deposition on the environment and on designated ecological sites. One element of the assessment considered all receptors outside the site boundary regardless of designated status, and the second element of the assessment considered the designated sites specifically.

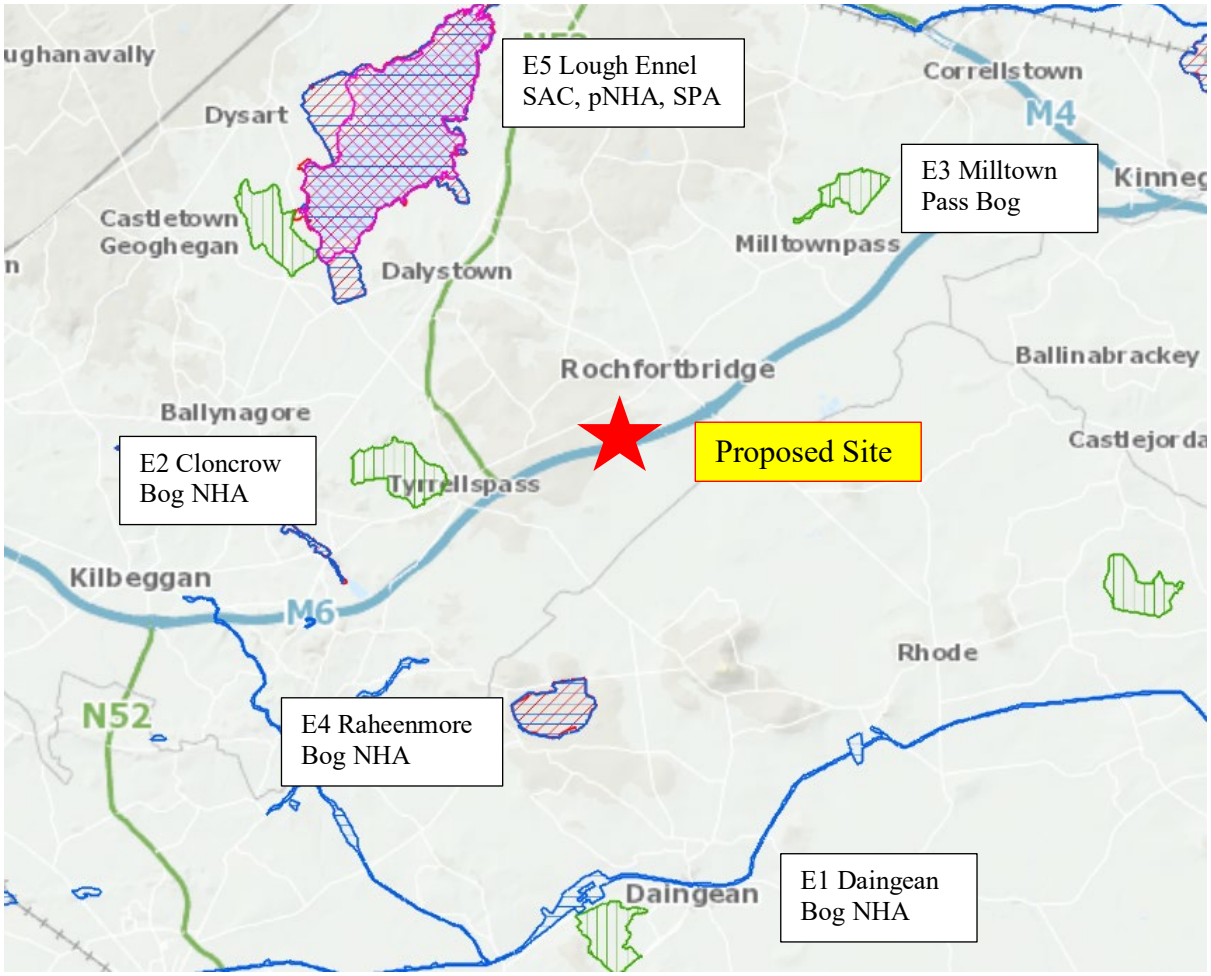
Designated ecological sites within 15km of the site were identified and included in the assessment. There were five designated ecological sites selected for inclusion in the assessment as follows and as shown in Figure 4.1:

- E1 Daingean Bog NHA;
- E2 Cloncrow Bog NHA;
- E3 Milltown Pass Bog NHA;
- E4 Raheenmore Bog SAC, pNHA;
- E5 Lough Ennel SAC, SPA, pNHA;

Receptors within these designated sites were included in the dispersion modelling assessments. The maximum predicted Process Contributions are considered with the background concentrations to arrive at a PEC. The background concentration selected is for the areas closest to the site where maximum predicted PCs arise which is likely to be conservative given the surrounding land uses and the dominating influence of traffic from the motorway on ambient air quality.

The impact predictions for the concentration of nitrogen oxides in air at ground level are presented in Table 4.2. The predictions are the highest concentrations predicted at any location at the ecological sites .

Figure 4.1 Ecological receptors for detailed study



The maximum predicted Process Contributions are considered with the background concentrations to arrive at a Predicted Environmental Concentration (PEC). The background concentration selected is for the areas closest to the site where maximum predicted Process Contributions (PCs) arise which is likely to be conservative given the surrounding land uses and the dominating influence of traffic from the motorway on ambient air quality.

The results indicate that the cumulative impact of the proposed development with existing activities will not exceed the air quality standard of 30 µg/m^3 expressed as an annual mean for ground level concentration of NO_x. The results therefore indicate that the emissions from the facility will not exert a significant adverse impact on any receptor outside the site boundary or, specifically, any designated ecosystems. The maximum predicted process contribution to ground level concentration as a result of the proposed development is 1% of the Air Quality

Standard for full time operation at any ecological receptor.

Table 4.2 Predicted NO_x concentrations for Worst Case Operation

Meteorological data	Averaging interval	Process Contribution (PC) µg/m^3	Background concentration µg/m^3	Predicted Environmental Concentration (PEC) µg/m^3	Air Quality Standard µg/m^3	PC as % of Air Quality Standard
2016	Annual mean	0.11	14.8	14.9	30	1.1
2017	Annual mean	0.11	14.8	14.9	30	1.1
2018	Annual mean	0.12	14.8	14.9	30	1.1
2019	Annual mean	0.11	14.8	14.9	30	1.1
2020	Annual mean	0.13	14.8	14.9	30	1.1

NOTE

The background concentration is the annual mean when evaluating annual or daily predictions.

The results indicate that the cumulative impact of the proposed development with existing activities will not exceed the air quality standard. The results therefore indicate that the emissions from the facility will not exert a significant adverse impact on ecosystems. The maximum values predicted for the representative ecological receptors are below a level that could be differentiated from background contributions.

4.4 Impact of nitrogen deposition from the proposed facility on ecosystems

The potential impact of the emissions on ecosystems is also considered using the projected nitrogen deposition rate which is derived from the gaseous nitrogen oxides concentration. The most sensitive habitat for this purpose is bog ecosystems and a recommendation of 5kg N ha^{-1} year^{-1} has been made [UNECE 5 – 10 kg N ha^{-1} year^{-1} and EPA *Research Report 390: Nitrogen–Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitats (2016-CCRP-MS.43)* 5kg N ha^{-1} year^{-1}] as the critical load for habitat protection. The maximum rate of deposition of total nitrogen at any of the designated ecological receptors within 15km of the proposed site was determined from dispersion modelling as follows with data provided for the highest concentration predicted from the five years of meteorological data for any receptor at the designated ecological sites represented by E1 – E5.

Table 4.3 Total Nitrogen deposition at designated ecological sites as a result of emissions from the proposed facility

Maximum impacted Ecological Receptor	**Maximum Total nitrogen deposition, kg N ha^{-1} year^{-1}**	
	Deposition velocity 0.0015m/sec	**Deposition velocity 0.003m/sec**
Process Contribution	0.055	0.11
Total environmental contribution	2.3	4.4

The predicted deposition rates for the worst case scenarios are well within the critical loads. The contribution from the process to the nitrogen deposition rate is less than 2% of the recommended level under maximum adverse conditions. The levels may also be considered in the context of measured nitrogen deposition rates at Valentia Observatory [EPA *Research Report 390: Nitrogen–Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitats (2016-CCRP-MS.43)*]. This study estimated deposition rates of 8.3 kg N ha−1 y−1 for 2006 - 2015, with a maximum deposition of 19.3 kg N ha−1 y−1 during 2009. The Research Report found that dry deposition made up 40% of total deposition, which was dominated by reduced species (56%), that is, wet ammonium, dry particulate ammonium and dry gaseous ammonia. None of these species are significant in the current study but it is useful to note that nitrogen oxides are not the dominant contributor to nitrogen deposition in Ireland. Agricultural emissions are a much more significant source of deposition in rural environments than traffic or any facility of the type proposed here.

When these concentrations are converted to nitrogen deposition rates following the methodology outlined in the EPA Guidance Note AG4, and using the specified deposition velocities of 0.0015 (grassland) or 0.003 (forest), the assessment predicted a maximum potential nitrogen deposition rate at ecological sites as shown in Table 4.3. The data presented in Table 4.3 shows that even if the plant runs continuously, the maximum potential impact at any location in the protected ecological sites, is significantly lower than the relevant critical loads as set out above.

4.5 Sensitivity analysis

Sensitivity checks on the modelling assumptions were checked as follows:

- Meteorological data selection
- Influence of terrain

The detailed results of those assessments demonstrate that in this facility there is no significant influence on the predictions.

5.0 CONCLUSIONS

The impact of emissions to atmosphere has been investigated using a dispersion modelling approach. The assessment shows that the predicted concentrations are not predicted to exceed the Air Quality Standards for the normal and conservative worst-case operating scenarios assessed. There is therefore predicted to be no significant adverse impact on human health or on ecosystems as a result of the emissions.

APPENDIX 11.1

Location NMP1

Location NMP2

Location NMP3

Location NMP4

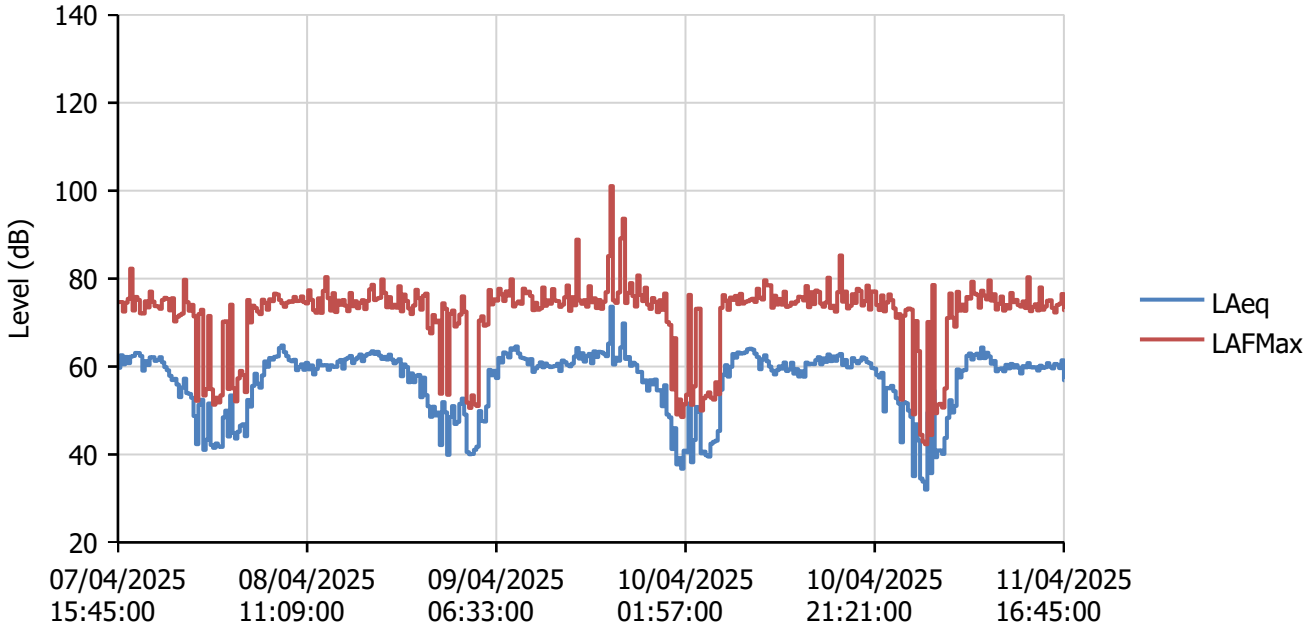
APPENDIX 11.2

Cirrus Research plc

Measurement List Report

Name NMP 1
Start Time 07/04/2025 15:45:00
End Time 11/04/2025 16:47:23

Calibration Before	07/04/2025 15:33:09	Offset	0.12 dB
Calibration After	11/04/2025 16:47:38	Offset	0.09 dB



Start Time	End Time	Duration	LAeq (dB)	LAFMax	Ln1	Ln2	Ln3	Ln4	Ln5	Ln6	Ln7
07/04/2025 15:45:00	07/04/2025 16:00:00	00:15:00	59.7	74.7	70.4	67.2	64.6	49.9	39.9	39.0	37.9
07/04/2025 16:00:01	07/04/2025 16:15:01	00:15:00	62.6	74.7	71.4	68.9	67.2	57.7	45.8	42.1	38.8
07/04/2025 16:15:01	07/04/2025 16:30:01	00:15:00	60.5	72.5	69.7	67.4	65.3	53.9	44.2	42.7	41.1
07/04/2025 16:30:02	07/04/2025 16:45:02	00:15:00	62.2	74.5	71.2	68.9	67.1	55.6	45.4	43.8	42.0
07/04/2025 16:45:01	07/04/2025 17:00:01	00:15:00	60.8	75.4	70.4	67.8	66.0	52.5	44.6	43.0	41.3

ReportId

07/04/2025 17:00:01	07/04/2025 17:15:01	00:15:00	62.3	82.3	71.1	68.5	66.7	55.2	44.8	43.8	42.4
07/04/2025 17:15:01	07/04/2025 17:30:01	00:15:00	62.4	72.7	70.3	68.2	67.0	57.9	46.6	45.1	42.6
07/04/2025 17:30:02	07/04/2025 17:45:02	00:15:00	63.1	75.8	71.6	69.3	67.7	58.5	47.6	45.8	43.7
07/04/2025 17:45:01	07/04/2025 18:00:01	00:15:00	63.1	75.2	70.9	68.9	67.7	58.9	46.4	44.9	43.0
07/04/2025 18:00:01	07/04/2025 18:15:01	00:15:00	62.4	72.1	70.0	68.3	67.1	58.6	46.6	43.6	41.4
07/04/2025 18:15:01	07/04/2025 18:30:01	00:15:00	59.1	72.1	69.0	66.2	63.9	50.8	42.9	41.6	39.9
07/04/2025 18:30:01	07/04/2025 18:45:01	00:15:00	61.2	74.9	71.1	68.0	65.8	53.2	43.8	42.7	40.5
07/04/2025 18:45:01	07/04/2025 19:00:01	00:15:00	60.4	73.5	70.3	67.6	65.3	52.2	42.8	41.5	38.7
07/04/2025 19:00:01	07/04/2025 19:15:01	00:15:00	62.1	77.1	71.6	68.3	66.5	55.8	47.7	46.4	44.8
07/04/2025 19:15:02	07/04/2025 19:30:02	00:15:00	62.1	74.8	71.8	69.4	67.0	54.5	44.4	43.0	41.0
07/04/2025 19:30:01	07/04/2025 19:45:01	00:15:00	61.3	73.7	71.1	68.5	66.3	53.6	44.3	43.4	42.3
07/04/2025 19:45:01	07/04/2025 20:00:01	00:15:00	61.5	73.7	70.5	68.2	66.3	55.8	45.5	44.4	43.1
07/04/2025 20:00:01	07/04/2025 20:15:01	00:15:00	62.1	73.1	70.7	68.7	67.1	55.9	45.3	44.2	42.4
07/04/2025 20:15:02	07/04/2025 20:30:02	00:15:00	61.0	75.1	71.5	68.0	66.0	52.1	43.7	42.5	40.6
07/04/2025 20:30:01	07/04/2025 20:45:01	00:15:00	59.9	75.6	70.5	66.9	64.5	50.3	43.8	42.6	41.0
07/04/2025 20:45:01	07/04/2025 21:00:01	00:15:00	59.2	75.4	70.5	66.4	63.1	49.6	44.6	43.5	41.2
07/04/2025 21:00:01	07/04/2025 21:15:01	00:15:00	57.9	72.8	70.4	64.9	62.1	46.8	42.0	40.8	37.3
07/04/2025 21:15:01	07/04/2025 21:30:01	00:15:00	56.9	75.6	69.8	63.6	59.1	45.0	40.7	39.7	37.3
07/04/2025 21:30:01	07/04/2025 21:45:01	00:15:00	57.2	70.3	68.2	65.3	62.0	46.7	39.3	37.3	35.6
07/04/2025 21:45:01	07/04/2025 22:00:01	00:15:00	55.9	71.3	67.8	63.0	60.1	46.2	40.2	39.1	37.4
07/04/2025 22:00:02	07/04/2025 22:15:02	00:15:00	53.0	71.7	65.6	59.8	53.0	43.8	38.7	37.5	36.1
07/04/2025 22:15:01	07/04/2025 22:30:01	00:15:00	55.2	72.0	68.2	62.2	57.4	44.4	40.6	39.9	38.3
07/04/2025 22:30:01	07/04/2025 22:45:01	00:15:00	57.3	79.7	69.5	63.0	57.1	44.8	41.6	41.0	39.9
07/04/2025 22:45:01	07/04/2025 23:00:01	00:15:00	54.0	74.6	69.2	54.5	47.3	42.1	38.2	37.2	35.8
07/04/2025 23:00:01	07/04/2025 23:15:01	00:15:00	53.8	72.7	67.7	58.4	51.7	44.6	41.0	40.2	38.4
07/04/2025 23:15:01	07/04/2025 23:30:01	00:15:00	52.9	74.0	66.4	55.3	48.4	42.7	39.2	38.2	36.2

ReportId

07/04/2025 23:30:02	07/04/2025 23:45:02	00:15:00	48.7	71.4	60.7	48.9	46.9	42.3	37.2	35.8	34.1
07/04/2025 23:45:01	08/04/2025 00:00:01	00:15:00	42.3	52.2	48.3	46.1	45.1	41.3	37.7	36.8	35.7
08/04/2025 00:00:01	08/04/2025 00:15:01	00:15:00	51.3	71.9	65.3	50.5	47.1	41.8	36.8	35.2	33.6
08/04/2025 00:15:02	08/04/2025 00:30:02	00:15:00	52.5	72.9	66.8	54.8	50.1	41.0	33.9	32.7	31.2
08/04/2025 00:30:01	08/04/2025 00:45:01	00:15:00	41.0	53.4	50.0	47.0	45.0	37.1	31.4	30.4	28.0
08/04/2025 00:45:01	08/04/2025 01:00:01	00:15:00	43.3	54.9	50.5	48.0	46.7	41.6	36.4	35.0	33.5
08/04/2025 01:00:01	08/04/2025 01:15:01	00:15:00	51.6	71.5	66.1	51.7	48.6	41.8	36.6	35.7	34.7
08/04/2025 01:15:02	08/04/2025 01:30:02	00:15:00	42.1	54.8	50.9	47.5	46.1	39.1	32.9	31.3	29.6
08/04/2025 01:30:01	08/04/2025 01:45:01	00:15:00	41.5	51.3	49.4	47.1	45.3	39.1	32.7	31.8	30.7
08/04/2025 01:45:01	08/04/2025 02:00:01	00:15:00	42.5	52.9	48.9	46.9	45.8	41.1	34.5	33.1	28.8
08/04/2025 02:00:01	08/04/2025 02:15:01	00:15:00	41.8	51.8	49.0	46.6	45.2	39.9	34.2	32.5	30.1
08/04/2025 02:15:02	08/04/2025 02:30:02	00:15:00	41.7	53.4	48.5	46.5	45.4	39.4	34.6	33.1	31.2
08/04/2025 02:30:01	08/04/2025 02:45:01	00:15:00	48.5	70.2	60.5	48.8	47.4	42.4	37.4	36.4	34.8
08/04/2025 02:45:01	08/04/2025 03:00:01	00:15:00	50.0	70.3	63.9	50.7	47.5	42.0	37.1	35.9	34.1
08/04/2025 03:00:01	08/04/2025 03:15:01	00:15:00	44.1	54.9	52.0	49.2	47.4	42.0	36.5	35.6	34.7
08/04/2025 03:15:02	08/04/2025 03:30:02	00:15:00	53.4	74.1	67.7	53.4	51.1	45.8	40.7	39.7	37.8
08/04/2025 03:30:01	08/04/2025 03:45:01	00:15:00	44.9	55.0	51.1	49.0	48.0	43.8	37.5	35.3	31.9
08/04/2025 03:45:02	08/04/2025 04:00:02	00:15:00	43.6	52.1	49.9	47.9	46.8	42.3	36.6	35.5	33.6
08/04/2025 04:00:01	08/04/2025 04:15:01	00:15:00	45.2	57.3	52.8	50.1	48.9	42.8	37.4	36.1	34.6
08/04/2025 04:15:01	08/04/2025 04:30:01	00:15:00	46.6	59.0	54.4	51.4	50.0	44.1	38.5	37.0	35.1
08/04/2025 04:30:01	08/04/2025 04:45:01	00:15:00	46.9	58.1	53.6	51.4	50.2	45.0	39.4	38.0	36.6
08/04/2025 04:45:02	08/04/2025 05:00:02	00:15:00	44.2	54.2	51.4	49.3	47.8	41.6	36.7	36.0	35.1
08/04/2025 05:00:01	08/04/2025 05:15:01	00:15:00	52.4	75.1	61.9	53.4	51.2	46.8	42.2	41.1	39.6
08/04/2025 05:15:01	08/04/2025 05:30:01	00:15:00	50.9	70.0	62.8	53.5	51.6	46.9	41.4	39.9	38.0
08/04/2025 05:30:01	08/04/2025 05:45:01	00:15:00	55.6	73.9	68.7	61.3	55.0	49.4	45.2	43.8	41.5
08/04/2025 05:45:02	08/04/2025 06:00:02	00:15:00	58.4	73.3	69.4	64.9	61.7	52.9	49.0	48.1	46.7

