

# DREHID WASTE MANAGEMENT FACILITY (EXISTING FACILITY)

REPORT OF THE PROPERTY OF THE PORT OF THE

VOLUME EIAR MAIN TEXT

December 2018

# TOBIN CONSULTING ENGINEERS

















#### **DOCUMENT AMENDMENT RECORD**

Client: Bord na Móna Plc.

**Project:** Drehid Waste Management Facility (Existing Facility)

Title: EIAR Main Text (Volume II)



PROJECT	PROJECT NUMBER: 10369				DOCUMENT REF: 10369-EIAR-001			
Α	Final	Various	15/12/18	RH	15/12/18	DG	15/12/18	
Revision	<b>Description &amp; Rationale</b>	Originated	Date	Checked	Date	Authorised	Date	
	TOBIN Consulting Engineers							





# **TABLE OF CONTENTS**

1	INI	KOD	UCTION	1
	1.1	SITE	E LOCATION	1
	1.1.	1	Applicant Details and Site Location	1
	1.1.	2	Company Background	4
	1.2	EXIS	STING FACILITY AND PROPOSED DEVELOPMENT WORKS	6
	1.2.	1	Scope of EIAR	8
	1.3	EΝV	/IRONMENTAL IMPACT ASSESSMENT (EIA)	9
	1.3.	1	Legislative Context of an EIAR	9
	1.4	IND	USTRIAL EMISSIONS DIRECTIVE LICENCE	10
	1.4.	1	Drehid WMF IED Licence	
	1.4.	2	EIAR and the IED Regulations	11
	1.5	INF	ORMATION TO BE CONTAINED WITHIN THE ENVIRONMENTAL IMPACT ASSESSME	NT
	REPO	RT		11
	1.5.	1	Overview of the EIAR	13
	1.5.	2	Contributors to the EIAR	15
	1.6	SITE	E LOCATION AND SUITABILITY	16
	1.6.	1	Alternative Sites	16
	1.6.	2	Site Suitability	16
	1.7	CON	Overview of the EIAR	16
	1.7.	1	Public Information	17
	1.8	ASS	SUMPTIONS AND LIMITATIONS OF THE EIAR	18
	1.9		Γ OF DRAWINGS	
2	PLA		NG AND POLICY	
	2.1		CKGROUND	
	2.1.	-	Background Context and General Location of the Facility	
	2.2		STING WASTE MANAGEMENT FACILITY	
	2.2.		Need for the Facility	
	2.3		E LOCATION, CONTEXT AND PLANNING HISTORY	
	2.3.		Location of the Drehid Waste Management Facility	
	2.3.		Planning History for the Site and Bord na Móna Landholding	
	2.3.		Planning History for Area Surrounding the Bord na Móna Landholding	
	2.3.		Overall Characteristics of the Existing Facility	
	2.4		NNING POLICY, STRATEGY AND CONTEXT	
	2.4.		Relevant Planning and Development Policies	
	2.5		NCLUSION	
3	DES	CRI	PTION OF THE EXISTING ENVIRONMENT, ONGOING AND FUTURE ACTIVITIES	60





3.1 EX	XISTING SITE	60
3.1.1	Site Location	60
3.1.2	Proximity of Housing and Centres of Population	60
3.1.3	Land Use	61
3.1.4	Traffic and Access	61
3.1.5	Topography	61
3.2 DI	ETAILS OF THE EXISTING FACILITY	62
3.2.1	Non-Hazardous Municipal Solid Waste Landfill	62
3.2.2	Waste Composition	68
3.2.3	Site Infrastructure	68
3.2.4	Construction Activities	76
3.2.5	Operational Phase	76
3.2.6	Nuisance Controls	81
3.2.7	Restoration and Aftercare	84
3.2.8	Decommissioning	85
3.2.9	Health and Safety	85
3.2.10	Environmental Monitoring	86
3.2.11	Contingency Arrangements	92
3.2.12	Employee Welfare	94
3.3 C	OMPOSTING FACILITY	95
3.4 M	Environmental Monitoring  Contingency Arrangements  Employee Welfare  OMPOSTING FACILITY  SW LANDFILL INFRASTRUCTURE  Phasing of the Landfill  ASAL LINING SYSTEM  Method Statement for Installation of Basal Liner	103
3.4.1	Phasing of the Landfill	104
3.5 BA	ASAL LINING SYSTEM	104
3.5.1	Method Statement for Installation of Basal Liner	105
3.5.2	Safety Statement	106
3.5.3	Quality Control	106
3.5.4	Quality Assurance	107
3.5.5	Material Balance	107
3.6 LE	EACHATE MANAGEMENT	109
3.6.1	Composition of Leachate	111
3.6.2	Leachate Collection and Removal System	
3.7 LA	ANDFILL GAS MANAGEMENT	112
3.7.1	Degradation Process	112
3.7.2	Landfill Gas Extraction	113
	APPING SYSTEM	
DESCI	RIPTION OF REASONABLE ALTERNATIVES	117
	TRODUCTION	
4.2 AL	TERNATIVE LOCATIONS	117
	TERNATIVE LAYOUTS	
4.4 AL	TERNATIVE TECHNOLOGIES	119





5	BIC	ODIVE	ERSITY	120
	5.1	INT	RODUCTION	120
	5.2	ME	THODOLOGY	121
	5.2	2.1	Legislations & Guidance	121
	5.2	2.2	Consultation	122
	5.2	2.3	Desk Study	122
	5.2	2.4	Field Survey	123
	5.3	REC	CEIVING ENVIRONMENT	124
	5.3	3.1	Evaluation Criteria	124
	5.3	3.2	Designated Conservation Sites	126
	5.3	3.3	Rare and Protected Flora	129
	5.3	3.4	Habitats within the existing permitted development and wider surroundings	129
	5.3	3.5	Fauna	133
	5.3	3.6	Biodiversity Evaluation	135
	5.4	PO	FENTIAL EFFECTS	137
	5.4	1.1	Overview of Effects	137
	5.4	1.2	Potential Effects during Construction Phase	137
	5.4	1.3	Potential Effects during Operational Phase	137
	5.5	DO	NOTHING SCENARIO	138
	5.6	MIT	IGATION MEASURES	138
	5.6	5.1	Potential Effects during Construction Phase  Potential Effects during Operational Phase  NOTHING SCENARIO  IGATION MEASURES  Operational Phase  SIDUAL EFFECTS  NCLUSIONS  AND GEOLOGY AND HYDROGEOLOGY	138
	5.7	RES	SIDUAL EFFECTS	138
	5.8	COI	NCLUSIONS	138
6	SO	ILS, A	AND GEOLOGY AND HYDROGEOLOGY	140
	6.1	IINI	KODOCTION	140
	6.2	ME	THODOLOGY	141
	6.3	REC	CEIVING ENVIRONMENT/BASELINE DESCRIPTION	143
	6.3	3.1	Historical & Recent Geological Information from Literature Review	143
	6.3	3.2	Geological Heritage	
	6.3	3.3	Groundwater Status	
	6.3	3.4	Geological Information Gathered from Site-Specific Investigations	
	6.3	3.5	Geotechnical Analysis of Subsoil Material	159
	6.3	3.6	Groundwater Vulnerability	
	6.3	3.7	Groundwater Protection Response Matrix	
	6.3	3.8	Hydrogeology Data	
	6.3	3.9	Water Abstractions	
	6.3	3.10	Groundwater Piezometry	
		3.11	Groundwater Chemistry	
	6.3	3.12	Likely Future Receiving Environment / Do Nothing Scenario	
	6.4	PO	FENTIAL EFFECTS ON GEOLOGY AND HYDROGEOLOGY	189





	6.4.	.1	Construction Phase	189
	6.4.	.2	Operational Phase	190
	6.5	MITI	IGATION MEASURES	194
	6.5.	.1	Construction phase	194
	6.5.	.2	Operational Phase	195
	6.6	10M	NITORING	197
	6.7	RES	SIDUAL EFFECTS	197
7	WA	TER.		198
	7.1	INT	RODUCTION	198
	7.2	MET	THODOLOGY	198
	7.3	REC	CEIVING ENVIRONMENT/BASELINE DESCRIPTION	202
	7.3.	.1	Drainage	202
	7.3.	.2	Surface Water Flow Measurements	207
	7.3.	.3	Site Specific Hydrometric Data	208
	7.3.	4	Flooding Data	210
	7.3.	.5	Surface Water Quality	210
	7.4	WA	TER FRAMEWORK DIRECTIVE REQUIREMENTS	214
	7.4.	.1	Likely Future Environment/Do Nothing Scenario	214
	7.5	POT	FENTIAL EFFECTS ON WATER	214
	7.5.	.1	TER FRAMEWORK DIRECTIVE REQUIREMENTS  Likely Future Environment/Do Nothing Scenario  TENTIAL EFFECTS ON WATER  Construction Phases (phased through the directime of the landfills)  Operational Phase  IGATION MEASURES  Mitigation Measures for Construction Phase  Operational Phase  Operational Phase	214
	7.5.	.2	Operational Phase	218
	7.6	MITI	IGATION MEASURES	219
	7.6.	.1	Mitigation Measures for Construction Phase	219
	7.6.	.2	Operational Phase	220
	7.7	RES	SIDUAL EFFECTS	225
	7.8	CON	NCLUSION	225
8	LAI	NDSC	CAPE AND VISUAL	227
	8.1	INT	RODUCTION	227
	8.1.	.1	Guidance used in the Landscape and Visual Impact Assessment	227
	8.1.	.2	Characteristics of the Existing Facility and Ongoing Future Activities	227
	8.2	MET	THODOLOGY	228
	8.2.	.1	Landscape and Visual Impact Assessment Criteria	228
	8.2.	.2	Assessment Process	229
	8.2.	.3	Establishment of the Baseline	229
	8.2.	4	Appreciation of the Permitted Development	229
	8.2.	.5	Assessment of Effects	230
	8.2.	.6	Scope	230
	8.2.	.7	Landscape Effects	230
	8.2.	.8	Landscape Sensitivity to Change	231
	8.2.	.9	Visual Effects	234





		8.2.10	Visual Sensitivity to Change	235
		8.2.11	Cumulative Effects	242
		8.2.12	Field Work	242
		8.2.13	Selection of Viewpoints	242
		8.2.14	Photomontages	243
		8.2.15	Zone of Theoretical Visibility (ZTV)	244
	8.3	3 REC	CEIVING ENVIRONMENT / BASELINE DESCRIPTION	244
		8.3.1	Landscape Character Areas / Types	248
		8.3.2	Scenic Routes	248
		8.3.3	Scenic Viewpoints	249
		8.3.4	Demesne landscapes and gardens	249
		8.3.5	Environmental designations	249
		8.3.6	Slí na Sláinte walking routes	250
		8.3.7	Walking Routes	250
		8.3.8	Likely Future Receiving Environment / Do Nothing Scenario	250
	8.4	4 POT	ENTIAL EFFECTS	250
		8.4.1	Landscape Effects	251
		8.4.2	Visual Effects	252
		8.4.3	Effects at Constructiongdipolitic	257
	8.5	5 MIT	IGATION MEASURES	257
	8.6	6 RES	SIDUAL IMPACTS	258
		8.6.1	Landscape Impacts (Effects)	258
		8.6.2	Visual Impacts (Effects)	260
	8.7	7 CON	NCLUSION	261
9	ı	LAND	Landscape Effects  Visual Effects  Effects at Construction  IGATION MEASURES  Landscape Impacts (Effects)  Visual Impacts (Effects)  Visual Impacts (Effects)  Visual Impacts (Effects)  Visual Impacts (Effects)	263
	9.1	1 SITE	E LOCATION	263
		9.1.1	Guidance Used in the Land Impact Assessment	263
		9.1.2	Characteristics of the Existing Development	263
	9.2	2 REC	CEIVING ENVIRONMENT/BASELINE DESCRIPTION	263
	,	9.2.1	Site Location	263
		9.2.2	Land Use	264
		9.2.3	Topography	264
	,	9.2.4	Likely Future Receiving Environment/Do Nothing Scenario	264
	9.3	3 POT	ENTIAL EFFECTS ON LAND	265
		9.3.1	Land Use	265
	9.4	4 MIT	IGATION MEASURES	265
		9.4.1	Avoidance Measures	266
		9.4.2	Reduction Measures	266
		9.4.3	Remediation Measures	266
	9.5	5 RES	SIDUAL IMPACTS	266





	9.6	C	ONCLUSION	266
10	)	MAT	TERIAL ASSETS (ROADS & TRAFFIC)	267
	10.1		INTRODUCTION	267
	10.2		SCOPING AND MEETINGS	267
	10.	.2.1	Methodology	267
	10.3		RECEIVING ENVIRONMENT/BASELINE DESCRIPTION	268
	10.	.3.1	Baseline Traffic Surveys	268
	10.	.3.2	Road Network	271
	10.	.3.3	Proposed Road Network Improvements	272
	10.	.3.4	Likely Future Environment/Do Nothing Scenario	273
	10.4		POTENTIAL EFFECTS ON TRAFFIC	273
	10.	.4.1	Existing Development Scenario	274
	10.	.4.2	Cumulative Impacts	274
	10.	.4.3	Traffic Generation	274
	10.	.4.4	Seasonal Adjustment	280
	10.	.4.5	Traffic Growth	280
	10.	.4.6	Trip Distribution	281
	10.	.4.7	Junction Analysis	281
	10.	.4.8	B Link Capacity	290
	10.	.4.9	Pavement Survey	290
	10.	.4.1	0 Unplanned Eventsten july 1	291
	10.	.4.1	1 Road Safety	292
	10.	.4.12	2 Speed Surveys	298
	10.	.4.1	Trip Distribution	299
	10.	.4.1	4 Car Parking	299
	10.	.4.1	5 Public Transport	299
	10.5		MITIGATION MEASURES	300
	10.6		RESIDUAL EFFECTS	300
	10.	.6.1	Summary	300
	10.	.6.2	Residual Effects	301
11	1	AIR	QUALITY	
	11.1		INTRODUCTION	
	11.2		ASSESSMENT METHODOLOGY	
	11.	.2.1	Odour Assessment	305
	11.	.2.2	Air Quality Assessment	312
	11.3		RECEIVING ENVIRONMENT	
	11.	.3.1	3	
	11.	.3.2	3	
	11.4		POTENTIAL EFFECTS	
	11.	.4.1	Odour Emissions	331





