Appendix 2. Project Description

2.4. Pavement Analysis (AtkinsRealis 2025)

TECHNICAL NOTE

Cashla Peaker Plant Haulage Routes Pavement Analysis

SUBJECT	PROJECT NO.	DATE
Pavement Structural Analysis	100114485	November 2025

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Client signoff

Client	Bord Gáis Energy		
Project	Cashla Peaker Plant Haulage Routes Pavement Analysis	**Project No.**	100114485
Client signature / date			

1. Introduction

1.1 Background and Purpose

Bord Gáis Energy is proposing a gas-powered peaker plant near the west of Athenry, County Galway. Referred to as the Cashla Peaker Plant, this plant aims to provide flexible power generation and is specifically designed to facilitate the continued expansion of renewable energy while ensuring a stable and reliable electricity system.

Bord Gáis Energy plan to transport heavy equipment, including a generator weighing approximately 380 tons, to the site via the public road network along national, regional, and local roads. Due to the combined exceptional loads of the girder trucks and cargo, concerns in relation to the structural capacity of the pavements along the haulage routes were raised. AtkinsRéalis has been commissioned to assess the structural adequacy of the existing road pavement on the haulage routes along which the exceptional load associated with the Cashla Peaker Plant equipment will be transported.

1.2 Scope

Pavement investigation was carried out in order to determine the structural capacity of the existing road pavements along the proposed haulage routes, and determine their suitability to accommodate the traffic loading associated with the proposed delivery of equipment to the Cashla Peaker Plant site. Pavement Management Services (PMS) Ltd. were commissioned to conduct Falling Weight Deflectometer (FWD) testing, rotary coring, and a Ground Penetrating Radar (GPR) survey on the existing road pavements along the proposed haulage routes outlined below in **Table 1**. The pavement investigations on the regional and local roads listed below were completed in September 2025. Pavement investigation was not carried out on the motorway / national road network as it was considered that these have indeterminate long life pavements that have sufficient structural capacity to accommodate the traffic loading associated with the proposed exceptional load.

Table 1 below summarises the road sections that were tested along the proposed haulage routes to the Cashla Peaker Plant site.

Table 1 - Details of Sections Tested

Section		Direction	Survey Length (m)
1	R381 Motorway to Carnmore Cross (Route 1)	Northbound	1,100
2	R339 Carnmore (Route 1)	Eastbound	6,755
3	L3103 (Route 1)	Southbound	3,590
4	L3103 Motorway to Site (Route 2)	Southbound	4,100
5	L3103 Motorway to Site (Route 2)	Northbound	4,140
6	R339 Ballybane to Port	Westbound	3,420
7	R339 Ballybane to Port	WB turn lane to R339	42
8	R339 Ballybane to Port	WB turn to R339	40
9	R339 Ballybane to Port	EB turn to R399	37
10	R339 Ballybane to Port	Turn to N6 WB	40
11	R339 Ballybane to Port	Turn to N6 EB	30

2. Analysis of Pavement Testing Results

2.1 FWD Test Data

Falling Weight Deflectometer (FWD) testing was conducted to evaluate the structural capacity of the pavement. FWD testing involves the application of a known load to the road pavement and the measurement of actual deflections in the pavement at given distances from the centre of the load plate.

The FWD survey was carried out in accordance with TII DN-PAV-03060 'Test Method for the Structural Evaluation of Road Pavements' and TII DN-PAV-03061 'Guidelines for the Structural Evaluation of Road Pavements'.

The following output deflection parameters are measured in order to evaluate the pavement structurally:

- Central Deflection (D1) = overall pavement structural condition
- Surface Curvature Index (SCI) = indication of load spreading in the upper pavement layers
- Outer Deflection (D7) = indication of strength within the subgrade layers

For the 11 no. road sections shown in **Table 1**, the following FWD results were given:

- All the sections had an overall pavement structural condition (D1) described as good.
- All the sections indicated good load spreading in the upper pavement layers (SCI).
- A portion of approx. 1,160m along Section 6 (Westbound R399 Ballybane to Port) had a stiff to moderate categorisation for the subgrade strength (D7).
- For all other sections, the categorisation for the strength of the subgrade layers (D7) was indicated as stiff.

Refer to Appendix A and Appendix B for the FWD Level 1 and FWD Level 2 reports issued by PMS.

2.2 GPR Test Data & Coring

A Ground Penetrating Radar (GPR) survey and rotary pavement coring was also conducted by PMS Ltd. This provides information on the existing pavement layer thicknesses of the various road sections tested, and a general indication of their material types. Pavement coring results were used to verify the overall pavement thickness and identify the individual bituminous pavement layer thicknesses and material types in the different road sections.

The GPR survey and pavement coring concluded that the upper bituminous layer thicknesses ranged between 75 mm and 225 mm. The upper granular layer thickness, based on the GPR survey, ranges from 225 mm and 300 mm across the various road sections tested.

Refer to Appendix C for the GPR survey report issued by PMS Ltd., which includes the pavement core logs.

2.3 Vehicle Loading and Pavement Impact Assessment

2.3.1 Estimated Vehicle Loading

For the purpose of this technical note, the pavement will be analysed by converting the loading of the heavy-lift transporter and the expected payload to an equivalent standard axle (80kN). A GKT FAKTOR 5/5.5 heavy-lift transporter will be used to transport equipment to the Cashla Peaker Plant along the designated haulage routes. Technical data for the GKT FAKTOR 5 is included in Appendix D.

When PMS Ltd. conducted their investigation, the exact vehicle configuration had not yet been confirmed and thus the assessment was based on the following loading scenario provided by the project team:

- GKT Faktor 5 with 28 axles, a trailer weight of 208 tonnes, and a payload of 332 tonnes, giving a gross vehicle weight of 540 tonnes.

The expected weight of the heaviest payload subsequently increased to 380 tonnes. Therefore, a trailer weight of 208 tonne and a worst case scenario payload of 380 tonne was assessed as part of this study, a total cargo gross weight of 588 tonne. In addition with the two towing truck units, which have a total weight of 66 tonne (33 tonne each), the total weight equates to 654 tonnes.

For the pavement design and analysis carried out by PMS, the vehicle loading has been expressed in terms of Equivalent Standard Axles (ESAs). A standard ESA is defined as an 80 kN axle load with twin tyres at each end and a tyre pressure of 565 kPa. Based on the information provided, PMS considered a single vehicle pass for the assessment.

From the manufacturer's technical data, the maximum axle load for the 28-axle Faktor 5 is approximately 19 tonnes (≈190 kN), distributed over eight tyres per axle. This load is 2.375 times greater than a standard 80 kN axle load. Applying the fourth power law to estimate the relative pavement damage, the following calculations were done:

Damage Factor per Axle = $(2.375)^4 \approx 32$ ESAs per axle

With 28 axles, this equates to:

28 × 32 = 896 ESAs for the trailer and payload

Including the additional axles of the towing tractor units (8 axles), the total estimated loading per vehicle pass is:

36 × 32 = 1,152 ESAs for the tractor units, trailer and payload

This was conservatively rounded up to 1,200 ESAs (0.0012 MSA) for a single pass for the purpose of the analysis.

2.3.2 Residual Life

The residual life of each pavement section outlined in **Table 1** was analysed using TII's pavement analysis toolkit, the Irish Analytical Pavement Design Method (IAPDM). The IAPDM software uses the measured stiffness moduli from the FWD testing, and layer thicknesses from the GPR survey and pavement coring, to analyse the structural capacity of the

pavement to accommodate the estimated traffic loading, and to determine the expected residual life of the pavement, measured in million standard axles (msa).

According to the FWD Level 2 report (Appendix A) by PMS, each assessed route is considered to have sufficient structural capacity to carry the required loading. The report does, however, note that only the heavy-lift transporter (tractor unit, trailer, and payload) was considered for the assessment and the analysis did not take into account any background traffic loading from other vehicles that would use the routes on a day to day basis. It should also be noted that PMS assessed the structural capacity of the road considering only a single load (consisting of a trailer, payload and trucking units) and a single pass (travelling in a single direction over the entire haulage route).

3. Assessment of Pavement Capacity under Abnormal Loads

3.1 Methodology

To assess the structural capacity of the existing pavement along the proposed haulage routes, the methodology adopted by AtkinsRéalis follows the general approach previously established by PMS, in accordance with TII Publication DN-PAV-03021, Analytic Pavement & Foundation Design, and implemented through the Irish Analytic Pavement Design Method (IAPDM) software.

The additional assessment by AtkinsRéalis was carried out as the expected payload increased subsequent to PMS completed their analysis, as recorded in the FWD Level 2 report. Additionally, the number of loads per pass and number of trips/passes are expected to be increased on the haulage routes. AtkinsRéalis has incorporated the increased loads and trips/passes as part of our assessment to analyse the structural capacity of the route.

The key steps used as part of the evaluation process are outlined below.

3.1.1 Review and Interpretation of Existing Pavement Investigation Data

The Falling Weight Deflectometer (FWD) testing and Ground Penetrating Radar (GPR) surveys previously undertaken by PMS were reviewed in detail.

The FWD Level 1 and Level 2 Analysis Reports were examined to establish pavement layer stiffnesses, characteristic deflections, and estimated residual pavement life.

The GPR Survey outputs were reviewed to confirm pavement layer thicknesses and to identify any localised variability in construction.

3.1.2 Structural Assessment Methodology

The determination framework and analytical assumptions utilised by PMS were reviewed by AtkinsRéalis to ensure consistency and uniformity when comparing results. This included:

- The pavement layer modelling approach.
- Material stiffness parameters extracted from FWD back-calculation.
- The determination of traffic loads.
- Assessment of pavement fatigue, subgrade deformation and residual life.

3.1.3 Heavy Lifter Load Characterisation

The axle configuration and total load of the heavy-lift transporter (HLT) were obtained from the project design team (refer to Appendix D). The imposed axle loads were reviewed against typical pavement loading assumptions (80 kN axle load with twin tyres at each end and a tyre pressure of 565 kPa).

As part of the initial assessment conducted by PMS, the payload was expected to be 332 tonnes. The expected weight of the heaviest payload subsequently increased to 380 tonnes. Therefore, a trailer weight of 208 tonne and a worst case scenario payload of 380 tonne was assessed, totalling a cargo gross weight of 588 tonne. In addition with the two towing truck units, which have a total weight of 66 tonne (33 tonne each), the total weight equates to 654 tonnes.

3.1.4 Determination of Cumulative HLT Traffic Loading (Million Standard Axles – MSA)

The heavy-lift transporter axle loads were converted to an Equivalent Standard Axle (ESA) in accordance with recognised pavement design principles. By converting the weight in tonnes to kilonewton (kN) and applying the fourth power law to convert the loading factor to a damage factor, the axle load effects were normalised to a standard 80 kN axle.

Table 2 - Summary of ESA Calculation

	Tonne	kN	Loading Factor	Damage Factor (ESA per axle)	No. Axles	Total damage over axles (ESA)
HLT (trailer and payload)	588	5,859.84	2.616	46.801	28	1,310.42
1 no. Towing Truck Units	9	89.676	1.121	1.579	2	3.158
	9	89.676	1.121	1.579	2	3.158
	15	149.460	1.868	12.183	4	48.731

Therefore, for 2 no. towing truck units, the total damage over the axles equates to 110.09 ESAs.

All calculations were undertaken using the load data provided resulting in 1,420.52 ESAs.

The total number of ESAs associated with a single heavy-lift transporter pass was calculated and expressed in terms of Million Standard Axles (MSA). This enabled direct comparison of the transporter loading with the residual pavement life derived from the FWD Level 1 and Level 2 analysis.

A total of 1,420.52 ESAs equates to 0.00142 MSA for a single HLT pass.

For this assessment, it was been taken that 3 separate loads (each of 654 tonne) will be travelling over the proposed haulage route a total of 4 times (inbound and outbound to the peaker plant considered as a single pass each). Therefore, the assessment assumes the worst case scenario resulting in a total traffic load of 12 passes x 0.00142 MSA per pass = 0.017 (rounded to 0.02 for the IAPDM analysis).

This is a conservative estimate as it assumes that the HLTs will be fully laden on the return trip from the Peaker Plant, when in reality they will have delivered their payload and will be unladen.

3.2 IAPDM Analysis

The pavement moduli and thicknesses determined from the pavement investigation were analysed in accordance with TII Publication DN-PAV-03021, Analytic Pavement & Foundation Design using the Irish Analytic Pavement Design Method. The IAPDM model outputs the number of standard axles (million standard axles - msa) the pavement is expected to support before reaching the limit of its structural capacity. A summary of the IAPDM analysis results, including the remaining residual life (in msa) for the various regional and local roads along the haulage route, is presented in **Table 3** below.

Table 3 - Summary of IAPDM Analysis

Road and Direction	Chainage	Temp corrected Bit Layer moduli (MPa)	Modelled Bituminous thickness (mm)	Subbase Moduli (MPa)	Modelled Sub-base thickness (mm)	Subgrade Moduli (MPa)	Residual Life (msa)
R381 Motorway to Carnmore Cross (Route 1), NB &SB	0-200	14565	150	400	300	330	32.2
	200-1100	6328	175	400	300	326	12.8
R339 Carnmore (Route 1) EB & WB	5 – 3880	1074	100	400	300	57	0.9
	3880 – 5710	2854	125	400	300	208	1.1
	5710 – 6755	3471	100	400	300	137	0.7
L3103 (Route 1) SB	15 – 2640	3441	100	400	300	145	0.7
	2640 – 3215	4727	225	400	225	375	28.0
	3215 – 3590	942	200	400	300	190	2.2
L3103 (Route 1) NB	0-2810	2447	75	400	300	208	0.6
	2810-3205	4727	225	400	225	375	28.0
	3205-3590	1122	125	400	300	226	0.7
	0 – 2375	3909	100	400	300	138	0.8

L3103 Site to Motorway (Route 2) SB	2375 – 3225	9230	125	400	300	371	6.0
	3225 – 4100	4070	100	400	300	408	1.0
L3103 Motorway to Site (Route 2), NB	0 – 850	2674	125	400	300	388	1.1
	850 - 1735	6320	150	400	300	594	7.3
	1735 - 4140	2558	75	400	300	213	0.6
R339 Ballybane to Port, WB & EB	10 – 1790	4270	150	400	250	182	2.8
	1790 – 2950	3387	150	400	250	132	1.9
	2950 - 3400	2494	175	400	300	200	2.8
R339 Ballybane to Port -WB Turn Lane to R339 **and** EB Turn Lane to R339	1685 – 1727 and 1805-1842	6012	150	400	300	228	5.3
R865 Ballybane to Port - WB Turn Lane to R339 **and Turn to N6 EB &WB**	0 - 40	7959	150	400	300	458	10.5

3.2.1 Determination of Cumulative Traffic Loading along L3103

A further assessment was also undertaken to account for the cumulative effect of the heavy equipment transport as well as the existing background traffic along the routes.

Classified traffic count data collected in February 2025 along the L3103 was reviewed and converted to cumulative traffic loading in accordance with the procedures outlined in TII Publications PE-PAG-02039 and PE-PAG-02017.

The recorded 7-day traffic counts were projected to a 5-year assessment period, resulting in an estimated baseline traffic loading of approximately 0.16 MSA. The previously calculated loading associated with the HLT (determined in section 3.1.4 above) was added to the baseline background traffic. The combined effect of both the background traffic and the proposed haulage operations yields a total projected traffic loading of 0.18 MSA on the L3103 over the 5-year evaluation period.

The design life considered for the IAPDM analysis is 0.18 MSA, as shown above. It should be noted that the design traffic considered in this evaluation included only the traffic loading described above, as data for general traffic volumes on the R381, R339 and R865 was unavailable.

4. Discussion

The IAPDM assessment results for the existing traffic volumes along the L3103 and the expected HLT loading along the proposed haulage routes were reviewed to determine the structural adequacy of the existing pavements. The assessment incorporated pavement stiffness and layer thickness information derived from FWD Level 1 and Level 2 testing and GPR surveys.

From the IAPDM evaluation as summarised in **Table 3**, the residual pavement life values vary across the assessed road sections, ranging from 0.6 MSA up to 32.2 MSA, depending on local pavement construction and subgrade conditions. These values represent the remaining traffic loading (in terms of cumulative million standard axles) that each pavement section can sustain before reaching its structural capacity.

As outlined above in Section 3.1.4, the expected traffic loading for all trips/passes associated with the heavy equipment transport to the Cashla Peaker Plant equates to 0.02msa. Comparing this loading against the residual life for each road section along the haulage route, as outlined in **Table 3**, it can be seen that each road section has sufficient structural capacity to carry the expected loading associated with the heavy equipment transport to the Cashla Peaker Plant.

The calculated loading demand generated by the proposed HLT, including 3 transported loads over four passes of the haulage route, and the surveyed background traffic volumes corresponds to approximately 0.18 MSA over a 5-year period. When compared with the determined residual life values shown in **Table 3** above, the loading contribution of the HLT passes represents only a small proportion of the residual pavement life across all sections of pavement assessed over a 5-year period, and each road section has sufficient structural capacity to carry the cumulative expected loading associated with the heavy equipment transport to the Cashla Peaker Plant as well as the general background traffic along the route, for at least a five year period.

Further analysis of the pavement structure indicate that based on current background traffic levels, and accounting for the loading generated by the proposed heavy equipment transport, it would take approximately 11 years for the anticipated pavement loading to exceed the remaining residual life along the L3103 (the section with the lowest expected residual life).

5. Conclusion & Recommandations

Based on the review of FWD Level 1 and Level 2 pavement evaluation data, GPR survey, and IAPDM structural analysis, it is concluded that the pavement structures along the proposed haulage routes possess adequate residual capacity to withstand the anticipated loading from the heavy lifter transporter passes.

The cumulative loading demand of approximately 0.18 MSA (inclusive of the existing traffic volumes and the expected 3 loads per pass and 4 passes of the HLT) is substantially lower than the residual pavement life determined for each section of the route. As such, no pavement strengthening works are anticipated to be required to facilitate the transport movement, provided that conventional traffic management and operational controls are maintained during the haulage activity.

Appendix A. PMS Level 1 Report

Structural Evaluation of the Cashla Peaker Plant Haulage Routes, Co. Galway

Bord Gáis Energy

August 2025

25/143

Document Control Sheet

Client	Bord Gáis Energy					
Project Title	Structural Evaluation of the Cashla Peaker Plant Haulage Routes, Co. Galway					
Document Title	Falling Weight Deflectometer – Level 1 Report					
Project Ref.	AS25F172+					
This Document Comprises	**DCS**	**TOC**	**Text**	**Tables**	**Figures**	**Appendices**
	1	1	5	5	0	4

Amendment Record

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Revision	Description	Compiled by	Issue Date
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Approved Signatory	Monica Loughnane	Project Engineer	Monica Loughnane

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1. Introduction

PMS Pavement Management Services Ltd. (PMS) were appointed by (Bord Gáis Energy) to carry out a structural evaluation of the Cashla Peaker Plant Haulage Routes, Co. Galway in August 2025. The structural evaluation of the existing pavement construction was completed with a Falling Weight Deflectometer (FWD) survey.

The FWD survey was carried out in accordance with **DN-PAV-03060 '***Test Method for the Structural Evaluation of Road Pavements''* and **DN-PAV-03061** *'Guidelines for the Structural Evaluation of Road Pavements'*

Details of the pavement sections surveyed are given in **Table 1**.

Section		No. Lanes Surveyed	True Direction	Test Interval (m)	Survey Length (m)
1	R381 Motorway to Carnmore Cross (Route 1)	2	NB	25	1100
2	R339 Carnmore (Route 1)	2	EB	25	6755
3	L3103 (Route 1)	2	SB	25	3590
4	L3103 Site to Motorway (Route 2)	1	SB	25	4100
5	L3103 Motorway to Site (Route 2)	1	NB	25	4140
6	R339 Ballybane to Port	2	WB	25	3420
7	R339 Ballybane to Port	1	WB Turn Lane to R339	20	42
8	R865 Ballybane to Port	1	WB Turn to R339	20	40
9	R865 Ballybane to Port	1	EB Turn to R339	20	37
10	R865 Ballybane to Port	1	Turn to N6 WB	20	40
11	R865 Ballybane to Port	1	Turn to N6 EB	15	30

Table 1: Details of Sections Tested

This report describes the structural evaluation methodology and presents the principal deflection results.

2. Structural Evaluation Methodology

2.1. Description of FWD

A Dynatest Model 8000 Series FWD was used to carry out the structural evaluation. In FWD testing, a known load is applied to the pavement and the actual deflections at given distances from the centre of the load plate are measured. The deflected shape of the surface, generated by an FWD impact load depends upon the type, thickness and condition of the construction layers.

There is a deflection-measuring sensor built into the centre of the load plate to measure the central deflection (D1), and a series of further sensors measure pavement deflections at radial distances from the load application. In Ireland, the standard setup is to space the sensors at 300mm intervals; (D1 to D7) at 0, 300, 600, 900, 1200, 1500 and 1800mm from the centre of the load plate.

2.2. Output Parameters

The principal output deflection parameters from the FWD survey are the central deflection (D1), the Surface Curvature Index (SCI) and the outer deflection (D7).

D1 provides an indication of the overall pavement structural condition. Lower D1 results are more desirable from a structural viewpoint, with higher D1 results indicating a poor structural condition.

The SCI is calculated as the difference between the D1 and the D2 deflection readings. High SCI readings would generally indicate poor load spreading ability in the upper pavement layers. ***DN-PAV-03061 'Guidelines for the Structural Evaluation of Road Pavements'*** states that SCI values in excess of 250 microns (normalised to 40kN) indicate poor load spreading ability in the upper pavement layers and are not suitable for bituminous only overlays, as there is a higher risk of premature cracking.

The D7 sensor measures the deflection at 1800mm from the centre of the load plate. At this distance, the influence of the upper pavement layers is negligible and consequently the D7 sensor gives a good indication of the deflection attributable solely to the subgrade layer, at a depth of approximately 2 metres. Higher D7 readings indicate weaker subgrade strengths.

Table 2 shows typical ranges of the D1 deflection results and their associated descriptions for Regional and Local roads in Ireland. **Table 3** and **4** show typical ranges for SCI and D7 deflections and their associated descriptions for roads in Ireland.

D1 Description	Regional/Local Road (microns)
Good	< 300
Good to Poor	300 to 500
Poor to Bad	500 to 800
Bad	> 800

Table 2: Categorisation of D1 Deflection Results

Upper Pavement Description	SCI (microns)
Good	< 150
Good to Poor	150 to 250
Poor to Bad	250 to 400
Bad	> 400

Table 3: Categorisation of SCI Results

Subgrade Description	D7 (microns)
Stiff	< 15
Stiff to Moderate	15 to 30
Moderate to Weak	30 to 45
Weak	> 45

Table 4: Categorisation of D7 Deflection Results

3. Survey Results

The D1, SCI and D7 deflection results are presented in both tabular and graphical format.

Each section is subdivided into homogenous segments based on changes in deflection response and pavement structure (if known). **Table 5** presents the average D1, SCI and D7 results for each segment. A classification of the average deflection results for each segment is also given in Table 5, based on the typical deflection ranges shown in Tables 2, 3 and 4.

Appendix A contains deflection charts of the D1, SCI and D7 deflection results plotted against chainage for each of the sections surveyed.

Appendix B contains the tabulated D1, SCI and D7 results for all test locations on each section. In all cases, the lowest deflection results are the best from a structural viewpoint. Each test location is referenced to linear chainage and ITM co-ordinate systems.

Appendix C contains site operator notes with physical identifiers recorded along the length of each section at the time of testing.

Appendix D contains site maps showing the test locations and extents of each section.

Section		Lane	Chainage (m)	Road Classification	Average D1 (microns)	Description	Average SCI (microns)	Description	Average D7 (microns)	Description
1	R381 Motorway to Carnmore Cross (Route 1)	NB	0 – 200	Regional	42	Good	14	Good	5	Stiff
			200 – 1100		91	Good	38	Good	5	Stiff
		SB	0 – 190		56	Good	20	Good	4	Stiff
			190 – 1085		96	Good	42	Good	6	Stiff
2	R339 Carnmore (Route 1)	EB	5 – 3880	Regional	230	Good	100	Good	5	Stiff
			3880 – 5710		169	Good	63	Good	6	Stiff
			5710 – 6755		239	Good	109	Good	8	Stiff
		WB	0 – 3805		278	Good	136	Good	4	Stiff
			3805 – 5750		220	Good	94	Good	5	Stiff
			5750 – 6755		268	Good	96	Good	8	Stiff
3	L3103 (Route 1)	SB	15 – 2640	Local	222	Good	86	Good	10	Stiff
			2640 – 3215		92	Good	35	Good	7	Stiff
			3215 – 3590		218	Good	88	Good	6	Stiff
		NB	0 – 2810		239	Good	91	Good	9	Stiff
			2810 – 3205		77	Good	25	Good	6	Stiff
			3205 – 3590		248	Good	103	Good	6	Stiff
4	L3103 Site to Motorway (Route 2)	SB	0 – 2375	Local	210	Good	89	Good	5	Stiff
			2375 – 3225		87	Good	38	Good	4	Stiff
			3225 – 4100		191	Good	102	Good	5	Stiff
5	L3103 Motorway to Site (Route 2)	NB	0 – 850	Local	184	Good	98	Good	5	Stiff
			850 – 1735		91	Good	44	Good	3	Stiff
			1735 - 4140		259	Good	131	Good	4	Stiff
6	R339 Ballybane to Port	WB	10 – 1790	Regional	160	Good	76	Good	7	Stiff
			1790 – 2950		267	Good	101	Good	16	Stiff to Moderate
			2950 - 3400		142	Good	61	Good	7	Stiff

Section		Lane	Chainage (m)	Road Classification	Average D1 (microns)	Description	Average SCI (microns)	Description	Average D7 (microns)	Description
6	R339 Ballybane to Port	EB	0 – 1795	Regional	136	Good	63	Good	5	Stiff
			1795 – 2945		161	Good	61	Good	11	Stiff
			2945 – 3420		149	Good	76	Good	5	Stiff
7	R339 Ballybane to Port	WB Turn Lane to R339	1685 – 1727	Regional	182	Good	77	Good	8	Stiff
8	R865 Ballybane to Port	WB Turn to R339	0 – 40	Regional	72	Good	34	Good	4	Stiff
9	R865 Ballybane to Port	EB Turn to R339	1805 - 1842	Regional	132	Good	58	Good	6	Stiff
10	R865 Ballybane to Port	Turn to N6 WB	0 – 40	Regional	92	Good	46	Good	3	Stiff
11	R865 Ballybane to Port	Turn to N6 EB	0 – 30	Regional	75	Good	34	Good	7	Stiff

Table 5: Homogenous Segment Categorisation

Appendix A – Deflection Charts

R381 Motorway to Carnmore Cross

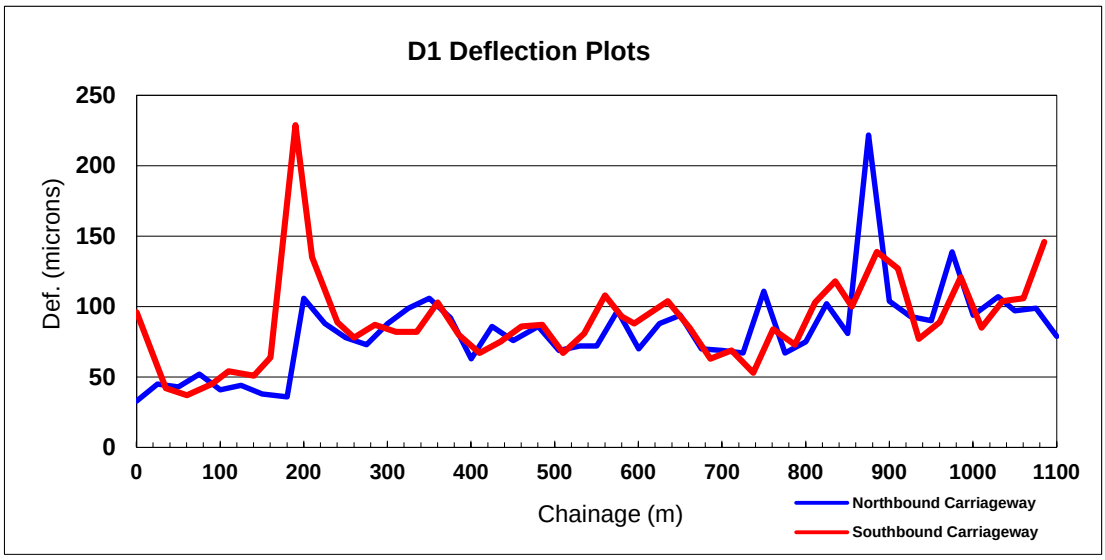


Figure 1: D1 Deflection Plots

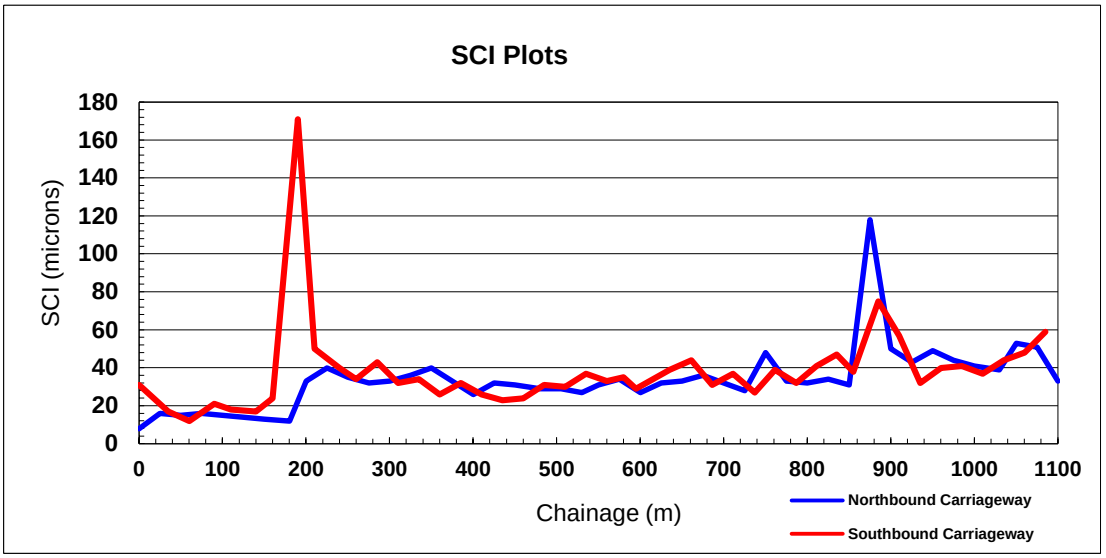


Figure 2: SCI Plots

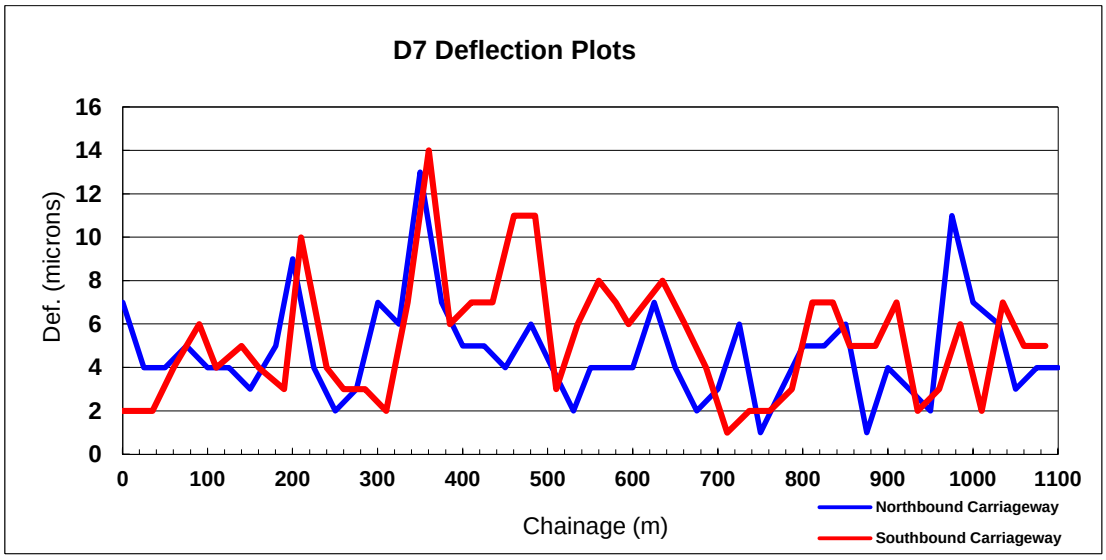


Figure 3: D7 Deflection Plots

R339 Carnmore (Route 1)

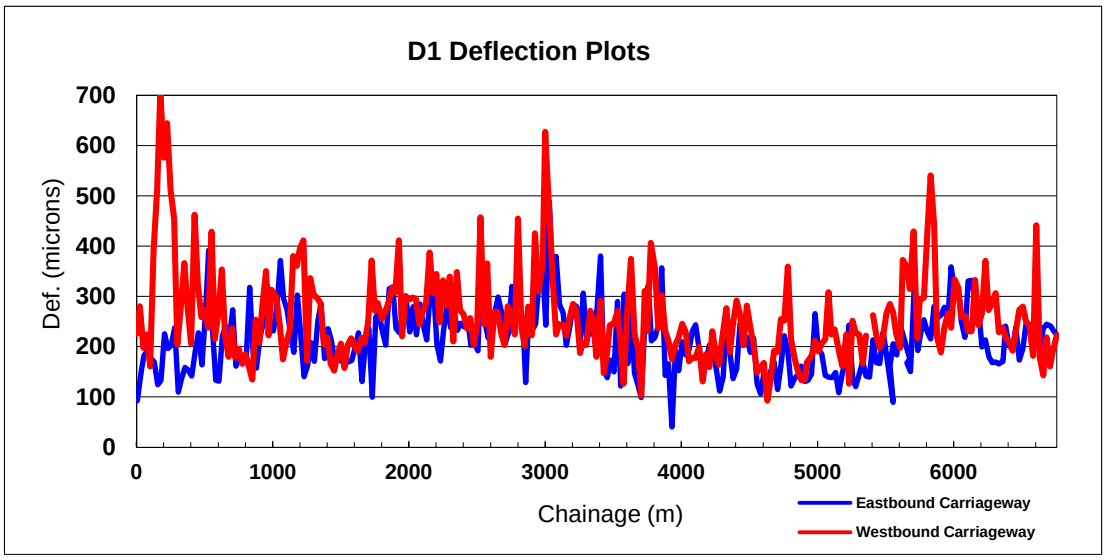


Figure 1: D1 Deflection Plots

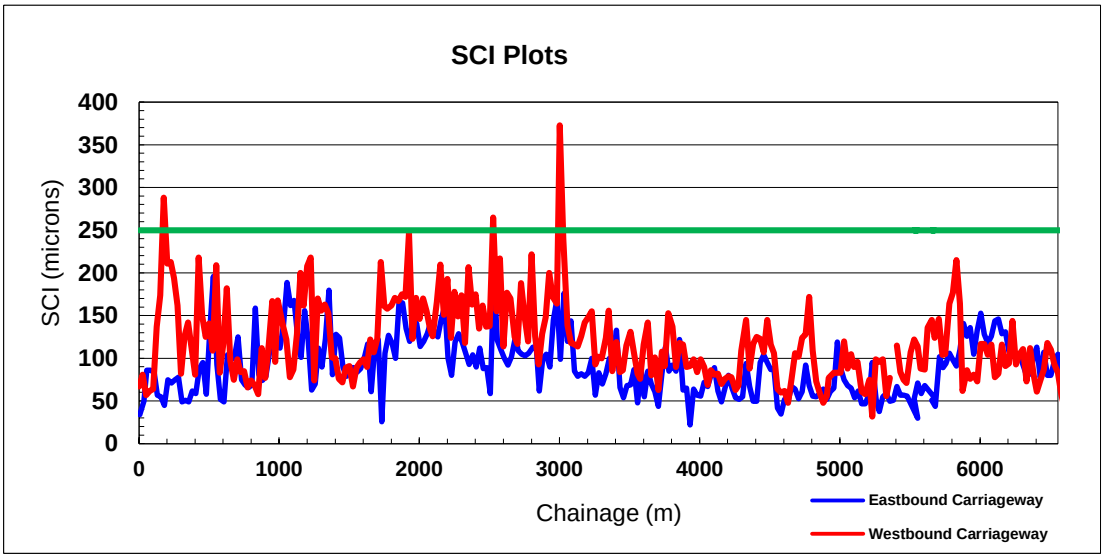


Figure 2: SCI Plots

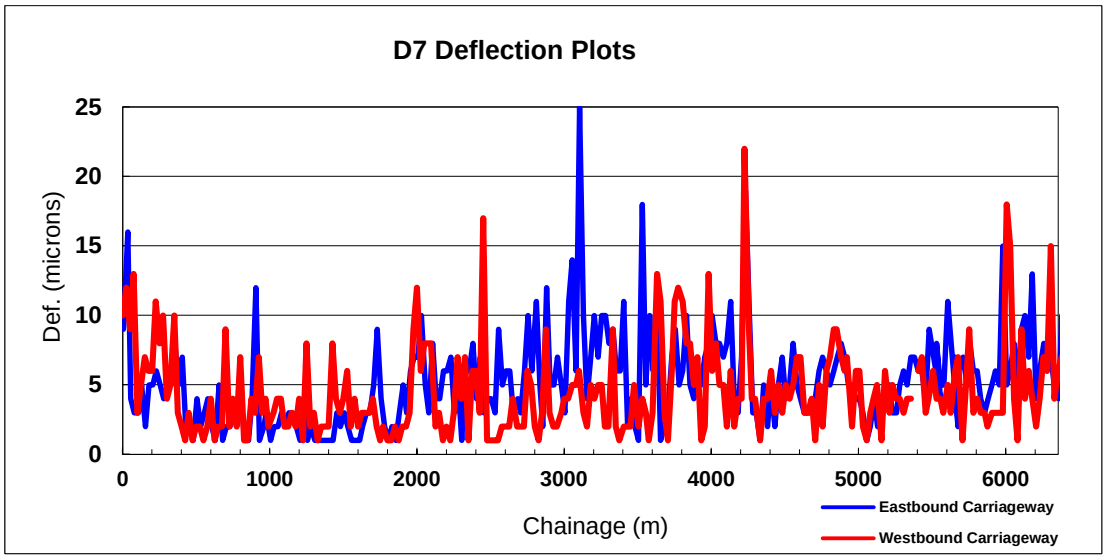


Figure 3: D7 Deflection Plots

L3103 (Route 1)

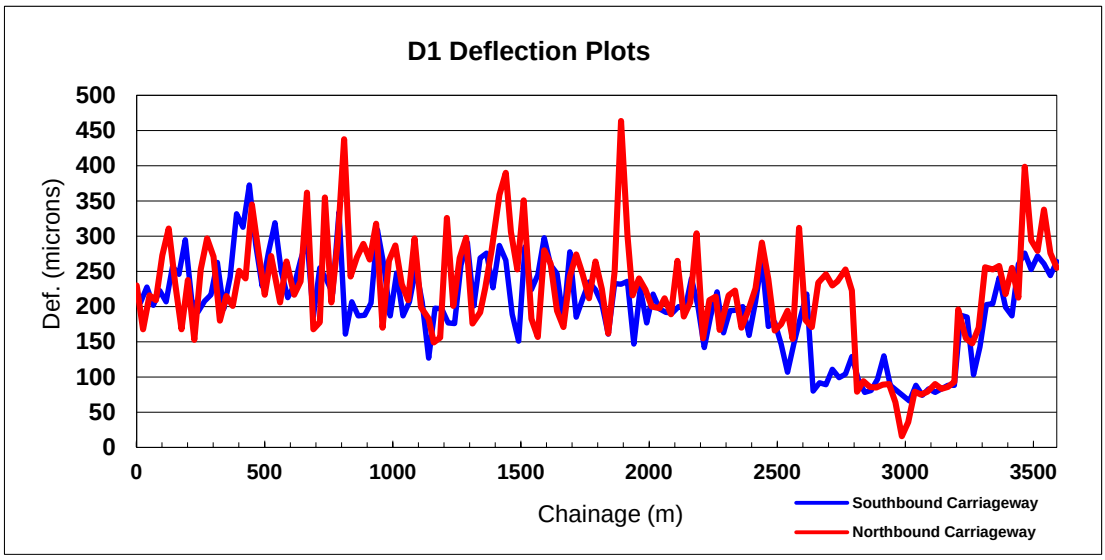


Figure 1: D1 Deflection Plots

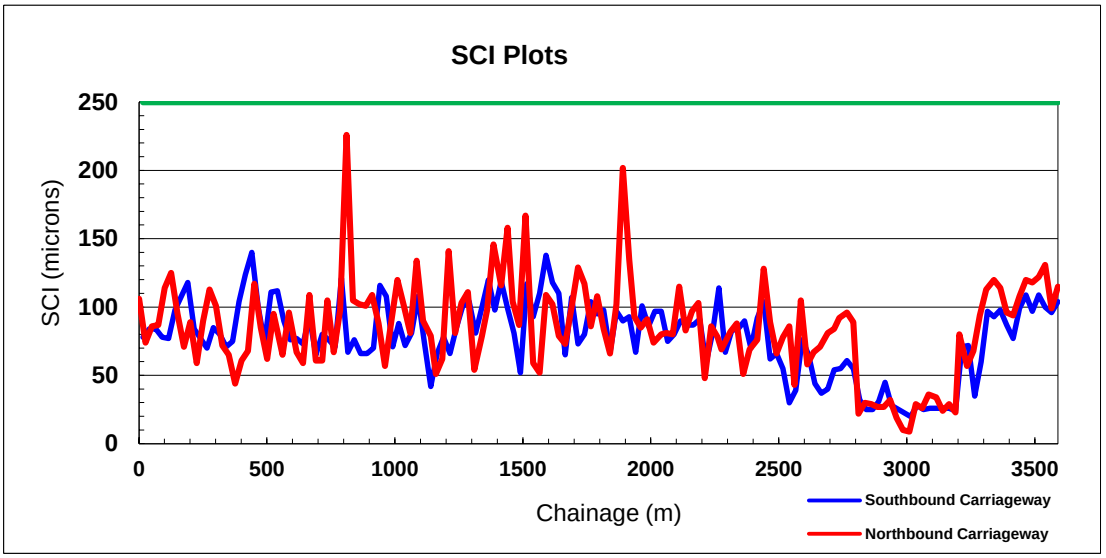


Figure 2: SCI Plots

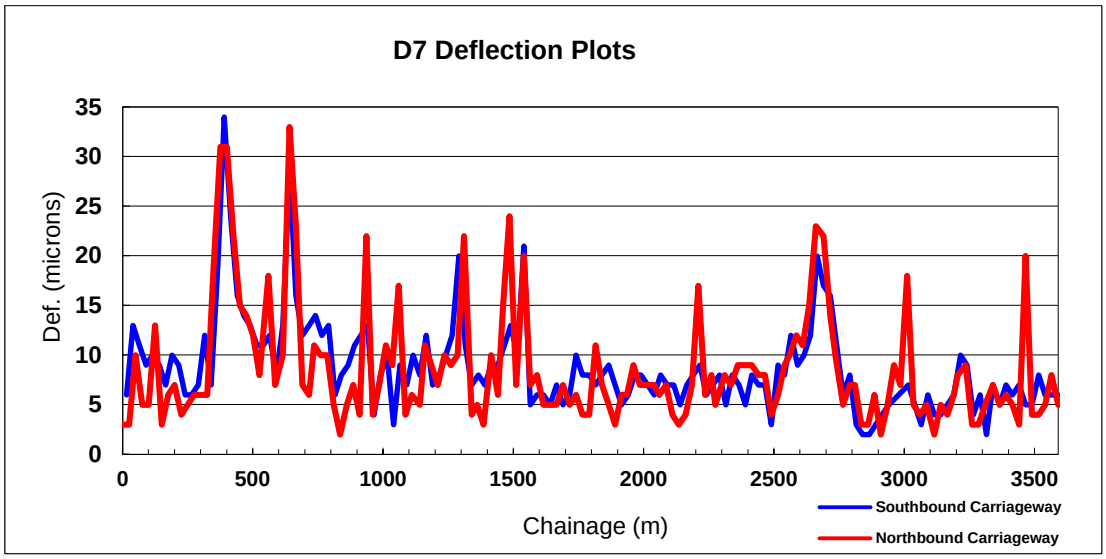


Figure 3: D7 Deflection Plots

L3103 Site to Motorway (Route 2)