ReportId

08/04/2025 06:00:01	08/04/2025 06:15:01	00:15:00	56.1	72.5	68.0	60.0	56.7	52.8	50.1	49.3	47.8
08/04/2025 06:15:01	08/04/2025 06:30:01	00:15:00	55.2	71.9	67.0	59.0	55.5	51.2	48.6	47.9	46.9
08/04/2025 06:30:02	08/04/2025 06:45:02	00:15:00	58.0	75.2	68.9	65.0	60.9	51.7	49.2	48.7	47.6
08/04/2025 06:45:01	08/04/2025 07:00:01	00:15:00	61.2	74.5	70.7	67.9	65.8	54.6	50.9	50.3	49.2
08/04/2025 07:00:01	08/04/2025 07:15:01	00:15:00	59.9	72.9	70.9	66.7	64.0	53.7	50.9	50.2	49.0
08/04/2025 07:15:02	08/04/2025 07:30:02	00:15:00	62.0	75.3	71.8	68.7	66.2	56.4	52.1	51.4	50.4
08/04/2025 07:30:01	08/04/2025 07:45:01	00:15:00	61.6	74.9	70.6	68.1	66.5	55.8	52.1	51.5	50.3
08/04/2025 07:45:01	08/04/2025 08:00:01	00:15:00	62.2	76.6	71.3	68.5	66.8	56.8	54.1	53.6	52.7
08/04/2025 08:00:01	08/04/2025 08:15:01	00:15:00	62.3	76.4	71.0	68.9	66.8	57.2	54.3	53.8	52.7
08/04/2025 08:15:01	08/04/2025 08:30:01	00:15:00	64.2	75.1	71.7	70.0	68.6	60.7	55.1	54.2	53.2
08/04/2025 08:30:01	08/04/2025 08:45:01	00:15:00	64.8	74.4	72.2	70.4	69.3	61.1	55.0	54.1	52.7
08/04/2025 08:45:01	08/04/2025 09:00:01	00:15:00	63.3	73.6	71.5	69.5	67.9	59.0	53.9	53.2	52.2
08/04/2025 09:00:02	08/04/2025 09:15:02	00:15:00	62.4	74.5	71.3	69.1	67.3	55.9	50.8	49.8	48.4
08/04/2025 09:15:01	08/04/2025 09:30:01	00:15:00	61.5	74.9	70.7	68.4	66.1	54.4	50.6	49.7	48.2
08/04/2025 09:30:01	08/04/2025 09:45:01	00:15:00	61.2	74.7	71.1	68.1	66.2	53.0	48.0	47.2	46.0
08/04/2025 09:45:01	08/04/2025 10:00:01	00:15:00	61.5	75.8	72.2	68.6	66.2	52.6	46.0	45.1	43.7
08/04/2025 10:00:02	08/04/2025 10:15:02	00:15:00	59.2	74.9	70.1	66.8	63.6	49.1	44.0	43.2	41.3
08/04/2025 10:15:01	08/04/2025 10:30:01	00:15:00	59.9	75.0	70.9	67.6	64.5	50.1	42.9	41.8	40.6
08/04/2025 10:30:01	08/04/2025 10:45:01	00:15:00	60.5	76.0	71.8	67.6	65.3	49.1	41.1	40.0	37.8
08/04/2025 10:45:02	08/04/2025 11:00:02	00:15:00	59.3	74.6	69.8	66.7	64.0	49.2	42.3	40.7	38.6
08/04/2025 11:00:01	08/04/2025 11:15:01	00:15:00	60.9	74.4	71.0	67.8	65.7	53.0	42.8	41.4	39.9
08/04/2025 11:15:01	08/04/2025 11:30:01	00:15:00	59.4	77.4	71.4	66.7	62.7	46.9	40.3	39.5	38.6
08/04/2025 11:30:01	08/04/2025 11:45:01	00:15:00	60.3	75.2	70.9	67.5	64.5	52.7	44.2	42.7	41.0
08/04/2025 11:45:01	08/04/2025 12:00:01	00:15:00	58.2	72.8	69.2	65.7	62.9	48.5	42.3	41.3	40.1
08/04/2025 12:00:01	08/04/2025 12:15:01	00:15:00	59.4	72.2	69.6	67.1	64.4	50.1	42.9	41.6	40.2
08/04/2025 12:15:01	08/04/2025 12:30:01	00:15:00	61.3	75.5	71.0	68.1	66.3	53.8	43.0	41.3	38.8

ReportId

08/04/2025 12:30:01	08/04/2025 12:45:01	00:15:00	60.3	72.2	69.8	67.7	65.7	50.1	40.8	39.7	38.1
08/04/2025 12:45:02	08/04/2025 13:00:02	00:15:00	60.3	77.2	70.2	67.4	65.4	49.1	40.4	39.1	37.8
08/04/2025 13:00:01	08/04/2025 13:15:01	00:15:00	60.3	80.4	71.0	67.1	64.3	47.5	39.0	38.0	36.3
08/04/2025 13:15:01	08/04/2025 13:30:01	00:15:00	59.3	75.5	70.2	66.6	63.9	48.7	42.4	41.0	39.0
08/04/2025 13:30:02	08/04/2025 13:45:02	00:15:00	60.3	72.7	69.9	67.3	65.5	52.6	43.3	41.7	39.7
08/04/2025 13:45:01	08/04/2025 14:00:01	00:15:00	60.0	76.7	70.0	66.9	64.8	50.6	41.4	39.6	37.1
08/04/2025 14:00:01	08/04/2025 14:15:01	00:15:00	59.9	72.4	69.7	67.1	65.0	51.7	42.5	40.9	38.6
08/04/2025 14:15:02	08/04/2025 14:30:02	00:15:00	61.1	75.0	70.3	67.7	65.8	54.4	41.8	39.9	37.5
08/04/2025 14:30:01	08/04/2025 14:45:01	00:15:00	61.5	74.0	70.5	68.2	66.3	55.9	46.8	44.4	40.0
08/04/2025 14:45:01	08/04/2025 15:00:01	00:15:00	59.5	75.1	69.7	66.5	64.2	52.4	40.3	38.9	37.9
08/04/2025 15:00:01	08/04/2025 15:15:01	00:15:00	61.7	73.8	70.2	67.9	66.3	56.4	45.3	43.1	40.3
08/04/2025 15:15:02	08/04/2025 15:30:02	00:15:00	62.0	72.6	70.2	68.4	66.9	56.6	43.8	42.3	39.8
08/04/2025 15:30:01	08/04/2025 15:45:01	00:15:00	62.4	76.7	72.4	69.1	67.0	55.2	43.9	42.7	40.0
08/04/2025 15:45:01	08/04/2025 16:00:01	00:15:00	60.8	73.7	70.7	67.5	65.4	53.4	44.5	42.7	40.7
08/04/2025 16:00:02	08/04/2025 16:15:02	00:15:00	61.6	74.9	71.3	68.3	66.4	54.7	44.2	42.7	40.3
08/04/2025 16:15:01	08/04/2025 16:30:01	00:15:00	62.1	73.3	70.4	68.2	66.9	56.6	45.0	43.5	40.1
08/04/2025 16:30:01	08/04/2025 16:45:01	00:15:00	62.7	74.5	71.6	69.2	67.6	56.8	43.0	40.9	39.1
08/04/2025 16:45:01	08/04/2025 17:00:01	00:15:00	61.2	75.1	70.9	67.9	66.1	52.8	40.5	39.1	37.4
08/04/2025 17:00:02	08/04/2025 17:15:02	00:15:00	62.5	73.1	71.3	69.0	67.3	57.3	45.3	42.6	39.9
08/04/2025 17:15:01	08/04/2025 17:30:01	00:15:00	62.8	74.9	71.1	68.7	67.3	58.3	44.4	42.9	40.6
08/04/2025 17:30:01	08/04/2025 17:45:01	00:15:00	63.0	77.5	71.7	69.6	68.1	54.1	44.6	43.4	41.8
08/04/2025 17:45:01	08/04/2025 18:00:01	00:15:00	63.5	78.6	72.0	69.4	68.2	56.9	46.8	45.5	42.8
08/04/2025 18:00:02	08/04/2025 18:15:02	00:15:00	62.9	75.1	71.9	69.5	67.9	54.5	44.3	43.3	41.4
08/04/2025 18:15:01	08/04/2025 18:30:01	00:15:00	63.4	75.5	71.8	69.6	68.1	57.3	47.1	44.8	42.1
08/04/2025 18:30:01	08/04/2025 18:45:01	00:15:00	62.5	75.6	71.3	69.1	67.6	54.9	44.6	43.6	42.4
08/04/2025 18:45:01	08/04/2025 19:00:01	00:15:00	61.7	79.8	71.3	68.5	66.5	52.2	44.7	43.8	42.4

ReportId

08/04/2025 19:00:01	08/04/2025 19:15:01	00:15:00	62.2	76.8	70.5	68.7	67.1	55.6	45.2	44.1	42.8
08/04/2025 19:15:01	08/04/2025 19:30:01	00:15:00	61.6	73.5	70.8	68.5	66.9	53.8	43.3	42.3	41.3
08/04/2025 19:30:01	08/04/2025 19:45:01	00:15:00	62.7	75.8	71.8	69.4	67.5	56.0	44.7	43.1	41.8
08/04/2025 19:45:02	08/04/2025 20:00:02	00:15:00	61.6	73.4	70.7	68.4	66.4	54.6	44.2	43.3	41.7
08/04/2025 20:00:01	08/04/2025 20:15:01	00:15:00	60.7	74.1	71.4	67.7	65.3	52.3	43.5	42.5	41.1
08/04/2025 20:15:02	08/04/2025 20:30:02	00:15:00	61.2	73.4	71.5	68.2	65.9	51.7	44.0	42.9	41.1
08/04/2025 20:30:01	08/04/2025 20:45:01	00:15:00	61.7	78.3	73.5	68.6	65.8	52.0	45.1	43.3	40.9
08/04/2025 20:45:01	08/04/2025 21:00:01	00:15:00	57.8	72.6	69.3	65.7	62.4	47.4	41.4	40.2	37.1
08/04/2025 21:00:01	08/04/2025 21:15:01	00:15:00	60.5	76.4	72.3	67.1	64.5	50.1	43.6	42.1	40.0
08/04/2025 21:15:02	08/04/2025 21:30:02	00:15:00	59.9	74.9	69.7	67.1	64.8	49.2	43.4	42.3	40.3
08/04/2025 21:30:01	08/04/2025 21:45:01	00:15:00	56.4	73.2	69.3	64.1	57.7	44.2	38.3	36.6	34.0
08/04/2025 21:45:01	08/04/2025 22:00:01	00:15:00	58.5	71.9	69.7	66.0	63.5	46.1	40.3	38.7	37.0
08/04/2025 22:00:01	08/04/2025 22:15:01	00:15:00	56.4	73.9	69.1	63.8	58.8	44.3	38.1	36.9	34.9
08/04/2025 22:15:02	08/04/2025 22:30:02	00:15:00	57.9	77.5	69.9	65.3	61.3	44.8	39.8	38.1	35.3
08/04/2025 22:30:01	08/04/2025 22:45:01	00:15:00	58.1	75.6	70.4	65.2	62.1	44.7	38.6	37.0	34.7
08/04/2025 22:45:01	08/04/2025 23:00:01	00:15:00	53.0	72.9	66.6	59.0	51.2	42.6	38.2	37.4	35.8
08/04/2025 23:00:02	08/04/2025 23:15:02	00:15:00	57.5	76.1	69.3	65.2	61.8	43.3	35.5	33.9	31.8
08/04/2025 23:15:01	08/04/2025 23:30:01	00:15:00	53.5	76.6	67.7	51.3	47.6	41.6	36.0	34.9	32.6
08/04/2025 23:30:02	08/04/2025 23:45:02	00:15:00	50.9	68.7	64.9	54.6	49.5	42.0	37.0	35.7	33.3
08/04/2025 23:45:01	09/04/2025 00:00:01	00:15:00	48.6	67.5	62.8	50.7	46.5	40.0	34.5	33.6	32.0
09/04/2025 00:00:01	09/04/2025 00:15:01	00:15:00	50.9	71.7	65.4	51.2	46.5	39.1	33.5	31.9	30.6
09/04/2025 00:15:01	09/04/2025 00:30:01	00:15:00	48.9	70.1	62.6	50.0	46.8	40.0	33.9	32.6	31.1
09/04/2025 00:30:02	09/04/2025 00:45:02	00:15:00	49.5	70.5	63.1	50.5	47.4	40.9	35.4	31.9	30.0
09/04/2025 00:45:01	09/04/2025 01:00:01	00:15:00	42.1	53.8	49.5	46.9	45.5	40.1	34.6	33.4	32.2
09/04/2025 01:00:01	09/04/2025 01:15:01	00:15:00	51.9	74.4	63.6	49.2	47.5	39.7	33.9	33.1	31.9
09/04/2025 01:15:01	09/04/2025 01:30:01	00:15:00	49.6	73.1	60.8	50.1	47.0	40.8	33.9	32.5	31.3

ReportId

09/04/2025 01:30:01	09/04/2025 01:45:01	00:15:00	39.9	53.6	48.8	45.7	43.8	36.5	30.2	29.4	28.6
09/04/2025 01:45:01	09/04/2025 02:00:01	00:15:00	48.5	72.0	61.4	48.6	45.5	38.4	28.7	28.0	26.9
09/04/2025 02:00:02	09/04/2025 02:15:02	00:15:00	51.0	72.7	65.4	51.4	48.1	39.4	29.1	28.1	27.2
09/04/2025 02:15:01	09/04/2025 02:30:01	00:15:00	46.9	69.1	59.3	48.7	45.5	37.3	29.5	28.7	27.9
09/04/2025 02:30:01	09/04/2025 02:45:01	00:15:00	47.4	69.7	60.4	48.3	46.0	39.5	32.9	31.6	28.6
09/04/2025 02:45:01	09/04/2025 03:00:01	00:15:00	51.5	71.8	65.3	56.3	49.0	38.4	30.1	29.1	27.8
09/04/2025 03:00:02	09/04/2025 03:15:02	00:15:00	52.7	76.0	65.8	52.1	47.2	39.6	33.8	31.8	29.3
09/04/2025 03:15:01	09/04/2025 03:30:01	00:15:00	49.1	72.5	60.4	49.1	46.7	40.5	32.5	31.0	29.6
09/04/2025 03:30:01	09/04/2025 03:45:01	00:15:00	40.5	51.8	48.3	45.2	43.9	38.7	32.3	30.7	28.3
09/04/2025 03:45:01	09/04/2025 04:00:01	00:15:00	40.0	50.6	47.4	45.3	43.8	37.6	32.3	30.8	29.2
09/04/2025 04:00:02	09/04/2025 04:15:02	00:15:00	40.1	53.5	48.9	45.6	43.8	37.5	28.8	26.5	25.5
09/04/2025 04:15:01	09/04/2025 04:30:01	00:15:00	41.1	51.4	47.5	45.4	44.4	39.6	33.0	31.6	30.0
09/04/2025 04:30:01	09/04/2025 04:45:01	00:15:00	41.8	51.0	47.8	46.1	45.1	40.5	32.6	29.8	27.8
09/04/2025 04:45:01	09/04/2025 05:00:01	00:15:00	49.9	70.5	64.3	52.1	45.9	38.7	33.5	32.5	31.1
09/04/2025 05:00:02	09/04/2025 05:15:02	00:15:00	47.6	71.4	59.3	46.5	44.9	39.5	33.8	32.2	30.5
09/04/2025 05:15:01	09/04/2025 05:30:01	00:15:00	47.5	69.3	59.0	47.6	46.4	42.5	38.8	37.9	35.4
09/04/2025 05:30:01	09/04/2025 05:45:01	00:15:00	50.9	69.5	64.4	52.8	49.4	46.1	42.5	41.3	38.5
09/04/2025 05:45:01	09/04/2025 06:00:01	00:15:00	59.2	77.4	71.2	66.0	61.7	50.7	46.9	46.1	44.7
09/04/2025 06:00:01	09/04/2025 06:15:01	00:15:00	58.0	74.1	70.7	65.1	59.8	50.4	46.3	45.5	44.3
09/04/2025 06:15:01	09/04/2025 06:30:01	00:15:00	59.0	75.3	71.1	66.6	61.9	49.5	44.6	43.7	42.3
09/04/2025 06:30:01	09/04/2025 06:45:01	00:15:00	57.4	75.0	70.6	64.0	58.2	46.8	43.5	42.8	41.3
09/04/2025 06:45:01	09/04/2025 07:00:01	00:15:00	62.0	77.7	72.7	69.4	66.2	52.1	45.6	44.6	43.1
09/04/2025 07:00:01	09/04/2025 07:15:01	00:15:00	60.9	76.4	71.5	68.6	65.1	53.2	47.3	46.3	44.9
09/04/2025 07:15:01	09/04/2025 07:30:01	00:15:00	63.2	74.9	72.5	69.8	68.0	58.1	50.7	49.0	46.0
09/04/2025 07:30:01	09/04/2025 07:45:01	00:15:00	62.9	77.1	72.4	69.6	67.6	57.7	51.2	50.4	49.3
09/04/2025 07:45:01	09/04/2025 08:00:01	00:15:00	62.1	76.1	72.5	68.9	66.6	54.8	49.7	49.0	47.9

ReportId

09/04/2025 08:00:01	09/04/2025 08:15:01	00:15:00	64.2	79.8	72.8	70.4	68.6	59.4	52.9	51.7	49.9
09/04/2025 08:15:01	09/04/2025 08:30:01	00:15:00	63.8	73.7	71.6	69.9	68.6	59.5	51.5	50.3	48.7
09/04/2025 08:30:01	09/04/2025 08:45:01	00:15:00	64.6	74.4	72.6	70.4	69.1	60.1	52.4	51.6	50.5
09/04/2025 08:45:01	09/04/2025 09:00:01	00:15:00	63.0	74.8	71.7	69.8	68.3	55.1	49.2	48.1	46.8
09/04/2025 09:00:01	09/04/2025 09:15:01	00:15:00	62.0	74.3	71.5	68.6	67.1	54.2	46.6	45.9	44.6
09/04/2025 09:15:01	09/04/2025 09:30:01	00:15:00	61.9	77.7	71.6	68.6	66.6	53.6	46.1	45.4	44.2
09/04/2025 09:30:01	09/04/2025 09:45:01	00:15:00	61.7	76.7	72.1	68.3	66.0	54.4	45.6	44.8	43.8
09/04/2025 09:45:01	09/04/2025 10:00:01	00:15:00	60.5	77.0	70.1	67.5	64.9	53.8	45.0	44.2	43.2
09/04/2025 10:00:01	09/04/2025 10:15:01	00:15:00	61.7	76.1	71.1	68.7	66.7	53.8	42.3	41.5	40.6
09/04/2025 10:15:01	09/04/2025 10:30:01	00:15:00	58.8	72.8	69.6	66.4	64.1	47.0	39.6	38.7	37.4
09/04/2025 10:30:01	09/04/2025 10:45:01	00:15:00	59.6	74.5	70.1	67.3	64.3	49.3	42.0	41.1	39.8
09/04/2025 10:45:01	09/04/2025 11:00:01	00:15:00	60.1	72.9	70.2	67.4	65.1	51.2	43.1	41.9	39.5
09/04/2025 11:00:01	09/04/2025 11:15:01	00:15:00	61.0	73.3	70.8	67.6	66.0	52.7	42.4	41.3	39.7
09/04/2025 11:15:01	09/04/2025 11:30:01	00:15:00	59.8	78.0	69.8	66.5	64.5	50.6	43.1	41.8	39.7
09/04/2025 11:30:01	09/04/2025 11:45:01	00:15:00	60.7	73.8	70.7	67.8	65.7	51.7	42.9	42.0	40.7
09/04/2025 11:45:01	09/04/2025 12:00:01	00:15:00	60.2	75.1	70.9	67.1	64.5	51.4	43.1	42.3	41.1
09/04/2025 12:00:02	09/04/2025 12:15:02	00:15:00	59.9	74.3	70.5	66.8	64.7	50.2	42.6	41.6	40.2
09/04/2025 12:15:01	09/04/2025 12:30:01	00:15:00	60.0	77.6	70.3	67.1	64.9	50.3	42.1	41.2	40.1
09/04/2025 12:30:01	09/04/2025 12:45:01	00:15:00	60.1	75.0	70.3	67.5	65.1	50.3	43.1	42.0	40.5
09/04/2025 12:45:01	09/04/2025 13:00:01	00:15:00	60.6	74.9	70.7	67.7	65.7	50.0	43.3	42.3	40.4
09/04/2025 13:00:01	09/04/2025 13:15:01	00:15:00	59.0	73.6	68.9	66.0	64.2	49.8	42.4	41.1	39.8
09/04/2025 13:15:01	09/04/2025 13:30:01	00:15:00	61.4	74.1	70.6	68.0	66.3	53.6	44.2	43.1	41.6
09/04/2025 13:30:01	09/04/2025 13:45:01	00:15:00	61.0	75.8	71.6	67.9	65.5	53.0	44.4	43.1	41.0
09/04/2025 13:45:01	09/04/2025 14:00:01	00:15:00	60.4	78.4	71.9	67.8	64.4	48.2	43.1	42.3	40.7
09/04/2025 14:00:02	09/04/2025 14:15:02	00:15:00	60.1	72.7	70.3	67.8	65.1	50.5	44.0	43.2	41.7
09/04/2025 14:15:01	09/04/2025 14:30:01	00:15:00	60.7	75.8	71.7	67.9	65.5	50.4	43.2	41.9	40.4

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09/04/2025 14:30:01	09/04/2025 14:45:01	00:15:00	62.3	73.9	71.2	69.1	67.4	53.8	44.2	43.1	40.7
09/04/2025 14:45:01	09/04/2025 15:00:01	00:15:00	64.2	88.9	72.0	68.8	67.0	53.2	45.4	44.3	42.4
09/04/2025 15:00:01	09/04/2025 15:15:01	00:15:00	61.8	75.0	71.5	68.5	66.7	53.2	45.3	44.4	42.9
09/04/2025 15:15:01	09/04/2025 15:30:01	00:15:00	63.0	74.3	71.6	69.3	67.9	57.0	46.4	45.4	43.6
09/04/2025 15:30:01	09/04/2025 15:45:01	00:15:00	61.1	75.1	70.5	68.3	66.5	51.4	45.3	44.3	42.0
09/04/2025 15:45:01	09/04/2025 16:00:01	00:15:00	62.4	73.6	71.0	68.8	67.2	56.3	47.2	45.8	43.4
09/04/2025 16:00:01	09/04/2025 16:15:01	00:15:00	62.9	78.3	71.4	69.1	67.5	56.9	46.5	45.3	43.9
09/04/2025 16:15:01	09/04/2025 16:30:01	00:15:00	60.7	74.6	70.5	67.5	65.7	52.8	44.1	43.3	41.9
09/04/2025 16:30:01	09/04/2025 16:45:01	00:15:00	63.5	75.5	73.2	69.4	68.1	56.4	45.0	43.9	42.3
09/04/2025 16:45:01	09/04/2025 17:00:01	00:15:00	62.2	73.3	71.0	69.0	67.5	53.6	45.6	44.8	43.9
09/04/2025 17:00:01	09/04/2025 17:15:01	00:15:00	63.4	75.1	71.3	69.5	68.0	58.4	49.1	47.6	45.5
09/04/2025 17:15:02	09/04/2025 17:30:02	00:15:00	63.2	73.1	71.0	69.2	67.8	59.2	48.7	47.1	44.9
09/04/2025 17:30:01	09/04/2025 17:45:01	00:15:00	62.9	74.7	71.6	69.2	67.5	57.7	48.1	46.8	45.2
09/04/2025 17:45:01	09/04/2025 18:00:01	00:15:00	62.4	76.9	70.9	68.2	66.7	58.0	49.9	48.5	46.6
09/04/2025 18:00:02	09/04/2025 18:15:02	00:15:00	65.2	85.1	76.6	69.9	68.2	58.1	48.3	46.9	45.3
09/04/2025 18:15:01	09/04/2025 18:30:01	00:15:00	73.6	101.1	82.9	69.6	67.9	57.8	46.8	45.6	44.2
09/04/2025 18:30:01	09/04/2025 18:45:01	00:15:00	60.5	75.0	71.6	67.3	64.7	51.8	45.3	44.3	43.2
09/04/2025 18:45:01	09/04/2025 19:00:01	00:15:00	62.0	74.5	71.0	68.2	66.6	57.0	46.2	44.8	43.2
09/04/2025 19:00:02	09/04/2025 19:15:02	00:15:00	61.3	76.9	71.1	68.0	66.0	54.6	44.4	43.1	41.1
09/04/2025 19:15:01	09/04/2025 19:30:01	00:15:00	64.3	89.2	74.8	68.7	66.4	51.5	44.7	43.9	42.1
09/04/2025 19:30:01	09/04/2025 19:45:01	00:15:00	69.8	93.6	81.6	68.9	67.2	53.7	45.9	45.1	43.8
09/04/2025 19:45:01	09/04/2025 20:00:01	00:15:00	61.7	74.4	70.6	68.4	66.8	53.7	46.4	45.6	44.6
09/04/2025 20:00:02	09/04/2025 20:15:02	00:15:00	62.2	76.8	71.9	68.9	66.7	54.2	46.1	45.1	43.1
09/04/2025 20:15:01	09/04/2025 20:30:01	00:15:00	60.2	79.0	71.0	67.4	64.7	49.1	44.3	43.6	42.3
09/04/2025 20:30:01	09/04/2025 20:45:01	00:15:00	60.9	76.0	70.8	67.8	65.0	54.1	47.0	46.0	44.2
09/04/2025 20:45:01	09/04/2025 21:00:01	00:15:00	60.4	73.6	71.2	67.9	65.3	51.5	45.3	43.9	42.1