11.4.2	NOx and Particulate Matter Dispersion Modelling	334
11.4.3	Climate Assessment	339
11.4.4	Regional Climate Impacts	339
11.4.5	Impact of Climate Change on the Project	339
11.5	MITIGATION MEASURES	340
11.5.1	Construction Phase	340
11.5.2	Odour	340
11.5.3	3 Air Quality	341
11.6	CUMULATIVE IMPACTS	342
11.7	WORST CASE IMPACT	342
11.8	DIFFICULTIES ENCOUNTERED	343
11.9	ASSESSMENT SUMMARY	343
12 NO	SE AND VIBRATION	345
12.1	INTRODUCTION	345
12.2	ASSESSMENT METHODOLOGY	345
12.3	RECEIVING ENVIRONMENT	346
12.3.1	Annual Noise Monitoring	346
12.3.2	Additional Noise Monitoring Survey	350
12.4	CHARACTERISTICS OF EXISTING FACILITY OF THE PROPERTY OF THE PR	353
12.5	POTENTIAL IMPACTS OF THE EXISTING PACILITY	354
12.5.1	Assessment Criteria	354
12.5.2	Construction Phase Impacts	354
12.5.3	Operational Phase Impacts	355
12.6	MITIGATION MEASURES	362
12.7	RESIDUAL IMPACTS	363
12.8	DECOMMISSIONIG IMPACTS	363
12.9	DIFFICULTIES ENCOUNTERED	363
12.10	MONITORING	363
13 CU	LTURAL HERITAGE	364
13.1	BACKGROUND AND OBJECTIVES	364
13.1.1	Statement of Authority	364
13.1.2	Assessment Structure	365
13.2	ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA	365
13.2.1	Assessment Methodology	365
13.2.2	Relevant Legislation & Guidance	365
13.2.3	B Desk Study	369
13.2.4	Field Surveys	370
13.2.5	Predicted Impacts on Archaeological, Architectural and Cultural Heritage	370
13.3	BASELINE DESCRIPTION	372
13.3.1	Introduction	372





13.3.2	Archaeological and Historical Background	373
13.3.3	Record of Monuments and Places ("RMP")	375
13.3.4	Topographical Files for the National Museum of Ireland	377
13.3.5	Aerial Photography	379
13.3.6	Kildare County Development Plan	379
13.3.7	National Monuments in State Care	379
13.3.8	National Inventory of Architectural Heritage	379
13.3.9	Previous Archaeological Work in the Area	379
13.3.10	Cartographic Analysis & Ordinance Survey Maps	380
13.3.11	Townland Names	381
13.3.12	Field Work	382
13.3.13	Summary	384
13.4 P	OTENTIAL EFFECTS TO CULTURAL HERITAGE	384
13.4.1	Construction Phase – Direct Impacts	384
13.4.2	Construction Phase – Indirect Impacts	385
13.4.3	Operational Phase – Direct Impacts	385
13.4.4	Operational Phase – Indirect Impacts	385
13.4.5	Decommissioning Phase – Direct Impacts	386
13.4.6	Operational Phase – Indirect Impacts	386
13.5 N	MITIGATION MEASURE AND RESIDUAL EFFECTS	386
13.5.1	MITIGATION MEASURE AND RESIDUAL REFERENCES  Construction Phase Impacts Operational Phase Impacts Decommissioning Phase CONCLUSIONS	386
13.5.2	Operational Phase Impacts	386
13.5.3	Decommissioning Phase	387
13.6 C	CONCLUSIONSdo	387
13.7 S	STATEMENT OF SIGNIFICANCE	387
13.8 S	SUMMARY OF SIGNIFICANT EFFECTS	387
14 CLIMA	ATE	388
14.1 IN	NTRODUCTION	388
14.1.1	Methodology	388
14.1.2	Weather Observing Stations	388
14.2 R	RECEIVING ENVIRONMENT/BASELINE DESCRIPTION	388
14.2.1	General Climate of Ireland	388
14.2.2	Rainfall	389
14.2.3	Evapotranspiration and Effective Rainfall	390
14.2.4	Wind	392
14.2.5	Likely future receiving environment/ do nothing scenario	392
14.3 P	OTENTIAL EFFECTS ON CLIMATE	392
14.4 N	MITIGATION MEASURES	393
14.5 C	CONCLUSION	394
15 POPU	ILATION AND HUMAN HEALTH	395





	15.1	INTRODUCTION	395
	15.2	POPULATION	395
	15.2.1	Methodology	395
	15.2.2	Receiving Environment/Baseline Description	395
	15.2.3	Socio Economic Profile	400
	15.2.4	Likely Future Receiving Environment / Do Nothing Scenario	406
	15.2.5	Potential Effects	406
	15.2.6	Community Gain	408
	15.2.7	Health and Safety	409
	15.2.8	Mitigation Measures	409
	15.3	HUMAN HEALTH	410
	15.3.1	Introduction	410
	15.3.2	Methodology	411
	15.3.3	Receiving Environment	418
	15.3.4	Literature Review	419
	15.3.5	Dose Response Principal	428
	15.3.6	Exposure Assessment	428
	15.3.7	Risk Characterisation	429
	15.3.8	Overall Assessment of Health Impact of the Existing Facility	432
16	inti	ERACTIONS OF THE FOREGOING	433
17	7 GLC	DSSARY	439
18	B REF	ERENCES TO THE PROPERTY OF THE	440
		Exposure Assessment  Risk Characterisation  Overall Assessment of Health Impact of the Existing Facility  ERACTIONS OF THE FOREGOING  DSSARY  FERENCES	
		$_{arepsilon}$	





# **TABLE OF FIGURES**

Figure 1.1:	Regional Site Location Map	3
Figure 2.1:	Site Location Map – Spatial Context in relation to Zoned Settlements	21
Figure 2.2:	Development Plan Macro Environmental Sensitivity Map	36
Figure 2.3:	Kildare Landscape Character Areas	42
Figure 2.4:	Kildare Landscape Sensitivity Areas	43
Figure 2.5:	European Union Waste Hierarchy	48
Figure 2.6:	New Waste Management Regions	55
Figure 3.1:	Site Layout Plan	63
Figure 3.2:	Site Layout Plan (Aerial)	64
Figure 3.3:	Drehid WMF Organisational Chart	80
Figure 3.4:	Environmental Monitoring Locations	91
Figure 3.5:	Environmental Monitoring Locations	97
Figure 3.6:	Typical Shredder	98
Figure 3.7:	Loading of Dry AD Tunnels	99
Figure 3.8:	Typical Composting Tunnel with Spigot Floor	99
Figure 3.9:	Typical Aeration Fan and Ductwork Installation	100
Figure 3.10:	Wind Sifter Principle	. 102
Figure 3.11:	Leachate Recirculation Process Flow (Source: from SEW Report No. 14)	. 110
Figure 5.1:	Designated Conservation Areas within 15km Buffer	128
Figure 5.2:	Habitat Map	132
Figure 6.1:	Regional Soil Types	. 144
Figure 6.2:	Quaternary Deposit Map	. 145
Figure 6.3:	Depth to Bedrock	. 146
Figure 6.4:	Regional Bedrock Geology	. 147
Figure 6.5:	Site Investigation Locations	153
Figure 6.6:	Groundwater Vulnerability Map	163
Figure 6.7:	Aquifer Classification Map	166
Figure 6.8:	Inferred Groundwater Contours	. 174
Figure 6.9:	Drehid Groundwater Monitoring - Conductivity Concentrations	. 179
Figure 6.10:	Drehid Groundwater Monitoring - Ammonia Concentrations	180
Figure 6.11:	Drehid Groundwater Monitoring – Cumulative frequency Ammonia Concentrations	. 181
Figure 7.1:	Regional Surface Water Catchments	204
Figure 7.2:	Existing Site Drainage Layout	205
Figure 7.3:	Surface Water Monitoring Locations	206





Figure 8.1:	Landscape Designations and Photomontage Locations	246
Figure 8.2:	Landscape Character Areas	247
Figure 10.1:	Haul Routes and Traffic Count Locations	270
Figure 10.2:	Junction 1 Layout	283
Figure 10.3:	Junction 2 Layout	284
Figure 10.4:	Junction 3 Layout	286
Figure 10.5:	Junction 4 Layout	287
Figure 10.6:	Junction 5 Layout	289
Figure 11.1:	Map of Land-Use in The Vicinity Of Drehid Landfill	304
Figure 11.2:	Casement Aerodrome Windrose 2013-2017	316
Figure 11.3:	AERMOD 2-Tier Receptor Grid	317
Figure 11.4:	Terrain in the Vicinity of Drehid Facility (UTM Coordinates)	318
Figure 11.5:	98 <sup>th</sup> % of 1-Hour Odour Concentrations (OU <sub>E</sub> /m³) (Year 2016)	333
Figure 11.6:	Annual Mean NO <sub>2</sub> Concentrations (µg/m3) (Year 2015)	335
Figure 11.7:	Annual Mean $PM_{10}$ Concentrations ( $\mu g \ / m^3$ ) (excluding background) (Year 2015)	338
Figure 12.1:	Annual Noise Monitoring Locations	347
Figure 12.2:	Supplementary Noise Monitoring Locations	351
Figure 12.3:	Noise Modelling Locations	359
Figure 13.1:	Map indicating Recorded Monuments (red dot) in relation to the Existing Facility	
Figure 13.2:	Digital Global Picture of Existing Facility Site with RMP sites indicated with red dots	(After
OSI)	382 Handle Control	
Figure 15.1:	Buildings in Proximity to Existing Facility	403
Figure 15.2:	Deprivation Levels in County Kildare	418
	Course	





# **LIST OF TABLES**

Table 1.1:	Contributors to the EIAR	15
Table 2.1:	Planning Applications within the Bord na Móna Landholding (associated with the D	rehid
WMF site)	24	
Table 3.1:	Summary of Current Status of Landfilling Activity	65
Table 3.2:	Summary of Future Landfilling Activity	66
Table 3.3:	Summary of Submitted Specified Engineering Works	67
Table 3.4:	Waste accepted at the Existing Facility	68
Table 3.5:	Water Supply Provision	73
Table 3.6:	Testing Requirements	78
Table 3.7:	Raw Materials and Energy Usage for the Operation of the Existing Facility	
Table 3.8:	Annual Outputs from the Existing Facility	81
Table 3.9:	Annual Outputs from the Existing Facility  Dust Monitoring Locations  Noise Monitoring Locations  Surface Water Monitoring Locations Locations  Landfill Inputs and Outputs	87
Table 3.10:	Noise Monitoring Locations	88
Table 3.11:	Surface Water Monitoring Locations (1975)	89
Table 3.12:	Landfill Inputs and Outputs	. 103
Table 3.13:	Estimated material balance for the construction of the MSW Landfill	. 107
Table 3.14:	Leachate and Foul Water Quantities Managed at the Existing Facility	. 109
Table 5.1:	Criteria for Establishing Receptor Importance (NRA, 2009)	. 125
Table 5.2:	Designated conservation areas located within 15 km of the site	. 127
Table 5.3:	Protected or Rare Plants	. 129
Table 5.4:	Summary of Species Found on Site during Static and Transect Survey Work	. 134
Table 5.5:	Habitat Evaluation	. 136
Table 6.1:	Impact Magnitude Definitions	. 142
Table 6.2:	Assessment Criteria	. 142
Table 6.3:	Particle Size Distribution of Fine Grained Samples	. 159
Table 6.4:	Particle Size Distribution of Sand and Gravel Samples	. 160
Table 6.5:	Results of Triaxial Constant Head Permeability Analysis	. 161
Table 6.6:	Transmissivity Values from Drawdown Data at Pumping Well GW6	. 168
Table 6.7:	Transmissivity Values from Recovery Data recorded at Pumping Well GW6	. 169
Table 6.8:	Transmissivity Values from Recovery Data recorded at Observation Well GW1D	. 169
Table 6.9:	Transmissivity Values from Distance Drawdown Analysis	. 170
Table 6.10:	Location and Elevation of Groundwater Monitoring Points and Piezometric Head	. 175
Table 6.11:	Vertical Groundwater Gradients	. 177





Table 6.12:	Groundwater Chemistry from Samples obtained on 04/02/2003	185
Table 6.13:	Results of Chemical Analysis of Groundwater (11/7/2006)	186
Table 6.14:	Average groundwater quality from 2014 – Q2 2016	187
Table 7.1:	Significance Criteria and Examples	200
Table 7.2:	Magnitude Criteria and Examples	200
Table 7.3:	Impact Assessment Criteria Matrix	201
Table 7.4:	Q-Rating Table	211
Table 7.5:	EPA Monitoring of Biological Quality of Waters on the River Figile	211
Table 7.6:	Biological monitoring at Dillon's Bridge (Source: W0201-03 AER)	212
Table 8.1:	Landscape Value	231
Table 8.2:	Landscape Susceptibility Criteria	232
Table 8.3:	Landscape Sensitivity to Change Criteria	232
Table 8.4:	Magnitude of Landscape Change Criteria (Landscape Effects)	234
Table 8.5:	Value of the View	235
Table 8.6:	Visual Susceptibility	236
Table 8.7:	Sensitivity to Change Criteria	237
Table 8.8:	Magnitude of Visual Change Criteria (Visual effects)	238
Table 8.9:	Definition of Duration of Effects	238
Table 8.10:	Definition of Quality of Effects	238
Table 8.11:	Categories of Digrilloance of Landspape and Visual Effects	200
Table 8.12:	Scale of Significance	241
Table 8.13:	Significance of Effects Matrix	241
Table 8.14:	Summary of Landscape Effects	252
Table 8.15:	Summary of Visual Effects	256
Table 8.16:	Summary of Landscape Effects	259
Table 8.17:	Summary of Residual Visual Impacts (Effects)	260
Table 10.1:	Priority Road and Bridge Projects	272
Table 10.2:	Regional Roads Identified for Improvements	272
Table 10.3:	Nature and Volumes of Waste at Existing Drehid WMF	274
Table 10.4:	Total Number of Arriving Operational Flows	275
Table 10.5:	Total Number of Departing Operational Flows	276
Table 10.6:	Net Arriving Operational Flows	277
Table 10.7:	Net Departing Operational Flows	277
Table 10.8:	Total Number of Construction Trips (one-way)	278
Table 10.9:	Estimated Combined Operational and Construction Flows	279
Table 10.10:	Growth Factors	281
Table 10.11:	OSCADY Results: Junction 1 - R408 & R403 Signalised Crossroads in Prosperous	AM
& PM Peak F	łours	283