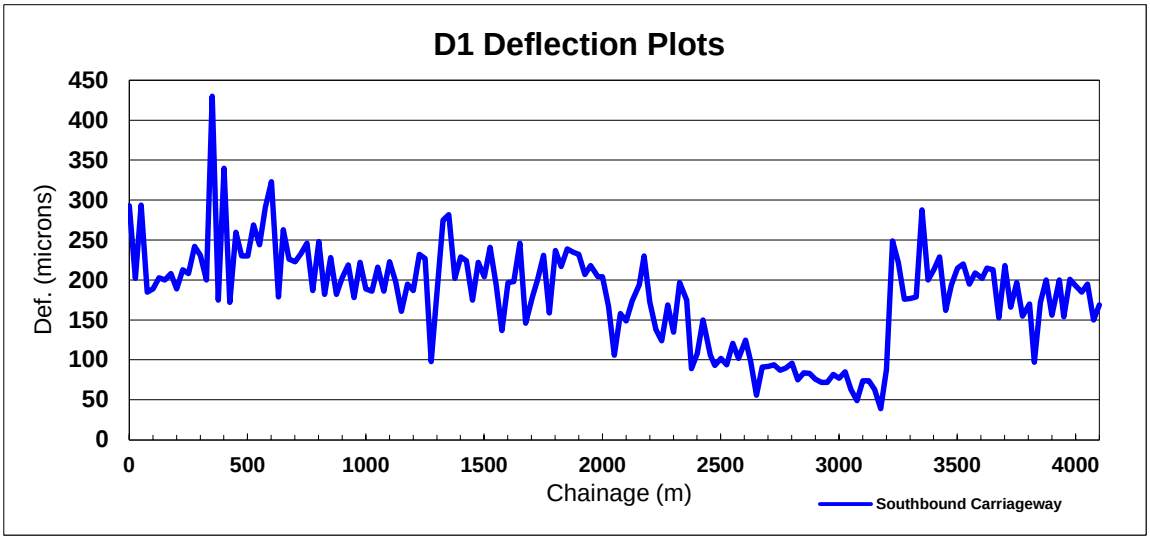


Figure 1: D1 Deflection Plots

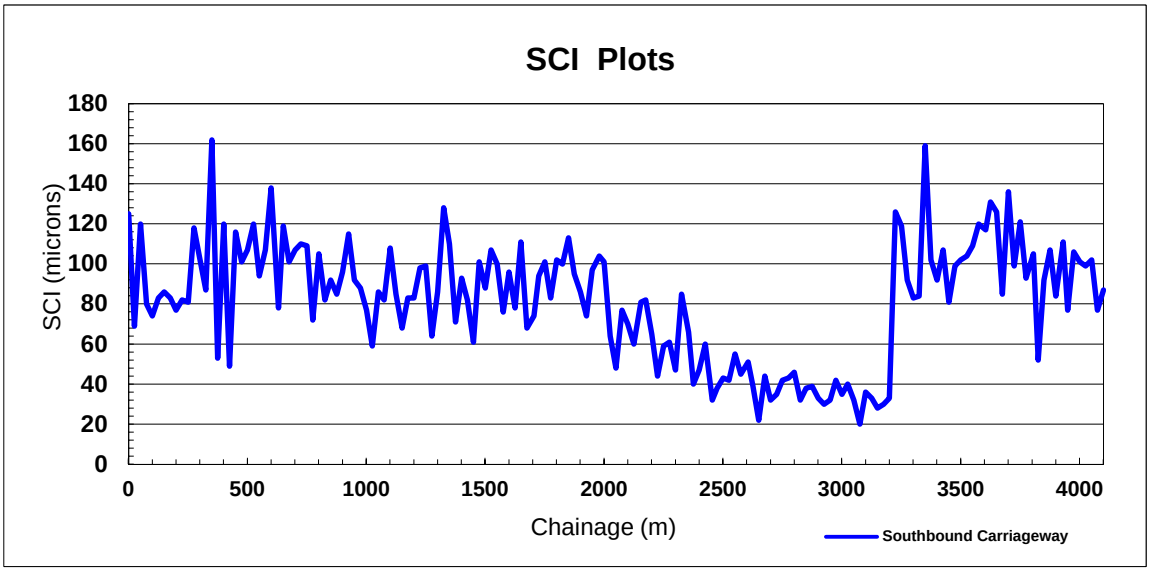


Figure 2: SCI Plots

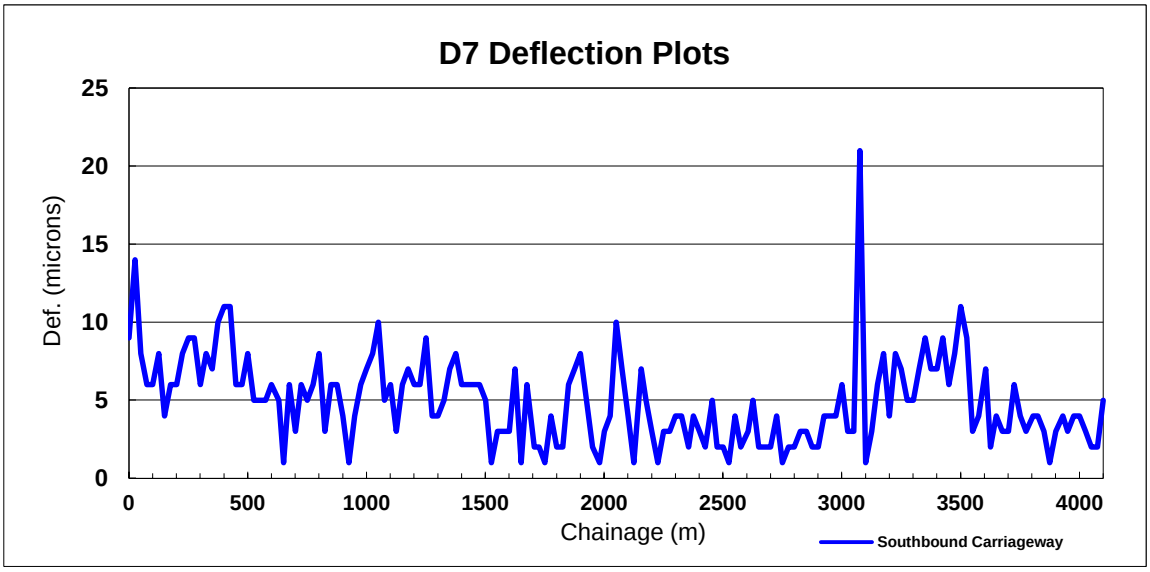


Figure 3: D7 Deflection Plots

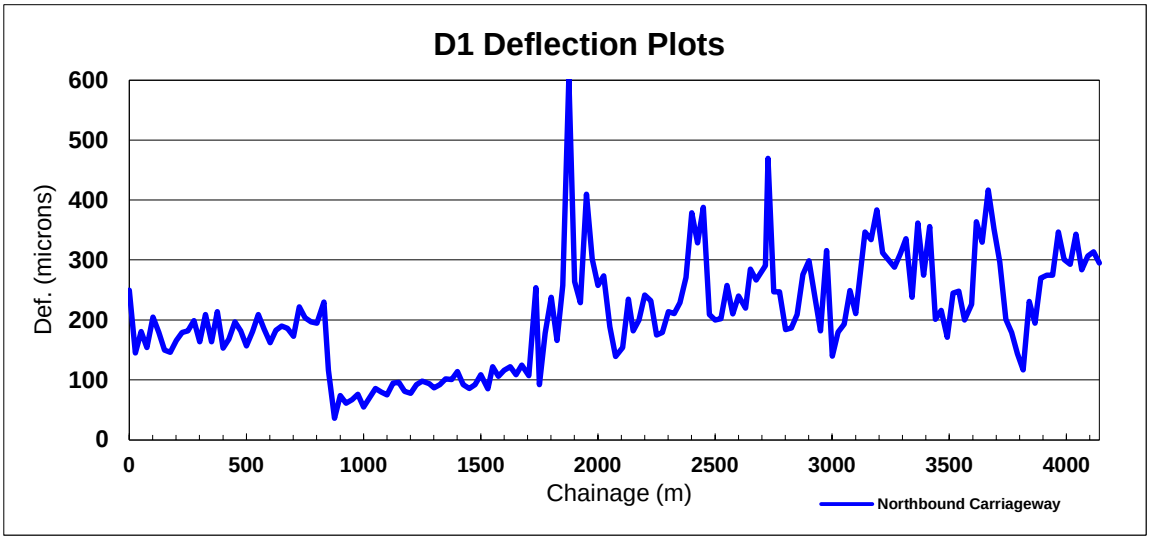


Figure 1: D1 Deflection Plots

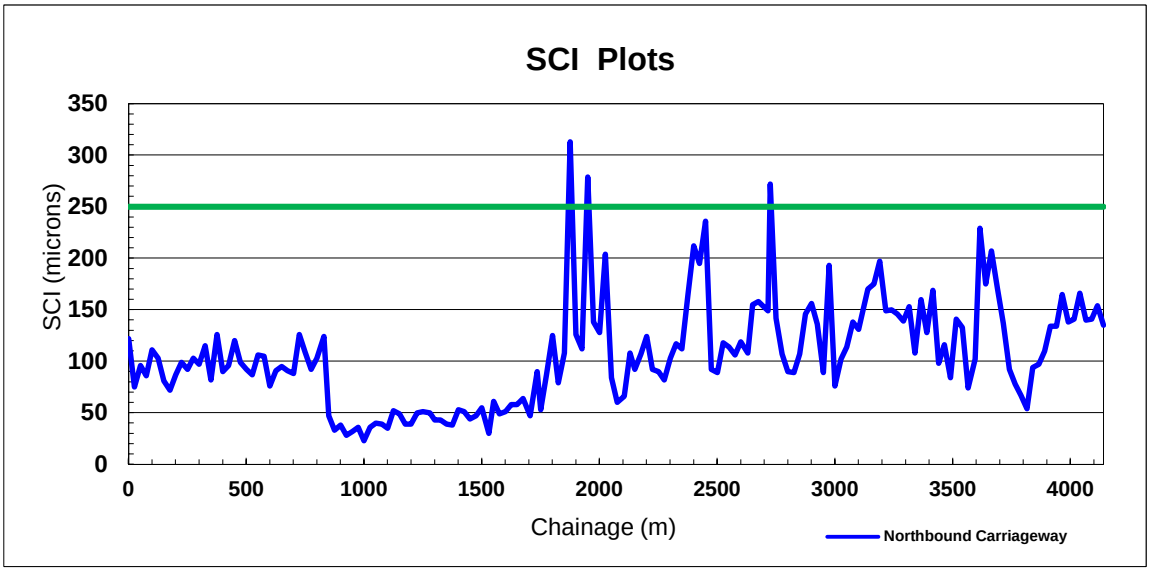


Figure 2: SCI Plots

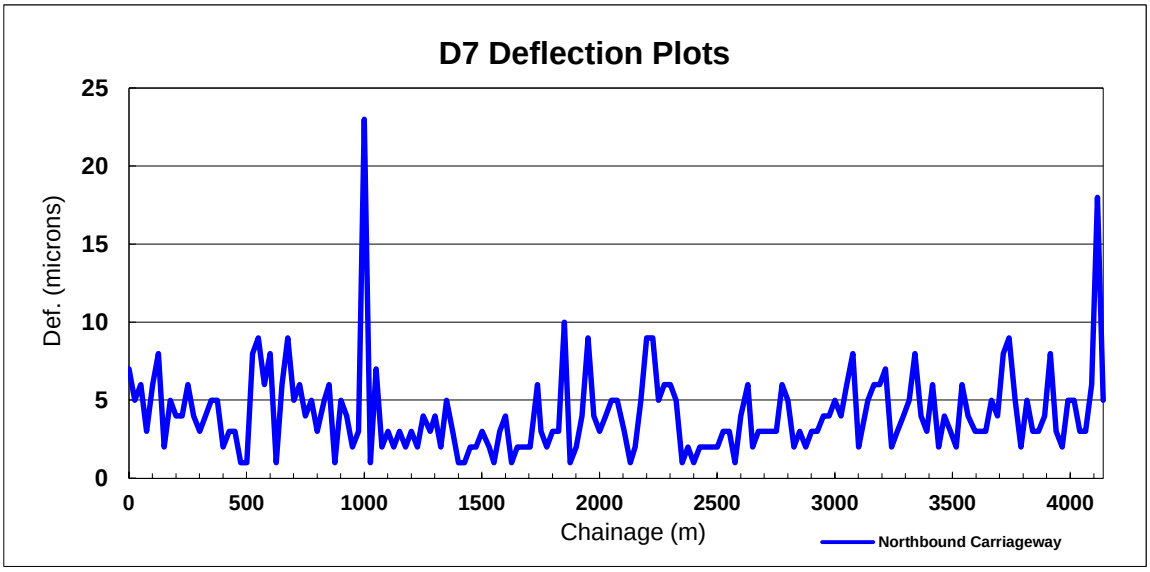


Figure 3: D7 Deflection Plots

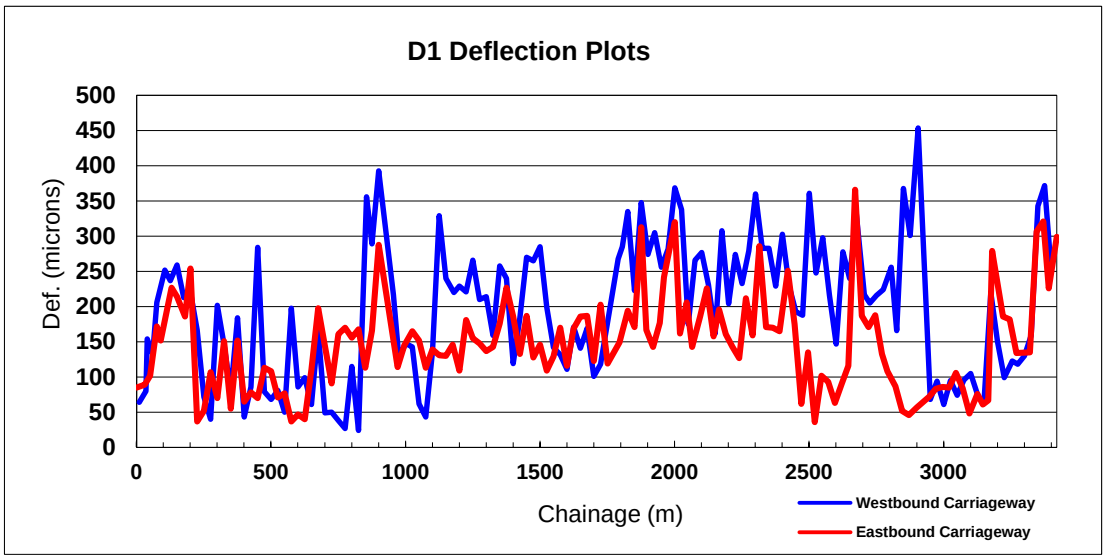


Figure 1: D1 Deflection Plots

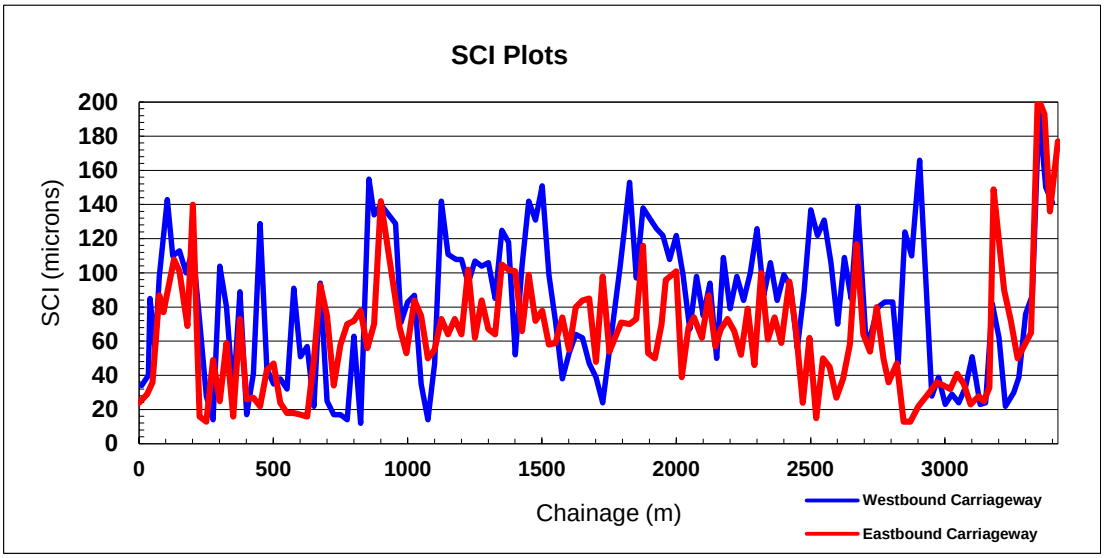


Figure 2: SCI Plots

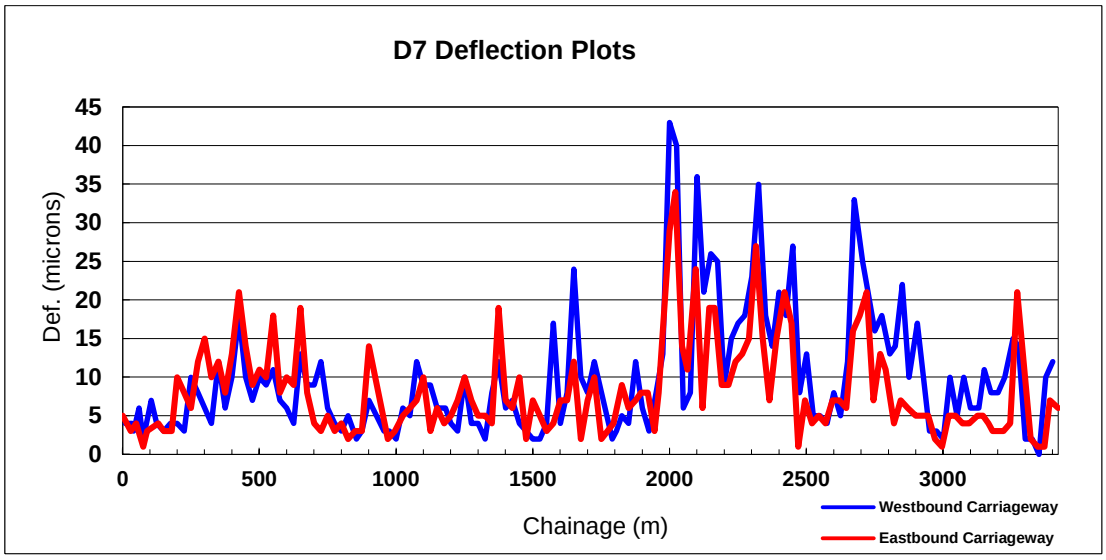


Figure 3: D7 Deflection Plots

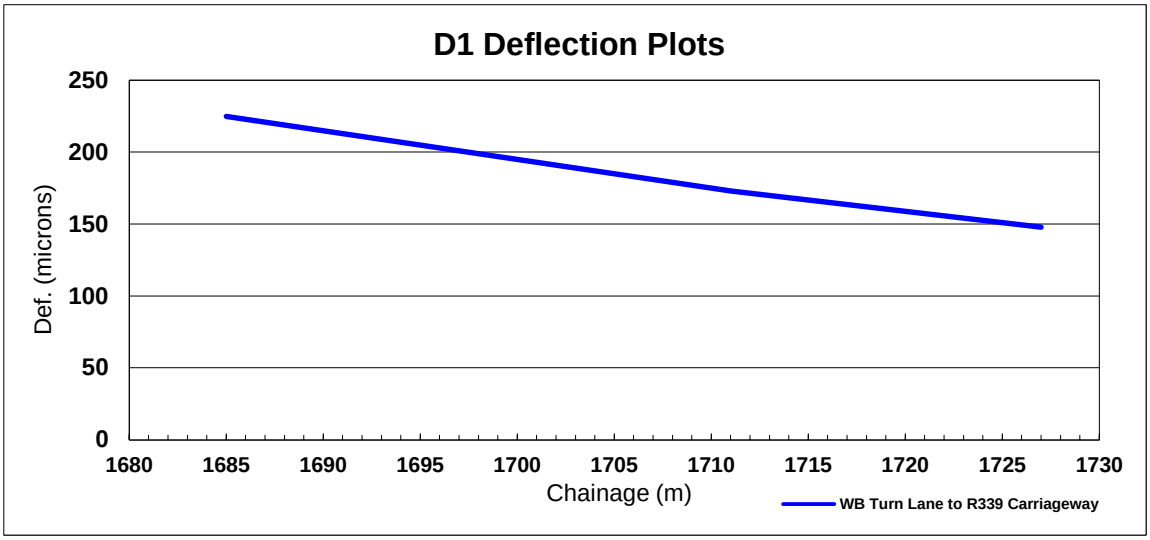


Figure 1: D1 Deflection Plots

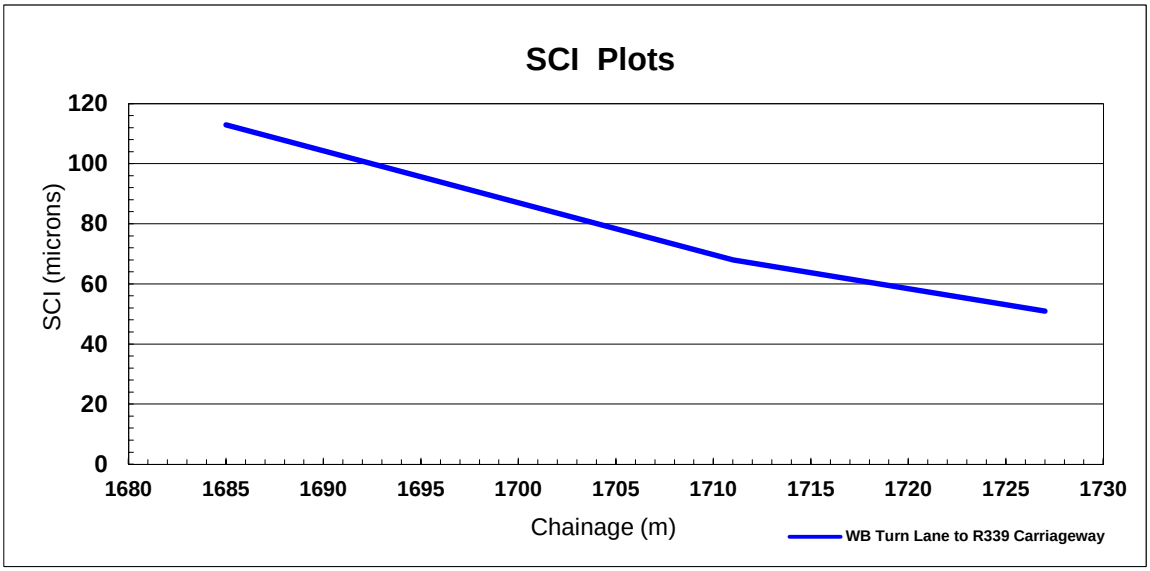


Figure 2: SCI Plots

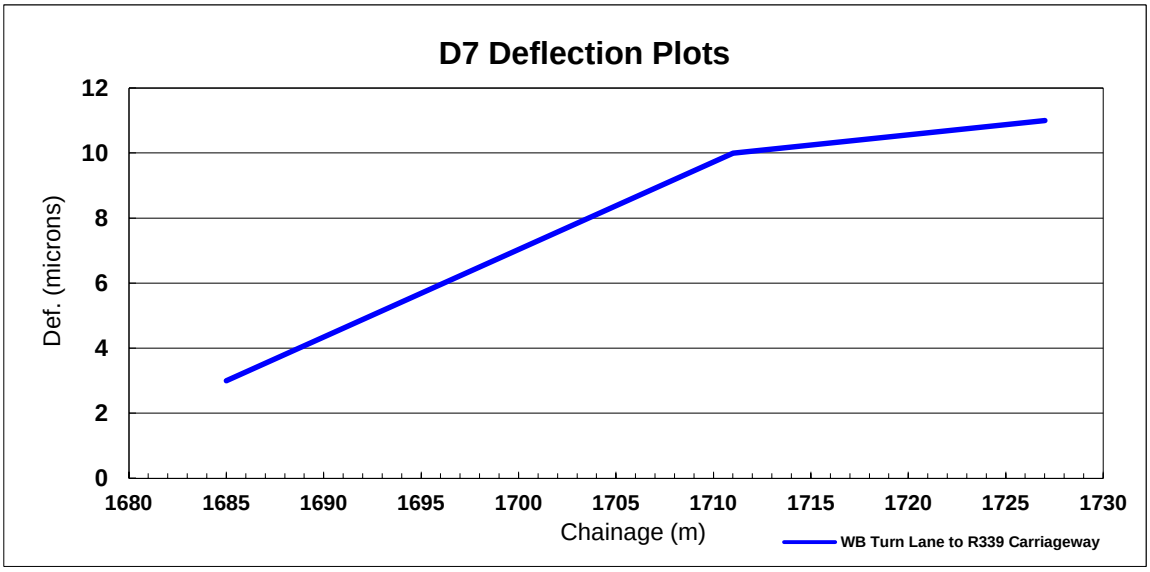


Figure 3: D7 Deflection Plots

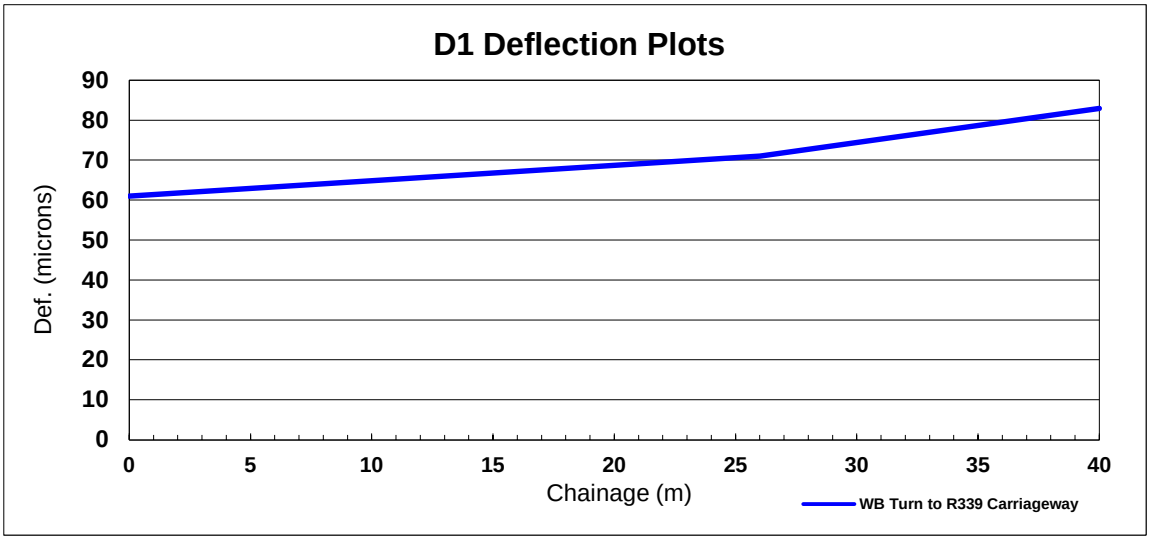


Figure 1: D1 Deflection Plots

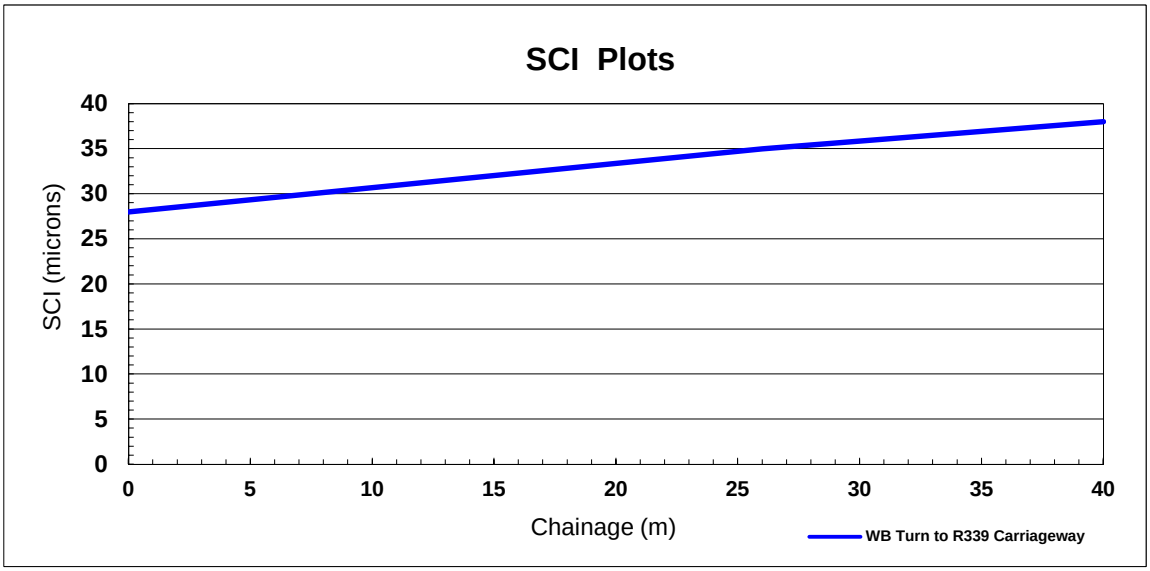


Figure 2: SCI Plots

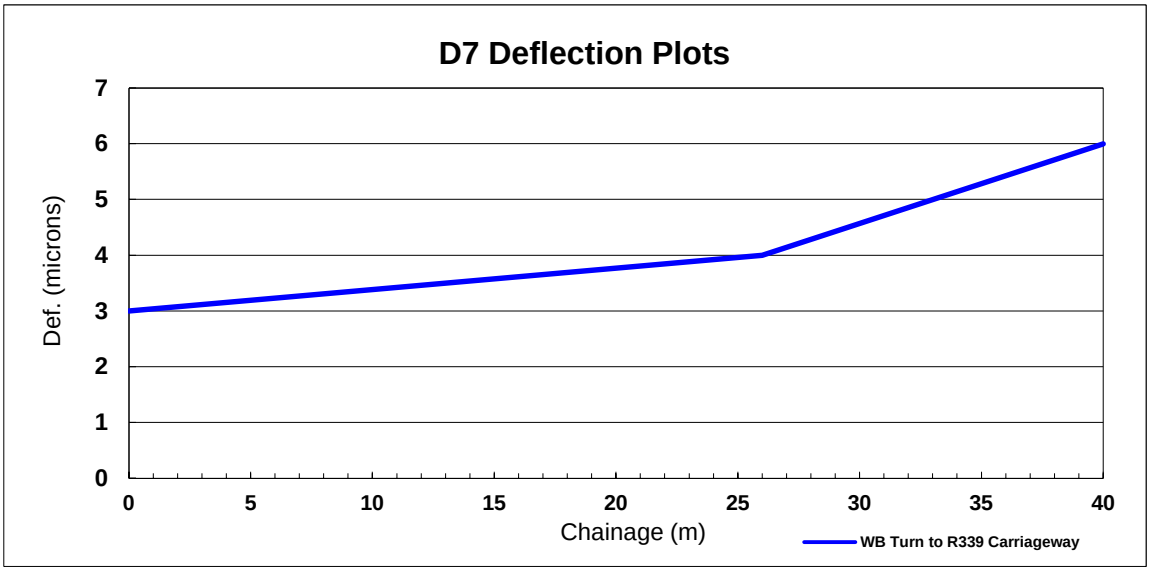


Figure 3: D7 Deflection Plots

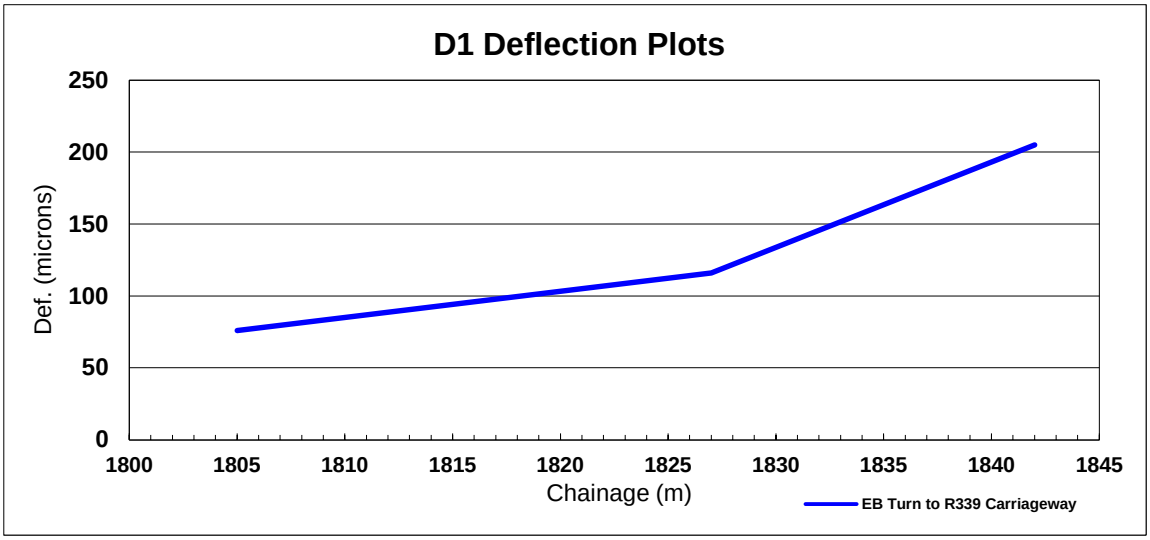


Figure 1: D1 Deflection Plots

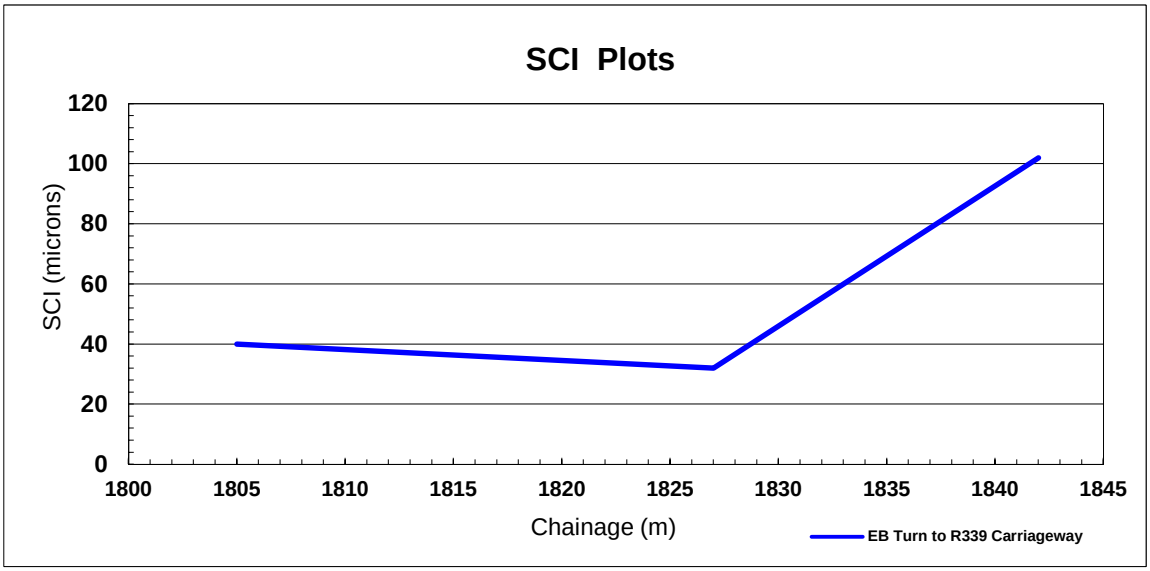


Figure 2: SCI Plots

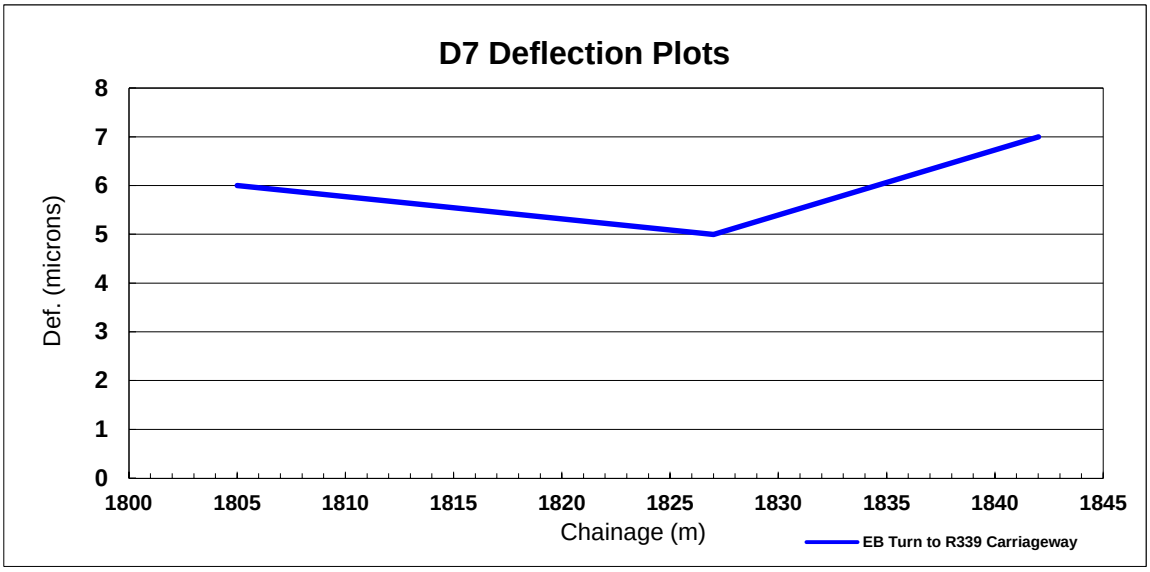


Figure 3: D7 Deflection Plots

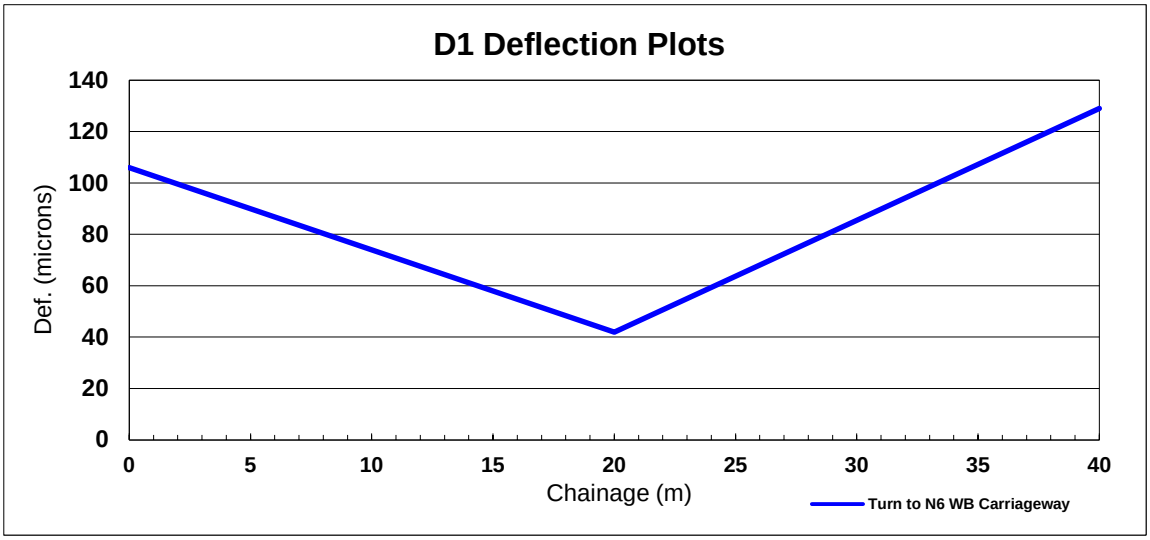


Figure 1: D1 Deflection Plots

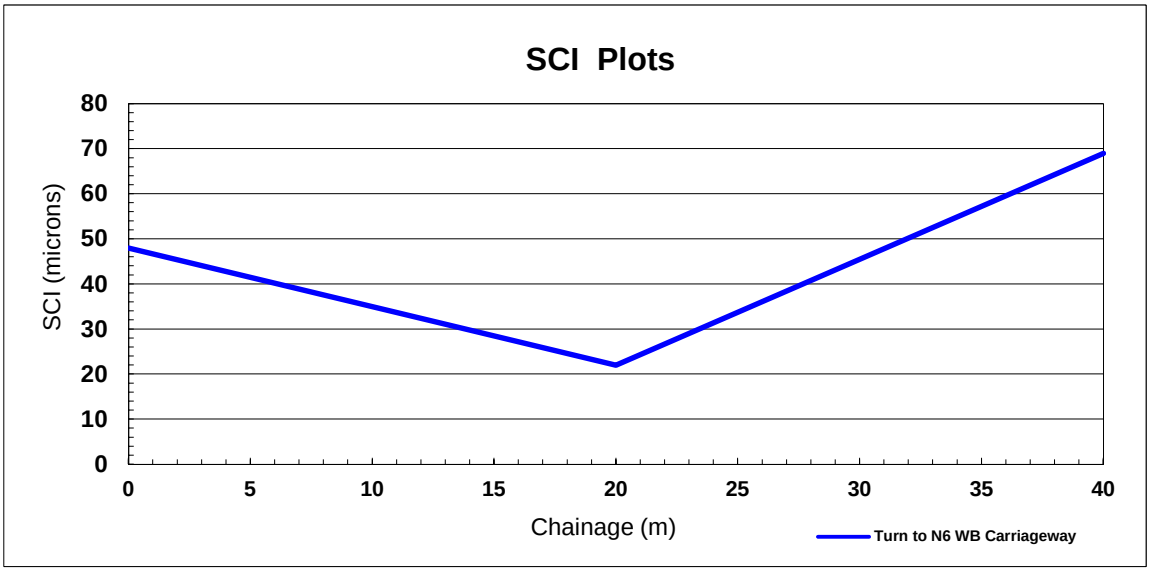


Figure 2: SCI Plots

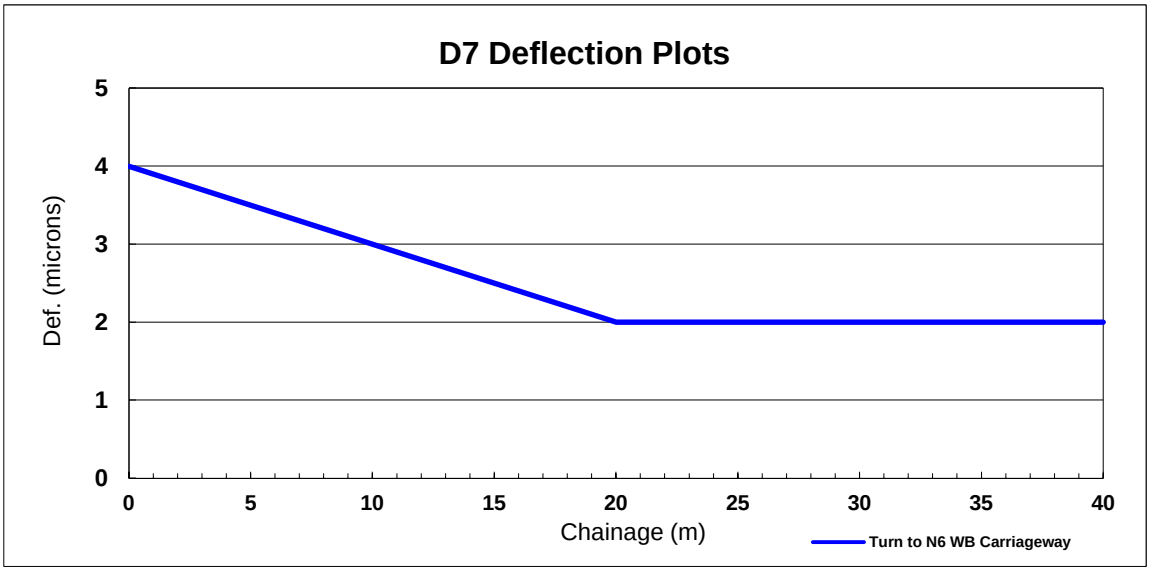


Figure 3: D7 Deflection Plots

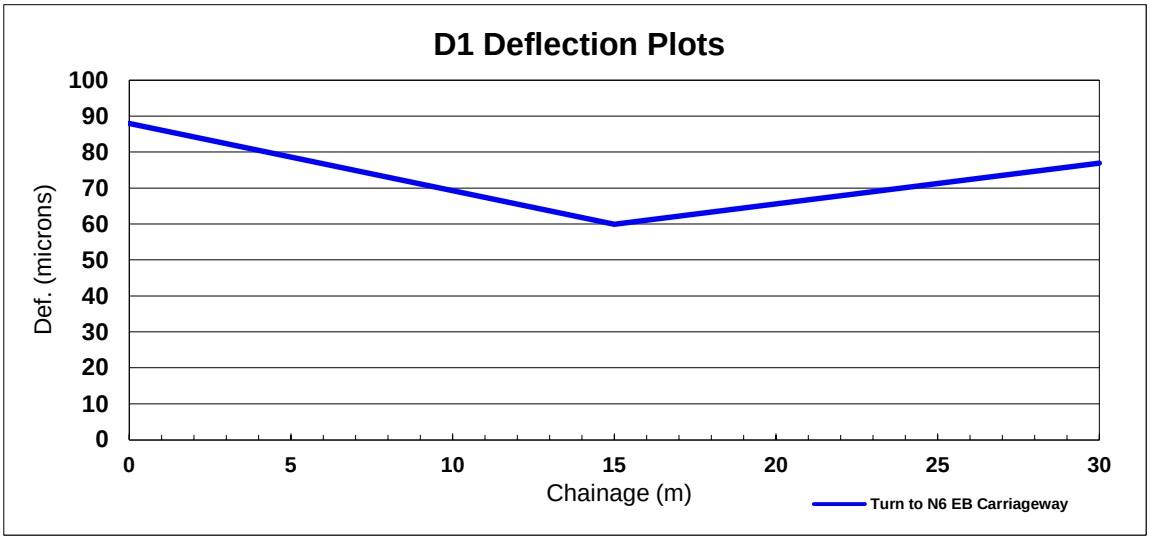


Figure 1: D1 Deflection Plots

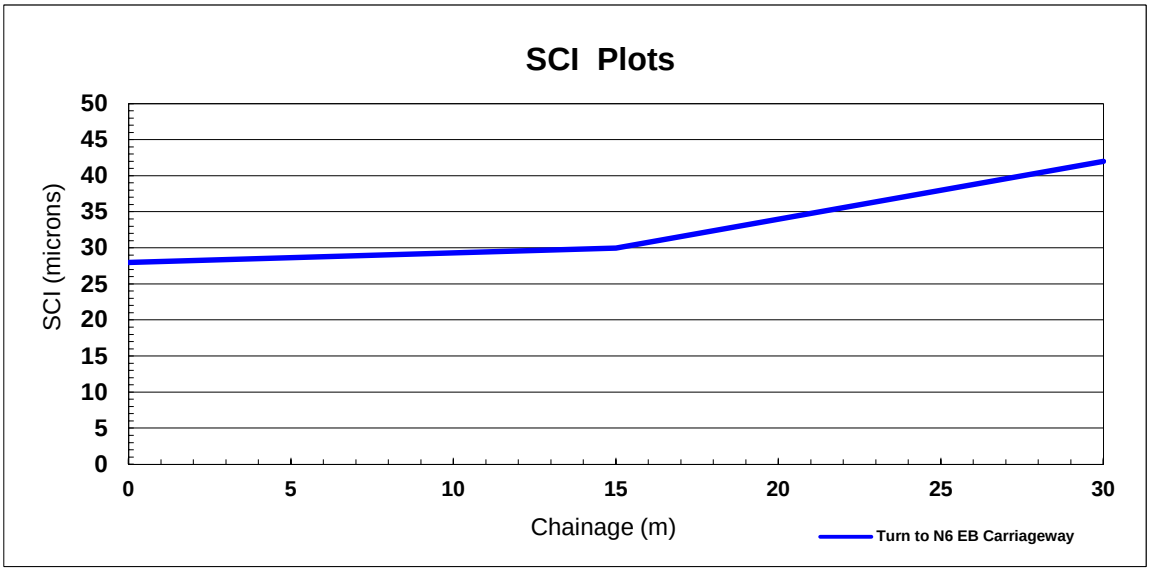


Figure 2: SCI Plots

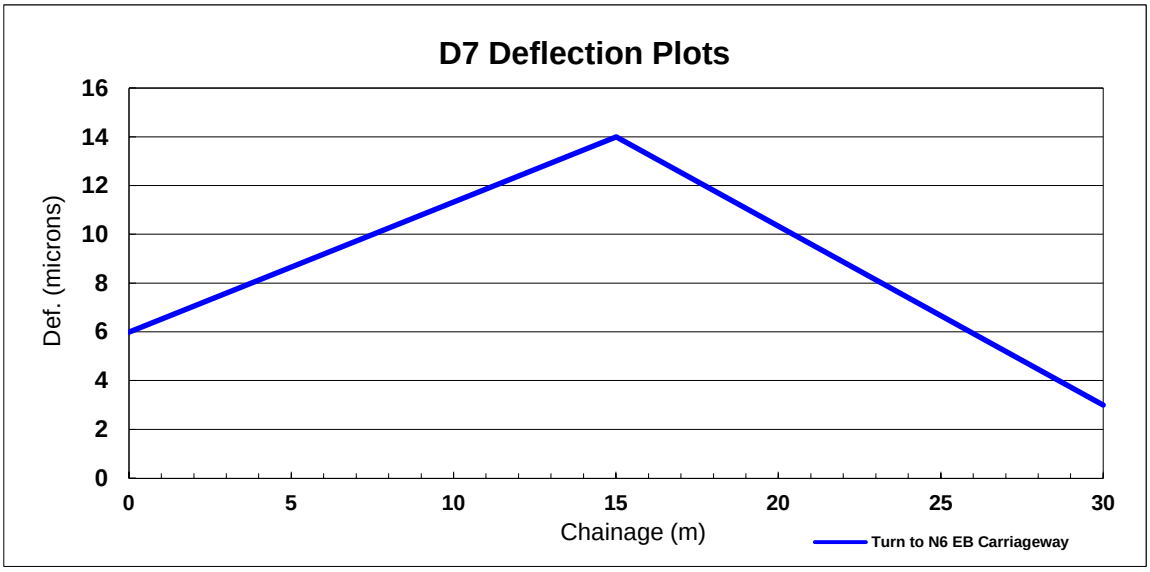


Figure 3: D7 Deflection Plots

Appendix B – Tabulated Deflection Results

R381 Motorway to Carnmore Cross					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	33	8	7	538405	727732
25	45	16	4	538412	727759
50	43	15	4	538416	727781
75	52	16	5	538419	727806
100	41	15	4	538419	727832
125	44	14	4	538416	727855
150	38	13	3	538412	727880
180	36	12	5	538404	727910
200	106	33	9	538398	727928
225	88	40	4	538390	727951
250	78	35	2	538382	727974
275	73	32	3	538374	727998
300	88	33	7	538364	728022
325	99	36	6	538355	728046
350	106	40	13	538346	728068
375	92	33	7	538337	728091
400	63	26	5	538328	728113
425	86	32	5	538318	728137
450	76	31	4	538309	728160
480	86	29	6	538298	728186
505	69	29	4	538288	728208
530	72	27	2	538277	728231
550	72	31	4	538266	728251
575	97	34	4	538254	728272
600	70	27	4	538238	728294
625	88	32	7	538224	728313
650	94	33	4	538209	728331
675	70	36	2	538191	728350
700	69	32	3	538174	728366
725	67	28	6	538154	728383
750	111	48	1	538135	728398
775	67	33	3	538113	728413
800	75	32	5	538094	728425
825	102	34	5	538071	728439
850	81	31	6	538052	728452
875	222	118	1	538031	728466
900	104	50	4	538010	728480
925	93	43	3	537990	728496
950	90	49	2	537972	728511
975	139	44	11	537953	728529
1000	94	41	7	537936	728546
1030	107	39	6	537919	728570
1050	97	53	3	537907	728585
1075	99	51	4	537892	728606
1100	79	33	4	537878	728627

R381 Motorway to Carnmore Cross					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	96	31	2	538412	727734
35	42	17	2	538418	727769
60	37	12	4	538422	727794
90	45	21	6	538423	727819
110	54	18	4	538422	727843
140	51	17	5	538419	727868
160	64	24	4	538413	727891
190	229	171	3	538406	727917
210	135	50	10	538399	727938
240	89	40	4	538390	727963
260	78	34	3	538384	727983
285	87	43	3	538373	728011
310	82	32	2	538364	728033
335	82	34	7	538355	728058
360	103	26	14	538346	728080
385	80	32	6	538337	728104
410	67	26	7	538327	728126
435	75	23	7	538318	728149
460	86	24	11	538308	728173
485	87	31	11	538298	728195
510	67	30	3	538288	728217
535	81	37	6	538277	728240
560	108	33	8	538266	728260
580	93	35	7	538253	728281
595	88	29	6	538245	728292
635	104	39	8	538222	728321
661	85	44	6	538206	728340
686	63	31	4	538188	728358
711	69	37	1	538170	728375
737	53	27	2	538149	728392
761	84	39	2	538130	728406
787	73	32	3	538108	728421
811	103	41	7	538089	728433
835	118	47	7	538068	728446
855	100	38	5	538049	728458
885	139	75	5	538025	728475
910	127	57	7	538006	728489
935	77	32	2	537987	728506
960	89	40	3	537970	728521
985	121	41	6	537951	728540
1010	85	37	2	537935	728557
1035	104	44	7	537917	728578
1060	106	48	5	537905	728595
1085	146	59	5	537889	728617

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
5	93	34	9	537904	728671
35	154	50	16	537932	728675
55	183	86	4	537956	728678
80	193	86	3	537981	728682
107	177	84	3	538004	728687
130	170	57	5	538027	728692
155	125	55	2	538053	728698
180	134	45	5	538077	728703
205	226	75	5	538100	728708
230	197	71	6	538127	728713
255	203	75	5	538151	728718
280	238	78	4	538173	728721
305	110	49	5	538198	728726
330	136	51	5	538223	728730
355	159	49	8	538247	728733
380	154	62	5	538272	728736
405	142	59	7	538297	728738
430	191	88	2	538323	728740
455	228	95	2	538347	728742
480	164	58	1	538372	728746
505	267	134	4	538396	728750
530	392	196	2	538421	728753
555	244	93	3	538447	728757
580	134	52	4	538469	728762
605	132	49	2	538494	728765
630	223	104	1	538519	728768
655	241	98	5	538545	728772
680	212	102	1	538568	728776
705	274	125	2	538594	728779
730	162	75	2	538618	728783
755	176	69	3	538642	728786
780	175	66	4	538667	728790
805	174	69	4	538691	728793
830	318	159	1	538716	728797
855	187	81	1	538742	728801
880	158	74	4	538767	728805
905	219	79	12	538791	728809
930	246	106	1	538817	728813
960	323	152	2	538843	728817
975	245	115	3	538864	728820
1005	232	112	1	538890	728824
1030	279	139	2	538914	728827
1055	372	189	2	538938	728830
1080	296	162	3	538963	728834
1105	273	168	2	538988	728838

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1130	225	126	3	539012	728841
1155	189	101	3	539037	728845
1180	303	156	2	539061	728849
1205	227	122	1	539086	728853
1230	141	63	3	539110	728857
1255	163	70	1	539134	728860
1280	209	112	2	539159	728864
1305	171	90	1	539184	728868
1330	251	123	1	539211	728871
1355	286	180	1	539234	728874
1380	177	81	1	539258	728878
1405	236	128	1	539283	728881
1430	213	124	1	539307	728884
1455	171	89	3	539332	728888
1480	175	79	2	539358	728891
1505	171	89	3	539382	728894
1530	170	89	2	539406	728897
1555	170	84	1	539434	728900
1580	173	88	1	539456	728903
1610	205	103	1	539484	728907
1630	228	117	2	539505	728909
1655	131	61	3	539529	728913
1680	210	112	3	539554	728918
1705	237	122	5	539578	728923
1730	100	26	9	539604	728931
1755	260	106	4	539626	728938
1780	267	127	2	539650	728947
1805	229	118	1	539673	728956
1830	204	100	2	539695	728965
1855	316	166	1	539719	728974
1880	319	165	3	539742	728983
1905	237	135	5	539766	728991
1930	228	120	3	539789	729000
1955	271	145	6	539813	729009
1980	293	141	7	539835	729018
2005	230	114	7	539860	729027
2030	280	120	10	539885	729036
2055	224	129	5	539906	729044
2080	285	142	3	539928	729053
2105	244	131	8	539953	729064
2130	214	125	4	539974	729075
2155	310	146	4	539994	729087
2180	318	161	6	540015	729102
2205	204	100	6	540035	729116
2230	172	80	7	540056	729130

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2255	234	119	3	540077	729145
2280	284	129	5	540097	729159
2305	238	119	1	540117	729173
2330	271	106	6	540137	729188
2355	233	93	6	540157	729202
2380	247	104	8	540179	729217
2405	240	90	4	540199	729231
2430	254	112	7	540218	729245
2455	203	88	3	540239	729260
2480	208	89	4	540259	729275
2505	192	59	4	540280	729290
2530	374	199	3	540300	729303
2555	252	121	9	540320	729318
2580	218	110	5	540340	729332
2605	243	100	6	540360	729346
2630	269	92	6	540381	729362
2655	299	102	3	540401	729376
2685	262	126	4	540423	729393
2705	207	109	3	540441	729407
2730	227	105	6	540460	729421
2755	320	103	10	540480	729435
2780	281	106	6	540500	729451
2810	266	113	11	540525	729469
2835	260	111	5	540544	729482
2855	129	62	2	540568	729492
2880	267	100	12	540591	729499
2905	233	105	5	540615	729504
2930	246	90	5	540640	729509
2955	333	145	7	540664	729515
2980	361	169	5	540688	729520
3005	243	99	3	540712	729524
3030	489	176	11	540737	729530
3055	326	120	14	540762	729534
3080	380	144	6	540785	729540
3105	284	85	25	540810	729545
3130	268	79	10	540834	729550
3155	203	82	4	540859	729554
3180	240	79	7	540883	729559
3205	285	83	10	540907	729564
3230	280	100	7	540933	729569
3255	206	57	10	540956	729574
3280	307	83	10	540981	729578
3305	212	70	8	541007	729583
3330	238	82	9	541029	729587
3355	224	100	6	541056	729593

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3380	275	101	6	541080	729597
3405	381	133	11	541103	729602
3430	154	66	2	541127	729606
3455	139	54	4	541154	729612
3480	174	68	2	541177	729616
3505	150	69	1	541201	729621
3530	290	87	18	541225	729626
3555	122	48	5	541250	729631
3580	305	88	10	541275	729636
3605	167	55	6	541300	729641
3630	281	85	11	541322	729646
3655	148	70	1	541347	729652
3680	124	61	2	541371	729658
3705	99	44	3	541396	729663
3730	241	82	7	541419	729671
3755	322	113	9	541444	729677
3780	212	85	5	541467	729684
3805	219	92	6	541491	729691
3830	241	85	10	541515	729698
3855	357	122	5	541539	729706
3880	143	63	4	541562	729713
3905	166	65	5	541586	729722
3930	41	22	5	541609	729729
3955	192	64	7	541634	729738
3980	153	57	8	541656	729745
4005	210	56	10	541680	729753
4030	184	72	8	541705	729762
4055	194	67	8	541727	729769
4080	232	80	7	541751	729778
4105	244	89	8	541774	729786
4130	196	62	11	541797	729794
4155	136	49	4	541821	729803
4180	170	65	3	541844	729812
4205	204	80	7	541868	729820
4230	191	65	19	541891	729829
4255	157	54	11	541915	729836
4280	112	52	3	541938	729844
4305	140	55	3	541961	729854
4330	251	94	1	541987	729863
4355	188	67	5	542008	729871
4380	137	50	2	542031	729880
4405	156	50	5	542054	729890
4430	247	95	2	542077	729900
4455	222	104	5	542101	729911
4480	219	95	7	542125	729921

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
4505	189	87	4	542146	729930
4530	217	88	5	542168	729939
4555	127	42	8	542193	729949
4580	106	35	5	542216	729958
4605	147	52	4	542238	729967
4630	126	50	3	542260	729977
4655	151	67	3	542282	729990
4680	170	64	3	542302	730004
4705	115	53	4	542323	730017
4730	161	61	6	542344	730031
4755	222	92	7	542366	730046
4780	193	68	6	542386	730059
4805	122	56	5	542406	730072
4830	137	55	6	542428	730086
4855	145	59	7	542449	730100
4880	162	64	8	542468	730113
4905	131	52	7	542489	730127
4930	134	61	5	542510	730142
4955	146	65	5	542531	730158
4980	266	119	4	542551	730173
5005	197	89	4	542570	730187
5030	186	75	3	542589	730202
5055	143	68	1	542610	730217
5080	140	65	2	542629	730230
5105	139	54	4	542651	730246
5130	149	62	2	542670	730259
5155	109	47	2	542692	730274
5180	147	47	5	542711	730288
5210	183	59	5	542734	730304
5230	243	95	3	542752	730317
5257	134	52	3	542773	730331
5280	121	38	5	542795	730342
5305	146	55	6	542819	730351
5330	171	59	5	542841	730360
5355	142	50	7	542865	730369
5380	140	51	7	542888	730378
5405	214	67	6	542914	730385
5430	169	57	6	542937	730389
5455	167	57	4	542961	730392
5480	230	56	9	542985	730396
5555	90	30	4	543015	730400
5530	163	53	8	543035	730403
5555	206	71	5	543061	730407
5580	184	59	5	543084	730412
5605	244	68	11	543109	730418

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
5675	176	54	2	543133	730423
5655	168	51	7	543157	730429
5680	151	44	6	543182	730434
5710	320	102	7	543209	730440
5735	193	89	5	543235	730445
5755	227	94	8	543256	730450
5780	254	106	6	543279	730456
5805	229	98	6	543301	730465
5830	216	91	4	543325	730475
5855	281	110	3	543347	730485
5880	258	141	4	543372	730496
5905	263	126	5	543392	730505
5930	279	136	6	543415	730515
5955	253	105	5	543438	730525
5980	359	133	15	543460	730535
6005	311	153	5	543484	730546
6030	319	128	6	543506	730555
6055	250	118	8	543529	730565
6080	219	126	5	543552	730575
6105	331	144	9	543576	730586
6130	332	146	10	543599	730596
6155	292	129	7	543620	730607
6180	287	131	13	543641	730619
6205	200	108	4	543663	730632
6230	214	116	6	543684	730644
6257	181	96	8	543706	730657
6280	169	105	6	543727	730669
6305	170	92	7	543750	730683
6330	166	80	5	543771	730694
6360	171	82	4	543795	730708
6380	241	103	10	543814	730716
6405	202	113	5	543838	730728
6430	196	77	8	543859	730738
6455	239	107	5	543882	730748
6480	174	80	8	543905	730760
6505	196	80	12	543927	730771
6530	246	97	13	543949	730782
6555	238	105	12	543973	730793
6580	187	82	11	543994	730803
6605	237	107	7	544017	730813
6630	197	96	9	544039	730824
6655	237	108	16	544062	730834
6680	245	109	6	544085	730845
6710	241	113	8	544114	730859
6730	233	112	7	544129	730866

R339 Carnmore (Route 1)					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
6755	224	103	9	544154	730879

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	226	67	10	537900	728664
25	281	81	12	537925	728667
50	198	57	9	537949	728670
75	225	62	13	537973	728674
100	161	64	3	537997	728679
125	394	137	5	538023	728686
150	513	174	7	538044	728691
175	706	288	6	538070	728697
200	576	211	6	538095	728702
225	645	213	11	538120	728708
250	512	194	8	538144	728713
275	456	162	10	538167	728717
300	205	82	4	538194	728721
325	279	126	5	538215	728724
350	367	142	10	538242	728729
375	280	112	3	538264	728731
400	206	81	2	538290	728734
425	463	218	1	538317	728735
450	326	150	3	538342	728737
475	259	125	1	538365	728741
500	274	141	2	538389	728745
525	238	109	2	538416	728749
550	429	209	1	538439	728753
575	215	83	2	538464	728757
600	267	117	4	538489	728760
625	354	182	1	538514	728764
650	223	97	2	538538	728767
675	180	75	2	538563	728771
700	237	99	9	538587	728775
725	178	84	2	538612	728778
750	196	85	4	538639	728782
775	166	66	2	538662	728786
800	185	74	7	538687	728789
825	160	68	1	538710	728793
850	135	58	1	538735	728796
875	254	112	4	538760	728800
900	208	77	3	538783	728804
925	284	116	7	538809	728808
950	351	167	3	538832	728811
970	223	96	4	538857	728815
990	314	168	2	538882	728818
1025	299	139	3	538908	728822
1050	243	122	4	538933	728825
1075	175	78	4	538953	728828
1100	211	87	2	538979	728832

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1125	232	128	2	539006	728837
1150	381	200	3	539030	728841
1175	361	162	2	539055	728844
1200	396	208	4	539080	728848
1225	412	218	1	539105	728852
1250	172	74	8	539126	728855
1275	337	170	2	539154	728860
1300	303	156	3	539176	728863
1325	297	163	1	539204	728867
1350	287	153	2	539226	728870
1375	205	101	2	539250	728873
1400	219	100	2	539278	728877
1425	166	76	8	539303	728880
1450	153	72	4	539326	728883
1475	184	89	3	539352	728887
1500	206	91	4	539377	728890
1525	158	67	6	539402	728893
1550	203	89	2	539427	728896
1575	217	95	4	539451	728899
1600	201	99	2	539475	728901
1625	191	90	3	539500	728904
1650	218	122	3	539525	728908
1675	208	107	3	539548	728912
1700	249	123	4	539573	728917
1725	372	213	2	539598	728924
1750	272	161	1	539622	728932
1770	287	158	2	539639	728938
1800	256	162	1	539666	728949
1825	269	171	1	539690	728959
1850	289	167	2	539714	728968
1875	318	175	1	539738	728977
1900	309	172	2	539761	728986
1925	412	247	2	539784	728994
1950	221	123	3	539808	729003
1975	301	171	9	539831	729011
2000	294	146	12	539851	729019
2025	298	170	6	539877	729029
2050	296	155	8	539900	729037
2075	245	134	8	539924	729047
2095	265	126	8	539944	729055
2125	287	166	2	539967	729066
2150	388	210	3	539990	729080
2175	307	151	1	540011	729094
2200	345	193	2	540031	729108
2225	249	124	1	540052	729123

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2250	332	178	3	540073	729137
2275	282	149	7	540093	729152
2300	340	174	4	540112	729166
2325	211	118	7	540131	729179
2350	349	207	1	540152	729194
2375	273	163	6	540173	729208
2400	265	175	6	540195	729224
2425	236	135	3	540212	729236
2450	257	162	17	540233	729252
2475	203	137	1	540254	729267
2500	247	138	1	540275	729281
2525	458	265	1	540295	729295
2550	245	155	1	540314	729309
2575	366	217	2	540337	729325
2600	180	114	2	540357	729340
2625	269	177	2	540377	729354
2650	270	170	4	540398	729369
2680	223	125	2	540417	729383
2700	204	117	2	540437	729399
2725	281	188	2	540457	729414
2750	265	149	6	540474	729427
2775	225	120	5	540497	729444
2800	455	222	2	540516	729458
2825	238	126	1	540537	729473
2850	202	93	3	540562	729486
2875	280	129	9	540589	729494
2900	223	148	3	540615	729500
2925	426	200	2	540638	729505
2950	310	172	2	540664	729511
2980	361	164	3	540688	729516
3000	628	373	4	540713	729521
3025	487	240	4	540737	729526
3055	329	139	5	540762	729531
3080	225	118	5	540785	729536
3100	245	117	6	540811	729541
3130	244	114	3	540835	729546
3155	222	126	2	540859	729550
3180	260	142	5	540882	729555
3205	285	148	4	540908	729560
3230	270	155	5	540932	729565
3255	188	93	5	540957	729570
3275	209	102	2	540979	729574
3300	204	100	2	541002	729578
3330	272	124	9	541029	729583
3350	256	156	2	541054	729588

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3375	180	85	1	541078	729593
3405	292	119	2	541102	729598
3430	148	84	2	541128	729603
3450	180	86	2	541152	729608
3475	243	115	5	541175	729612
3505	247	131	2	541201	729617
3530	271	106	4	541224	729622
3555	206	82	3	541250	729627
3575	127	76	1	541273	729632
3600	266	116	3	541298	729637
3630	375	142	13	541322	729642
3655	226	80	11	541348	729649
3680	197	101	3	541370	729655
3705	103	63	1	541397	729661
3730	311	108	6	541419	729666
3750	232	91	11	541443	729673
3775	407	153	12	541465	729680
3805	356	137	11	541492	729688
3830	237	90	8	541516	729695
3855	303	118	8	541538	729703
3880	231	116	5	541563	729711
3905	212	90	7	541585	729718
3930	175	91	1	541608	729726
3955	205	99	2	541634	729734
3980	219	84	13	541655	729742
4005	246	99	6	541679	729749
4030	229	90	8	541704	729758
4055	171	69	5	541726	729766
4080	178	86	5	541749	729774
4105	178	81	2	541775	729783
4130	200	82	6	541797	729791
4155	131	70	2	541822	729800
4180	185	76	4	541845	729809
4205	160	79	4	541869	729817
4225	231	78	22	541888	729823
4255	182	63	9	541916	729834
4275	164	68	4	541938	729841
4295	208	109	4	541955	729848
4330	277	145	1	541986	729859
4355	190	88	4	542008	729868
4380	247	117	4	542030	729876
4405	292	125	6	542055	729886
4430	263	123	3	542078	729896
4455	203	107	5	542100	729906
4480	282	145	3	542123	729916

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
4505	238	116	5	542147	729926
4530	204	106	4	542169	729936
4555	149	64	5	542193	729945
4580	159	60	7	542216	729954
4605	168	62	7	542239	729964
4630	93	48	3	542262	729974
4655	134	76	3	542282	729986
4680	192	106	4	542303	730000
4705	190	102	1	542325	730014
4730	255	124	5	542346	730028
4755	252	128	2	542366	730042
4780	360	172	6	542386	730055
4805	215	109	7	542408	730069
4830	177	73	9	542428	730082
4850	157	62	9	542445	730093
4880	134	48	7	542471	730111
4905	135	56	6	542491	730124
4920	169	77	7	542506	730135
4955	182	83	2	542530	730153
4980	212	83	6	542551	730169
5005	191	83	6	542571	730184
5030	207	120	2	542591	730199
5055	215	88	1	542610	730213
5080	309	105	3	542630	730228
5100	225	90	4	542650	730242
5125	235	96	5	542669	730255
5155	193	61	1	542692	730271
5180	162	58	6	542711	730284
5210	225	75	3	542733	730300
5230	127	32	5	542752	730313
5255	252	99	4	542770	730326
5280	228	96	4	542795	730338
5305	224	99	3	542819	730348
5330	167	56	4	542843	730357
5355	222	77	4	542865	730366
5380	879	800	9	542886	730374
5405	263	115	6	542913	730382
5430	224	84	7	542937	730386
5455	198	75	3	542963	730390
5475	211	71	4	542982	730392
5505	267	107	6	543010	730395
5530	285	122	4	543036	730399
5555	268	114	4	543060	730404
5575	227	88	3	543080	730409
5605	198	87	5	543109	730415

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
5625	373	136	3	543133	730420
5655	358	145	6	543157	730426
5675	315	124	7	543179	730431
5705	430	146	1	543206	730436
5730	217	104	5	543230	730442
5750	293	105	9	543253	730446
5780	298	164	3	543279	730453
5805	431	177	4	543303	730462
5830	541	215	3	543325	730471
5855	442	164	3	543348	730482
5875	219	62	2	543370	730491
5905	189	86	3	543393	730502
5930	239	76	3	543417	730512
5955	267	81	3	543438	730522
5980	238	73	3	543463	730533
6005	334	117	18	543485	730542
6030	318	117	15	543506	730552
6055	259	104	4	543531	730563
6080	262	116	1	543550	730571
6105	231	78	9	543577	730583
6130	231	82	4	543594	730591
6155	333	116	6	543622	730604
6180	243	91	4	543642	730616
6205	266	94	2	543664	730629
6230	371	144	4	543684	730641
6255	273	93	7	543707	730654
6280	288	105	6	543728	730667
6305	307	111	15	543749	730679
6330	229	73	4	543771	730691
6355	239	112	6	543794	730703
6380	219	81	7	543815	730713
6405	209	61	5	543838	730724
6430	192	74	7	543861	730735
6455	231	87	9	543882	730745
6480	274	118	6	543905	730756
6505	280	110	13	543927	730768
6530	250	93	6	543949	730778
6555	243	83	15	543973	730789
6580	182	57	11	543996	730800
6605	442	40	54	544019	730810
6630	178	65	7	544040	730820
6655	143	49	12	544061	730830
6680	219	74	13	544086	730841
6705	161	56	7	544107	730852
6725	190	70	2	544130	730863

R339 Carnmore (Route 1)					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
6755	223	81	1	544154	730875

L3103 (Route 1)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
15	206	78	6	544193	730863
40	228	84	13	544213	730847
65	202	84	11	544232	730832
90	223	78	9	544251	730816
115	207	77	10	544271	730800
140	257	98	9	544290	730785
165	246	108	7	544310	730768
190	295	118	10	544329	730753
215	209	84	9	544349	730737
240	193	77	6	544367	730722
265	208	70	6	544387	730705
290	217	85	7	544406	730690
315	263	80	12	544425	730674
340	197	71	7	544445	730659
365	242	75	19	544464	730643
390	332	104	34	544483	730628
415	313	124	24	544503	730612
440	373	140	16	544522	730596
465	288	100	14	544542	730580
490	229	74	13	544562	730565
515	278	111	11	544581	730549
540	319	112	11	544601	730534
565	249	90	12	544619	730519
590	213	76	8	544639	730503
615	230	77	13	544658	730488
640	266	73	29	544676	730473
665	296	93	16	544696	730457
690	186	65	12	544716	730441
715	255	80	13	544735	730425
740	239	76	14	544754	730408
765	219	71	12	544774	730392
790	334	121	13	544794	730376
815	161	67	6	544814	730360
840	207	76	8	544831	730346
865	187	66	9	544850	730329
890	188	66	11	544870	730312
915	205	70	12	544888	730298
940	309	116	13	544908	730282
965	259	108	4	544927	730267
990	187	71	8	544947	730250
1015	248	88	10	544966	730234
1040	187	72	3	544984	730219
1065	207	81	9	545004	730202
1090	254	108	7	545023	730186
1115	206	74	10	545043	730170

L3103 (Route 1)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1140	127	42	8	545060	730156
1165	198	66	12	545081	730140
1190	197	78	7	545100	730123
1215	177	66	8	545119	730108
1240	176	85	10	545140	730091
1265	259	101	12	545158	730076
1290	291	104	20	545177	730060
1315	201	81	11	545198	730044
1340	269	100	7	545215	730029
1365	276	120	8	545235	730013
1390	227	98	7	545254	729998
1415	287	119	9	545273	729983
1440	266	99	9	545293	729968
1465	189	81	11	545316	729954
1490	151	52	13	545337	729941
1515	285	117	10	545358	729929
1540	224	93	21	545378	729917
1565	245	110	5	545401	729903
1590	298	138	6	545421	729891
1615	259	118	6	545444	729877
1640	247	110	5	545464	729865
1665	179	65	7	545487	729852
1690	278	107	5	545508	729841
1715	185	73	6	545530	729828
1740	211	80	10	545553	729818
1765	235	104	8	545576	729814
1790	224	95	8	545601	729811
1815	204	98	7	545625	729807
1840	161	67	8	545651	729804
1865	233	97	9	545676	729801
1890	232	90	7	545700	729798
1915	236	93	5	545725	729795
1940	147	67	6	545750	729791
1965	226	101	8	545773	729788
1990	177	86	8	545798	729784
2015	218	97	7	545824	729781
2040	197	97	6	545847	729777
2065	192	75	8	545873	729775
2090	191	80	7	545898	729770
2115	200	90	7	545924	729768
2140	197	87	5	545948	729766
2165	240	87	7	545972	729758
2190	201	91	8	545995	729751
2215	142	59	9	546017	729742
2240	187	81	6	546040	729731