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09/04/2025 21:00:01	09/04/2025 21:15:01	00:15:00	58.8	80.7	69.1	65.0	61.0	46.6	42.6	41.7	38.4
09/04/2025 21:15:01	09/04/2025 21:30:01	00:15:00	58.8	76.3	72.3	65.8	59.1	44.6	40.9	39.8	37.4
09/04/2025 21:30:01	09/04/2025 21:45:01	00:15:00	56.4	74.9	70.1	63.6	56.9	42.4	37.6	36.5	34.9
09/04/2025 21:45:01	09/04/2025 22:00:01	00:15:00	56.9	78.0	69.8	63.3	57.1	44.0	40.0	39.1	37.8
09/04/2025 22:00:01	09/04/2025 22:15:01	00:15:00	54.5	74.1	68.1	59.9	52.3	42.3	38.0	36.8	35.3
09/04/2025 22:15:01	09/04/2025 22:30:01	00:15:00	56.9	73.1	69.0	64.9	61.0	44.0	39.0	38.0	35.9
09/04/2025 22:30:01	09/04/2025 22:45:01	00:15:00	55.9	75.6	69.3	62.3	57.1	43.0	37.7	36.1	33.4
09/04/2025 22:45:02	09/04/2025 23:00:02	00:15:00	57.1	74.7	70.2	64.0	60.1	44.5	39.6	38.7	37.6
09/04/2025 23:00:01	09/04/2025 23:15:01	00:15:00	54.6	72.4	67.8	61.4	56.1	43.6	35.0	33.2	30.8
09/04/2025 23:15:01	09/04/2025 23:30:01	00:15:00	54.6	75.1	68.1	60.8	54.5	43.4	38.0	35.7	31.4
09/04/2025 23:30:01	09/04/2025 23:45:01	00:15:00	51.0	72.9	65.3	52.2	46.8	39.3	33.6	32.5	30.7
09/04/2025 23:45:01	10/04/2025 00:00:01	00:15:00	55.8	76.6	69.8	60.6	52.7	42.1	33.1	31.5	29.9
10/04/2025 00:00:01	10/04/2025 00:15:01	00:15:00	49.1	70.1	62.8	50.6	47.0	36.5	31.7	30.9	29.7
10/04/2025 00:15:01	10/04/2025 00:30:01	00:15:00	48.5	69.5	61.8	49.6	46.1	36.7	31.0	30.3	29.1
10/04/2025 00:30:01	10/04/2025 00:45:01	00:15:00	41.2	54.8	49.0	46.3	45.0	38.7	31.2	30.5	29.6
10/04/2025 00:45:01	10/04/2025 01:00:01	00:15:00	46.0	66.5	59.8	47.1	44.2	35.7	31.0	29.6	27.6
10/04/2025 01:00:01	10/04/2025 01:15:01	00:15:00	37.7	49.1	45.2	42.8	41.2	35.2	30.5	29.3	28.0
10/04/2025 01:15:02	10/04/2025 01:30:02	00:15:00	39.2	52.5	47.3	44.7	42.9	36.3	31.3	30.4	28.7
10/04/2025 01:30:01	10/04/2025 01:45:01	00:15:00	36.8	48.5	45.0	42.4	40.8	33.2	28.8	28.4	27.7
10/04/2025 01:45:01	10/04/2025 02:00:01	00:15:00	40.9	51.4	48.4	45.9	44.4	38.7	32.3	31.3	29.4
10/04/2025 02:00:01	10/04/2025 02:15:01	00:15:00	40.5	53.6	49.2	46.3	44.3	37.1	28.9	27.7	26.8
10/04/2025 02:15:02	10/04/2025 02:30:02	00:15:00	51.6	76.3	65.2	48.8	46.4	37.9	32.2	31.1	29.4
10/04/2025 02:30:01	10/04/2025 02:45:01	00:15:00	38.2	51.3	47.0	43.9	41.8	34.5	29.9	29.2	28.4
10/04/2025 02:45:01	10/04/2025 03:00:01	00:15:00	43.3	55.5	51.1	48.9	47.4	40.1	33.6	31.6	29.8
10/04/2025 03:00:02	10/04/2025 03:15:02	00:15:00	50.8	73.1	64.2	49.1	45.6	38.1	30.9	30.0	28.7
10/04/2025 03:15:01	10/04/2025 03:30:01	00:15:00	49.7	73.2	62.8	48.3	46.1	39.2	34.9	33.3	31.1

ReportId

10/04/2025 03:30:01	10/04/2025 03:45:01	00:15:00	40.3	50.0	47.5	45.2	43.6	38.4	31.7	30.8	29.7
10/04/2025 03:45:02	10/04/2025 04:00:02	00:15:00	40.7	52.8	48.6	45.6	44.1	38.5	31.3	30.2	29.1
10/04/2025 04:00:01	10/04/2025 04:15:01	00:15:00	39.8	53.4	47.2	44.4	43.0	38.0	31.9	30.9	29.5
10/04/2025 04:15:01	10/04/2025 04:30:01	00:15:00	39.5	54.1	47.7	44.9	43.2	36.4	29.9	29.2	27.9
10/04/2025 04:30:02	10/04/2025 04:45:02	00:15:00	42.5	52.9	50.0	47.3	45.9	40.4	33.8	32.7	31.2
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10/04/2025 05:00:01	10/04/2025 05:15:01	00:15:00	43.1	56.4	51.6	48.4	46.7	40.3	34.5	33.4	31.0
10/04/2025 05:15:01	10/04/2025 05:30:01	00:15:00	45.3	53.7	50.9	49.4	48.4	44.2	39.8	38.1	33.3
10/04/2025 05:30:02	10/04/2025 05:45:02	00:15:00	54.7	73.3	67.9	58.9	54.0	48.3	42.9	41.1	37.6
10/04/2025 05:45:01	10/04/2025 06:00:01	00:15:00	58.2	76.3	70.2	64.4	59.7	51.7	47.9	46.9	45.0
10/04/2025 06:00:01	10/04/2025 06:15:01	00:15:00	60.3	75.0	71.5	67.9	64.2	52.6	48.2	47.2	45.4
10/04/2025 06:15:01	10/04/2025 06:30:01	00:15:00	57.7	72.9	69.0	65.1	60.9	51.0	47.4	46.5	44.6
10/04/2025 06:30:02	10/04/2025 06:45:02	00:15:00	59.9	75.7	71.2	67.1	63.7	51.3	47.4	46.6	44.8
10/04/2025 06:45:01	10/04/2025 07:00:01	00:15:00	62.9	75.2	72.8	69.9	67.4	55.2	49.9	49.1	47.8
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10/04/2025 07:15:02	10/04/2025 07:30:02	00:15:00	63.2	74.2	71.5	69.3	67.7	59.4	53.6	52.7	50.8
10/04/2025 07:30:01	10/04/2025 07:45:01	00:15:00	62.9	76.5	72.3	69.2	67.2	58.1	53.6	52.7	51.4
10/04/2025 07:45:01	10/04/2025 08:00:01	00:15:00	63.0	74.3	71.7	69.4	67.6	58.1	53.3	52.2	49.5
10/04/2025 08:00:02	10/04/2025 08:15:02	00:15:00	63.3	74.7	71.7	69.6	68.1	57.4	53.3	52.4	51.0
10/04/2025 08:15:01	10/04/2025 08:30:01	00:15:00	63.9	74.9	72.3	70.2	68.4	59.2	52.5	51.4	50.1
10/04/2025 08:30:01	10/04/2025 08:45:01	00:15:00	64.1	75.2	73.0	70.3	68.5	59.3	51.9	51.4	50.2
10/04/2025 08:45:01	10/04/2025 09:00:01	00:15:00	63.9	75.4	72.0	69.9	68.6	59.3	49.8	48.3	46.6
10/04/2025 09:00:01	10/04/2025 09:15:01	00:15:00	62.9	74.7	71.7	69.7	68.0	55.3	47.4	46.2	45.0
10/04/2025 09:15:01	10/04/2025 09:30:01	00:15:00	62.2	77.7	73.1	69.1	66.9	53.0	43.0	42.1	40.8
10/04/2025 09:30:01	10/04/2025 09:45:01	00:15:00	59.4	75.7	70.9	66.8	63.7	47.6	41.7	40.9	40.0
10/04/2025 09:45:02	10/04/2025 10:00:02	00:15:00	61.6	75.2	72.0	68.5	66.8	51.3	41.9	40.9	39.8

ReportId

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10/04/2025 10:15:01	10/04/2025 10:30:01	00:15:00	61.2	78.5	70.6	68.1	65.9	52.8	40.3	38.6	35.8
10/04/2025 10:30:02	10/04/2025 10:45:02	00:15:00	60.0	78.5	70.2	67.4	64.5	48.7	41.0	40.0	38.5
10/04/2025 10:45:01	10/04/2025 11:00:01	00:15:00	59.1	73.4	70.1	66.8	63.8	47.9	40.2	39.2	37.4
10/04/2025 11:00:01	10/04/2025 11:15:01	00:15:00	58.2	76.1	70.1	65.5	61.7	43.8	38.4	37.7	36.7
10/04/2025 11:15:01	10/04/2025 11:30:01	00:15:00	59.2	74.1	70.6	66.7	63.1	47.1	39.2	38.0	36.1
10/04/2025 11:30:02	10/04/2025 11:45:02	00:15:00	60.1	75.4	71.1	67.1	64.7	47.9	40.4	39.3	37.6
10/04/2025 11:45:01	10/04/2025 12:00:01	00:15:00	59.5	74.1	70.6	67.5	64.7	45.5	39.0	38.1	37.0
10/04/2025 12:00:01	10/04/2025 12:15:01	00:15:00	60.9	77.0	72.0	68.3	65.5	48.2	41.1	40.1	39.0
10/04/2025 12:15:01	10/04/2025 12:30:01	00:15:00	59.0	73.6	69.9	66.4	64.2	47.3	40.3	38.9	36.6
10/04/2025 12:30:02	10/04/2025 12:45:02	00:15:00	59.4	73.8	70.0	66.8	64.3	47.9	41.2	39.9	37.7
10/04/2025 12:45:01	10/04/2025 13:00:01	00:15:00	60.9	74.6	71.3	67.6	65.7	52.2	40.3	39.0	37.6
10/04/2025 13:00:01	10/04/2025 13:15:01	00:15:00	58.4	74.3	70.1	66.1	62.5	44.7	37.9	37.0	36.2
10/04/2025 13:15:02	10/04/2025 13:30:02	00:15:00	59.4	74.8	70.2	67.0	64.2	47.8	40.1	38.8	36.9
10/04/2025 13:30:01	10/04/2025 13:45:01	00:15:00	57.7	75.9	68.7	65.6	62.1	44.0	36.9	35.7	34.2
10/04/2025 13:45:01	10/04/2025 14:00:01	00:15:00	58.9	75.8	70.7	66.7	63.5	45.0	37.7	36.4	34.7
10/04/2025 14:00:01	10/04/2025 14:15:01	00:15:00	57.7	75.0	69.4	65.1	61.5	43.2	35.0	33.7	32.1
10/04/2025 14:15:02	10/04/2025 14:30:02	00:15:00	60.9	78.3	71.8	67.9	65.9	48.3	37.1	35.9	33.6
10/04/2025 14:30:01	10/04/2025 14:45:01	00:15:00	60.5	73.5	70.1	67.6	65.6	51.3	39.4	37.8	35.8
10/04/2025 14:45:01	10/04/2025 15:00:01	00:15:00	60.7	76.9	71.2	67.8	65.8	49.3	37.9	35.8	34.0
10/04/2025 15:00:01	10/04/2025 15:15:01	00:15:00	60.5	74.2	70.8	67.4	65.6	50.7	41.4	39.1	36.8
10/04/2025 15:15:02	10/04/2025 15:30:02	00:15:00	61.5	77.3	71.5	68.3	66.4	51.7	40.3	38.9	36.5
10/04/2025 15:30:01	10/04/2025 15:45:01	00:15:00	62.1	77.0	72.6	68.8	66.9	52.7	37.6	35.6	33.6
10/04/2025 15:45:02	10/04/2025 16:00:02	00:15:00	60.5	74.3	71.1	67.8	66.0	48.0	38.0	36.4	34.6
10/04/2025 16:00:01	10/04/2025 16:15:01	00:15:00	61.9	73.6	71.5	68.6	66.7	54.2	41.3	39.6	37.4
10/04/2025 16:15:01	10/04/2025 16:30:01	00:15:00	61.1	74.6	70.9	68.0	66.2	51.5	40.8	38.7	36.4

ReportId

10/04/2025 16:30:01	10/04/2025 16:45:01	00:15:00	62.8	80.2	71.7	68.7	67.2	56.6	43.5	40.5	36.9
10/04/2025 16:45:02	10/04/2025 17:00:02	00:15:00	61.2	73.3	70.4	68.1	66.3	54.1	40.9	39.5	37.5
10/04/2025 17:00:02	10/04/2025 17:15:02	00:15:00	62.3	73.8	70.8	68.9	67.5	55.3	40.8	38.9	34.0
10/04/2025 17:15:01	10/04/2025 17:30:01	00:15:00	61.3	72.5	70.0	68.3	66.7	52.5	38.2	36.1	32.3
10/04/2025 17:30:01	10/04/2025 17:45:01	00:15:00	62.5	76.9	71.3	68.8	67.5	56.9	41.9	38.8	34.8
10/04/2025 17:45:01	10/04/2025 18:00:01	00:15:00	62.9	85.3	71.0	68.8	67.0	53.8	38.8	36.6	34.3
10/04/2025 18:00:02	10/04/2025 18:15:02	00:15:00	60.4	74.8	70.5	67.4	65.4	50.0	39.2	37.4	34.2
10/04/2025 18:15:01	10/04/2025 18:30:01	00:15:00	61.5	77.1	70.9	68.4	66.4	53.0	42.3	40.4	36.8
10/04/2025 18:30:01	10/04/2025 18:45:01	00:15:00	59.8	73.2	69.9	67.2	65.2	47.6	34.9	33.1	31.2
10/04/2025 18:45:02	10/04/2025 19:00:02	00:15:00	59.8	73.8	69.7	67.2	65.1	48.3	36.0	34.7	33.2
10/04/2025 19:00:01	10/04/2025 19:15:01	00:15:00	61.9	76.5	72.0	68.5	66.8	54.5	44.7	43.4	40.5
10/04/2025 19:15:01	10/04/2025 19:30:01	00:15:00	61.3	74.5	71.6	68.2	66.1	52.0	38.9	37.2	35.0
10/04/2025 19:30:01	10/04/2025 19:45:01	00:15:00	60.7	77.7	72.2	68.1	65.0	48.7	39.0	37.5	35.4
10/04/2025 19:45:02	10/04/2025 20:00:02	00:15:00	61.3	77.2	71.5	68.7	66.5	52.0	41.9	39.4	35.5
10/04/2025 20:00:01	10/04/2025 20:15:01	00:15:00	62.1	73.9	71.9	69.1	67.2	53.1	40.6	38.5	35.8
10/04/2025 20:15:01	10/04/2025 20:30:01	00:15:00	61.8	74.9	71.0	68.8	67.1	52.4	43.9	41.8	38.8
10/04/2025 20:30:02	10/04/2025 20:45:02	00:15:00	61.0	78.4	71.5	67.7	65.3	50.8	42.4	41.5	39.9
10/04/2025 20:45:01	10/04/2025 21:00:01	00:15:00	60.8	73.0	70.4	67.9	66.1	52.1	40.5	39.0	37.8
10/04/2025 21:00:01	10/04/2025 21:15:01	00:15:00	59.7	77.1	70.6	67.1	64.3	47.6	40.7	39.2	37.1
10/04/2025 21:15:02	10/04/2025 21:30:02	00:15:00	59.5	77.1	71.0	67.1	63.9	46.3	41.2	40.0	37.5
10/04/2025 21:30:01	10/04/2025 21:45:01	00:15:00	58.1	74.0	70.7	65.7	61.7	44.2	38.9	38.0	35.8
10/04/2025 21:45:01	10/04/2025 22:00:01	00:15:00	57.5	72.9	69.3	65.5	61.6	45.4	39.8	38.6	37.1
10/04/2025 22:00:01	10/04/2025 22:15:01	00:15:00	58.6	76.2	70.8	66.5	61.9	43.4	39.2	38.2	37.0
10/04/2025 22:15:02	10/04/2025 22:30:02	00:15:00	49.8	72.6	62.1	45.2	43.9	40.6	37.2	36.6	35.5
10/04/2025 22:30:01	10/04/2025 22:45:01	00:15:00	55.1	74.5	69.8	58.7	51.1	42.3	38.5	37.6	36.5
10/04/2025 22:45:01	10/04/2025 23:00:01	00:15:00	55.0	76.4	67.7	61.4	53.1	44.1	40.5	39.7	37.5

ReportId

10/04/2025 23:00:02	10/04/2025 23:15:02	00:15:00	55.6	75.1	68.0	63.0	57.3	44.3	40.9	39.7	34.5
10/04/2025 23:15:01	10/04/2025 23:30:01	00:15:00	54.4	73.2	69.0	59.2	52.4	43.5	39.1	38.2	37.2
10/04/2025 23:30:01	10/04/2025 23:45:01	00:15:00	52.8	71.1	66.9	58.7	50.9	41.1	37.2	36.0	33.7
10/04/2025 23:45:01	11/04/2025 00:00:01	00:15:00	51.6	71.9	66.1	53.8	46.8	40.3	36.0	34.7	33.0
11/04/2025 00:00:01	11/04/2025 00:15:01	00:15:00	42.8	52.5	49.5	46.7	45.5	41.4	37.5	36.5	35.4
11/04/2025 00:15:01	11/04/2025 00:30:01	00:15:00	51.9	71.5	66.6	54.8	48.2	40.0	35.4	33.8	31.4
11/04/2025 00:30:01	11/04/2025 00:45:01	00:15:00	51.7	72.9	66.7	50.7	45.6	40.0	33.4	31.8	30.4
11/04/2025 00:45:02	11/04/2025 01:00:02	00:15:00	50.0	73.2	63.2	48.8	44.0	38.3	33.4	32.1	29.5
11/04/2025 01:00:01	11/04/2025 01:15:01	00:15:00	48.6	73.0	59.9	44.9	42.4	35.7	30.8	29.0	27.2
11/04/2025 01:15:01	11/04/2025 01:30:01	00:15:00	35.1	49.1	43.3	40.1	38.4	32.8	27.4	25.9	24.3
11/04/2025 01:30:01	11/04/2025 01:45:01	00:15:00	46.9	70.4	59.2	45.9	40.2	28.9	23.6	23.0	22.2
11/04/2025 01:45:01	11/04/2025 02:00:01	00:15:00	43.2	63.5	58.5	41.8	39.5	31.8	26.8	25.3	22.5
11/04/2025 02:00:01	11/04/2025 02:15:01	00:15:00	34.5	44.5	40.6	38.3	37.2	33.7	28.9	27.6	25.3
11/04/2025 02:15:01	11/04/2025 02:30:01	00:15:00	33.8	42.9	40.6	38.4	37.1	31.8	28.1	27.5	26.0
11/04/2025 02:30:02	11/04/2025 02:45:02	00:15:00	32.0	42.3	38.7	36.5	35.2	30.2	26.7	25.9	24.9
11/04/2025 02:45:01	11/04/2025 03:00:01	00:15:00	49.5	70.1	64.8	49.4	41.2	34.8	30.1	29.0	26.8
11/04/2025 03:00:01	11/04/2025 03:15:01	00:15:00	35.8	44.4	41.8	39.2	38.2	34.8	31.2	30.3	28.6
11/04/2025 03:15:01	11/04/2025 03:30:01	00:15:00	54.5	78.6	67.5	52.5	45.3	38.7	35.0	34.4	33.4
11/04/2025 03:30:02	11/04/2025 03:45:02	00:15:00	39.4	49.4	46.5	44.4	43.0	37.0	31.7	30.6	29.3
11/04/2025 03:45:01	11/04/2025 04:00:01	00:15:00	40.9	51.3	48.1	46.0	44.6	38.6	33.8	33.0	31.6
11/04/2025 04:00:01	11/04/2025 04:15:01	00:15:00	40.9	51.5	48.7	46.2	44.5	38.6	33.0	32.3	31.4
11/04/2025 04:15:01	11/04/2025 04:30:01	00:15:00	40.1	50.7	47.0	45.1	43.6	38.3	32.6	31.3	30.4
11/04/2025 04:30:01	11/04/2025 04:45:01	00:15:00	43.8	55.0	49.9	48.0	46.9	42.5	37.2	35.8	34.4
11/04/2025 04:45:01	11/04/2025 05:00:01	00:15:00	48.3	71.0	59.2	48.8	47.3	42.8	37.2	35.4	32.5
11/04/2025 05:00:01	11/04/2025 05:15:01	00:15:00	52.4	76.6	62.6	50.6	48.9	44.6	38.8	37.7	36.2
11/04/2025 05:15:02	11/04/2025 05:30:02	00:15:00	49.5	71.1	57.2	51.0	49.7	46.3	43.0	42.0	40.3

ReportId

11/04/2025 05:30:01	11/04/2025 05:45:01	00:15:00	51.0	69.1	62.8	54.0	51.2	46.9	43.3	42.5	41.0
11/04/2025 05:45:01	11/04/2025 06:00:01	00:15:00	59.3	77.0	71.5	66.2	61.3	52.3	48.6	47.8	46.6
11/04/2025 06:00:01	11/04/2025 06:15:01	00:15:00	57.5	72.7	69.5	64.3	60.2	51.2	47.2	46.4	45.1
11/04/2025 06:15:02	11/04/2025 06:30:02	00:15:00	59.1	74.1	70.6	66.4	62.9	50.6	46.9	46.1	44.8
11/04/2025 06:30:01	11/04/2025 06:45:01	00:15:00	59.2	72.7	70.2	66.7	63.4	50.1	47.0	46.3	45.0
11/04/2025 06:45:01	11/04/2025 07:00:01	00:15:00	62.5	75.8	72.9	69.1	66.7	56.0	48.3	47.2	45.6
11/04/2025 07:00:02	11/04/2025 07:15:02	00:15:00	63.0	75.5	72.1	69.4	67.7	57.8	49.5	48.7	47.4
11/04/2025 07:15:01	11/04/2025 07:30:01	00:15:00	61.6	79.3	71.9	68.4	65.7	54.5	49.5	48.9	47.8
11/04/2025 07:30:01	11/04/2025 07:45:01	00:15:00	62.6	76.6	71.7	69.5	67.2	57.3	52.4	51.4	49.6
11/04/2025 07:45:01	11/04/2025 08:00:01	00:15:00	62.9	76.3	72.2	69.5	67.6	56.9	51.8	50.4	48.8
11/04/2025 08:00:01	11/04/2025 08:15:01	00:15:00	61.9	73.4	71.2	68.5	66.6	56.1	52.3	51.8	51.0
11/04/2025 08:15:01	11/04/2025 08:30:01	00:15:00	64.3	77.3	73.4	70.5	69.0	58.8	52.1	51.1	49.3
11/04/2025 08:30:01	11/04/2025 08:45:01	00:15:00	61.9	76.1	71.4	68.7	66.5	55.2	50.2	49.6	48.6
11/04/2025 08:45:01	11/04/2025 09:00:01	00:15:00	63.1	75.3	72.3	69.8	68.2	56.0	49.8	48.9	47.8
11/04/2025 09:00:01	11/04/2025 09:15:01	00:15:00	62.3	79.6	72.7	69.1	67.2	51.1	47.3	46.7	45.2
11/04/2025 09:15:01	11/04/2025 09:30:01	00:15:00	60.6	75.0	72.3	68.1	65.3	49.6	44.7	43.8	42.3
11/04/2025 09:30:02	11/04/2025 09:45:02	00:15:00	61.3	76.5	71.5	68.5	66.4	51.3	44.6	43.6	42.4
11/04/2025 09:45:01	11/04/2025 10:00:01	00:15:00	58.9	73.0	70.3	66.4	63.5	47.2	40.8	39.8	38.8
11/04/2025 10:00:01	11/04/2025 10:15:01	00:15:00	59.4	74.3	69.8	67.1	64.7	47.7	40.3	39.4	38.2
11/04/2025 10:15:01	11/04/2025 10:30:01	00:15:00	59.6	75.9	70.4	67.5	64.1	46.0	37.6	36.6	35.2
11/04/2025 10:30:02	11/04/2025 10:45:02	00:15:00	58.9	72.7	69.6	66.9	64.2	45.2	36.2	34.8	33.5
11/04/2025 10:45:01	11/04/2025 11:00:01	00:15:00	60.4	74.0	70.8	67.6	65.3	49.9	37.9	36.2	34.3
11/04/2025 11:00:01	11/04/2025 11:15:01	00:15:00	59.6	73.2	70.0	67.3	65.0	46.9	37.5	35.8	34.4
11/04/2025 11:15:01	11/04/2025 11:30:01	00:15:00	60.6	76.7	70.1	67.5	65.8	50.8	40.6	38.9	36.2
11/04/2025 11:30:02	11/04/2025 11:45:02	00:15:00	59.8	74.6	71.1	67.7	64.3	46.1	36.7	35.8	34.0
11/04/2025 11:45:01	11/04/2025 12:00:01	00:15:00	60.3	75.2	71.0	67.8	65.1	49.3	37.6	36.1	34.2