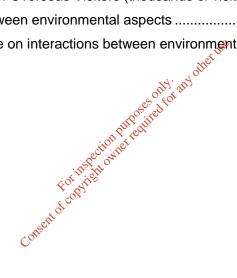


Table 10.12:	OSCADY Results: Junction 2 – Signalised Priority Junction R407 & R403 in Clane A	8 M
PM Peak Hour	rs	. 285
Table 10.13:	JUNCTION 9 (ARCADY) Results: Junction 3 - Johnstown Roundabout between	1 the
R402 and Johi	nstown Road AM & PM Peak Hours	. 286
Table 10.14:	OSCADY Results: Junction 4 - Signalised crossroads R415 & R445 in Kildare Town	า AM
& PM Peak Ho	ours	. 288
Table 10.15:	JUNCTION 9 (PICADY) Results: Junction 5 - Existing site entrance AM & PM Peak	289
Table 10.16:	Unplanned Events – Outline Risk Assessment	. 292
Table 10.17:	Summary of Collison Data for the Permitted Haul Route	. 294
Table 10.18:	Collision Data involving a HGV within Operating Hours of the Facility (Haul Route 295	1.2)
Table 10.19:	Collision Data involving a HGV within Operating Hours of the Facility (Haul Route 3)	295)
Table 10.20:	Collision Data involving a HGV within Operating Hours of the Facility (Haul Route 4)	296
Table 10.21:	Collision Data involving a HGV within Operating Hours of the Facility (Haul Route 1)	297 (
Table 10.22:	Collision Data involving a HGV within Operating Hours of the Facility (Haul Route	2.2)
	297	
Table 10.23:	Speed Surveys along the Permitted Haul Routes 15.	. 298
Table 11.1:	Ranking Table For Various Industrial Sources (Environment Agency, 2002)	. 308
Table 11.2:	Indicative Odour Standards Based Of Odour (Environment Age	ency
2002)	309 girdh gerfeit	
Table 11.3:	Drehid Facility, County Kildare Landfill Odour Emission Source Details	. 311
Table 11.4:	Drehid Facility, County Kildare. Composting Odour Emission Source Details	. 311
Table 11.5:	Air Quality Standards Regulations 2011 (based on EU Council Directive 2008/50	/EC)
	312 Casts	
Table 11.6:	Drehid Facility, County Kildare. Landfill NOx and PM <sub>10</sub> Emission Source Details	. 323
Table 11.7:	Definition of Impact Magnitude for Changes in Ambient Pollutant Concentrations	. 325
Table 11.8:	Definition of Impact Magnitude for Changes in Ambient Pollutant Concentrations	. 326
Table 11.9:	Air Quality Impact Significance Criteria for PM <sub>10</sub>	. 326
Table 11.10:	Annual Mean NO <sub>2</sub> Concentrations In Zone D Locations 2013 - 2016 (μg/m³)	. 329
Table 11.11:	90th%ile of 24-Hour $PM_{10}$ Concentrations In Zone D Locations 2013 - 2016 ( $\mu g/m^3$ )	330
Table 11.12:	Annual Mean PM <sub>10</sub> Concentrations In Zone D Locations 2013 - 2016 (µg/m³)	. 330
Table 11.13:	Predicted Odour Concentration At Worst-Case Offsite Receptor (OUE/m³)	. 332
Table 11.14:	Predicted Odour Concentration At Closest Sensitive Receptors (OUE/m³)	. 332
Table 11.15:	Dispersion Model Results- NO <sub>2</sub>	. 334
Table 11.16:	Dispersion Model Results – PM <sub>10</sub>	. 336
Table 11.17:	Dispersion Model Results – PM <sub>2.5</sub>	. 337
Table 12.1:	Drehid Facility, 2015 Annual Noise Survey Results	. 348
Table 12.2:	Drehid Facility, 2016 Annual Noise Survey Results	. 349





Table 13.1:	Criteria for Rating Site Attributes	371
Table 13.2:	Impact Assessment Criteria	372
Table 13.3:	Details of Recorded Monuments within the vicinity of the Existing Facility	376
Table 13.4:	Archaeological Artefacts Recorded from the Area	377
Table 13.5:	Townlands in the vicinity of Existing Facility Site	381
Table 14.1:	Designated Meteorological Stations for the Existing Development	389
Table 14.2:	Average Monthly Precipitation Lullymore Rainfall Station (Bord na Móna) 1960-	1990390
Table 14.3:	Calculated Effective Rainfall at the Existing Development Site at Drehid	391
Table 15.1:	Population Change 2006-2016	398
Table 15.2:	Population Change 2006-2016	399
Table 15.3:	Labour Force Survey* (Q1 2017 – Q1 2018)	399
Table 15.4:	Live Register 2017-2018	400
Table 15.5:	Occupational Groups in Electoral Divisions	400
Table 15.6:	2017 Numbers of Overseas Visitors (thousands of visitors) **	404
Table 16.1:	Interactions between environmental aspects	435
Table 16.2:	Explanatory note on interactions between environmental aspects	436







### **APPENDICES**

Appendix 2.1	List of Planning Applications
Appendix 3.1	Dust and Litter Control Plan
Appendix 3.2	Landfill Odour Management Plan
Appendix 5.1	AA Screening and NIS – November 2018
Appendix 6.1	Geophysics Reports from 2003 to 2016
Appendix 6.2	Borehole Logs
Appendix 6.3	PSD Laboratory Tests
Appendix 6.4	Tri-axial Constant Head Permeability Analysis
Appendix 6.5	Groundwater Response Matrix for Landfills
Appendix 6.6	GSI Aquifer Classification
Appendix 6.7	Pumping Test Data
Appendix 6.8	Hydrogeological Risk Assessment
Appendix 6.9	Report Extracts on Johnstown & Robertstown Well Fields
Appendix 7.1	OPW Hydrometric Data at River Figile
Appendix 7.2	OPW Hydrometric Data at River Figile Biological Quality Classes
Appendix 7.3	AND LEAR TO THE CONTRACT OF THE PARTY OF THE
Appendix 8.1	Photomontages 1 – 4  Overview of the AERMOD Dispersion Model  Meteorological Data - AERMER Home  Air Quality Standards  Dust Minimisation Plan  Details of Recorded Monuments  Casement Aerodrome Wind Rose Data
Appendix 11.1	Overview of the AERMOD Dispersion Model
Appendix 11.2	Meteorological Data - AERMET
Appendix 11.3	Air Quality Standards
Appendix 11.4	Dust Minimisation Plan
Appendix 13.1	Details of Recorded Monuments
Appendix 14.1	Casement Aerodrome Wind Rose Data
Appendix 15.1	Fáilte Ireland Visitor Numbers





#### 1 INTRODUCTION

#### 1.1 SITE LOCATION

#### 1.1.1 Applicant Details and Site Location

Bord na Móna Plc. (hereafter referred to as Bord na Móna) operates the Drehid Waste Management Facility (WMF), situated near Carbury, County Kildare. The Drehid WMF is an integrated waste management facility which principally includes a municipal solid waste (MSW) landfill and a Composting Facility. The Drehid WMF operates subject to an Industrial Emissions Directive (IED) licence, issued by the Environmental Protection Agency (EPA), (Reg. No. W0201-03) and subject to the planning approval for the facility.

An Environmental Impact Statement (EIS) was prepared and submitted to ABP in 2008¹ for the extension and intensification of landfilling activity at the facility which, at the time, was regulated by the EPA as a Waste Licensed facility (Reg. No. W0201-01). The EIS had been prepared in accordance with the requirements of the prevailing EIA Directive (Directive 85/337/EEC). This current Environmental Impact Assessment Report (EIAR) has been prepared to update the previous EIS in accordance with the requirements of the new Environmental Impact Assessment (EIA) Directive (Directive 2014/52/EU) which came into effect on the 16th of May 2017.

Bord na Móna intends to further develop the existing **Drenid** WMF and submitted a planning application to An Bord Pleanála (ABP) (ABP Ref. No. 300506) for the proposed works on the 20<sup>th</sup> of December 2017. As part of the further development works at the site (as described in Section 1.2), Bord na Móna are required to submit an application to the EPA for a new IED Licence for the overall facility. The new IED Licence will be sought to permit and regulate the activities of the proposed development works as well as the existing landfilling and composting activities currently licensed at the facility. This EIAR addresses specifically the existing landfilling and composting activities currently licensed at the facility (herein referred to as 'Existing Facility EIAR') and will be submitted to the EPA as part of the new IED Licence Application. The EIAR for the proposed development works (herein referred to as 'Proposed Development EIAR') will also be submitted to the EPA in support of the new IED Licence application.

The existing permitted development area, to which this Existing Facility EIAR refers, is confined to an area of 179 hectares (ha) which is the same area as was the subject of the previous EIS in 2008. The development is situated in the townlands of Timahoe West, Coolcarrigan, Killinagh Upper, Killinagh Lower, Drummond, Kilkeaskin, Loughnacush, and Parsonstown, as outlined in red on the Regional Site Location Map in Figure 1.1.

The overall Bord na Móna landholding comprises 2,544 hectares (ha) and is outlined in blue on Figure 1.1. The overall landholding is located within the townlands of Drehid, Ballynamullagh, Kilmurry, Mulgeeth, Mucklon, Timahoe East, Timahoe West, Coolcarrigan, Corduff, Coolearagh West, Allenwood

<sup>&</sup>lt;sup>1</sup> TOBIN Consulting Engineers, Drehid WMF Intensification and Extension EIS (2008)



\_



North, Killinagh Upper, Killinagh Lower, Ballynakill Upper, Ballynakill Lower, Drummond, Kilkeaskin, Loughnacush and Parsonstown at Carbury, County Kildare.

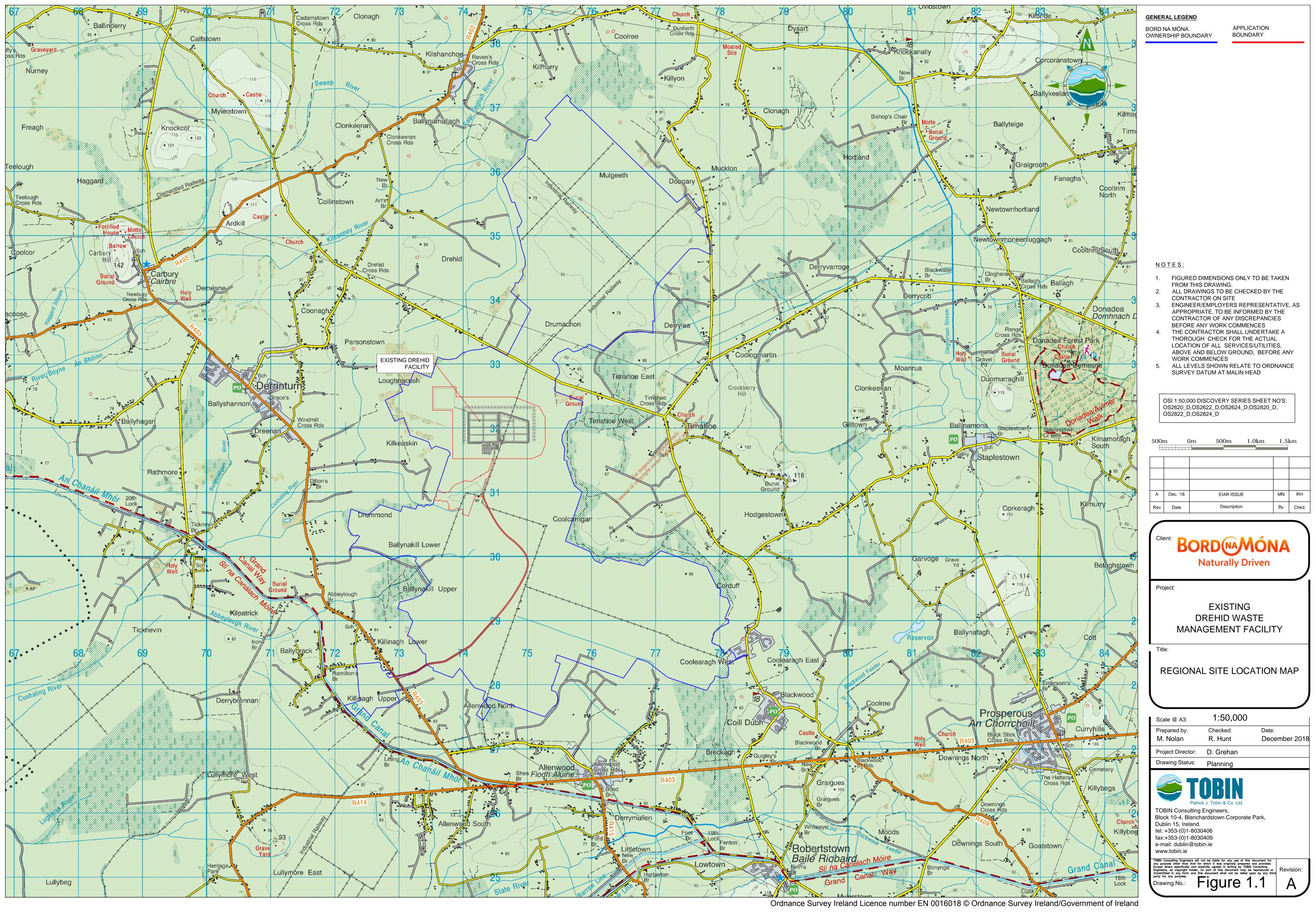
Access to the Drehid WMF is from the R403 regional road via an existing dedicated site entrance and a 4.8 km internal access road from the regional road. The R403 lies south, southwest and west of the site. The R403 joins the R402 at Carbury to the northwest of the site. The R402 connects to the M4 while the R403 connects to central and south County Kildare. The M4 (Dublin to Sligo/Galway) motorway is located approximately 9 km to the north of the facility, while the M7 (Dublin to Limerick/Cork) motorway is located approximately 17 km to the south of the facility.

This Existing Facility EIAR is being submitted to the EPA as part of an IED Licence Application and is an updated impact assessment appraisal from the EIS submitted to ABP in 2008. This EIAR is required to enable the EPA to complete an EIA for the existing facility in accordance with Directive 2014/52/EU (see Section 1.4.2 for further detail).