L3103 (Route 1)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2265	221	114	7	546064	729720
2290	163	67	8	546085	729711
2315	194	83	5	546109	729700
2340	195	84	8	546132	729691
2365	200	90	7	546154	729680
2390	159	70	5	546177	729670
2415	207	92	8	546199	729660
2440	267	104	7	546222	729649
2465	172	62	7	546245	729639
2490	178	66	3	546268	729629
2515	147	55	9	546290	729618
2540	107	30	8	546312	729609
2565	148	39	12	546336	729599
2590	184	76	9	546358	729588
2615	218	65	10	546380	729576
2640	80	44	12	546401	729563
2665	92	37	20	546421	729549
2690	89	40	17	546442	729536
2715	111	54	16	546463	729521
2740	99	55	11	546484	729508
2765	104	61	6	546505	729493
2790	129	55	8	546525	729479
2815	97	32	3	546547	729465
2840	78	25	2	546568	729453
2865	81	25	2	546591	729443
2890	97	31	3	546615	729433
2915	130	45	4	546636	729424
2940	88	28	5	546660	729412
3015	66	20	7	546724	729377
3040	88	28	5	546746	729364
3065	74	25	3	546766	729350
3090	83	26	6	546784	729333
3115	78	26	4	546801	729314
3140	83	26	4	546815	729294
3165	88	26	5	546832	729275
3190	88	24	6	546851	729260
3215	188	71	10	546872	729245
3240	185	72	9	546894	729231
3265	103	35	4	546913	729219
3290	143	60	6	546933	729205
3315	203	97	2	546955	729190
3340	204	93	7	546975	729177
3365	241	98	5	546995	729164
3390	199	87	7	547016	729151
3415	187	77	6	547037	729138

L3103 (Route 1)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3440	260	99	7	547060	729122
3465	276	109	5	547079	729109
3490	253	97	5	547101	729096
3515	272	109	8	547121	729083
3540	261	100	6	547143	729069
3565	244	96	6	547164	729056
3590	264	104	6	547184	729043

L3103 (Route 1)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	230	106	3	544179	730870
25	168	74	3	544199	730855
50	216	86	10	544218	730840
75	209	87	5	544236	730825
100	273	114	5	544255	730810
125	311	125	13	544274	730794
150	234	95	3	544295	730777
175	168	71	6	544312	730764
200	238	89	7	544334	730746
225	153	59	4	544354	730730
250	253	90	5	544373	730714
275	297	113	6	544393	730698
300	271	101	6	544410	730684
325	180	72	6	544431	730667
350	215	65	19	544450	730652
375	201	44	31	544469	730636
400	251	61	31	544488	730621
425	240	68	22	544508	730605
450	345	117	15	544525	730591
475	279	85	14	544547	730573
500	217	62	12	544567	730557
525	272	95	8	544586	730541
560	206	65	18	544614	730518
585	264	96	7	544634	730503
615	217	67	10	544655	730486
640	236	59	33	544674	730471
665	362	109	23	544694	730455
690	168	61	7	544713	730439
715	178	61	6	544732	730424
735	355	105	11	544751	730408
760	206	67	10	544770	730391
785	292	98	10	544790	730376
810	438	226	5	544809	730361
835	243	105	2	544828	730345
860	270	102	5	544845	730331
885	289	101	7	544865	730313
910	267	109	4	544884	730297
935	318	88	22	544904	730281
960	170	57	4	544923	730267
985	265	90	7	544943	730249
1010	287	120	11	544961	730233
1035	232	101	9	544981	730217
1060	209	81	17	545000	730201
1085	297	134	4	545020	730185
1110	199	90	6	545038	730170

L3103 (Route 1)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1140	183	79	5	545058	730154
1160	149	51	11	545077	730138
1185	156	62	9	545096	730123
1210	326	141	7	545115	730107
1235	201	81	10	545130	730094
1260	269	103	9	545152	730077
1285	298	111	10	545174	730059
1310	176	54	22	545193	730043
1340	192	79	4	545212	730027
1360	227	98	5	545230	730013
1385	281	146	3	545250	729997
1415	359	116	10	545270	729981
1440	390	158	6	545290	729966
1460	306	104	15	545311	729952
1485	253	87	24	545333	729939
1510	351	167	7	545351	729928
1540	183	59	20	545376	729913
1565	157	52	7	545396	729902
1590	280	109	8	545419	729888
1615	261	102	5	545439	729876
1640	194	79	5	545461	729863
1665	171	73	5	545483	729850
1690	243	100	7	545504	729838
1715	274	129	5	545524	729827
1740	246	117	6	545546	729816
1765	212	86	4	545572	729810
1790	264	108	4	545596	729807
1815	225	84	11	545622	729804
1840	162	66	7	545646	729801
1865	251	102	5	545672	729798
1890	464	202	3	545695	729795
1915	301	135	6	545721	729792
1935	216	93	6	545745	729788
1960	240	85	9	545768	729785
1985	224	91	7	545794	729781
2010	200	74	7	545819	729778
2040	198	80	7	545845	729774
2060	212	81	6	545868	729771
2085	189	80	7	545894	729768
2110	265	115	4	545918	729765
2135	186	83	3	545942	729762
2160	206	97	4	545967	729757
2185	304	103	7	545991	729748
2210	155	48	17	546012	729740
2235	209	86	6	546035	729729

L3103 (Route 1)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2260	214	78	8	546058	729719
2275	167	69	5	546082	729708
2310	216	82	8	546103	729699
2335	223	88	7	546127	729688
2360	170	51	9	546148	729679
2385	193	69	9	546172	729668
2415	226	76	9	546196	729658
2440	291	128	8	546218	729647
2465	239	89	8	546240	729637
2490	166	66	4	546263	729627
2515	175	78	6	546286	729615
2540	194	86	9	546309	729605
2560	154	43	10	546330	729596
2585	312	105	12	546353	729586
2610	181	58	11	546376	729573
2635	171	67	15	546397	729561
2660	234	71	23	546418	729547
2690	246	81	22	546439	729533
2715	230	84	14	546460	729520
2735	236	92	10	546479	729507
2765	253	96	5	546501	729492
2790	223	89	7	546521	729478
2810	79	22	7	546541	729465
2835	94	30	3	546564	729451
2860	86	29	3	546586	729442
2885	85	27	6	546609	729432
2910	89	27	2	546632	729421
2935	90	32	5	546654	729411
2960	64	19	9	546676	729399
2985	16	10	7	546699	729387
3010	36	9	18	546717	729377
3035	79	29	5	546742	729363
3060	75	26	4	546761	729349
3085	79	36	5	546779	729333
3115	90	34	2	546795	729314
3140	83	24	5	546811	729294
3165	86	29	4	546828	729274
3190	93	23	6	546847	729258
3205	196	80	8	546866	729246
3235	155	57	9	546888	729231
3260	148	68	3	546908	729217
3285	170	94	3	546928	729204
3310	256	113	5	546951	729189
3340	253	120	7	546972	729175
3365	258	114	5	546990	729163

L3103 (Route 1)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3390	218	96	6	547014	729148
3415	255	94	5	547035	729135
3440	213	108	3	547053	729123
3465	399	120	20	547076	729109
3490	294	118	4	547096	729095
3515	279	122	4	547118	729081
3540	338	131	5	547140	729068
3565	276	99	8	547160	729055
3590	255	115	5	547182	729041

L3103 Site to Motorway (Route 2)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	293	125	9	547205	729030
25	202	69	14	547228	729015
50	294	120	8	547249	729003
75	185	80	6	547271	728991
100	189	74	6	547293	728980
125	203	83	8	547316	728969
150	200	86	4	547335	728956
175	208	83	6	547357	728943
200	189	77	6	547378	728932
225	213	82	8	547401	728919
250	208	81	9	547422	728907
275	242	118	9	547447	728896
300	231	102	6	547469	728887
325	200	87	8	547492	728881
350	430	162	7	547517	728873
375	175	53	10	547541	728865
400	340	120	11	547564	728859
425	172	49	11	547587	728852
450	260	116	6	547611	728844
475	230	101	6	547635	728836
500	230	107	8	547660	728832
525	269	120	5	547686	728829
550	244	94	5	547710	728826
575	291	107	5	547735	728823
600	323	138	6	547758	728820
630	179	78	5	547787	728816
650	263	119	1	547809	728812
675	226	101	6	547832	728806
700	223	107	3	547856	728799
725	233	110	6	547879	728789
750	246	109	5	547902	728779
775	187	72	6	547926	728768
800	248	105	8	547949	728759
825	182	82	3	547972	728752
850	228	92	6	547995	728745
875	182	85	6	548019	728737
900	203	96	4	548043	728730
925	219	115	1	548067	728722
950	178	92	4	548092	728716
975	222	88	6	548114	728711
1000	189	77	7	548140	728705
1025	186	59	8	548191	728698
1050	216	86	10	548212	728696
1075	186	82	5	548238	728698
1100	223	108	6	548262	728702

L3103 Site to Motorway (Route 2)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1125	198	85	3	548284	728706
1150	161	68	6	548310	728710
1175	195	83	7	548334	728713
1200	187	83	6	548359	728717
1225	232	98	6	548388	728717
1250	227	99	9	548411	728714
1275	98	64	4	548434	728709
1300	184	86	4	548457	728701
1325	275	128	5	548482	728693
1350	282	110	7	548504	728684
1375	202	71	8	548529	728675
1400	229	93	6	548551	728667
1425	224	82	6	548575	728656
1450	175	61	6	548594	728641
1475	222	101	6	548614	728625
1500	204	88	5	548631	728610
1525	241	107	1	548651	728593
1550	194	100	3	548668	728576
1575	137	76	3	548686	728559
1600	197	96	3	548705	728542
1625	198	78	7	548725	728524
1650	246	111	1	548740	728506
1675	146	68	6	548755	728487
1705	180	74	2	548770	728461
1725	200	94	2	548781	728445
1750	231	101	1	548796	728424
1775	159	83	4	548811	728404
1800	237	102	2	548825	728384
1825	217	100	2	548840	728363
1850	239	113	6	548855	728343
1875	235	95	7	548870	728325
1900	232	86	8	548888	728306
1925	207	74	5	548905	728289
1950	218	97	2	548921	728271
1980	204	104	1	548942	728249
2000	204	101	3	548956	728234
2025	167	64	4	548973	728216
2050	106	48	10	548990	728197
2075	158	77	7	549006	728179
2100	149	70	4	549023	728160
2125	174	60	1	549040	728141
2155	194	81	7	549061	728124
2175	230	82	5	549079	728111
2200	172	65	3	549098	728096
2225	138	44	1	549119	728080

L3103 Site to Motorway (Route 2)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2250	124	59	3	549140	728067
2275	169	61	3	549160	728056
2300	135	47	4	549183	728044
2325	197	85	4	549206	728034
2355	175	66	2	549231	728022
2375	89	40	4	549249	728013
2400	108	47	3	549276	728004
2425	150	60	2	549272	727986
2455	106	32	5	549244	727977
2475	93	38	2	549223	727966
2500	102	43	2	549204	727954
2525	94	42	1	549183	727938
2550	121	55	4	549165	727921
2575	102	45	2	549147	727903
2605	125	51	3	549130	727883
2626	98	39	5	549114	727867
2650	56	22	2	549097	727849
2675	91	44	2	549092	727826
2700	92	32	2	549099	727800
2725	94	35	4	549113	727780
2750	87	42	1	549128	727761
2775	90	43	2	549143	727742
2800	96	46	2	549159	727723
2825	75	32	3	549175	727703
2850	84	38	3	549189	727685
2875	83	39	2	549204	727665
2900	76	33	2	549219	727645
2925	72	30	4	549235	727624
2950	72	32	4	549249	727605
2975	82	42	4	549263	727585
3000	77	35	6	549278	727564
3025	85	40	3	549293	727541
3050	63	32	3	549306	727523
3075	49	20	21	549321	727501
3100	74	36	1	549334	727481
3125	74	33	3	549348	727461
3150	63	28	6	549361	727441
3175	39	30	8	549374	727418
3200	88	33	4	549386	727397
3225	249	126	8	549398	727372
3250	222	119	7	549409	727353
3275	176	92	5	549431	727338
3300	177	83	5	549444	727319
3325	179	84	7	549448	727293
3350	288	159	9	549457	727272

L3103 Site to Motorway (Route 2)					
Southbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3375	200	102	7	549469	727250
3400	213	92	7	549482	727227
3425	229	107	9	549494	727206
3450	162	81	6	549506	727184
3475	194	99	8	549517	727160
3500	215	102	11	549525	727139
3525	220	104	9	549534	727115
3550	195	109	3	549541	727092
3575	209	120	4	549547	727066
3605	202	117	7	549553	727040
3625	215	131	2	549557	727018
3650	213	126	4	549562	726995
3675	153	85	3	549566	726970
3700	218	136	3	549572	726944
3725	166	99	6	549592	726921
3750	197	121	4	549602	726911
3775	155	93	3	549596	726887
3805	170	105	4	549568	726879
3825	97	52	4	549547	726873
3850	172	92	3	549526	726861
3875	200	107	1	549506	726847
3900	156	84	3	549487	726831
3930	200	111	4	549467	726812
3950	154	77	3	549451	726797
3975	201	106	4	549434	726777
4000	193	101	4	549416	726758
4025	185	99	3	549401	726740
4050	195	102	2	549385	726723
4075	150	77	2	549367	726704
4100	169	87	5	549353	726683

L3103 Motorway to Site (Route 2)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	250	122	7	549342	726690
25	145	75	5	549364	726708
50	181	96	6	549380	726725
75	154	86	3	549395	726742
100	205	111	6	549413	726761
125	180	103	8	549428	726778
150	150	81	2	549445	726797
175	146	72	5	549464	726816
200	166	87	4	549482	726833
225	179	99	4	549500	726849
250	182	92	6	549523	726865
275	199	103	4	549545	726880
300	164	97	3	549558	726897
325	209	115	4	549564	726919
350	164	82	5	549566	726944
375	214	126	5	549562	726969
400	153	90	2	549558	726992
425	168	96	3	549552	727019
450	197	120	3	549548	727041
475	182	99	1	549542	727068
500	157	92	1	549536	727091
525	181	87	8	549529	727115
550	209	106	9	549521	727138
575	185	105	6	549511	727162
600	162	76	8	549501	727184
625	183	91	1	549488	727206
650	190	95	6	549476	727225
675	186	91	9	549462	727246
700	173	88	5	549446	727266
725	222	126	6	549427	727282
750	204	109	4	549404	727285
775	197	92	5	549388	727304
800	195	103	3	549390	727331
830	230	124	5	549394	727356
850	116	47	6	549388	727378
875	36	33	1	549378	727400
900	74	38	5	549367	727422
925	61	28	4	549354	727443
950	67	32	2	549339	727464
975	76	36	3	549325	727485
1000	55	23	23	549312	727505
1025	71	36	1	549299	727525
1050	86	40	7	549284	727546
1075	80	39	2	549270	727566
1100	75	35	3	549256	727586

L3103 Motorway to Site (Route 2)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1125	95	52	2	549241	727608
1150	96	49	3	549226	727628
1175	81	39	2	549211	727649
1200	78	39	3	549196	727668
1225	92	50	2	549180	727689
1250	98	51	4	549166	727707
1280	94	50	3	549149	727729
1300	87	43	4	549134	727746
1325	92	43	2	549118	727764
1350	102	39	5	549101	727783
1375	101	38	3	549084	727799
1400	114	53	1	549060	727805
1425	92	51	1	549039	727818
1450	86	44	2	549036	727843
1475	92	47	2	549052	727861
1500	109	55	3	549077	727863
1530	85	30	2	549105	727869
1550	122	61	1	549122	727882
1575	106	49	3	549138	727899
1600	116	51	4	549155	727918
1625	122	58	1	549174	727935
1650	109	58	2	549193	727952
1675	125	64	2	549214	727965
1705	107	47	2	549239	727980
1735	254	90	6	549250	728002
1750	92	53	3	549238	728013
1775	178	87	2	549216	728025
1800	238	125	3	549194	728036
1825	166	79	3	549171	728046
1850	258	108	10	549149	728057
1875	604	313	1	549127	728070
1900	264	126	2	549108	728084
1925	229	112	4	549087	728100
1950	410	279	9	549067	728115
1975	302	138	4	549047	728130
2000	258	128	3	549030	728147
2025	274	204	4	549014	728166
2050	189	84	5	548997	728184
2075	139	60	5	548979	728204
2105	154	66	3	548961	728224
2130	235	108	1	548943	728243
2150	182	92	2	548929	728258
2175	200	107	5	548911	728277
2200	242	124	9	548894	728295
2225	232	92	9	548878	728312

L3103 Motorway to Site (Route 2)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2250	175	90	5	548861	728331
2275	179	82	6	548846	728350
2300	214	103	6	548831	728370
2325	211	117	5	548816	728391
2350	229	112	1	548801	728411
2375	271	165	2	548787	728430
2400	379	212	1	548772	728453
2425	329	195	2	548759	728475
2450	388	236	2	548742	728500
2475	209	92	2	548729	728515
2500	200	89	2	548713	728530
2525	202	118	3	548695	728547
2550	258	114	3	548677	728564
2575	210	106	1	548658	728581
2600	240	119	4	548640	728599
2630	220	108	6	548617	728618
2650	285	155	2	548600	728632
2675	267	158	3	548584	728646
2715	291	149	3	548550	728664
2725	470	272	3	548538	728668
2750	247	142	3	548518	728676
2775	247	107	6	548494	728685
2800	184	90	5	548471	728693
2825	187	89	2	548448	728701
2850	209	107	3	548423	728708
2875	276	146	2	548397	728712
2900	299	156	3	548372	728713
2925	240	136	3	548349	728713
2950	182	89	4	548325	728710
2975	316	193	4	548300	728707
3000	140	76	5	548277	728703
3025	180	102	4	548251	728697
3050	193	114	6	548225	728693
3075	249	138	8	548198	728694
3100	211	131	2	548177	728696
3140	347	170	5	548139	728702
3165	334	175	6	548113	728708
3190	384	197	6	548088	728713
3215	312	149	7	548065	728719
3240	300	150	2	548042	728726
3265	288	146	3	548015	728735
3290	310	139	4	547995	728742
3315	336	153	5	547969	728749
3340	238	108	8	547948	728757
3365	362	160	4	547923	728766

L3103 Motorway to Site (Route 2)					
Northbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
3390	275	128	3	547901	728776
3415	356	169	6	547877	728786
3440	201	98	2	547855	728796
3465	216	116	4	547832	728803
3490	171	84	3	547808	728809
3515	245	141	2	547783	728813
3540	248	133	6	547756	728817
3565	200	74	4	547732	728820
3595	226	102	3	547706	728824
3615	364	229	3	547682	728826
3640	330	175	3	547657	728829
3665	417	207	5	547633	728834
3690	352	170	4	547611	728841
3715	297	137	8	547587	728849
3740	201	92	9	547564	728856
3765	179	78	5	547538	728863
3790	144	67	2	547516	728871
3815	117	54	5	547491	728878
3840	231	94	3	547467	728886
3865	195	97	3	547444	728895
3890	270	110	4	547423	728905
3915	275	134	8	547401	728916
3940	275	134	3	547379	728927
3965	347	165	2	547355	728940
3990	301	138	5	547335	728952
4015	293	141	5	547312	728967
4040	343	166	3	547291	728976
4065	284	140	3	547269	728987
4090	307	141	6	547248	729000
4115	314	154	18	547226	729013
4140	295	135	5	547205	729025

R339 Ballybane to Port					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
10	64	34	4	532497	726921
35	80	40	4	532496	726896
40	154	85	3	532495	726872
60	133	55	6	532473	726865
75	206	98	2	532463	726887
105	252	143	7	532455	726913
125	237	110	4	532448	726929
150	259	113	3	532432	726953
175	213	100	4	532415	726970
200	221	114	4	532394	726983
225	167	72	3	532370	726992
250	72	28	10	532345	726996
275	40	14	8	532322	726995
300	202	104	6	532297	726991
325	146	80	4	532272	726985
350	79	28	12	532249	726979
375	184	89	6	532226	726971
400	43	17	10	532202	726962
425	86	41	18	532180	726953
450	284	129	10	532157	726943
475	79	44	7	532133	726928
500	68	35	10	532115	726914
525	81	38	9	532097	726898
550	50	32	11	532076	726882
575	198	91	7	532058	726867
600	86	51	6	532039	726851
625	99	57	4	532017	726835
650	61	22	13	531997	726822
675	165	94	9	531977	726808
700	49	25	9	531956	726796
725	50	17	12	531934	726784
750	38	17	6	531911	726772
775	27	14	4	531890	726761
800	115	63	3	531862	726748
825	24	12	5	531844	726740
855	356	155	2	531819	726728
875	289	134	3	531798	726718
900	393	140	7	531776	726708
955	217	129	3	531729	726683
975	127	71	3	531712	726668
1000	148	83	2	531695	726651
1025	143	87	6	531680	726632
1050	62	35	5	531663	726615
1075	43	14	12	531647	726597
1100	136	47	9	531631	726578

R339 Ballybane to Port					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1125	329	142	9	531613	726560
1150	240	111	6	531593	726546
1180	220	108	6	531571	726528
1200	229	108	4	531554	726512
1225	221	94	3	531537	726494
1250	266	107	10	531517	726479
1275	210	104	4	531498	726465
1300	214	106	4	531476	726451
1325	159	85	2	531457	726437
1350	258	125	8	531435	726421
1375	240	118	12	531415	726408
1400	119	52	6	531394	726395
1425	184	104	7	531371	726384
1450	270	142	4	531348	726375
1475	265	131	3	531324	726367
1500	285	151	2	531297	726360
1525	199	99	2	531276	726355
1550	142	71	4	531252	726350
1575	132	38	17	531229	726342
1600	111	53	4	531203	726337
1625	171	64	8	531180	726331
1650	141	62	24	531157	726323
1675	169	47	10	531134	726312
1700	101	39	8	531112	726296
1725	118	24	12	531094	726280
1790	268	103	2	531053	726232
1805	285	124	3	531043	726221
1825	335	153	5	531033	726203
1850	223	97	4	531022	726181
1875	348	138	12	531010	726160
1900	274	132	6	530997	726137
1925	305	126	3	530986	726116
1950	256	122	8	530973	726092
1975	282	108	13	530960	726070
2000	369	122	43	530949	726050
2025	338	99	40	530935	726028
2050	175	67	6	530922	726008
2075	266	98	8	530905	725986
2100	277	75	36	530893	725968
2125	231	94	21	530876	725946
2150	162	50	26	530863	725928
2175	308	109	25	530848	725909
2200	204	79	9	530833	725887
2225	274	98	15	530819	725868
2250	233	84	17	530804	725847

R339 Ballybane to Port					
Westbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2275	279	100	18	530790	725827
2300	360	126	23	530775	725806
2325	283	87	35	530762	725788
2350	283	106	18	530746	725765
2375	229	84	14	530733	725746
2400	303	99	21	530719	725725
2425	229	92	18	530704	725704
2450	193	56	27	530690	725683
2475	188	89	8	530677	725664
2500	361	137	13	530662	725641
2525	248	122	5	530649	725623
2550	298	131	5	530635	725602
2575	216	106	4	530621	725582
2600	147	70	8	530607	725560
2625	278	109	5	530593	725540
2650	240	85	12	530578	725519
2675	331	139	33	530564	725499
2705	217	61	25	530548	725474
2725	205	65	21	530537	725458
2750	216	80	16	530522	725436
2775	224	83	18	530508	725416
2805	256	83	13	530493	725393
2825	166	47	14	530482	725374
2850	368	124	22	530470	725354
2875	301	110	10	530456	725331
2905	454	166	17	530442	725309
2950	68	28	3	530415	725271
2975	94	39	3	530400	725250
3000	61	23	2	530385	725230
3025	95	29	10	530372	725208
3050	74	24	5	530350	725199
3075	96	33	10	530343	725167
3100	105	51	6	530326	725150
3130	70	23	6	530305	725132
3150	67	24	11	530288	725116
3175	220	82	8	530265	725092
3200	150	62	8	530253	725079
3225	99	22	10	530239	725062
3255	123	30	15	530218	725038
3275	118	39	14	530205	725024
3300	130	76	2	530185	725010
3325	159	87	2	530169	724991
3350	343	195	1	530152	724973
3375	372	150	10	530135	724955
3400	249	141	12	530111	724941

R339 Ballybane to Port					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	85	24	5	532485	726931
30	89	29	3	532485	726904
50	102	36	4	532484	726881
75	172	87	1	532468	726889
90	152	77	3	532463	726903
130	227	108	4	532448	726936
150	214	101	3	532435	726956
180	186	69	3	532414	726975
200	254	140	10	532395	726987
225	37	16	8	532373	726996
250	52	13	6	532346	727001
275	107	49	12	532320	727000
300	70	25	15	532294	726995
325	151	59	10	532271	726989
350	55	16	12	532247	726982
375	152	73	8	532222	726975
400	65	26	13	532200	726967
425	78	27	21	532177	726958
450	70	22	14	532154	726946
475	113	43	9	532132	726934
500	108	47	11	532114	726920
525	71	24	10	532093	726904
550	77	18	18	532074	726888
575	37	18	8	532055	726872
600	47	17	10	532037	726857
625	40	16	9	532016	726841
650	111	49	19	531997	726829
675	198	93	8	531974	726814
700	144	75	4	531954	726801
725	91	34	3	531932	726789
750	161	58	5	531910	726777
775	170	70	3	531888	726765
800	156	72	4	531865	726755
825	168	78	2	531843	726745
850	113	56	3	531819	726734
875	166	70	3	531796	726724
900	288	142	14	531773	726714
970	114	68	2	531716	726679
995	145	53	3	531695	726658
1025	165	84	5	531677	726638
1050	152	75	6	531661	726619
1075	113	50	7	531644	726601
1100	139	55	10	531628	726581
1125	131	73	3	531612	726564
1150	130	64	6	531593	726546

R339 Ballybane to Port					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1175	146	73	4	531574	726530
1200	109	64	5	531556	726515
1225	181	102	7	531538	726502
1250	155	62	10	531515	726485
1275	148	84	7	531495	726470
1300	137	67	5	531477	726458
1325	143	64	5	531454	726441
1350	176	105	4	531435	726427
1375	227	102	19	531414	726414
1400	186	101	7	531393	726401
1425	133	66	6	531372	726390
1450	187	99	10	531351	726381
1475	128	72	2	531325	726373
1500	146	78	7	531301	726366
1525	109	58	5	531276	726360
1550	129	59	3	531252	726355
1575	170	74	4	531228	726350
1600	116	55	7	531205	726345
1625	169	80	7	531178	726338
1650	186	84	12	531155	726330
1675	187	85	2	531132	726321
1700	123	48	7	531110	726308
1725	203	98	10	531091	726293
1750	119	54	2	531079	726283
1795	149	71	4	531041	726230
1825	194	70	9	531027	726208
1850	171	73	6	531016	726187
1875	313	116	7	531004	726164
1895	167	53	8	530994	726145
1920	143	50	8	530982	726122
1945	177	70	3	530969	726101
1960	242	96	8	530954	726084
2000	320	101	29	530946	726054
2020	162	39	34	530938	726038
2045	206	68	14	530922	726015
2065	143	74	11	530908	725996
2095	186	62	24	530893	725976
2120	226	87	6	530878	725955
2145	158	57	19	530863	725935
2165	196	67	19	530850	725917
2190	161	73	9	530834	725896
2215	143	66	9	530818	725875
2240	127	52	12	530804	725854
2265	212	79	13	530790	725835
2290	159	46	15	530775	725814

R339 Ballybane to Port					
Eastbound Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
2315	286	100	27	530761	725794
2340	171	61	15	530747	725774
2365	170	74	7	530733	725752
2390	165	59	15	530720	725735
2420	251	95	21	530704	725711
2445	175	66	17	530690	725691
2470	62	24	1	530678	725673
2495	135	62	7	530662	725650
2520	36	15	4	530648	725629
2545	102	50	5	530634	725608
2570	93	45	4	530622	725590
2595	63	27	7	530607	725568
2620	90	38	7	530593	725547
2645	116	58	6	530578	725526
2670	366	117	16	530564	725506
2695	187	64	18	530550	725485
2720	171	54	21	530536	725464
2745	188	80	7	530523	725445
2770	133	50	13	530508	725423
2790	108	36	11	530496	725405
2820	87	47	4	530480	725382
2845	52	13	7	530466	725361
2870	46	13	6	530452	725340
2900	57	22	5	530440	725321
2945	72	31	5	530425	725299
2970	83	36	2	530398	725258
2995	86	34	1	530384	725236
3020	85	32	5	530372	725216
3045	106	41	5	530350	725193
3070	84	35	4	530344	725174
3095	48	23	4	530327	725156
3125	76	28	5	530308	725140
3145	61	25	5	530291	725124
3165	67	33	4	530272	725107
3180	279	149	3	530256	725091
3220	186	90	3	530237	725069
3245	182	72	4	530223	725052
3270	134	50	21	530206	725033
3320	135	65	2	530171	724999
3345	307	203	1	530153	724981
3370	321	193	1	530135	724962
3390	226	136	7	530119	724949
3420	299	177	6	530093	724936

R339 Ballybane to Port					
WB Turn Lane to R339 Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1685	225	113	3	531122	726308
1711	173	68	10	531101	726292
1727	148	51	11	531090	726281

R865 Ballybane to Port					
WB Turn to R339 Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	61	28	3	532503	726930
26	71	35	4	532501	726904
40	83	38	6	532499	726874

R339 Ballybane to Port					
EB Turn to R339 Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
1805	76	40	6	531046	726233
1827	116	32	5	531038	726221
1842	205	102	7	531028	726202

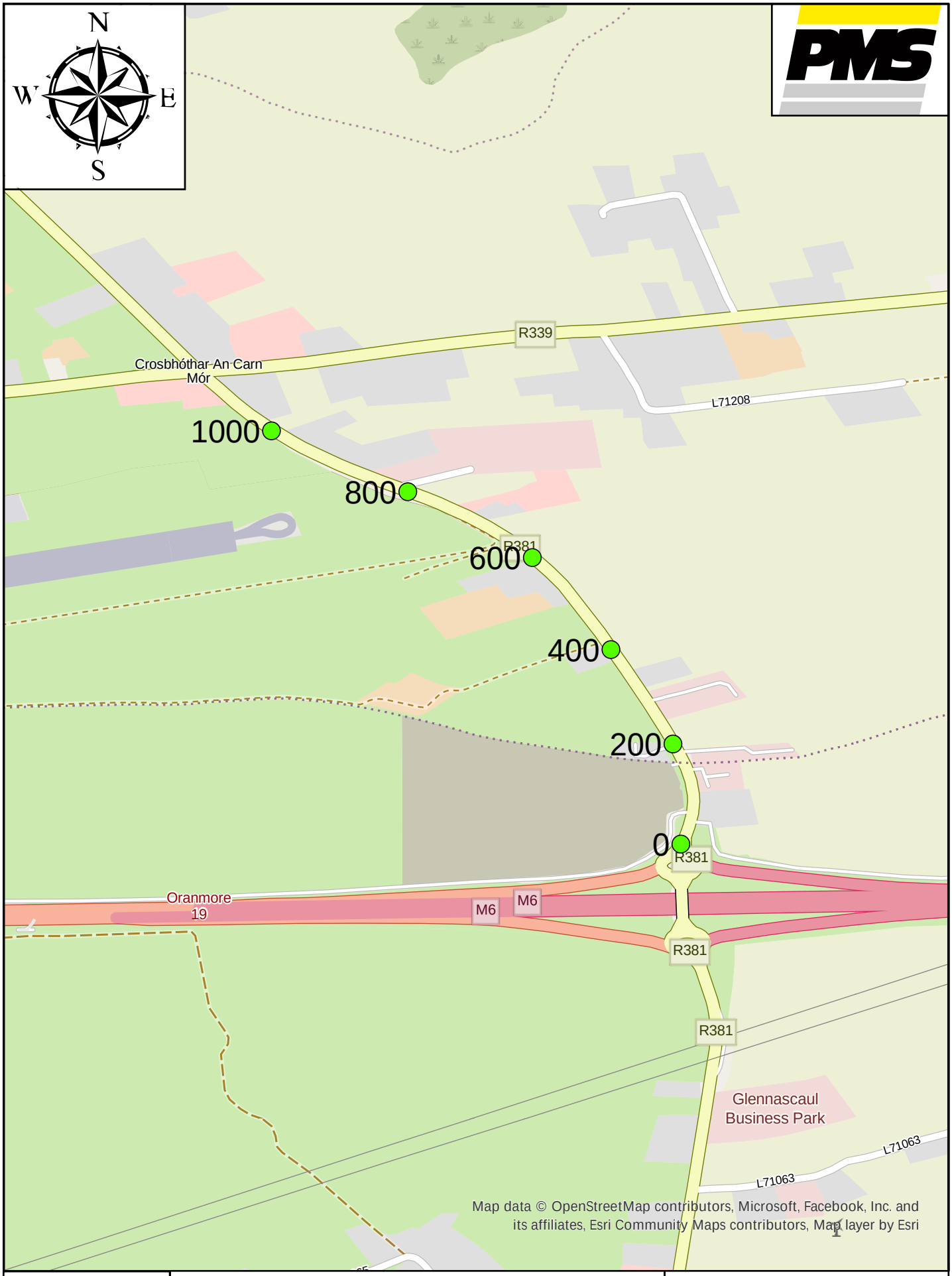
R865 Ballybane to Port					
Turn to N6 WB Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	106	48	4	532487	726931
20	42	22	2	532488	726911
40	129	69	2	532489	726891

R339 Ballybane to Port					
Turn to N6 EB Carriageway					
Chainage	D1(40)	SCI	D7	ITM	
(metres)	(microns)	(microns)	(microns)	Easting	Northing
0	88	28	6	532490	726932
15	60	30	14	532491	726916
30	77	42	3	532491	726900

Appendix C – Operator Notes

Section		Lane	Chainage (m)	Physical Identifier	ITM	
					Easting	Northing
1	R381 Motorway to Carnmore Cross (Route 1)	NB	0	*Start at Coordinates*	538405	727732
			1100	*End at Coordinates*	537878	728627
2	R339 Carnmore (Route 1)	EB	5	*Start at Coordinates*	537904	728671
			6755	*End at Coordinates*	544154	730879
3	L3103 (Route 1)	SB	15	*Start at Coordinates*	544193	730863
			3590	*End at Coordinates*	547184	729043
4	L3103 Site to Motorway (Route 2)	SB	0	*Start at Coordinates*	547205	729030
			4100	*End at Coordinates*	549353	726683
5	L3103 Motorway to Site (Route 2)	NB	0	*Start at Coordinates*	549342	726690
			4140	*End at Coordinates*	547205	729025
6	R339 Ballybane to Port	WB	0	*Start at Coordinates*	532497	726921
			3420	*End at Coordinates*	530111	724941
7	R339 Ballybane to Port	WB Turn Lane to R339	1685	*Start at Coordinates*	531122	726308
			1727	*End at Coordinates*	531090	726281
8	R865 Ballybane to Port	WB Turn to R339	0	*Start at Coordinates*	532503	726930
			40	*End at Coordinates*	532499	726874
9	R865 Ballybane to Port	EB Turn to R339	1805	*Start at Coordinates*	531046	726233
			1842	*End at Coordinates*	531028	726202
10	R865 Ballybane to Port	Turn to N6 WB	0	*Start at Coordinates*	532487	726931
			40	*End at Coordinates*	532489	726891
11	R865 Ballybane to Port	Turn to N6 EB	0	*Start at Coordinates*	532490	726932
			30	*End at Coordinates*	532491	726900

Appendix D – Site Maps

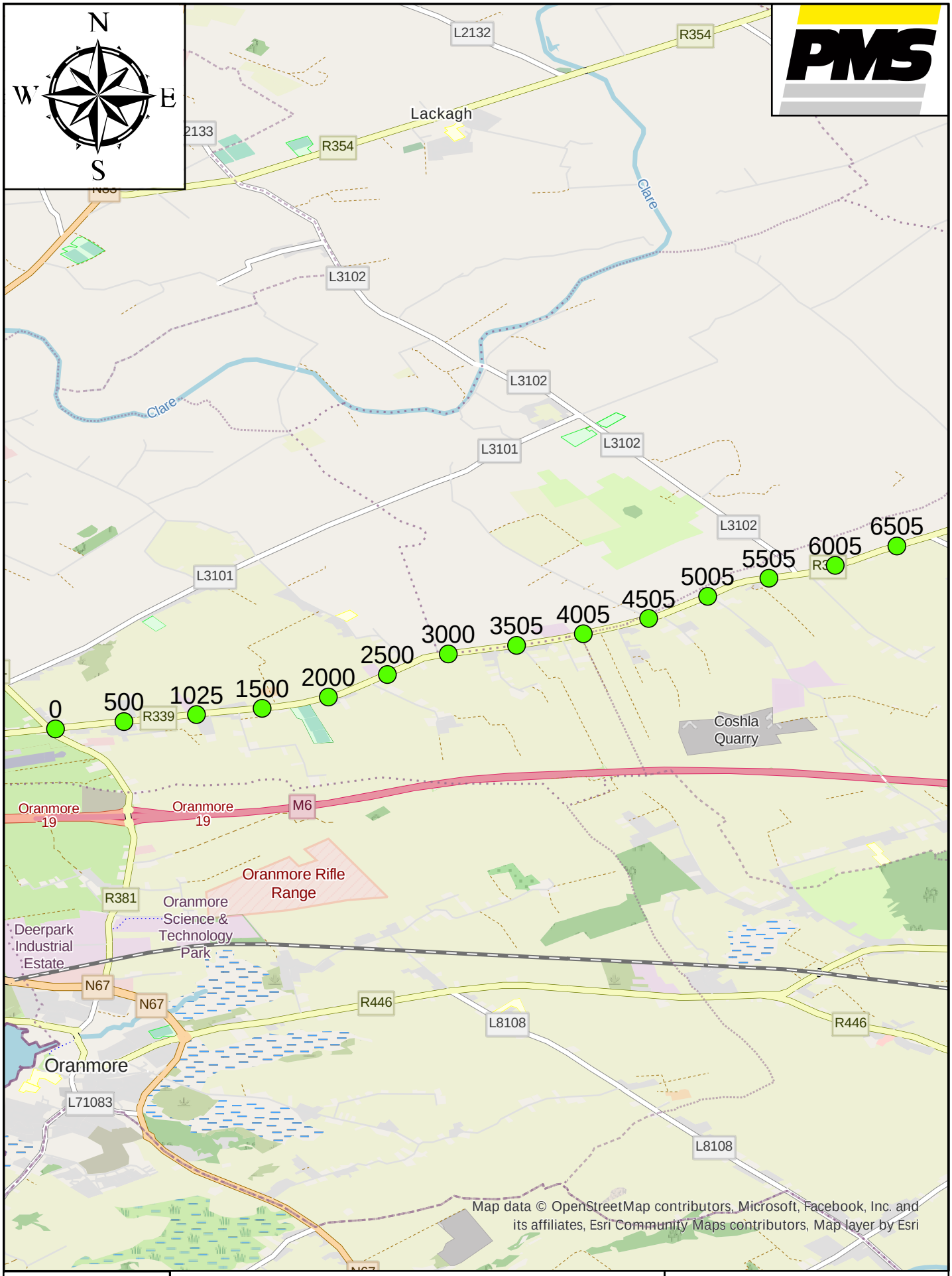


Legend

FWD_GPS

Bord Gáis Energy
FWD Survey August 2025

Section: R381 Motorway to Carnmore Cross (Route 1)
Lane: NB
FileName: AS25F172AA
Date Tested: 05-07/08/2025



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Bord Gáis Energy
FWD Survey August 2025

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Lane: EB
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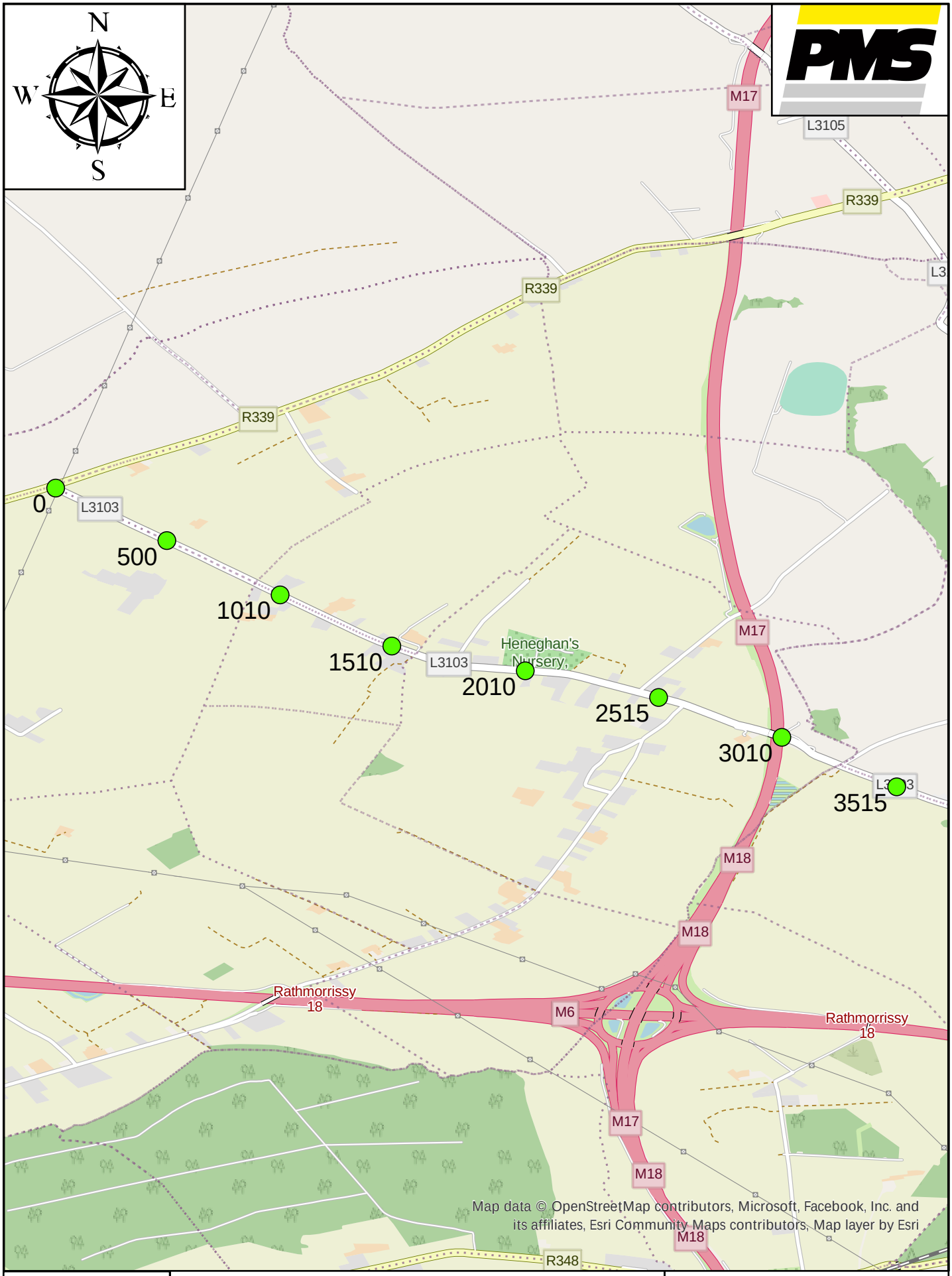
Date Tested: 05-07/08/2025



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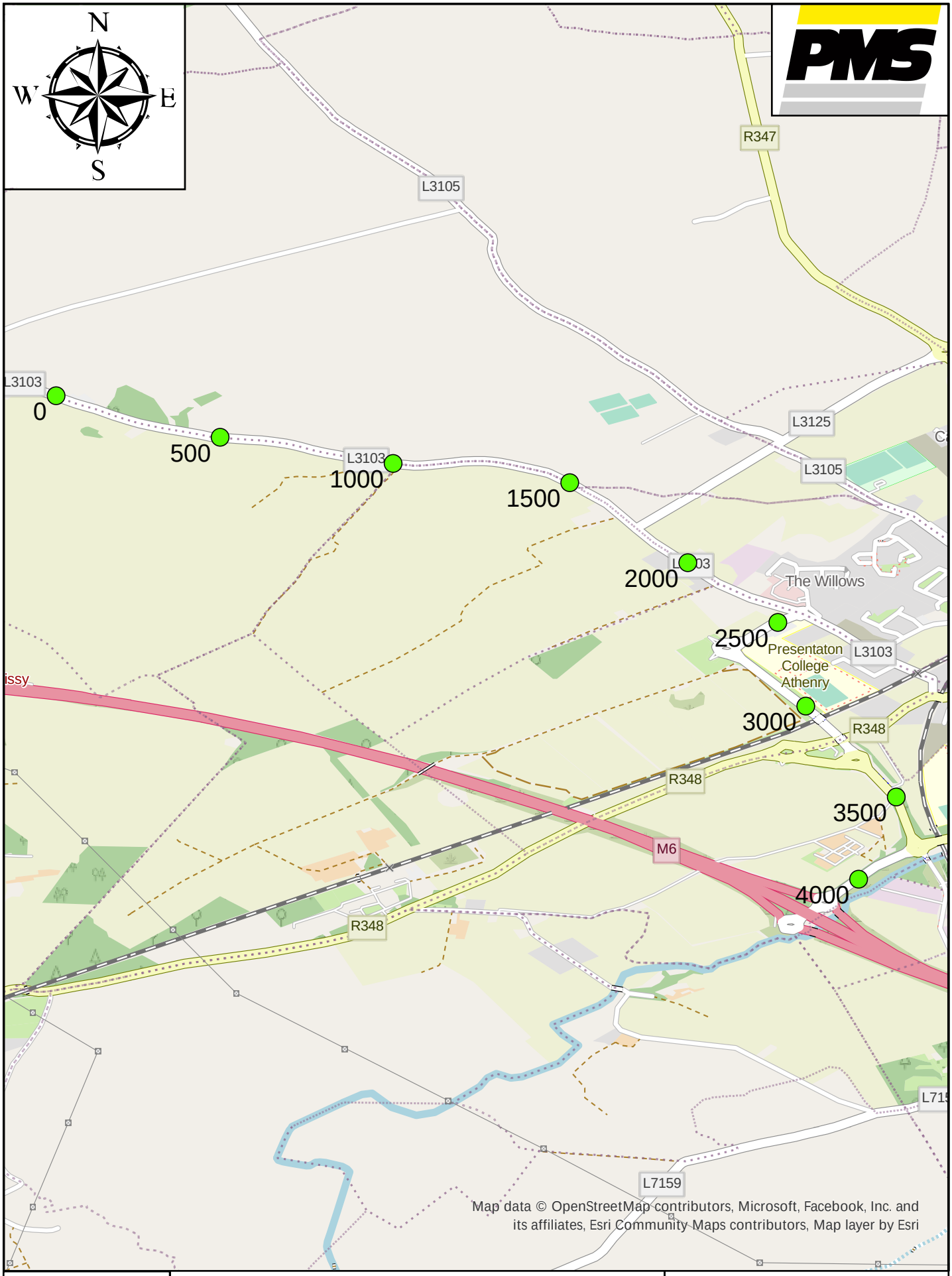
Bord Gáis Energy
FWD Survey August 2025

Section: L3103 (Route 1)
Lane: SB
FileName: AS25F172CA
Date Tested: 05-07/08/2025



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Bord Gáis Energy
FWD Survey August 2025

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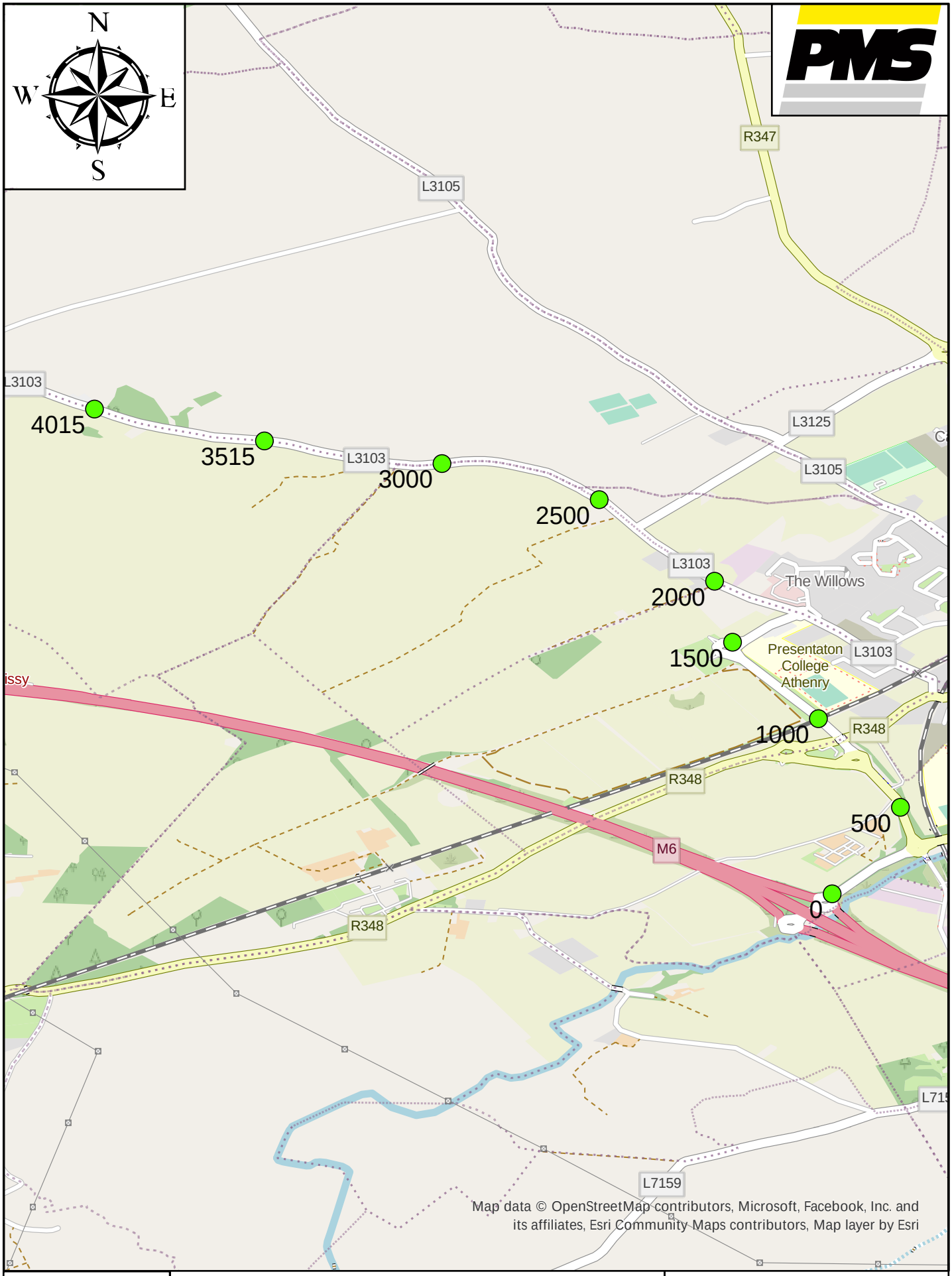
Lane: SB
FileName: AS25F173A
Date Tested: 07-11/08/2025



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Bord Gáis Energy
FWD Survey August 2025

Section: L3103 Motorway to Site (Route 2)
Lane: NB
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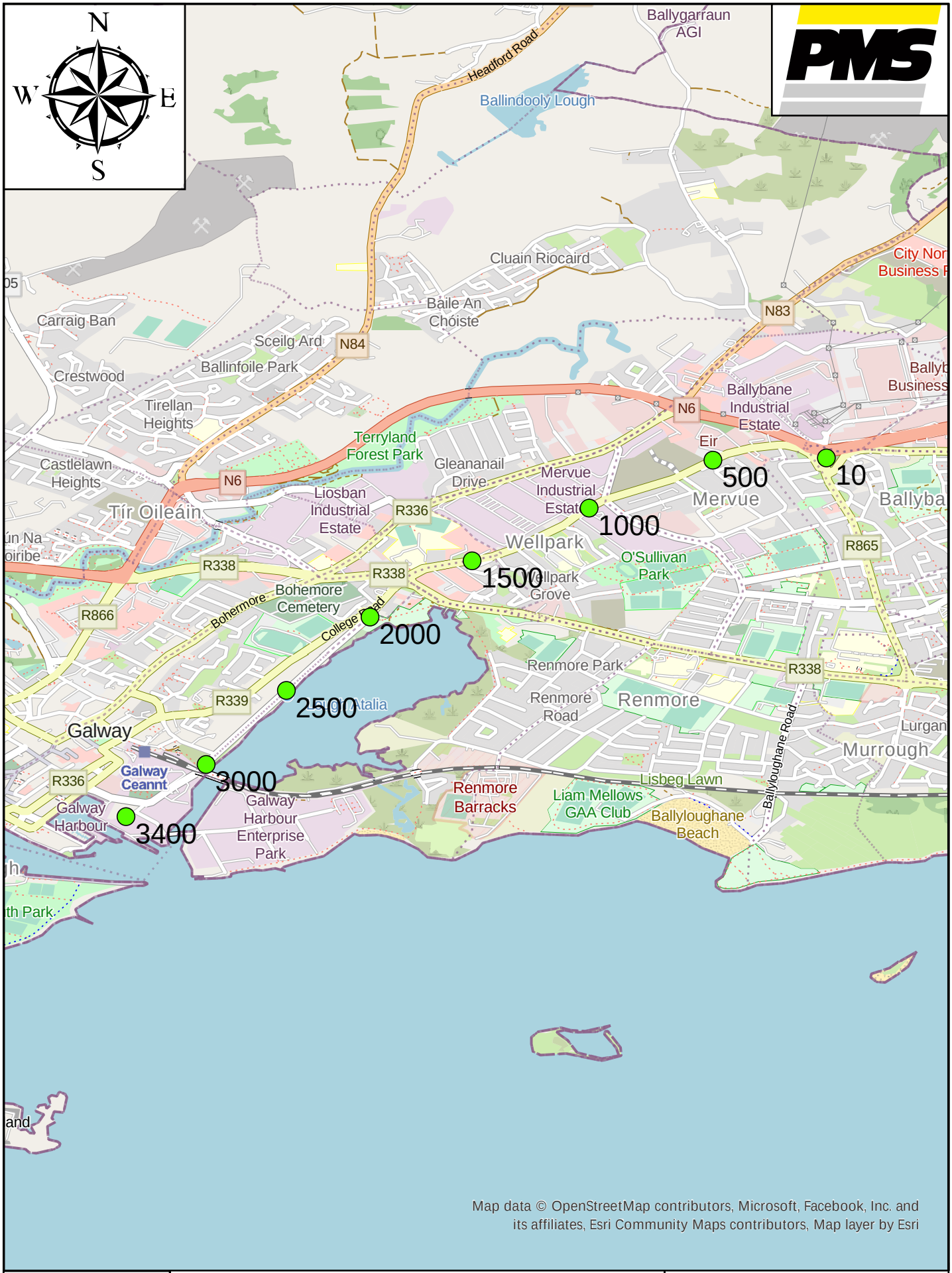
Date Tested: 07-11/08/2025



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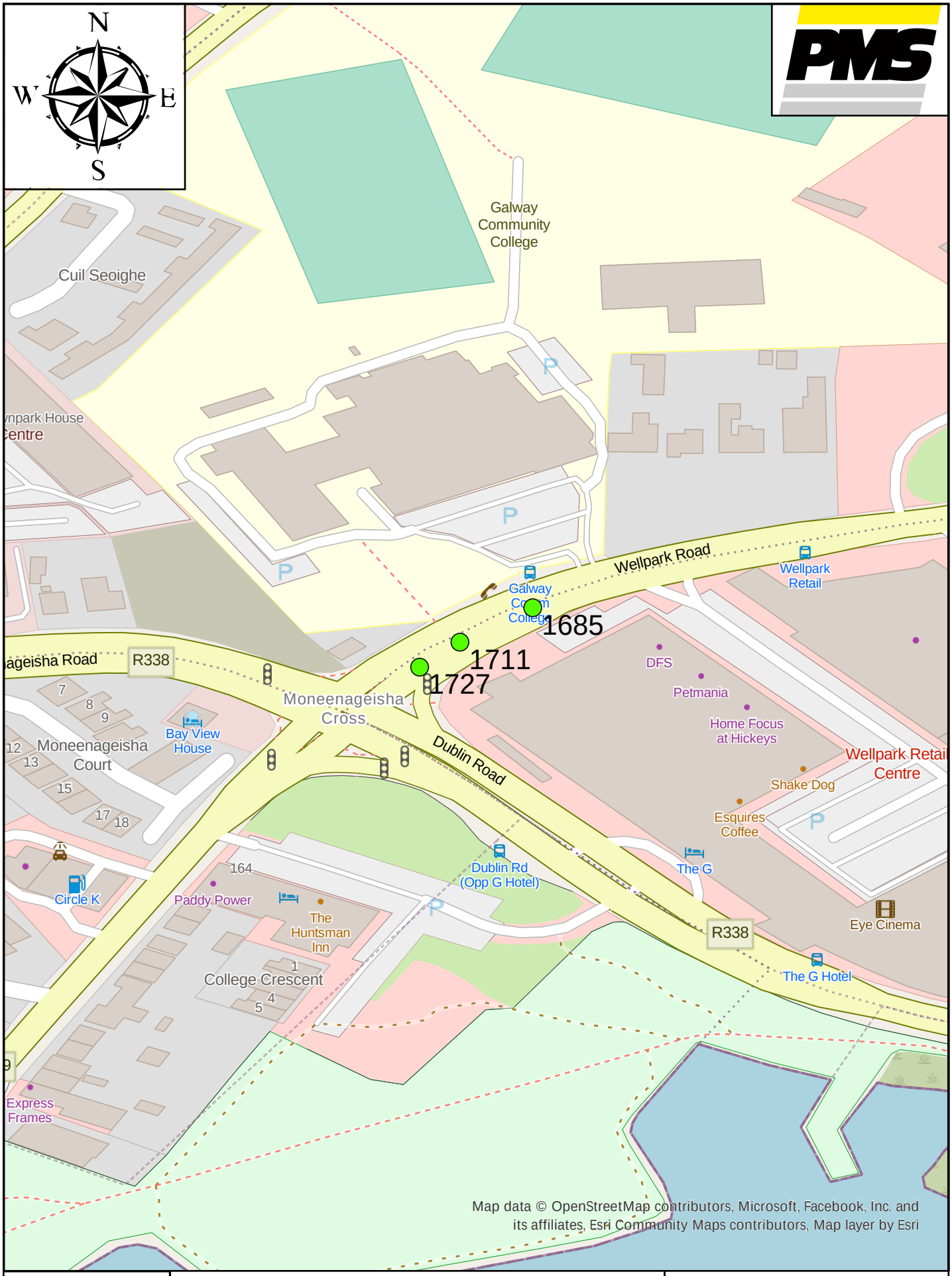
Bord Gáis Energy
FWD Survey August 2025

Section: R339 Ballybane to Port
Lane: WB
FileName: AS25F179A
Date Tested: 14-15/08/2025



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Bord Gáis Energy
FWD Survey August 2025