ReportId

11/04/2025 12:00:02	11/04/2025 12:15:02	00:15:00	59.7	74.0	69.9	67.1	65.0	48.3	38.9	37.3	34.9
11/04/2025 12:15:01	11/04/2025 12:30:01	00:15:00	58.4	73.6	69.7	66.4	62.9	45.5	38.4	37.3	35.9
11/04/2025 12:30:01	11/04/2025 12:45:01	00:15:00	60.1	74.8	70.4	67.4	65.3	49.3	40.3	38.2	36.0
11/04/2025 12:45:01	11/04/2025 13:00:01	00:15:00	59.8	73.3	70.7	67.7	64.8	48.4	38.7	37.4	36.0
11/04/2025 13:00:02	11/04/2025 13:15:02	00:15:00	60.8	80.3	71.9	67.7	65.2	49.7	39.4	37.8	35.5
11/04/2025 13:15:01	11/04/2025 13:30:01	00:15:00	59.9	72.6	70.1	67.3	65.1	48.5	39.9	38.9	37.4
11/04/2025 13:30:01	11/04/2025 13:45:01	00:15:00	59.8	73.5	70.2	67.5	65.1	47.1	40.5	39.8	38.4
11/04/2025 13:45:01	11/04/2025 14:00:01	00:15:00	59.8	74.2	69.9	67.2	65.3	48.7	40.9	40.1	39.0
11/04/2025 14:00:02	11/04/2025 14:15:02	00:15:00	59.1	72.8	69.5	66.7	64.5	48.0	39.7	38.6	37.6
11/04/2025 14:15:01	11/04/2025 14:30:01	00:15:00	60.2	78.0	70.7	67.2	65.3	50.3	43.2	42.0	40.4
11/04/2025 14:30:01	11/04/2025 14:45:01	00:15:00	59.7	72.9	69.8	66.8	64.6	51.5	43.4	42.1	40.5
11/04/2025 14:45:01	11/04/2025 15:00:01	00:15:00	59.8	73.7	69.7	66.8	65.1	50.4	42.6	41.7	40.3
11/04/2025 15:00:02	11/04/2025 15:15:02	00:15:00	60.8	75.0	70.4	67.7	65.8	53.0	43.8	42.3	40.3
11/04/2025 15:15:01	11/04/2025 15:30:01	00:15:00	60.0	75.1	70.8	67.4	64.8	48.7	41.8	40.8	39.5
11/04/2025 15:30:02	11/04/2025 15:45:02	00:15:00	59.6	73.3	70.4	66.7	64.6	51.1	44.9	43.4	40.6
11/04/2025 15:45:01	11/04/2025 16:00:01	00:15:00	60.6	72.3	70.1	67.4	65.8	52.4	45.7	44.7	43.4
11/04/2025 16:00:01	11/04/2025 16:15:01	00:15:00	60.4	74.0	70.1	67.7	65.6	53.1	44.9	43.5	41.0
11/04/2025 16:15:01	11/04/2025 16:30:01	00:15:00	59.6	74.3	69.1	66.8	64.8	51.9	41.6	40.3	39.1
11/04/2025 16:30:02	11/04/2025 16:45:02	00:15:00	61.4	76.5	71.9	68.0	65.9	53.1	42.4	41.2	39.8
11/04/2025 16:45:01	11/04/2025 16:47:23	00:02:22	56.9	72.8	70.0	65.1	58.6	43.5	40.0	39.5	38.7

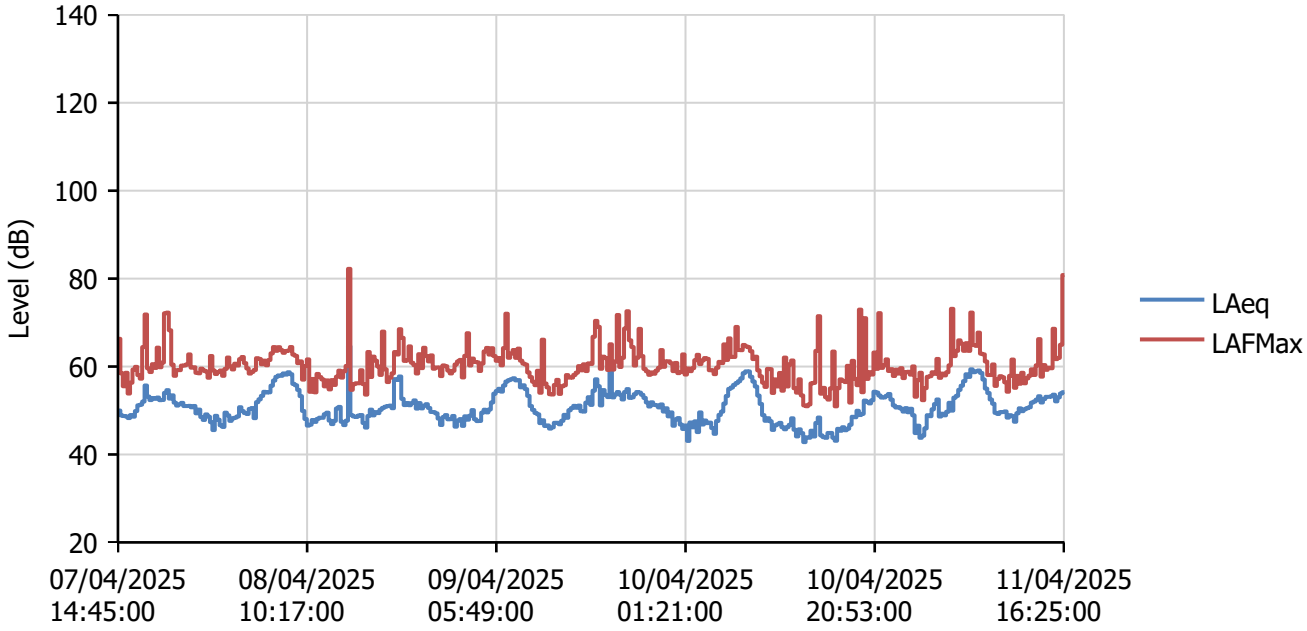
ReportId

Cirrus Research plc

Measurement List Report

Name NMP2
Start Time 07/04/2025 14:45:00
End Time 11/04/2025 16:27:58

Calibration Before	07/04/2025 13:00:51	Offset	0.37 dB
Calibration After	11/04/2025 16:28:37	Offset	0.45 dB



Start Time	End Time	Duration	LAeq (dB)	LAFMax	Ln1	Ln2	Ln3	Ln4	Ln5	Ln6	Ln7
07/04/2025 14:45:00	07/04/2025 15:00:00	00:15:00	50.0	66.3	54.7	52.6	51.7	49.2	46.9	45.9	44.4
07/04/2025 15:00:01	07/04/2025 15:15:01	00:15:00	48.9	58.5	52.9	51.6	50.9	48.4	45.7	45.2	43.6
07/04/2025 15:15:02	07/04/2025 15:30:02	00:15:00	48.7	55.5	52.4	51.2	50.5	48.3	46.4	46.0	45.3
07/04/2025 15:30:01	07/04/2025 15:45:01	00:15:00	48.7	58.6	53.7	51.3	50.2	48.1	46.0	45.4	44.3
07/04/2025 15:45:01	07/04/2025 16:00:01	00:15:00	48.3	53.9	51.7	50.7	50.1	47.9	45.7	45.1	44.3

ReportId

07/04/2025 16:00:01	07/04/2025 16:15:01	00:15:00	49.0	56.3	53.3	51.6	50.8	48.5	46.1	45.3	44.4
07/04/2025 16:15:02	07/04/2025 16:30:02	00:15:00	48.6	59.3	53.9	51.5	50.4	47.9	45.8	45.3	44.4
07/04/2025 16:30:01	07/04/2025 16:45:01	00:15:00	49.9	59.9	54.6	52.7	51.7	49.2	47.2	46.7	44.9
07/04/2025 16:45:01	07/04/2025 17:00:01	00:15:00	51.2	58.1	54.9	53.8	53.3	50.8	48.0	47.4	46.2
07/04/2025 17:00:01	07/04/2025 17:15:01	00:15:00	51.3	57.2	55.0	54.0	53.5	50.7	48.5	47.9	47.1
07/04/2025 17:15:02	07/04/2025 17:30:02	00:15:00	52.0	64.4	56.0	54.7	54.1	51.6	48.6	47.5	46.1
07/04/2025 17:30:01	07/04/2025 17:45:01	00:15:00	55.7	71.8	66.4	58.9	56.0	53.0	50.4	49.8	48.9
07/04/2025 17:45:01	07/04/2025 18:00:01	00:15:00	53.2	59.6	57.0	55.7	55.0	52.8	50.4	49.6	48.4
07/04/2025 18:00:01	07/04/2025 18:15:01	00:15:00	52.4	58.8	56.4	55.0	54.3	52.0	49.3	48.7	47.4
07/04/2025 18:15:01	07/04/2025 18:30:01	00:15:00	52.8	60.5	56.8	55.4	54.7	52.4	50.2	49.6	48.2
07/04/2025 18:30:01	07/04/2025 18:45:01	00:15:00	52.7	59.7	56.7	55.4	54.6	52.2	49.7	49.1	48.1
07/04/2025 18:45:01	07/04/2025 19:00:01	00:15:00	53.0	64.3	61.8	55.9	54.6	51.7	48.9	48.0	46.3
07/04/2025 19:00:01	07/04/2025 19:15:01	00:15:00	52.4	59.8	57.5	55.8	54.9	51.6	47.8	46.3	44.7
07/04/2025 19:15:01	07/04/2025 19:30:01	00:15:00	52.4	60.9	57.2	55.6	54.8	51.8	48.4	47.4	45.8
07/04/2025 19:30:01	07/04/2025 19:45:01	00:15:00	54.0	72.1	64.2	56.4	54.9	52.1	49.3	48.6	47.5
07/04/2025 19:45:01	07/04/2025 20:00:01	00:15:00	54.6	72.3	66.7	56.3	54.8	51.9	49.0	48.1	46.4
07/04/2025 20:00:01	07/04/2025 20:15:01	00:15:00	52.7	68.3	59.2	57.5	55.3	51.2	48.5	47.9	46.9
07/04/2025 20:15:01	07/04/2025 20:30:01	00:15:00	53.5	60.4	58.9	57.8	56.9	52.1	48.1	46.7	44.4
07/04/2025 20:30:01	07/04/2025 20:45:01	00:15:00	51.8	57.9	55.8	54.6	53.9	51.4	48.0	47.2	46.2
07/04/2025 20:45:02	07/04/2025 21:00:02	00:15:00	51.1	59.2	55.3	53.8	53.1	50.6	48.2	47.7	46.4
07/04/2025 21:00:01	07/04/2025 21:15:01	00:15:00	51.4	59.2	55.7	54.4	53.6	50.9	48.2	47.4	45.7
07/04/2025 21:15:01	07/04/2025 21:30:01	00:15:00	51.7	60.2	56.5	55.1	54.3	51.0	46.9	45.7	43.0
07/04/2025 21:30:02	07/04/2025 21:45:02	00:15:00	51.0	60.3	57.4	54.5	53.6	50.0	45.7	44.7	43.4
07/04/2025 21:45:01	07/04/2025 22:00:01	00:15:00	51.0	60.5	56.7	55.0	54.0	50.0	45.3	43.9	40.8
07/04/2025 22:00:01	07/04/2025 22:15:01	00:15:00	51.1	62.8	57.7	54.6	53.3	50.1	46.3	45.4	43.9
07/04/2025 22:15:01	07/04/2025 22:30:01	00:15:00	50.7	59.7	56.8	54.4	53.2	49.8	46.8	46.0	44.5

ReportId

07/04/2025 22:30:02	07/04/2025 22:45:02	00:15:00	51.0	59.8	56.1	54.4	53.4	50.3	47.1	46.1	44.3
07/04/2025 22:45:01	07/04/2025 23:00:01	00:15:00	49.4	58.6	55.2	53.2	52.3	48.2	44.0	43.1	41.2
07/04/2025 23:00:01	07/04/2025 23:15:01	00:15:00	50.2	58.5	55.5	54.0	53.0	49.4	44.6	43.5	41.4
07/04/2025 23:15:01	07/04/2025 23:30:01	00:15:00	48.5	59.5	54.7	52.4	51.2	47.6	42.6	41.1	39.4
07/04/2025 23:30:02	07/04/2025 23:45:02	00:15:00	47.9	59.1	54.7	52.1	50.9	46.4	41.5	40.3	38.1
07/04/2025 23:45:01	08/04/2025 00:00:01	00:15:00	49.1	58.9	55.5	53.7	52.4	47.7	41.7	39.9	37.1
08/04/2025 00:00:01	08/04/2025 00:15:01	00:15:00	48.6	57.5	55.1	53.1	51.8	47.2	39.9	38.1	34.7
08/04/2025 00:15:01	08/04/2025 00:30:01	00:15:00	47.4	62.4	54.8	52.4	51.0	45.1	36.7	35.5	33.0
08/04/2025 00:30:02	08/04/2025 00:45:02	00:15:00	45.6	59.1	54.7	51.9	50.1	40.6	29.0	26.9	24.8
08/04/2025 00:45:01	08/04/2025 01:00:01	00:15:00	48.8	58.3	55.3	53.3	52.1	47.2	41.9	40.2	37.2
08/04/2025 01:00:01	08/04/2025 01:15:01	00:15:00	47.9	58.7	55.0	52.5	51.2	46.3	40.2	34.8	31.7
08/04/2025 01:15:02	08/04/2025 01:30:02	00:15:00	46.6	59.1	54.2	51.8	50.2	44.7	34.7	30.5	27.5
08/04/2025 01:30:01	08/04/2025 01:45:01	00:15:00	46.3	57.9	53.9	51.6	49.7	44.2	36.4	32.0	29.6
08/04/2025 01:45:01	08/04/2025 02:00:01	00:15:00	49.5	59.5	57.3	55.3	53.4	47.3	37.2	31.7	24.4
08/04/2025 02:00:02	08/04/2025 02:15:02	00:15:00	48.9	62.1	58.3	54.5	52.4	46.4	36.2	32.9	26.1
08/04/2025 02:15:01	08/04/2025 02:30:01	00:15:00	47.6	60.0	56.1	53.3	51.4	44.9	32.1	29.6	27.3
08/04/2025 02:30:01	08/04/2025 02:45:01	00:15:00	48.2	59.3	55.9	53.3	51.8	46.0	39.8	37.5	32.1
08/04/2025 02:45:02	08/04/2025 03:00:02	00:15:00	48.4	60.7	56.3	53.8	51.7	46.3	40.9	38.9	32.7
08/04/2025 03:00:01	08/04/2025 03:15:01	00:15:00	48.7	60.2	57.6	53.9	51.9	46.2	40.2	38.5	34.0
08/04/2025 03:15:01	08/04/2025 03:30:01	00:15:00	50.8	61.7	58.6	55.8	54.0	48.5	44.5	43.2	39.7
08/04/2025 03:30:01	08/04/2025 03:45:01	00:15:00	49.9	62.2	57.3	54.6	53.2	47.9	40.2	37.7	34.0
08/04/2025 03:45:01	08/04/2025 04:00:01	00:15:00	49.4	60.8	57.2	54.2	52.5	47.7	40.3	37.5	31.9
08/04/2025 04:00:01	08/04/2025 04:15:01	00:15:00	49.2	59.6	56.5	54.1	52.7	47.5	41.3	39.3	36.5
08/04/2025 04:15:01	08/04/2025 04:30:01	00:15:00	50.4	58.4	56.3	54.6	53.6	49.0	43.3	41.9	40.7
08/04/2025 04:30:02	08/04/2025 04:45:02	00:15:00	50.6	58.8	56.4	54.4	53.2	49.6	46.2	45.1	41.1
08/04/2025 04:45:01	08/04/2025 05:00:01	00:15:00	48.3	59.2	55.5	53.1	51.7	46.5	40.9	39.5	36.6

ReportId

08/04/2025 05:00:01	08/04/2025 05:15:01	00:15:00	51.9	61.9	57.5	55.7	54.7	50.7	47.2	46.3	44.3
08/04/2025 05:15:01	08/04/2025 05:30:01	00:15:00	52.5	61.7	58.1	56.3	55.4	51.5	46.5	45.0	41.8
08/04/2025 05:30:01	08/04/2025 05:45:01	00:15:00	53.3	60.5	58.1	56.7	55.8	52.6	49.5	48.7	47.3
08/04/2025 05:45:01	08/04/2025 06:00:01	00:15:00	54.3	61.4	58.1	56.9	56.3	53.8	51.2	50.3	48.7
08/04/2025 06:00:01	08/04/2025 06:15:01	00:15:00	54.1	60.3	57.9	56.8	56.1	53.7	50.8	50.2	49.2
08/04/2025 06:15:02	08/04/2025 06:30:02	00:15:00	54.1	61.5	58.9	57.1	56.3	53.5	50.7	50.0	48.8
08/04/2025 06:30:01	08/04/2025 06:45:01	00:15:00	55.6	63.0	60.5	58.6	57.7	55.1	52.2	51.4	50.4
08/04/2025 06:45:01	08/04/2025 07:00:01	00:15:00	56.8	64.4	61.4	60.0	59.1	56.1	53.1	52.2	50.3
08/04/2025 07:00:01	08/04/2025 07:15:01	00:15:00	57.7	63.6	62.0	60.6	59.9	57.3	53.8	52.6	50.4
08/04/2025 07:15:01	08/04/2025 07:30:01	00:15:00	58.0	64.4	62.3	61.1	60.3	57.3	54.6	54.0	52.8
08/04/2025 07:30:01	08/04/2025 07:45:01	00:15:00	57.9	63.7	61.4	60.3	59.6	57.5	55.5	54.9	53.9
08/04/2025 07:45:01	08/04/2025 08:00:01	00:15:00	58.4	63.1	61.2	60.3	59.9	58.3	56.3	55.7	54.9
08/04/2025 08:00:01	08/04/2025 08:15:01	00:15:00	58.2	63.5	61.3	60.4	59.8	57.8	55.8	55.1	54.0
08/04/2025 08:15:01	08/04/2025 08:30:01	00:15:00	58.7	63.6	61.9	61.0	60.4	58.4	56.4	55.9	54.8
08/04/2025 08:30:01	08/04/2025 08:45:01	00:15:00	58.3	64.4	61.8	60.8	60.1	57.9	55.4	54.9	53.9
08/04/2025 08:45:01	08/04/2025 09:00:01	00:15:00	56.1	62.7	59.9	58.6	58.0	55.7	53.3	52.7	51.5
08/04/2025 09:00:02	08/04/2025 09:15:02	00:15:00	55.7	62.4	59.7	58.2	57.4	55.3	53.2	52.7	51.8
08/04/2025 09:15:01	08/04/2025 09:30:01	00:15:00	54.7	60.8	58.7	57.4	56.6	54.1	52.4	52.0	51.2
08/04/2025 09:30:01	08/04/2025 09:45:01	00:15:00	53.3	61.2	57.6	56.2	55.3	52.7	50.6	50.1	49.3
08/04/2025 09:45:01	08/04/2025 10:00:01	00:15:00	49.9	57.0	52.9	51.8	51.3	49.6	47.8	47.3	46.6
08/04/2025 10:00:02	08/04/2025 10:15:02	00:15:00	48.1	60.1	52.9	50.8	49.9	47.4	45.6	45.2	44.4
08/04/2025 10:15:01	08/04/2025 10:30:01	00:15:00	46.6	61.6	51.7	48.9	47.9	45.8	44.0	43.6	42.6
08/04/2025 10:30:01	08/04/2025 10:45:01	00:15:00	46.8	54.3	50.5	49.3	48.8	46.3	43.9	43.4	42.5
08/04/2025 10:45:01	08/04/2025 11:00:01	00:15:00	47.8	57.2	51.6	50.3	49.6	47.4	45.4	45.0	44.0
08/04/2025 11:00:02	08/04/2025 11:15:02	00:15:00	47.4	54.1	50.9	49.6	48.9	47.1	45.2	44.7	43.9
08/04/2025 11:15:01	08/04/2025 11:30:01	00:15:00	48.1	58.3	52.3	50.6	49.9	47.7	45.1	43.8	42.0

ReportId

08/04/2025 11:30:01	08/04/2025 11:45:01	00:15:00	48.4	57.6	52.6	51.1	50.1	47.8	46.1	45.6	44.8
08/04/2025 11:45:01	08/04/2025 12:00:01	00:15:00	48.3	57.1	52.5	50.8	49.9	47.9	46.0	45.5	44.4
08/04/2025 12:00:02	08/04/2025 12:15:02	00:15:00	49.2	55.5	53.4	52.1	51.3	48.5	46.5	46.0	44.5
08/04/2025 12:15:01	08/04/2025 12:30:01	00:15:00	49.5	56.9	53.4	52.2	51.5	48.9	47.2	46.7	45.6
08/04/2025 12:30:02	08/04/2025 12:45:02	00:15:00	47.7	54.8	52.6	51.3	50.7	46.3	43.4	42.8	42.1
08/04/2025 12:45:01	08/04/2025 13:00:01	00:15:00	46.9	56.9	51.4	49.7	48.8	46.3	44.3	43.7	42.8
08/04/2025 13:00:01	08/04/2025 13:15:01	00:15:00	47.7	55.8	52.5	50.9	50.1	46.9	43.9	43.1	41.9
08/04/2025 13:15:01	08/04/2025 13:30:01	00:15:00	50.5	57.7	55.1	53.5	52.7	49.8	47.4	46.8	45.0
08/04/2025 13:30:02	08/04/2025 13:45:02	00:15:00	50.8	59.1	55.4	53.7	53.0	50.2	47.2	46.5	45.5
08/04/2025 13:45:01	08/04/2025 14:00:01	00:15:00	47.4	57.5	53.0	51.2	50.1	46.3	43.6	42.7	40.9
08/04/2025 14:00:01	08/04/2025 14:15:01	00:15:00	46.7	58.9	52.3	50.1	48.7	45.8	43.4	42.7	41.7
08/04/2025 14:15:01	08/04/2025 14:30:01	00:15:00	47.7	60.1	54.9	52.0	50.3	46.2	43.7	43.2	42.5
08/04/2025 14:30:02	08/04/2025 14:45:02	00:15:00	64.6	82.2	79.1	72.3	63.3	47.0	43.3	42.7	41.8
08/04/2025 14:45:01	08/04/2025 15:00:01	00:15:00	48.9	54.7	53.0	51.7	51.0	48.3	46.4	45.9	45.1
08/04/2025 15:00:01	08/04/2025 15:15:01	00:15:00	48.6	56.0	51.9	51.0	50.4	48.3	46.2	45.5	44.6
08/04/2025 15:15:01	08/04/2025 15:30:01	00:15:00	48.5	56.2	52.3	51.3	50.7	47.9	45.5	45.0	44.3
08/04/2025 15:30:01	08/04/2025 15:45:01	00:15:00	48.9	56.2	52.6	51.4	50.7	48.4	46.1	45.5	44.9
08/04/2025 15:45:01	08/04/2025 16:00:01	00:15:00	49.0	59.2	53.8	51.8	50.8	48.3	46.5	46.1	45.3
08/04/2025 16:00:01	08/04/2025 16:15:01	00:15:00	47.2	56.0	51.7	50.1	49.4	46.5	44.1	43.7	43.2
08/04/2025 16:15:01	08/04/2025 16:30:01	00:15:00	46.1	53.6	50.8	48.4	47.7	45.6	43.8	43.4	42.9
08/04/2025 16:30:01	08/04/2025 16:45:01	00:15:00	48.7	63.3	54.0	51.3	50.3	48.1	46.0	45.5	44.4
08/04/2025 16:45:01	08/04/2025 17:00:01	00:15:00	50.2	57.6	53.5	52.4	51.9	49.9	47.7	47.2	46.3
08/04/2025 17:00:02	08/04/2025 17:15:02	00:15:00	48.9	62.3	56.6	52.8	51.3	47.3	44.9	44.3	43.2
08/04/2025 17:15:01	08/04/2025 17:30:01	00:15:00	49.6	61.3	56.5	53.4	51.9	48.3	45.9	45.2	43.4
08/04/2025 17:30:01	08/04/2025 17:45:01	00:15:00	49.4	60.0	54.1	51.8	51.1	49.0	46.5	45.9	44.9
08/04/2025 17:45:02	08/04/2025 18:00:02	00:15:00	50.2	58.1	53.8	52.5	51.8	49.8	47.8	47.3	46.3