The Proposed Development EIAR was prepared in December 2017 to accompany a planning application to ABP for proposed development works on undeveloped lands adjacent to the existing licensed facility and considered the potential impact of the existing facility as the cumulative impact on the proposed development.

\*\*Existing Transport T







#### 1.1.2 Company Background

Bord na Móna is Ireland's leading environmentally responsible integrated utility service provider. Established in 1934 as the Turf Development Board to develop Ireland's peat resources, renamed Bord na Móna in 1946, it is now active across a range of industries.

For the financial year 2017, Bord na Móna recorded a turnover of €406 million and currently employs over 2,000 people. Today, Bord na Móna owns approximately 80,000 hectares of peatland, located mainly in the Midlands of Ireland. To date, this land has been primarily used for peat harvesting for energy and for horticulture growing media.

With a transition away from the traditional industries, heavily dependent on peat and other fossil fuels, Bord na Móna has embraced, at its core, a new vision for the future and a move to a new, more sustainable business. The Group's *Sustainability 2030 Statement* creates a vision that ensures that Bord na Móna operations work in harmony with, and minimises the impact on, the environment.

#### **Bord na Móna Activities**

Bord na Móna is now active across a wide range of industries with business units in the areas of:

- Waste and Recovery the business includes collection, recovery, recycling, treatment and disposal of waste and is focused on the responsible treatment and recovery of waste;
- Powergen develops and operates a portrofio of thermal and renewable energy assets. The current portfolio consists of Edenderry of fred Power Plant, Cushaling Peaking Plant, the Drehid landfill gas facility and wind farms in Bellacorrick, Mount Lucas, Bruckana and Sliabh Bawn. Powergen is currently constructing the Oweninny Wind Farm in County Mayo through a joint venture with ESB. Full planning permission has recently been consented by ABP for a wind farm development in Cloncreen, Co. Offaly;
- Peat the peat business harvests, manages and supplies milled peat to Edenderry co-fired power
  plant and the two ESB power plants. The business also supplies peat to the Horticulture and
  Fuels businesses for the manufacture of growing media and peat briquettes;
- Biomass the biomass supply business is focusing on the transition away from peat-based energy supply by lowering the carbon footprint of fuel for the generation of electricity in the Bord na Móna and ESB owned power stations. Biomass will also be an essential component of products within the Fuels and Horticulture businesses as it develops and commercialises more environmentally friendly products;
- Fuels the fuels business supplies the residential market with solid fuel products. The portfolio
  includes peat briquettes, wood logs and kindling, stove fuels and convenience fuels e.g. Firepak,
  Firelog and Firelighters; and
- Horticulture focused on the marketing and sales of growing media and other horticulture products to retail and professional markets primarily in Ireland, the UK and Europe.





Many of Bord na Móna's current activities are regulated by the EPA. Bord na Móna conducts its peat extraction activities under the terms of IPC (Integrated Pollution Control) Licenses and operates its resource recovery facilities, a peat deposition site and an ash repository site under the terms of further Licenses, including IED and Waste Licences.

#### **Waste Management**

Bord na Móna's Resource Recovery is an integrated waste management business providing a collection service, recycling, composting and residual disposal of all non-hazardous waste streams arising from both commercial and domestic sources. The principal focus is on delivering exceptional customer service and maximising the re-use potential of managed waste materials, where possible, within the broader Bord na Móna Group.

Advanced Environmental Solutions (Ireland) Ltd (AES), was acquired by the Group in 2007, creating an opportunity to establish a strong presence in the Waste Management sector in Ireland. Today, waste collection services operate under the AES brand; provide domestic waste management to over 110,000 domestic customers throughout the Midlands, South East and Mid-West regions, and more than 4,000 commercial customers nationwide.

In terms of waste management facilities, Bord na Mona operates engineered landfills for the environmentally responsible disposal of peat ash from reland's three peat-fired power stations. The facilities are operated under the terms of the PA licensing regime and cumulatively manage approximately 120,000 tonnes of waste each year.

Bord na Móna also operates a licensed composting facility near Athy, County Kildare. The facility is licensed to process 96,000 tonnes per annum (TPA) of green waste as well as by-products from the brewing industry, cocoa shell and other biowaste. The final product is used to enhance the company's range of growing media products.

The Drehid WMF is the Group's most extensive waste management facility. In 2005, Bord na Móna was granted planning permission<sup>2</sup> for the development of activities comprising an engineered residual landfill accepting 120,000 TPA, a composting facility accepting 25,000 TPA of biowaste from household, commercial and industrial sources, associated site infrastructure and development works. A waste licence was subsequently issued by the EPA<sup>3</sup>. The facility commenced operations in February 2008.

Planning permission was granted by ABP<sup>4</sup> in 2008 to intensify waste acceptance at the landfill to 360,000 TPA for a five-year period (until December 2013) and to extend the landfill footprint of the facility. The associated EPA waste licence<sup>5</sup> was granted in 2009. That licence was reviewed in June 2009 as a result

<sup>&</sup>lt;sup>5</sup> EPA Ref. W0201-02



<sup>&</sup>lt;sup>2</sup> Kildare County Council Reg. Ref. 04/371; An Bord Pleanála Ref. PL.09.212059

<sup>&</sup>lt;sup>3</sup> EPA Ref. W0201-01

<sup>&</sup>lt;sup>4</sup> An Bord Pleanála Ref. PL09.PA004



of the introduction of limits on the acceptance of biodegradable municipal waste at landfill. A revised waste licence was issued by the EPA in March 2010<sup>6</sup>. More recent permissions include the development of a landfill gas utilisation plant (October 2011) and an increase in the floor area of the previously permitted composting facility (November 2011). Further detail on the planning history of the existing facility is provided in Section 2.3.2 and 2.3.3 of this EIAR.

Following the incorporation into the statute book of additional regulations in 2013 relating to the Industrial Emissions Directive (IED), on 20 December 2013, the EPA issued an IED Amendment to the Drehid WMF Licence<sup>7</sup>, and further detail is provided in Section 1.4 below.

Bord na Móna also received planning permission for a Mechanical Biological Treatment (MBT) Facility (ABP Ref. PL09.PA0027) in 2013 which has not yet been constructed. The permitted MBT facility includes permission for waste processing buildings, administration area, parking areas, access roads, weighbridge, settlement lagoons and ancillary infrastructure.

As detailed further in Chapter 2, in Section 2.3.3, subsequent applications were made to ABP under Section 146B of the Planning and Development Acts 2000 in relation to the volume of waste acceptance at the Drehid WMF. A Section 146B application was made for waste acceptance at 360,000 TPA for an additional two years from December 2013 to December 2015, and that request was granted approval on 23 December 2013. In 2016, a further Section 146B application was made by Bord na Móna for waste acceptance at 360,000 TPA for a further 2 years up to 1 December 2017, reverting to 120,000 TPA thereafter; that application was granted approval by ABP on 12 September 2016. The facility is currently permitted to accept 120,000 TPA.

The company has made significant investment in the waste management sector and has developed a landfill gas electricity generation facility, which is the process of gathering, processing and treating landfill gas to produce electricity. Currently, the landfill gas utilisation facility at Drehid WMF generates enough sustainable and renewable electricity to power 8,500 homes.

Elsewhere, the Group has secured planning permission for the development of a 99,000 TPA materials recycling and transfer facility at Drumman, County Offaly. The company also provides consultancy services to the waste management industry.

#### 1.2 EXISTING FACILITY AND PROPOSED DEVELOPMENT WORKS

A detailed description of the existing Drehid WMF is provided in Chapter 3 of this EIAR. In summary, the existing facility includes a permitted MSW landfill, composting facility, administration area, car park, access roads, weighbridge, settlement lagoons and ancillary infrastructure.

<sup>&</sup>lt;sup>7</sup> EPA Ref. W0201-03 (IED Amendment)



<sup>&</sup>lt;sup>6</sup> EPA Ref. W0201-03



Bord na Móna intends to further develop the existing Drehid WMF and submitted a planning application to ABP (ABP Ref. No. 300506) for the proposed works on 20 December 2017. The proposed works are summarised as:

- Changes to the volume and nature of wastes to be accepted at the landfill disposal facility;
- Development of additional non-hazardous (250,000 TPA) and new hazardous landfill (85,000 TPA) capacity to provide for sustainable landfill of these waste streams for twenty-five years;
- Pre-treatment or processing of certain waste streams prior to landfill (including recovery from waste stream of non-hazardous waste of approx. 15,000 TPA metals);
- Increasing the volume of waste to be accepted at the composting facility and the removal of the restriction on the operating life of the composting facility contained in Condition 2(2) of ABP Ref No. PL.09.212059 including the following;
  - increase in the composting processing within the existing built composting infrastructure (increase by 20,000 TPA to 45,000 TPA within current infrastructure); and
  - extension to the existing composting facility to build further infrastructural capacity for an additional 45,000 TPA composting (a combined total of 90,000 TPA where all capacity would be licensed);
- · On-site treatment of leachate; and
- Development of associated buildings, plant, intrastructure and landscaping.

This application for planning approval for the above works was made directly to ABP through the Strategic Infrastructure Development (SID) process under the provisions of Section 37 of the Planning and Development (Strategic Infrastructure) Act, 2006, the Planning and Development Act, 2000 as amended and the associated Planning Regulations.

An EIAR (Proposed Development EIAR) was prepared to accompany the planning application to ABP, the scope of which addressed the proposed development as summarised above and considered the potential cumulative environmental impacts of the proposed development works with the existing permitted Drehid WMF activities, the permitted (but not yet built) MBT facility and other relevant built or consented developments in the vicinity of the site. A detailed description of the proposed development works at the facility is provided in Chapter 3 of the Proposed Development EIAR.

Ongoing activities at the existing facility consist of the landfilling of waste materials in an MSW landfill at a maximum rate of 120,000 TPA and acceptance of suitable waste for composting in a Composting Facility at a maximum rate of 25,000 TPA. The engineered MSW landfill has a footprint area of approx. 39 ha and, when complete, will consist of 15 No. fully lined phases which are sub-divided into 3-6 No. separate cells (per phase) depending on the phase footprint area. BnM have been depositing waste in the MSW landfill since 2008 and the current status of landfilling activity at the facility is summarised as:

Phases 1 to 4: Landfilling is complete and final capping has been put in place;





- Phases 5 to 11: Initial landfilling is complete and waste is being given time to self-compact.
   Temporary capping is in place;
- Phase 12: Current active phase and is accepting waste on a daily basis;
- Phase 13: Construction of lined cells completed in June 2018 and CQA Report approved by the EPA;
- Phase 14: Preliminary under-cell drainage and site preparation works completed in July 2018.
   Construction of Phase 14 is anticipated to recommence in 2020; and
- Phase 15: Stripping of peat has taken place to permit installation of a compound area for recent construction works for Phase 13 and Phase 14.

Further detail on the current status of activities at the MSW landfill is provided in Chapter 3.

#### 1.2.1 Scope of EIAR

This Existing Facility EIAR is prepared on the following overall basis:

#### Completed Activities:

- Landfilling and final capping is completed in 4 No. of the 15 No. Phases;
- Landfilling is currently ongoing in 8 No. of the 15 No. Rhases;
- Phase 13 construction is complete and approved to accept waste;
- Final capping works are currently ongoing in 3 No. of the 15 No. Phases;
- Preliminary site preparation for construction of Phases 14 and 15 has been carried out; and
- Composting facility is operational and accepting waste.

#### Ongoing and Future Activities:

- Landfilling of waste will continue at a maximum rate of 120,000 TPA up to 2028;
- Waste material will continue to be placed in Phases 5 12 up to the maximum permitted height (allowing for capping and settlement);
- Placement of waste is anticipated to commence in Phase 13 in 2019 subject to incoming waste quantities;
- Final capping works will continue as phases cease waste deposition;
- Construction of Phase 14 is anticipated to commence in Q2 2020;
- Construction of Phase 15 is anticipated to commence in 2022; and
- Composting facility will continue to operate on a daily basis within permitted 25,000 TPA limit.

This EIAR and the individual impact assessments have been carried out on the above current status with further detail and clarity presented as required by the particular environmental factors. The above completed and ongoing works are considered for the current licensed activities in accordance with IED Licence W0201-03 and the relevant planning consents.





The potential cumulative impacts of the existing licensed facility with the proposed development (submitted for planning approval in December 2017), the permitted (but not yet built) MBT facility and other relevant built or consented developments in the vicinity of the site are not presented in this EIAR as this has already been considered and included in relevant emissions and traffic modelling scenarios presented in the Proposed Development EIAR. It is noted that both this Existing Facility EIAR and the Proposed Development EIAR will accompany the application to the EPA for a new IED Licence for the facility.

#### 1.3 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Environmental Impact Assessment (EIA) is the process by which the anticipated effects on the environment (positive and negative) of a development or project are measured. If the anticipated effects are unacceptable, design measures or other relevant mitigation measures can be identified to reduce or avoid those effects. The purpose of the assessment is to ensure that decision makers consider the environmental effects when deciding whether or not to proceed with a project.

The initial Environmental Impact Assessment (EIA) Directive has been in place since 1985 (85/337/EEC). This Directive along with four amendments was amalgamated into Directive 2014/52/EU in May 2014. Directive 2014/52/EU aims to simplify the rules for assessing the potential environmental effects of projects on the environment while improving the level of environmental protection in line with current challenges. One of the key changes made by Directive 2014/52/EU is that it replaces the term Environmental Impact Statement (EIS) with Environmental Impact Assessment Report (EIAR). An EIAR is the document used to record the environmental impact assessment and focuses on describing the existing environment, identifying the potential effects as a result of the intended development and describing any mitigation measures required to reduce or eliminate potential effects.

The EIA Directive requires that certain developments be assessed for the likely environmental effects before planning approval can be granted. The EPA also requires that authorisation for certain licensed activities require an EIAR.

#### 1.3.1 Legislative Context of an EIAR

#### Planning and Development Regulations

In accordance with the Planning and Development Act (as amended), the existing facility is of the type described in Paragraph 3 – Environmental Infrastructure, Section 5, Part 2, of the 2006 Act (as inserted as the 7<sup>th</sup> Schedule into the Planning and Development Act, 2000), namely:

"- An installation for the disposal, treatment or recovery of waste with a capacity for an annual intake greater than 100,000 tonnes".