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Lane: WB Turn Lane to R339
Carriageway
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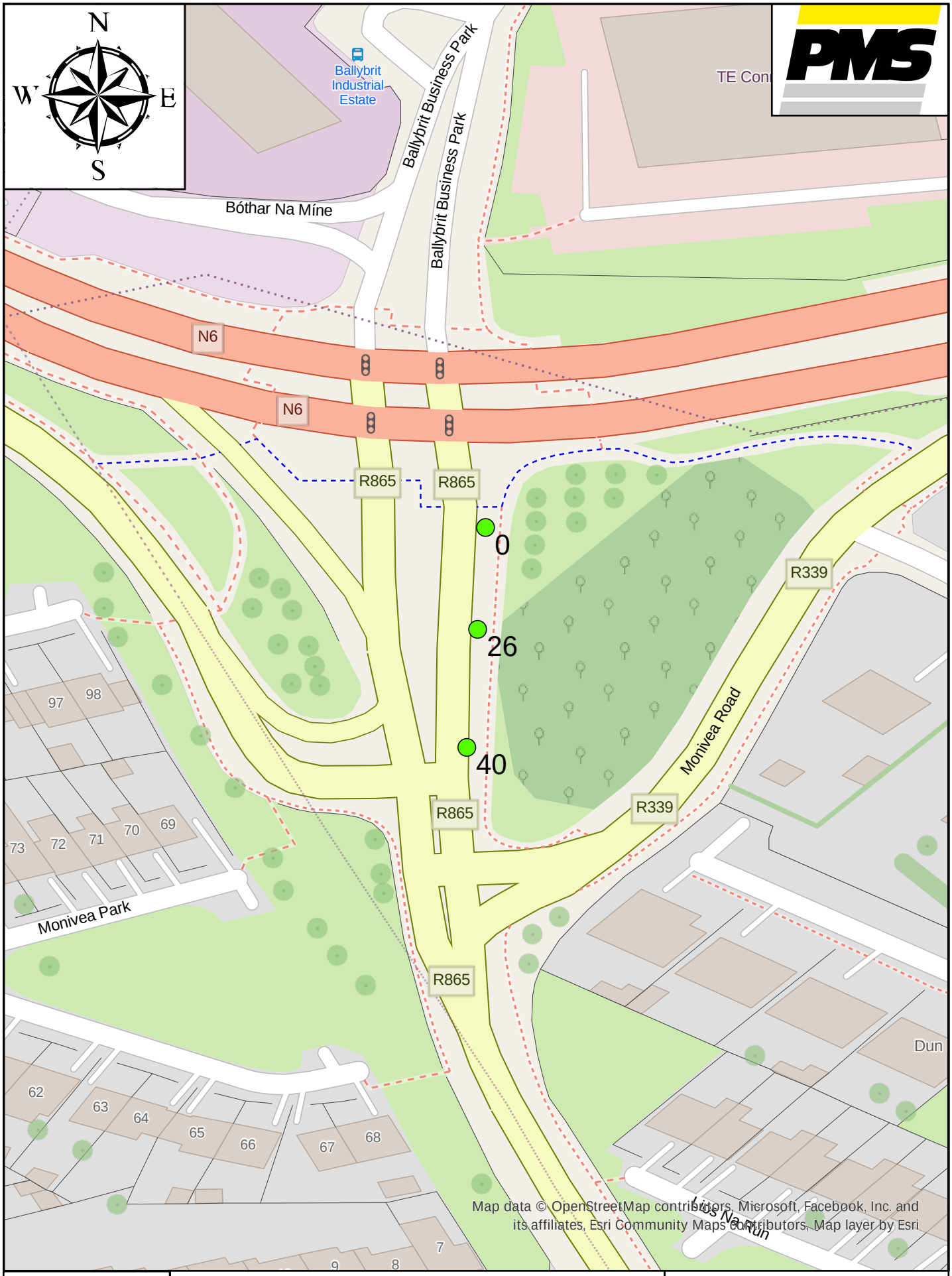
Date Tested: 14-15/08/2025



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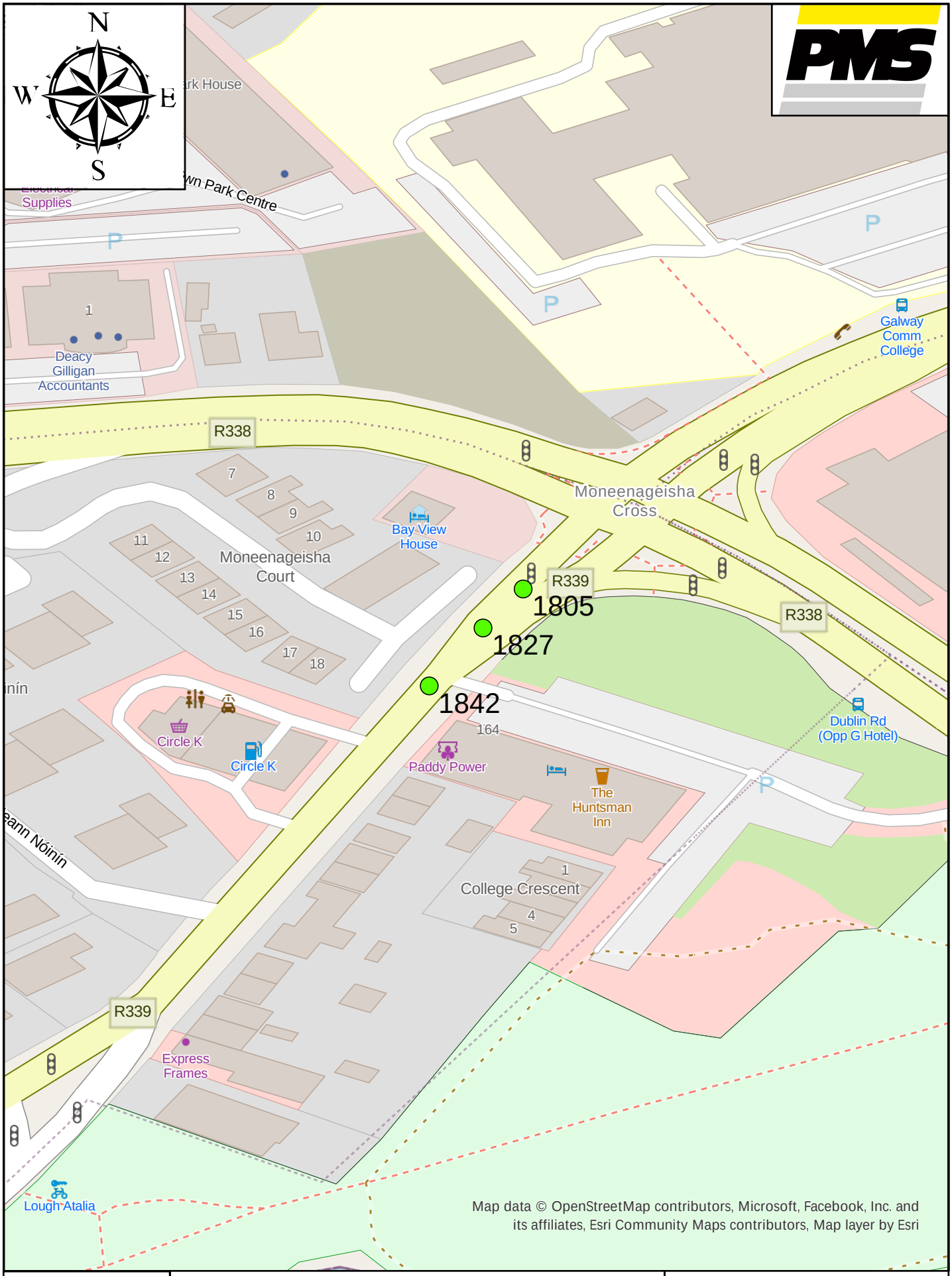
FWD_GPS

Bord Gáis Energy
FWD Survey August 2025

Section: R865 Ballybane to Port
Lane: WB Turn to R339
Carriageway
FileName: AS25F179A2
Date Tested: 14-15/08/2025



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Bord Gáis Energy
FWD Survey August 2025

Section: R339 Ballybane to Port
Lane: EB Turn to R339 Carriageway
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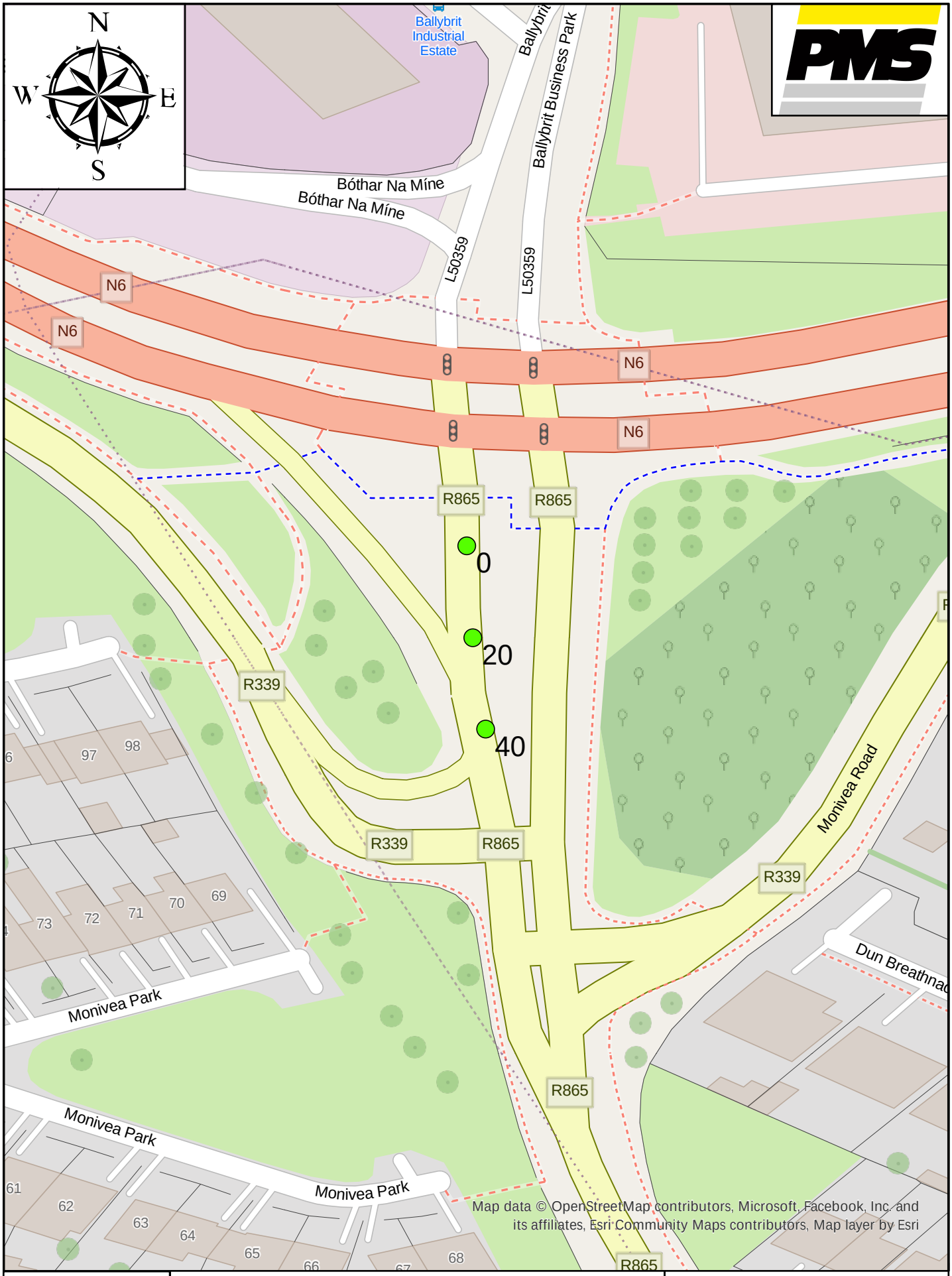
Date Tested: 14-15/08/2025



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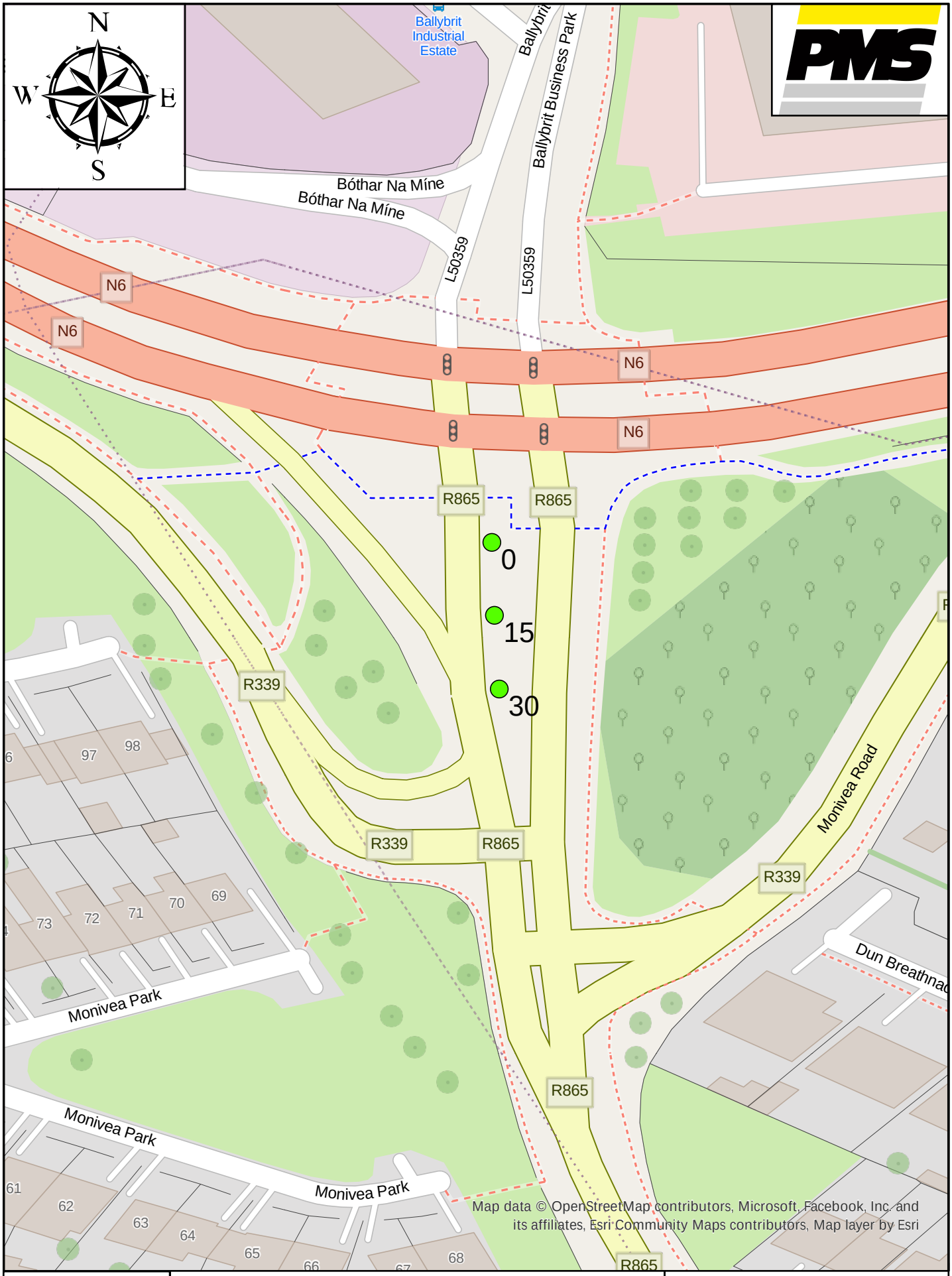
FWD_GPS

Bord Gáis Energy
FWD Survey August 2025

Section: R865 Ballybane to Port
Lane: Turn to N6 WB Carriageway
FileName: AS25F179B2
Date Tested: 14-15/08/2025



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FWD_GPS

Bord Gáis Energy
FWD Survey August 2025

Section: R339 Ballybane to Port
Lane: Turn to N6 EB Carriageway
FileName: AS25F179B3
Date Tested: 14-15/08/2025

Appendix B. PMS Level 2 Report

Structural Evaluation and Pavement Investigation of the Cashla Peaker Plant Haulage Routes, Co. Galway

Bord Gáis Energy

September 2025

25/143

Document Control Sheet

Client	Bord Gáis Energy					
Project Title	Structural Evaluation and Pavement Investigation of the Cashla Peaker Plant Haulage Routes, Co. Galway					
Document Title	Falling Weight Deflectometer – Level 2 Report					
Project Ref.	AS25F172+					
This Document Comprises	**DCS**	**TOC**	**Text**	**Tables**	**Figures**	**Appendices**
	1	1	8	4	0	2

Amendment Record

This report has been amended and issued as follows:

Revision	Description	Compiled by	Issue Date
1.0	Issue	Monica Loughnane	05-09-2025

Approved Signatory	Monica Loughnane	Project Engineer	Monica Loughnane

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Table of Contents

List of Tables

1. Introduction

PMS Pavement Management Services Ltd. (PMS) were appointed by Bord Gáis Energy to carry out a structural evaluation and pavement investigation of the Cashla Peaker Plant Haulage Routes, Co. Galway in August 2025.

A programme of pavement testing was carried out comprising a Falling Weight Deflectometer (FWD) survey, Ground Penetrating Radar (GPR) survey and pavement coring.

The structural evaluation was carried out in accordance with **DN-PAV-03060** '*Test Method for the Structural Evaluation of Road Pavements'* and **DN-PAV-03061** *'Guidelines for the Structural Evaluation of Road Pavements'*.

A FWD Level 1 Report titled *'AS25F172+ Bord Gais Cashla Peaker Plant Routes Galway August 2025 FWD Level 1 Analysis Report August 2025'* containing the central deflection (D1), Surface Curvature Index (SCI) and outer deflection (D7) results was issued to Bord Gáis Energy in August 2025. Details of the pavement sections surveyed are given in **Table 1**.

Section		No. Lanes Surveyed	True Direction	Test Interval (m)	Survey Length (m)
1	R381 Motorway to Carnmore Cross (Route 1)	2	NB	25	1100
2	R339 Carnmore (Route 1)	2	EB	25	6755
3	L3103 (Route 1)	2	SB	25	3590
4	L3103 Site to Motorway (Route 2)	1	SB	25	4100
5	L3103 Motorway to Site (Route 2)	1	NB	25	4140
6	R339 Ballybane to Port	2	WB	25	3420
7	R339 Ballybane to Port	1	WB Turn Lane to R339	20	42
8	R865 Ballybane to Port	1	WB Turn to R339	20	40
9	R865 Ballybane to Port	1	EB Turn to R339	20	37
10	R865 Ballybane to Port	1	Turn to N6 WB	20	40
11	R865 Ballybane to Port	1	Turn to N6 EB	15	30

Table 1: Details of Sections Tested

The objective of this report is to assess the structural capacity of the pavement and determine its suitability to accommodate the traffic loading proposed by the client.

2. Existing Pavement Construction

A Ground Penetrating Radar (GPR) survey and pavement coring was carried out by PMS to determine the existing pavement layer thicknesses and material types. The pavement coring results were used to verify the GPR results. The graphical and tabulated results from the pavement coring survey are included in **Appendix A**. The GPR survey results are contained in the report titled *'AS25GB123 Bord Gais Cashla Peaker Plant Routes Galway August 2025 GPR Analysis Report'* issued to Bord Gáis Energy in August 2025.

3. Structural Evaluation Methodology

3.1. Back-calculation of Layer Moduli

In FWD testing, a known 40kN load is applied to the pavement and the actual deflections at given distances from the centre of the load plate are measured. The deflected shape of the surface, generated by a FWD impact load depends upon the type, thickness and condition of the construction layers.

A "Back-calculation" process is used to estimate pavement layer moduli. Computer programs using linear elastic multi-layered analysis can be used to model the pavement structure. This back-calculation process is based on a mathematical model of the pavement structure which predicts the surface deflection under a given applied load. An iterative procedure is used to match the computed deflections to the measured values. The layer stiffness's are adjusted in this process until a match is obtained.

The back-calculation procedure was used to obtain the pavement layer moduli from multilayer elastic analysis. For the purposes of back-calculation, appropriate upper bituminous layer thicknesses ranging from 75mm to 225mm were selected based on GPR and pavement coring information for each segment. Effective upper granular layer thicknesses ranging from 225mm to 300mm were selected based on GPR information for each segment.

The analysis for each design segment was based on the 85th percentile level as stated in **DN-PAV-03060.** The 85th percentile of D1 deflection is the value below which 85 percent of all D1 deflections in the segment fall. The temperature-adjusted moduli of the upper layers, and subgrade moduli for that deflection level were selected as the design values. These values allow characterisation of the existing pavement to determine its current bearing capacity and also form the basis of the pavement characterisation for pavement overlay or inlay design.

The temperature-adjusted moduli of the upper layers, subgrade moduli, and modelled pavement depths for each design segment are shown in **Table 2.**

Section		Lane	Chainage (m)	Pavement Temp. (°C)	Bit. Layer Moduli (MPa)	Temp. Corrected Bit. Layer Moduli (MPa)	Modelled Bit. Thickness (mm)	Sub-base Moduli (MPa)	Modelled Sub-base Thickness (mm)	Subgrade Moduli (MPa)
1	R381 Motorway to Carnmore Cross (Route 1)	NB	0 – 200	17.0	16850	14565	150	400	300	330
			200 – 1100	17.0	7320	6328	175	400	300	326
		SB	0 – 190	17.0	16850	14565	150	400	300	330
			190 – 1085	17.0	7320	6328	175	400	300	326
2	R339 Carnmore (Route 1)	EB	5 – 3880	21.0	1020	1074	100	400	300	57
			3880 – 5710	18.0	3149	2854	125	400	300	208
			5710 – 6755	18.0	3831	3471	100	400	300	137
		WB	0 – 3805	21.0	1020	1074	100	400	300	57
			3805 – 5750	18.0	3149	2854	125	400	300	208
			5750 – 6755	18.0	3831	3471	100	400	300	137
3	L3103 (Route 1)	SB	15 – 2640	17.0	3981	3441	100	400	300	145
			2640 – 3215	17.0	5469	4727	225	400	225	375
			3215 – 3590	17.0	1090	942	200	400	300	190
		NB	0 – 2810	17.0	2831	2447	75	400	300	208
			2810 – 3205	17.0	5469	4727	225	400	225	375
			3205 – 3590	17.0	1298	1122	125	400	300	226
4	L3103 Site to Motorway (Route 2)	SB	0 – 2375	24.0	3157	3909	100	400	300	138
			2375 – 3225	24.0	7454	9230	125	400	300	371
			3225 – 4100	24.0	3287	4070	100	400	300	408
5	L3103 Motorway to Site (Route 2)	NB	0 – 850	24.0	2160	2674	125	400	300	388
			850 – 1735	24.0	5104	6320	150	400	300	394
			1735 - 4140	24.0	2067	2558	75	400	300	213

Section		Lane	Chainage (m)	Pavement Temp. (°C)	Bit. Layer Moduli (MPa)	Temp. Corrected Bit. Layer Moduli (MPa)	Modelled Bit. Thickness (mm)	Sub-base Moduli (MPa)	Modelled Sub-base Thickness (mm)	Subgrade Moduli (MPa)
6	R339 Ballybane to Port	WB	10 – 1790	21.0	4057	2674	150	400	250	388
			1790 – 2950	21.0	3217	6320	150	400	250	494
			2950 - 3400	21.0	2370	2558	175	400	300	213
		EB	0 – 1795	21.0	4057	2674	150	400	250	388
			1795 – 2945	21.0	3217	6320	150	400	250	494
			2945 – 3420	21.0	2370	2558	175	400	300	213
7	R339 Ballybane to Port	WB Turn Lane to R339	1685 – 1727	21.0	5711	6012	150	400	300	228
8	R865 Ballybane to Port	WB Turn to R339	0 – 40	21.0	7560	7959	150	400	300	458
9	R865 Ballybane to Port	EB Turn to R339	1805 - 1842	21.0	5711	6012	150	400	300	228
10	R865 Ballybane to Port	Turn to N6 WB	0 – 40	21.0	7560	7959	150	400	300	458
11	R865 Ballybane to Port	Turn to N6 EB	0 – 30							

Table 2: Pavement Moduli

4. Traffic Requirements

The pavement is to be trafficked by a GKT FAKTOR 5/5.5 heavy-lift transporter, which will be used to transport equipment for the Cashla Peaker Plant along the haulage routes assessed. Technical data for the GKT FAKTOR 5/5.5, as provided by Atkins Réalis, is included in Appendix B. As the exact model/configuration of the vehicle is not yet confirmed, the assessment assumes the worst-case loading: the Faktor 5 with 28 axles and with a trailer weight of 208 tonne and a payload weight of 332 tonne for a total trailer and cargo gross weight capacity of 540 tonne.

For pavement design and analysis purposes, the loading has been expressed in terms of Equivalent Standard Axles (ESA). A standard ESA is defined as an 80 kN axle load with twin tyres at each end, at a tyre pressure of 565 kPa. Based on the data provided by Atkins Réalis, it is understood that a single pass of the vehicle is to be considered.

Using the technical data sheet for the 28 axle GKT Faktor 5, the expected loading per axle is 19.29 tonne, which equates to c. 190 kN distributed over 8 tyres. Conservatively, taking the loading on each axle as a factor of the loading on a standard axle in calculating an ESA, it is 2.375 times greater than a standard axle loading. Applying the fourth power law to calculate the damage factor per axle:

$$\text{Damage Factor per Axle} = (2.375)^4 \approx 32 \text{ ESAs per axle.}$$

With 28 axles across the two trailers:

$$28 \times 32 = 896 \text{ ESAs}$$

Including the axles of the towing tractor units, the total estimated load per vehicle pass is estimated at:

1,200 ESAs (0.0012 msa)

5. Residual Life

The back calculated moduli and layer thicknesses are used in a mechanistic-empirical thickness design procedures in accordance with TII Publication DN-PAV-03021 ‘Analytic Pavement & Foundation Design’, and the associated Irish Analytic Pavement Design Method (IAPDM) software. The output from the IAPDM models is the number of standard axles that the pavement is anticipated to withstand before failing structurally due to either excessive rutting caused by subgrade failure or by cracking of the bituminous layers induced by fatigue

of the upper layers. If the number of axles to failure for the existing pavement is less than that desired (i.e. if the strains are excessively high), the pavement is deemed to have failed. The remaining residual life in millions of standard axles (msa) determined from the results of the testing and analysis for each design segment are shown in Table 3.

Section		Lane	Chainage (m)	Residual Life (msa)
1	R381 Motorway to Carnmore Cross (Route 1)	NB	0 – 200	39.0
			200 – 1100	12.8
		SB	0 – 190	39.0
			190 – 1085	12.8
2	R339 Carnmore (Route 1)	EB	5 – 3880	0.5
			3880 – 5710	0.7
			5710 – 6755	0.6
		WB	0 – 3805	0.5
			3805 – 5750	0.7
			5750 – 6755	0.6
3	L3103 (Route 1)	SB	15 – 2640	1.0
			2640 – 3215	28.0
			3215 – 3590	2.2
		NB	0 – 2810	0.6
			2810 – 3205	28.0
			3205 – 3590	0.7
4	L3103 Site to Motorway (Route 2)	SB	0 – 2375	1.6
			2375 – 3225	6.3
			3225 – 4100	0.6
5	L3103 Motorway to Site (Route 2)	NB	0 – 850	1.1
			850 – 1735	7.3
			1735 - 4140	0.7
6	R339 Ballybane to Port	WB	10 – 1790	2.7
			1790 – 2950	1.9
			2950 - 3400	2.6
6	R339 Ballybane to Port	EB	0 – 1795	2.7
			1795 – 2945	1.9
			2945 – 3420	2.6
7	R339 Ballybane to Port	WB Turn Lane to R339	1685 – 1727	5.3
8	R865 Ballybane to Port	WB Turn to R339	0 – 40	10.6
9	R865 Ballybane to Port	EB Turn to R339	1805 - 1842	5.3
10	R865 Ballybane to Port	Turn to N6 WB	0 – 40	10.6
11	R865 Ballybane to Port	Turn to N6 EB	0 – 30	10.6

Table 3: Residual Life

6. Summary of Analysis and Results

The residual life of each pavement section, derived from FWD testing and analysis, was compared against the estimated loading of a single pass of the loaded haulage vehicle. As determined through the IAPDM calculations, each assessed route is considered to have sufficient structural capacity to carry the required loading.

There is significant variation in structural capacity across the design segments of all routes. The weakest segments show an estimated residual life of approximately 0.5 msa, which is still significantly greater than the anticipated loading of 0.0012 msa from a single pass of the haulage vehicle.

It should be noted that this analysis is based solely on structural capacity and only considers the impact of loading from the GKT FAKTOR 5/5.5 vehicle as described above. It does not account for cumulative traffic loading from other vehicles using the routes.

In addition, the FWD testing was carried out along the typical left wheel path in each carriageway. Where the existing road is narrow or other variations are required in the travel path, the vehicle may deviate from the wheel paths, increasing the risk of edge break-up or verge/embankment instability. Furthermore, the rotation and sweeping of the vehicle during turning movements may induce localised stresses that are not captured in the FWD back calculation and analysis procedure. These factors present risks outside the scope of this analysis.

6.1. Locations for Further Investigations

Table 4 shows locations where the D1 deflections are well above the average deflection values for the segment. Such deflections generally indicate a pavement structure with a lower bearing capacity compared to the remainder of the existing pavement. Higher accompanying SCIs (>250 microns) at these locations would generally indicate a lower load spreading ability in the upper pavement layers. These locations, as well as areas with visible cracking or other signs of structural distress, may warrant further investigation or targeted intervention prior to being subjected to heavy or abnormal loading.

Section		Lane	Chainage (m)	D1 Criterion (microns)	Average D1 (microns)	Average SCI (microns)	Average D7 (microns)
2	R339 Carnmore (Route 1)	WB	150 - 250	D1 > 500	590	216	8
			3000		628	373	4
			5830		541	215	3
5	L3103 Motorway to Site (Route 2)	NB	1875	D1 > 500	604	313	1

Table 4: Locations with Higer Deflections and Reduced Bearing Capacity

Appendix A – Pavement Coring Results

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AA
Road No:	R-381	Date Cored:	05/08/2025
Section:	Motorway to Carnmore Cross (Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	52	52	HRA		
2	52	174	122	AC		
3	174	197	23	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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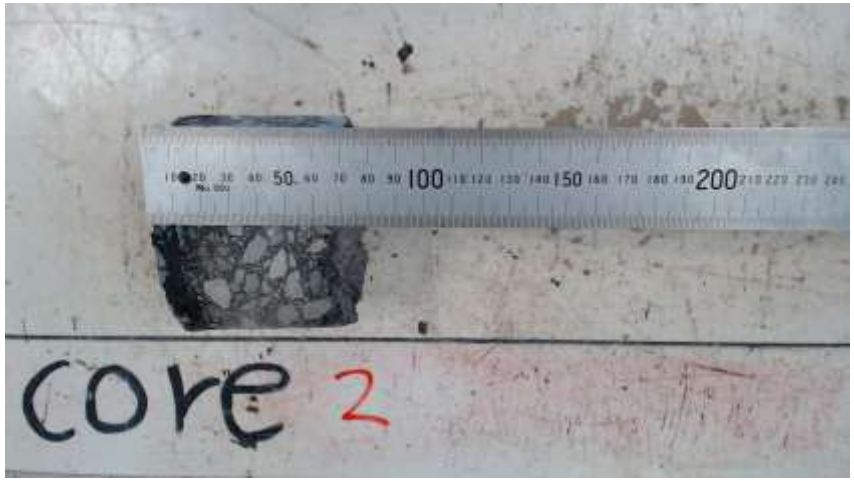
Core No:	1	Chainage (m):	505
Core Diameter (mm):	100	Core Depth (mm):	197
Easting:	538287	Wheelpath:	LWP
Northing:	728208		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	16	16	SMA		
2	16	70	54	AC		



Additional Comments:

Core No:	2	Chainage (m):	1330
Core Diameter (mm):	100	Core Depth (mm):	70
Easting:	539210	Wheelpath:	LWP
Northing:	728871		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	20	20	SMA		
2	20	35	15	AC		

Additional Comments:

Core No:	3	Chainage (m):	2325
Core Diameter (mm):	100	Core Depth (mm):	35
Easting:	540131	Wheelpath:	LWP
Northing:	729179		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	80	80	AC		
2	80	140	60	AC		
3	140	170	30	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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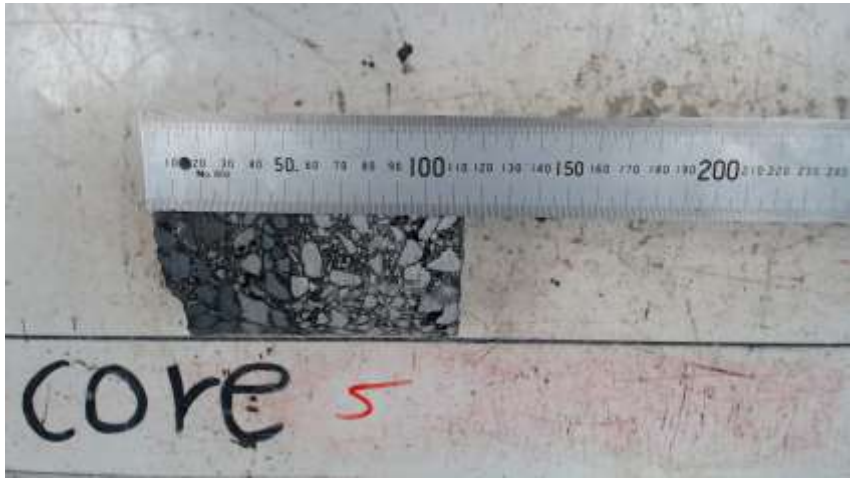
Core No:	4	Chainage (m):	325
Core Diameter (mm):	100	Core Depth (mm):	170
Easting:	538217	Wheelpath:	LWP
Northing:	728724		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	28	28	SMA		
2	28	40	12	AC		
3	40	50	10	AC		
4	50	113	63	AC		



Additional Comments:

Core No:	5	Chainage (m):	3330
Core Diameter (mm):	100	Core Depth (mm):	113
Easting:	541029	Wheelpath:	LWP
Northing:	729587		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	15	15	SMA		
2	15	110	95	AC		
3	110	120	10	AC		
4	120	192	72	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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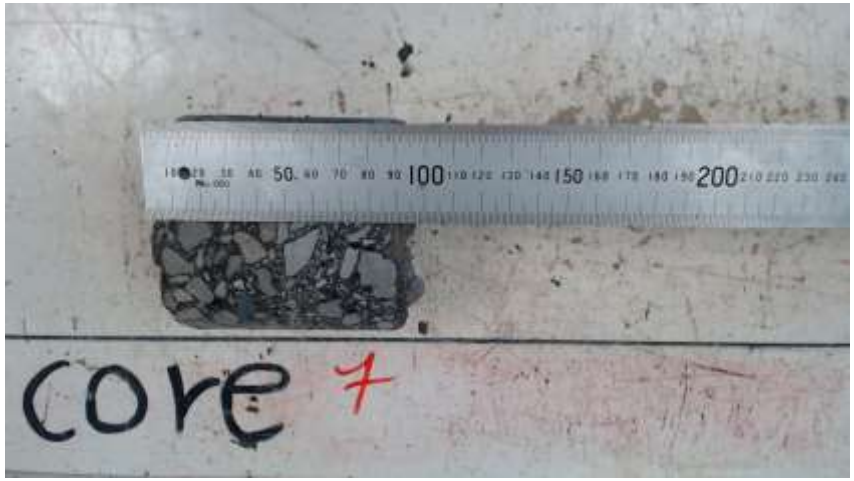
Core No:	6	Chainage (m):	5330
Core Diameter (mm):	100	Core Depth (mm):	192
Easting:	542840	Wheelpath:	LWP
Northing:	730359		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AC
Road No:	L-3103	Date Cored:	06/08/2025
Section:	(Route 1)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	47	47	SMA		
2	47	88	41	AC		



Additional Comments:

Core No:	7	Chainage (m):	540
Core Diameter (mm):	100	Core Depth (mm):	88
Easting:	544600	Wheelpath:	LWP
Northing:	730534		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	15	15	SMA		
2	15	80	65	AC		

Additional Comments:

Core No:	8	Chainage (m):	6305
Core Diameter (mm):	100	Core Depth (mm):	80
Easting:	543749	Wheelpath:	LWP
Northing:	730678		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

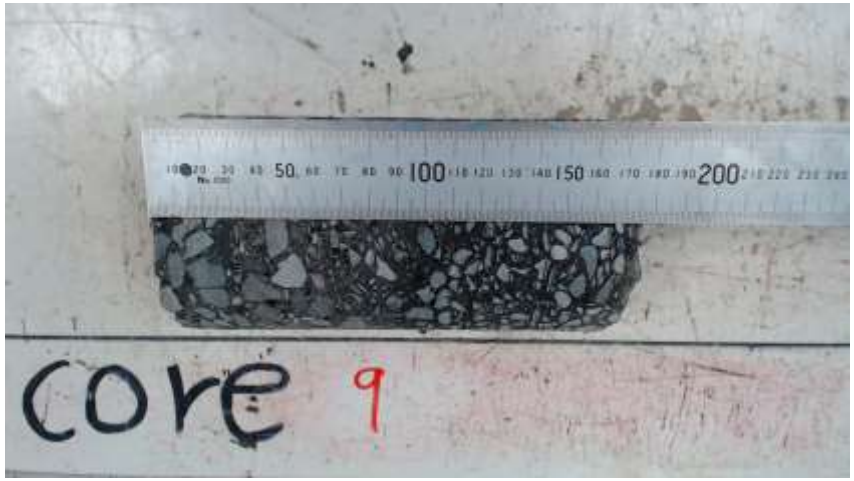
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	30	30	SMA		
2	30	95	65	AC		
3	95	144	49	AC		
4	144	184	40	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	9	Chainage (m):	4295
Core Diameter (mm):	100	Core Depth (mm):	184
Easting:	541954	Wheelpath:	LWP
Northing:	729847		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	43	43	SMA		
2	43	95	52	AC		
3	95	152	57	AC		
4	152	215	63	AC		Debonded

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
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Core No:	10	Chainage (m):	2560
Core Diameter (mm):	100	Core Depth (mm):	215
Easting:	546332	Wheelpath:	LWP
Northing:	729608		
Operator:	JOG	Date Measured:	

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	31	31	SMA		
2	31	88	57	AC		

Additional Comments:

Core No:	11	Chainage (m):	3590
Core Diameter (mm):	100	Core Depth (mm):	88
Easting:	547181	Wheelpath:	LWP
Northing:	729040		
Operator:	JOG	Date Measured:	11/08/2025

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Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

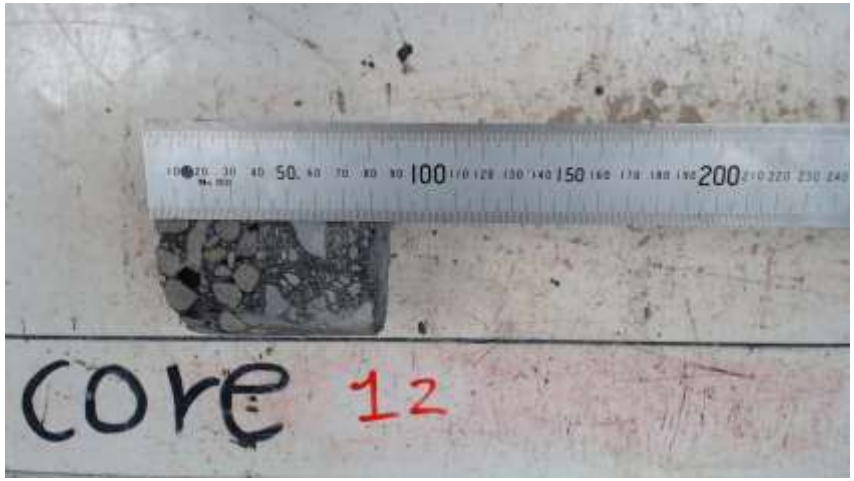
HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	39	39	SMA		
2	39	80	41	AC		



Additional Comments:

Core No:	12	Chainage (m):	1590
Core Diameter (mm):	100	Core Depth (mm):	80
Easting:	545418	Wheelpath:	LWP
Northing:	729887		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	07/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	30	30	SMA		
2	30	100	70	AC		

Additional Comments:

Core No:	13	Chainage (m):	500
Core Diameter (mm):	100	Core Depth (mm):	100
Easting:	547659	Wheelpath:	LWP
Northing:	728831		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

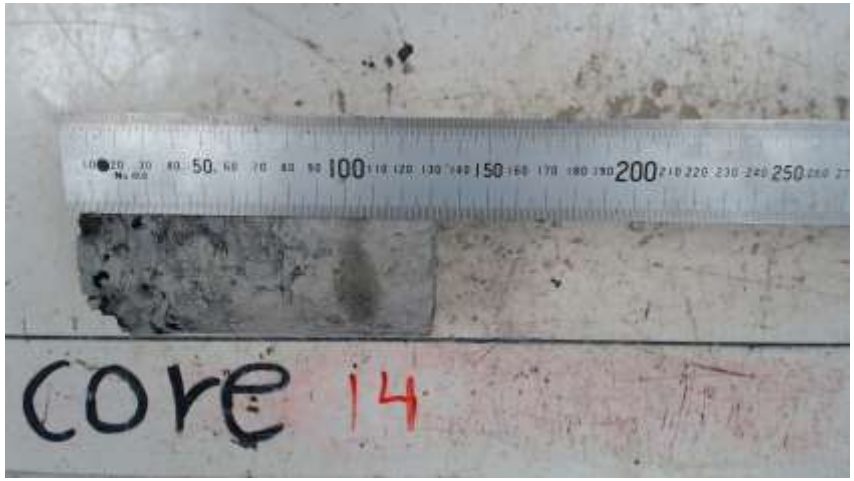
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	25	25	AC		
2	25	75	50	AC		
3	75	135	60	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	14	Chainage (m):	2325
Core Diameter (mm):	100	Core Depth (mm):	135
Easting:	549205	Wheelpath:	LWP
Northing:	728034.819		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	43	43	AC		
2	43	84	41	AC		

Additional Comments:

Core No:	15	Chainage (m):	4000
Core Diameter (mm):	100	Core Depth (mm):	84
Easting:	549416	Wheelpath:	LWP
Northing:	726757		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

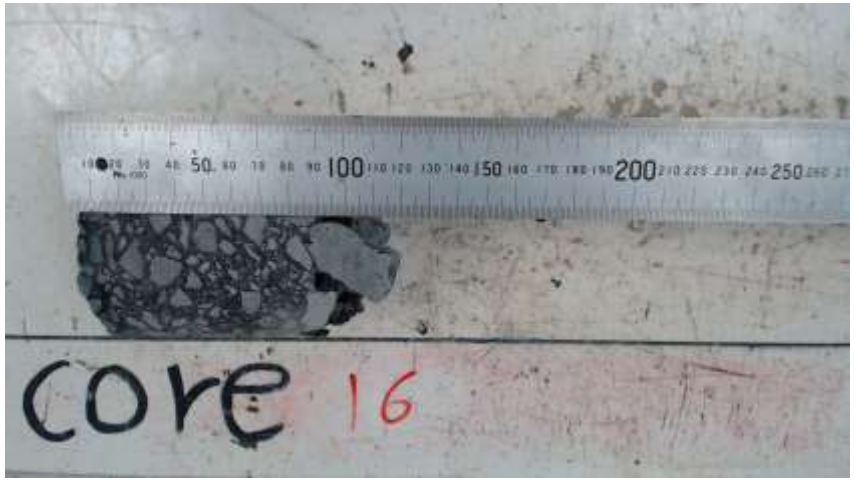
HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173B1
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Motorway to Site (Route 2)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	13	13	SMA		
2	13	85	72	AC		
3	85	117	32	AC		



Additional Comments:

Core No:	16	Chainage (m):	500
Core Diameter (mm):	100	Core Depth (mm):	117
Easting:	549536	Wheelpath:	LWP
Northing:	727090		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

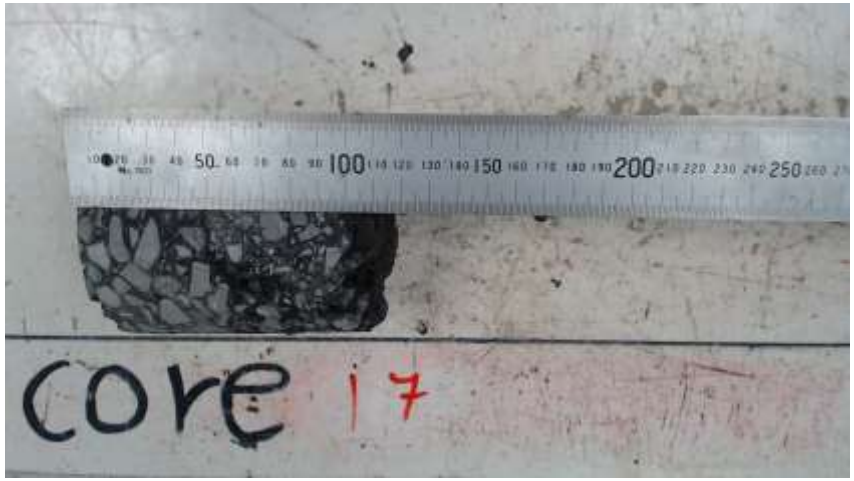
HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173B1
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Motorway to Site (Route 2)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	45	45	AC		
2	45	99	54	AC		



Additional Comments:

Core No:	17	Chainage (m):	2500
Core Diameter (mm):	100	Core Depth (mm):	99
Easting:	548713	Wheelpath:	LWP
Northing:	728530		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179A
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	36	36	HRA		
2	36	129	93	AC		
3	129	157	28	AC		

Additional Comments: Bottom Layers Debonded

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

Core No:	1	Chainage (m):	475
Core Diameter (mm):	100	Core Depth (mm):	157
Easting:	532133	Wheelpath:	LWP
Northing:	726928		
Operator:	JOG	Date Measured:	15/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179A
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	38	38	HRA		
2	38	109	71	AC		
3	109	129	20	AC		

Additional Comments:

Core No:	2	Chainage (m):	2125
Core Diameter (mm):	100	Core Depth (mm):	129
Easting:	530877	Wheelpath:	LWP
Northing:	725947		
Operator:	JOG	Date Measured:	15/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179B
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

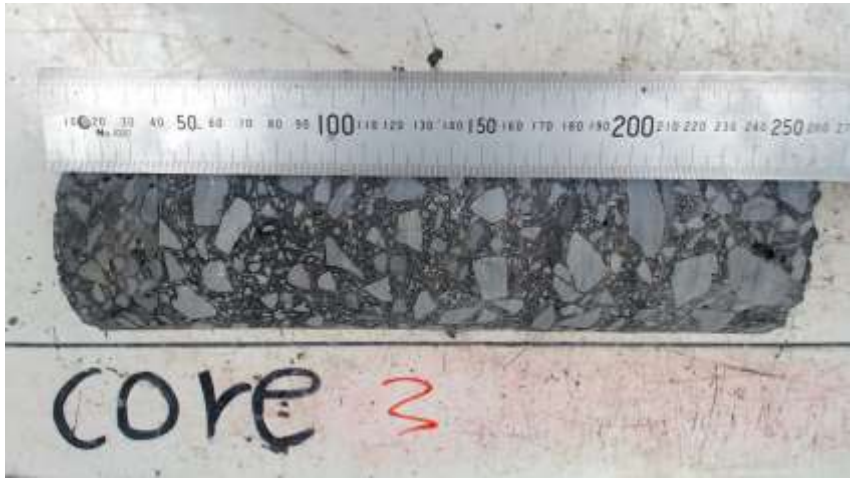
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	38	38	SMA		
2	38	97	59	AC		
3	97	183	86	AC		
4	183	281	98	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	3	Chainage (m):	3145
Core Diameter (mm):	100	Core Depth (mm):	281
Easting:	530290	Wheelpath:	LWP
Northing:	725124		
Operator:	JOG	Date Measured:	15/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179B
Road No:	R-339	Date Cored:	15/08/2025
Section:	Ballybane to Port	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	49	49	SMA		
2	49	122	73	AC		

Additional Comments: Bottom Layers Debonded

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

Core No:	4	Chainage (m):	1575
Core Diameter (mm):	100	Core Depth (mm):	122
Easting:	531228	Wheelpath:	LWP
Northing:	726350		
Operator:	JOG	Date Measured:	15/08/2025

Appendix B – Transport Equipment Technical Data Sheet

FAKTOR 5 - 500 TONNE CAPACITY FRAME
INDICATIVE AXLE LOAD INFORMATION FOR 332 TONNE ABNORMAL LOAD

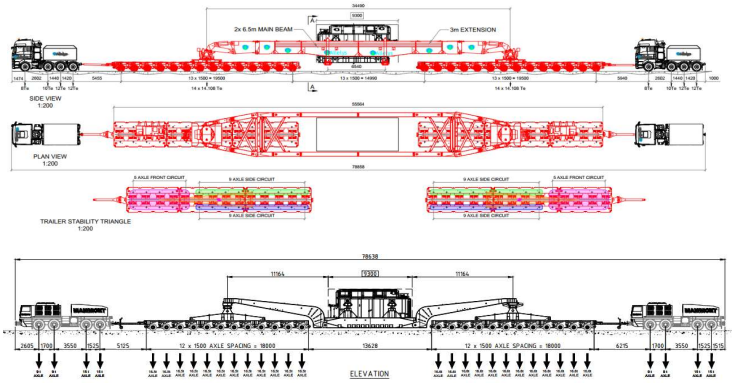
11/07/2025

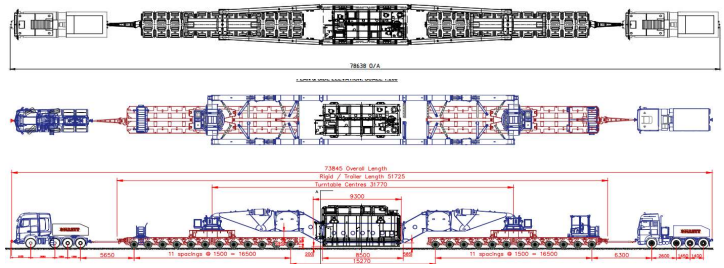
Girder Frame: Faktor 5 - 500 tonne capacity
Axles: Goldhofer THP - 14 axle of 15 axles
Tyres: 215/75 R17.5 - assumed cold pressure 133 psi (915 kPa)
Tractor Unit: 8 x 8 Various available - assume maximum 15 per axle

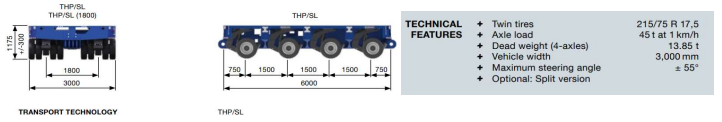
Option 1	**28 axle Faktor 5 - 500 tonne capacity**	
Number of trailer axles:	28.00	total
Weight per axle	3.50	tonne
Total weight of axles	98.00	tonne
Girder frame weight	105.00	tonne
Ancillary steelwork	5.00	tonne
Total trailer weight	**208.00**	**tonne**
Payload	332.00	tonne
Gross weight - trailer & cargo	**540.00**	**tonne**
Load per 14 axle trailer	270.00	tonne
Load per axle	19.29	tonne
Load per tyre (8 per axle)	2.41	tonne
Single trailer ground bearing pressure	4.62	tonne per m2
Individual tyre ground contact area	0.043	m2

Option 2	**30 axle Faktor 5 - 500 tonne capacity**	
Number of trailer axles:	30.00	total
Weight per axle	3.50	tonne
Total weight of axles	105.00	tonne
Girder frame weight	105.00	tonne
Ancillary steelwork	5.00	tonne
Total trailer weight	**215.00**	**tonne**
Payload	332.00	tonne
Gross weight - trailer & cargo	**547.00**	**tonne**
Load per 15 axle trailer	273.50	tonne
Load per axle	18.23	tonne
Load per tyre (8 per axle)	2.28	tonne
Single trailer ground bearing pressure	4.34	tonne per m2
Individual tyre ground contact area	0.043	m2

Option 6	**32 axle Faktor 5 - 500 tonne capacity**	
Number of trailer axles:	32.00	total
Weight per axle	3.50	tonne
Total weight of axles	112.00	tonne
Girder frame weight	105.00	tonne
Ancillary steelwork	5.00	tonne
Total trailer weight	**222.00**	**tonne**
Payload	332.00	tonne
Gross weight - trailer & cargo	**554.00**	**tonne**
Load per 16 axle trailer	277.00	tonne
Load per axle	17.31	tonne
Load per tyre (8 per axle)	2.16	tonne
Single trailer ground bearing pressure	4.10	tonne per m2
Individual tyre ground contact area	0.043	m2

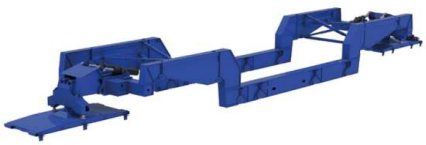






TECHNICAL FEATURES		
+ Twin tires		215/75 R 17,5
+ Axle load		451 at 1 km/h
+ Dead weight (4-axles)		13.85 t
+ Vehicle width		3,000 mm
+ Maximum steering angle		± 55°
+ Optional: Split version		

»FAKTOR« 5 | »FAKTOR« 5.5
FOR THE HEAVIEST LOADS



TECHNICAL FEATURES	»FAKTOR« 5	»FAKTOR« 5.5
+ Payload *(depending on combination)*	500t	350t
+ Lift height	1.80 m	1.80 m
+ Load widths	3.00-6.75 m	2.00-6.00 m
+ Load lengths	11.00-17.00 m	11.00-17.00 m
+ Axle configurations*	2x 12 AL to 2x 20 AL	2x 10 AL to 2x 16 AL
+ Beam	lateral beam, vessel bridge	

Appendix C. PMS GPR Survey Report

Ground Penetrating Radar Survey of the Cashla Peaker Plant Haulage Routes, County Galway

Bord Gáis Energy

August 2025

25/143

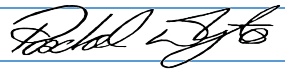
Document Control Sheet

Client	Bord Gáis Energy					
Project Title	Ground Penetrating Radar Survey of the Cashla Peaker Plant Haulage Routes, County Galway					
Document Title	Ground Penetrating Radar Analysis Report					
Project Ref.	AS25GB123					
This Document Comprises	**DCS**	**TOC**	**Text**	**Tables**	**Figures**	**Appendices**
	1	1	5	1	1	3

Amendment Record

This report has been amended and issued as follows:

Revision	Description	Compiled by	Issue Date
1.0	Issue	Paschal Whyte	29-08-2025

Approved Signatory	Paschal Whyte	Data Analyst	

Disclaimer

This report applies only to the tests performed and shall not be reproduced, except in full, without written approval from PMS. In addition, PMS shall have no liability for the accuracy of information supplied by the Client, or any third party, for the purposes of this report.

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1. Introduction

PMS Pavement Management Services Ltd. (PMS) were appointed by Bord Gáis Energy to carry out a Ground Penetrating Radar (GPR) survey of the Cashla Peaker Plant Haulage Routes, County Galway, in August 2025. Pavement Coring was also undertaken as part of the works.

The surveys were carried out in accordance with **DN-PAV-03061** *'Guidelines for the Structural Evaluation of Road Pavements (November 2024)'*. The purpose of the surveys was to establish the existing pavement layer thicknesses and material types along the length of each section tested.

Details of each road section surveyed are given in **Table 1**.

Section		No of Lanes Surveyed	True Direction	Survey Length (m)
1	R381 Motorway to Carnmore Cross (Route 1)	2	NB	1100
2	R339 Carnmore (Route 1)	2	EB	6755
3	L3103 (Route 1)	2	SB	3590
4	L3103 Site to Motorway (Route 2)	1	SB	4100
5	L3103 Motorway to Site (Route 2)	1	NB	4140
6	R339 Ballybane to Port	2	WB	3400

Table 1: Details of Sections Tested

This report describes the GPR methodology, survey equipment, survey procedures and presents the survey results for each of the sections surveyed.

2. Description of GPR Methodology

The GPR operates by transmitting a pulse of electromagnetic radiation (typically 100MHz to 2000MHz) from an antenna into the pavement and recording the subsequent reflections. The electromagnetic radiation penetrates down through the pavement construction as an energy wave, with an envelope in the shape of a cone.

As this wave passes through various pavement layers, its velocity changes and the strength of the wave is weakened. Buried objects and the interfaces between different pavement layers reflect back part or all of the wave. The velocity and depth of penetration of the wave depends on the electrical properties of the material. Highly conductive materials such as water saturated and clay-rich soils have a low penetration compared to dry gravelly soils.

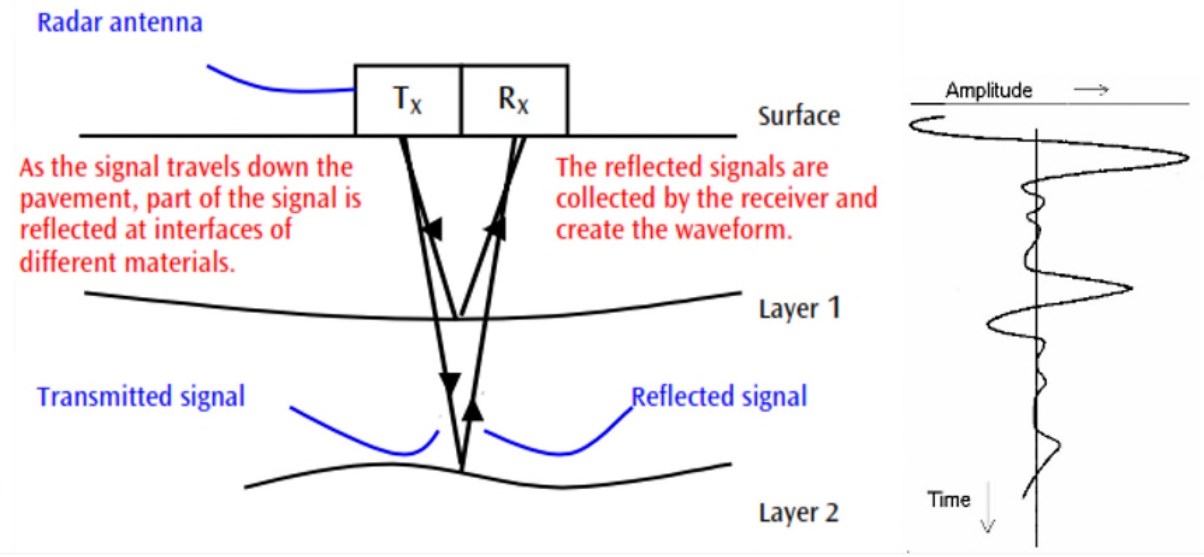


Figure 1: GPR Electromagnetic Wave Overview

By understanding the electromagnetic pulse velocity of the material type being tested it is possible to convert the time series into depth with the following formula:

Depth (m) = Velocity (m/ns) x Reflected Time x 0.5

High frequencies such as 2000MHz give good resolution at shallow depths (less than 1m). Lower frequencies such as 600MHz produces good resolution at greater depths (1m to 3m). Therefore combining high and low frequency antennas provides a comprehensive assessment of the pavement construction.

3. Description of Survey Equipment

3.1. GPR Survey Equipment

The GPR system used to carry out the survey was an IDS RIS Hi-Pave system. It is a vehicle mounted GPR system for high-speed pavement surveying. The IDS RIS Hi-Pave system is based on multi-channel, high performance radar technology. The GPR complies with the requirements outlined by the European Telecommunications Standards Institute (ETSI) document; **EG 202 730 V1.1.1 (2009-09)** *'Electromagnetic compatibility and Radio spectrum Matters (ERM); Code of Practice in respect of the control, use and application of Ground Probing Radar (GPR) and Wall Probing Radar (WPR) systems and equipment'*.

The GPR is equipped with a double antenna configuration that consists of a 2GHz HR2000 horn antenna for identifying shallow layers (less than 1m) and 600MHz TR600 antenna for identifying deeper layers (1m to 3m). The incoming data is controlled by a digital antenna driver (DAD) control unit connected to the double antenna configuration. The DAD converts the incoming analogue signal to digital and can be viewed in real time via a laptop. Data is typically collected longitudinally in the left-hand wheel path of the surveyed lane.

The entire data collection process is non-contact. The data collected can be referenced to linear chainage and Global Positioning System (GPS) coordinate systems, allowing easy integration to Geographic Information System (GIS).

3.2. Pavement Coring Equipment

The pavement coring system used was a Hakken Rotary Percussive 110V Drill, powered by a 3kVA petrol 110V generator. The Drill is mounted to a static Drill Rig to allow the pavement coring be performed in a safe and accurate manner. A 100mm diamond edge Drill Bit was used during the works.

4. Description of Survey Procedure

4.1. GPR Survey Procedure

The GPR survey is a non-contact pavement survey carried out at normal traffic speeds, with no requirement for traffic management. All data was collected longitudinally in the left hand wheel path for all carriageways. The survey vehicle is fitted with warning beacons, retroreflective chevrons and “Highway Maintenance” signage. All data recorded is linked to a wheel mounted DMI system to precisely measure distance. A GPS system is used to geo-reference all data recorded. In addition, forward view imagery is recorded throughout the survey.

The GPR data is processed in the PMS Athenry Office by trained technicians using the Roaddoctor Pro analysis software. Layer identification, noise filtering and wave velocities through the different pavement layers are identified and calculated with the analysis software. The software exports the layer data to graphical and tabular formats.