ReportId

08/04/2025 18:00:01	08/04/2025 18:15:01	00:15:00	50.6	68.0	54.1	52.8	52.2	50.2	48.1	47.4	46.6
08/04/2025 18:15:01	08/04/2025 18:30:01	00:15:00	50.9	59.4	54.6	53.2	52.6	50.5	48.3	47.7	46.7
08/04/2025 18:30:01	08/04/2025 18:45:01	00:15:00	51.0	56.5	54.6	53.5	52.9	50.6	48.4	48.0	47.1
08/04/2025 18:45:02	08/04/2025 19:00:02	00:15:00	51.1	57.5	55.3	53.8	53.1	50.6	48.4	47.8	47.0
08/04/2025 19:00:01	08/04/2025 19:15:01	00:15:00	50.5	58.5	54.4	53.0	52.4	50.2	47.4	46.6	45.2
08/04/2025 19:15:01	08/04/2025 19:30:01	00:15:00	57.1	63.3	61.7	60.7	60.1	55.9	52.2	51.5	50.3
08/04/2025 19:30:01	08/04/2025 19:45:01	00:15:00	56.9	62.7	61.3	60.5	59.8	55.9	52.4	51.7	50.6
08/04/2025 19:45:02	08/04/2025 20:00:02	00:15:00	57.7	68.5	62.1	61.1	60.6	56.4	52.7	51.1	49.4
08/04/2025 20:00:01	08/04/2025 20:15:01	00:15:00	52.7	66.5	60.7	56.9	54.5	51.1	48.4	47.5	46.2
08/04/2025 20:15:01	08/04/2025 20:30:01	00:15:00	51.2	61.3	56.7	54.7	53.4	50.4	47.9	47.2	45.9
08/04/2025 20:30:02	08/04/2025 20:45:02	00:15:00	51.7	61.4	55.8	54.5	53.8	51.1	48.6	47.8	46.7
08/04/2025 20:45:01	08/04/2025 21:00:01	00:15:00	51.2	64.6	55.5	54.3	53.6	50.8	46.3	44.4	41.8
08/04/2025 21:00:01	08/04/2025 21:15:01	00:15:00	51.7	60.9	56.6	54.7	53.8	51.2	47.7	46.3	42.9
08/04/2025 21:15:02	08/04/2025 21:30:02	00:15:00	52.3	60.3	57.0	55.5	54.7	51.7	47.9	47.0	45.6
08/04/2025 21:30:01	08/04/2025 21:45:01	00:15:00	50.4	58.4	55.6	54.0	53.1	49.5	46.2	44.4	39.8
08/04/2025 21:45:01	08/04/2025 22:00:01	00:15:00	51.7	62.8	56.7	55.3	54.3	50.8	47.1	46.0	44.3
08/04/2025 22:00:01	08/04/2025 22:15:01	00:15:00	50.5	59.6	56.8	54.9	53.8	48.8	43.6	42.5	39.9
08/04/2025 22:15:02	08/04/2025 22:30:02	00:15:00	51.1	64.3	57.2	55.2	54.1	50.0	43.5	40.1	34.0
08/04/2025 22:30:01	08/04/2025 22:45:01	00:15:00	51.4	62.4	57.8	55.9	54.6	50.0	44.7	43.1	37.9
08/04/2025 22:45:01	08/04/2025 23:00:01	00:15:00	50.6	61.2	57.7	55.2	53.8	48.8	43.5	42.4	41.0
08/04/2025 23:00:01	08/04/2025 23:15:01	00:15:00	49.7	62.5	55.9	54.3	53.3	48.1	41.1	39.5	36.6
08/04/2025 23:15:02	08/04/2025 23:30:02	00:15:00	49.6	59.5	56.1	54.0	52.9	48.2	42.5	41.0	36.3
08/04/2025 23:30:01	08/04/2025 23:45:01	00:15:00	49.4	59.8	56.0	53.9	52.8	47.7	41.8	40.5	38.4
08/04/2025 23:45:01	09/04/2025 00:00:01	00:15:00	48.2	59.8	56.3	53.3	51.6	45.9	40.0	38.1	35.4
09/04/2025 00:00:01	09/04/2025 00:15:01	00:15:00	46.7	57.8	54.5	51.9	50.3	44.4	35.2	32.0	29.1
09/04/2025 00:15:02	09/04/2025 00:30:02	00:15:00	48.5	60.3	55.5	53.3	52.2	46.8	37.7	35.2	32.4

ReportId

09/04/2025 00:30:01	09/04/2025 00:45:01	00:15:00	49.0	60.1	56.3	53.8	52.6	47.1	34.7	25.7	22.7
09/04/2025 00:45:01	09/04/2025 01:00:01	00:15:00	48.0	59.1	55.2	52.9	51.6	46.0	38.4	36.3	32.9
09/04/2025 01:00:01	09/04/2025 01:15:01	00:15:00	48.0	58.4	55.4	53.1	51.8	45.8	37.0	35.6	33.0
09/04/2025 01:15:02	09/04/2025 01:30:02	00:15:00	48.8	59.0	55.6	53.4	52.1	47.1	40.3	39.1	37.6
09/04/2025 01:30:01	09/04/2025 01:45:01	00:15:00	46.3	60.5	54.3	52.2	50.8	42.4	33.8	32.1	30.2
09/04/2025 01:45:01	09/04/2025 02:00:01	00:15:00	47.7	61.2	56.3	53.4	51.9	44.0	26.3	23.6	22.0
09/04/2025 02:00:01	09/04/2025 02:15:01	00:15:00	48.1	61.5	56.8	53.6	52.1	44.2	24.4	22.4	21.4
09/04/2025 02:15:01	09/04/2025 02:30:01	00:15:00	46.5	57.5	55.2	53.2	51.2	42.1	25.2	22.5	21.0
09/04/2025 02:30:01	09/04/2025 02:45:01	00:15:00	48.7	62.4	56.4	53.9	52.3	46.4	29.7	24.5	22.7
09/04/2025 02:45:01	09/04/2025 03:00:01	00:15:00	47.9	67.6	57.1	53.6	51.6	43.5	25.2	22.3	21.0
09/04/2025 03:00:02	09/04/2025 03:15:02	00:15:00	48.8	60.2	57.1	54.2	52.4	46.5	36.5	34.0	30.4
09/04/2025 03:15:01	09/04/2025 03:30:01	00:15:00	50.1	61.8	58.4	55.9	54.4	46.9	32.8	29.5	27.9
09/04/2025 03:30:01	09/04/2025 03:45:01	00:15:00	48.0	61.0	56.1	53.9	52.4	44.5	34.9	32.2	30.1
09/04/2025 03:45:01	09/04/2025 04:00:01	00:15:00	47.6	61.0	56.4	53.7	51.8	43.5	36.5	34.5	30.1
09/04/2025 04:00:02	09/04/2025 04:15:02	00:15:00	47.6	59.0	56.2	53.8	52.2	43.2	33.6	30.0	27.4
09/04/2025 04:15:01	09/04/2025 04:30:01	00:15:00	49.5	60.7	57.5	55.2	53.7	46.3	37.8	34.5	31.7
09/04/2025 04:30:01	09/04/2025 04:45:01	00:15:00	50.2	63.5	58.9	56.0	54.1	46.3	37.9	34.6	32.3
09/04/2025 04:45:02	09/04/2025 05:00:02	00:15:00	49.6	64.2	58.6	55.5	53.7	45.8	38.3	36.6	34.1
09/04/2025 05:00:01	09/04/2025 05:15:01	00:15:00	50.2	62.7	58.8	55.9	54.0	46.7	39.4	37.8	35.1
09/04/2025 05:15:01	09/04/2025 05:30:01	00:15:00	51.8	64.2	59.2	56.9	55.3	49.7	44.8	43.8	42.1
09/04/2025 05:30:02	09/04/2025 05:45:02	00:15:00	53.8	62.4	59.4	57.9	56.8	52.6	48.8	47.7	45.2
09/04/2025 05:45:01	09/04/2025 06:00:01	00:15:00	54.4	61.3	58.7	57.2	56.4	54.0	50.8	49.6	48.1
09/04/2025 06:00:01	09/04/2025 06:15:01	00:15:00	54.9	62.0	58.7	57.6	56.9	54.6	51.5	50.7	49.3
09/04/2025 06:15:01	09/04/2025 06:30:01	00:15:00	54.3	60.3	58.1	57.0	56.3	54.0	50.8	49.8	47.0
09/04/2025 06:30:01	09/04/2025 06:45:01	00:15:00	55.7	64.2	59.7	58.4	57.8	55.2	52.4	51.7	50.4
09/04/2025 06:45:01	09/04/2025 07:00:01	00:15:00	56.6	72.0	60.9	58.8	58.1	55.9	53.5	52.7	51.6

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09/04/2025 07:00:01	09/04/2025 07:15:01	00:15:00	56.9	62.0	60.3	59.4	58.7	56.6	54.3	53.5	51.6
09/04/2025 07:15:01	09/04/2025 07:30:01	00:15:00	57.1	63.0	60.6	59.6	59.0	56.8	54.0	53.2	51.4
09/04/2025 07:30:01	09/04/2025 07:45:01	00:15:00	57.3	63.8	60.5	59.5	59.0	57.1	55.0	54.3	52.7
09/04/2025 07:45:01	09/04/2025 08:00:01	00:15:00	56.9	62.0	59.8	58.7	58.3	56.7	54.8	54.3	53.1
09/04/2025 08:00:01	09/04/2025 08:15:01	00:15:00	56.9	64.1	60.4	59.2	58.6	56.6	54.3	53.6	52.8
09/04/2025 08:15:01	09/04/2025 08:30:01	00:15:00	55.3	61.3	58.7	57.6	57.1	54.9	52.7	52.2	51.3
09/04/2025 08:30:02	09/04/2025 08:45:02	00:15:00	55.7	60.7	58.9	57.9	57.4	55.5	53.0	52.2	50.9
09/04/2025 08:45:01	09/04/2025 09:00:01	00:15:00	54.9	60.4	58.6	57.4	56.7	54.4	52.3	51.6	49.8
09/04/2025 09:00:01	09/04/2025 09:15:01	00:15:00	53.3	58.7	56.9	55.5	54.7	53.0	51.5	51.0	50.1
09/04/2025 09:15:02	09/04/2025 09:30:02	00:15:00	51.0	57.6	54.3	53.0	52.4	50.7	49.2	48.8	48.1
09/04/2025 09:30:01	09/04/2025 09:45:01	00:15:00	50.1	56.6	53.8	52.6	51.9	49.7	47.7	46.7	45.2
09/04/2025 09:45:01	09/04/2025 10:00:01	00:15:00	49.5	55.8	53.3	51.8	51.1	49.0	47.4	47.1	46.3
09/04/2025 10:00:02	09/04/2025 10:15:02	00:15:00	49.1	59.0	53.4	51.6	50.9	48.6	46.5	46.0	45.0
09/04/2025 10:15:01	09/04/2025 10:30:01	00:15:00	47.1	54.0	51.6	50.1	49.3	46.4	44.0	43.3	42.4
09/04/2025 10:30:01	09/04/2025 10:45:01	00:15:00	47.8	66.1	51.8	50.4	49.6	47.2	44.8	44.1	42.7
09/04/2025 10:45:01	09/04/2025 11:00:01	00:15:00	46.5	56.1	50.8	49.1	48.3	45.9	44.1	43.7	43.0
09/04/2025 11:00:02	09/04/2025 11:15:02	00:15:00	46.6	55.3	50.8	49.0	48.1	46.1	44.6	44.1	43.3
09/04/2025 11:15:01	09/04/2025 11:30:01	00:15:00	45.9	53.7	50.1	48.8	48.0	45.2	43.1	42.6	41.4
09/04/2025 11:30:01	09/04/2025 11:45:01	00:15:00	46.2	53.6	50.2	48.8	48.1	45.5	43.8	43.4	42.6
09/04/2025 11:45:02	09/04/2025 12:00:02	00:15:00	47.2	55.8	51.1	49.5	48.7	46.7	45.3	44.8	43.9
09/04/2025 12:00:01	09/04/2025 12:15:01	00:15:00	47.2	57.0	51.9	50.1	49.1	46.6	44.2	43.6	42.4
09/04/2025 12:15:01	09/04/2025 12:30:01	00:15:00	46.9	53.8	50.9	49.5	48.6	46.4	44.4	43.8	42.9
09/04/2025 12:30:02	09/04/2025 12:45:02	00:15:00	47.7	55.5	52.6	50.5	49.4	47.2	44.5	43.7	42.7
09/04/2025 12:45:01	09/04/2025 13:00:01	00:15:00	49.0	55.7	52.6	51.4	50.9	48.6	46.1	45.6	44.7
09/04/2025 13:00:01	09/04/2025 13:15:01	00:15:00	48.3	58.1	53.1	51.6	50.5	47.6	45.3	44.7	43.4
09/04/2025 13:15:01	09/04/2025 13:30:01	00:15:00	50.1	57.5	54.4	53.0	52.2	49.4	46.9	46.4	45.2

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09/04/2025 13:45:01	09/04/2025 14:00:01	00:15:00	51.1	58.1	55.8	54.0	53.1	50.5	48.0	47.3	46.2
09/04/2025 14:00:01	09/04/2025 14:15:01	00:15:00	50.6	58.6	55.0	53.4	52.7	50.0	47.6	46.9	45.3
09/04/2025 14:15:01	09/04/2025 14:30:01	00:15:00	51.1	60.1	55.5	53.7	53.0	50.6	48.3	47.8	46.2
09/04/2025 14:30:01	09/04/2025 14:45:01	00:15:00	49.8	59.1	54.3	52.4	51.6	49.3	47.4	46.8	45.1
09/04/2025 14:45:01	09/04/2025 15:00:01	00:15:00	49.8	60.5	54.3	52.5	51.7	49.2	46.6	45.8	44.2
09/04/2025 15:00:01	09/04/2025 15:15:01	00:15:00	51.8	59.0	56.6	55.1	54.3	50.9	48.6	48.1	47.4
09/04/2025 15:15:02	09/04/2025 15:30:02	00:15:00	53.0	60.7	56.9	55.6	54.9	52.6	50.2	49.3	47.9
09/04/2025 15:30:01	09/04/2025 15:45:01	00:15:00	51.3	60.6	55.6	53.9	53.2	50.8	48.3	47.6	46.0
09/04/2025 15:45:01	09/04/2025 16:00:01	00:15:00	54.5	66.8	63.8	59.0	57.1	51.8	48.6	48.0	47.0
09/04/2025 16:00:01	09/04/2025 16:15:01	00:15:00	57.1	70.4	65.9	63.4	61.6	53.2	49.4	48.7	47.8
09/04/2025 16:15:02	09/04/2025 16:30:02	00:15:00	55.5	69.0	64.7	60.7	58.4	52.7	50.0	49.2	48.1
09/04/2025 16:30:01	09/04/2025 16:45:01	00:15:00	51.2	59.5	55.6	54.3	53.5	50.5	47.7	47.1	46.2
09/04/2025 16:45:01	09/04/2025 17:00:01	00:15:00	54.7	62.3	60.7	59.3	58.2	53.2	48.8	48.2	47.3
09/04/2025 17:00:01	09/04/2025 17:15:01	00:15:00	53.6	61.9	59.3	57.1	56.0	52.5	50.1	49.3	48.0
09/04/2025 17:15:01	09/04/2025 17:30:01	00:15:00	53.1	59.2	56.9	55.6	55.0	52.8	49.8	48.9	47.8
09/04/2025 17:30:01	09/04/2025 17:45:01	00:15:00	58.9	65.1	63.2	61.8	61.2	58.4	54.7	54.0	53.0
09/04/2025 17:45:01	09/04/2025 18:00:01	00:15:00	53.0	59.3	56.5	55.3	54.7	52.7	50.5	50.0	48.7
09/04/2025 18:00:02	09/04/2025 18:15:02	00:15:00	53.6	61.1	57.6	56.3	55.7	53.2	50.6	49.7	47.6
09/04/2025 18:15:01	09/04/2025 18:30:01	00:15:00	54.2	71.7	60.4	56.7	55.7	53.2	50.8	49.8	48.4
09/04/2025 18:30:01	09/04/2025 18:45:01	00:15:00	53.6	59.9	57.3	56.1	55.4	53.2	50.9	50.3	49.1
09/04/2025 18:45:01	09/04/2025 19:00:01	00:15:00	52.5	62.0	56.7	55.1	54.3	52.0	49.8	49.1	47.5
09/04/2025 19:00:02	09/04/2025 19:15:02	00:15:00	54.2	68.6	65.5	56.5	55.0	52.4	49.5	48.8	47.7
09/04/2025 19:15:01	09/04/2025 19:30:01	00:15:00	54.9	72.6	67.5	56.9	54.8	51.8	49.4	48.6	47.1
09/04/2025 19:30:01	09/04/2025 19:45:01	00:15:00	52.9	66.0	57.4	55.5	54.8	52.2	49.8	49.3	48.0
09/04/2025 19:45:01	09/04/2025 20:00:01	00:15:00	53.0	64.4	56.8	55.5	54.8	52.6	50.2	49.1	47.9

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09/04/2025 20:00:02	09/04/2025 20:15:02	00:15:00	53.7	60.2	57.7	56.5	55.7	53.2	50.9	50.2	49.1
09/04/2025 20:15:01	09/04/2025 20:30:01	00:15:00	54.2	62.0	58.5	56.9	56.3	53.8	50.7	50.1	49.0
09/04/2025 20:30:02	09/04/2025 20:45:02	00:15:00	54.1	68.6	57.8	56.8	56.1	53.5	51.3	50.6	49.2
09/04/2025 20:45:01	09/04/2025 21:00:01	00:15:00	53.6	62.4	57.2	55.9	55.4	53.2	50.7	50.1	49.0
09/04/2025 21:00:01	09/04/2025 21:15:01	00:15:00	52.9	59.5	57.0	55.7	55.0	52.4	49.2	48.0	45.7
09/04/2025 21:15:02	09/04/2025 21:30:02	00:15:00	51.8	58.9	56.0	54.5	53.8	51.5	48.3	46.8	45.2
09/04/2025 21:30:01	09/04/2025 21:45:01	00:15:00	50.9	58.1	55.4	54.2	53.4	50.4	46.5	44.8	40.0
09/04/2025 21:45:01	09/04/2025 22:00:01	00:15:00	51.9	58.7	55.8	54.7	54.1	51.4	48.2	47.4	46.0
09/04/2025 22:00:01	09/04/2025 22:15:01	00:15:00	51.3	58.4	56.0	54.6	53.9	50.6	46.3	44.8	42.1
09/04/2025 22:15:03	09/04/2025 22:30:03	00:15:00	51.2	59.1	56.8	55.5	54.6	49.8	45.3	44.2	41.9
09/04/2025 22:30:01	09/04/2025 22:45:01	00:15:00	50.7	59.7	56.3	54.7	53.8	49.5	43.9	41.8	40.0
09/04/2025 22:45:01	09/04/2025 23:00:01	00:15:00	51.4	63.8	57.4	55.4	54.3	50.2	45.2	44.2	42.4
09/04/2025 23:00:02	09/04/2025 23:15:02	00:15:00	49.8	59.9	55.6	53.8	53.0	48.7	42.3	39.7	34.0
09/04/2025 23:15:01	09/04/2025 23:30:01	00:15:00	50.5	61.2	56.4	54.6	53.7	49.4	43.4	41.4	38.4
09/04/2025 23:30:01	09/04/2025 23:45:01	00:15:00	48.7	61.2	56.9	54.5	52.7	45.5	39.7	38.3	35.8
09/04/2025 23:45:01	10/04/2025 00:00:01	00:15:00	49.6	60.8	57.2	54.5	53.3	47.5	37.2	31.6	28.1
10/04/2025 00:00:02	10/04/2025 00:15:02	00:15:00	46.5	59.0	55.5	52.0	50.4	43.5	35.2	32.9	23.2
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10/04/2025 00:30:01	10/04/2025 00:45:01	00:15:00	48.3	58.5	55.4	53.6	52.5	45.4	32.8	26.4	23.8
10/04/2025 00:45:01	10/04/2025 01:00:01	00:15:00	46.8	58.8	55.1	52.5	51.0	43.4	32.6	29.3	26.7
10/04/2025 01:00:01	10/04/2025 01:15:01	00:15:00	45.8	62.8	56.2	52.3	49.4	40.7	29.4	27.1	21.3
10/04/2025 01:15:01	10/04/2025 01:30:01	00:15:00	46.6	58.2	56.0	52.9	50.7	42.6	30.6	24.5	22.2
10/04/2025 01:30:02	10/04/2025 01:45:02	00:15:00	43.1	59.6	53.2	48.6	46.8	38.9	26.5	21.6	20.0
10/04/2025 01:45:01	10/04/2025 02:00:01	00:15:00	47.3	59.0	55.7	53.0	51.2	44.0	38.2	35.7	32.2
10/04/2025 02:00:01	10/04/2025 02:15:01	00:15:00	46.2	59.6	55.6	52.6	50.2	41.7	27.4	25.1	20.9
10/04/2025 02:15:01	10/04/2025 02:30:01	00:15:00	47.5	61.4	55.3	53.2	51.5	44.9	33.4	31.1	26.5