The existing facility also exceeds the thresholds for completion of an EIAR as detailed in the Planning and Development Regulations (S.I. No. 600 of 2001), as amended, in Part 2 of Schedule 5, 11(b), as highlighted below:

#### Schedule 5, Part 2:

Class 11(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule".

An EIS was therefore prepared for planning approval for extension and intensification of the permitted landfill facility in 2008. This EIAR replaces the previous EIS to meet the requirements Directive 2014/52/EU.

#### 1.4 INDUSTRIAL EMISSIONS DIRECTIVE LICENCE

#### 1.4.1 Drehid WMF IED Licence

The Drehid WMF IED Licence W0201-03 was issued by the EPA on the 20<sup>th</sup> December 2013 by Amendment to the existing licence. The IED Licence has subsequently been amended by Technical Amendment B in March 2016 under Section 96(1)(b) of the Epytronmental Protection Act 1992 (as amended).

The European Union (Industrial Emissions) Regulations 2013 (S.I. No. 138 of 2013) and the EPA (Industrial Emissions) (Licensing) Regulations 2013 (S.I. No. 137 of 2013) update the existing regulations in Ireland and update the licensing regime managed by the EPA. The remit of the EPA now includes the licensing of IED activities.

The regulatory framework for the issuing of IED licences is provided for by the updated EPA Acts (1992 to 2013), in conjunction with the general provisions of IED Regulations S.I. No. 137 & S.I. No. 138 of 2013, and the most recent amendment to First Schedule of the 1992 Act, included in IED Regulations S.I. No. 138 of 2013.

The update to the First Schedule of the 1992 Act in conjunction with S.I. No. 138 of 2013 specifies the classes of activities that are considered Industrial Emissions Directive activities and to be licensed as such by the EPA.

At the time of issuing IED Licence W0201-03, the EPA amended the licensed activities, such that the activities listed here are IED activities within the licence Schedule of Activities (where the 1996 Act is the Waste Management Acts and Part IV is Part IV of the 1992 EPA Acts (1992 to 2013) as amended); The relevant classes of activity are as follows:

11.5 Landfills, within the meaning of section 5 (amended by Regulation 11(I) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008)) of the Act of 1996, receiving more than 10 tonnes





of waste per day or with a total capacity exceeding 25,000 tonnes, other than landfills of inert waste.

- 11.1 The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.
- **11.4 (b)(i)** Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.1. No. 254 of 2001) apply): biological treatment; when the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day.

An application for a new IED Licence covering both the existing facility and the proposed development is being made to the EPA.

#### 1.4.2 EIAR and the IED Regulations

Section 9 (2)(d) of the EPA (Industrial Emissions) (Licensing) Regulations 2013 (S.I. No. 137 of 2013) also identifies the need for an EIAR to be issued to the EPA following the requirements of the EPA Act of 1992:

- (d) in accordance with Section 87(1B)(a) of the Act of 1992 and in the case where an application for permission for development comprising or for the purposes of the industrial emissions directive activity to which the application for permission for the licence relates is currently under consideration by the planning authority concerned or An Bord Pleanála, a written confirmation from the planning authority or An Bord Pleanála, as appropriate, of the fact together with either:
- i. A copy of the environmental impact statement (now referred to as Environmental Impact Assessment Report), 2 hard copies and 2 electronic copies or in such form as may be requested by the Agency, that was required to be submitted with the application for planning permission, or
- ii. A written confirmation from the planning authority or An Bord Pleanála that an environmental impact statement (now referred to as Environmental Impact Assessment Report), is not required by or under the Act of 2000.

# 1.5 INFORMATION TO BE CONTAINED WITHIN THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Information to be contained within an EIAR is detailed in Article 5 and Annex IV of the EIA Directive (as amended).



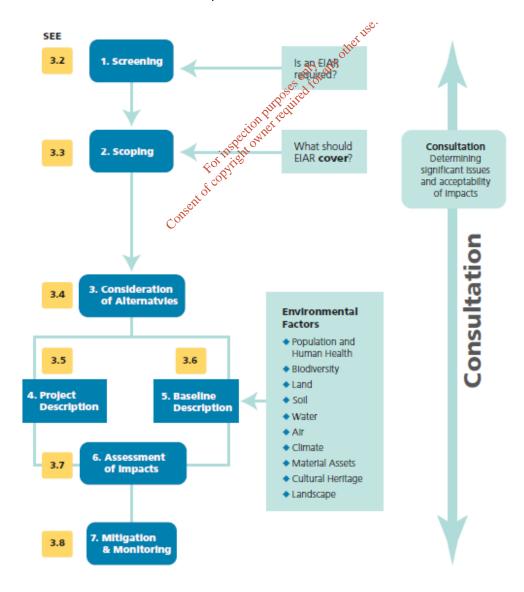


Currently in Irish planning legislation, the minimum information that must be contained in an EIAR (the term EIS will continue to be used in some legislation until such time it is updated) is specified in Article 94 of Part 10 ("Content of EIS") of the Planning and Development Regulations, 2001 (as amended), and Article 177 ("Prescribed information regarding environmental impact statements") of Part X of the Planning and Development Act, 2000, as amended.

Additional advice is contained in the *Guidelines on the Information to be contained in Environmental Impact Statements* published by the EPA in March 2002 and the *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* published by the EPA in September 2003.

Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports published by the EPA in August 2017 detail the key changes made by the amended Directive and show that compliance with the amended Directive requires nothing less than was previously required.

The structure and content of this EIAR fully complies with the legislative requirements and guidelines as identified within the above documents and provisions.







Source: EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (Draft August 2017)

The diagram above outlines seven steps included in the EIAR process. The environment is described under a number of specific headings that are shown on the right. Adherence to this general sequence and structure helps ensure an objective and systematic approach.

#### This EIAR includes:

- A description of the site and the existing environment;
- A description of reasonable alternatives considered;
- A description of the ongoing and future activities at the facility;
- The environmental effects, if any, resulting from the ongoing and future activities;
- The measures to mitigate or reduce the potential effects;
- Monitoring measures (where required); and
- A non-technical summary.

This EIAR takes into account information compiled through the desk-based assessment, field surveys and consultation with the relevant statutory bodies and the general public.

The overall EIAR is arranged in four volumes, as follows:

Non-Technical Summary Country

Environmental Impact Assessment Report; Volume II:

Drawings; and Volume III: Appendices. Volume IV:

#### Volume I: **Non-Technical Summary**

This document provides an overview and summary of the main EIAR using non-technical language. It is a standalone document that presents a clear and concise summary of the existing environment, characteristics of the existing facility, ongoing and future activities at the facility and mitigation measures adopted into the design of the development to minimise impacts on the surrounding environment.

#### Volume II: Main Environmental Impact Assessment Report

The EIAR is presented in a "grouped format" structure to allow for ease of presentation and consistency across the document when considering the various elements of the environment.

The EIAR follows the standard methodology and is presented in accordance the above-mentioned legislation and guidelines. Individual categories are introduced later in this section. The development is assessed and described within each category in terms of:





- Introduction includes a background to the assessment and describes the study methodology
  employed in carrying out the assessment.
- Existing Environment Describes and assesses the existing environment in the context of the
  relevant environmental categories. This section also takes account of any other existing
  developments in the vicinity.
- Potential Effects Provides the description of the potential specific, direct and indirect effects, associated with the ongoing and future activities at the facility. This is done through reference to the magnitude, duration, consequences and significance of the impact associated with the construction and operation of the existing facility and ongoing activities.
- Mitigation Measures A description of any remedial, or mitigation measures that have been
  incorporated into the design to offset or minimise identified potential adverse effects. This section
  also includes monitoring currently being undertaken, where required, to ensure mitigation
  measures are working effectively.
- **Residual Effects** Provides the description and assessment of the predicted residual effect associated with the facility on the surrounding environment.
- Conclusion Provides a summary of the salient points of the assessment chapter.

The EIAR is broken up into the following Chapters:

- <u>Chapter 1:</u> Provides an introduction to the PIAR. Chapters 2 to Chapter 14 inclusive within Volume II present the environmental impact assessment associated with the ongoing and future activities under the factors listed below.
- Chapter 2: Planning and Policy Detailed assessment of the Planning Policy and Context in support of the rationale and the requirement for the existing facility;
- Chapter 3: Description of the existing environment, ongoing and future activities Provides
  a detailed description of the ongoing and future activities as well as construction methodology for
  future landfill phases, including site layout and infrastructural details, construction procedures and
  the materials required, the operational and maintenance phases in addition to the
  decommissioning and restoration phases;
- Chapter 4: Description of Reasonable Alternatives;
- Chapter 5: Biodiversity;
- Chapter 6: Soils, and Geology and Hydrogeology;
- Chapter 7: Water;
- Chapter 8: Landscape and Visual;
- Chapter 9: Land;
- Chapter 10: Traffic;
- Chapter 11: Air Quality;
- Chapter 12: Noise and Vibration;
- Chapter 13: Cultural Heritage;





- Chapter 14: Climate;
- Chapter 15: Population and Human Health; and
- Chapter 16: Interactions of the Foregoing.

Supporting maps and drawings as referred to in the Main EIAR (Volume II) are included in this volume.

#### **Volume III: Drawings**

Detailed drawings of the existing facility infrastructure accompanying the EIAR are presented in Volume III of the EIAR.

#### **Volume IV: Appendices**

All supporting documentation and references, referred to in the Main EIAR (Volume II) are included in this volume. A detailed schedule of appendices is included at the front of Volume IV for ease of reference.

#### 1.5.2 Contributors to the EIAR

TOBIN Consulting Engineers have been engaged by Bord na Móna as Lead Consultant to project manage the preparation of this EIAR for the existing facility. The relevant inputs of the various members Othy any other tree. of the Study Team are listed in Table 1.1.

**Table 1.1:** Contributors to the EIAR

	- O'. &
Team Member	Inputs
TOBIN Consulting Engineers	Introduction Planning and Policy Description of the Existing Environment, Ongoing and Future Activities Biodiversity Soils, Geology & Hydrogeology Water Climate Land Traffic and Transportation Impact Assessment Population and Human Health (with input from Corporate Health Ireland)
AWN Consulting Ltd.	Air Quality Noise & Vibration
AECOM	Landscape & Visual Impact Assessment – Production of Photomontages and Wireframes
Through Time Ltd.	Cultural Heritage





#### 1.6 SITE LOCATION AND SUITABILITY

#### 1.6.1 Alternative Sites

As part of the EIS for the initial planning application for the existing facility in 2005, Fehily Timoney & Co., on behalf of Kildare County Council (KCC), identified the site in Drehid as the preferred site in County Kildare for the development of a landfill. This was achieved by means of identifying a number of exclusionary areas and then ranking the remaining sites using a number of headings. This process led to the short-listing of three sites, namely Usk, Newtowndonore and Drehid. Drehid emerged as the most suitable site for an MSW landfill due to:

- The large available land bank;
- The remoteness from buildings;
- Availability of clay and gravel locally; and
- The natural protection offered by the surficial deposits to the underlying bedrock aquifer.

The Drehid WMF was granted planning approval in 2005 and commenced acceptance of waste in 2008. The facility has an existing licence for acceptance of waste at a maximum rate of 120,000 TPA to the landfill and 25,000 TPA to the composting facility until 2028. It is not proposed to utilise any sites or land area that are not currently approved for planning and permitted under IED Licence W0201-03.

#### 1.6.2 Site Suitability

A significant environmental assessment was carried out on the site as part of the submission for planning approval in 2005. The EIS and associated reports were determined by ABP to show that the facility would not have a significant impact on the environment and subsequently, planning was granted for the WMF. Further planning applications which have been made to ABP as described in Section 1.1.2 and Chapter 2, were supported by environmental assessments as appropriate.

The ongoing and future activities at the Drehid WMF are being carried out in accordance with the IED Licence Conditions for the facility and, as required under Condition 3.7.1 of the Licence, proposals for any Specified Engineering Works (SEW) to be carried out at the existing facility will be submitted to the EPA for its agreement at least two months prior to the intended date of commencement of any such work.

#### 1.7 CONSULTATION

The following lists the various parties that were consulted in the preparation of the EIS for the existing facility in 2008:

- Kildare County Council (Environmental Services)
- Kildare County Council (Economic Development)
- Kildare County Council (Roads)
- Kildare County Council (Water Services)
- Kildare County Council (Planning)





- Kildare County Council (Conservation Officer)
- Dublin City Council
- Meath County Council
- Fingal County Council
- Dún Laoghaire-Rathdown County Council
- South Dublin County Council
- Wicklow County Council
- Environmental Protection Agency
- The Heritage and Planning Division of the Department of the Environment, Heritage and Local Government
- Department of Agriculture and Food
- Southern Fisheries Board
- An Taisce
- Irish Peatland Conservation Council (IPCC)
- Heritage Council
- Irish Native Woodland Trust
- Geological Survey of Ireland
- BirdWatch Ireland
- Irish Wildlife Trust
- Irish Forestry Board
- Irish Farmers Association
- Failte Ireland
- National Roads Authority
- National Parks and Wildlife Service
- Teagasc
- Electricity Supply Board
- Bord Gáis
- Health and Safety Authority

Pre-application consultation meetings were also held with KCC and the EPA in January 2008.

Consultation carried out as part of the planning application for the proposed development works (submitted to ABP in December 2017) are detailed in Section 1.6 of the Proposed Development EIAR. Additional consultation with the EPA has been carried out as part of the preparation of this EIAR.

#### 1.7.1 Public Information

A public information event was held by Bord na Móna at Carbury GAA Clubhouse, Parsonstown, County Kildare in respect of the proposed development works at the Drehid WMF. This event was advertised in local newspapers and conducted over the afternoon and evening of February 8<sup>th</sup>, 2017. The information

nd

torinspection purposes only any other use

Consent of copyright owner required for any other assessment of copyright owner required for any other assessment of copyright owner required for any other use.





evening informed the attendees that a new application for an IED Licence would be submitted to the EPA in due course.

There was no specific public information event carried out as part of the preparation of this EIAR, however there were information packs and information sessions held with local residents and businesses in 2003 as part of the original planning application for the current facility.