4.2. Pavement Coring Survey Procedure

The pavement coring survey is completed separately to the GPR survey, as traffic management is required to complete the works. The pavement coring works commence by locating the core-hole location(s). A CAT scan is used to assist in identifying underground services which may be present. The Drill Rig is positioned and setup at the core-hole location. The drilling operation commences and ceases when the Drill Bit reaches the bottom of the bound layers. The core-hole is reinstated with a suitable reinstatement material, agreed with the Client prior to commencement of the works. All loose debris is removed prior to leaving the location.

The pavement cores are measured and photographed in the Athenry Office by trained technicians. The material types and layer thicknesses are recorded. PMS is accredited by the Irish National Accreditation Board (INAB) to determine pavement core thicknesses in accordance with **EN 12697-36: 2003** *‘Determination of the thickness of bituminous pavement’* under our scope of accreditation (Registration number: 230T).

5. Survey Results

The GPR data is reported in both tabular and graphical formats. **Appendix A** contains a summary table detailing the overall depths of the bound and granular layers based on homogeneous segments for each section.

Appendix B presents the GPR survey data in graphical format. The graphs show the longitudinal cross-section of the pavement with the interface between the individual pavement layers identified.

The GPR graphs also include the following survey information:

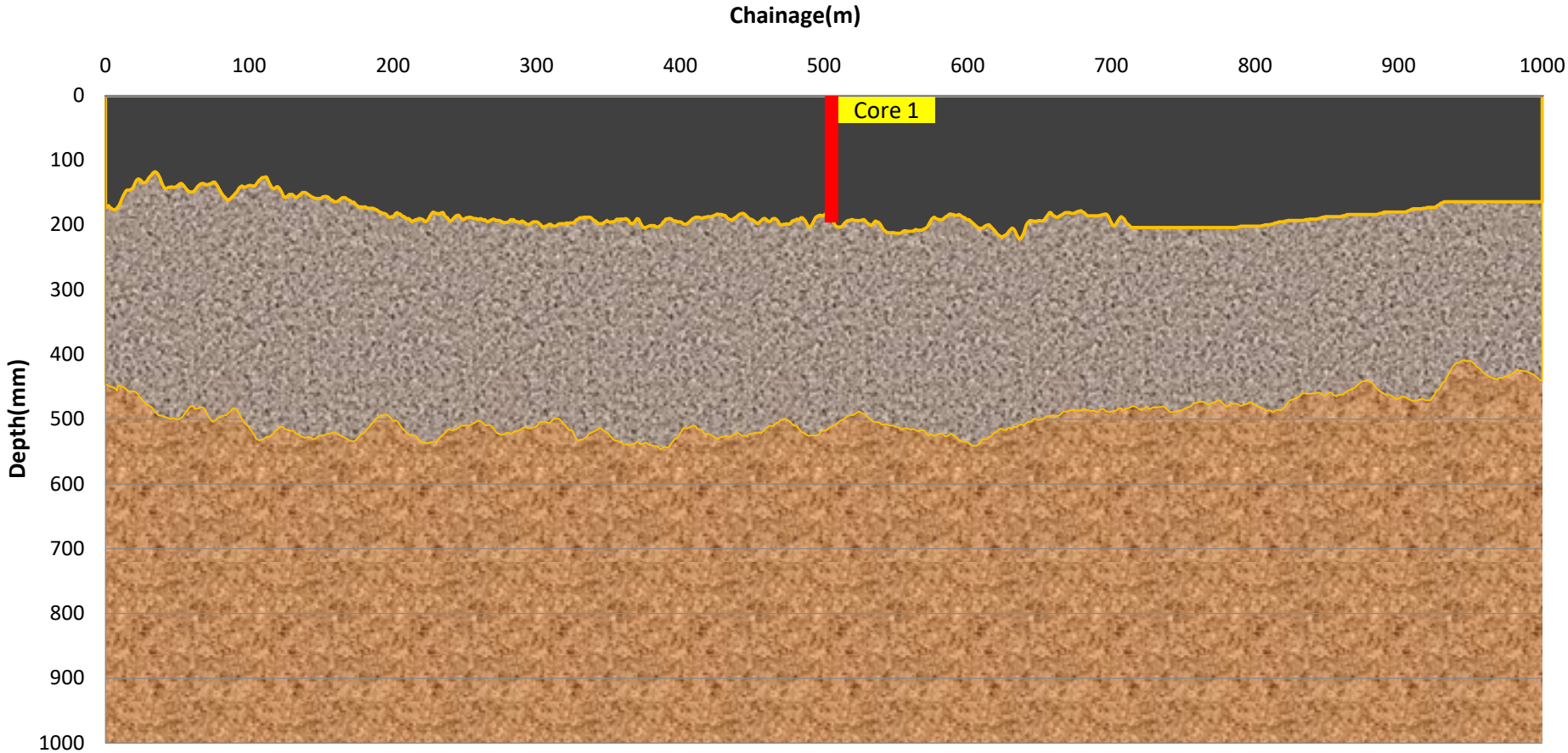
- Date of survey
- Project Name
- Client Name
- Lane tested
- Surface Conditions
- Survey length

Appendix C contains the pavement coring results detailing the number of layers, material types and thicknesses. In addition, a photograph of each core is provided for clarity.

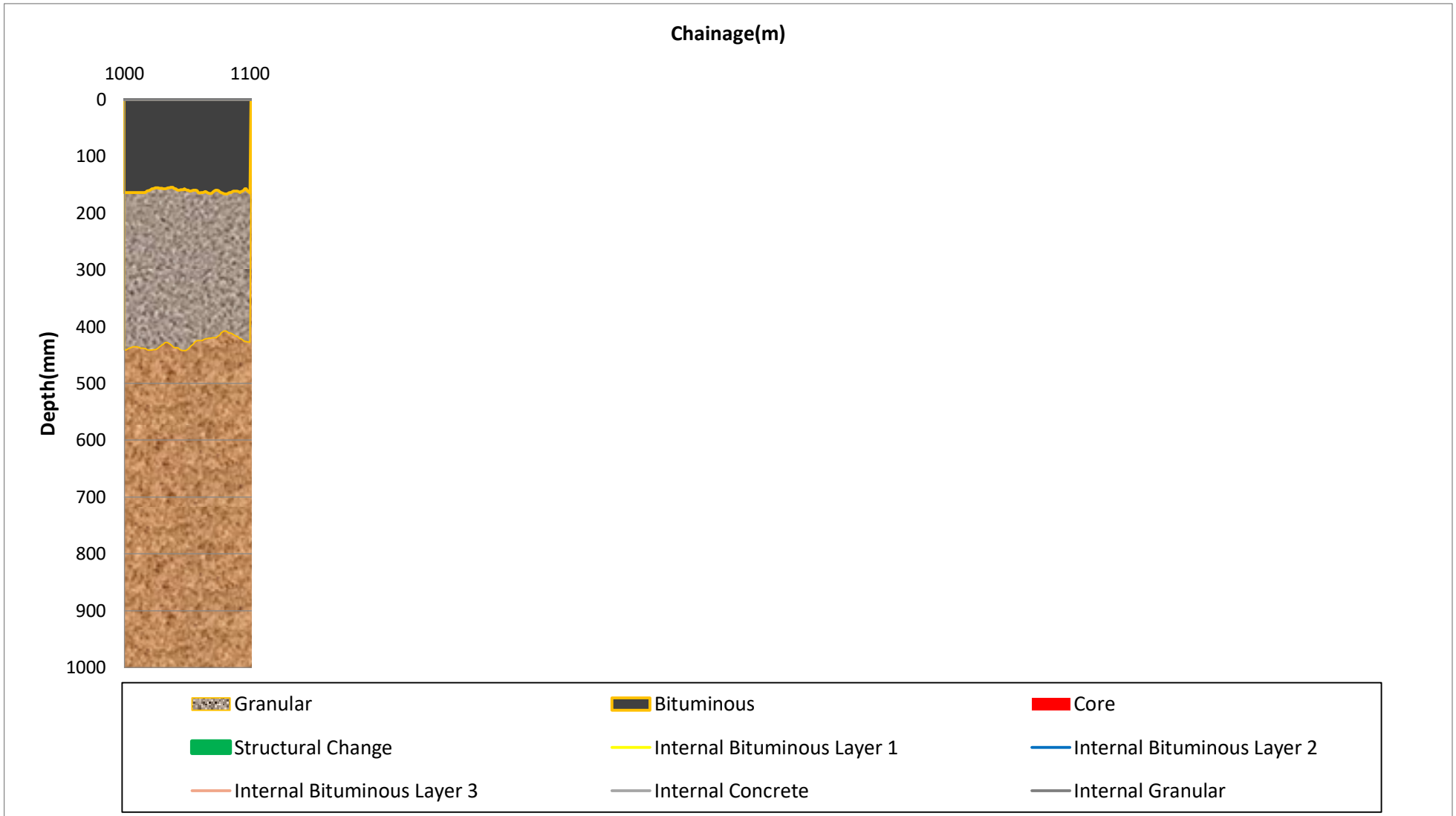
Appendix A – GPR Summary Table

Section		Lane	Chainage (m)		Avg. Bituminous (mm)	Avg. Granular (mm)
			From	To		
1	R381 Motorway to Carnmore Cross (Route 1)	NB	0	200	151	350
			200	1100	188	300
		SB	0	190	150	275
			190	1085	175	258
2	R339 Carnmore (Route 1)	EB	5	3880	94	293
			3880	5710	148	326
			5710	6755	114	341
		WB	0	3805	97	276
			3805	5750	136	289
			5750	6755	102	395
3	L3103 (Route 1)	SB	15	2640	124	401
			2640	3215	231	351
			3215	3590	242	329
		NB	0	2810	95	434
			2810	3205	244	304
			3205	3590	117	405
4	L3103 Site to Motorway (Route 2)	SB	0	2375	98	391
			2375	3225	111	346
			3225	4100	96	380
5	L3103 Motorway to Site (Route 2)	NB	0	850	129	330
			850	1735	141	252
			1735	4140	121	351
6	R339 Ballybane to Port	WB	10	1790	148	243
			1790	2950	155	260
			2950	3400	195	354
		EB	0	1795	141	205
			1795	2945	156	358
			2945	3420	172	441

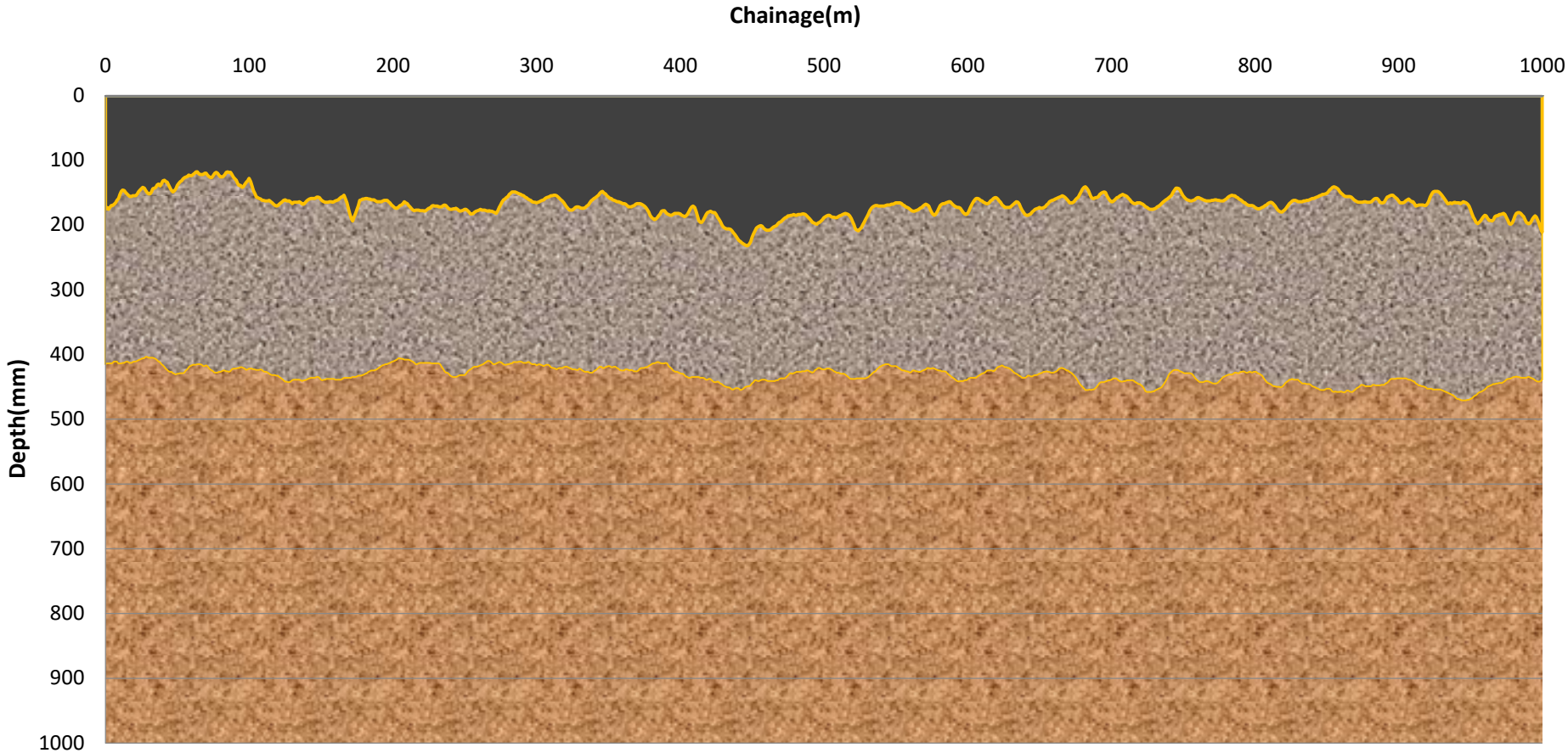
Appendix B – GPR Graphical Results



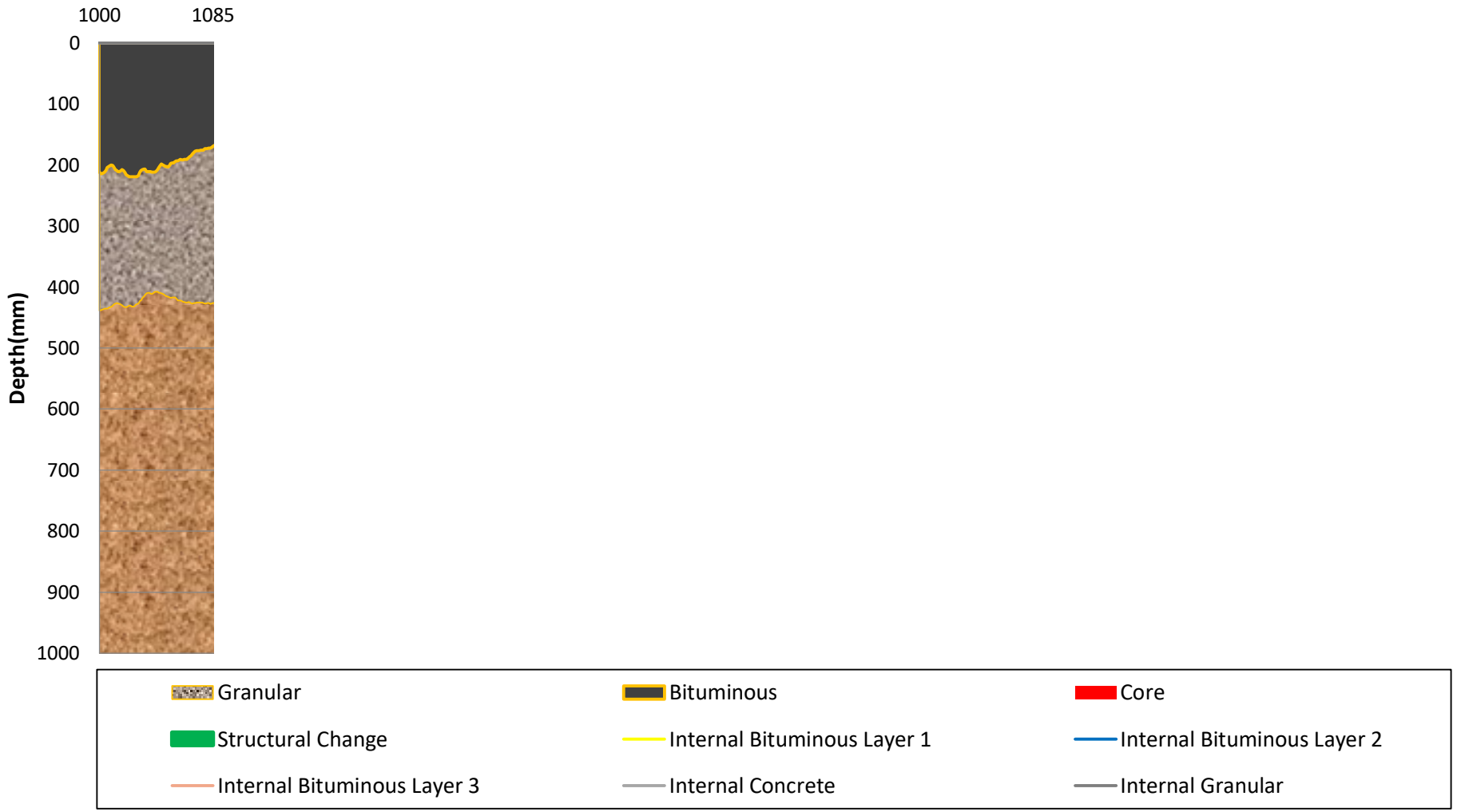
Section:	R381 Motorway to Carnmore Cross (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	1100m



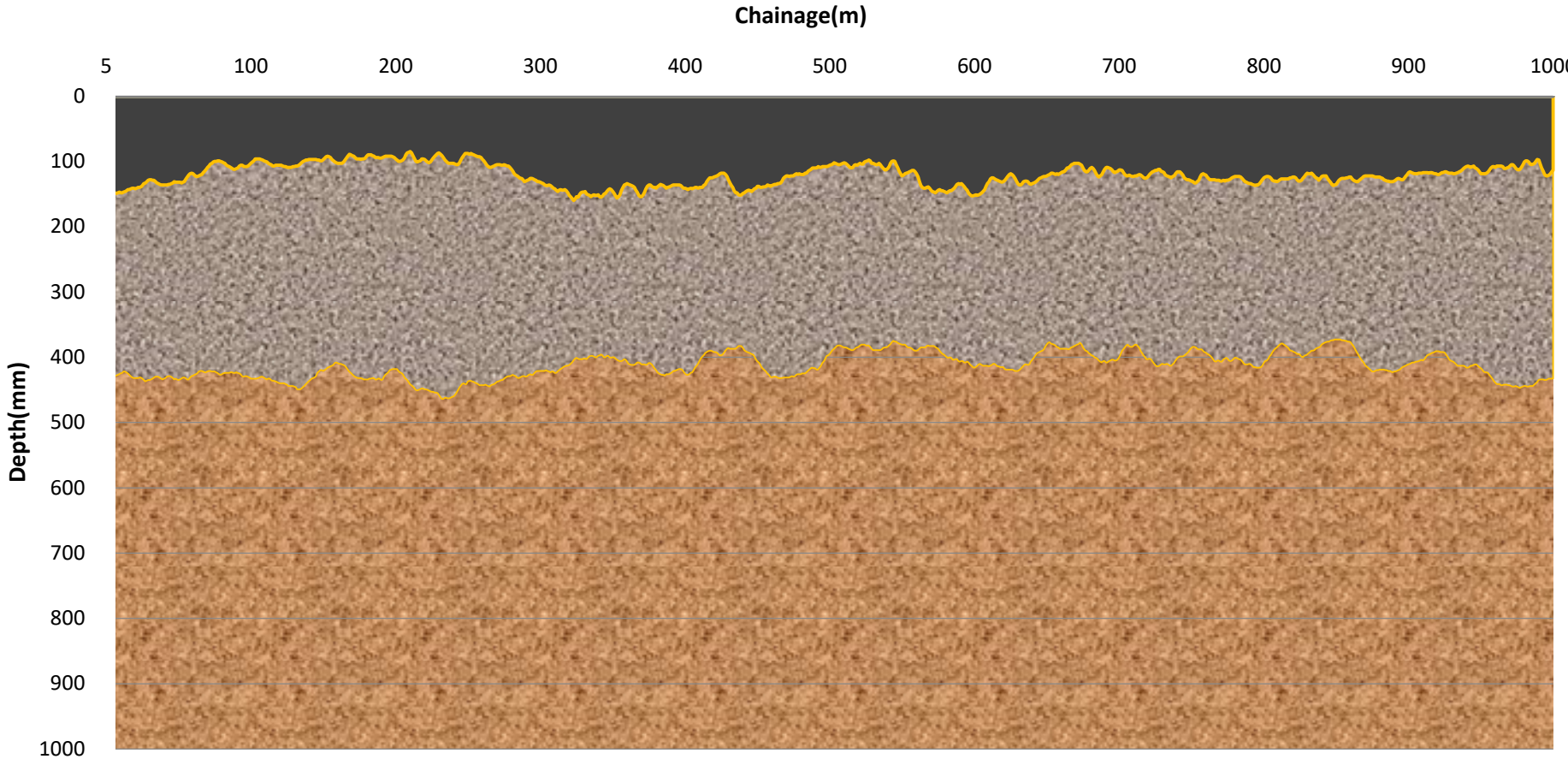
Section:	R381 Motorway to Carnmore Cross (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (1000-1100m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	1100m



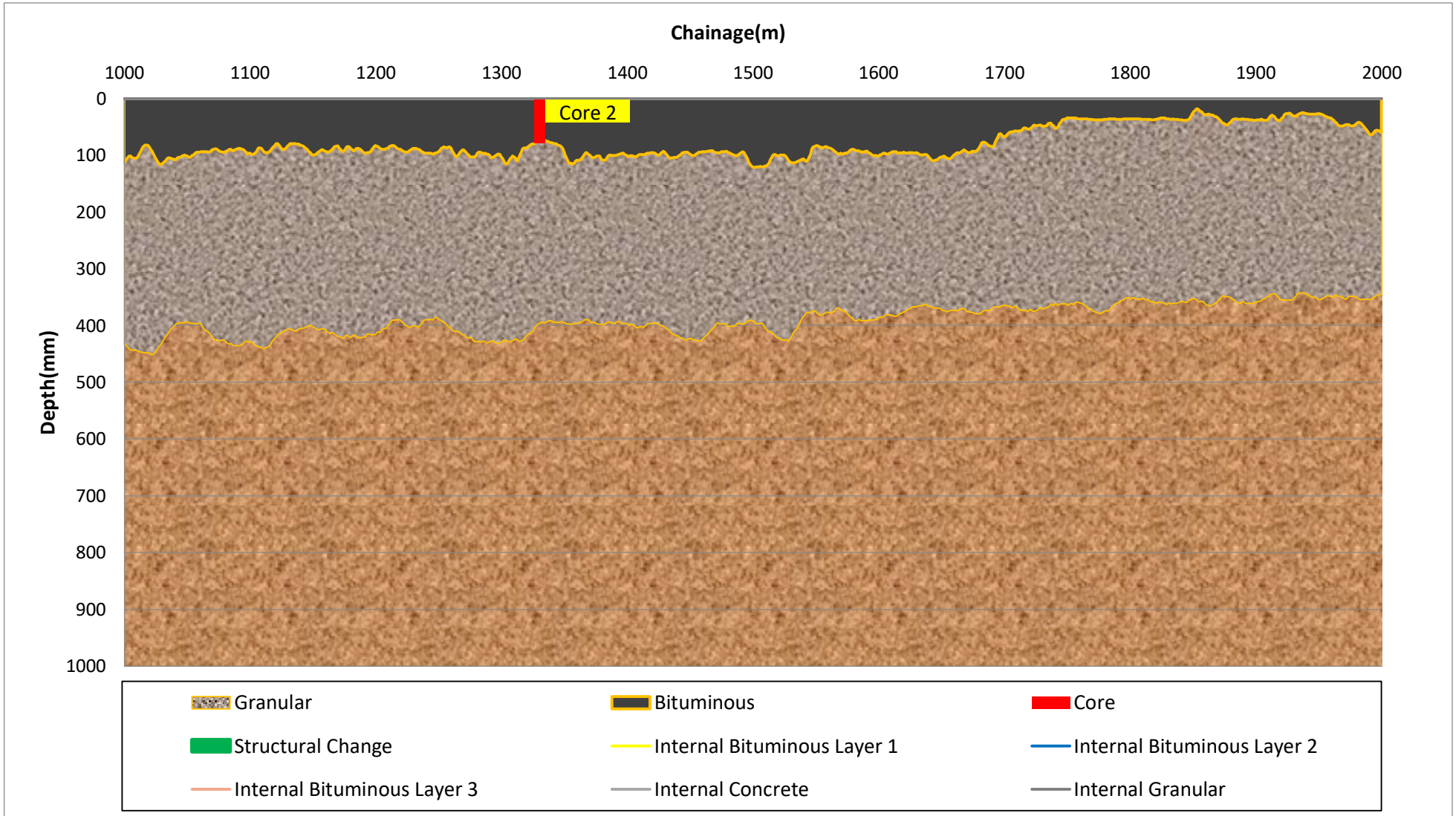
Section:	R381 Motorway to Carnmore Cross (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	NBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	1100m



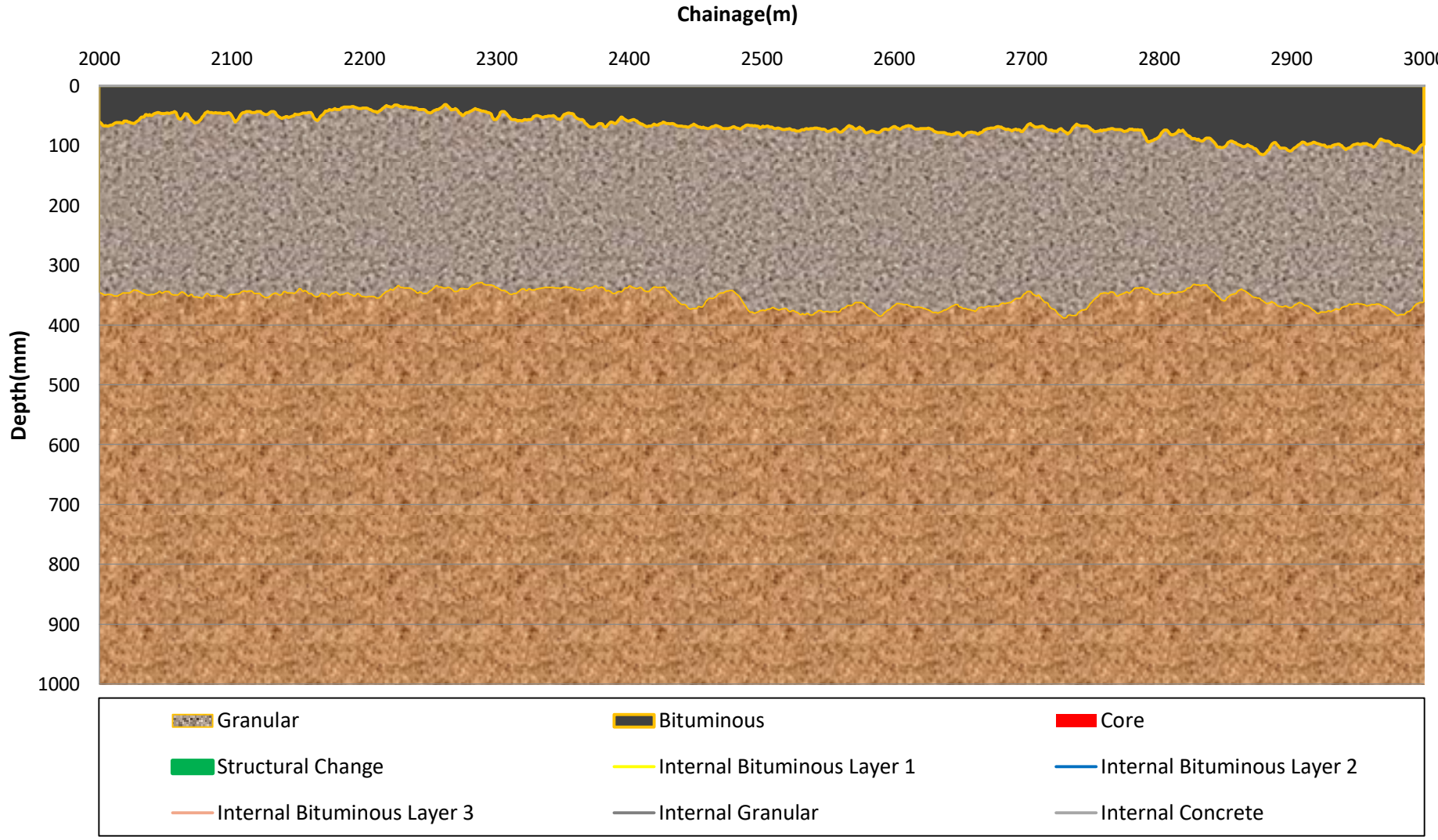
Section:	R381 Motorway to Carnmore Cross (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	NBCW (1000-1085m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	1100m



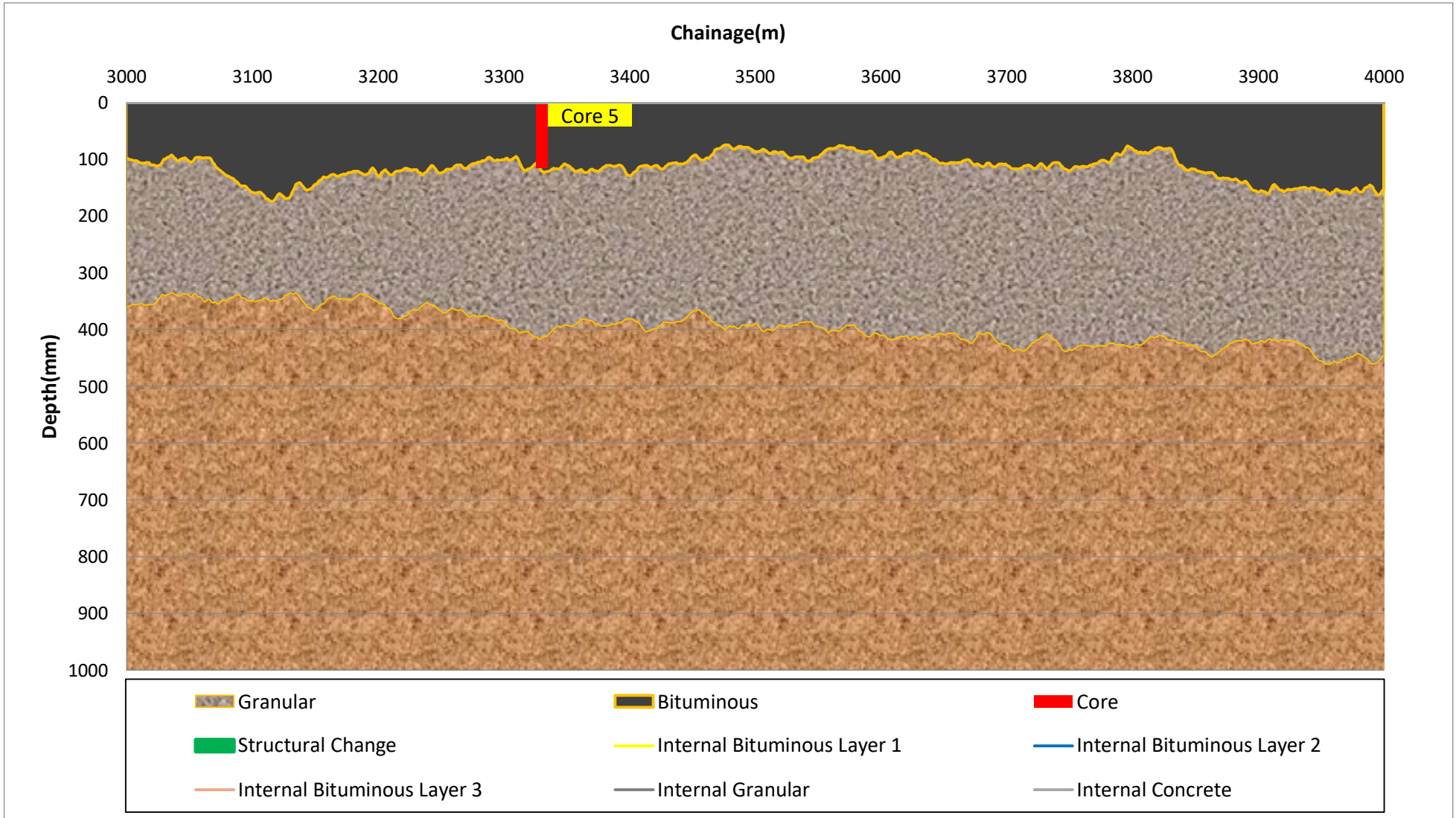
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (5-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



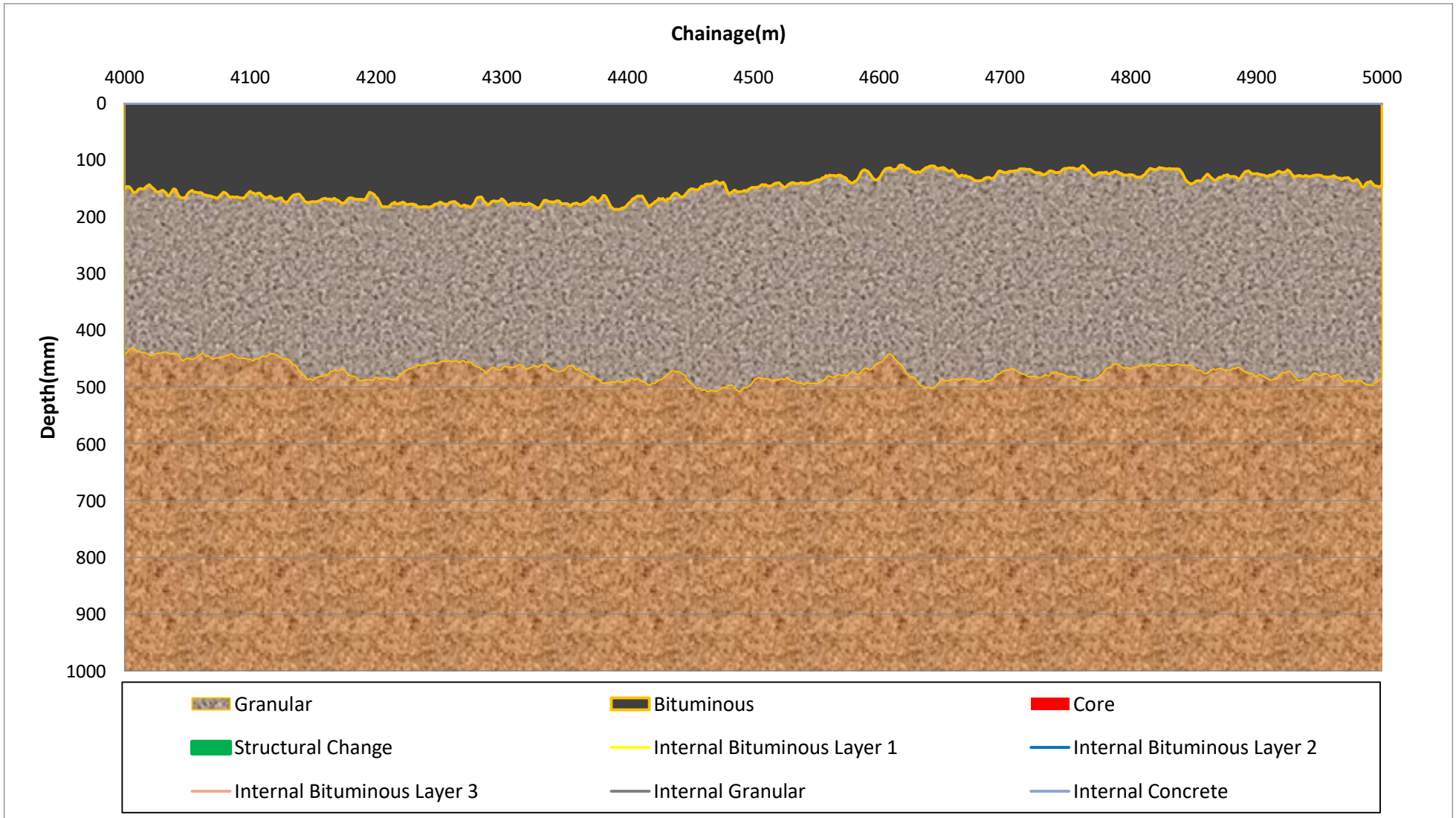
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



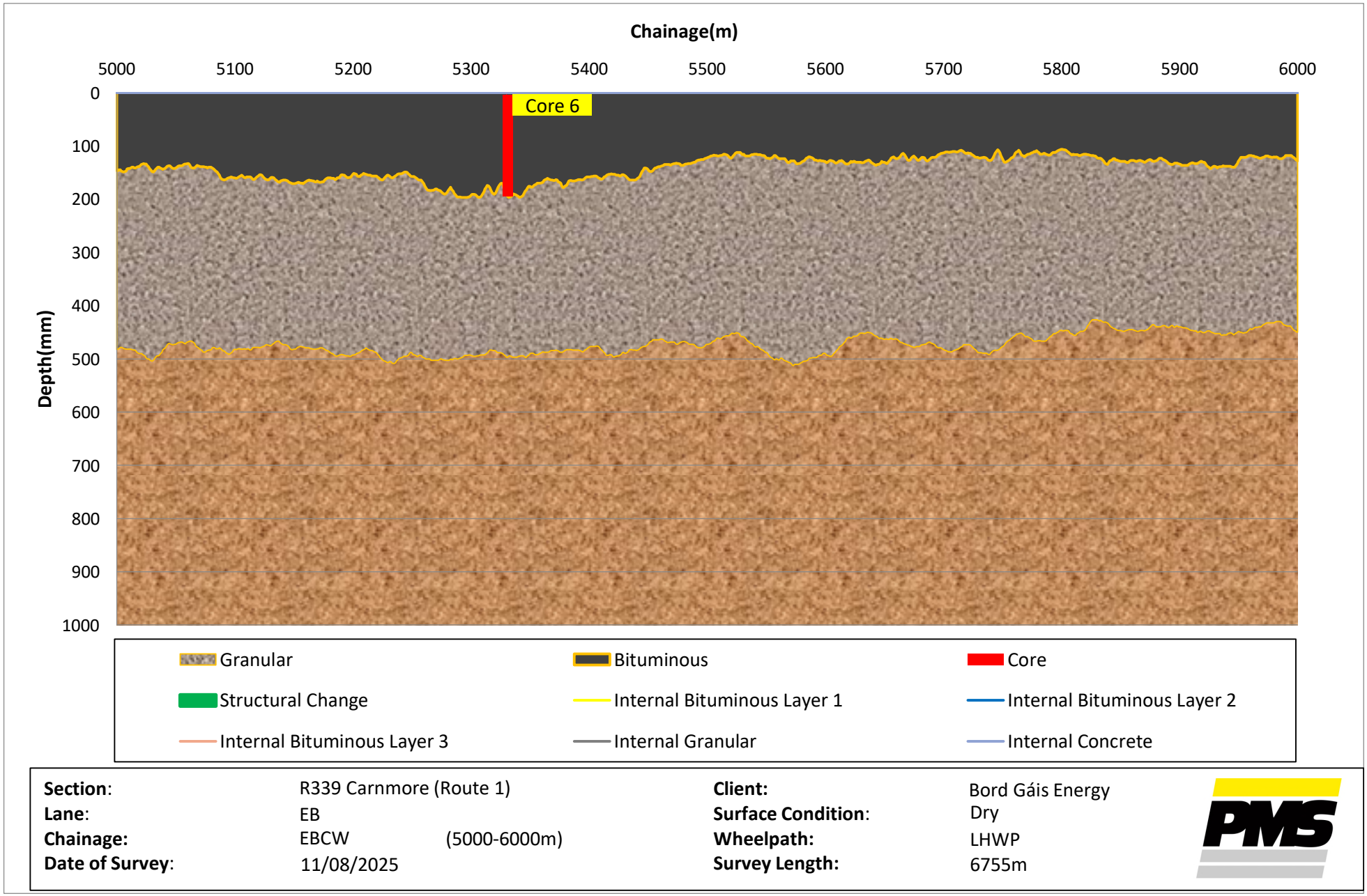
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



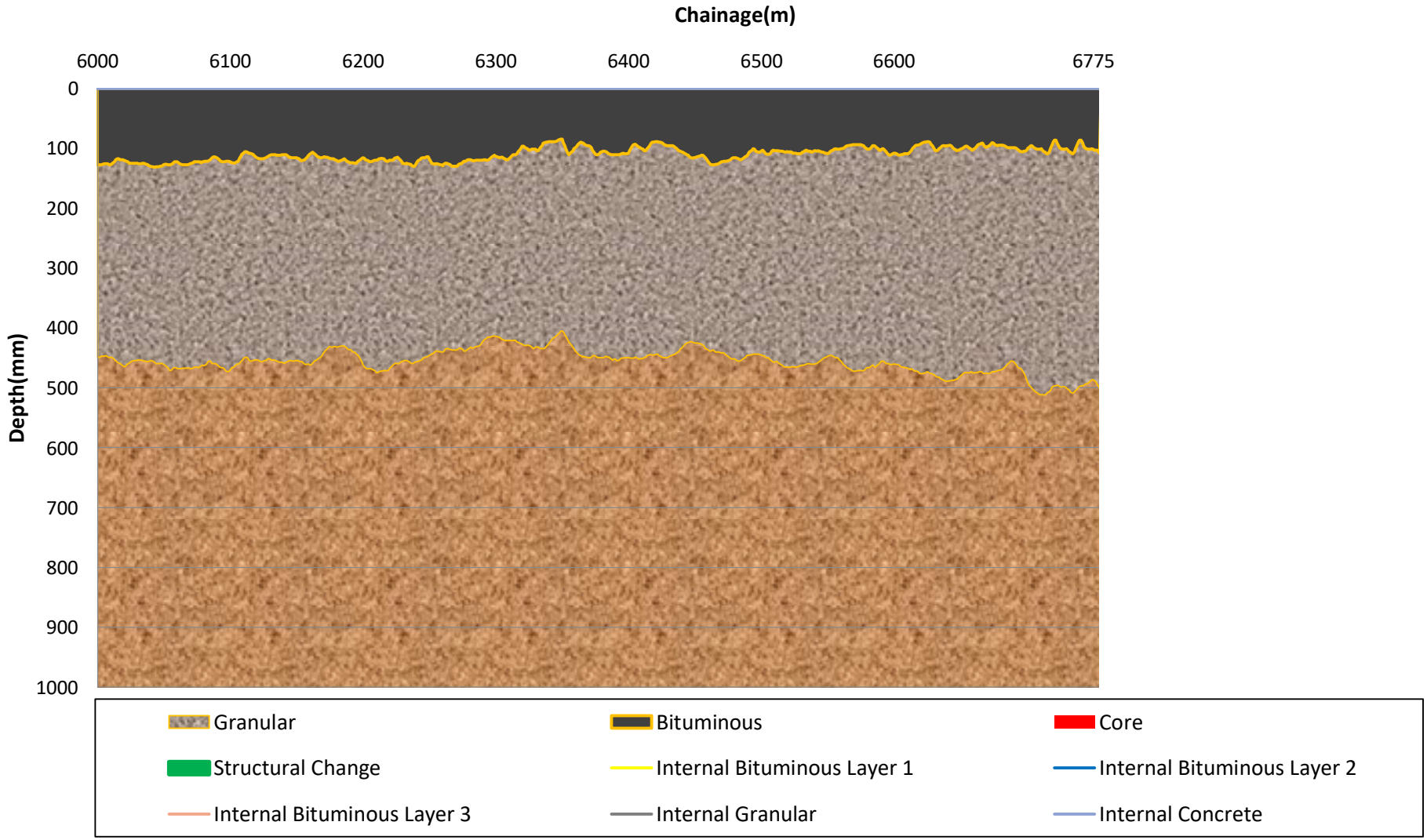
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (3000-4000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



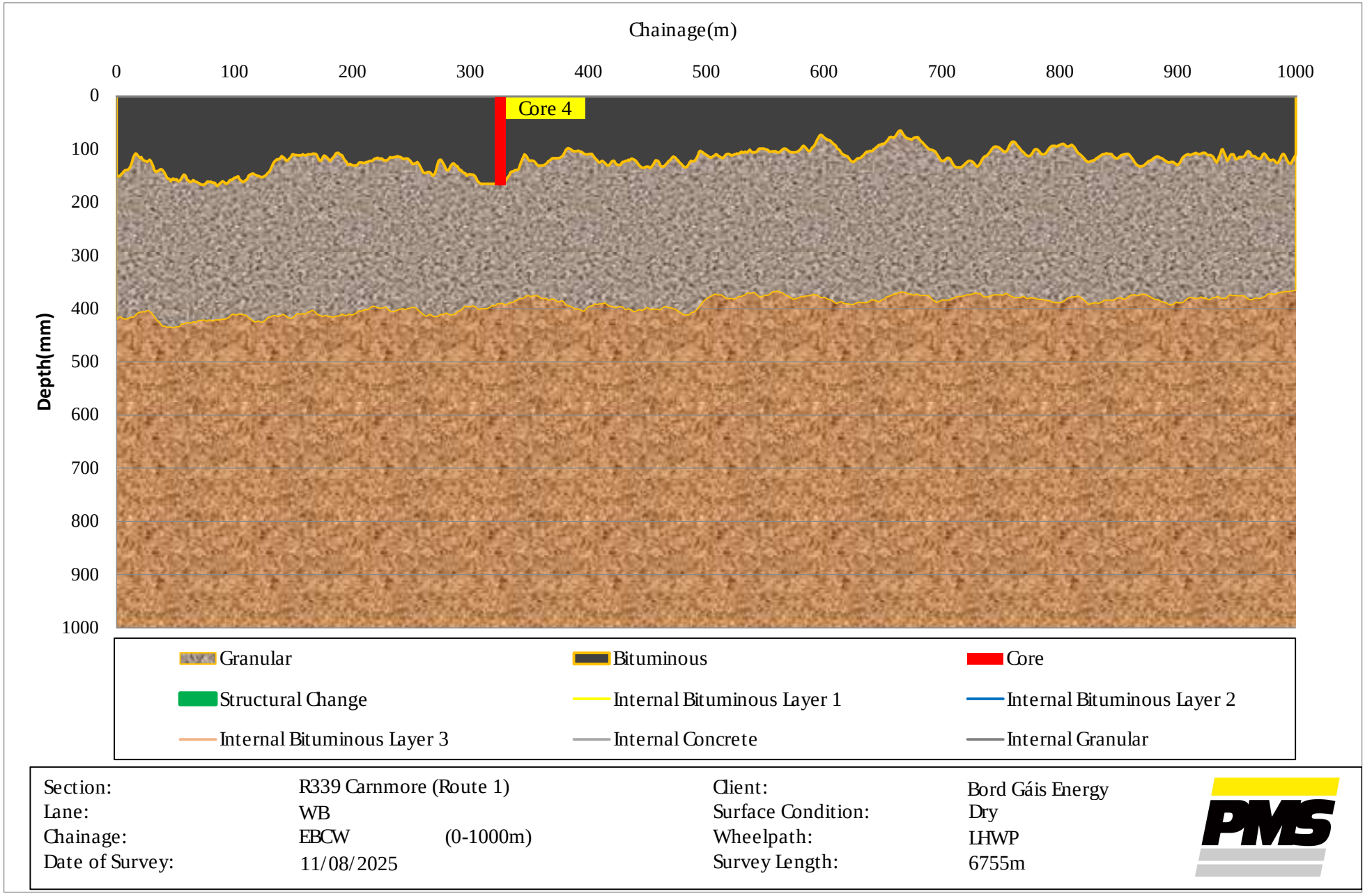
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (4000-5000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



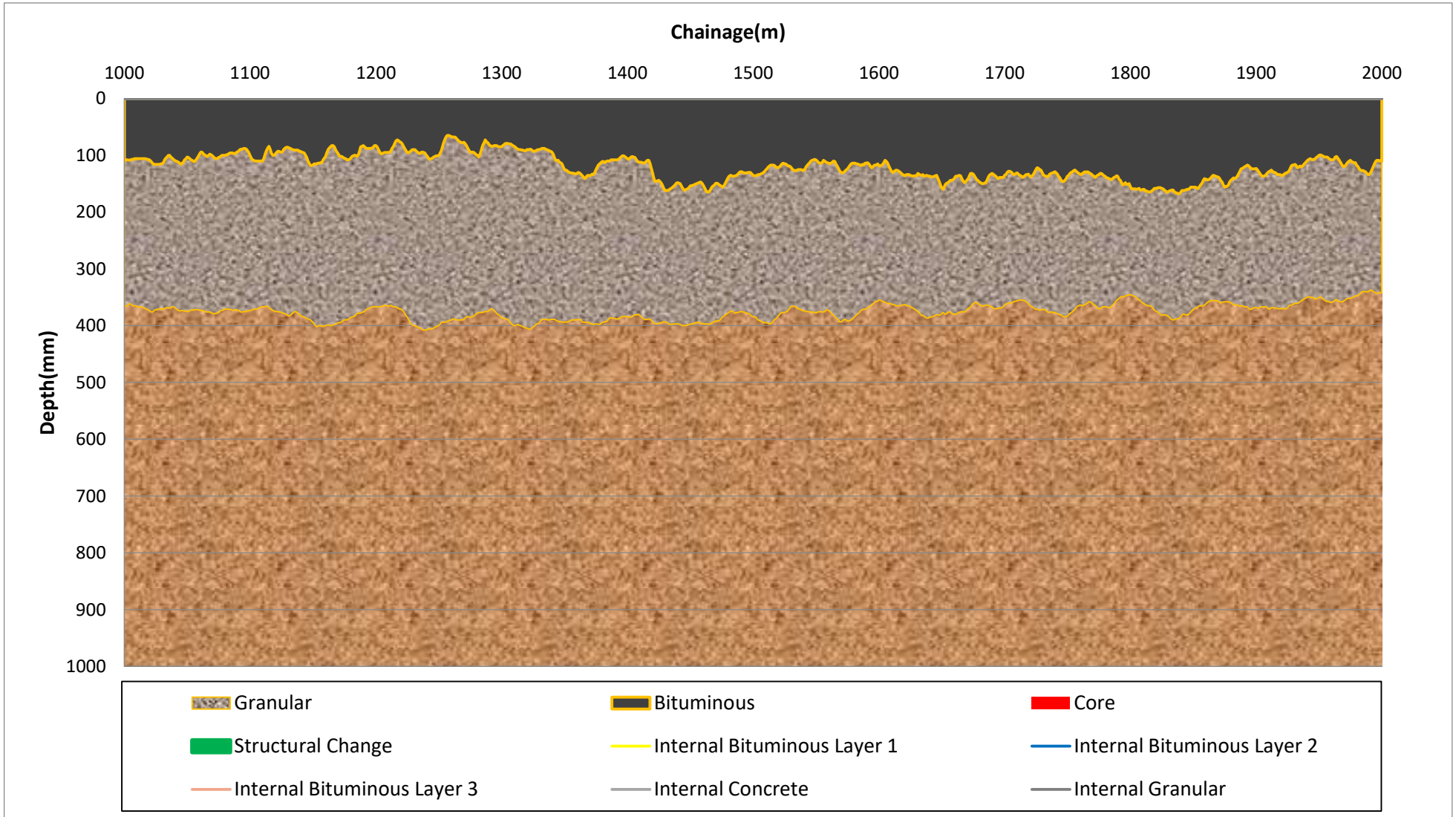
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (5000-6000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



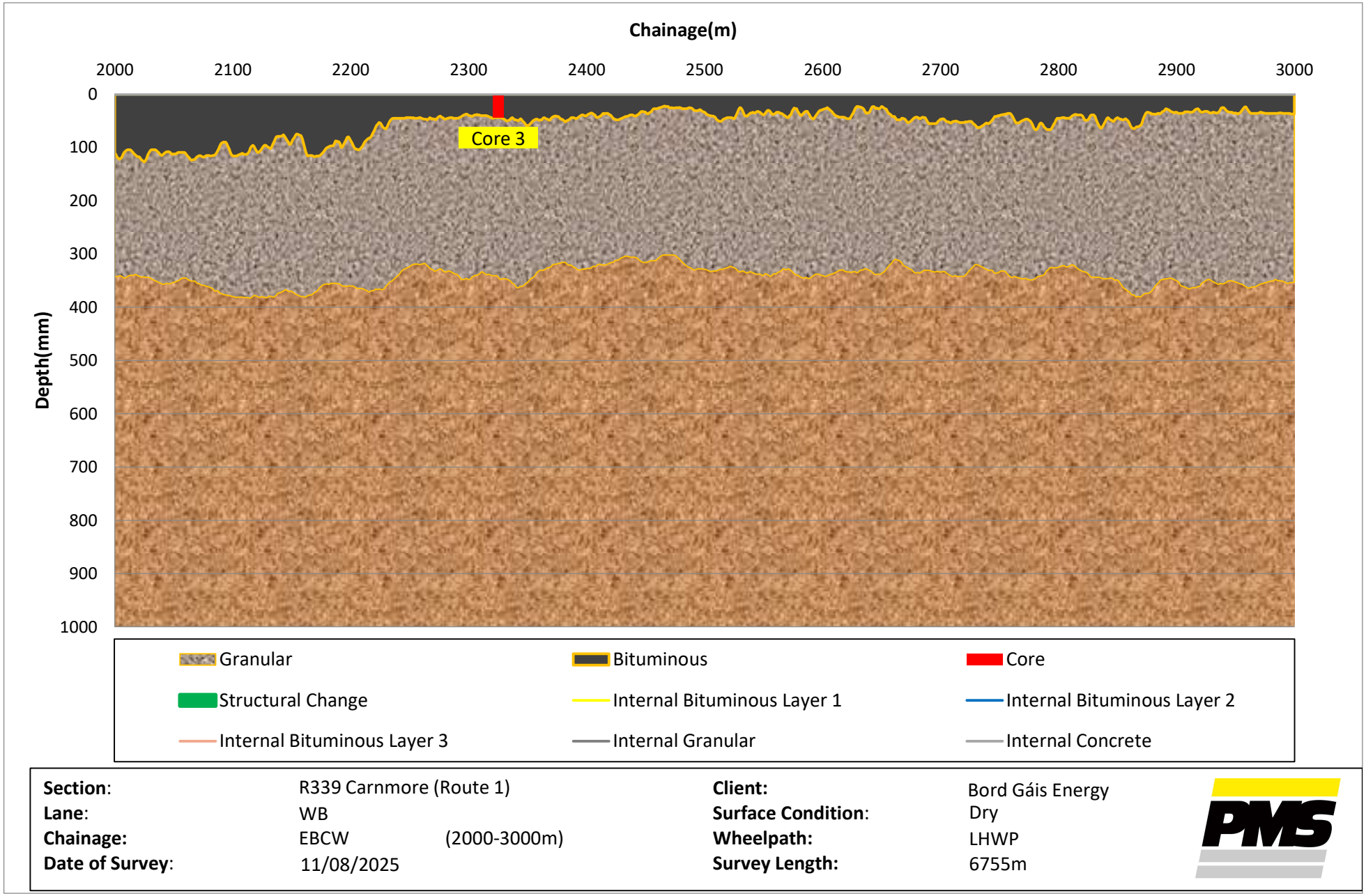
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	EBCW (6000-6755m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



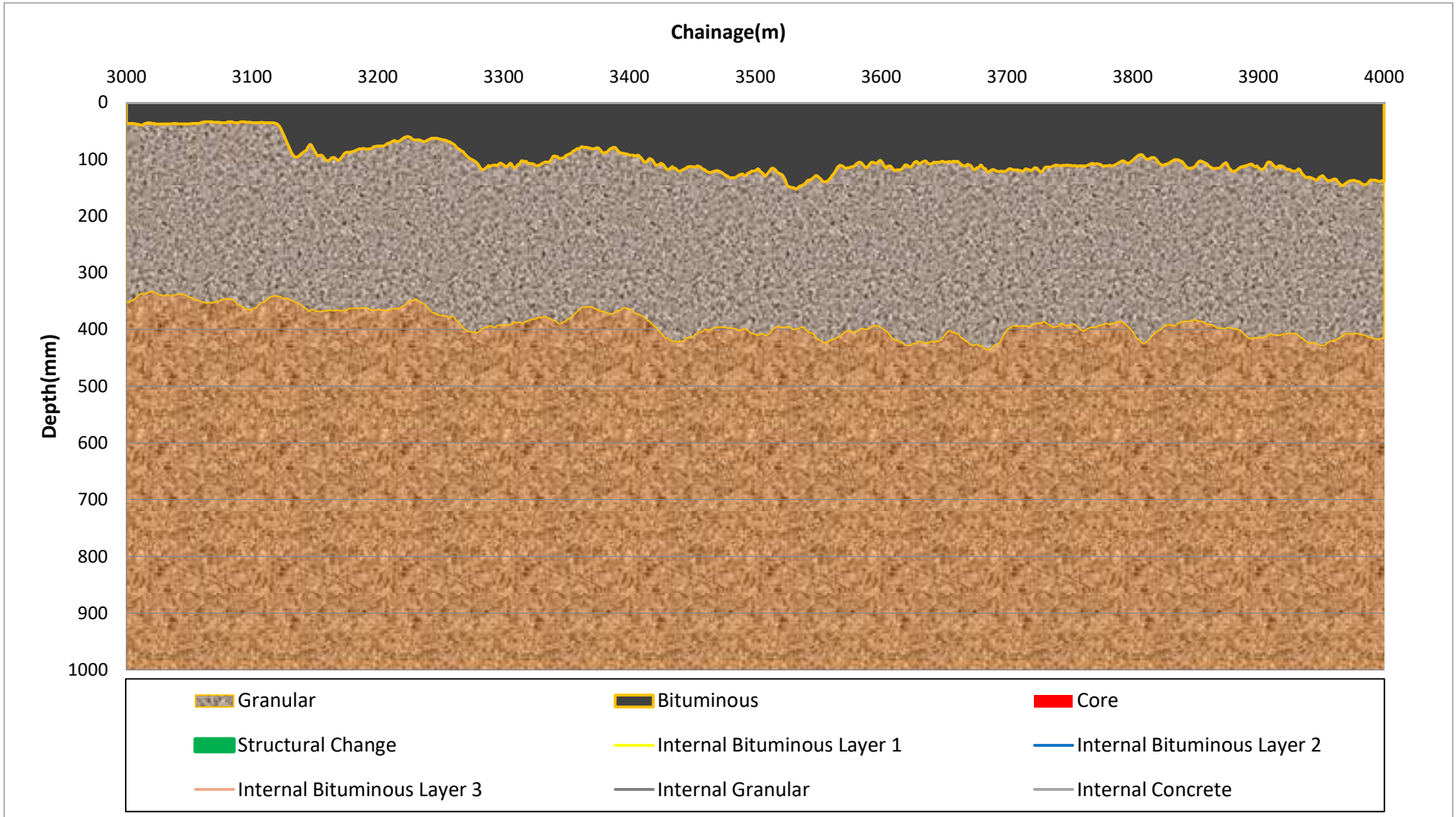
Section:	R339 Carnmore (Route 1)	Client:	Bord Gáis Energy
Lane:	WB	Surface Condition:	Dry
Chainage:	EBCW (0-1000m)	Wheelpath:	LHWP
Date of Survey:	11/08/2025	Survey Length:	6755m