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10/04/2025 02:30:02	10/04/2025 02:45:02	00:15:00	45.1	62.7	54.5	51.4	49.4	39.5	26.1	24.1	21.3
10/04/2025 02:45:01	10/04/2025 03:00:01	00:15:00	49.6	60.6	58.1	55.3	53.9	46.0	32.9	29.6	26.2
10/04/2025 03:00:01	10/04/2025 03:15:01	00:15:00	46.8	61.4	55.3	52.3	50.6	43.3	32.5	29.8	25.7
10/04/2025 03:15:01	10/04/2025 03:30:01	00:15:00	47.7	61.9	57.0	53.5	51.2	44.8	36.1	32.8	29.1
10/04/2025 03:30:02	10/04/2025 03:45:02	00:15:00	47.1	61.8	55.2	52.6	51.0	44.1	29.9	26.2	21.9
10/04/2025 03:45:01	10/04/2025 04:00:01	00:15:00	47.3	59.2	55.5	53.5	52.0	43.3	31.1	28.0	25.8
10/04/2025 04:00:01	10/04/2025 04:15:01	00:15:00	46.0	59.2	54.0	51.3	49.6	43.6	36.8	35.6	33.6
10/04/2025 04:15:01	10/04/2025 04:30:01	00:15:00	44.7	58.3	52.9	50.4	48.8	41.4	23.5	22.5	21.4
10/04/2025 04:30:02	10/04/2025 04:45:02	00:15:00	47.6	59.7	55.0	52.3	50.7	45.9	40.1	37.5	27.0
10/04/2025 04:45:01	10/04/2025 05:00:01	00:15:00	49.0	61.1	56.1	53.7	52.4	47.3	38.1	34.3	27.0
10/04/2025 05:00:01	10/04/2025 05:15:01	00:15:00	49.7	60.8	57.1	55.1	53.4	47.5	40.3	36.3	30.4
10/04/2025 05:15:01	10/04/2025 05:30:01	00:15:00	51.6	65.0	57.6	55.6	54.6	50.4	44.6	42.9	40.7
10/04/2025 05:30:01	10/04/2025 05:45:01	00:15:00	53.3	61.5	58.1	56.7	56.1	52.4	47.5	45.8	43.7
10/04/2025 05:45:01	10/04/2025 06:00:01	00:15:00	54.9	66.4	61.2	58.5	57.3	53.8	50.7	49.9	48.4
10/04/2025 06:00:01	10/04/2025 06:15:01	00:15:00	55.2	62.2	59.7	58.4	57.6	54.5	51.5	50.6	49.3
10/04/2025 06:15:02	10/04/2025 06:30:02	00:15:00	55.8	62.2	60.2	58.7	58.1	55.3	51.9	50.9	49.6
10/04/2025 06:30:01	10/04/2025 06:45:01	00:15:00	56.2	69.0	61.1	59.3	58.5	55.4	52.6	51.8	50.8
10/04/2025 06:45:01	10/04/2025 07:00:01	00:15:00	56.7	63.8	60.5	59.3	58.6	56.2	53.6	52.9	51.6
10/04/2025 07:00:01	10/04/2025 07:15:01	00:15:00	57.3	63.7	61.0	60.0	59.4	56.9	53.7	52.9	51.1
10/04/2025 07:15:02	10/04/2025 07:30:02	00:15:00	58.5	64.9	61.6	60.7	60.2	58.2	56.3	56.0	55.2
10/04/2025 07:30:01	10/04/2025 07:45:01	00:15:00	58.9	64.6	61.7	60.8	60.4	58.6	57.0	56.6	55.6
10/04/2025 07:45:01	10/04/2025 08:00:01	00:15:00	58.9	64.4	62.2	61.2	60.6	58.6	56.3	55.3	53.7
10/04/2025 08:00:02	10/04/2025 08:15:02	00:15:00	57.7	63.5	61.3	60.0	59.4	57.4	54.8	54.0	52.3
10/04/2025 08:15:01	10/04/2025 08:30:01	00:15:00	56.6	61.7	59.8	58.8	58.2	56.2	54.4	53.7	52.2
10/04/2025 08:30:01	10/04/2025 08:45:01	00:15:00	55.5	62.2	60.6	57.6	56.9	55.0	52.9	52.3	51.5
10/04/2025 08:45:01	10/04/2025 09:00:01	00:15:00	53.4	59.1	57.1	55.9	55.3	52.9	51.2	50.8	50.1

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10/04/2025 09:00:02	10/04/2025 09:15:02	00:15:00	51.5	57.8	55.6	54.5	53.9	50.7	48.7	48.4	47.9
10/04/2025 09:15:01	10/04/2025 09:30:01	00:15:00	49.0	56.3	52.5	51.2	50.5	48.5	46.9	46.5	45.9
10/04/2025 09:30:01	10/04/2025 09:45:01	00:15:00	47.7	55.4	51.6	50.2	49.5	47.2	45.0	44.6	43.9
10/04/2025 09:45:01	10/04/2025 10:00:01	00:15:00	48.3	59.5	51.7	50.4	49.8	47.9	45.9	45.5	44.8
10/04/2025 10:00:02	10/04/2025 10:15:02	00:15:00	47.6	59.4	51.4	50.3	49.7	47.0	44.5	43.9	43.1
10/04/2025 10:15:01	10/04/2025 10:30:01	00:15:00	45.6	54.0	50.7	48.3	47.3	44.9	43.3	42.9	41.9
10/04/2025 10:30:01	10/04/2025 10:45:01	00:15:00	46.6	57.1	51.6	49.7	48.8	45.7	44.1	43.7	43.1
10/04/2025 10:45:01	10/04/2025 11:00:01	00:15:00	46.9	55.5	52.0	50.0	49.0	46.1	43.6	43.2	42.3
10/04/2025 11:00:02	10/04/2025 11:15:02	00:15:00	47.2	58.5	51.1	49.7	48.9	46.7	44.9	44.5	43.9
10/04/2025 11:15:01	10/04/2025 11:30:01	00:15:00	46.2	54.5	51.3	49.9	48.8	45.2	42.2	41.6	40.0
10/04/2025 11:30:01	10/04/2025 11:45:01	00:15:00	45.7	62.0	51.4	48.4	47.2	44.7	43.0	42.6	41.9
10/04/2025 11:45:01	10/04/2025 12:00:01	00:15:00	46.2	55.5	50.8	48.9	48.2	45.6	43.8	43.3	42.5
10/04/2025 12:00:02	10/04/2025 12:15:02	00:15:00	46.7	60.5	55.8	50.9	48.6	44.7	42.8	42.3	41.4
10/04/2025 12:15:01	10/04/2025 12:30:01	00:15:00	48.2	61.4	53.3	51.0	50.1	47.6	45.5	44.9	44.0
10/04/2025 12:30:01	10/04/2025 12:45:01	00:15:00	45.6	55.1	50.0	48.5	47.8	45.0	42.8	42.4	41.6
10/04/2025 12:45:01	10/04/2025 13:00:01	00:15:00	44.1	54.1	49.1	47.2	46.2	43.3	41.6	41.1	40.5
10/04/2025 13:00:01	10/04/2025 13:15:01	00:15:00	45.7	57.1	49.3	48.1	47.5	45.3	42.9	42.4	41.5
10/04/2025 13:15:01	10/04/2025 13:30:01	00:15:00	44.9	53.4	48.9	47.4	46.8	44.5	41.9	41.4	40.6
10/04/2025 13:30:02	10/04/2025 13:45:02	00:15:00	42.8	51.2	48.3	46.6	45.6	41.5	39.6	39.2	38.6
10/04/2025 13:45:01	10/04/2025 14:00:01	00:15:00	43.9	51.0	48.3	47.2	46.4	43.1	40.2	38.8	37.3
10/04/2025 14:00:01	10/04/2025 14:15:01	00:15:00	43.8	51.4	47.7	46.7	45.8	43.1	41.6	41.1	39.7
10/04/2025 14:15:01	10/04/2025 14:30:01	00:15:00	45.4	56.2	50.3	48.2	47.1	44.8	42.8	42.1	41.2
10/04/2025 14:30:02	10/04/2025 14:45:02	00:15:00	44.1	56.3	49.4	46.6	45.9	43.5	41.2	40.5	39.1
10/04/2025 14:45:01	10/04/2025 15:00:01	00:15:00	47.2	63.6	58.9	53.1	47.5	42.8	40.8	40.3	39.5
10/04/2025 15:00:01	10/04/2025 15:15:01	00:15:00	48.4	71.5	61.2	47.8	45.6	42.9	41.4	41.1	40.4
10/04/2025 15:15:01	10/04/2025 15:30:01	00:15:00	44.3	53.8	49.9	47.3	46.1	43.6	41.6	41.0	39.8

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10/04/2025 15:45:01	10/04/2025 16:00:01	00:15:00	43.8	53.0	48.3	46.7	45.8	43.1	40.9	40.4	39.5
10/04/2025 16:00:01	10/04/2025 16:15:01	00:15:00	44.9	52.5	48.5	47.2	46.6	44.5	42.6	42.0	39.8
10/04/2025 16:15:01	10/04/2025 16:30:01	00:15:00	44.9	55.0	49.5	48.0	47.2	44.0	42.0	41.5	40.6
10/04/2025 16:30:02	10/04/2025 16:45:02	00:15:00	43.8	63.4	50.5	46.8	45.5	42.4	40.0	39.5	38.6
10/04/2025 16:45:01	10/04/2025 17:00:01	00:15:00	43.1	51.0	47.2	46.0	45.2	42.5	40.2	39.7	39.0
10/04/2025 17:00:02	10/04/2025 17:15:02	00:15:00	45.8	55.1	50.1	48.3	47.6	45.4	43.0	42.2	38.4
10/04/2025 17:15:01	10/04/2025 17:30:01	00:15:00	45.4	57.1	53.9	49.8	47.1	43.7	41.0	40.5	39.3
10/04/2025 17:30:01	10/04/2025 17:45:01	00:15:00	46.2	56.8	51.7	49.5	48.7	45.3	42.4	41.7	40.7
10/04/2025 17:45:01	10/04/2025 18:00:01	00:15:00	45.5	56.5	50.8	48.5	47.6	44.8	42.0	41.1	39.4
10/04/2025 18:00:01	10/04/2025 18:15:01	00:15:00	45.9	60.2	52.5	49.4	47.8	44.9	41.9	41.2	40.0
10/04/2025 18:15:01	10/04/2025 18:30:01	00:15:00	46.8	51.8	49.8	49.0	48.5	46.6	43.9	42.5	41.2
10/04/2025 18:30:01	10/04/2025 18:45:01	00:15:00	48.6	61.3	52.3	51.0	50.3	48.1	46.1	45.7	44.9
10/04/2025 18:45:02	10/04/2025 19:00:02	00:15:00	48.5	57.2	52.3	50.9	50.2	48.1	45.8	45.2	44.1
10/04/2025 19:00:01	10/04/2025 19:15:01	00:15:00	49.9	55.8	53.5	52.5	52.0	49.6	46.2	45.5	44.2
10/04/2025 19:15:01	10/04/2025 19:30:01	00:15:00	49.0	73.0	52.3	51.2	50.6	48.4	45.7	45.0	44.0
10/04/2025 19:30:01	10/04/2025 19:45:01	00:15:00	49.2	54.2	52.5	51.6	51.1	49.0	46.2	45.1	43.0
10/04/2025 19:45:02	10/04/2025 20:00:02	00:15:00	52.3	71.0	55.5	54.5	54.0	51.7	49.1	48.2	45.3
10/04/2025 20:00:01	10/04/2025 20:15:01	00:15:00	52.0	57.2	55.7	54.6	54.0	51.6	48.8	48.1	46.4
10/04/2025 20:15:01	10/04/2025 20:30:01	00:15:00	51.6	58.7	55.4	54.2	53.6	51.2	48.5	47.6	46.4
10/04/2025 20:30:02	10/04/2025 20:45:02	00:15:00	52.3	58.2	55.6	54.8	54.3	52.0	49.2	48.4	47.1
10/04/2025 20:45:01	10/04/2025 21:00:01	00:15:00	54.3	63.2	58.7	57.2	56.3	53.8	50.5	49.6	48.2
10/04/2025 21:00:02	10/04/2025 21:15:02	00:15:00	54.1	59.5	57.9	56.9	56.3	53.6	50.6	49.9	48.3
10/04/2025 21:15:01	10/04/2025 21:30:01	00:15:00	53.4	72.2	57.0	55.7	55.1	52.7	49.6	48.8	47.5
10/04/2025 21:30:01	10/04/2025 21:45:01	00:15:00	52.9	59.7	57.6	56.1	55.3	52.4	48.7	45.6	40.0
10/04/2025 21:45:01	10/04/2025 22:00:01	00:15:00	53.0	60.3	58.1	56.7	55.6	52.2	47.7	46.4	43.8

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10/04/2025 22:00:02	10/04/2025 22:15:02	00:15:00	53.3	61.6	58.9	56.7	55.6	52.7	48.6	46.4	43.3
10/04/2025 22:15:01	10/04/2025 22:30:01	00:15:00	53.8	59.0	57.4	56.5	56.0	53.8	47.7	44.8	41.3
10/04/2025 22:30:01	10/04/2025 22:45:01	00:15:00	52.5	59.4	57.3	55.8	55.0	51.7	48.1	46.9	43.3
10/04/2025 22:45:01	10/04/2025 23:00:01	00:15:00	51.1	57.9	56.0	54.5	53.7	50.6	46.3	45.0	42.1
10/04/2025 23:00:02	10/04/2025 23:15:02	00:15:00	50.7	59.3	55.2	54.0	53.2	50.2	45.4	42.6	40.2
10/04/2025 23:15:01	10/04/2025 23:30:01	00:15:00	50.8	58.4	55.6	54.3	53.5	50.0	45.7	44.3	41.6
10/04/2025 23:30:01	10/04/2025 23:45:01	00:15:00	50.4	59.6	56.4	54.1	53.0	49.4	45.4	44.1	42.4
10/04/2025 23:45:01	11/04/2025 00:00:01	00:15:00	49.8	57.4	55.0	53.8	53.0	48.7	41.4	37.4	34.1
11/04/2025 00:00:01	11/04/2025 00:15:01	00:15:00	50.6	58.7	55.6	54.1	53.2	49.8	45.2	42.9	38.8
11/04/2025 00:15:01	11/04/2025 00:30:01	00:15:00	49.6	58.8	55.3	53.5	52.6	48.8	37.9	36.0	32.4
11/04/2025 00:30:01	11/04/2025 00:45:01	00:15:00	50.4	58.2	56.0	54.6	53.6	49.4	39.8	33.2	30.8
11/04/2025 00:45:02	11/04/2025 01:00:02	00:15:00	48.9	60.0	55.7	53.3	52.1	47.7	40.8	38.6	35.6
11/04/2025 01:00:01	11/04/2025 01:15:01	00:15:00	44.9	53.1	50.9	49.6	48.6	43.2	35.6	33.2	29.8
11/04/2025 01:15:01	11/04/2025 01:30:01	00:15:00	46.6	56.9	52.1	50.9	50.2	45.1	35.9	33.3	31.8
11/04/2025 01:30:01	11/04/2025 01:45:01	00:15:00	43.8	58.6	52.2	49.9	48.2	39.3	28.0	27.1	25.5
11/04/2025 01:45:02	11/04/2025 02:00:02	00:15:00	44.3	52.4	50.4	48.9	47.9	42.6	36.1	33.4	31.1
11/04/2025 02:00:01	11/04/2025 02:15:01	00:15:00	45.9	55.1	52.9	50.7	49.0	44.5	38.7	37.3	35.3
11/04/2025 02:15:01	11/04/2025 02:30:01	00:15:00	48.9	57.7	55.9	54.8	53.1	46.4	37.7	34.8	32.5
11/04/2025 02:30:01	11/04/2025 02:45:01	00:15:00	48.7	57.8	55.9	54.3	53.0	46.3	37.3	35.9	34.7
11/04/2025 02:45:02	11/04/2025 03:00:02	00:15:00	50.3	58.7	56.1	54.9	53.9	48.5	38.2	36.4	34.2
11/04/2025 03:00:01	11/04/2025 03:15:01	00:15:00	51.5	58.3	56.6	55.1	54.4	50.7	43.1	40.6	37.3
11/04/2025 03:15:01	11/04/2025 03:30:01	00:15:00	52.5	61.7	58.7	56.7	55.6	51.1	46.2	44.1	42.1
11/04/2025 03:30:01	11/04/2025 03:45:01	00:15:00	48.6	57.4	54.7	53.3	52.4	47.2	37.4	33.6	30.1
11/04/2025 03:45:02	11/04/2025 04:00:02	00:15:00	49.3	58.4	55.5	53.6	52.5	48.1	41.0	39.5	37.7
11/04/2025 04:00:01	11/04/2025 04:15:01	00:15:00	48.9	58.0	56.0	54.1	52.8	46.9	37.5	36.4	34.6
11/04/2025 04:15:01	11/04/2025 04:30:01	00:15:00	49.7	58.7	56.7	54.5	52.9	48.1	39.4	37.1	33.5

ReportId

11/04/2025 04:30:02	11/04/2025 04:45:02	00:15:00	51.8	60.3	56.9	55.2	54.4	51.1	45.5	42.6	38.7
11/04/2025 04:45:01	11/04/2025 05:00:01	00:15:00	50.0	73.1	55.6	53.9	52.9	48.6	43.1	41.0	39.0
11/04/2025 05:00:01	11/04/2025 05:15:01	00:15:00	52.9	62.4	58.7	57.0	56.1	51.8	44.7	42.6	38.1
11/04/2025 05:15:02	11/04/2025 05:30:02	00:15:00	53.3	63.6	59.3	57.1	56.1	52.3	48.0	46.9	45.1
11/04/2025 05:30:01	11/04/2025 05:45:01	00:15:00	54.7	66.0	60.7	58.4	57.3	53.7	50.3	49.2	47.2
11/04/2025 05:45:01	11/04/2025 06:00:01	00:15:00	55.6	65.2	61.0	59.1	58.0	54.7	51.8	51.1	49.9
11/04/2025 06:00:01	11/04/2025 06:15:01	00:15:00	56.7	63.6	61.2	59.7	58.9	56.1	53.0	52.2	50.8
11/04/2025 06:15:02	11/04/2025 06:30:02	00:15:00	58.2	65.3	62.4	60.9	60.3	57.9	54.6	53.6	51.7
11/04/2025 06:30:01	11/04/2025 06:45:01	00:15:00	57.6	63.6	61.0	59.9	59.4	57.3	55.0	54.5	53.5
11/04/2025 06:45:01	11/04/2025 07:00:01	00:15:00	59.4	72.3	64.9	62.3	61.1	58.7	55.6	55.0	54.2
11/04/2025 07:00:01	11/04/2025 07:15:01	00:15:00	58.7	64.9	61.9	60.9	60.3	58.4	56.5	56.0	55.0
11/04/2025 07:15:01	11/04/2025 07:30:01	00:15:00	58.9	64.7	63.1	61.3	60.5	58.5	56.5	55.9	55.0
11/04/2025 07:30:01	11/04/2025 07:45:01	00:15:00	59.1	67.7	63.2	61.1	60.6	58.8	56.5	55.9	54.6
11/04/2025 07:45:01	11/04/2025 08:00:01	00:15:00	58.5	62.9	61.5	60.5	60.1	58.2	56.6	56.2	55.3
11/04/2025 08:00:01	11/04/2025 08:15:01	00:15:00	57.1	62.8	59.8	58.9	58.5	56.8	55.2	54.8	53.8
11/04/2025 08:15:01	11/04/2025 08:30:01	00:15:00	55.0	61.2	57.3	56.6	56.3	54.9	53.0	52.4	50.9
11/04/2025 08:30:01	11/04/2025 08:45:01	00:15:00	54.0	58.1	56.8	55.9	55.5	53.7	51.7	51.2	50.4
11/04/2025 08:45:02	11/04/2025 09:00:02	00:15:00	52.5	58.1	56.1	55.1	54.3	52.1	50.0	49.5	48.5
11/04/2025 09:00:01	11/04/2025 09:15:01	00:15:00	51.6	60.5	54.8	53.9	53.2	51.3	48.8	48.0	46.7
11/04/2025 09:15:02	11/04/2025 09:30:02	00:15:00	49.5	55.6	53.1	51.8	51.1	49.1	47.1	46.5	45.5
11/04/2025 09:30:01	11/04/2025 09:45:01	00:15:00	49.2	57.2	52.6	51.6	51.1	48.7	46.9	46.4	45.4
11/04/2025 09:45:01	11/04/2025 10:00:01	00:15:00	49.6	57.8	53.7	52.3	51.7	49.2	46.1	45.1	43.7
11/04/2025 10:00:01	11/04/2025 10:15:01	00:15:00	49.6	57.6	53.7	52.2	51.6	49.4	46.0	44.7	42.8
11/04/2025 10:15:01	11/04/2025 10:30:01	00:15:00	49.8	56.4	54.1	52.6	51.9	49.4	46.2	45.0	42.2
11/04/2025 10:30:01	11/04/2025 10:45:01	00:15:00	48.4	54.3	52.4	51.1	50.5	48.1	44.5	43.1	40.5
11/04/2025 10:45:01	11/04/2025 11:00:01	00:15:00	48.9	57.9	53.5	51.9	51.1	48.4	45.3	44.2	42.2

ReportId

11/04/2025 11:00:02	11/04/2025 11:15:02	00:15:00	48.7	61.6	56.0	52.0	51.1	47.6	43.7	42.5	39.8
11/04/2025 11:15:01	11/04/2025 11:30:01	00:15:00	47.4	55.2	51.9	50.4	49.6	46.8	44.0	43.2	41.2
11/04/2025 11:30:01	11/04/2025 11:45:01	00:15:00	49.4	57.9	54.2	52.9	52.0	48.5	45.3	44.5	43.3
11/04/2025 11:45:01	11/04/2025 12:00:01	00:15:00	50.5	56.1	54.4	53.2	52.5	50.0	47.5	46.7	45.7
11/04/2025 12:00:02	11/04/2025 12:15:02	00:15:00	49.9	58.6	54.5	53.0	52.1	49.2	46.3	45.2	43.9
11/04/2025 12:15:01	11/04/2025 12:30:01	00:15:00	50.3	56.2	53.8	52.7	52.1	49.8	47.8	47.3	46.2
11/04/2025 12:30:02	11/04/2025 12:45:02	00:15:00	50.5	57.3	54.3	53.1	52.5	50.0	47.8	47.0	45.7
11/04/2025 12:45:01	11/04/2025 13:00:01	00:15:00	50.7	57.9	55.1	53.9	53.2	49.9	46.6	45.8	43.8
11/04/2025 13:00:01	11/04/2025 13:15:01	00:15:00	51.8	59.4	55.8	54.4	53.7	51.5	48.7	48.1	46.7
11/04/2025 13:15:01	11/04/2025 13:30:01	00:15:00	52.0	58.1	55.9	54.6	53.9	51.8	48.8	48.2	47.5
11/04/2025 13:30:02	11/04/2025 13:45:02	00:15:00	52.5	60.3	56.9	55.1	54.4	51.9	49.6	48.9	46.7
11/04/2025 13:45:01	11/04/2025 14:00:01	00:15:00	53.3	66.2	59.6	56.1	55.1	52.5	49.7	49.0	47.7
11/04/2025 14:00:01	11/04/2025 14:15:01	00:15:00	51.8	57.7	55.9	54.5	53.8	51.4	48.7	48.1	46.8
11/04/2025 14:15:01	11/04/2025 14:30:01	00:15:00	52.6	60.3	57.8	55.8	54.6	51.8	49.7	49.0	47.9
11/04/2025 14:30:02	11/04/2025 14:45:02	00:15:00	53.1	59.3	56.9	56.0	55.3	52.6	49.9	48.8	46.8
11/04/2025 14:45:01	11/04/2025 15:00:01	00:15:00	53.1	59.7	56.5	55.5	54.9	52.9	50.1	49.2	47.4
11/04/2025 15:00:01	11/04/2025 15:15:01	00:15:00	53.2	59.6	56.8	55.8	55.2	52.9	49.7	48.4	46.8
11/04/2025 15:15:01	11/04/2025 15:30:01	00:15:00	53.6	68.6	58.0	56.1	55.4	53.0	50.8	50.2	48.7
11/04/2025 15:30:02	11/04/2025 15:45:02	00:15:00	52.1	61.7	56.7	55.4	54.6	51.5	47.6	46.8	45.7
11/04/2025 15:45:01	11/04/2025 16:00:01	00:15:00	53.0	62.0	57.2	55.9	55.2	52.5	49.3	47.7	44.6
11/04/2025 16:00:01	11/04/2025 16:15:01	00:15:00	53.9	64.9	57.7	56.3	55.7	53.5	50.8	49.9	48.1
11/04/2025 16:15:02	11/04/2025 16:27:58	00:12:56	54.2	80.8	61.0	57.8	56.0	52.2	49.3	48.2	46.1