#### 1.8 ASSUMPTIONS AND LIMITATIONS OF THE EIAR

Assumptions specific to certain environmental aspects are discussed in the relevant chapters of the EIAR. General Assumptions that have been made during preparation of the EIAR are set out below:

- No cumulative impact assessments have been presented in this EIAR as the Proposed Development EIAR, which accompanies the IED application, has already considered the potential cumulative impacts of the existing facility, the proposed development works, the permitted (but not yet built) MBT facility and other relevant built or consented developments in the vicinity of the site;
- The baseline information gathered for the Proposed Development EIAR has been used, where appropriate, to ensure consistency between this EIAR and the Proposed Development EIAR. An additional traffic count was carried out at the facility entrance in March 2018 but no other additional traffic surveys were carried out on the public road network;
- Model inputs for air quality, noise and traffic assessments follow the approach presented in the Proposed Development EIAR supplemented, where appropriate, by the most recent available data including the 2017 Annual Environmental Report (AER) for the facility; and
- Information provided by third parties, including publicly available information and databases, is correct at the time of publication.

Limitations specific to certain environmental aspects are discussed in the relevant chapters of the EIAR. General limitations associated with this EIAR are outlined below:

- Baseline conditions and assessments are accurate at the time of the physical surveys but may be subject to change, due to the dynamic nature of the surrounding environment and surrounding activities; and
- None of the individual specialists have highlighted any limitations that are considered significant.

#### 1.9 LIST OF DRAWINGS

The below drawings are included in Volume III of the EIAR.

Drawing No.	Drawing Title
10369-2000	EXISTING SITE TOPOGRAPHY





Drawing No.	Drawing Title
10369-2001	DETAILED FACILITY LAYOUT
10369-2002	LANDFILL PHASING PLAN
10369-2003	LANDFILL CAPPING PLAN
10369-2004	LANDFILL LONG SECTIONS
10369-2005	LANDFILL SECTIONS
10369-2006	TYPICAL EMBANKMENTS AND LINER DETAILS
10369-2007	LANDFILL GAS MANAGEMENT AND CAPPING DETAILS
10369-2008	LANDFILL GAS LAYOUT
10369-2009	LANDFILL RESTORATION PLAN







# 2 PLANNING AND POLICY

#### 2.1 BACKGROUND

## 2.1.1 Background Context and General Location of the Facility

This section of the EIAR provides an evaluation of Planning and Policy in relation to the existing Drehid WMF. This Chapter should be read in conjunction with Chapter 1 (Introduction) and Chapter 3 (Description of the Existing Environment, Ongoing and Future Activities).

The existing Drehid WMF is situated approximately 4 km north of Allenwood, 9 km north-west of Prosperous, 9 km south of Enfield, County Meath and 12 km east of Edenderry, County Offaly. The landform of the general area is flat-lying to gently undulating topography of cut away peatland. Villages with zoned land in the context of the Kildare County Development Plan (CDP) and in relative close proximity include Derrinturn (c. 3 km to the north-west), Coill Dubh ('Blackwood' – c. 6 km to the southeast) and Allenwood (c. 4 km to the south). The general location within the above context is indicated in Figure 2.1.









Figure 2.1: Site Location Map – Spatial Context in relation to Zoned Settlements (Source: Kildare County Development Plan 2017 - 2023)

The location of the existing Drehid WMF is confined to a landbank of 179 ha within the larger Bord na Móna landholding. The location has been optimised with regard to environmental considerations.

The facility is also within relative close proximity of the R402 and R403 regional roads. Primary access to the facility is from the R403 and this access will be used for all future activity at the site. The site is therefore accessible via the existing network of regional routes which in turn link with the National Motorway network.

The R403 lies south, south-west and west of the site, and joins the R402 at Carbury to the north-west. The R402 connects to the M4 south of Enfield while the R403 connects to central and south County Kildare. The M4 (Dublin to Sligo/Galway) motorway is located approximately 8 km to the north of the site, while the M7 (Dublin to Limerick/Cork) motorway is located approximately 18 km to the south of the site.

In the context of the above, it should be noted that this EIAR considers the traffic implications of the ongoing and future activities at the facility using existing approved haul routes.





#### 2.2 EXISTING WASTE MANAGEMENT FACILITY

This section should be read in conjunction with Chapter 3 (Description of the Existing Environment, Ongoing and Future Activities). Chapter 3 provides a detailed description of the existing infrastructure and waste management activities currently ongoing at the site and the future activities that will be carried out in accordance with the current IED Licence. Chapter 3 also includes cross reference to the relevant drawings which give the details of the site infrastructure.

At present, the Drehid WMF comprises an engineered landfill and a composting plant. The engineered landfill is currently permitted to accept 120,000 TPA of municipal solid waste until the end of the life of the currently permitted facility in 2028. The composting facility is currently permitted to accept a maximum of 25,000 TPA until 2028.

#### 2.2.1 Need for the Facility

#### **MSW Landfill**

The MSW landfill is currently permitted to accept up to a maximum of 120,000 TPA. From April 2009 to December 2017, the facility was granted planning permission and a revised Waste Licence to intensify waste acceptance up to 360,000 TPA to satisfy the national demand for waste disposal infrastructure during this period.

In March 2016, all Local Authorities simultaneously and collectively invoked their powers under Section 56 of the Waste Management Act, as amended to make Orders specifically in relation to making arrangements for a prescribed period up to 10 June 2016 for the activation of all immediately available landfill capacity and the taking of such other necessary measures to limit or prevent environmental pollution. This resulted in additional capacity required to be provided at the Drehid MSW landfill of 138,000 tonnes (i.e. 6,000 tonnes per week for 23 weeks up to 10 June 2016).

The 2017 AER for the facility shows that over 327,886 tonnes of waste was disposed of to the landfill in 2017 highlighting the ongoing demand for MSW landfill infrastructure in the country. From BnM's extensive knowledge of the waste industry and through their waste collection services division (AES), the company anticipates that there will continue to be demand for MSW landfill demand capacity in Ireland in coming years. It is expected that the maximum quantity of waste permitted for acceptance at the MSW landfill of 120,000 TPA will be reached in 2018 and subsequent years.

Dublin Waste-to-Energy commenced operations at the incinerator at Poolbeg in County Dublin in April 2017 and is permitted to accept 600,000 TPA of MSW. However, as reported in national media in Q2 2018<sup>8</sup>, waste figures the TransFrontier Shipments (TfS) Office show that the export of MSW has only decreased by around 7% from Q1 2017 to Q1 2018 despite the commencement of waste acceptance at the incinerator in Poolbeg which is at maximum capacity. RTÉ News reported the Regional Waste Co-

<sup>&</sup>lt;sup>8</sup> RTÉ News website article dated 17 May 2018 – https://www.rte.ie/news/2018/0517/964056-waste\_exports/ (Accessed on 20 May 2018) and Irish Times website article dated 17 May 2018 – https://www.irishtimes.com/news/ireland/irishnews/poolbeg-incinerator-reduces-exported-waste-by-just-7-1.3498786 (Accessed on 20 May 2018).



-



ordinator for the Connacht-Ulster Region, Kevin Swift, as saying that "exports will continue to be high because infrastructure has not been developed to cater for the reduction in landfill capacity". Based on this report, it is clear that ongoing landfill infrastructure is required in Ireland for MSW.

#### **Composting Facility**

The existing composting facility is permitted to accept 25,000 TPA until its current end of life in 2028. The 2017 AER for the facility shows that 24,999 TPA of organic fines were accepted into the facility highlighting that the facility is currently operating at maximum capacity.

The justification for the ongoing and future acceptance of waste at the composting facility is the ongoing requirement to divert bio-waste from landfill, as provided for in EU and National policy and supported by the Eastern Midlands Regional Waste Management Plan<sup>9</sup>.

### 2.3 SITE LOCATION, CONTEXT AND PLANNING HISTORY

#### 2.3.1 Location of the Drehid Waste Management Facility

The existing facility is located within BnM's overall landholding on the Timahoe South Bog in County Kildare.

The largest concentration of houses in the vicinity of the site is in the village of Derrinturn, some 3 km north-west of the facility. The villages of Allenwood and collicity Dubh are in excess of 3 km to the south and south-east, respectively, of the site. There are not significant residential/commercial developments planned within close proximity of the site.

The R403 regional road lies south, south west and west of the site. The R403 joins the R402 regional road at Carbury, to the north-west of the site. The R402 connects to the M4 while the R403 connects to central and south County Kildare. The M4 (Dublin to Sligo/Galway) Motorway is located approximately 8 km to the north of the site, while the M7 (Dublin to Limerick/Cork) Motorway is located approximately 18 km to the south of the site.

Access to the facility is via the existing permitted site entrance at the R403 regional road and the existing 4.8 km long private access road. The facility is accessible via the network of existing regional routes which in turn link with the National Motorway network. These routes have been approved for the haulage of waste to the operational facility and for the permitted MBT facility (ABP Ref. PL09.PA0027) (which has not yet been built).

#### 2.3.2 Planning History for the Site and Bord na Móna Landholding

The planning files associated with the development of the existing facility are set out in Table 2.1.

Within the broader landholding, the existing WMF has been developed and is operational, and an MBT facility has been permitted but not built as yet. The location of the MBT facility is on the eastern side of

<sup>&</sup>lt;sup>9</sup> Policy E17 – The Plan supports the development of at least 75,000 TPA of additional biological treatment capacity in the region.





the site access road c. 700 m south of the existing MSW landfill infrastructure. The MBT facility has also been taken into consideration within Table 2.1.

An application for proposed development works, as outlined in Section 1.2 of this EIAR and detailed in Chapter 3 of the Proposed Development EIAR, was submitted to ABP in December 2017. The location of the proposed development is immediately to the south of the existing MSW landfill and composting facility. The proposed development has been taken into consideration within Table 2.1.

The following subsections within this Chapter provide outline descriptions of the key relevant planning and associated applications submitted in respect of the existing Drehid WMF site. It also provides details of Waste/IED Licenses issued by the EPA in relation to the operation of the existing landfill and composting facilities as well as the MBT facility.

Table 2.1: Planning Applications within the Bord na Móna Landholding (associated with the Drehid WMF site)

Brief Description of Previous Submissions	Reg. No.	Grant Date
Bilei Description of Frevious Submissions	Reg. No.	Grant Date
Construction of Drehid Waste Management Facility consisting of an engineered landfill site and composting facility for an operational lifespan of 20 years.	04/371 / PL09.212059	13/04/05 / 21/11/05
Proposed extension and intensification of the Drehid Waste Management Facility.	PL09.PA0004	31/10/08
Bord Na Móna sought a declaration whether or not the deposition of stable, non-reactive hazardous waste, including bound asbestos at this facility is development or exempted development. The Planning Authority (KCC) referred the case to ABP and on the 30 <sup>th</sup> August 2010 ABP issued its declaration that it is development and is not exempted development.	09.RL.2742	30/08/10
Extension of the appropriate period of the planning permission granted in 2005 under KCC reg. ref. 04/371 and ABP ref. PL09 212059 – this related chiefly to the permitted composting facility which was not yet constructed.	10/1172	25/02/11
Development of a landfill gas utilisation plant which will be phased and will generate up to 4.99 MW of electricity for input into the national grid.	11/537	19/10/11
An extension (with a gross floor space of approximately 383 square metres) to the previously permitted composting facility.	11/902	02/11/11
Development of a mechanical biological treatment (MBT) facility with a capacity of 250,000 tonnes per annum of waste (principally municipal solid waste).	PL09.PA0027	15/03/13
Section 146B request to ABP to permit intensification for 7 yrs as originally requested in PA0004 (i.e. for an additional 2 yrs to Dec. 2015).	PL09.PM0003	23/12/13





Brief Description of Previous Submissions	Reg. No.	<b>Grant Date</b>
Section 146B request to ABP to alter condition of PA0004 to permit intensification of waste for a further 2 yrs to Dec. 2017, reverting to 120,000 tonnes thereafter.  No physical change to footprint proposed  No change to the final overall volume of waste proposed	PL09.PM0008	12/09/16
Proposed development of additional waste infrastructure as outlined in Section 1.2 of this EIAR and detailed in Chapter 3 of the Proposed Development EIAR.	Case No. 300506	Pending

# Grant of Planning Permission November 2005 and EPA Waste Licence in August 2005 (Ref. 04/371 / PL.09.212059)

The Drehid WMF was granted permission by KCC in April 2005, under KCC Reg. Ref. No. 04/371 subject to a number of conditions. In November 2005, ABP upheld that planning decision with revised conditions (ABP Ref. No. PL.09.212059), following an appeal and an Oral Hearing. The EPA issued a Waste Licence for the facility in August 2005 (EPA Ref. No. W0201-01).

Under the aforementioned planning permission, and in accordance with the aforementioned Waste Licence, 120,000 TPA of waste can be disposed of to the engineered landfill site with an additional 25,000 TPA permitted for treatment at a composting facility. The operational life of this facility is 20 years.

This planning permission also provided for all associated site development works, including the development of an internal access road from the R403 regional road to the location of the landfill and composting facility. Construction of the facility commenced in August 2006 and it commenced accepting waste in February 2008.

# Grant of Planning Permission, October 2008 and EPA Waste Licence, April 2009 (Ref.PL09.PA0004)

In April 2008, a planning application was lodged directly with ABP (under the provisions of the Planning and Development (Strategic Infrastructure) Act 2006) to intensify waste acceptance and to extend the landfill footprint of the facility.

The planning application proposed the disposal of an additional 240,000 TPA of waste (over and above that previously permitted) for 7 years, with the development reverting back to receiving the previously permitted 120,000 TPA thereafter.

In October 2008, following an Oral Hearing, ABP granted planning permission (ABP Ref. No. PL09 .PA0004) to intensify waste acceptance (for disposal to landfill) to 360,000 TPA until December 2013, with tonnage for disposal at the landfill element of the facility, thereafter, to be restricted to the 120,000 TPA maximum previously permitted.





The permission also included for a landfill facility extension, which involved the construction of additional landfill capacity in the form of lined and contained cells, to ensure that the previously permitted overall life span, and/or the annual capacity of the landfill element of the facility, is not reduced as a consequence of the temporary intensification (ABP Ref. No. PL.09.212059). The EPA issued a revised Waste Licence for the facility in April 2009 (EPA Ref No. W0201-02).

#### Grant of Revised Waste Licence, March 2010

In June 2009, the EPA initiated a Waste Licence review for the Drehid WMF. The grounds for the review related to the introduction of limits on the acceptance of biodegradable municipal waste at landfill following the publishing of a technical guidance document on Municipal Solid Waste Pre-treatment and Residuals Management. The EPA issued a revised Waste Licence for the facility in March 2010 (EPA Ref. No. W0201-03).