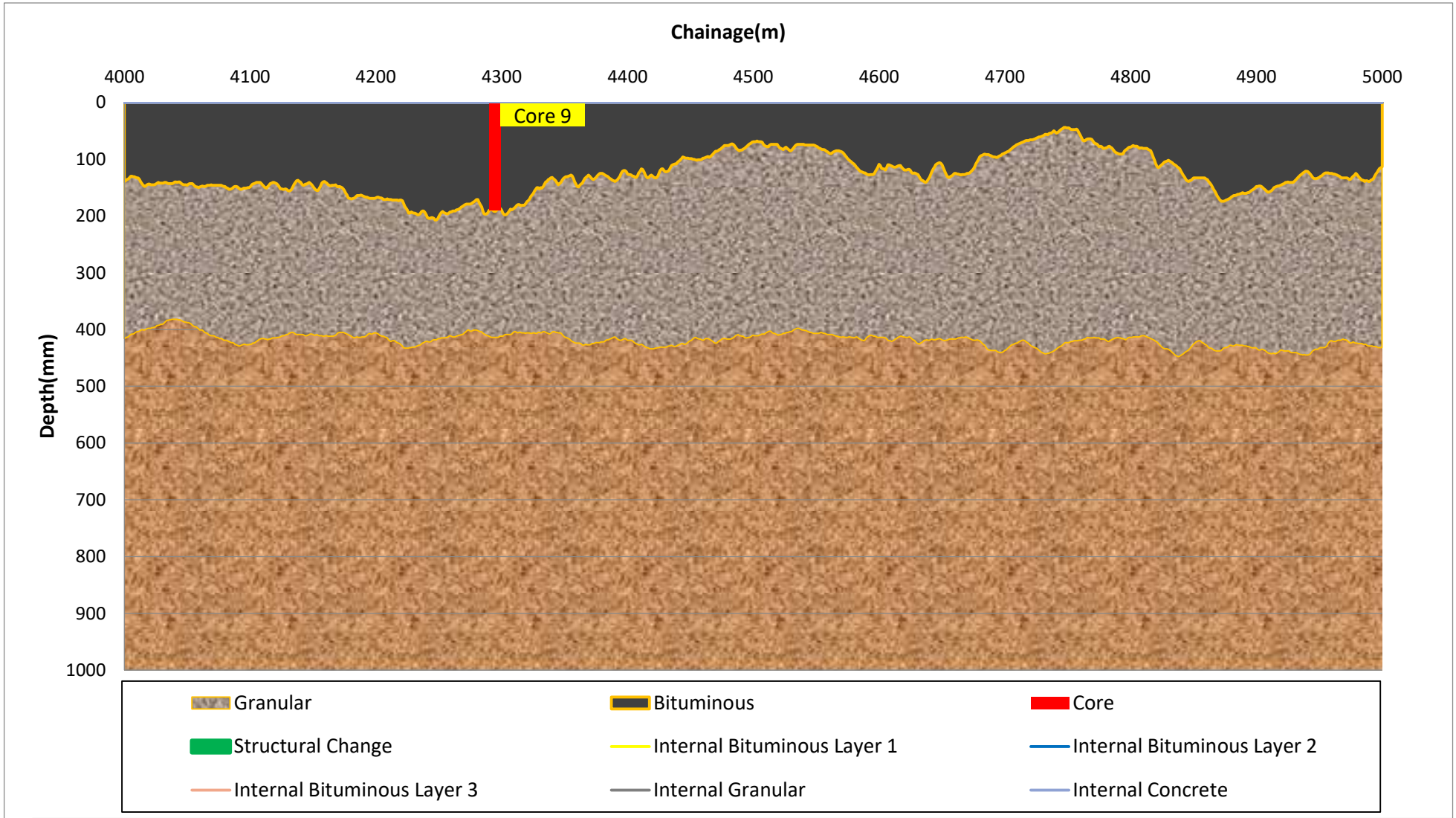
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



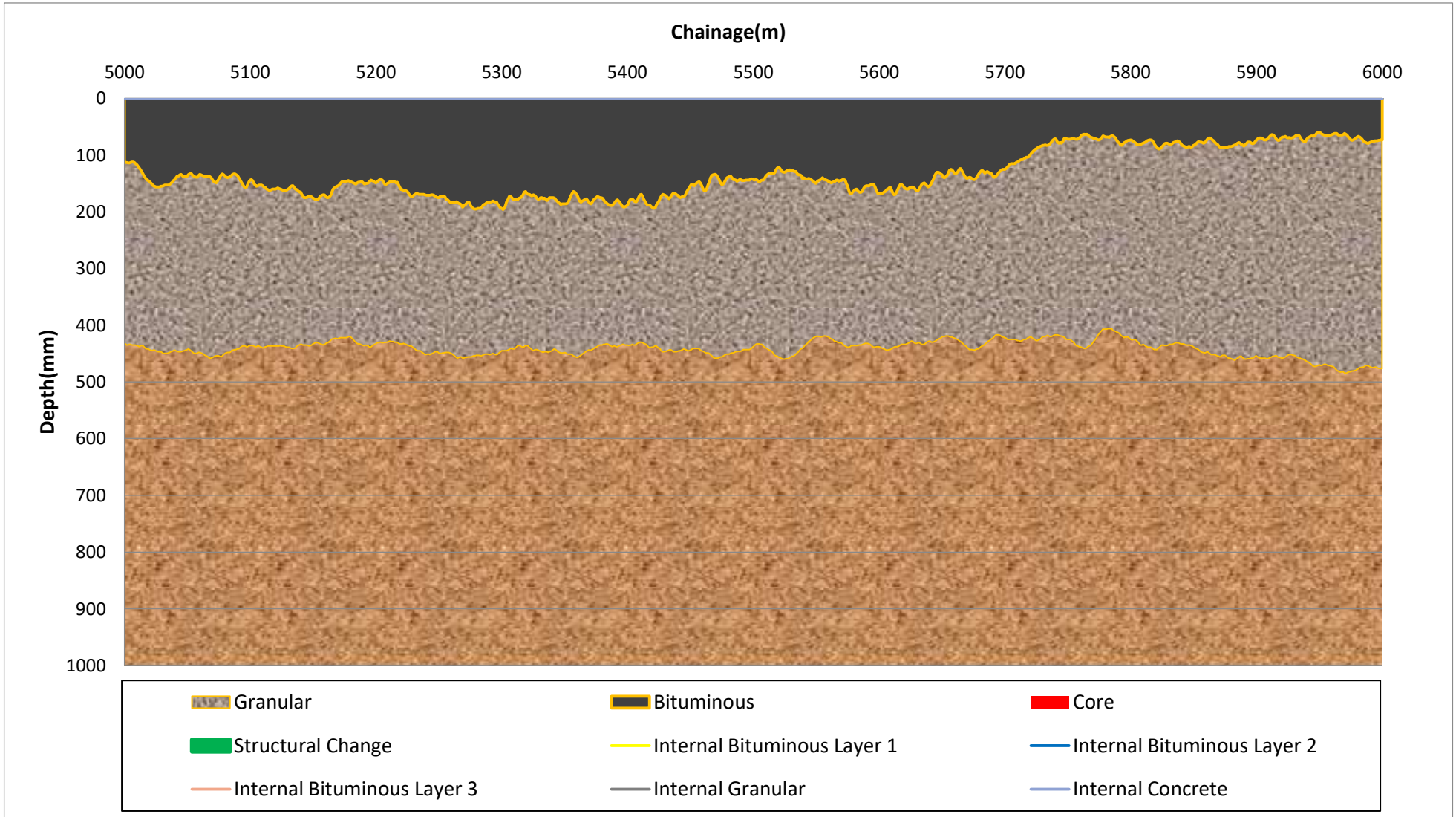
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



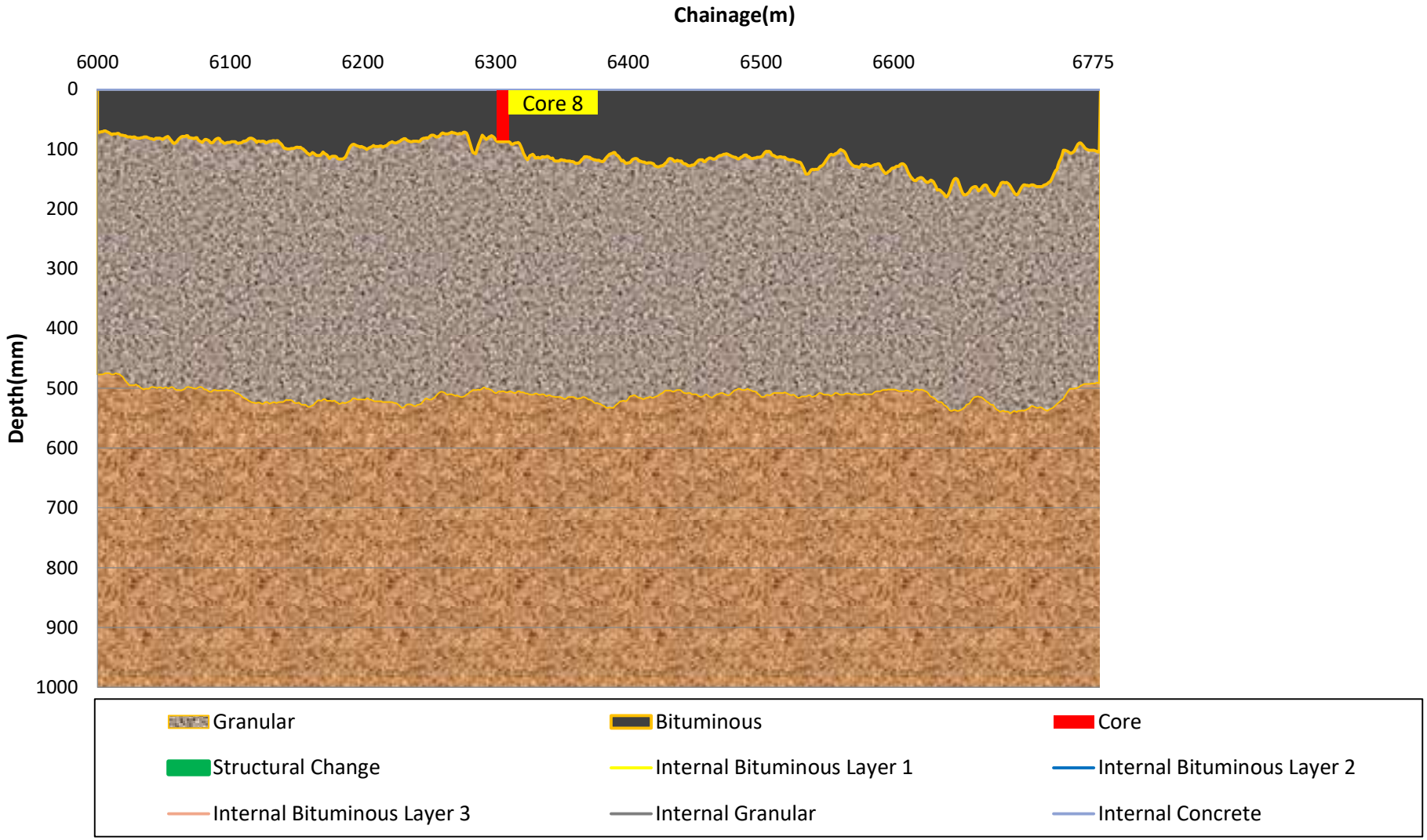
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (3000-4000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



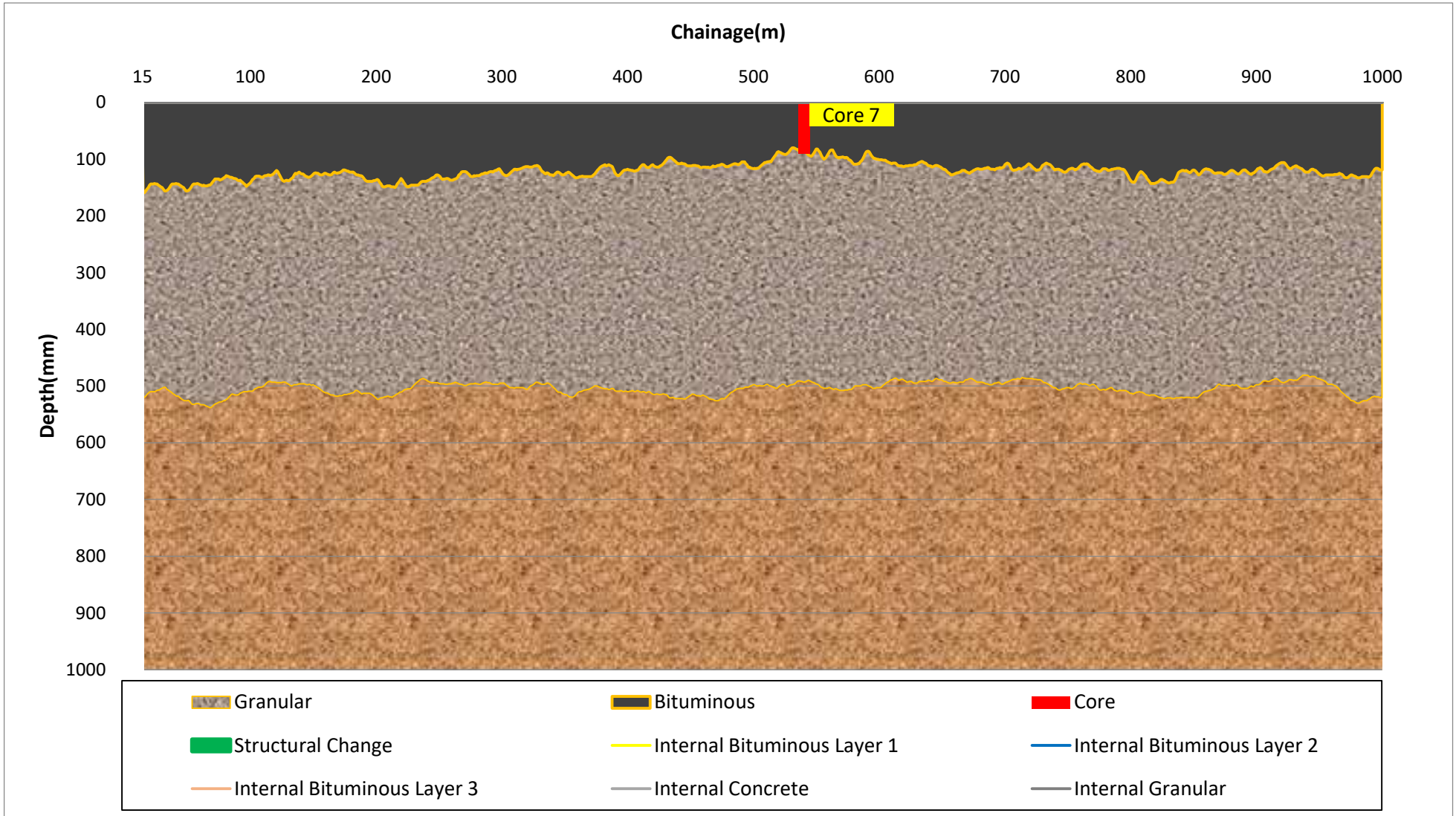
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (4000-5000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



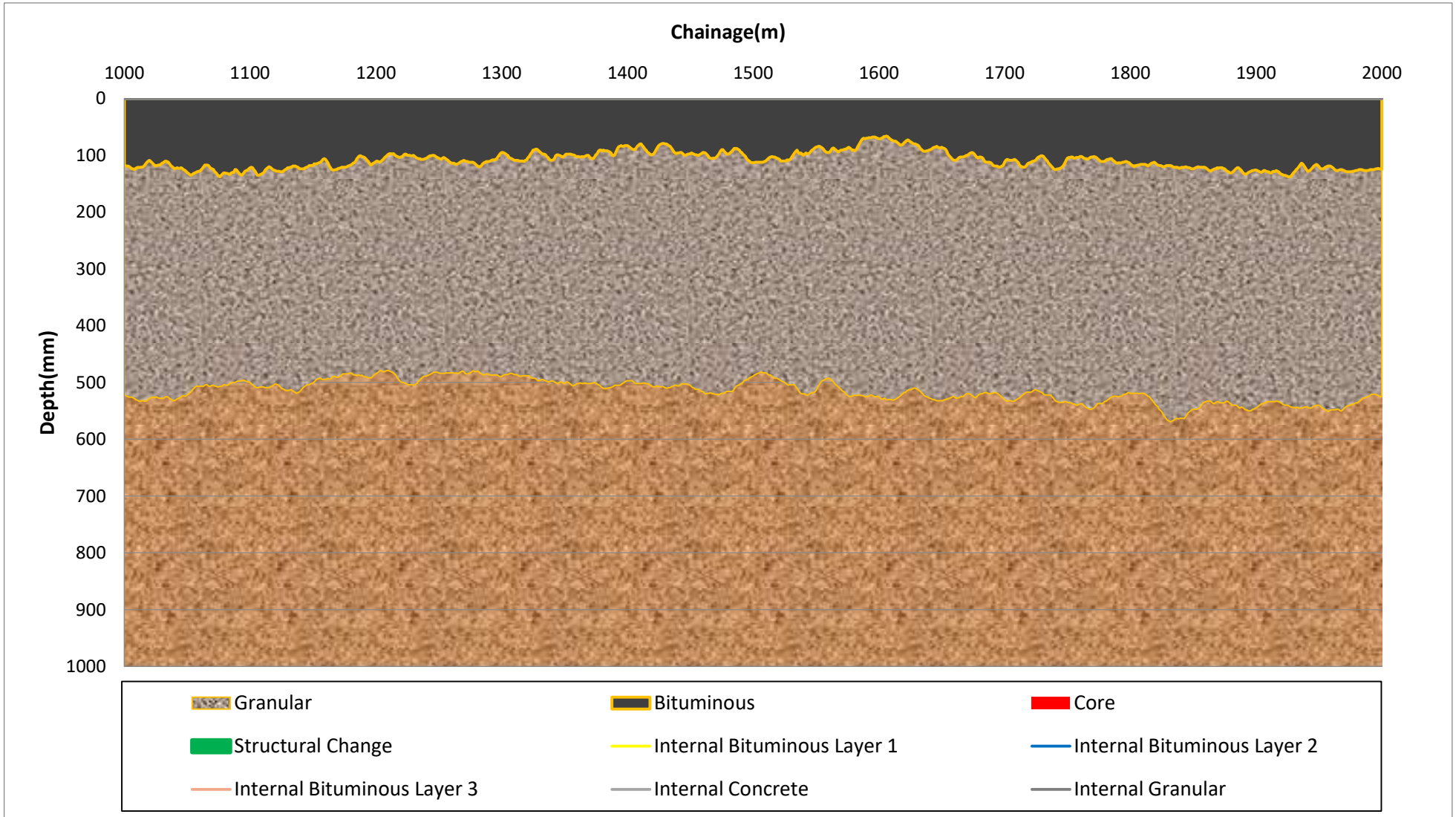
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (5000-6000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



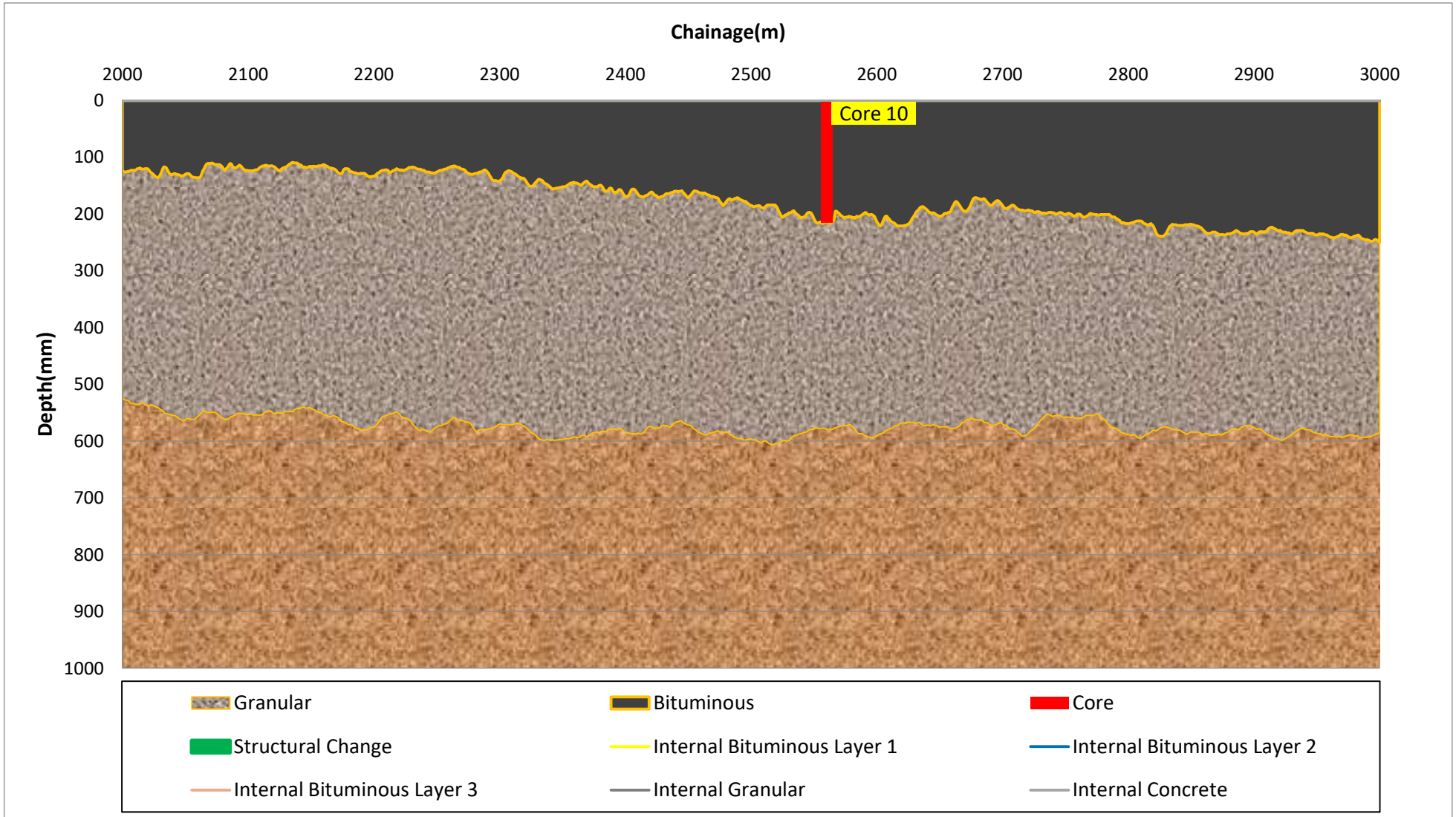
Section:	R339 Carnmore (Route 1)	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	EBCW (6000-6755m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	6755m



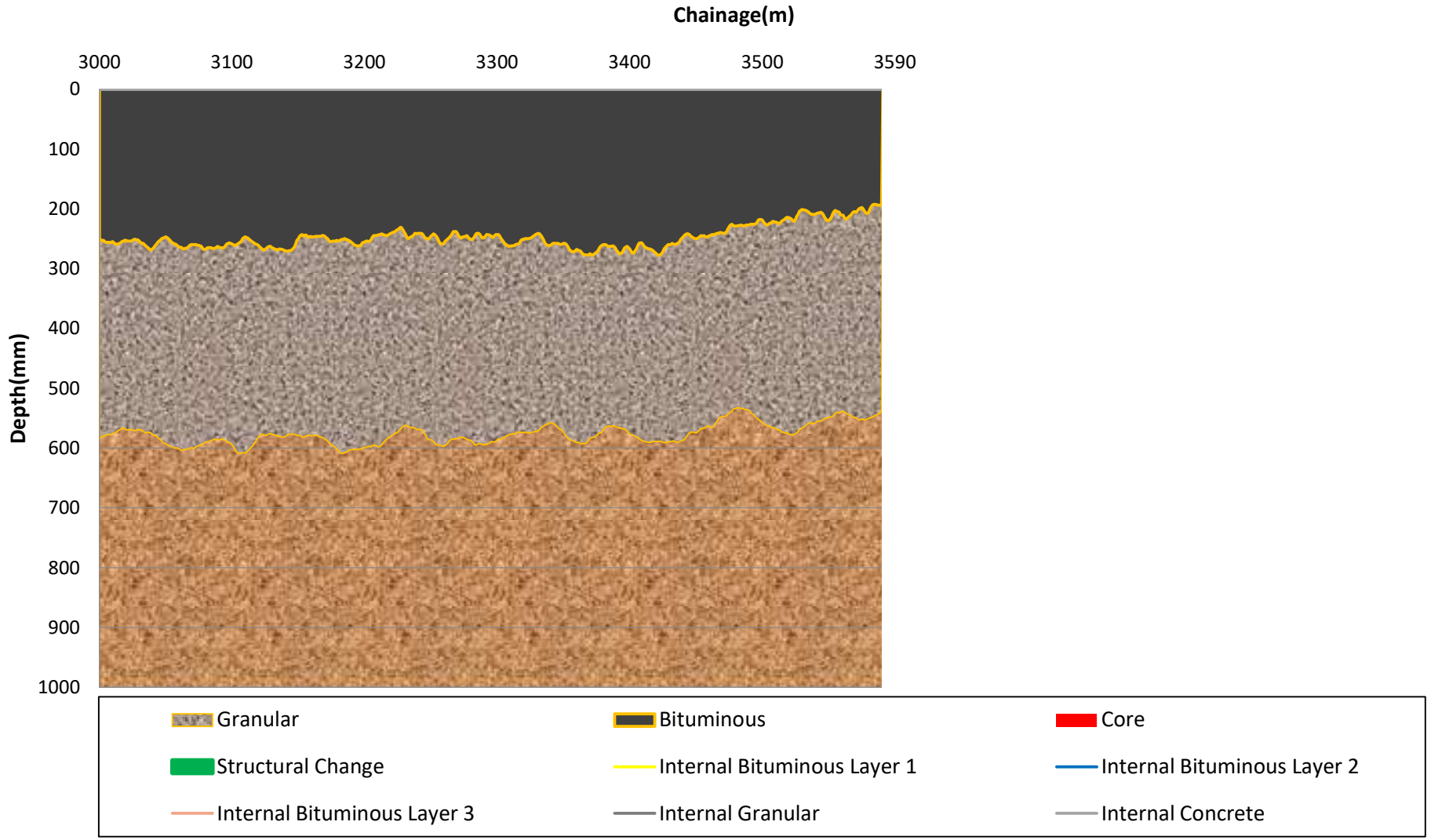
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (15-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



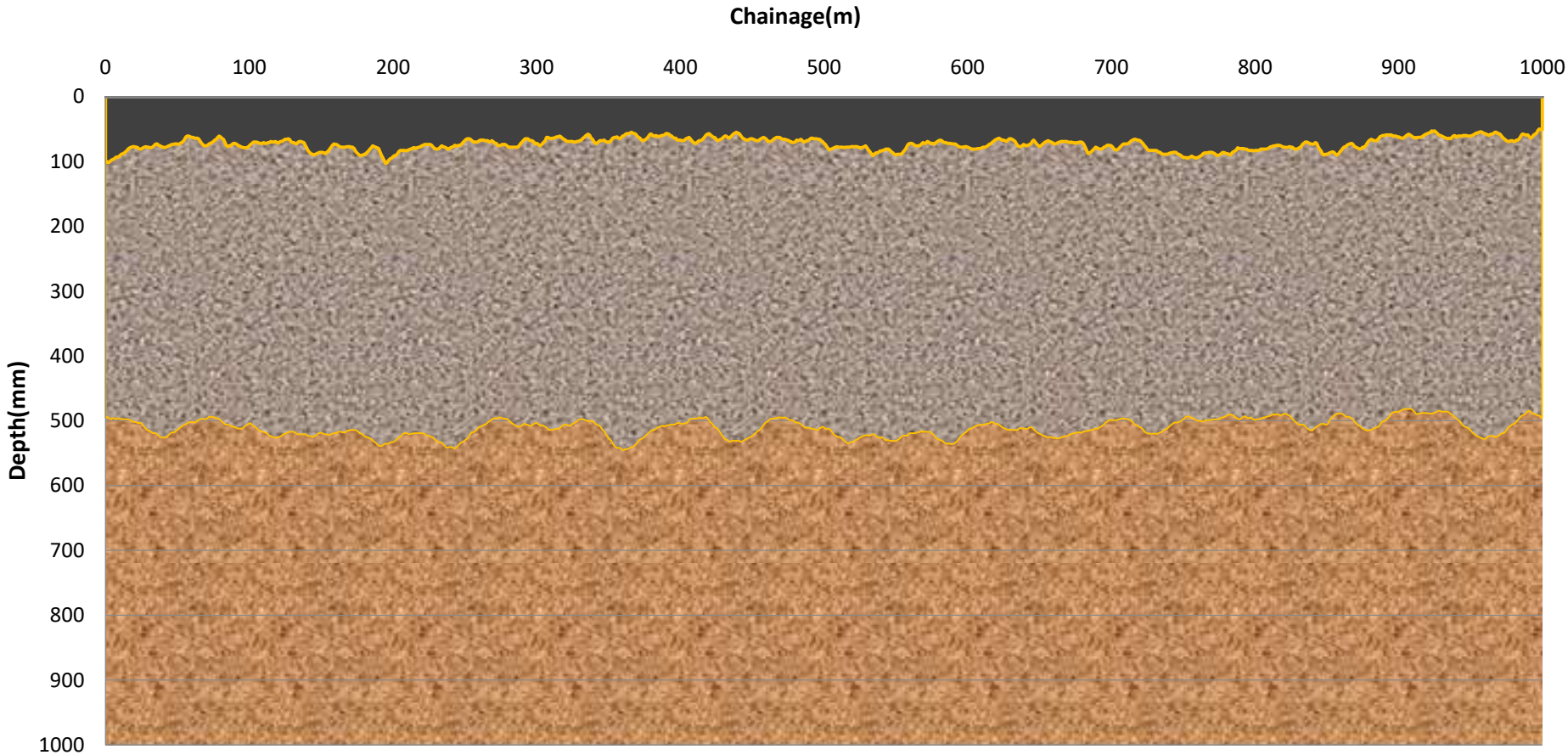
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



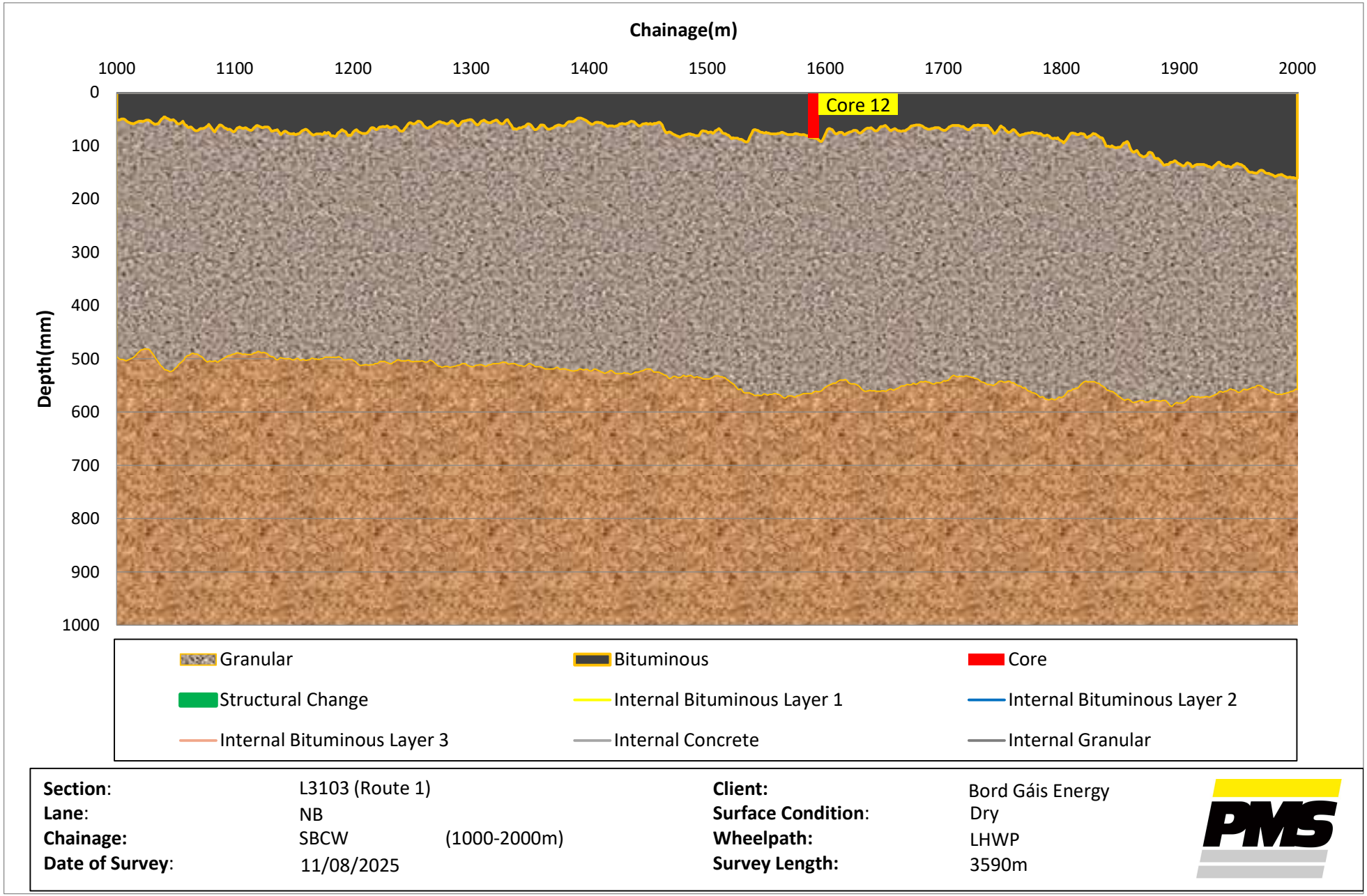
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



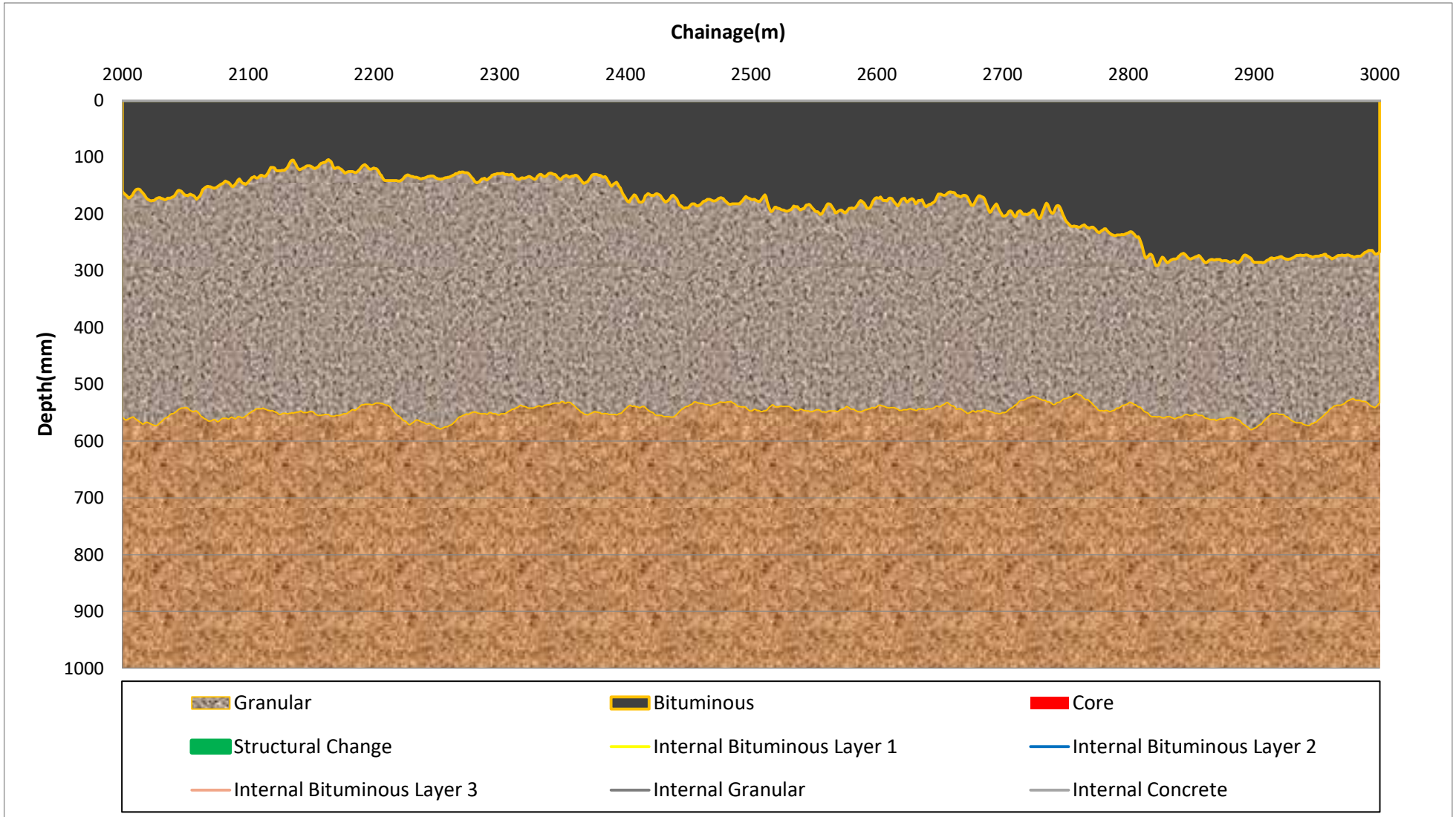
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (3000-3590m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



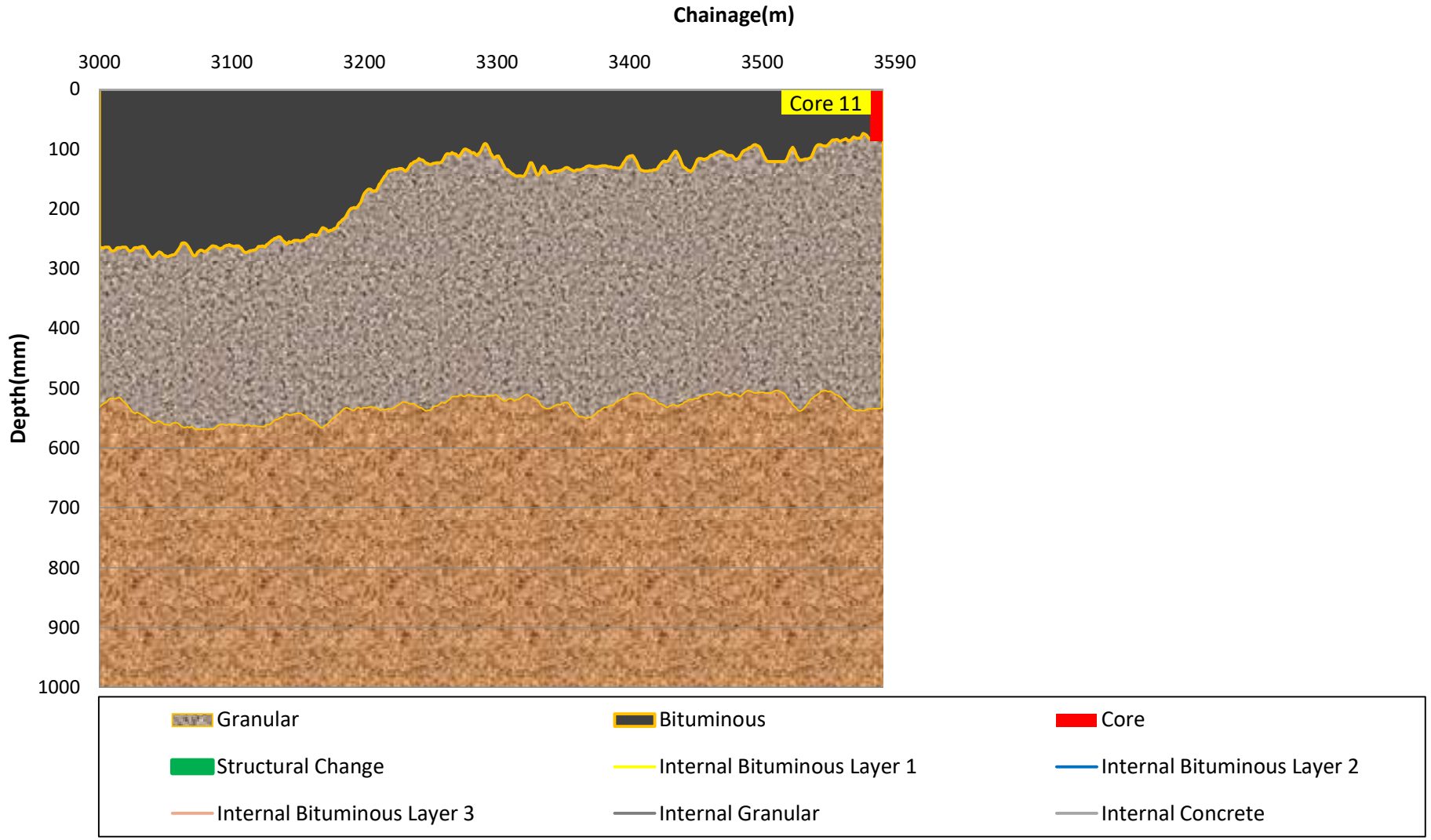
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	SBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



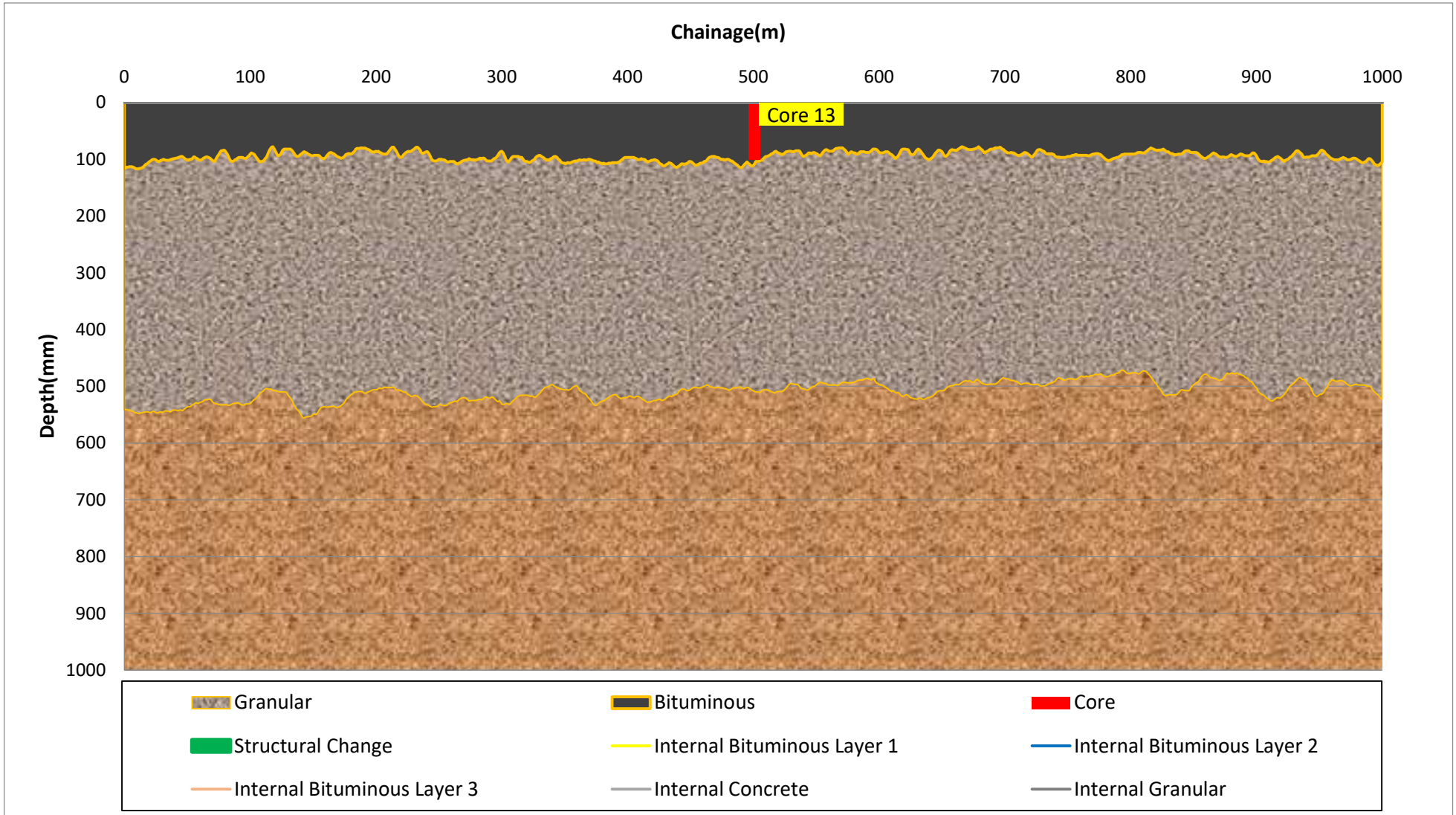
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	SBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



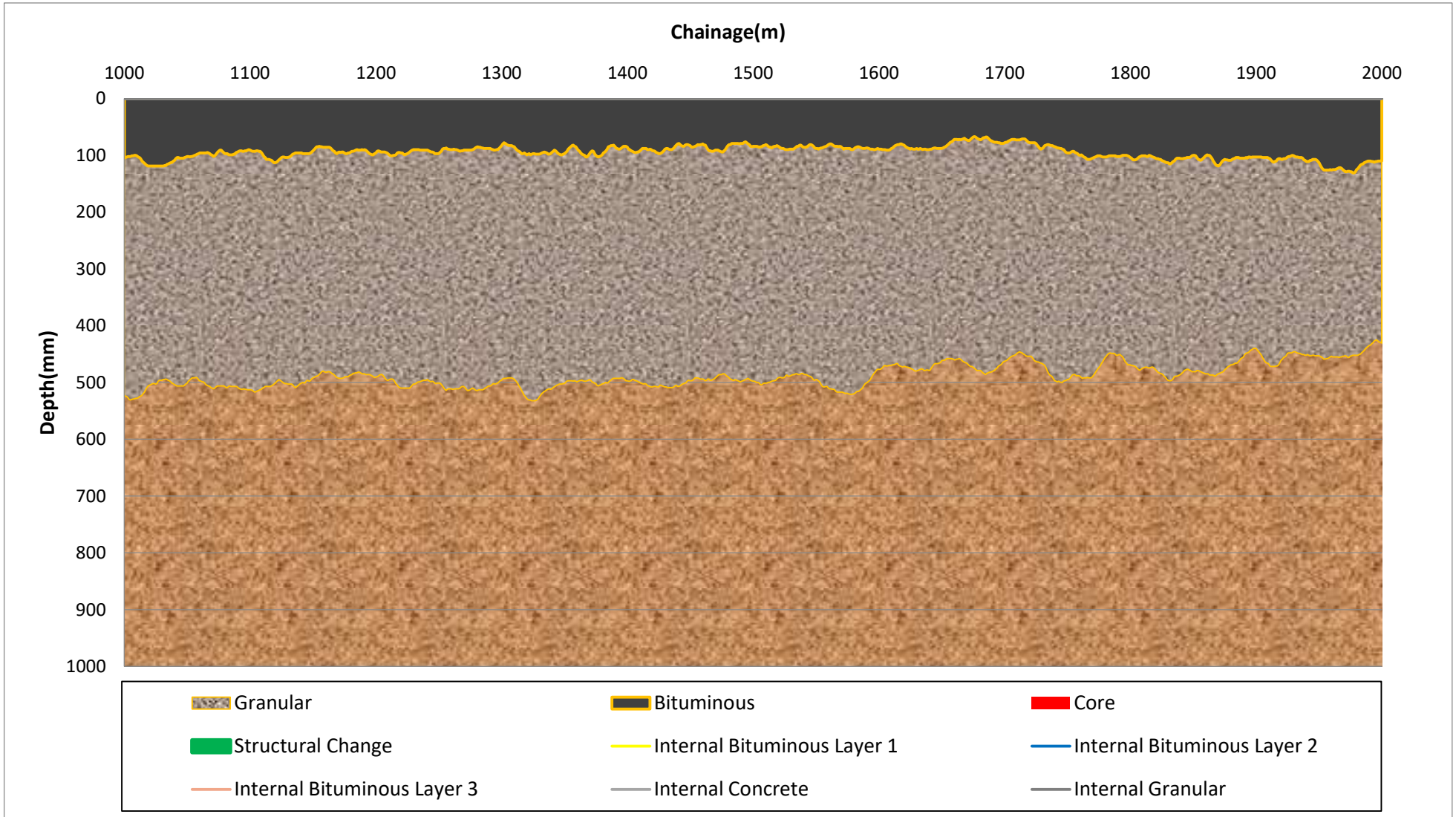
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	SBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



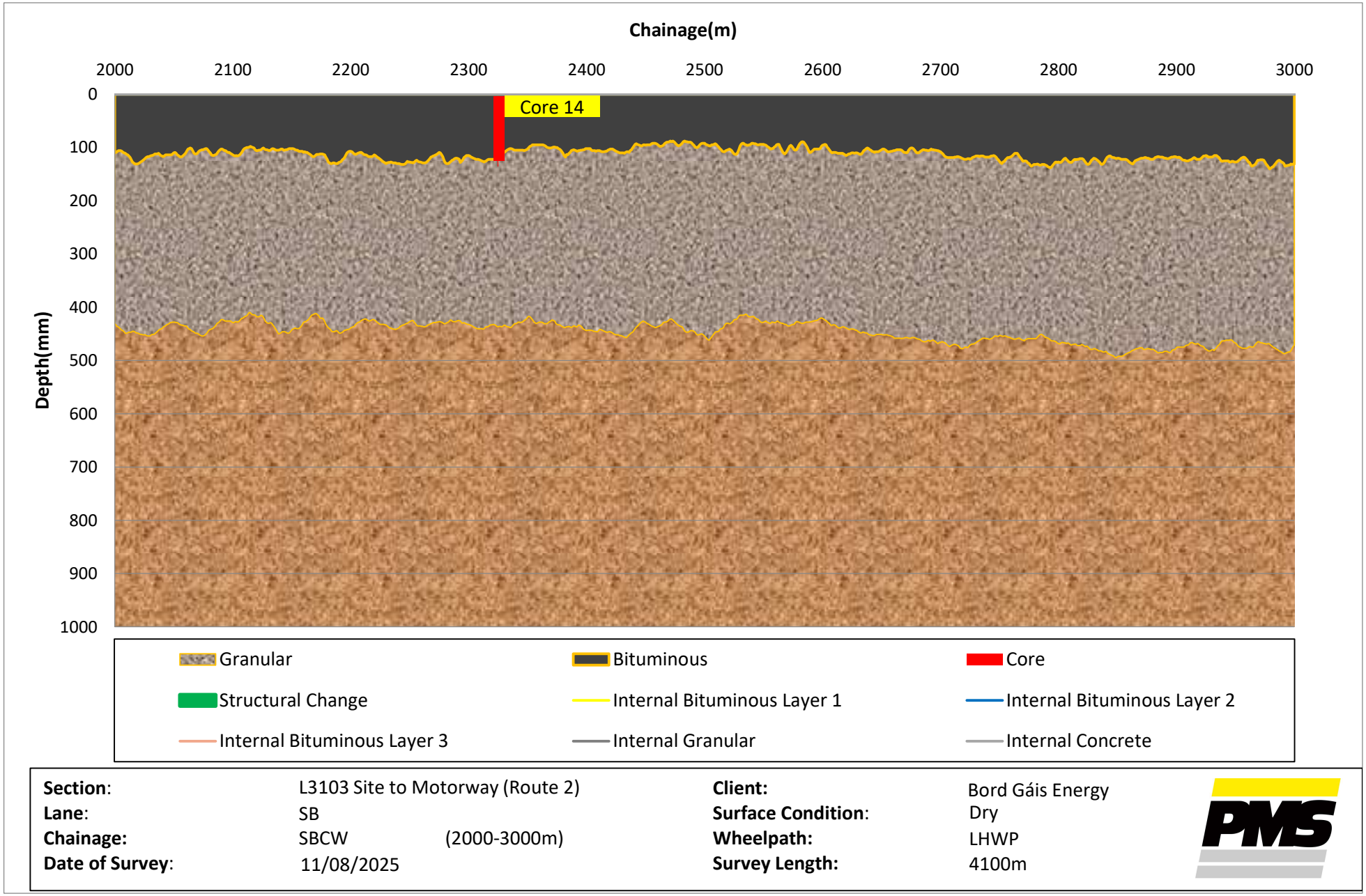
Section:	L3103 (Route 1)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	SBCW (3000-3590m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3590m



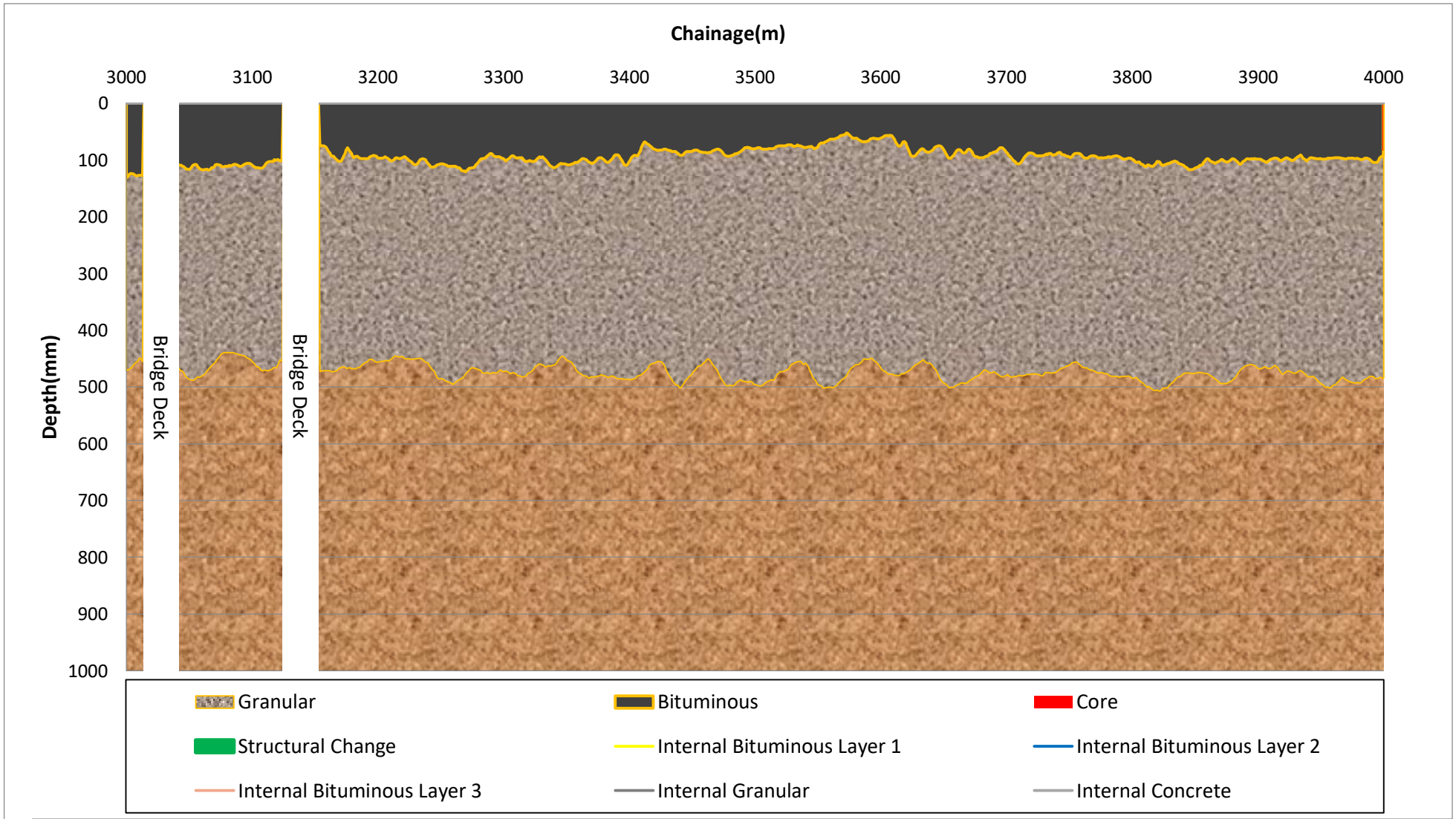
Section:	L3103 Site to Motorway (Route 2)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4100m



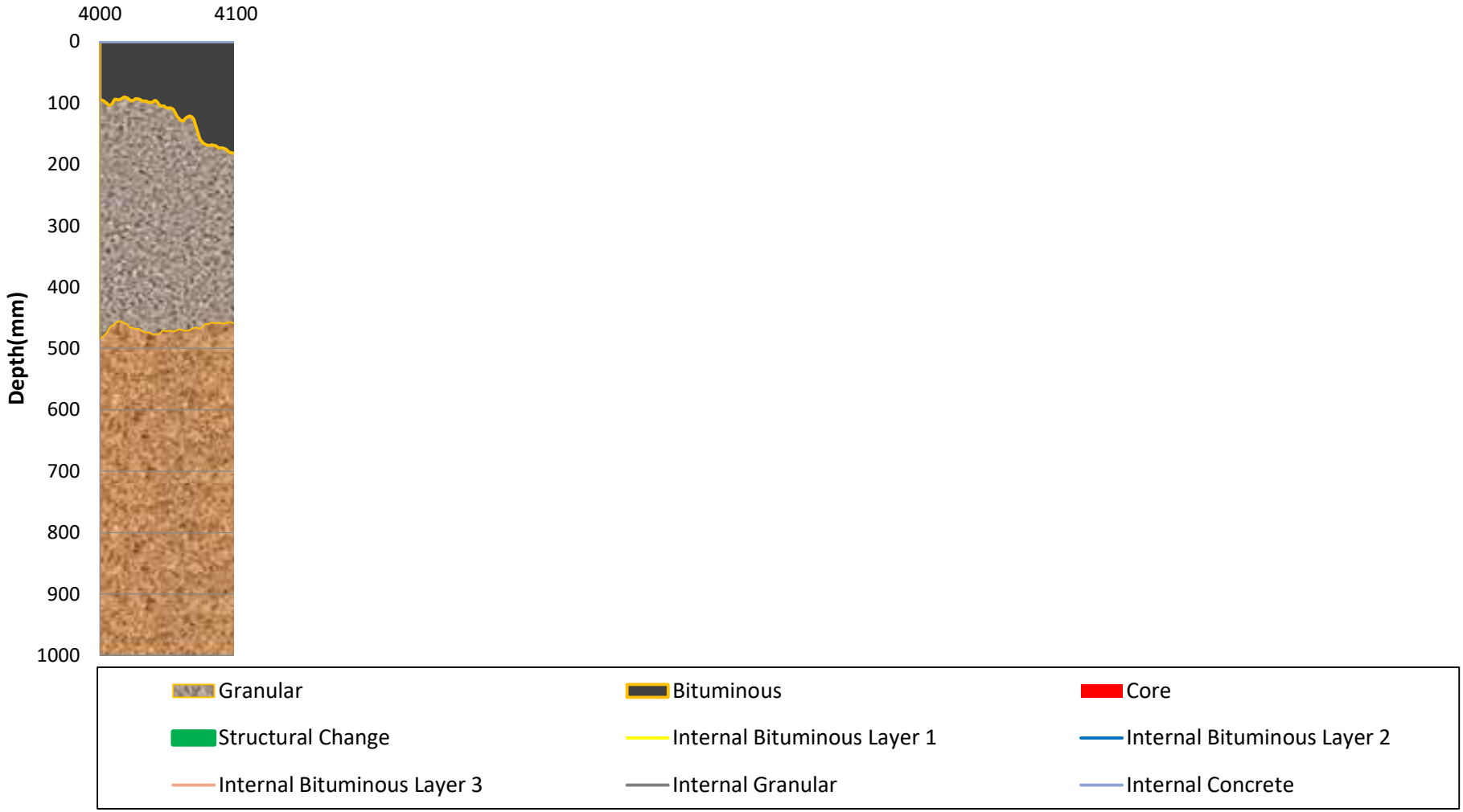
Section:	L3103 Site to Motorway (Route 2)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4100m