ReportId

NMP3

Start: 2025-04-07 14:04:12

End: 2025-04-09 14:25:29

Meter located in cereal crop field

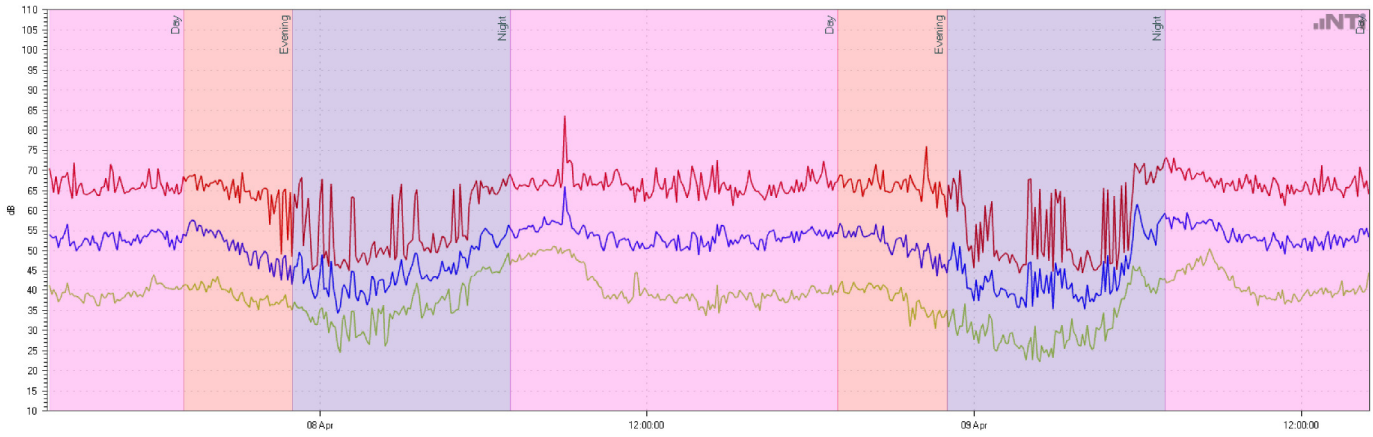
Configuration

Device Info: XL2, SNo. A2A-08898-E0, FW4.71 Type Approved

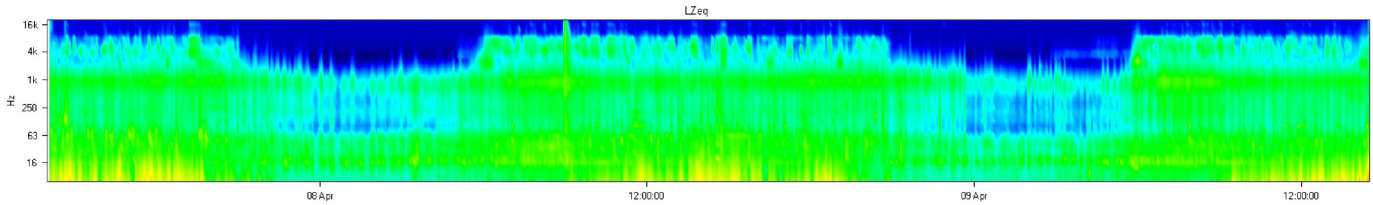
Mic Type: NTi Audio M2230, SNo. 5062, User calibrated 2025-04-07 13:29, WP30(h)

Mic Sensitivity: 40.9 mV/Pa

Range: 0 - 100 dB



LAFmax_dt LAFmin_dt LAeq_dt



Results

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
Recorded	**2025-04-07 14:04:12**	**2 00:21:17**	**83.4**	**22.1**	**52.7**		
Project Result		**2 00:21:17**	**83.4**	**22.1**	**52.7**	**57.0**	**37.9**

Markers

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
Evening (2)		**08:00:00**	**75.9**	**30.3**	**52.4**	**57.1**	**40.0**
Day (3)		**1 00:20:29**	**83.4**	**33.4**	**54.2**	**58.2**	**42.0**
Night (2)		**16:00:00**	**72.7**	**22.1**	**49.0**	**50.5**	**33.9**
Unmarked		**00:00:48**	**70.5**	**41.0**	**53.8**	**58.6**	**43.9**

Audit Intervals

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
15'	**2025-04-07 14:00:00**	**00:10:48**	**70.5**	**38.7**	**53.2**	**57.3**	**43.5**
15'	**2025-04-07 14:15:00**	**00:15:00**	**68.4**	**37.0**	**52.5**	**57.0**	**40.7**
15'	**2025-04-07 14:30:00**	**00:15:00**	**69.4**	**39.1**	**54.9**	**58.9**	**44.6**
15'	**2025-04-07 14:45:00**	**00:15:00**	**71.9**	**38.4**	**51.7**	**55.8**	**40.9**
15'	**2025-04-07 15:00:00**	**00:15:00**	**66.8**	**37.3**	**50.7**	**54.9**	**40.2**
15'	**2025-04-07 15:15:00**	**00:15:00**	**64.1**	**36.6**	**52.7**	**57.4**	**41.8**
15'	**2025-04-07 15:30:00**	**00:15:00**	**65.3**	**37.7**	**52.4**	**57.0**	**40.9**
15'	**2025-04-07 15:45:00**	**00:15:00**	**65.8**	**36.0**	**51.3**	**56.8**	**39.8**
15'	**2025-04-07 16:00:00**	**00:15:00**	**67.9**	**37.9**	**54.0**	**58.1**	**42.4**
15'	**2025-04-07 16:15:00**	**00:15:00**	**71.4**	**36.6**	**53.7**	**57.6**	**41.3**
15'	**2025-04-07 16:30:00**	**00:15:00**	**68.4**	**37.1**	**52.7**	**57.4**	**40.9**
15'	**2025-04-07 16:45:00**	**00:15:00**	**64.5**	**38.2**	**52.3**	**57.1**	**41.9**
15'	**2025-04-07 17:00:00**	**00:15:00**	**65.6**	**38.2**	**52.2**	**56.6**	**41.8**
15'	**2025-04-07 17:15:00**	**00:15:00**	**67.0**	**38.2**	**53.0**	**56.8**	**42.1**
15'	**2025-04-07 17:30:00**	**00:15:00**	**70.4**	**39.5**	**53.7**	**58.6**	**43.0**
15'	**2025-04-07 17:45:00**	**00:15:00**	**65.7**	**41.5**	**54.7**	**59.0**	**45.7**
15'	**2025-04-07 18:00:00**	**00:15:00**	**70.5**	**41.3**	**54.7**	**58.8**	**44.5**
15'	**2025-04-07 18:15:00**	**00:15:00**	**66.9**	**40.3**	**53.1**	**57.8**	**43.5**
15'	**2025-04-07 18:30:00**	**00:15:00**	**66.5**	**40.0**	**52.3**	**57.1**	**43.3**
15'	**2025-04-07 18:45:00**	**00:15:00**	**68.3**	**39.9**	**52.9**	**57.6**	**43.2**
15'	**2025-04-07 19:00:00**	**00:15:00**	**68.6**	**39.7**	**55.3**	**60.3**	**44.3**
15'	**2025-04-07 19:15:00**	**00:15:00**	**69.0**	**39.7**	**56.6**	**60.8**	**44.5**
15'	**2025-04-07 19:30:00**	**00:15:00**	**68.5**	**40.2**	**55.4**	**59.9**	**45.0**

15'	2025-04-07 19:45:00	00:15:00	66.8	39.4	54.9	59.2	44.0
15'	2025-04-07 20:00:00	00:15:00	67.3	41.8	54.2	58.9	45.4
15'	2025-04-07 20:15:00	00:15:00	67.6	40.1	53.6	58.2	44.1
15'	2025-04-07 20:30:00	00:15:00	65.9	39.2	51.4	55.1	42.4
15'	2025-04-07 20:45:00	00:15:00	67.8	37.2	51.7	55.6	41.1
15'	2025-04-07 21:00:00	00:15:00	69.3	37.2	50.3	54.0	41.2
15'	2025-04-07 21:15:00	00:15:00	64.9	35.5	47.7	47.9	39.0
15'	2025-04-07 21:30:00	00:15:00	64.9	35.0	48.7	52.6	39.2
15'	2025-04-07 21:45:00	00:15:00	65.6	37.4	49.0	51.4	40.7
15'	2025-04-07 22:00:00	00:15:00	65.1	35.9	47.1	48.4	40.3
15'	2025-04-07 22:15:00	00:15:00	65.2	36.1	46.7	46.5	39.7
15'	2025-04-07 22:30:00	00:15:00	65.3	37.4	47.2	48.0	40.4
15'	2025-04-07 22:45:00	00:15:00	64.5	34.8	43.8	44.4	37.8
15'	2025-04-07 23:00:00	00:15:00	66.8	35.3	47.5	47.1	39.6
15'	2025-04-07 23:15:00	00:15:00	68.2	34.6	45.1	44.2	37.6
15'	2025-04-07 23:30:00	00:15:00	63.0	31.8	42.8	43.4	36.4
15'	2025-04-07 23:45:00	00:15:00	61.8	31.3	40.9	42.4	34.6
15'	2025-04-08 00:00:00	00:15:00	67.7	32.6	45.2	43.2	37.3
15'	2025-04-08 00:15:00	00:15:00	66.6	29.1	43.7	43.0	33.7
15'	2025-04-08 00:30:00	00:15:00	46.6	24.2	36.2	39.6	28.6
15'	2025-04-08 00:45:00	00:15:00	47.8	29.4	40.5	43.3	36.0
15'	2025-04-08 01:00:00	00:15:00	63.3	27.1	43.4	43.7	34.6
15'	2025-04-08 01:15:00	00:15:00	48.6	28.0	38.6	42.0	32.2
15'	2025-04-08 01:30:00	00:15:00	49.3	27.1	38.3	41.6	31.5
15'	2025-04-08 01:45:00	00:15:00	52.3	26.4	41.8	45.2	33.1
15'	2025-04-08 02:00:00	00:15:00	50.7	28.6	41.3	44.5	34.8
15'	2025-04-08 02:15:00	00:15:00	51.1	26.0	40.8	44.0	31.2
15'	2025-04-08 02:30:00	00:15:00	63.8	32.7	42.7	43.7	37.0
15'	2025-04-08 02:45:00	00:15:00	66.5	33.6	45.4	45.4	38.0
15'	2025-04-08 03:00:00	00:15:00	51.5	33.7	42.7	45.5	37.7
15'	2025-04-08 03:15:00	00:15:00	63.9	35.2	47.5	50.1	41.0
15'	2025-04-08 03:30:00	00:15:00	65.1	32.9	46.6	49.0	39.7
15'	2025-04-08 03:45:00	00:15:00	50.7	34.0	43.2	45.8	38.8
15'	2025-04-08 04:00:00	00:15:00	54.3	33.6	42.8	45.4	37.8
15'	2025-04-08 04:15:00	00:15:00	53.5	36.6	45.2	48.5	40.4
15'	2025-04-08 04:30:00	00:15:00	53.0	37.4	45.3	47.6	41.6
15'	2025-04-08 04:45:00	00:15:00	65.3	34.1	45.1	47.0	38.6
15'	2025-04-08 05:00:00	00:15:00	66.6	35.1	48.3	50.1	42.2
15'	2025-04-08 05:15:00	00:15:00	61.0	36.0	47.6	50.0	42.2
15'	2025-04-08 05:30:00	00:15:00	67.3	43.4	50.9	51.2	46.4
15'	2025-04-08 05:45:00	00:15:00	67.3	44.7	53.3	57.0	47.8
15'	2025-04-08 06:00:00	00:15:00	66.0	45.4	54.8	58.3	49.0

15'	2025-04-08 06:15:00	00:15:00	65.8	44.2	52.3	55.8	47.3
15'	2025-04-08 06:30:00	00:15:00	67.8	44.3	52.4	54.9	47.5
15'	2025-04-08 06:45:00	00:15:00	69.0	46.3	55.4	58.6	49.8
15'	2025-04-08 07:00:00	00:15:00	67.5	47.1	53.7	56.2	49.4
15'	2025-04-08 07:15:00	00:15:00	66.4	47.6	55.3	59.7	50.0
15'	2025-04-08 07:30:00	00:15:00	67.8	48.4	55.7	59.8	50.6
15'	2025-04-08 07:45:00	00:15:00	68.0	48.7	55.3	58.7	51.4
15'	2025-04-08 08:00:00	00:15:00	67.5	49.8	56.8	60.3	51.9
15'	2025-04-08 08:15:00	00:15:00	67.2	50.1	56.7	60.4	52.0
15'	2025-04-08 08:30:00	00:15:00	70.2	49.2	57.1	60.8	52.4
15'	2025-04-08 08:45:00	00:15:00	83.4	49.2	62.0	61.8	52.3
15'	2025-04-08 09:00:00	00:15:00	72.5	48.2	58.2	62.3	51.3
15'	2025-04-08 09:15:00	00:15:00	66.6	47.4	54.6	58.1	49.9
15'	2025-04-08 09:30:00	00:15:00	69.1	46.5	55.8	59.7	49.3
15'	2025-04-08 09:45:00	00:15:00	68.6	42.3	54.0	58.3	45.9
15'	2025-04-08 10:00:00	00:15:00	66.7	40.8	53.6	57.6	44.5
15'	2025-04-08 10:15:00	00:15:00	69.4	37.8	50.9	55.6	41.4
15'	2025-04-08 10:30:00	00:15:00	67.3	37.6	54.3	58.8	42.0
15'	2025-04-08 10:45:00	00:15:00	70.3	37.6	52.1	56.4	41.1
15'	2025-04-08 11:00:00	00:15:00	66.8	37.7	52.8	57.7	41.8
15'	2025-04-08 11:15:00	00:15:00	66.1	36.5	51.3	55.5	41.2
15'	2025-04-08 11:30:00	00:15:00	65.6	38.3	51.4	55.3	42.9
15'	2025-04-08 11:45:00	00:15:00	68.0	39.1	51.0	54.7	43.0
15'	2025-04-08 12:00:00	00:15:00	65.2	38.0	51.0	55.9	41.5
15'	2025-04-08 12:15:00	00:15:00	70.6	37.4	54.1	58.6	41.5
15'	2025-04-08 12:30:00	00:15:00	68.0	37.4	51.8	56.8	40.7
15'	2025-04-08 12:45:00	00:15:00	68.6	37.0	52.3	56.8	40.7
15'	2025-04-08 13:00:00	00:15:00	70.0	36.6	51.6	55.7	40.3
15'	2025-04-08 13:15:00	00:15:00	66.1	37.8	50.6	54.9	40.7
15'	2025-04-08 13:30:00	00:15:00	71.1	37.1	53.3	57.5	41.0
15'	2025-04-08 13:45:00	00:15:00	69.4	35.0	52.4	56.6	40.1
15'	2025-04-08 14:00:00	00:15:00	65.3	33.4	51.5	56.5	38.5
15'	2025-04-08 14:15:00	00:15:00	71.2	34.8	51.8	56.2	38.7
15'	2025-04-08 14:30:00	00:15:00	72.5	34.0	55.6	59.4	42.8
15'	2025-04-08 14:45:00	00:15:00	67.0	36.5	53.9	58.5	41.6
15'	2025-04-08 15:00:00	00:15:00	66.4	37.9	52.3	56.6	42.3
15'	2025-04-08 15:15:00	00:15:00	65.0	38.2	52.8	57.5	41.6
15'	2025-04-08 15:30:00	00:15:00	70.1	37.4	53.4	58.0	41.6
15'	2025-04-08 15:45:00	00:15:00	67.3	35.5	51.4	56.1	40.1
15'	2025-04-08 16:00:00	00:15:00	64.7	34.7	51.9	56.6	39.3
15'	2025-04-08 16:15:00	00:15:00	66.3	37.8	53.1	57.5	41.1
15'	2025-04-08 16:30:00	00:15:00	66.4	38.3	54.1	58.7	42.8

15'	2025-04-08 16:45:00	00:15:00	67.1	37.1	52.8	57.2	40.6
15'	2025-04-08 17:00:00	00:15:00	64.8	36.8	53.2	57.9	40.7
15'	2025-04-08 17:15:00	00:15:00	67.5	37.6	53.9	58.4	41.3
15'	2025-04-08 17:30:00	00:15:00	66.9	37.4	53.9	58.8	41.5
15'	2025-04-08 17:45:00	00:15:00	71.0	38.0	54.9	59.4	43.1
15'	2025-04-08 18:00:00	00:15:00	70.2	39.2	54.8	59.3	43.4
15'	2025-04-08 18:15:00	00:15:00	72.2	38.9	54.2	58.5	43.1
15'	2025-04-08 18:30:00	00:15:00	68.9	38.9	54.3	59.3	42.9
15'	2025-04-08 18:45:00	00:15:00	67.2	38.6	54.0	58.5	42.3
15'	2025-04-08 19:00:00	00:15:00	68.8	39.4	55.5	60.1	44.0
15'	2025-04-08 19:15:00	00:15:00	67.8	39.0	53.8	58.2	43.3
15'	2025-04-08 19:30:00	00:15:00	67.3	40.2	54.7	59.3	43.8
15'	2025-04-08 19:45:00	00:15:00	67.5	39.2	54.4	59.2	43.4
15'	2025-04-08 20:00:00	00:15:00	68.0	40.8	53.8	58.2	44.7
15'	2025-04-08 20:15:00	00:15:00	71.5	40.2	54.8	59.0	44.2
15'	2025-04-08 20:30:00	00:15:00	70.0	39.7	53.7	57.2	43.5
15'	2025-04-08 20:45:00	00:15:00	64.6	37.1	50.4	54.7	40.6
15'	2025-04-08 21:00:00	00:15:00	67.2	38.5	52.3	56.9	42.2
15'	2025-04-08 21:15:00	00:15:00	67.7	37.2	52.7	57.1	41.9
15'	2025-04-08 21:30:00	00:15:00	68.7	30.8	49.5	50.7	38.8
15'	2025-04-08 21:45:00	00:15:00	65.8	32.4	50.6	54.0	39.9
15'	2025-04-08 22:00:00	00:15:00	75.9	33.9	48.9	48.8	38.0
15'	2025-04-08 22:15:00	00:15:00	68.1	33.0	49.4	49.7	37.0
15'	2025-04-08 22:30:00	00:15:00	67.2	30.3	47.7	47.9	36.6
15'	2025-04-08 22:45:00	00:15:00	64.0	33.1	45.6	47.1	36.9
15'	2025-04-08 23:00:00	00:15:00	67.9	30.6	49.6	52.6	35.6
15'	2025-04-08 23:15:00	00:15:00	70.0	28.5	48.8	48.9	34.9
15'	2025-04-08 23:30:00	00:15:00	62.0	29.2	44.4	46.9	34.4
15'	2025-04-08 23:45:00	00:15:00	51.2	27.5	39.4	42.6	33.0
15'	2025-04-09 00:00:00	00:15:00	57.1	26.5	40.7	43.2	32.8
15'	2025-04-09 00:15:00	00:15:00	61.3	28.3	42.0	44.3	33.6
15'	2025-04-09 00:30:00	00:15:00	62.2	25.4	42.9	44.6	35.4
15'	2025-04-09 00:45:00	00:15:00	50.1	24.7	39.2	43.3	29.0
15'	2025-04-09 01:00:00	00:15:00	49.4	26.6	39.4	42.8	32.0
15'	2025-04-09 01:15:00	00:15:00	48.9	26.5	38.9	42.2	32.9
15'	2025-04-09 01:30:00	00:15:00	46.7	25.4	36.7	39.8	29.0
15'	2025-04-09 01:45:00	00:15:00	67.6	22.4	42.8	42.8	27.7
15'	2025-04-09 02:00:00	00:15:00	67.7	22.4	44.5	44.1	25.1
15'	2025-04-09 02:15:00	00:15:00	65.3	22.1	42.4	43.1	25.1
15'	2025-04-09 02:30:00	00:15:00	60.3	23.2	41.3	44.0	26.3
15'	2025-04-09 02:45:00	00:15:00	65.4	23.1	44.4	42.0	29.7
15'	2025-04-09 03:00:00	00:15:00	64.6	29.1	43.6	43.2	33.9

15'	2025-04-09 03:15:00	00:15:00	63.2	25.4	42.8	44.6	31.2
15'	2025-04-09 03:30:00	00:15:00	49.3	28.5	39.7	42.9	34.1
15'	2025-04-09 03:45:00	00:15:00	48.4	25.9	37.7	40.7	30.1
15'	2025-04-09 04:00:00	00:15:00	49.9	26.2	38.5	42.4	30.7
15'	2025-04-09 04:15:00	00:15:00	46.2	25.1	38.0	41.2	32.0
15'	2025-04-09 04:30:00	00:15:00	65.5	29.9	43.7	42.2	35.7
15'	2025-04-09 04:45:00	00:15:00	65.1	27.2	44.8	43.8	34.2
15'	2025-04-09 05:00:00	00:15:00	63.4	30.4	42.9	43.3	35.3
15'	2025-04-09 05:15:00	00:15:00	66.2	35.1	44.4	45.1	39.6
15'	2025-04-09 05:30:00	00:15:00	66.9	38.7	47.6	48.9	41.9
15'	2025-04-09 05:45:00	00:15:00	71.6	45.0	58.8	63.0	49.4
15'	2025-04-09 06:00:00	00:15:00	71.7	43.1	57.2	62.1	46.9
15'	2025-04-09 06:15:00	00:15:00	69.6	39.2	54.0	56.9	44.3
15'	2025-04-09 06:30:00	00:15:00	71.1	38.9	54.3	54.8	43.1
15'	2025-04-09 06:45:00	00:15:00	72.7	42.4	58.4	63.7	46.2
15'	2025-04-09 07:00:00	00:15:00	73.1	41.6	57.3	61.5	45.5
15'	2025-04-09 07:15:00	00:15:00	73.0	42.3	58.0	62.5	47.4
15'	2025-04-09 07:30:00	00:15:00	70.5	43.9	56.5	60.8	47.6
15'	2025-04-09 07:45:00	00:15:00	70.4	45.1	57.7	62.1	48.7
15'	2025-04-09 08:00:00	00:15:00	69.1	45.9	56.5	60.8	49.1
15'	2025-04-09 08:15:00	00:15:00	69.6	46.1	56.9	61.0	50.0
15'	2025-04-09 08:30:00	00:15:00	68.2	48.7	57.4	61.2	51.6
15'	2025-04-09 08:45:00	00:15:00	67.3	45.2	55.8	60.1	50.0
15'	2025-04-09 09:00:00	00:15:00	67.9	44.3	54.5	59.1	47.5
15'	2025-04-09 09:15:00	00:15:00	67.4	42.2	53.7	58.3	44.8
15'	2025-04-09 09:30:00	00:15:00	68.0	40.4	53.2	57.6	43.1
15'	2025-04-09 09:45:00	00:15:00	68.9	39.4	53.1	57.7	42.9
15'	2025-04-09 10:00:00	00:15:00	67.6	38.5	53.4	58.1	43.1
15'	2025-04-09 10:15:00	00:15:00	68.8	35.9	52.7	57.6	41.2
15'	2025-04-09 10:30:00	00:15:00	66.3	37.5	52.0	56.5	40.8
15'	2025-04-09 10:45:00	00:15:00	68.2	37.5	52.8	57.5	40.8
15'	2025-04-09 11:00:00	00:15:00	67.3	37.4	51.9	56.7	40.5
15'	2025-04-09 11:15:00	00:15:00	66.3	36.3	52.1	56.6	39.7
15'	2025-04-09 11:30:00	00:15:00	66.3	36.7	51.7	56.0	41.1
15'	2025-04-09 11:45:00	00:15:00	65.4	36.9	51.2	55.7	40.7
15'	2025-04-09 12:00:00	00:15:00	67.1	38.4	52.1	56.1	42.3
15'	2025-04-09 12:15:00	00:15:00	67.9	38.4	52.1	56.7	41.6
15'	2025-04-09 12:30:00	00:15:00	71.2	38.9	52.0	56.9	42.0
15'	2025-04-09 12:45:00	00:15:00	68.4	38.7	53.0	57.7	42.3
15'	2025-04-09 13:00:00	00:15:00	68.2	38.0	52.4	56.9	41.9
15'	2025-04-09 13:15:00	00:15:00	65.3	38.9	52.7	57.3	43.0
15'	2025-04-09 13:30:00	00:15:00	65.7	38.4	52.1	56.8	41.4

15'	2025-04-09 13:45:00	00:15:00	68.6	38.8	52.8	56.8	42.5
15'	2025-04-09 14:00:00	00:15:00	70.9	39.4	54.5	58.7	42.9
15'	2025-04-09 14:15:00	00:10:29	67.3	39.4	54.7	59.4	43.3

NMP4

Start: 2025-04-07 13:20:06

End: 2025-04-09 13:44:16

SLM located in a rapeseed oil field.