# Declaration from An Bord Pleanála on Exempted Development Query, August 2010 (Ref. 09.RL.2742)

Bord na Móna requested a declaration on whether the deposition of stable non-reactive hazardous waste, including bound asbestos at the Drehid WMF, is or is not development, or is or is not exempted development. This case was referred to ABP by KCC on the 23<sup>rd</sup> April 2010. ABP issued its declaration on the 30<sup>th</sup> of August 2010 that the deposition of stable, non-reactive hazardous waste, including bound asbestos, is development and is not exempted development.

# Extension of Duration of Planning Permission February 2011 (Ref. 10/1172)

In November 2010, Bord na Móna applied onder Section 42 of the Planning and Development Act, 2000 (as amended), for the extension, by an additional two years, of the appropriate period of the Planning Permission granted in 2005 (KCC Reg. Ref. No. 04/371, ABP Ref. No. PL09.212059).

In February 2011, KCC (KCC Reg. Ref No. 10/1172) granted an extension of the duration of the aforementioned Planning Permission for construction of the Drehid WMF for a period of two years from the 14<sup>th</sup> of January 2011. This was chiefly to cover construction of the composting facility which had not yet been constructed.

#### Grant of Planning Permission for Landfill Gas Utilisation Plant, October 2011 (Ref. 11/537)

In May 2011, Bord na Móna lodged a planning application with KCC (KCC Reg. Ref No. 11/537) for the development of a landfill gas utilisation plant. The proposed development of the landfill gas utilisation plant will be phased and will generate up to 4.99 MW of electricity for input into the national grid. Planning permission was granted for this application in October 2011.

#### Planning Permission Granted for a Composting Facility Extension, November 2011 (Ref. 11/902)

Also in 2011, a planning application was lodged for an extension (with a gross floor space of approximately 383 m<sup>2</sup>) to the previously permitted composting facility. No increase to the previously permitted waste acceptance of 25,000 TPA at the composting facility was proposed, rather, the





application sought only an extension to provide additional floor space. Planning permission was granted for this development by KCC in November 2011.

#### Grant of Permission for the development of a MBT Facility, March 2013 (Ref. 09.PA0027)

Bord na Móna applied for planning permission for the development of an MBT facility which would primarily accept and process MSW and provide for an overall capacity of 250,000 TPA. The application for the proposed development was made directly to ABP as 'Strategic Infrastructure Development' under the provisions of Section 37 of the Planning and Development (Strategic Infrastructure) Act, 2006, the Planning and Development Act, 2000 as amended and the associated Planning Regulations. Planning permission was granted for this development in March 2013, following an Oral Hearing.

The EPA issued a Waste Licence for the facility in February 2014 (EPA Ref. No. W0283-01).

# Grant of Planning Permission for the intensification of the Drehid Waste Facility, December 2013 (Ref. 09. PM0003)

In June 2013, Bord na Móna, under section 146B of the Planning and Development Act 2000, submitted a request to ABP to alter Condition 1 attached to the approved grant under reference 09.PA0004 in relation to the extension and intensification of the Drehid WMF.

The request was for the alteration to the terms of the permission in order to allow MSW to be disposed of at the Drehid facility at a higher rate of 360,000 TPA until the 1st of December 2015. After this period the disposal of waste would be limited to 120,000 TPA.

This was the first request for an alteration to the terms of the permission.

In September 2013, ABP informed Bord an Móna that it had decided that the proposed alteration was a material change. This in turn invoked the provisions of section 146B (8) of the Act, which required Bord na Móna to provide a public notice of the amendment and invite submissions from the public and certain prescribed bodies. Submissions, to which Bord na Móna subsequently responded, were received by ABP on the case.

The Section 146B request was granted by the Board in December 2013.

#### Activation of immediately available landfill capacity by Local Authorities, March 2016

On the 10<sup>th</sup> March 2016, all Local Authorities simultaneously and collectively invoked their powers under Section 56 of the Waste Management Act, to make Orders specifically in relation to making arrangements for a prescribed period up to 10<sup>th</sup> June 2016 for the activation of all immediately available landfill capacity and the taking of such other necessary measures to limit or prevent environmental pollution. The three Waste Management Planning Lead Authorities (the Southern Waste Region, the Connacht - Ulster Waste Region and the Eastern - Midlands Waste Region) highlighted, during the development of the New Waste Management Plans in 2015, that there is a potential shortfall in capacity nationally to deal with residual waste. The issuing of collective Section 56 Orders by all other Local Authorities was necessary to ensure





that KCC in turn acted to make certain that available capacity at the Drehid WMF was provided for disposal of waste for a defined time period until 10<sup>th</sup> June 2016. The additional capacity required to be provided at Drehid is 138,000 tonnes (6,000 tonnes per week for 23 weeks up to the 10<sup>th</sup> June 2016).

# Grant of Section 146B request to An Bord Pleanála, September 2016 (Ref. PL09.PM0008)

In April 2016, Bord na Móna, under section 146B of the Planning and Development Act 2000, submitted a request to ABP to alter Condition 1 attached to the approved grant under reference 09.PA0004 in relation to the extension and intensification of the Drehid WMF.

The request was for the alteration to the terms of the permission in order to allow MSW to be disposed of at the Drehid facility at a higher rate of 360,000 TPA until the 1<sup>st</sup> of December 2017. After this period, the disposal of waste would be limited to 120,000 TPA.

This was the second request for an alteration to the terms of the permission. ABP previously made a decision to alter Condition 1 of the permission to allow for a higher rate of waste to be accepted at the facility until the 1<sup>st</sup> of December 2015 under case reference 09.PM0003.

In June 2016, ABP informed Bord an Móna that it had decided that the proposed alteration was a material change. This in turn invoked the provisions of section 146B (8) of the Act, which required Bord na Móna to provide a public notice of the amendment and invite submissions from the public and certain prescribed bodies. Submissions, to which Bord na Móna subsequently responded, were received by ABP on the case.

The Section 146B request was granted by the Board in September 2016.

# Submission of Planning Application for development of additional waste infrastructure at the Drehid WMF to An Bord Pleanála, December 2017 (Case No. 300506)

In December 2017, a planning application was made to ABP for development of additional waste infrastructure at the facility as outlined in Section 1.2 of the EIAR. The application for the proposed development was made directly to ABP as 'Strategic Infrastructure Development' under the provisions of Section 37 of the Planning and Development (Strategic Infrastructure) Act, 2006, the Planning and Development Act, 2000 as amended and the associated Planning Regulations.

ABP made a Request for Further Information on the 24<sup>th</sup> April 2018 which Bord na Móna responded to on the 22<sup>nd</sup> May 2018.

The planning application is currently under consideration by ABP.

#### 2.3.3 Planning History for Area Surrounding the Bord na Móna Landholding

As the existing facility is situated in a rural part of County Kildare, a thorough search of KCC's website was carried out. This indicated that the majority of planning applications made in recent years in the vicinity of the facility have been for small developments such as single dwellings.





For a detailed list of planning applications made in the area surrounding the subject site and the Drehid WMF please refer to Appendix 2.1 of this EIAR.

#### 2.3.4 Overall Characteristics of the Existing Facility

The existing facility is characteristic of an industrial facility which manages and treats waste. The specific site to which this EIAR refers is an active integrated WMF.

#### 2.4 PLANNING POLICY, STRATEGY AND CONTEXT

The Waste Framework Directive (2008/98/EC) ("the WFD") sets the legal framework for waste management in the European Union. The WFD established a hierarchy of waste management and was transposed into Irish Law (Section 21A of the Waste Management Act 1996 – as inserted by Article 7 of the European Communities (Waste Directive) Regulations 2011 (S.I. No.126 of 2011)). It sets out the basic concepts and definitions relating to waste management and was introduced in 2008. The WFD places a strong emphasis on optimising resource efficiency, prevention, reuse and the recovery of mixed residual wastes, whilst also introducing the "polluter pays principle" and the "extended producer responsibility".

The WFD imposes on Member States a number of obligations regarding waste management, including:

- The application of the waste hierarchy as a priority in waste prevention and waste management legislation and policy;
- To ensure that waste is recovered (including separate collection to facilitate recovery where technically, environmentally and economically practicable) or, where it is not recovered, to ensure that waste is disposed of without causing risks to human health and the environment; and
- To establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal wastes – aiming for EU self-sufficiency and for member states individually to move towards self-sufficiency.

The principles of self-sufficiency and proximity are also highlighted within the WFD (Article 16), and require that:

- 1. "Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households including where such collection also covers such waste from other producers, taking into account best available techniques.
- 2. The network shall be designed to enable the Community as a whole to become self-sufficient in waste disposal as well as in the recovery of waste referred to in paragraph 1, and to enable Member States to move towards that aim individually, taking into account geographical circumstances or the need for specialised installations for certain types of waste.





3. The network shall enable waste to be disposed of, or waste referred to in paragraph 1 to be recovered in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health".

The Landfill Directive (Council Directive 1999/31/EC) regulates waste management of EU landfills. The overall aim of the Landfill Directive is to prevent or reduce as far as possible negative effects on the environment. The Directive is applicable to all waste disposal sites and divides them into three classes:

- Landfills for hazardous waste;
- Landfills for non-hazardous waste; and
- Landfills for inert waste.

In respect of the above, waste disposal to landfills is restricted, and those that are permitted, are subject to a standard waste acceptance procedure, the criteria of which are specified within Council Decision 2003/33/EC. Implementation of the Landfill Directive through the setting of medium and long-term targets for reducing landfilling, has enabled a better definition of waste strategies and the continuous monitoring of their progress<sup>10</sup>.

It is within the above context that the development of Irish waste policy and landfill facilities has been set. The sections below outline how the principles and objectives have been incorporated into the various levels of policy (as relevant to the existing facility) and provide a brief indication of how the facility meets or seeks to implement these provisions.

# 2.4.1 Relevant Planning and Development Policies

This section demonstrates that the existing facility fully complies with the detailed requirements of all relevant statutory planning and development plans and policies, including the following:

- Planning policies set out in the National Planning Framework and Planning Policy Statement;
- Planning policies set out in the Regional Planning Guidelines for the Greater Dublin Area, 2010
   2022; and
- Local and County planning and development policies as set out in the Kildare County Development Plan 2017-2023.

Compliance with polices set out in the Eastern-Midlands Region Waste Management Plan 2015-2021 is discussed in Section 2.4.1.9.

<sup>&</sup>lt;sup>10</sup> European Environment Agency (EEA) Report No. 7/2009



. .



# 2.4.1.1 National Planning Framework (Project Ireland 2040)

The new National Planning Framework (NPF) (Project Ireland 2040) was officially launched in February 2018 and sets out the "Sustainable Management of Water, Waste and other Environmental Resources" as one of the National Strategic Outcomes (National Strategic Outcome 9) for the period of the Plan.

The NPF reiterates the fact that "waste planning in Ireland is primarily informed by national waste management policies and regional waste management plans", and further highlights the fact that planning for waste treatment requirements to 2040 will require (interalia):

- Regional Spatial and Economic Strategies (RSESs) and the core strategies of Metropolitan Area Strategic Plans (MASPs) and city and county plans will support national and regional waste policy and efficient use of resources; and
- Adequate capacity and systems to manage waste, including municipal and construction and demolition waste in an environmentally safe and sustainable manner and remediation of waste sites to mitigate appropriately the risk to environmental and human health.

The existing landfill and composting facility represents an efficient use of an existing resource for the management of MSW.

# 2.4.1.2 National Development Plan 2018 – 2027 (Project Ireland 2040)

The new National Development Plan 2018 – 2027 Project Ireland 2040) was launched alongside the National Planning Framework in February 2018 and is fully integrated with the approach to spatial planning in Ireland as set out in the National Planning Framework.

In line with National Strategic Outcome 9 as set out above, the National Development Plan recognises the importance of developing and maintaining waste management infrastructure and states that "Capacity will continue to be built in waste facilities, including anaerobic digestion, hazardous waste treatment, plastics processing, recycling, waste to energy, and landfill and landfill remediation, to meet future waste objectives".

The Plan also notes that "Significant infrastructure capacity development will be required to separate and process various waste streams at municipal and national levels to achieve new EU legally-binding targets and the additional investment may include a potential role for public investment."

The ongoing operation and maintenance of the Drehid WMF by Bord na Móna (as a semi-state company) is important to ensuring the above capacity is available on a regional and national scale.

#### 2.4.1.3 Planning Policy Statement

The Government published its first Planning Policy Statement in January 2015, which is intended to act as a general guiding document to the operation of the planning system and to outline the key values, principles and priorities that should underpin it. Through the non-statutory Planning Policy Statement 2015, the Government wishes:





"to reaffirm its strong belief in the value of a forward-looking, visionary and dynamic planning process, because it will ensure that the right development takes place in the right locations and at the right time and in providing the social, economic and physical infrastructure necessary to meet the needs of our people in a way that protects the many qualities of our natural and built environment".

The policy statement sets out a number of key principles, the following of which are relevant to the proposed development:

- 1. "Planning must be plan-led and evidence based so that at the appropriate level, from the National Spatial Strategy, Regional Spatial and Economic Strategies, City and County Development Plans and Local Area Plans, the Government, local authorities and local communities, work together to set out a cohesive vision for the future of our country.
- 2. Planning must proactively drive and support sustainable development, integrating consideration of its economic, social and environmental aspects at the earliest stage to deliver the homes, business and employment space, infrastructure and thriving urban and rural locations in an economically viable manner that will sustain recovery and our future prosperity.
- 6. Planning will encourage the most efficient and effective use of previously developed (brownfield) land over the use of greenfield and to ensure the most efficient use of existing infrastructure, enhancing and strengthening the continued vitality of existing communities through regeneration.
- 9. Planning will support the protection and enhancement of environmental quality in a manner consistent with the requirements of relevant national and European standards by guiding development towards optimal locations from the perspective of ensuring high standards of water and air quality, biodiversity and the minimisation of pollution risk".

The existing facility embodies the above principles in that:

- i. The facility was constructed and developed in accordance with an evidence-based requirement for waste infrastructure;
- ii. The continued future use of the facility is sustainable in terms of utilising existing infrastructure and permitted development;
- iii. The facility supports the transition to a low carbon economy through the treatment of waste by an accepted means, proximate to primary generation source; and
- iv. The facility supports the protection and enhancement of environmental quality, without impacting on designated sites.