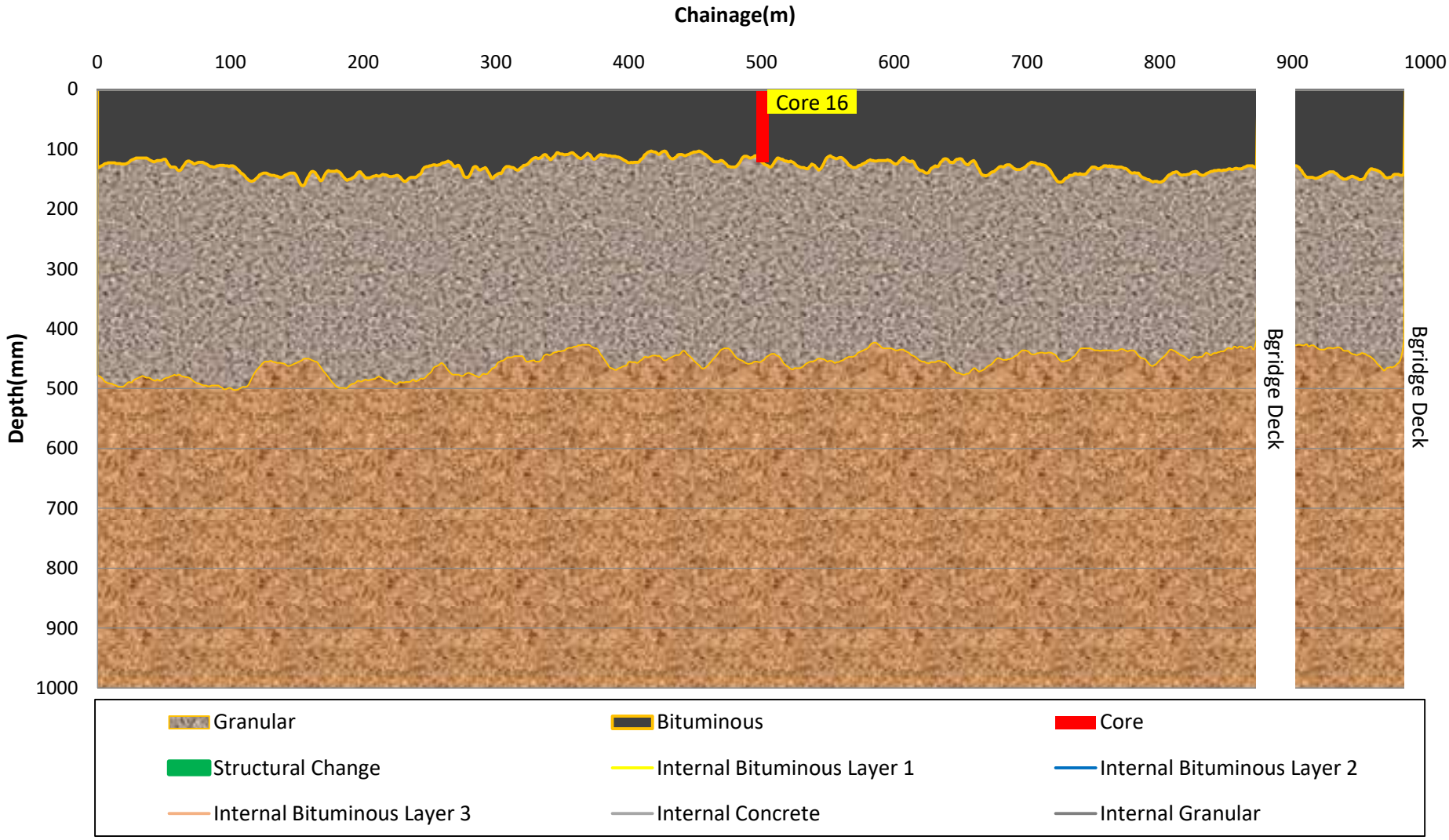
Section:	L3103 Site to Motorway (Route 2)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4100m



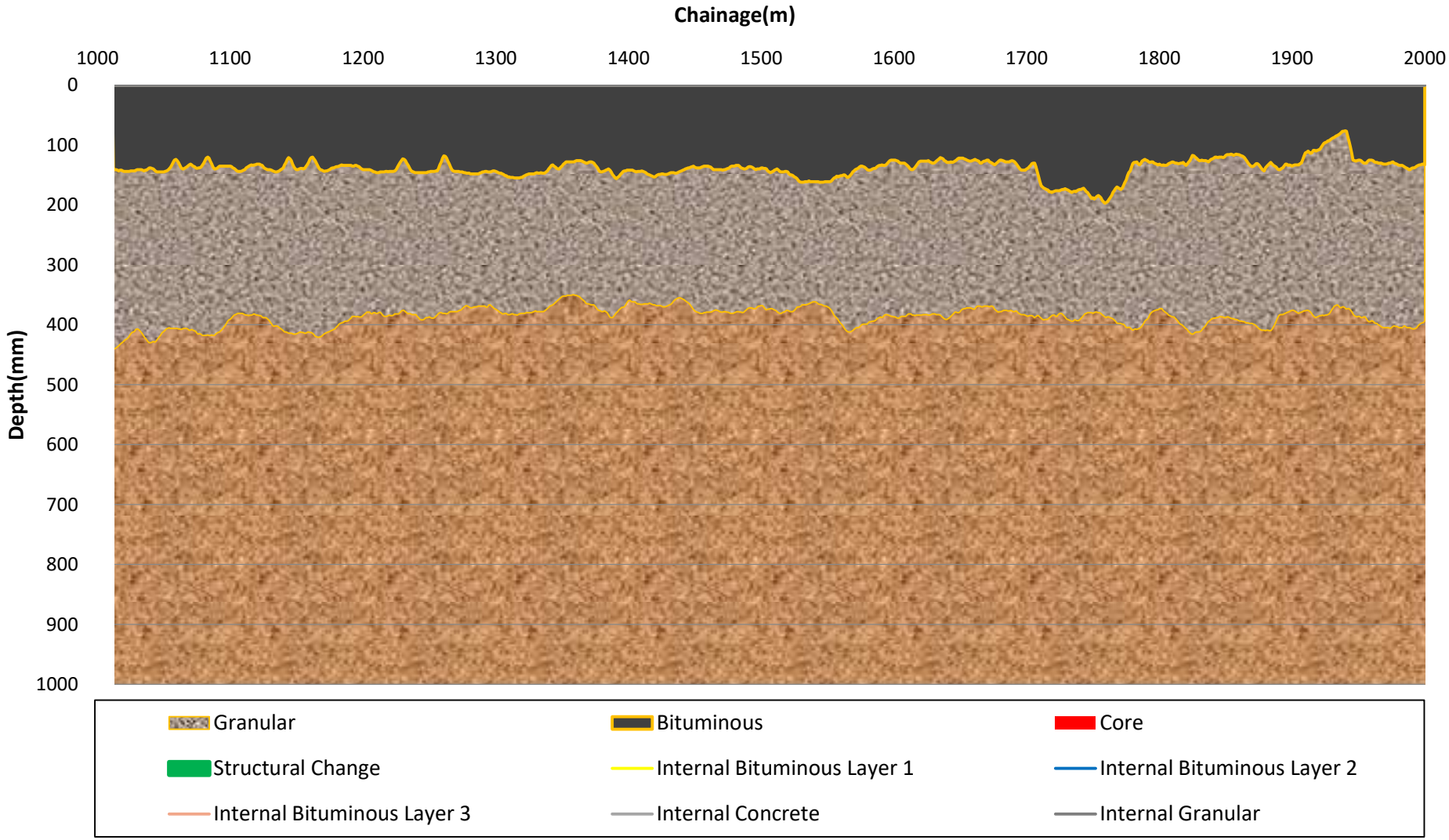
Section:	L3103 Site to Motorway (Route 2)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (3000-4000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4100m



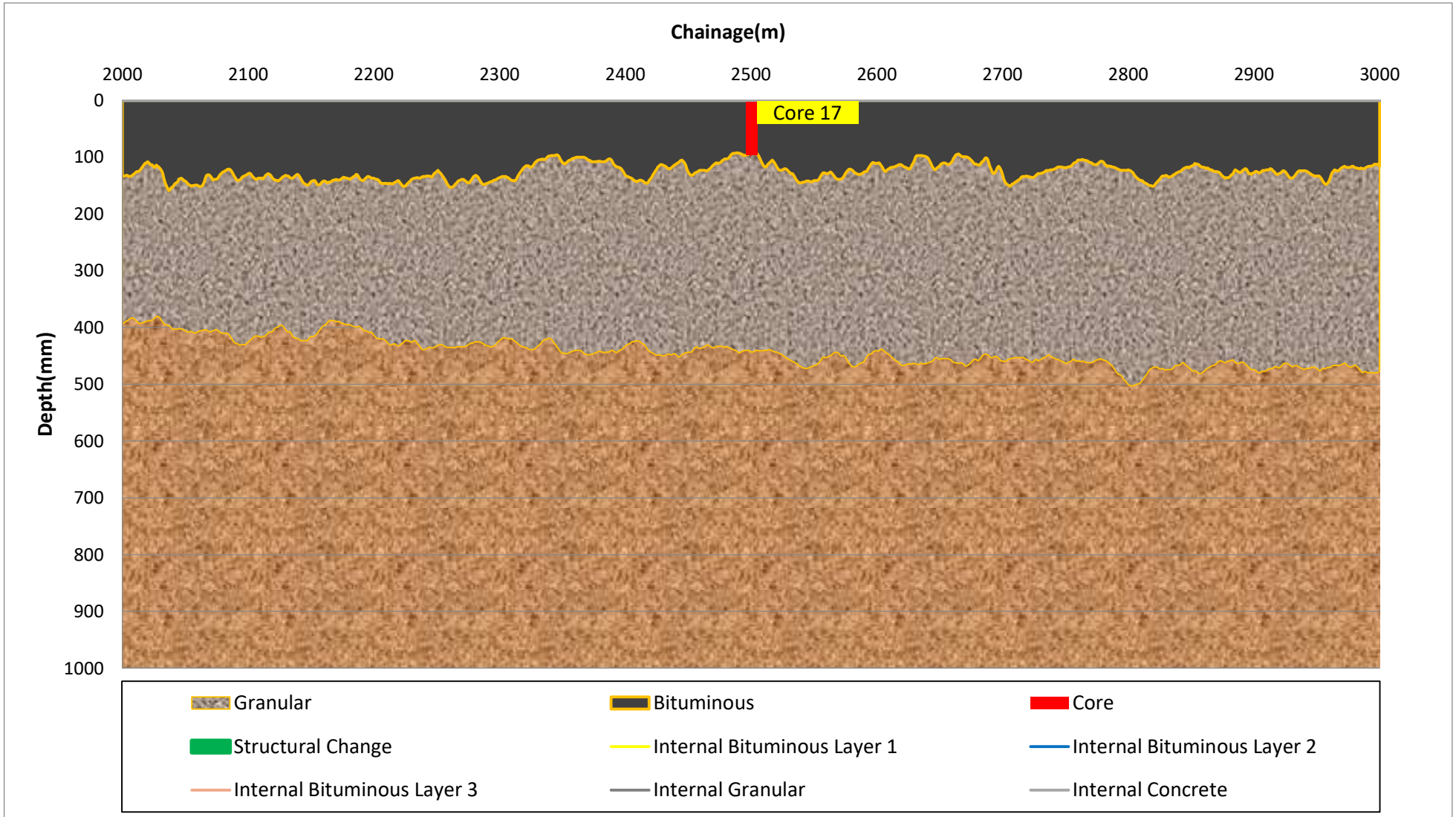
Section:	L3103 Site to Motorway (Route 2)	**Client:**	Bord Gáis Energy
Lane:	SB	**Surface Condition**:	Dry
Chainage:	SBCW (4000-4100m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4100m



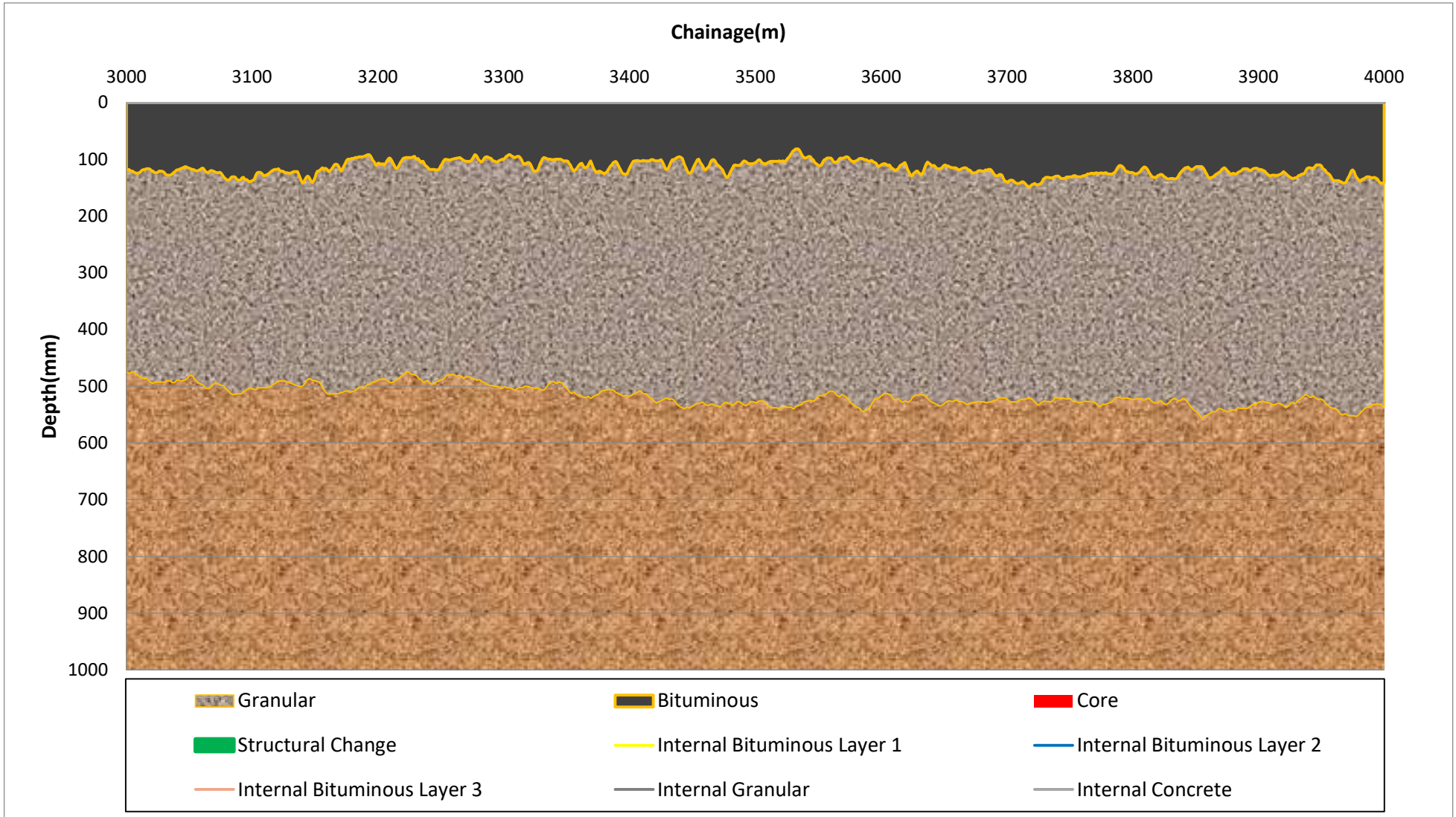
Section:	L3103 Motorway to Site (Route 2)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4140m



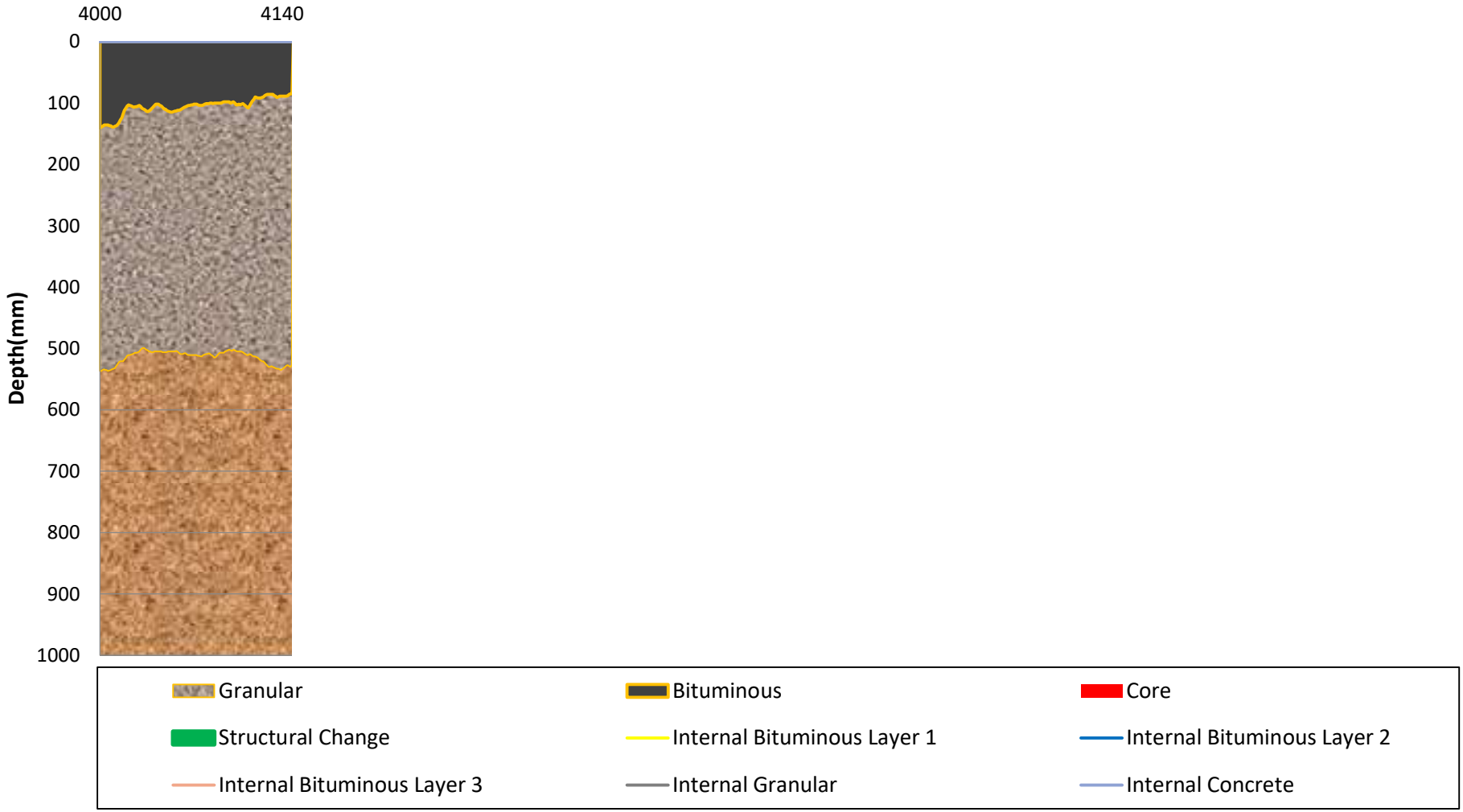
Section:	L3103 Motorway to Site (Route 2)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4140m



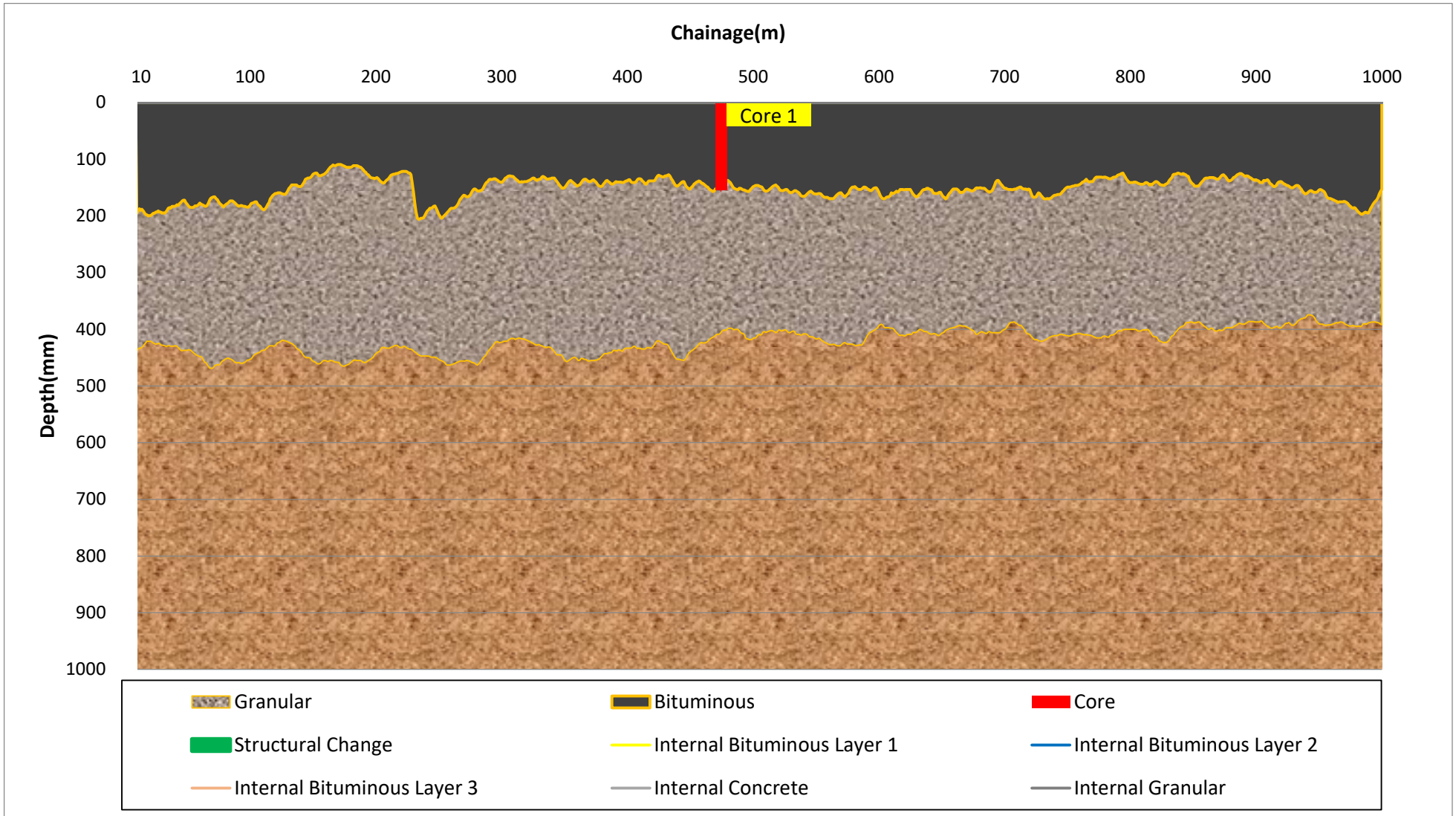
Section:	L3103 Motorway to Site (Route 2)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4140m



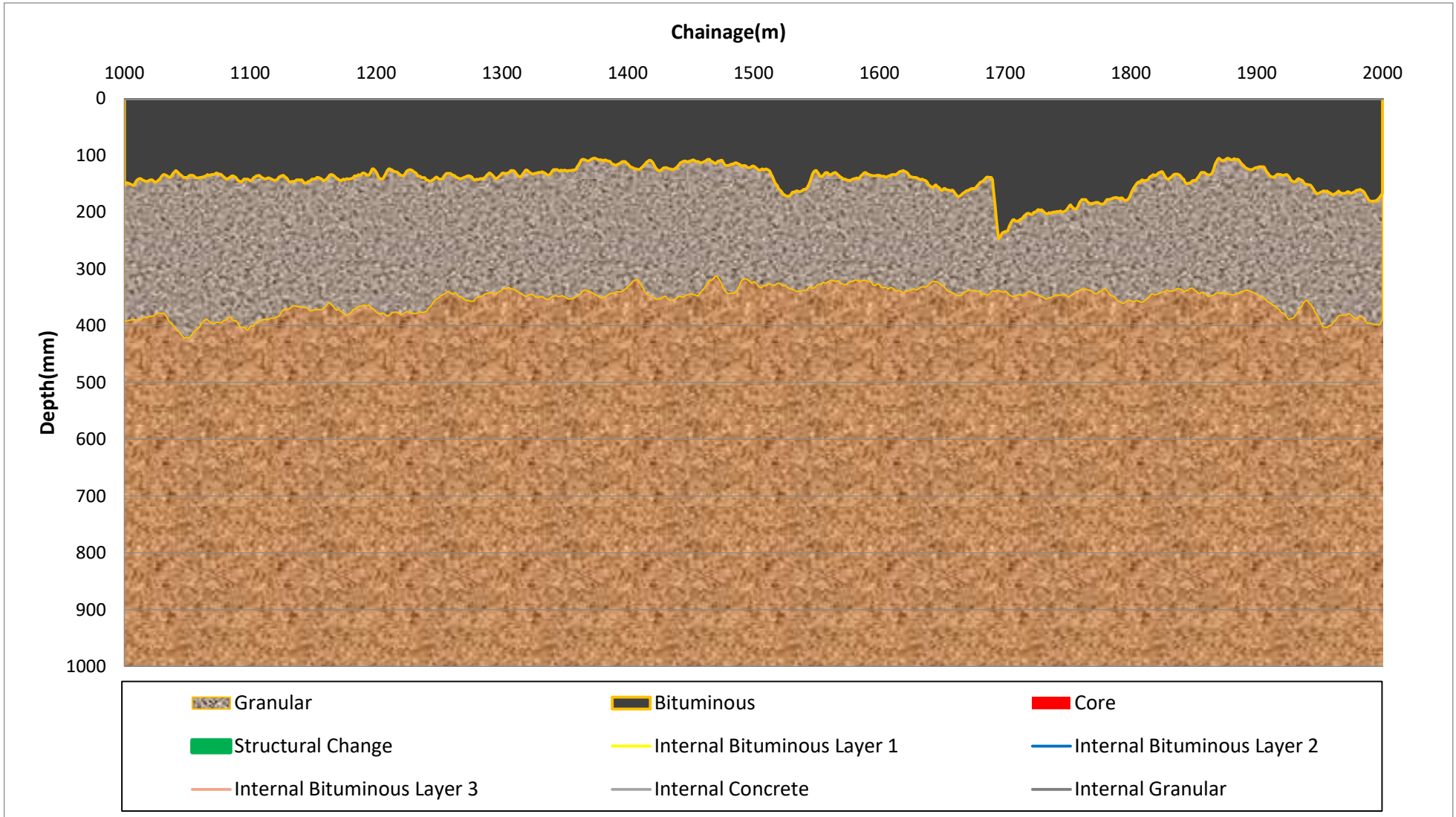
Section:	L3103 Motorway to Site (Route 2)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (3000-3590m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4140m



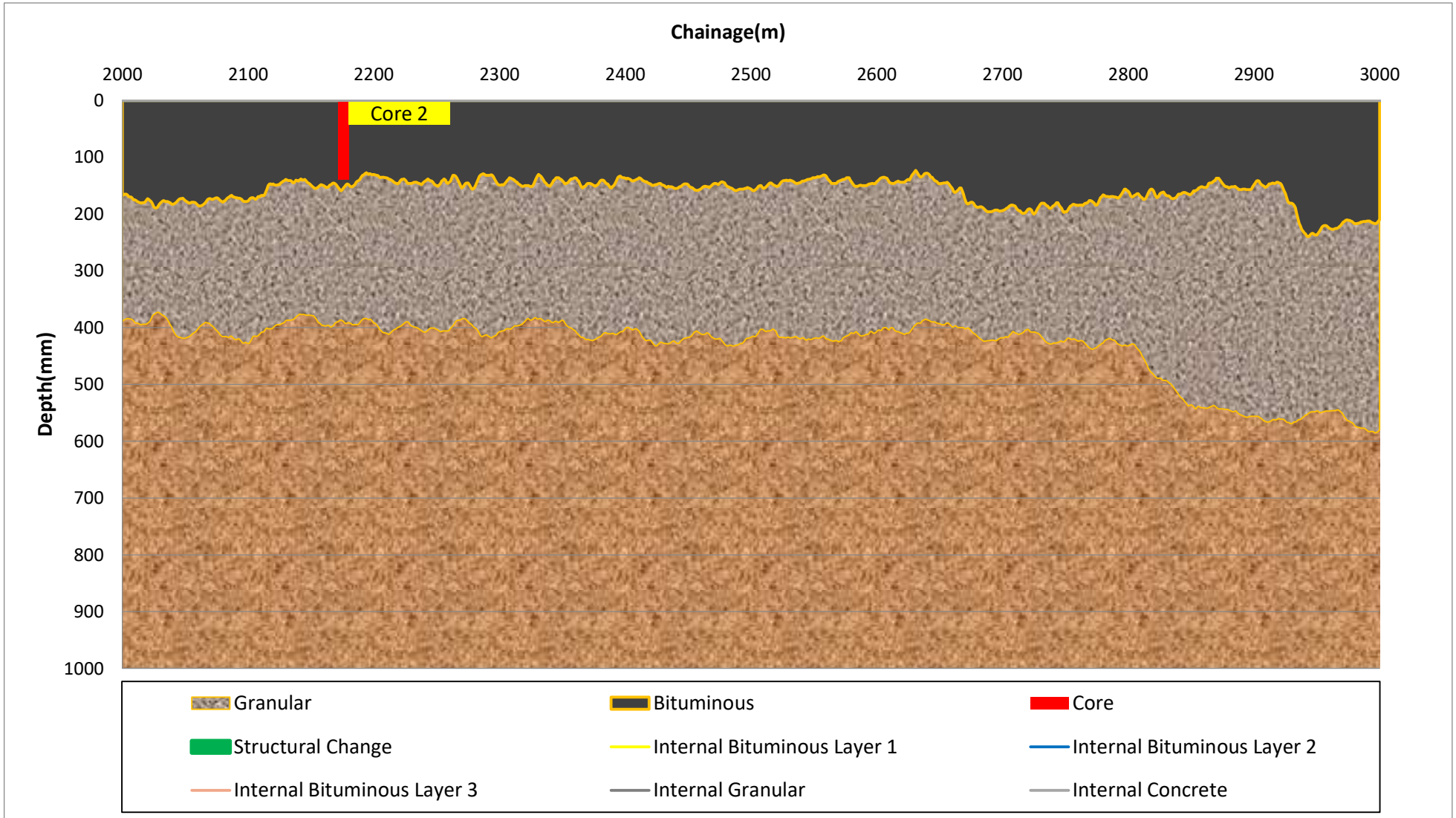
Section:	L3103 Motorway to Site (Route 2)	**Client:**	Bord Gáis Energy
Lane:	NB	**Surface Condition**:	Dry
Chainage:	NBCW (4000-4140m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	4140m



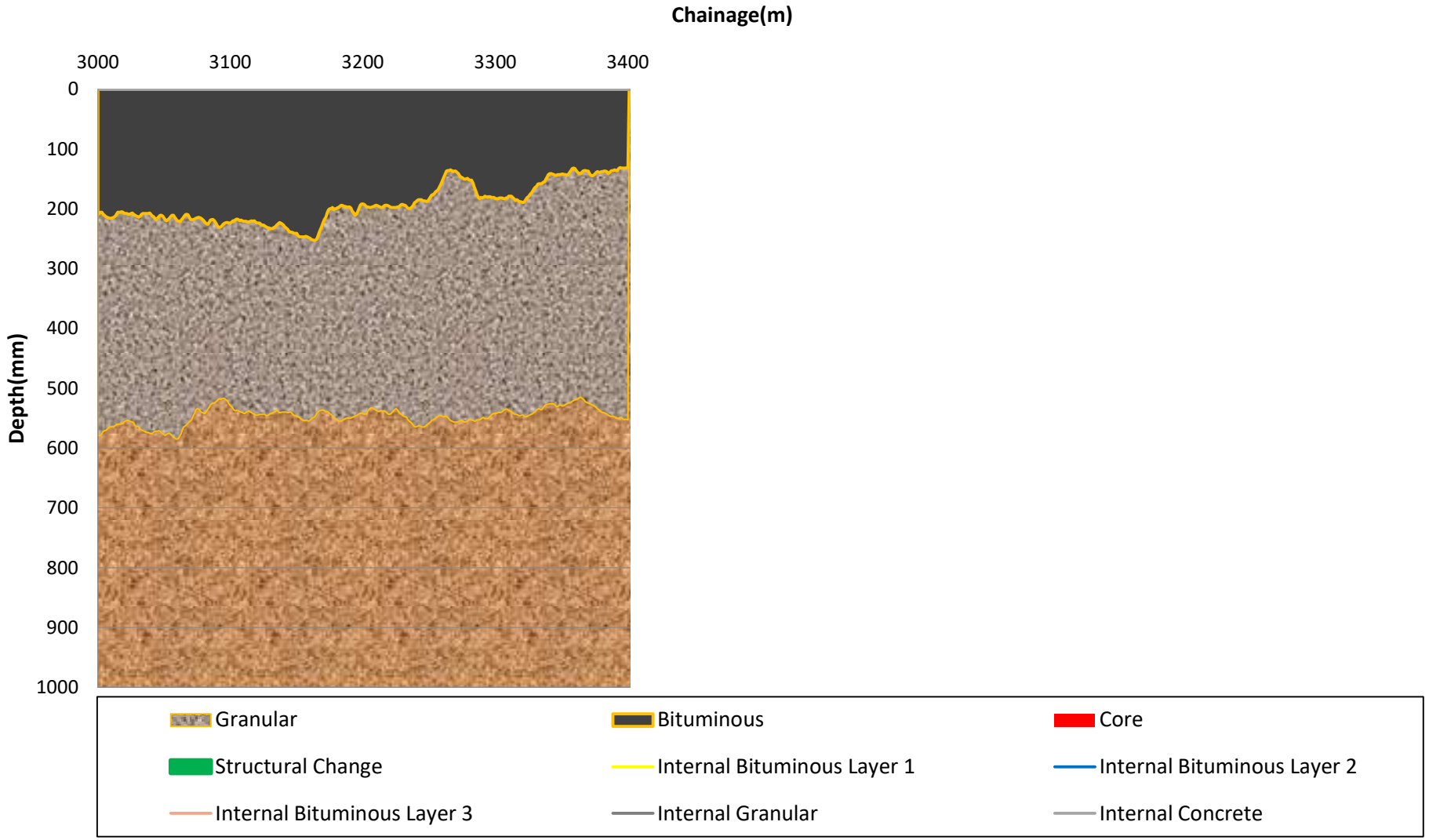
Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	WBCW (10-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



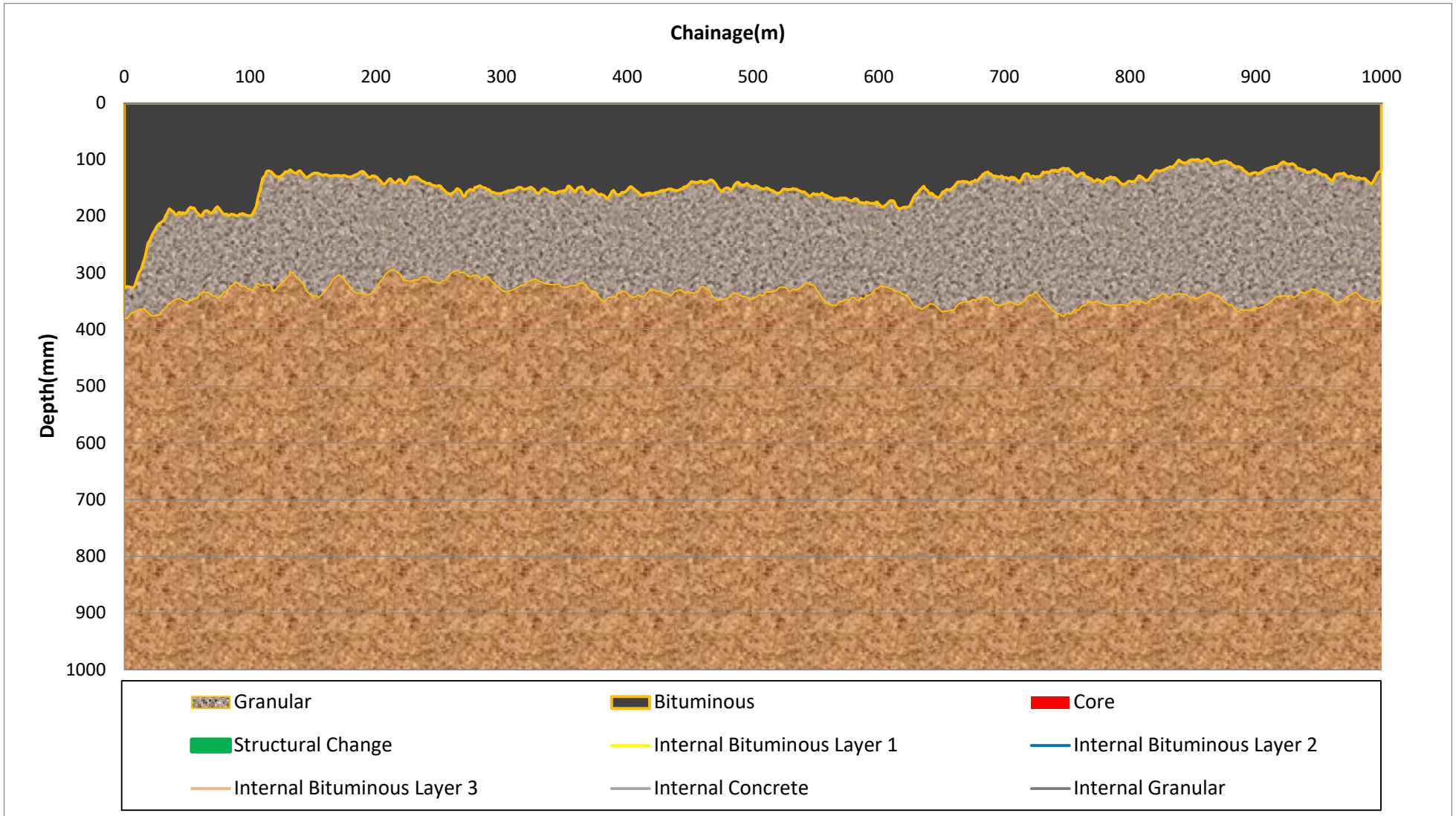
Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	WBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



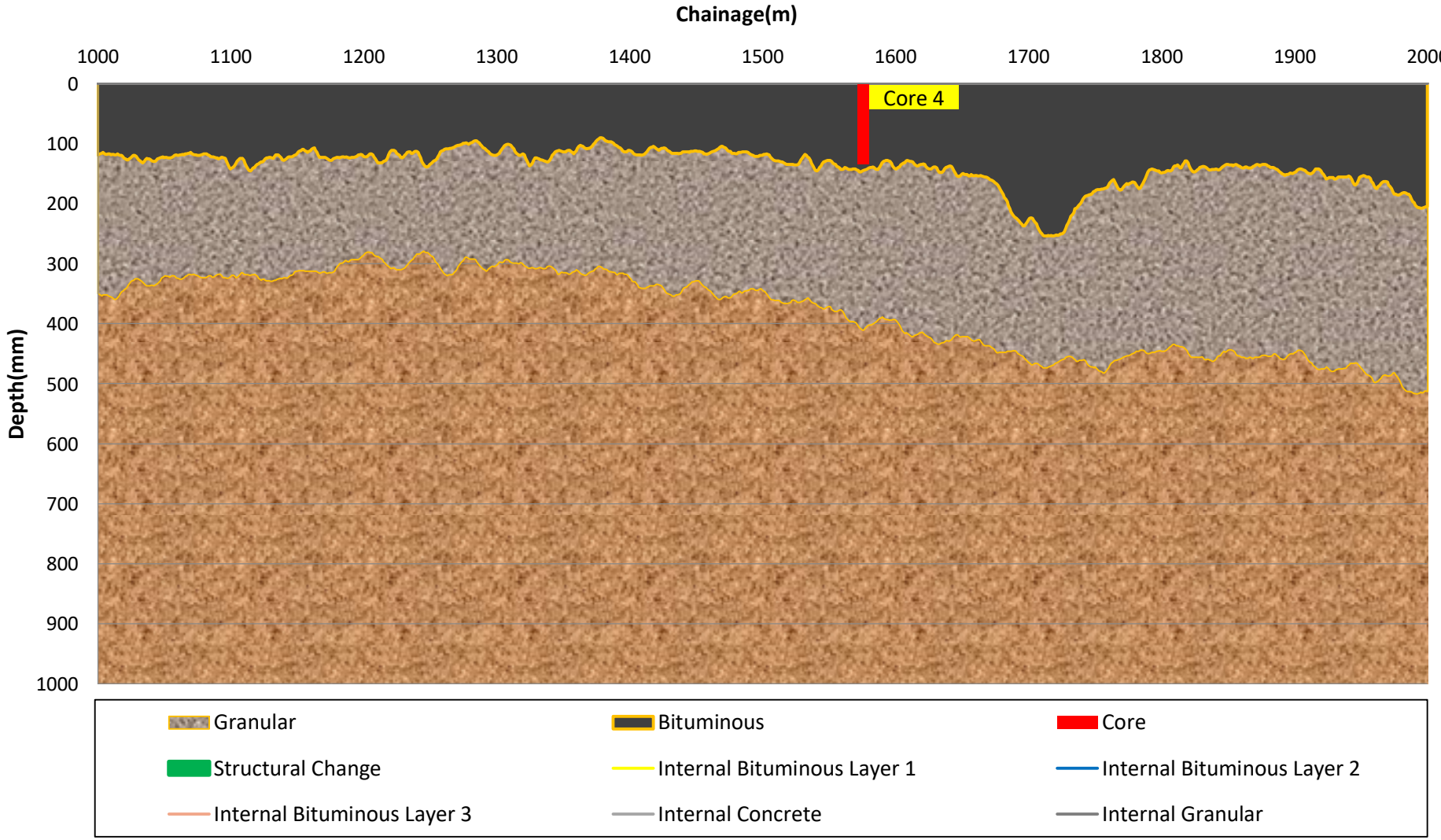
Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	WBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



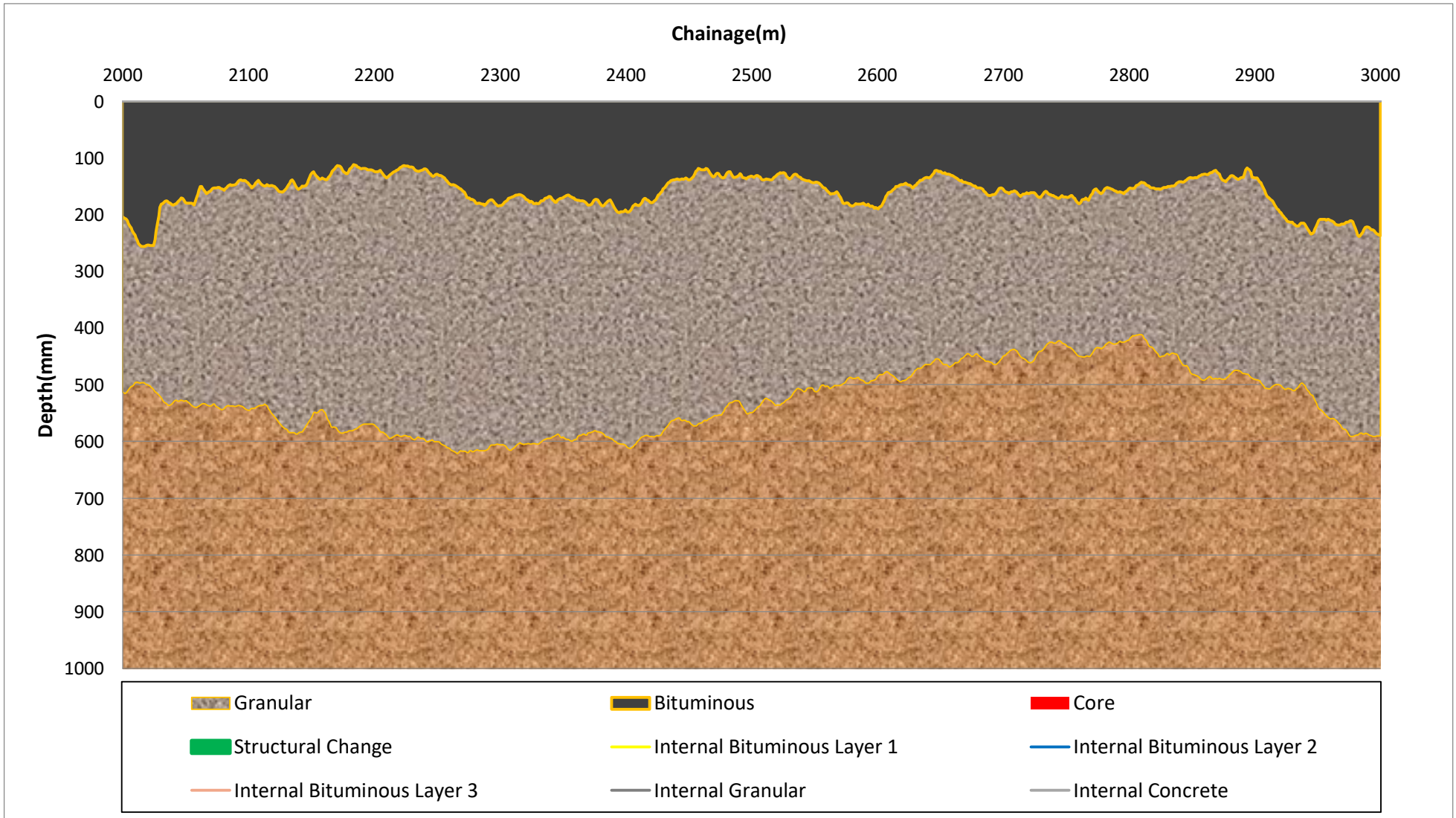
Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	WB	**Surface Condition**:	Dry
Chainage:	WBCW (3000-3400m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



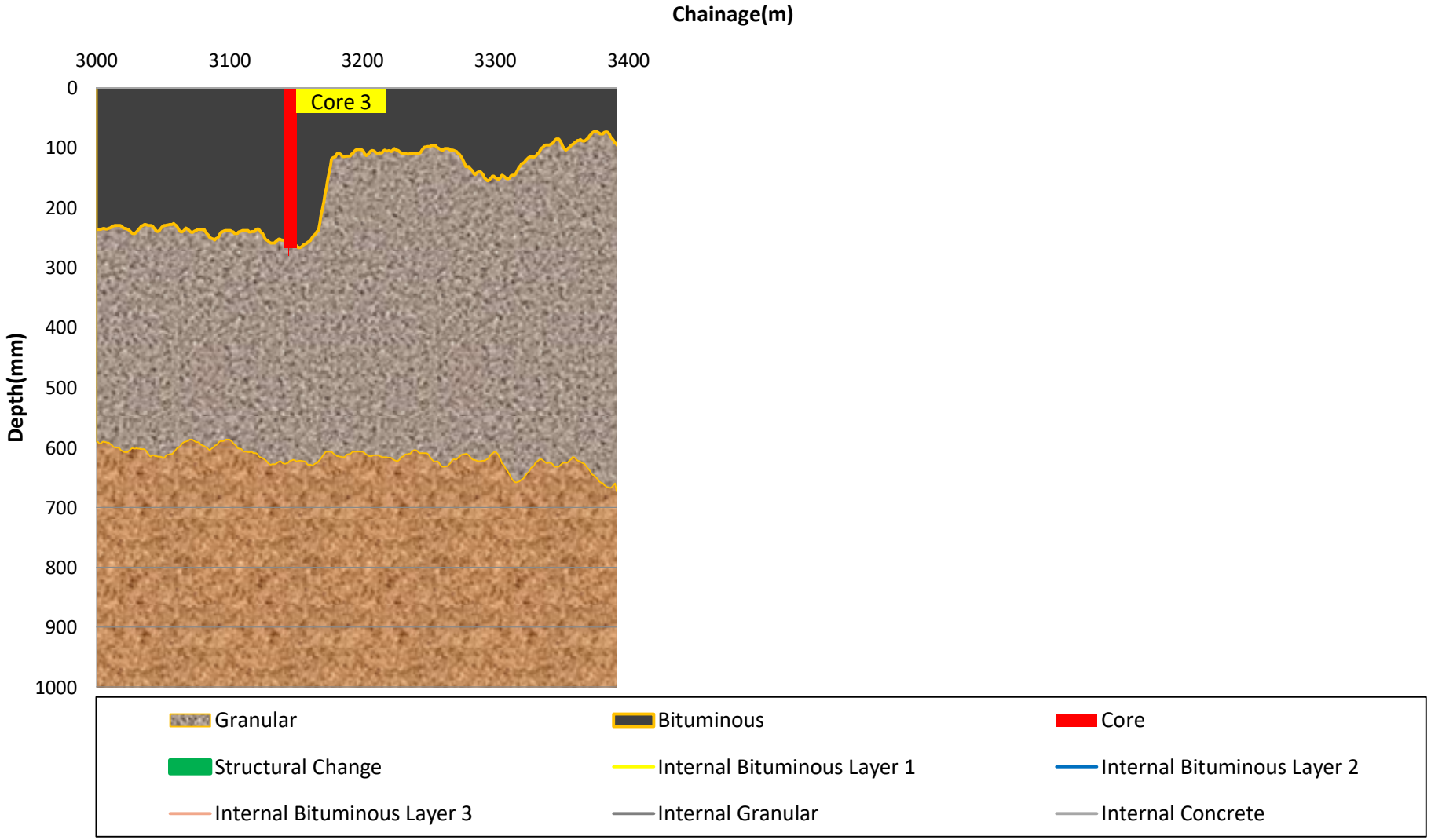
Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	WBCW (0-1000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	WBCW (1000-2000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	WBCW (2000-3000m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m



Section:	R339 Ballybane to Port	**Client:**	Bord Gáis Energy
Lane:	EB	**Surface Condition**:	Dry
Chainage:	WBCW (3000-3400m)	**Wheelpath:**	LHWP
Date of Survey:	11/08/2025	**Survey Length:**	3400m

Appendix C – Pavement Coring Results

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AA
Road No:	R-381	Date Cored:	05/08/2025
Section:	Motorway to Carnmore Cross (Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	52	52	HRA		
2	52	174	122	AC		
3	174	197	23	AC		

Additional Comments:

Core No:	1	Chainage (m):	505
Core Diameter (mm):	100	Core Depth (mm):	197
Easting:	538287	Wheelpath:	LWP
Northing:	728208		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

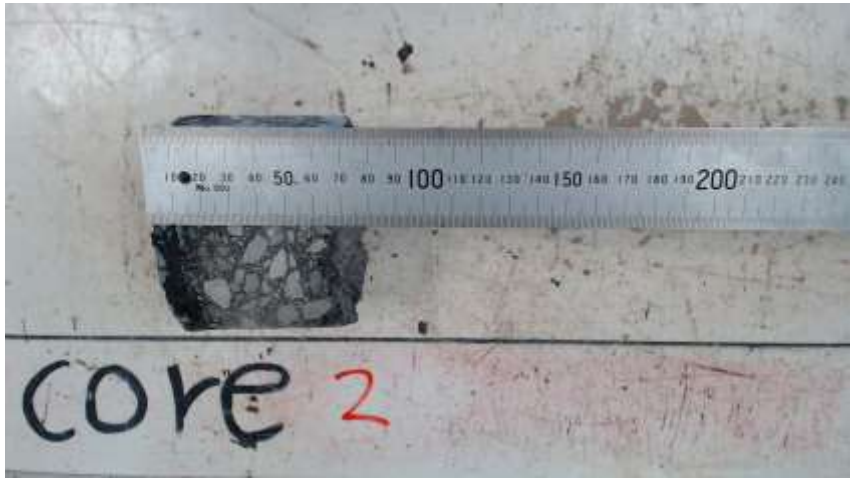
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	16	16	SMA		
2	16	70	54	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	2	Chainage (m):	1330
Core Diameter (mm):	100	Core Depth (mm):	70
Easting:	539210	Wheelpath:	LWP
Northing:	728871		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	20	20	SMA		
2	20	35	15	AC		

Additional Comments:

Core No:	3	Chainage (m):	2325
Core Diameter (mm):	100	Core Depth (mm):	35
Easting:	540131	Wheelpath:	LWP
Northing:	729179		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	05/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	80	80	AC		
2	80	140	60	AC		
3	140	170	30	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

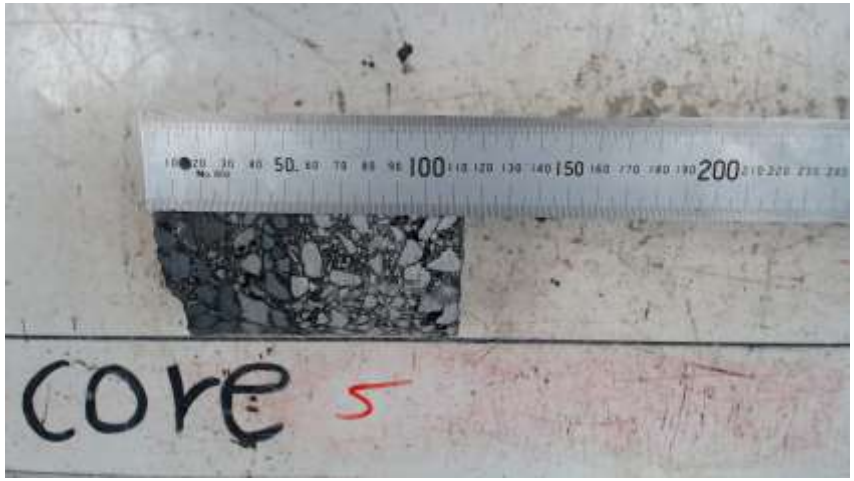
Core No:	4	Chainage (m):	325
Core Diameter (mm):	100	Core Depth (mm):	170
Easting:	538217	Wheelpath:	LWP
Northing:	728724		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	28	28	SMA		
2	28	40	12	AC		
3	40	50	10	AC		
4	50	113	63	AC		



Additional Comments:

Core No:	5	Chainage (m):	3330
Core Diameter (mm):	100	Core Depth (mm):	113
Easting:	541029	Wheelpath:	LWP
Northing:	729587		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	15	15	SMA		
2	15	110	95	AC		
3	110	120	10	AC		
4	120	192	72	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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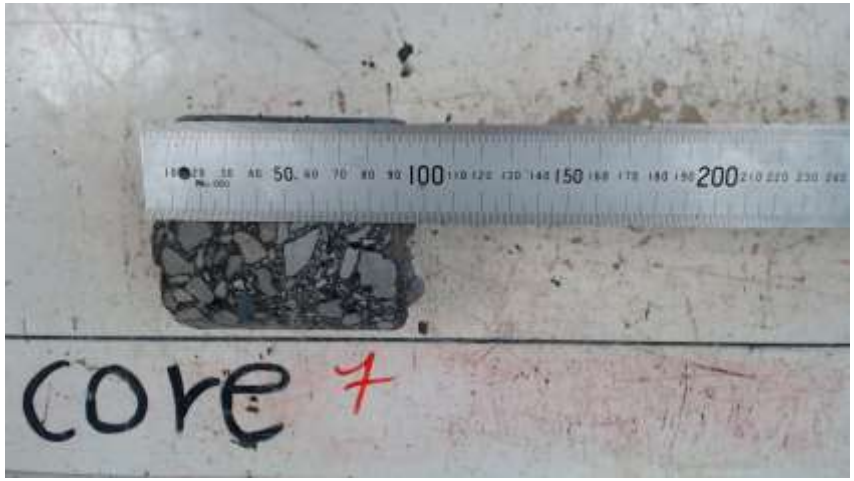
Core No:	6	Chainage (m):	5330
Core Diameter (mm):	100	Core Depth (mm):	192
Easting:	542840	Wheelpath:	LWP
Northing:	730359		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172AC
Road No:	L-3103	Date Cored:	06/08/2025
Section:	(Route 1)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	47	47	SMA		
2	47	88	41	AC		



Additional Comments:

Core No:	7	Chainage (m):	540
Core Diameter (mm):	100	Core Depth (mm):	88
Easting:	544600	Wheelpath:	LWP
Northing:	730534		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	15	15	SMA		
2	15	80	65	AC		

Additional Comments:

Core No:	8	Chainage (m):	6305
Core Diameter (mm):	100	Core Depth (mm):	80
Easting:	543749	Wheelpath:	LWP
Northing:	730678		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BB
Road No:	R-339	Date Cored:	06/08/2025
Section:	Carnmore Cross (Route 1)	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

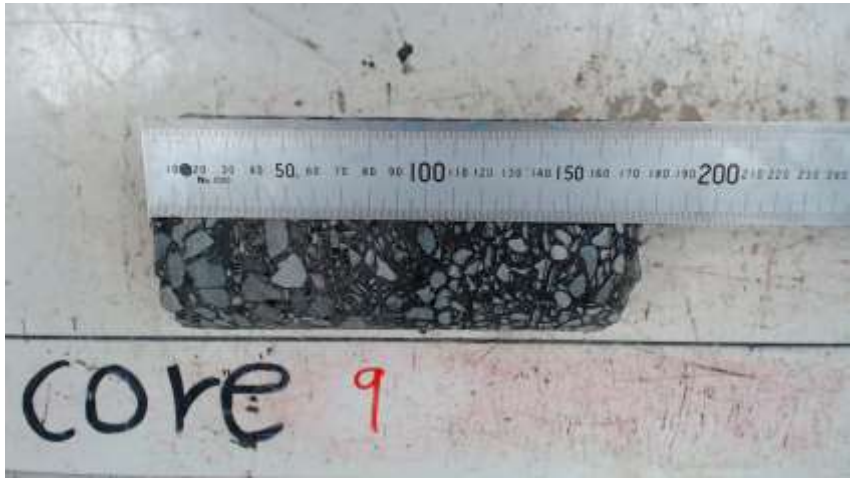
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	30	30	SMA		
2	30	95	65	AC		
3	95	144	49	AC		
4	144	184	40	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	9	Chainage (m):	4295
Core Diameter (mm):	100	Core Depth (mm):	184
Easting:	541954	Wheelpath:	LWP
Northing:	729847		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	43	43	SMA		
2	43	95	52	AC		
3	95	152	57	AC		
4	152	215	63	AC		Debonded

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
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Core No:	10	Chainage (m):	2560
Core Diameter (mm):	100	Core Depth (mm):	215
Easting:	546332	Wheelpath:	LWP
Northing:	729608		
Operator:	JOG	Date Measured:	

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	31	31	SMA		
2	31	88	57	AC		

Additional Comments:

Core No:	11	Chainage (m):	3590
Core Diameter (mm):	100	Core Depth (mm):	88
Easting:	547181	Wheelpath:	LWP
Northing:	729040		
Operator:	JOG	Date Measured:	11/08/2025

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Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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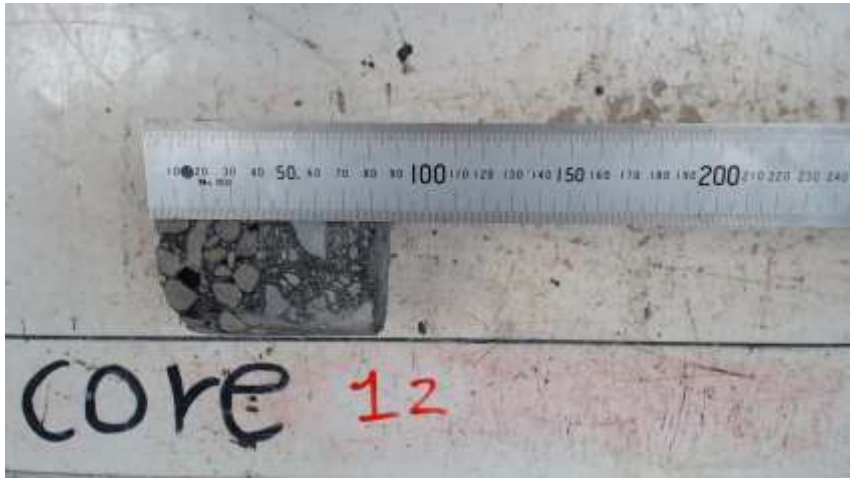
CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F172BC
Road No:	L-3103	Date Cored:	07/08/2025
Section:	(Route 1)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	39	39	SMA		
2	39	80	41	AC		



Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
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Core No:	12	Chainage (m):	1590
Core Diameter (mm):	100	Core Depth (mm):	80
Easting:	545418	Wheelpath:	LWP
Northing:	729887		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	07/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	30	30	SMA		
2	30	100	70	AC		

Additional Comments:

Core No:	13	Chainage (m):	500
Core Diameter (mm):	100	Core Depth (mm):	100
Easting:	547659	Wheelpath:	LWP
Northing:	728831		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

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CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	25	25	AC		
2	25	75	50	AC		
3	75	135	60	AC		

Additional Comments:

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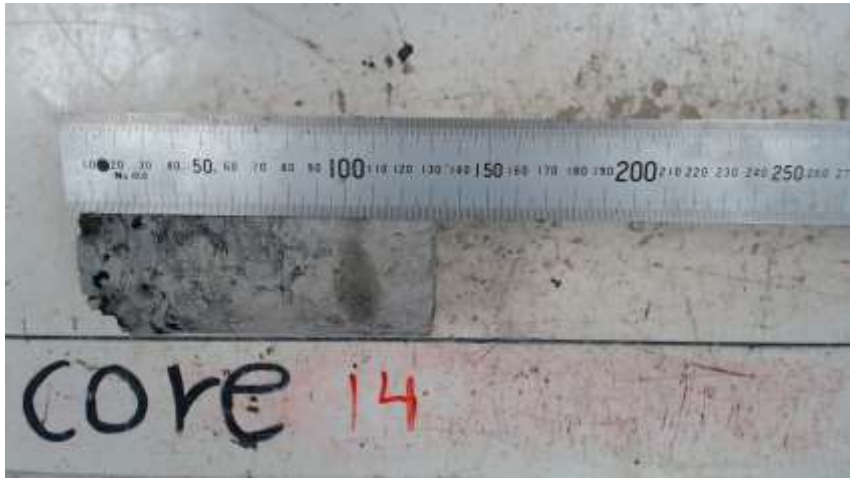
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	14	Chainage (m):	2325
Core Diameter (mm):	100	Core Depth (mm):	135
Easting:	549205	Wheelpath:	LWP
Northing:	728034.819		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173A
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Site to Motorway (Route 2)	Direction:	SB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	43	43	AC		
2	43	84	41	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

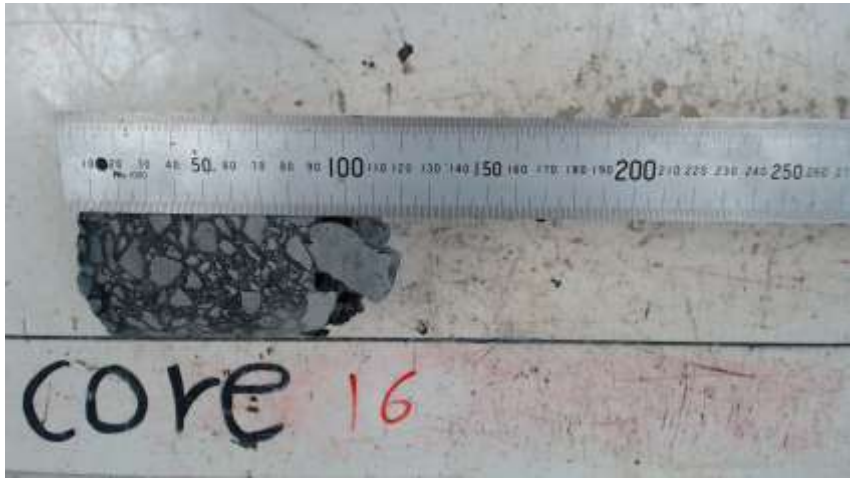
Core No:	15	Chainage (m):	4000
Core Diameter (mm):	100	Core Depth (mm):	84
Easting:	549416	Wheelpath:	LWP
Northing:	726757		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173B1
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Motorway to Site (Route 2)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	13	13	SMA		
2	13	85	72	AC		
3	85	117	32	AC		



Additional Comments:

Core No:	16	Chainage (m):	500
Core Diameter (mm):	100	Core Depth (mm):	117
Easting:	549536	Wheelpath:	LWP
Northing:	727090		
Operator:	JOG	Date Measured:	11/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

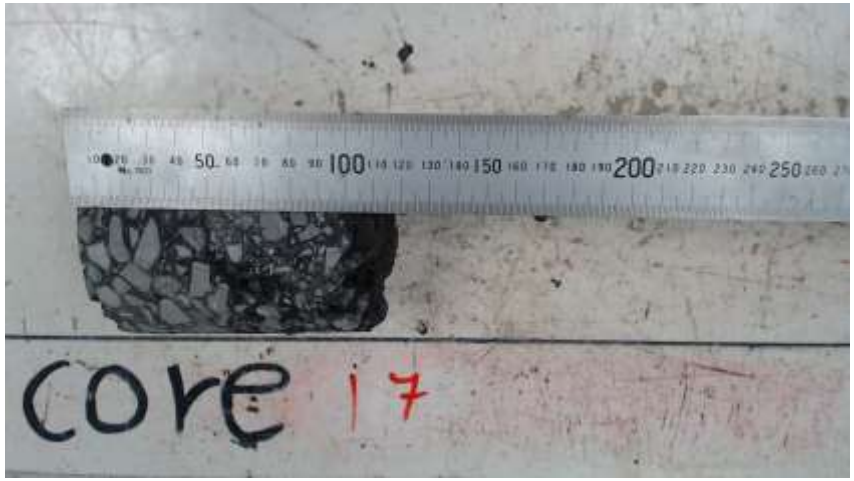
HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F173B1
Road No:	L-3103	Date Cored:	11/08/2025
Section:	Motorway to Site (Route 2)	Direction:	NB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	45	45	AC		
2	45	99	54	AC		



Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
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Core No:	17	Chainage (m):	2500
Core Diameter (mm):	100	Core Depth (mm):	99
Easting:	548713	Wheelpath:	LWP
Northing:	728530		
Operator:	JOG	Date Measured:	11/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179A
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	36	36	HRA		
2	36	129	93	AC		
3	129	157	28	AC		

Additional Comments: Bottom Layers Debonded

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

Core No:	1	Chainage (m):	475
Core Diameter (mm):	100	Core Depth (mm):	157
Easting:	532133	Wheelpath:	LWP
Northing:	726928		
Operator:	JOG	Date Measured:	15/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179A
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	WB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	38	38	HRA		
2	38	109	71	AC		
3	109	129	20	AC		

Additional Comments:

Core No:	2	Chainage (m):	2125
Core Diameter (mm):	100	Core Depth (mm):	129
Easting:	530877	Wheelpath:	LWP
Northing:	725947		
Operator:	JOG	Date Measured:	15/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179B
Road No:	R-339	Date Cored:	14/08/2025
Section:	Ballybane to Port	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

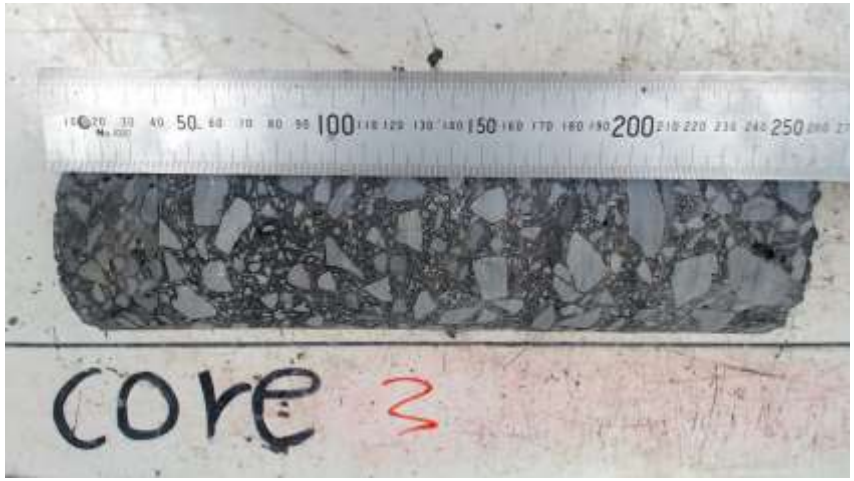
Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	38	38	SMA		
2	38	97	59	AC		
3	97	183	86	AC		
4	183	281	98	AC		

Additional Comments:

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

HTSF504, Rev5, 19022024



Core No:	3	Chainage (m):	3145
Core Diameter (mm):	100	Core Depth (mm):	281
Easting:	530290	Wheelpath:	LWP
Northing:	725124		
Operator:	JOG	Date Measured:	15/08/2025

CORE LOG

Client:	Bord Gáis Energy	Project No:	AS25F179B
Road No:	R-339	Date Cored:	15/08/2025
Section:	Ballybane to Port	Direction:	EB
		Procedure Used:	EN12697-36: 2022 - Clause 4.1

Pavement Management Services Ltd.