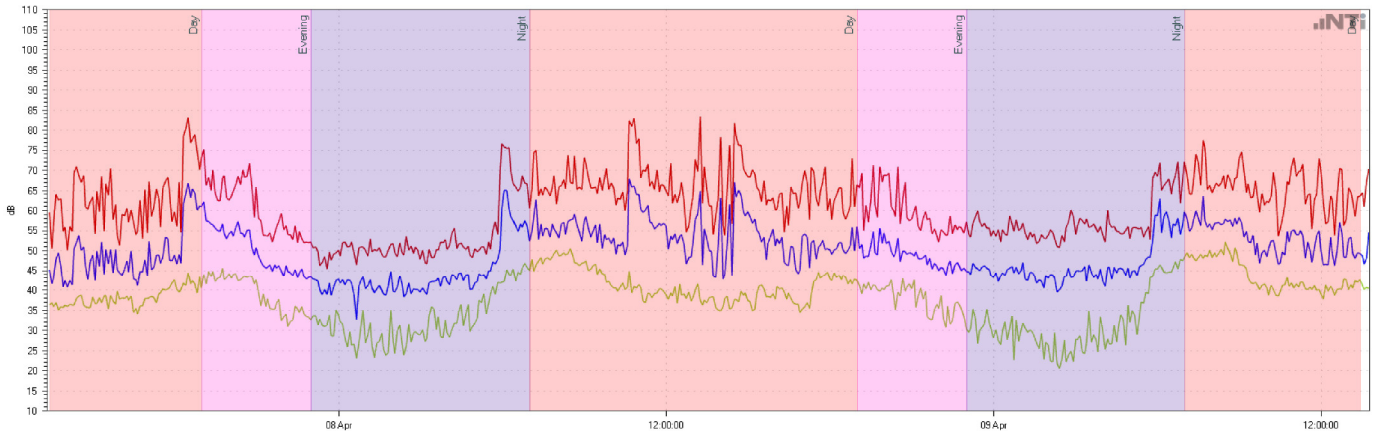
Configuration

Device Info: XL2, SNo. A2A-16311-E0, FW4.21 Type Approved

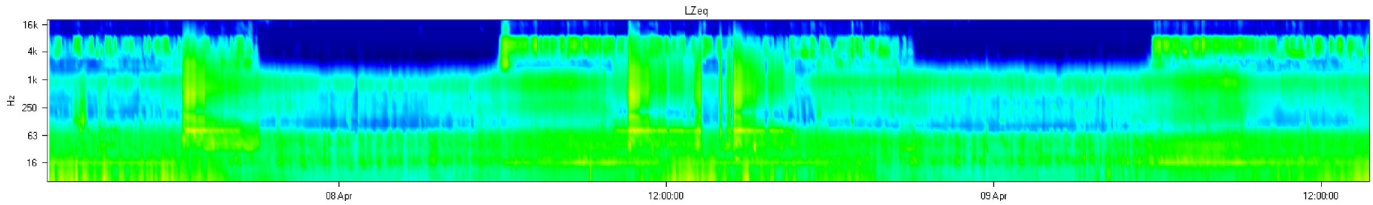
Mic Type: NTi Audio M2230, SNo. 8567, User calibrated 2025-04-07 12:59, WP30(h)

Mic Sensitivity: 38.7 mV/Pa

Range: 0 - 100 dB



LAFmax_dt LAFmin_dt LAeq_dt



Results

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
Recorded	**2025-04-07 13:20:06**	**2 00:24:10**	**83.3**	**20.5**	**54.4**		
Project Result		**2 00:24:10**	**83.3**	**20.5**	**54.4**	**56.6**	**37.9**

Markers

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
Day (3)		**1 00:00:00**	**83.3**	**33.8**	**56.3**	**58.3**	**41.7**
Evening (2)		**08:00:00**	**75.1**	**30.3**	**51.6**	**54.5**	**40.7**
Night (2)		**16:00:00**	**76.5**	**20.5**	**51.2**	**51.8**	**33.0**
Unmarked		**00:24:10**	**70.3**	**36.1**	**49.7**	**51.2**	**41.6**

Audit Intervals

Type	Start	Duration	LAFmax [dB]	LAFmin [dB]	LAeq [dB]	LAeq	
						10.0% [dB]	90.0% [dB]
15'	**2025-04-07 13:15:00**	**00:09:54**	**59.3**	**36.1**	**43.6**	**45.5**	**38.8**
15'	**2025-04-07 13:30:00**	**00:15:00**	**63.9**	**35.0**	**47.4**	**52.1**	**38.9**
15'	**2025-04-07 13:45:00**	**00:15:00**	**62.8**	**35.5**	**43.4**	**45.4**	**37.6**
15'	**2025-04-07 14:00:00**	**00:15:00**	**55.9**	**35.7**	**41.4**	**43.2**	**38.1**
15'	**2025-04-07 14:15:00**	**00:15:00**	**70.9**	**36.1**	**52.2**	**56.6**	**39.9**
15'	**2025-04-07 14:30:00**	**00:15:00**	**68.5**	**35.7**	**49.4**	**52.4**	**39.6**
15'	**2025-04-07 14:45:00**	**00:15:00**	**63.3**	**35.5**	**46.8**	**50.3**	**38.8**
15'	**2025-04-07 15:00:00**	**00:15:00**	**64.6**	**36.5**	**47.0**	**50.9**	**39.6**
15'	**2025-04-07 15:15:00**	**00:15:00**	**68.4**	**36.7**	**49.8**	**52.4**	**40.8**
15'	**2025-04-07 15:30:00**	**00:15:00**	**70.4**	**35.1**	**47.8**	**50.7**	**39.6**
15'	**2025-04-07 15:45:00**	**00:15:00**	**61.4**	**36.4**	**47.4**	**50.1**	**40.9**
15'	**2025-04-07 16:00:00**	**00:15:00**	**60.4**	**37.7**	**45.7**	**47.2**	**40.6**
15'	**2025-04-07 16:15:00**	**00:15:00**	**60.0**	**34.2**	**46.8**	**51.7**	**38.9**
15'	**2025-04-07 16:30:00**	**00:15:00**	**62.5**	**33.8**	**43.0**	**46.2**	**37.1**
15'	**2025-04-07 16:45:00**	**00:15:00**	**65.1**	**36.0**	**45.5**	**46.3**	**40.4**
15'	**2025-04-07 17:00:00**	**00:15:00**	**67.2**	**37.9**	**48.9**	**48.1**	**41.3**
15'	**2025-04-07 17:15:00**	**00:15:00**	**65.4**	**36.8**	**48.2**	**50.4**	**41.4**
15'	**2025-04-07 17:30:00**	**00:15:00**	**68.2**	**39.8**	**51.9**	**56.2**	**43.8**
15'	**2025-04-07 17:45:00**	**00:15:00**	**65.0**	**40.4**	**48.0**	**50.4**	**44.0**
15'	**2025-04-07 18:00:00**	**00:15:00**	**67.0**	**39.3**	**47.6**	**49.3**	**43.3**
15'	**2025-04-07 18:15:00**	**00:15:00**	**83.1**	**41.0**	**64.6**	**66.6**	**46.7**
15'	**2025-04-07 18:30:00**	**00:15:00**	**78.8**	**41.5**	**64.3**	**68.2**	**49.2**
15'	**2025-04-07 18:45:00**	**00:15:00**	**74.4**	**39.2**	**60.6**	**64.7**	**47.4**

15'	2025-04-07 19:00:00	00:15:00	75.1	41.5	59.5	62.5	47.9
15'	2025-04-07 19:15:00	00:15:00	70.0	42.1	56.1	59.7	48.4
15'	2025-04-07 19:30:00	00:15:00	67.9	42.9	55.4	59.0	48.2
15'	2025-04-07 19:45:00	00:15:00	68.6	42.5	53.7	56.9	47.3
15'	2025-04-07 20:00:00	00:15:00	66.2	42.8	54.7	58.0	48.8
15'	2025-04-07 20:15:00	00:15:00	70.0	42.2	55.4	59.3	47.9
15'	2025-04-07 20:30:00	00:15:00	71.7	43.0	54.5	59.5	47.3
15'	2025-04-07 20:45:00	00:15:00	65.8	41.4	50.1	51.7	45.9
15'	2025-04-07 21:00:00	00:15:00	57.9	36.0	47.4	50.3	42.5
15'	2025-04-07 21:15:00	00:15:00	54.2	35.3	45.9	48.6	41.0
15'	2025-04-07 21:30:00	00:15:00	55.7	35.1	45.6	48.4	39.7
15'	2025-04-07 21:45:00	00:15:00	59.2	32.3	44.9	48.4	36.6
15'	2025-04-07 22:00:00	00:15:00	56.1	30.8	45.1	48.8	35.5
15'	2025-04-07 22:15:00	00:15:00	56.2	32.5	44.0	47.0	38.1
15'	2025-04-07 22:30:00	00:15:00	54.7	33.9	44.4	47.4	38.0
15'	2025-04-07 22:45:00	00:15:00	52.1	32.5	43.1	46.6	37.1
15'	2025-04-07 23:00:00	00:15:00	50.8	31.3	42.4	45.2	36.7
15'	2025-04-07 23:15:00	00:15:00	48.4	30.8	39.6	42.2	35.2
15'	2025-04-07 23:30:00	00:15:00	49.6	28.6	39.9	43.0	34.0
15'	2025-04-07 23:45:00	00:15:00	50.1	28.3	42.0	45.0	35.7
15'	2025-04-08 00:00:00	00:15:00	52.0	27.9	41.8	45.1	34.5
15'	2025-04-08 00:15:00	00:15:00	52.0	25.8	42.1	46.1	30.4
15'	2025-04-08 00:30:00	00:15:00	50.6	22.8	38.7	43.2	26.3
15'	2025-04-08 00:45:00	00:15:00	50.9	26.8	42.1	45.3	35.1
15'	2025-04-08 01:00:00	00:15:00	52.8	26.1	41.4	44.7	33.5
15'	2025-04-08 01:15:00	00:15:00	50.7	23.0	40.2	44.2	28.5
15'	2025-04-08 01:30:00	00:15:00	48.9	23.7	39.2	43.2	28.5
15'	2025-04-08 01:45:00	00:15:00	51.6	24.2	42.2	46.6	30.7
15'	2025-04-08 02:00:00	00:15:00	51.8	24.0	41.5	45.5	31.1
15'	2025-04-08 02:15:00	00:15:00	53.5	23.6	39.8	44.2	28.2
15'	2025-04-08 02:30:00	00:15:00	51.1	26.9	40.4	43.8	32.5
15'	2025-04-08 02:45:00	00:15:00	50.9	28.7	39.8	42.7	32.8
15'	2025-04-08 03:00:00	00:15:00	50.0	27.1	39.5	43.2	32.0
15'	2025-04-08 03:15:00	00:15:00	50.2	33.5	41.9	44.5	37.4
15'	2025-04-08 03:30:00	00:15:00	52.1	28.4	42.0	45.1	34.7
15'	2025-04-08 03:45:00	00:15:00	52.6	27.9	42.8	46.5	34.9
15'	2025-04-08 04:00:00	00:15:00	55.6	28.2	43.0	46.6	34.7
15'	2025-04-08 04:15:00	00:15:00	51.9	31.6	43.7	46.9	37.7
15'	2025-04-08 04:30:00	00:15:00	51.0	31.1	43.3	46.3	37.4
15'	2025-04-08 04:45:00	00:15:00	50.5	29.6	40.7	44.1	34.1
15'	2025-04-08 05:00:00	00:15:00	50.9	32.9	43.3	45.8	39.0
15'	2025-04-08 05:15:00	00:15:00	52.0	33.8	43.9	46.3	39.8

15'	2025-04-08 05:30:00	00:15:00	57.1	38.7	46.2	48.9	42.2
15'	2025-04-08 05:45:00	00:15:00	76.5	41.6	56.1	60.5	45.5
15'	2025-04-08 06:00:00	00:15:00	75.8	42.0	63.8	68.3	50.1
15'	2025-04-08 06:15:00	00:15:00	69.7	42.0	57.3	61.6	48.0
15'	2025-04-08 06:30:00	00:15:00	68.5	43.9	55.7	60.3	47.5
15'	2025-04-08 06:45:00	00:15:00	66.7	45.0	55.6	60.2	49.6
15'	2025-04-08 07:00:00	00:15:00	74.8	44.7	59.8	62.2	49.5
15'	2025-04-08 07:15:00	00:15:00	65.4	46.6	54.5	58.2	50.3
15'	2025-04-08 07:30:00	00:15:00	65.7	47.6	54.8	58.2	50.5
15'	2025-04-08 07:45:00	00:15:00	68.5	48.3	55.4	57.9	51.9
15'	2025-04-08 08:00:00	00:15:00	67.5	48.6	55.8	59.8	51.3
15'	2025-04-08 08:15:00	00:15:00	73.7	48.7	56.4	60.0	51.8
15'	2025-04-08 08:30:00	00:15:00	73.4	46.8	57.9	60.9	50.8
15'	2025-04-08 08:45:00	00:15:00	73.0	46.2	55.2	58.1	49.0
15'	2025-04-08 09:00:00	00:15:00	71.6	45.0	56.3	60.3	48.1
15'	2025-04-08 09:15:00	00:15:00	65.7	43.8	54.7	59.1	48.0
15'	2025-04-08 09:30:00	00:15:00	68.2	43.9	54.3	59.1	46.3
15'	2025-04-08 09:45:00	00:15:00	70.5	41.1	52.5	57.1	44.5
15'	2025-04-08 10:00:00	00:15:00	65.6	39.5	51.5	55.8	44.3
15'	2025-04-08 10:15:00	00:15:00	64.5	39.9	50.8	53.2	45.2
15'	2025-04-08 10:30:00	00:15:00	82.3	39.2	65.2	66.8	45.3
15'	2025-04-08 10:45:00	00:15:00	82.8	40.5	64.7	69.2	45.8
15'	2025-04-08 11:00:00	00:15:00	70.0	36.8	59.9	65.1	45.5
15'	2025-04-08 11:15:00	00:15:00	71.5	38.0	58.9	62.6	47.0
15'	2025-04-08 11:30:00	00:15:00	70.0	39.0	56.1	60.3	44.6
15'	2025-04-08 11:45:00	00:15:00	66.3	38.8	56.3	60.3	45.1
15'	2025-04-08 12:00:00	00:15:00	71.6	37.5	52.4	56.7	42.3
15'	2025-04-08 12:15:00	00:15:00	64.2	36.6	53.2	57.8	44.1
15'	2025-04-08 12:30:00	00:15:00	66.9	37.8	51.7	56.4	43.0
15'	2025-04-08 12:45:00	00:15:00	63.2	37.1	49.7	52.9	42.4
15'	2025-04-08 13:00:00	00:15:00	83.3	37.4	61.6	62.8	41.8
15'	2025-04-08 13:15:00	00:15:00	70.8	36.2	52.8	57.1	39.5
15'	2025-04-08 13:30:00	00:15:00	61.0	37.9	48.5	53.7	40.8
15'	2025-04-08 13:45:00	00:15:00	78.2	34.6	58.5	57.2	39.1
15'	2025-04-08 14:00:00	00:15:00	65.0	35.8	47.7	48.9	39.7
15'	2025-04-08 14:15:00	00:15:00	81.7	35.2	63.3	65.4	39.5
15'	2025-04-08 14:30:00	00:15:00	78.4	36.9	64.0	69.4	42.3
15'	2025-04-08 14:45:00	00:15:00	70.4	37.4	59.3	64.5	42.1
15'	2025-04-08 15:00:00	00:15:00	70.1	34.6	57.7	62.4	39.0
15'	2025-04-08 15:15:00	00:15:00	65.7	39.0	54.0	58.2	44.2
15'	2025-04-08 15:30:00	00:15:00	67.4	38.2	51.5	56.5	41.3
15'	2025-04-08 15:45:00	00:15:00	63.0	37.6	53.6	58.3	42.4

15'	2025-04-08 16:00:00	00:15:00	64.2	40.2	52.6	56.9	44.4
15'	2025-04-08 16:15:00	00:15:00	61.0	37.6	46.5	49.5	40.9
15'	2025-04-08 16:30:00	00:15:00	65.7	36.3	49.6	54.0	39.2
15'	2025-04-08 16:45:00	00:15:00	66.7	34.3	49.6	54.5	38.3
15'	2025-04-08 17:00:00	00:15:00	69.7	35.4	52.3	56.4	40.8
15'	2025-04-08 17:15:00	00:15:00	70.7	38.8	51.2	51.4	43.5
15'	2025-04-08 17:30:00	00:15:00	67.1	42.9	51.5	54.1	46.7
15'	2025-04-08 17:45:00	00:15:00	70.9	42.6	50.1	51.9	46.5
15'	2025-04-08 18:00:00	00:15:00	63.7	42.2	49.9	52.1	46.3
15'	2025-04-08 18:15:00	00:15:00	65.6	42.5	51.3	54.4	46.4
15'	2025-04-08 18:30:00	00:15:00	61.3	41.5	50.2	52.8	46.1
15'	2025-04-08 18:45:00	00:15:00	72.9	41.4	54.5	58.3	45.9
15'	2025-04-08 19:00:00	00:15:00	69.2	38.9	50.2	51.2	44.4
15'	2025-04-08 19:15:00	00:15:00	62.6	39.9	49.6	52.1	44.7
15'	2025-04-08 19:30:00	00:15:00	71.3	39.9	51.8	52.2	45.0
15'	2025-04-08 19:45:00	00:15:00	70.9	39.5	54.2	58.4	45.6
15'	2025-04-08 20:00:00	00:15:00	69.1	40.9	51.4	53.2	45.3
15'	2025-04-08 20:15:00	00:15:00	70.9	35.0	50.7	51.7	44.1
15'	2025-04-08 20:30:00	00:15:00	67.0	38.3	49.0	50.9	44.4
15'	2025-04-08 20:45:00	00:15:00	58.2	40.2	49.1	51.7	44.7
15'	2025-04-08 21:00:00	00:15:00	61.1	35.5	48.7	51.2	43.6
15'	2025-04-08 21:15:00	00:15:00	59.6	37.5	48.2	51.0	43.3
15'	2025-04-08 21:30:00	00:15:00	57.9	32.5	46.7	50.0	38.0
15'	2025-04-08 21:45:00	00:15:00	55.4	35.1	45.9	48.9	40.6
15'	2025-04-08 22:00:00	00:15:00	55.1	30.7	45.1	48.1	37.2
15'	2025-04-08 22:15:00	00:15:00	58.5	31.5	46.0	49.1	38.7
15'	2025-04-08 22:30:00	00:15:00	56.3	36.4	46.5	49.5	40.3
15'	2025-04-08 22:45:00	00:15:00	57.2	30.3	45.0	48.7	37.3
15'	2025-04-08 23:00:00	00:15:00	56.8	29.4	45.3	49.2	35.8
15'	2025-04-08 23:15:00	00:15:00	59.7	26.5	45.3	49.2	33.9
15'	2025-04-08 23:30:00	00:15:00	56.7	30.7	45.8	49.1	37.3
15'	2025-04-08 23:45:00	00:15:00	55.6	28.0	44.0	47.7	35.6
15'	2025-04-09 00:00:00	00:15:00	55.1	26.3	43.4	47.8	31.2
15'	2025-04-09 00:15:00	00:15:00	55.1	27.5	44.4	48.4	33.8
15'	2025-04-09 00:30:00	00:15:00	58.6	22.5	45.3	49.3	32.3
15'	2025-04-09 00:45:00	00:15:00	57.5	27.1	45.0	49.6	33.9
15'	2025-04-09 01:00:00	00:15:00	56.7	29.3	44.6	48.7	34.0
15'	2025-04-09 01:15:00	00:15:00	54.5	28.4	44.1	48.0	32.6
15'	2025-04-09 01:30:00	00:15:00	53.8	25.3	42.0	46.4	30.4
15'	2025-04-09 01:45:00	00:15:00	53.7	22.6	42.5	47.3	26.6
15'	2025-04-09 02:00:00	00:15:00	55.2	22.0	43.4	48.1	25.2
15'	2025-04-09 02:15:00	00:15:00	53.6	20.5	40.1	45.4	22.6

15'	2025-04-09 02:30:00	00:15:00	57.0	22.1	44.1	48.7	25.8
15'	2025-04-09 02:45:00	00:15:00	60.0	22.0	43.8	48.5	25.6
15'	2025-04-09 03:00:00	00:15:00	57.9	24.4	44.9	49.4	31.8
15'	2025-04-09 03:15:00	00:15:00	57.8	24.1	45.1	49.7	30.9
15'	2025-04-09 03:30:00	00:15:00	56.6	26.9	43.8	48.3	32.7
15'	2025-04-09 03:45:00	00:15:00	56.0	24.5	43.6	47.1	33.3
15'	2025-04-09 04:00:00	00:15:00	60.0	25.1	44.6	48.6	31.1
15'	2025-04-09 04:15:00	00:15:00	56.0	26.5	44.4	48.3	32.8
15'	2025-04-09 04:30:00	00:15:00	54.7	30.4	45.3	49.2	36.5
15'	2025-04-09 04:45:00	00:15:00	55.9	26.1	44.2	47.6	36.0
15'	2025-04-09 05:00:00	00:15:00	55.7	28.7	44.4	48.1	36.8
15'	2025-04-09 05:15:00	00:15:00	55.7	33.6	46.2	49.2	40.8
15'	2025-04-09 05:30:00	00:15:00	56.0	38.9	48.1	50.4	43.7
15'	2025-04-09 05:45:00	00:15:00	69.3	43.2	57.4	62.7	47.8
15'	2025-04-09 06:00:00	00:15:00	71.9	44.5	59.9	64.0	49.6
15'	2025-04-09 06:15:00	00:15:00	67.8	44.2	57.3	61.3	48.3
15'	2025-04-09 06:30:00	00:15:00	72.1	45.4	57.0	60.7	49.2
15'	2025-04-09 06:45:00	00:15:00	72.1	47.3	57.3	61.3	50.9
15'	2025-04-09 07:00:00	00:15:00	68.8	48.2	56.2	59.9	51.7
15'	2025-04-09 07:15:00	00:15:00	73.9	47.3	58.5	61.6	51.7
15'	2025-04-09 07:30:00	00:15:00	77.3	48.0	60.3	62.1	52.3
15'	2025-04-09 07:45:00	00:15:00	66.2	48.2	55.8	59.3	52.1
15'	2025-04-09 08:00:00	00:15:00	66.7	48.4	56.7	60.2	52.3
15'	2025-04-09 08:15:00	00:15:00	68.6	48.7	57.0	60.0	52.8
15'	2025-04-09 08:30:00	00:15:00	68.7	47.2	56.9	59.8	53.0
15'	2025-04-09 08:45:00	00:15:00	72.8	46.3	57.7	61.4	51.1
15'	2025-04-09 09:00:00	00:15:00	74.5	45.4	55.2	58.1	48.4
15'	2025-04-09 09:15:00	00:15:00	66.5	41.5	52.6	57.7	45.4
15'	2025-04-09 09:30:00	00:15:00	67.4	39.9	49.7	51.4	44.0
15'	2025-04-09 09:45:00	00:15:00	64.0	40.5	49.3	53.0	43.6
15'	2025-04-09 10:00:00	00:15:00	69.3	38.5	51.8	55.9	43.6
15'	2025-04-09 10:15:00	00:15:00	64.8	38.4	47.8	49.9	42.8
15'	2025-04-09 10:30:00	00:15:00	67.1	41.1	51.9	54.2	45.1
15'	2025-04-09 10:45:00	00:15:00	73.0	40.4	54.1	58.7	45.3
15'	2025-04-09 11:00:00	00:15:00	69.6	40.7	54.3	58.6	45.1
15'	2025-04-09 11:15:00	00:15:00	71.4	40.0	51.8	56.2	44.5
15'	2025-04-09 11:30:00	00:15:00	64.0	39.9	49.4	51.5	43.9
15'	2025-04-09 11:45:00	00:15:00	72.8	38.9	53.3	57.3	43.6
15'	2025-04-09 12:00:00	00:15:00	62.0	37.6	46.4	48.4	43.2
15'	2025-04-09 12:15:00	00:15:00	63.5	38.6	50.6	55.8	43.6
15'	2025-04-09 12:30:00	00:15:00	70.4	40.0	54.6	57.9	43.5
15'	2025-04-09 12:45:00	00:15:00	65.5	39.9	50.3	51.6	44.5

15'	2025-04-09 13:00:00	00:15:00	64.4	40.5	50.7	54.7	44.6
15'	2025-04-09 13:15:00	00:15:00	64.3	41.0	49.1	52.4	44.5
15'	2025-04-09 13:30:00	00:14:16	70.3	40.1	50.8	51.5	43.6

APPENDIX 12.1

(Superseded by Appendix 12.4)

APPENDIX 12.2

(Superseded by Appendix 12.5)