Layer No.	Top (mm)	Bottom (mm)	Thickness (mm)	Material	Layer Condition	
1	0	49	49	SMA		
2	49	122	73	AC		

Additional Comments: Bottom Layers Debonded

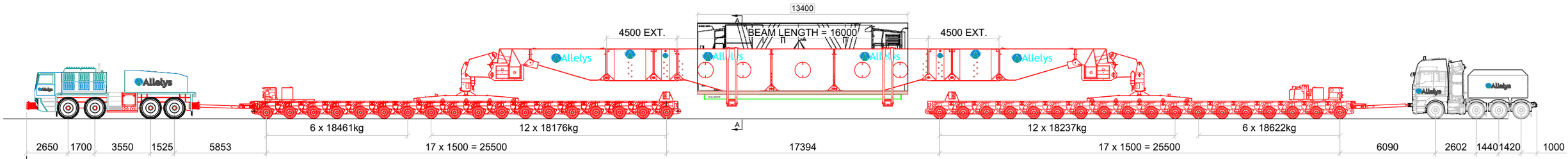
Core No:	4	Chainage (m):	1575
Core Diameter (mm):	100	Core Depth (mm):	122
Easting:	531228	Wheelpath:	LWP
Northing:	726350		
Operator:	JOG	Date Measured:	15/08/2025

Key: HRA= Hot Rolled Asphalt; AC= Asphaltic Concrete; SMA= Stone Mastic Asphalt; SD= Surface Dressing; HBM= Hydraulically Bound Material; WCG= Well Compacted Granular; DBM= Dense Bitumen Macadam; LMC= Lean Mix Concrete; PQC= Pavement Quality Concrete; MS= Micro-Surfacing; HDM= Heavy Duty Macadam; HFS=High Friction Surface.
Key: LWP= Left Wheel Path; Centre = Centre of the Lane; RWP= Right Wheel Path; HS= Hard Shoulder

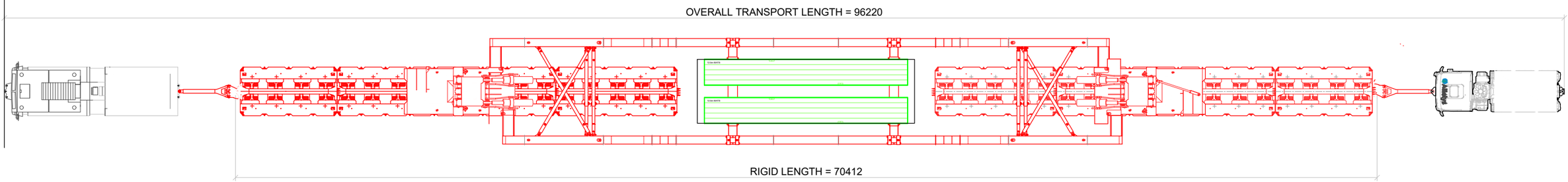
HTSF504, Rev5, 19022024

Appendix D. Girder Frame Loading Assessment

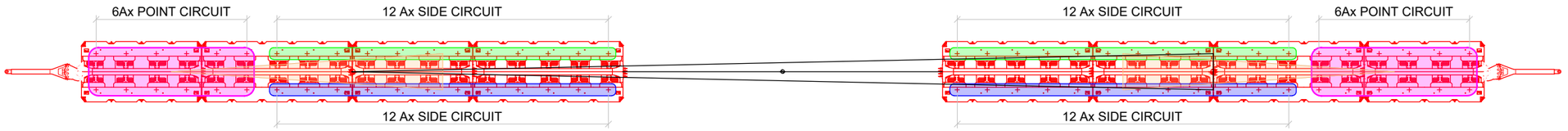
DO NOT SCALE | **IF IN DOUBT ASK**



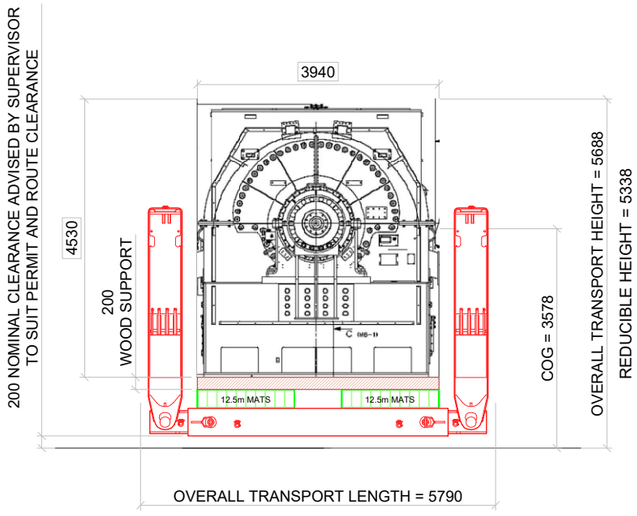
SIDE ELEVATION



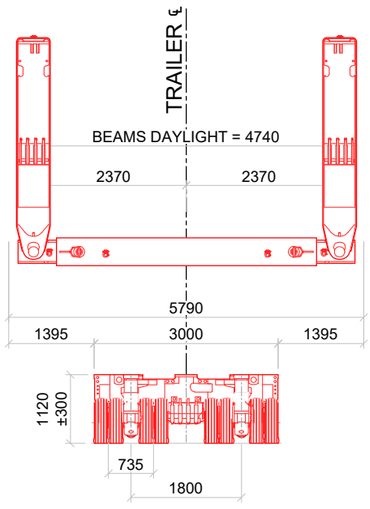
PLAN VIEW



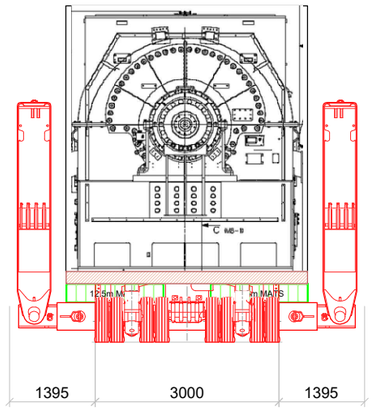
HYDRAULIC CIRCUIT DIAGRAM



SECTION A-A



TRAILER / BEAM DETAIL



LOAD PROJECTION

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
2. ALL WEIGHTS ARE IN kg (KILO GRAMS) UNLESS OTHERWISE STATED.
3. ALL DRAWINGS ARE BASED UPON DETAILS PROVIDED BY THE CLIENT.
4. PLYWOOD/RUBBER SHEETS SHALL BE PROVIDED AT ALL STEEL TO STEEL INTERFACES.
5. SUITABLE TRANSPORT LASHINGS TO BE APPLIED (NOT SHOWN).

FRONT TRACTOR AXLE LOADS	
AXLE NO.	AXLE LOAD (kg)
1	9000
2	9000
3	15000
4	15000

REAR TRACTOR AXLE LOADS	
AXLE NO.	AXLE LOAD (kg)
1	9000
2	8000
3	12500
4	12500

LOAD TABLE		
Applied Load Weight	(kg)	376000
Trailer Tare Weight	(kg)	263445
Aux Steel Work Weight	(kg)	20000
Transport Gross Weight	(kg)	659445
Tractor(s) Weight	(kg)	90000
Gross Train Weight	(kg)	749445

GIRDER FRAME BREAKDOWN		
Neck & Support Frame (Front)	(kg)	95901
Transport Beams	(kg)	24110
Ancillaries *	(kg)	17500
Axles	(kg)	125934
TOTAL	(kg)	263445

*ANCILLARIES INCLUDE 2 NO. CONTROL UNITS @ 1400kg & 2600kg, 2 NO. NECK CARRIERS @ 1450kg EA AND 2 HANGERS @ 5300kg EA.

REVISION HISTORY					
REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
00	04/11/25	First Issue	CL	TB	SNJ
A					
B					

CLIENT REFERENCE DOCUMENTS		
REV	DATE	DOCUMENT REFERENCE NO.
16	07/2022	SGT5-4000F

Allelys
The Slough,
Studley,
Warwickshire,
B80 7EN
Tel: +44 (0) 1527 852 408
e-mail: enquiries@allelys.co.uk

Client	Atkins Realis
Project	Cashla Peaker Plant
Title	376Te Generator Transport Arrangement 36Ax F5 16m Beam with 4.5m Ext
Scale (A3)	NTS
Sheet No.	1
Total No.	1
Dwg. No	ALL-A254213-TA-05

Appendix E. L3103 Traffic Data


N
Moanbaun
ATC 1
L3103
L3103
Image © 2025 Airbus
Google Earth

Site No.	Location.	Direction.	Speed Limit - PSL (km/h)	Start Date.	End Date.	Total Vehicles.	5 Day Ave.	7 Day Ave.	No. > Speed Limit.	%. > Speed Limit.	No. > Speed Limit1 (+5km/h).	%. > Speed Limit1 (+5km/h).	No. > Speed Limit1 (+10km/h).	%. > Speed Limit1 (+10km/h).	Mean Speed	85%ile Speed
1	L3103, 50 metres East of junction with Moanbaun	Eastbound	60	Wednesday 12 February 2025		1078	1078	1078	830	77.0	689	63.9	500	46.4	68.8	81.1
		Westbound	60	Wednesday 12 February 2025		1069	1069	1069	921	86.2	785	73.4	611	57.2	72.2	83.8
		Eastbound / Westbound	60	Wednesday 12 February 2025		2147	2147	2147	1751	81.6	1474	68.7	1111	51.8	70.5	82.6

Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	65 +5kph	65 +5kph	70 +10kph	70 +10kph		85
0000	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	54.9	-
0100	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50.0	1	50.0	1	50.0	71.5	-
0200	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100.0	1	100.0	0	0.0	69.8	-
0300	5	0	5	0	0	0	0	0	0	0	0	0	0	3	60.0	3	60.0	3	60.0	69.5	-
0400	1	0	0	0	1	0	0	0	0	0	0	0	0	1	100.0	1	100.0	1	100.0	113.8	-
0500	5	0	5	0	0	0	0	0	0	0	0	0	0	4	80.0	4	80.0	3	60.0	81.6	-
0600	25	0	22	0	2	0	0	0	0	1	0	0	0	22	88.0	18	72.0	15	60.0	73.3	93.9
0700	57	1	46	0	9	0	1	0	0	0	0	0	0	45	79.0	42	73.7	33	57.9	72.6	84.7
0800	**160**	**0**	**150**	**1**	**7**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**118**	**73.8**	**94**	**58.8**	**65**	**40.6**	**67.3**	**79.4**
0900	65	1	56	0	7	0	1	0	0	0	0	0	0	52	80.0	43	66.2	29	44.6	68.7	80.8
1000	47	0	43	0	3	0	1	0	0	0	0	0	0	44	93.6	35	74.5	26	55.3	71.8	82.3
1100	48	0	41	2	5	0	0	0	0	0	0	0	0	41	85.4	32	66.7	22	45.8	69.8	82.9
1200	45	0	38	2	4	0	1	0	0	0	0	0	0	37	82.2	33	73.3	22	48.9	69.9	85.1
1300	41	0	38	0	3	0	0	0	0	0	0	0	0	28	68.3	25	61.0	22	53.7	70.2	84.6
1400	79	0	68	2	8	0	0	0	0	1	0	0	0	52	65.8	42	53.2	29	36.7	66.5	78.8
1500	76	0	64	3	7	1	1	0	0	0	0	0	0	55	72.4	48	63.2	37	48.7	68.9	81.7
1600	**125**	**0**	**115**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**104**	**83.2**	**93**	**74.4**	**72**	**57.6**	**69.3**	**79.5**
1700	100	1	90	1	8	0	0	0	0	0	0	0	0	86	86.0	69	69.0	54	54.0	68.7	79.1
1800	83	0	77	1	5	0	0	0	0	0	0	0	0	61	73.5	45	54.2	27	32.5	67.1	80.9
1900	37	0	36	0	1	0	0	0	0	0	0	0	0	21	56.8	14	37.8	9	24.3	63.8	76.7
2000	40	0	37	0	3	0	0	0	0	0	0	0	0	27	67.5	22	55.0	15	37.5	67.8	81.8
2100	25	0	22	1	2	0	0	0	0	0	0	0	0	19	76.0	18	72.0	10	40.0	67.9	79.5
2200	6	0	5	0	0	0	0	0	1	0	0	0	0	5	83.3	3	50.0	2	33.3	66.8	-
2300	4	0	3	0	1	0	0	0	0	0	0	0	0	3	75.0	3	75.0	3	75.0	78.2	-
07-19	**926**	**3**	**826**	**12**	**76**	**1**	**6**	**0**	**1**	**1**	**0**	**0**	**0**	**723**	**78.1**	**601**	**64.9**	**438**	**47.3**	**68.8**	**80.7**
06-22	**1053**	**3**	**943**	**13**	**84**	**1**	**6**	**0**	**1**	**2**	**0**	**0**	**0**	**812**	**77.1**	**673**	**63.9**	**487**	**46.3**	**68.7**	**80.7**
06-00	**1063**	**3**	**951**	**13**	**85**	**1**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**820**	**77.1**	**679**	**63.9**	**492**	**46.3**	**68.7**	**80.8**
00-00	**1078**	**3**	**965**	**13**	**86**	**1**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**830**	**77.0**	**689**	**63.9**	**500**	**46.4**	**68.8**	**81.1**

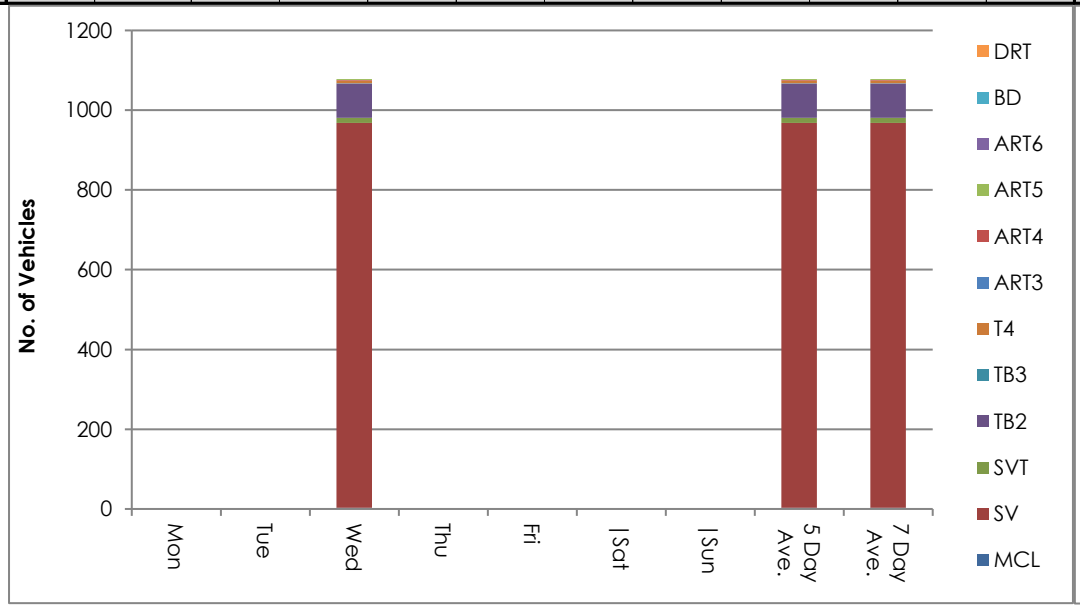
Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound

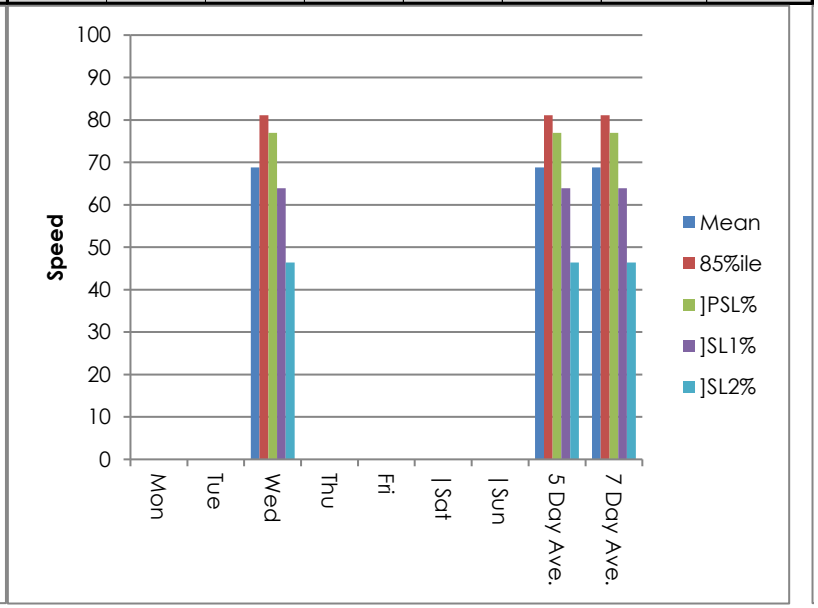
16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 65 +5kph	]SL1% 65 +5kph	]SL2 70 +10kph	]SL2% 70 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Wed	1078	3	965	13	86	1	6	0	2	2	0	0	0	830	77.0	689	63.9	500	46.4	68.8	81.1
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
|Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
|Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
5 Day Ave.	**1078**	**3**	**965**	**13**	**86**	**1**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**830**	**77.0**	**689**	**63.9**	**500**	**46.4**	**68.8**	**81.1**
7 Day Ave.	**1078**	**3**	**965**	**13**	**86**	**1**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**830**	**77.0**	**689**	**63.9**	**500**	**46.4**	**68.8**	**81.1**
--	**1078**	**3**	**965**	**13**	**86**	**1**	**6**	**0**	**2**	**2**	**0**	**0**	**0**	**830**	**77.0**	**689**	**63.9**	**500**	**46.4**	**68.8**	**81.1**

Summary Graphs





Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Speed Bins (km/h)																												
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	5	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0
0400	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0500	5	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
0600	25	0	0	0	0	0	0	0	0	1	0	2	0	4	3	5	3	2	1	2	2	0	0	0	0	0	0	0	0	0
0700	57	0	0	0	0	0	0	0	0	0	0	6	6	3	9	11	5	10	3	0	1	2	1	0	0	0	0	0	0	0
0800	**160**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**5**	**1**	**8**	**25**	**24**	**29**	**25**	**20**	**13**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900	65	0	0	0	0	1	0	1	1	1	1	5	3	9	14	10	9	3	2	3	1	1	0	0	0	0	0	0	0	0
1000	47	0	0	0	0	0	0	0	0	0	1	1	1	9	9	11	6	6	3	0	0	0	0	0	0	0	0	0	0	0
1100	48	0	0	0	0	0	0	0	0	0	0	7	0	9	10	8	6	3	2	1	0	2	0	0	0	0	0	0	0	0
1200	45	0	0	0	1	0	0	0	0	0	2	2	3	4	11	6	6	4	6	0	0	0	0	0	0	0	0	0	0	0
1300	41	0	0	0	0	1	0	0	0	1	2	4	5	3	3	7	6	3	1	1	2	0	2	0	0	0	0	0	0	0
1400	79	0	0	0	0	0	0	0	0	0	5	8	14	10	13	11	7	2	7	2	0	0	0	0	0	0	0	0	0	0
1500	76	0	0	0	0	0	0	0	1	0	3	12	5	7	11	10	10	10	2	4	0	1	0	0	0	0	0	0	0	0
1600	**125**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**2**	**4**	**3**	**2**	**8**	**11**	**21**	**34**	**21**	**10**	**3**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700	100	0	0	0	1	1	2	0	0	1	1	3	5	17	15	26	16	7	2	3	0	0	0	0	0	0	0	0	0	0
1800	83	0	0	0	0	0	0	0	0	0	3	11	8	16	18	8	7	3	8	0	1	0	0	0	0	0	0	0	0	0
1900	37	0	0	0	0	0	0	0	0	0	4	6	6	7	5	1	4	1	0	2	1	0	0	0	0	0	0	0	0	0
2000	40	0	0	0	0	0	0	0	0	0	2	3	8	5	7	3	5	4	1	1	0	1	0	0	0	0	0	0	0	0
2100	25	0	0	0	0	0	0	0	0	0	1	2	3	1	8	4	4	1	1	0	0	0	0	0	0	0	0	0	0	0
2200	6	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0
07-19	**926**	**0**	**0**	**0**	**2**	**4**	**2**	**2**	**7**	**12**	**22**	**69**	**83**	**122**	**163**	**167**	**119**	**74**	**45**	**17**	**7**	**6**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
06-22	**1053**	**0**	**0**	**0**	**2**	**4**	**2**	**2**	**7**	**13**	**29**	**82**	**100**	**139**	**186**	**180**	**135**	**82**	**48**	**22**	**10**	**7**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
06-00	**1063**	**0**	**0**	**0**	**2**	**4**	**2**	**2**	**7**	**13**	**29**	**82**	**102**	**141**	**187**	**181**	**137**	**83**	**48**	**22**	**11**	**7**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
00-00	**1078**	**0**	**0**	**0**	**2**	**4**	**3**	**2**	**7**	**13**	**29**	**85**	**103**	**141**	**189**	**181**	**138**	**83**	**50**	**23**	**13**	**8**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

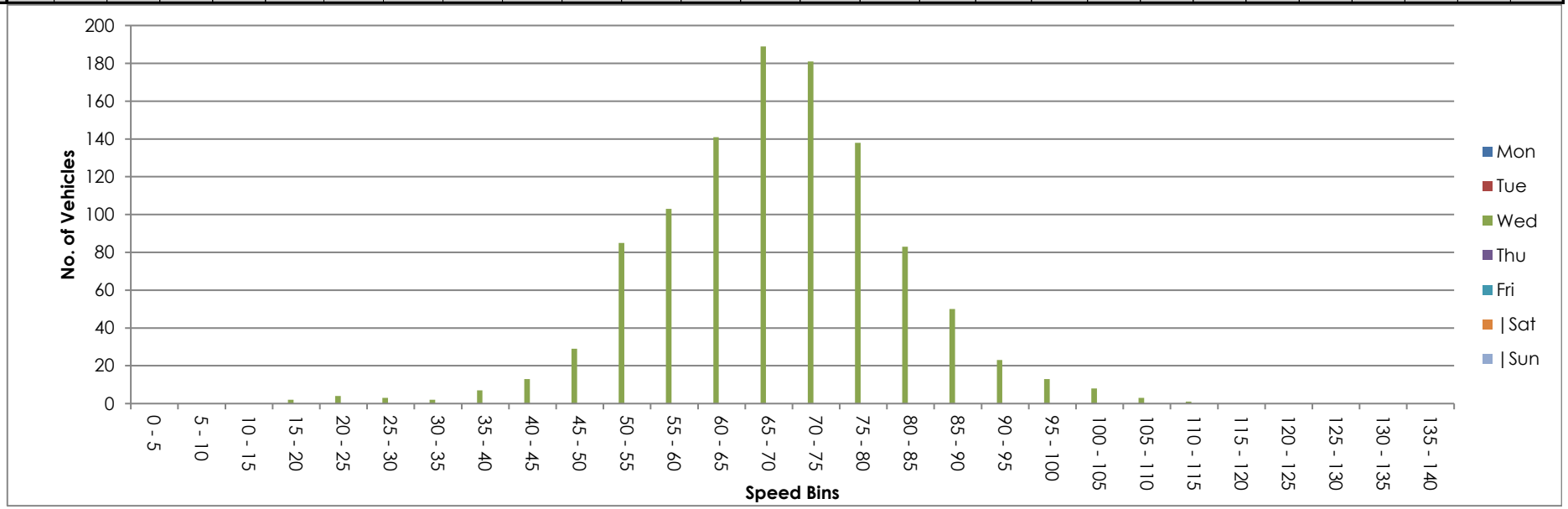
Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Speed Bins (km/h)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	1078	0	0	0	2	4	3	2	7	13	29	85	103	141	189	181	138	83	50	23	13	8	3	1	0	0	0	0	0
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	**1078**	**0**	**0**	**0**	**2**	**4**	**3**	**2**	**7**	**13**	**29**	**85**	**103**	**141**	**189**	**181**	**138**	**83**	**50**	**23**	**13**	**8**	**3**	**1**	**0**	**0**	**0**	**0**	**0**
7 Day Ave.	**1078**	**0**	**0**	**0**	**2**	**4**	**3**	**2**	**7**	**13**	**29**	**85**	**103**	**141**	**189**	**181**	**138**	**83**	**50**	**23**	**13**	**8**	**3**	**1**	**0**	**0**	**0**	**0**	**0**
--	**1078**	**0**	**0**	**0**	**2**	**4**	**3**	**2**	**7**	**13**	**29**	**85**	**103**	**141**	**189**	**181**	**138**	**83**	**50**	**23**	**13**	**8**	**3**	**1**	**0**	**0**	**0**	**0**	**0**

Summary Graphs



Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	65 +5kph	65 +5kph	70 +10kph	70 +10kph		85
0000	3	0	2	0	1	0	0	0	0	0	0	0	0	2	66.7	1	33.3	1	33.3	70.4	-
0100	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100.0	1	100.0	1	100.0	75.7	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100.0	1	100.0	1	100.0	73.3	-
0400	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100.0	1	100.0	1	100.0	72.5	-
0500	12	0	12	0	0	0	0	0	0	0	0	0	0	11	91.7	10	83.3	9	75.0	76	86.8
0600	25	0	22	0	3	0	0	0	0	0	0	0	0	22	88.0	16	64.0	11	44.0	73.2	93.3
0700	73	0	66	1	6	0	0	0	0	0	0	0	0	73	100.0	68	93.2	59	80.8	77.6	86.2
0800	**101**	**0**	**92**	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**88**	**87.1**	**75**	**74.3**	**63**	**62.4**	**72.6**	**84.2**
0900	63	1	51	2	5	0	2	0	1	0	1	0	0	52	82.5	44	69.8	37	58.7	71.4	83.7
1000	49	0	44	0	3	0	1	0	0	1	0	0	0	40	81.6	34	69.4	23	46.9	70.8	85.8
1100	50	0	41	2	5	0	1	0	0	0	1	0	0	43	86.0	34	68.0	25	50.0	70.3	78.8
1200	45	0	39	2	4	0	0	0	0	0	0	0	0	44	97.8	39	86.7	32	71.1	75.5	85.4
1300	57	0	48	1	6	0	1	0	0	1	0	0	0	42	73.7	28	49.1	21	36.8	67.2	81.6
1400	74	1	64	1	8	0	0	0	0	0	0	0	0	61	82.4	53	71.6	43	58.1	71.4	84.2
1500	75	0	67	2	5	0	0	0	0	1	0	0	0	61	81.3	55	73.3	42	56.0	70.6	83.8
1600	88	0	80	1	7	0	0	0	0	0	0	0	0	80	90.9	69	78.4	58	65.9	75.5	86.9
1700	**118**	**1**	**109**	**2**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**99**	**83.9**	**84**	**71.2**	**61**	**51.7**	**71.5**	**84.8**
1800	91	0	85	0	6	0	0	0	0	0	0	0	0	80	87.9	70	76.9	53	58.2	71.4	81.4
1900	59	0	56	0	3	0	0	0	0	0	0	0	0	47	79.7	42	71.2	29	49.2	70	82.4
2000	46	0	42	1	3	0	0	0	0	0	0	0	0	39	84.8	29	63.0	18	39.1	69.6	84.4
2100	19	0	16	0	3	0	0	0	0	0	0	0	0	18	94.7	16	84.2	10	52.6	72.7	84.3
2200	12	0	12	0	0	0	0	0	0	0	0	0	0	11	91.7	10	83.3	9	75.0	78.4	93.7
2300	6	0	5	0	1	0	0	0	0	0	0	0	0	5	83.3	5	83.3	4	66.7	73.1	-
07-19	**884**	**3**	**786**	**14**	**67**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**763**	**86.3**	**653**	**73.9**	**517**	**58.5**	**72.2**	**83.6**
06-22	**1033**	**3**	**922**	**15**	**79**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**889**	**86.1**	**756**	**73.2**	**585**	**56.6**	**72**	**83.5**
06-00	**1051**	**3**	**939**	**15**	**80**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**905**	**86.1**	**771**	**73.4**	**598**	**56.9**	**72.1**	**83.7**
00-00	**1069**	**3**	**956**	**15**	**81**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**921**	**86.2**	**785**	**73.4**	**611**	**57.2**	**72.2**	**83.8**

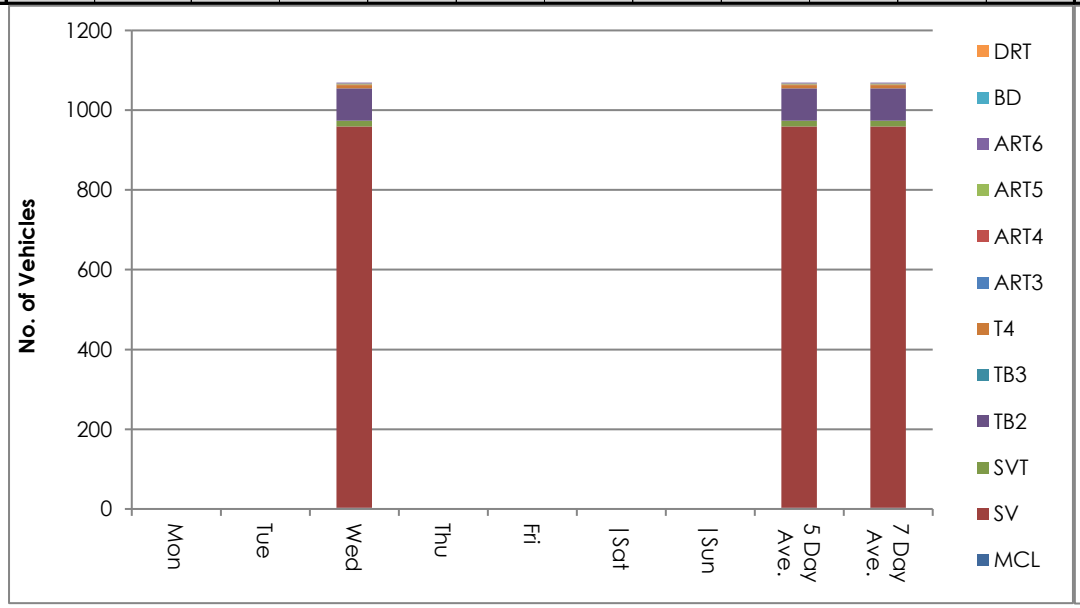
Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Westbound

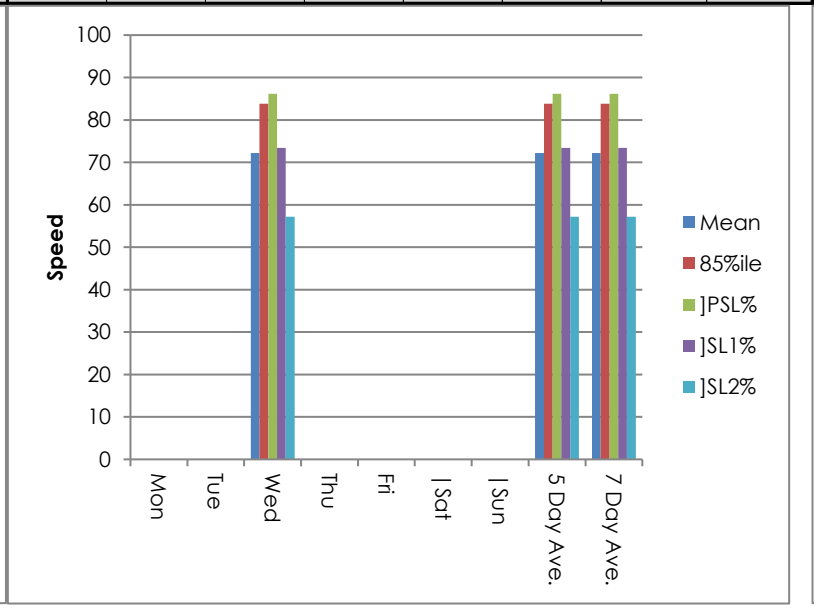
16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 65 +5kph	]SL1% 65 +5kph	]SL2 70 +10kph	]SL2% 70 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Wed	1069	3	956	15	81	0	8	0	1	3	2	0	0	921	86.2	785	73.4	611	57.2	72.2	83.8
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
|Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
|Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
5 Day Ave.	**1069**	**3**	**956**	**15**	**81**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**921**	**86.2**	**785**	**73.4**	**611**	**57.2**	**72.2**	**83.8**
7 Day Ave.	**1069**	**3**	**956**	**15**	**81**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**921**	**86.2**	**785**	**73.4**	**611**	**57.2**	**72.2**	**83.8**
--	**1069**	**3**	**956**	**15**	**81**	**0**	**8**	**0**	**1**	**3**	**2**	**0**	**0**	**921**	**86.2**	**785**	**73.4**	**611**	**57.2**	**72.2**	**83.8**

Summary Graphs





Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Speed Bins (km/h)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	12	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3	1	2	2	1	0	0	0	0	0	0	0	0	0
0600	25	0	0	0	0	0	0	0	0	0	1	0	2	6	5	1	3	2	0	2	2	1	0	0	0	0	0	0	0
0700	73	0	0	0	0	0	0	0	0	0	0	0	0	5	9	13	21	14	6	3	0	1	1	0	0	0	0	0	0
0800	**101**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**2**	**6**	**3**	**13**	**12**	**14**	**16**	**24**	**6**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900	63	0	0	0	0	0	0	0	1	1	2	2	5	8	7	11	10	9	5	1	1	0	0	0	0	0	0	0	0
1000	49	0	0	0	0	0	0	1	0	1	0	4	3	6	11	5	4	6	5	2	0	0	1	0	0	0	0	0	0
1100	50	0	0	0	0	0	0	0	0	0	1	2	4	9	9	10	9	2	2	2	0	0	0	0	0	0	0	0	0
1200	45	0	0	0	0	0	0	0	0	0	1	0	0	5	7	8	13	3	3	4	1	0	0	0	0	0	0	0	0
1300	57	0	0	0	0	1	0	0	0	1	2	4	7	14	7	5	3	8	2	1	1	1	0	0	0	0	0	0	0
1400	74	0	0	0	0	0	1	0	0	1	2	1	8	8	10	21	6	6	3	2	3	0	1	0	1	0	0	0	0
1500	75	0	0	0	0	0	0	0	0	2	0	7	5	6	13	19	6	10	5	0	2	0	0	0	0	0	0	0	0
1600	88	0	0	0	0	0	0	0	1	0	1	2	4	11	11	16	17	9	10	2	1	0	1	0	0	0	0	1	0
1700	**118**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**5**	**10**	**15**	**23**	**17**	**19**	**8**	**8**	**7**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
1800	91	0	0	0	0	0	0	0	0	0	1	1	9	10	17	25	10	14	3	0	1	0	0	0	0	0	0	0	0
1900	59	0	0	0	0	0	0	0	0	0	3	3	6	5	13	15	4	6	2	0	0	1	1	0	0	0	0	0	0
2000	46	0	0	0	0	0	0	0	0	0	2	2	3	10	11	7	1	4	3	1	2	0	0	0	0	0	0	0	0
2100	19	0	0	0	0	0	0	0	0	0	0	0	1	2	6	3	4	1	0	2	0	0	0	0	0	0	0	0	0
2200	12	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	4	1	0	3	1	0	0	0	0	0	0	0	0
2300	6	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
07-19	**884**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**15**	**34**	**58**	**110**	**136**	**164**	**134**	**113**	**58**	**26**	**12**	**2**	**4**	**1**	**1**	**0**	**0**	**1**	**0**
06-22	**1033**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**39**	**70**	**133**	**171**	**190**	**146**	**126**	**63**	**31**	**16**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**
06-00	**1051**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**41**	**70**	**134**	**173**	**191**	**151**	**128**	**64**	**34**	**17**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**
00-00	**1069**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**41**	**72**	**136**	**174**	**196**	**153**	**130**	**67**	**35**	**17**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**

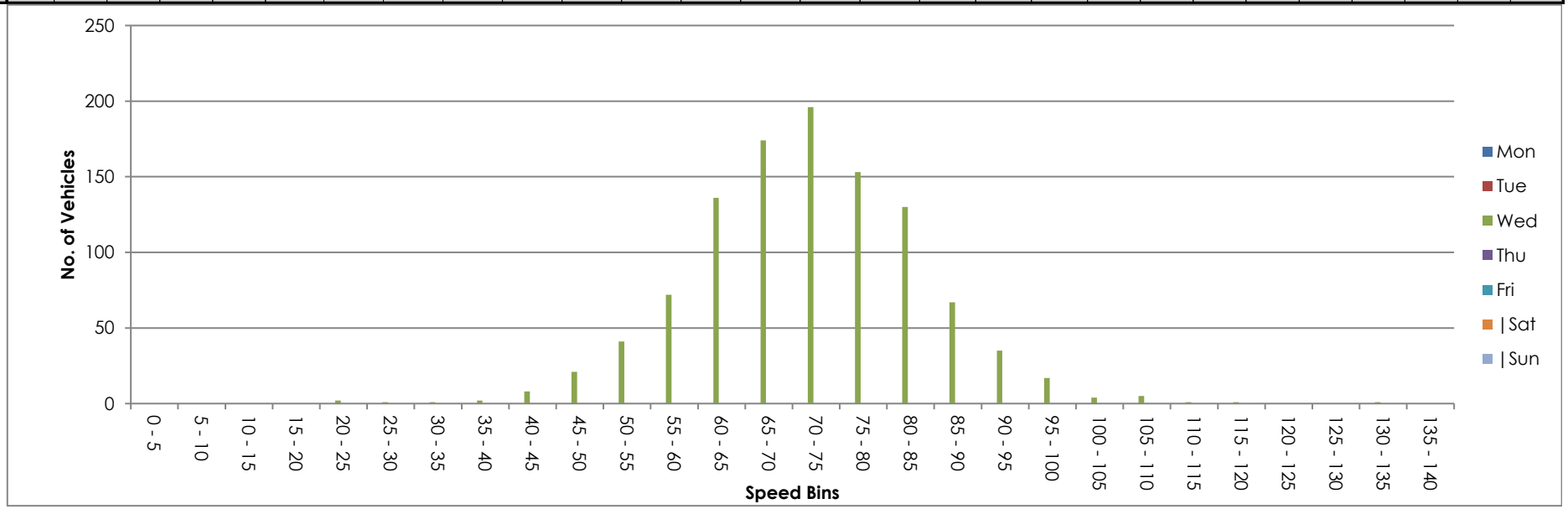
Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Speed Bins (km/h)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	1069	0	0	0	0	2	1	1	2	8	21	41	72	136	174	196	153	130	67	35	17	4	5	1	1	0	0	1	0
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	**1069**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**41**	**72**	**136**	**174**	**196**	**153**	**130**	**67**	**35**	**17**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**
7 Day Ave.	**1069**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**41**	**72**	**136**	**174**	**196**	**153**	**130**	**67**	**35**	**17**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**
--	**1069**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**2**	**8**	**21**	**41**	**72**	**136**	**174**	**196**	**153**	**130**	**67**	**35**	**17**	**4**	**5**	**1**	**1**	**0**	**0**	**1**	**0**

Summary Graphs



Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound / Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	65 +5kph	65 +5kph	70 +10kph	70 +10kph		85
0000	4	0	3	0	1	0	0	0	0	0	0	0	0	2	50.0	1	25.0	1	25.0	66.5	-
0100	3	0	3	0	0	0	0	0	0	0	0	0	0	2	66.7	2	66.7	2	66.7	72.9	-
0200	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100.0	1	100.0	0	0.0	69.8	-
0300	6	0	6	0	0	0	0	0	0	0	0	0	0	4	66.7	4	66.7	4	66.7	70.2	-
0400	2	0	1	0	1	0	0	0	0	0	0	0	0	2	100.0	2	100.0	2	100.0	93.1	-
0500	17	0	17	0	0	0	0	0	0	0	0	0	0	15	88.2	14	82.4	12	70.6	77.6	93.6
0600	50	0	44	0	5	0	0	0	0	1	0	0	0	44	88.0	34	68.0	26	52.0	73.3	93.3
0700	130	1	112	1	15	0	1	0	0	0	0	0	0	118	90.8	110	84.6	92	70.8	75.4	84.7
0800	**261**	**0**	**242**	**1**	**14**	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**206**	**78.9**	**169**	**64.8**	**128**	**49.0**	**69.4**	**82.3**
0900	128	2	107	2	12	0	3	0	1	0	1	0	0	104	81.3	87	68.0	66	51.6	70	82.6
1000	96	0	87	0	6	0	2	0	0	1	0	0	0	84	87.5	69	71.9	49	51.0	71.3	83.2
1100	98	0	82	4	10	0	1	0	0	0	1	0	0	84	85.7	66	67.4	47	48.0	70	80.4
1200	90	0	77	4	8	0	1	0	0	0	0	0	0	81	90.0	72	80.0	54	60.0	72.7	85.1
1300	98	0	86	1	9	0	1	0	0	1	0	0	0	70	71.4	53	54.1	43	43.9	68.4	81.9
1400	153	1	132	3	16	0	0	0	0	1	0	0	0	113	73.9	95	62.1	72	47.1	68.9	82.8
1500	151	0	131	5	12	1	1	0	0	1	0	0	0	116	76.8	103	68.2	79	52.3	69.7	82.9
1600	213	0	195	1	17	0	0	0	0	0	0	0	0	184	86.4	162	76.1	130	61.0	71.9	82.6
1700	**218**	**2**	**199**	**3**	**13**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**185**	**84.9**	**153**	**70.2**	**115**	**52.8**	**70.2**	**81.5**
1800	174	0	162	1	11	0	0	0	0	0	0	0	0	141	81.0	115	66.1	80	46.0	69.4	81.1
1900	96	0	92	0	4	0	0	0	0	0	0	0	0	68	70.8	56	58.3	38	39.6	67.6	80.3
2000	86	0	79	1	6	0	0	0	0	0	0	0	0	66	76.7	51	59.3	33	38.4	68.8	82
2100	44	0	38	1	5	0	0	0	0	0	0	0	0	37	84.1	34	77.3	20	45.5	70	79.6
2200	18	0	17	0	0	0	0	0	1	0	0	0	0	16	88.9	13	72.2	11	61.1	74.6	92.9
2300	10	0	8	0	2	0	0	0	0	0	0	0	0	8	80.0	8	80.0	7	70.0	75.1	-
07-19	**1810**	**6**	**1612**	**26**	**143**	**1**	**14**	**0**	**2**	**4**	**2**	**0**	**0**	**1486**	**82.1**	**1254**	**69.3**	**955**	**52.8**	**70.5**	**82.5**
06-22	**2086**	**6**	**1865**	**28**	**163**	**1**	**14**	**0**	**2**	**5**	**2**	**0**	**0**	**1701**	**81.5**	**1429**	**68.5**	**1072**	**51.4**	**70.3**	**82.4**
06-00	**2114**	**6**	**1890**	**28**	**165**	**1**	**14**	**0**	**3**	**5**	**2**	**0**	**0**	**1725**	**81.6**	**1450**	**68.6**	**1090**	**51.6**	**70.4**	**82.5**
00-00	**2147**	**6**	**1921**	**28**	**167**	**1**	**14**	**0**	**3**	**5**	**2**	**0**	**0**	**1751**	**81.6**	**1474**	**68.7**	**1111**	**51.8**	**70.5**	**82.6**

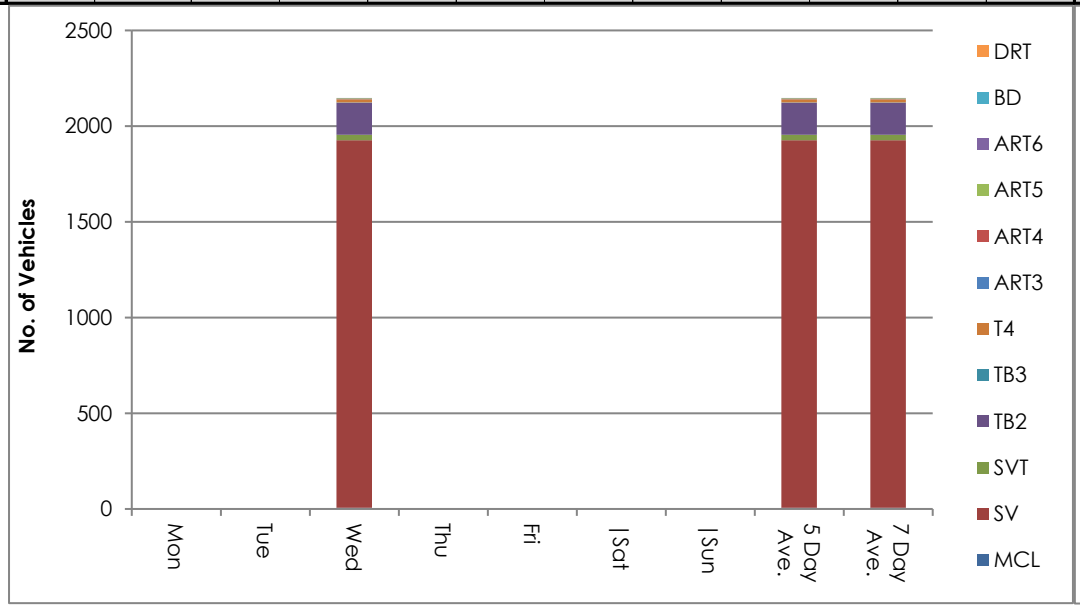
Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound / Westbound

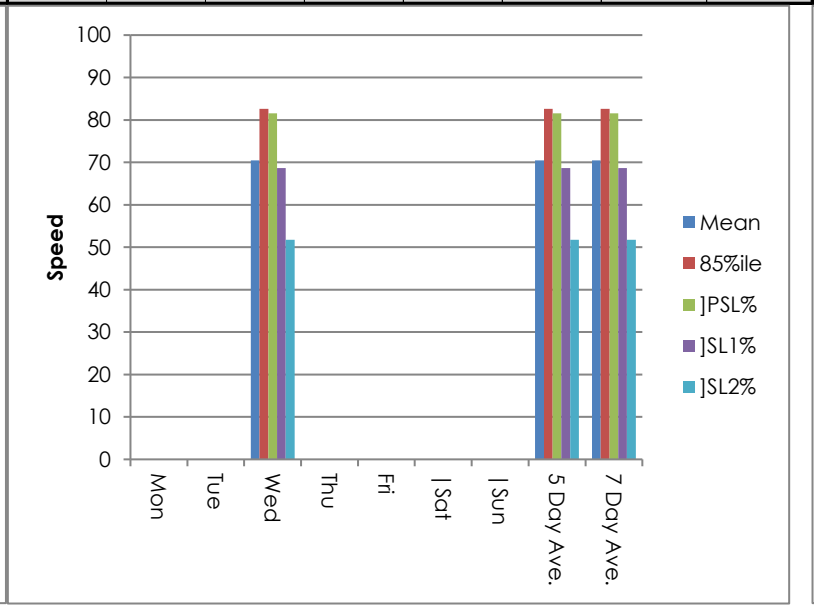
16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 65 +5kph	]SL1% 65 +5kph	]SL2 70 +10kph	]SL2% 70 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Wed	2147	6	1921	28	167	1	14	0	3	5	2	0	0	1751	81.6	1474	68.7	1111	51.8	70.5	82.6
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
]Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
]Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	-	-
5 Day Ave.	**2147**	**6**	**1921**	**28**	**167**	**1**	**14**	**0**	**3**	**5**	**2**	**0**	**0**	**1751**	**81.6**	**1474**	**68.7**	**1111**	**51.7**	**70.5**	**82.6**
7 Day Ave.	**2147**	**6**	**1921**	**28**	**167**	**1**	**14**	**0**	**3**	**5**	**2**	**0**	**0**	**1751**	**81.6**	**1474**	**68.7**	**1111**	**51.8**	**70.5**	**82.6**
--	**2147**	**6**	**1921**	**28**	**167**	**1**	**14**	**0**	**3**	**5**	**2**	**0**	**0**	**1751**	**81.6**	**1474**	**68.7**	**1111**	**51.8**	**70.5**	**82.6**

Summary Graphs





Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound / Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Wednesday 12 February 2025

Time	Total	Speed Bins (km/h)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	4	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	6	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0
0400	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
0500	17	0	0	0	0	0	0	0	0	0	0	1	1	1	2	3	1	2	3	1	1	1	0	0	0	0	0	0	0
0600	50	0	0	0	0	0	0	0	0	1	1	2	2	10	8	6	6	4	1	4	4	1	0	0	0	0	0	0	0
0700	130	0	0	0	0	0	0	0	0	0	0	6	6	8	18	24	26	24	9	3	1	3	2	0	0	0	0	0	0
0800	**261**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**6**	**3**	**14**	**28**	**37**	**41**	**39**	**36**	**37**	**12**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900	128	0	0	0	0	1	0	1	2	2	3	7	8	17	21	21	19	12	7	4	2	1	0	0	0	0	0	0	0
1000	96	0	0	0	0	0	0	1	0	1	1	5	4	15	20	16	10	12	8	2	0	0	1	0	0	0	0	0	0
1100	98	0	0	0	0	0	0	0	0	0	1	9	4	18	19	18	15	5	4	3	0	2	0	0	0	0	0	0	0
1200	90	0	0	0	1	0	0	0	0	0	3	2	3	9	18	14	19	7	9	4	1	0	0	0	0	0	0	0	0
1300	98	0	0	0	0	2	0	0	0	2	4	8	12	17	10	12	9	11	3	2	3	1	2	0	0	0	0	0	0
1400	153	0	0	0	0	0	1	0	0	1	7	9	22	18	23	32	13	8	10	4	3	0	1	0	1	0	0	0	0
1500	151	0	0	0	0	0	0	0	1	2	3	19	10	13	24	29	16	20	7	4	2	1	0	0	0	0	0	0	0
1600	213	0	0	0	0	1	0	1	3	4	4	4	12	22	32	50	38	19	13	4	3	0	1	0	0	0	0	1	0
1700	**218**	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**2**	**4**	**8**	**15**	**32**	**38**	**43**	**35**	**15**	**10**	**10**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
1800	174	0	0	0	0	0	0	0	0	0	4	12	17	26	35	33	17	17	11	0	2	0	0	0	0	0	0	0	0
1900	96	0	0	0	0	0	0	0	0	0	7	9	12	12	18	16	8	7	2	2	1	1	1	0	0	0	0	0	0
2000	86	0	0	0	0	0	0	0	0	0	4	5	11	15	18	10	6	8	4	2	2	1	0	0	0	0	0	0	0
2100	44	0	0	0	0	0	0	0	0	0	1	2	4	3	14	7	8	2	1	2	0	0	0	0	0	0	0	0	0
2200	18	0	0	0	0	0	0	0	0	0	0	1	1	3	2	1	5	1	0	3	1	0	0	0	0	0	0	0	0
2300	10	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	2	1	0	1	0	0	0	0	0	0	0	0
07-19	**1810**	**0**	**0**	**0**	**2**	**6**	**3**	**3**	**9**	**20**	**37**	**103**	**141**	**232**	**299**	**331**	**253**	**187**	**103**	**43**	**19**	**8**	**7**	**1**	**1**	**0**	**0**	**1**	**0**
06-22	**2086**	**0**	**0**	**0**	**2**	**6**	**3**	**3**	**9**	**21**	**50**	**121**	**170**	**272**	**357**	**370**	**281**	**208**	**111**	**53**	**26**	**11**	**8**	**1**	**1**	**0**	**0**	**1**	**0**
06-00	**2114**	**0**	**0**	**0**	**2**	**6**	**3**	**3**	**9**	**21**	**50**	**123**	**172**	**275**	**360**	**372**	**288**	**211**	**112**	**56**	**28**	**11**	**8**	**1**	**1**	**0**	**0**	**1**	**0**
00-00	**2147**	**0**	**0**	**0**	**2**	**6**	**4**	**3**	**9**	**21**	**50**	**126**	**175**	**277**	**363**	**377**	**291**	**213**	**117**	**58**	**30**	**12**	**8**	**2**	**1**	**0**	**0**	**1**	**0**

Site 1
Location L3103, 50 metres East of junction with Moanbaun
Direction Eastbound / Westbound

16432 / Athenry ATC
February 2025
Automatic Traffic Count

Virtual Week (1)

Time	Total	Speed Bins (km/h)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	2147	0	0	0	2	6	4	3	9	21	50	126	175	277	363	377	291	213	117	58	30	12	8	2	1	0	0	1	0
Thu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
|Sun	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	**2147**	**0**	**0**	**0**	**2**	**6**	**4**	**3**	**9**	**21**	**50**	**126**	**175**	**277**	**363**	**377**	**291**	**213**	**117**	**58**	**30**	**12**	**8**	**2**	**1**	**0**	**0**	**1**	**0**
7 Day Ave.	**2147**	**0**	**0**	**0**	**2**	**6**	**4**	**3**	**9**	**21**	**50**	**126**	**175**	**277**	**363**	**377**	**291**	**213**	**117**	**58**	**30**	**12**	**8**	**2**	**1**	**0**	**0**	**1**	**0**
--	**2147**	**0**	**0**	**0**	**2**	**6**	**4**	**3**	**9**	**21**	**50**	**126**	**175**	**277**	**363**	**377**	**291**	**213**	**117**	**58**	**30**	**12**	**8**	**2**	**1**	**0**	**0**	**1**	**0**

Summary Graphs