#### 2.4.1.4 Regional Planning Guidelines for the Greater Dublin Area

The Regional Planning Guidelines (RPGs) for the Greater Dublin Area (GDA) 2010 – 2022 aim to direct the future growth of the Greater Dublin Area over the medium to long term and work to implement the strategic planning framework set out in the National Spatial Strategy (NSS) published in 2002 (replaced by the National Planning Framework in February 2018).

The RPGs will be superseded by the RSESs which support the implementation of the National Planning Framework on a regional basis. The RSESs are currently being prepared by the three new Regional Assemblies which have replaced the Regional Authorities. The spatial areas of the new Regional Assemblies also reflect the Regional Waste Management Plan areas. The Eastern Midlands Regional Assembly (EMRA) published an *Initial Public & Stakeholder Consultation Issues Paper* in November 2017 which looked at the key questions that need to be answered in the RSES. The Issues Paper identified increasing waste generation volumes and the need to improve on the number of households with a waste collection service as key issues. It is intended that the draft RSES and associated environmental reports will be published in Q2 2018<sup>11</sup>.

Until the publication of the final RSESs, the RPGs will remain valid. The RPGs for the GDA (which incorporates the geographical area of Dublin City, Fingal, Dun Laoghaire-Rathdown, South Dublin, Kildare, Meath and Wicklow) set out a strategy for development in two main areas, namely the Metropolitan Area and the Hinterland. According to the RPGs, development in the Hinterland area is to be:

"focused on the high quality integrated growth and consolidation of development in key identified towns, separated from each other by extensive areas of strategic green belt land devoted to agriculture and similar uses."

Of particular relevance to the existing WMF is Chapter 6 of the RPGs. This sets out the key physical infrastructure needs for the GDA, listing key areas of priority investment under the different types of infrastructure such as transport, water supply, waste water and surface water treatment, energy and communications, and waste management.

Section 6.7 highlights the fact that "waste management infrastructure provision is an important part of the physical infrastructure investment needed in the GDA for population and economic growth". Key strategic policies and recommendations for waste management are set out in Section 6.7.1, and include the following Strategic Policy which emphasises the need to provide a range of options for the treatment and final disposal of waste:

**PIP5**: To ensure, from environmental, business and public health needs, that waste management remains a priority for local authorities and waste management regions in continuing to invest in

<sup>&</sup>lt;sup>11</sup> Eastern and Midland Regional Assembly website - http://emra.ie/regional-strategies/rses/ (Accessed on 25 June 2018)



\_



promoting and facilitating reuse and recycling by residential and commercial sources and that high standard options for treatment and final disposal of waste are available within the GDA.

The following strategic recommendations from the same section of the RPGs are also particularly relevant to the existing facility:

**PIR36** The new waste management strategy across the regions of the GDA should seek to facilitate a balanced use of resources and greater adaptability and robustness of services. Integrated waste management should be considered from the perspective of the GDA as one singular functioning economic and spatial unit and to increase economies of scale.

**PIR37** Encourage the expansion of increased levels of diversion of biodegradable waste from landfill through provision of or support for biological treatment facilities and home composting.

**PIR40** Waste management facilities should be appropriately managed and monitored according to best practice to maximise efficiencies and to protect human health and the natural environment.

**PIR41** Plans and projects associated with waste management that have the potential to negatively impact on Natura 2000 sites will be subject to Habitats Directive Assessment (HDA) according to Article 6 of the habitats directive and in accordance with best practice and guidance.

It is clear from the policies included above that the opinion of the existing facility assists in achieving the objectives set out in the RPGs by providing capacity for MSW waste disposal and bio-waste treatment.

In addition, as this EIAR demonstrates, the existing facility has been designed and sited in accordance with best practice for the protection of human health and the natural environment and has been granted planning approval by the relevant planning authorities in accordance with the relevant planning guidelines.

#### 2.4.1.5 Local and County Planning and Development Policies

Kildare County Development Plan 2017 – 2023

A key planning policy document against which the existing facility is considered is the Kildare County Development Plan (CDP) 2017 – 2023. This Plan sets out an overall strategy for the proper planning and sustainable development of County Kildare over the period 2017 – 2023. It also outlines an overall vision, along with affiliated strategies, policies and objectives for the county.

One of the main mandatory objectives of the Planning Acts relevant to the adoption and review of Development Plans, is "the provision of infrastructure including transport, energy and communication facilities, water supplies, waste recovery and disposal facilities, waste water facilities, and ancillary facilities". This primary objective sets a basis for policies in respect of waste management within the Plan,





which support the development of appropriate waste management facilities within Kildare and which would support the existing WMF at Drehid.

The Kildare CDP highlights the fact (Section 7.6.1) that the "Eastern-Midlands Region Waste Management Plan 2015-2021 [EMRWMP] provides the framework for waste management within the region and sets out a range of policies and actions to meet specified mandatory and performance-based targets". The EMRWMP recognises that managing waste in a sustainable and self-sufficient manner will be one of the key challenges for the region.

The overall development strategy ('Core Strategy') for the County is outlined in Chapter 2 of the Kildare CDP. This establishes a strategic approach to the management of development in the county. The overall core strategy builds on the principles established in the previous Kildare CDP 2011 – 2017 and the framework provided by the NSS 2002 – 2020 (replaced by the NPF, see Section 2.4.1.1 of this EIAR Chapter) and the RPGs for the GDA 2010 – 2022 (see section 2.4.1.4).

Section 2.6 of the Development Plan entitled 'SEA and the Settlement Strategy' contains a map (see Figure 2.2) which illustrates environmental conditions at a very broad, macro strategic level for the county as a whole, having regard to a range of separate environmental factors.

With regards to the location of the existing facility, the Development Plan indicates that environmental sensitivities in the County increase towards the north-west due to the presence of bogs and wetlands, and that "as the map illustrates a broad scale generalisation of sensitivities, all applications for development must be considered having regard to the individual environmental conditions of the subject site".

In addition to the above, Section 2.7 of the Plan 'Preferred Development Strategy' states that a key focus of the core strategy is on "protecting the environment by implementing an environmental protection policy which recognises the various environmentally sensitive zones within the county but not to mutually exclude appropriate and otherwise acceptable uses and development'.

The existing Drehid facility, to which this EIAR relates, is fully compliant with the CDP Core Strategy and has been assessed in this context by the planning authorities in terms of granting planning permission for the development. Furthermore, as this EIAR demonstrates, the existing facility has been carefully sited and designed to take account of the individual environmental conditions of the subject site.





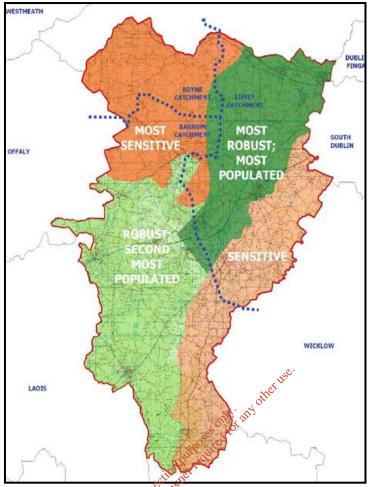


Figure 2.2: Development Plan Macro Environmental Sensitivity Map (Source: Section 2.6 – Map 2.4 Kildare County Development Plan 2017 – 2023)

Chapter 5 of the CDP (Economic Development, Enterprise and Tourism), highlights a key aim of the Plan as being to "support and facilitate the economic development of the county across a range of sectors". Section 5.3.2 identifies a number of factors which will influence the future economic development of the County including the availability of infrastructure. According to the Development Plan:

"Adequate infrastructure is essential to facilitate future economic development in the county and Kildare County Council will continue to work with infrastructure providers to secure adequate water services, effective public transport, energy, telecommunications, waste management and education facilities to support employment development.

The above statement is also related to an Economic Development Strategy Objective – specifically:

**EO 2:** Work with Irish Water, to support the provision of water, wastewater treatment and **waste management facilities** to accommodate the future economic growth of the county and to seek to reserve capacity in water services infrastructure for employment generating uses.





The above provisions outline the Council's commitment to working with the providers of waste management infrastructure, as well as the need to maintain, develop and upgrade waste management facilities in order to advance economic growth and the positive outcomes associated with this.

As regards movement and transport, Chapter 6 highlights the fact that the social, economic and environmental wellbeing of County Kildare is "dependent on the efficient and sustainable movement of people and goods within and through the County". In this regard policy MT 15 is of specific relevance to the subject proposal:

#### **MT 15**:

- (i) Seek to channel HGV traffic associated with landfill and extractive sites onto the regional and national road network insofar as possible.
- (ii) Seek appropriate and proportionate contributions towards the cost of road improvements which benefit the development, in accordance with Sections 48 or 49 of the Planning and Development Act 2000 (as amended)

The existing facility utilises previously permitted haul routes, predominantly comprising regional and national roads, all of which have been thoroughly assessed in previous planning applications. Chapter 10 of this EIAR provides further details of the haul routes, and Traffic Impact Assessment. The second part of the above policy (MT 15(ii)) reflects the provisions of Section 48 and 49 of the Planning and Development Act 2000, as amended, which was subsequently included as a Planning Condition in the Grant of Permission for the existing facility in 2008.

Chapter 7 (Infrastructure) of the CDP identifies the fact that KCC has a statutory role in regulating waste management and in pollution control. Within this Chapter, Section 7.6 (Environmental Services) sets out the Council's aim in respect of conforming "to European, National and Regional policies in relation to the provision of waste management and to protect and enhance water, air and noise quality". In this respect, the Plan highlights that the waste management policies and objectives contained within the Plan "are reflective of the overarching EU, National and Regional policy and legislation". The CDP also states that the Council "seeks to ensure the provision of the highest standards of waste management facilities...", and notes that as the Plan is required to include objectives for waste recovery and disposal facilities, "the objectives of the relevant waste management plan are deemed to be included in the Development Plan."

The following policies contained within Chapter 7 of the Kildare CDP, support the ongoing need for the existing Drehid WMF:

**WM 1:** Implement European Union, National and Regional waste related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.





- **WM 3:** Support the implementation of the Eastern Midlands Region Waste Management Plan 2015-2021 by adhering to overarching performance targets, policies and policy action.
- **WM 5:** Provide, promote and facilitate high quality sustainable waste recovery and disposal infrastructure and technology in keeping with the EU waste hierarchy and to adequately cater for a growing residential population and business sector.
- **WM** 7: Secure appropriate provision for the sustainable management of waste within developments, including the provision of facilities for the storage, separation and collection of such waste.
- **WM 10:** Encourage waste prevention, minimisation, reuse, recycling and recovery as methods of managing waste. Where waste management is not being carried out properly, the Waste Management Act 1996 as amended will be used as a means of ensuring specific national policies and regulations are adhered to.
- **WM 12:** Ensure the provision of waste management facilities in County Kildare (either directly by the Council or in co-operation or partnership with other local authorities and the private sector) is subject to the specific requirements of the Eastern-Midlands Region Waste Management Plan 2015-2021.
- **WM 15:** Support and facilitate the separation of waste at source into organic and non-organic streams or other waste management systems that divert waste from landfill and maximise the potential for each waste type to be reased and recycled or composted and divert organic waste from landfill, in accordance with the National Strategy on Biodegradable Waste 2006 and the Eastern Midlands Region Waste Management Plan 2015-2021.
- **WM 17:** Facilitate the development of waste management infrastructure that is of an appropriate scale and is related to the needs of the county and the Eastern and Midlands Waste Region, subject to the protection of the environment, landscape character, road network and the amenities of the area.
- **WM 18:** Facilitate the ongoing operation of the Drehid waste facility in so far as operations at the facility relate to the waste management needs of the County and the Eastern and Midlands Waste Region and subject to the protection of the environment, landscape character, road network and the amenities of the area.

The Environmental Services Objective associated with the above policies is stated at:

**EN 2:** Facilitate the implementation of the Eastern – Midlands Region Waste Management Plan 2015-2021.





It should be noted that policies WM 17 and WM 18 are not entirely consistent with policy WM1, nor government guidance in respect of the movement of waste (Circular WIR: 04/05 Policy guidance pursuant to Section 60 of the Waste Management Act, 1996 (as amended)).

The guidance notes that the national waste management policy document *Taking Stock and Moving Forward*, recognised a trend whereby certain planning permissions in respect of waste infrastructure restrict facilities to dealing only with waste arising within the area to which the waste management plan applies. The policy document reflected acceptance that facilities provided in a region must deal primarily with waste from that region. However, it also recognised that an unnecessarily restrictive approach may not be in keeping with the philosophy underpinning the regional approach to waste management planning and, by implication, the rational use of waste management infrastructure.

In addition, the EPA has stated that "the inter-regional movement and treatment of waste should be provided for....in appropriate circumstances." The Minister for the Environment, Heritage and Local Government issued guidance in 2005 to the effect that relevant authorities, in preparing waste management plans, determining the necessary statutory authorisations and in regard to other associated waste management functions, should recognise that the application of the proximity principle does not entail interpreting administrative waste management planning boundaries in such a manner as to inhibit the development of waste infrastructure which will support the attainment of national waste management policy objectives through the rational development and use of such infrastructure. This guidance was therefore intended to provide greater clarity in regard to the appropriate application of the proximity principle so as to facilitate the provision of environmentally sustainable and economically viable waste infrastructure in accordance with national policy.

Notwithstanding the above in respect of WM 17, the existing WMF fully accords with the Kildare CDP Policies and Objectives in ensuring that the County (and the wider region) has sufficient MSW landfill and composting infrastructure to meet the needs of the County (and the wider region). The existing facility is in accordance with EU, National, Regional and Local policies.

In accordance with guidance in respect of implementation of Directive 2014/52/EU, this EIAR has also considered aspects relating to climate change. Chapter 8 of the CDP highlights specific policies relating to Energy from Waste and Energy Efficiency in Buildings. The two most relevant policies to the existing WMF (although it is noted that the policies relate to new or extended developments) are:

**EW2:** It is the policy of Council to promote the development of waste heat technologies and the utilisation and sharing of waste heat in new or extended industrial and commercial developments, where the processes associated with the primary operation onsite generates waste heat.

**EB1:** Ensure that new development is designed to take account of the impacts of climate change, and that energy efficiency and renewable energy measures are incorporated in accordance with national building regulations, policy and guidance.





In the above regard, Chapter 14 (Climate) of this EIAR outlines those factors applicable to the existing facility. In addition, landfill gas generated in the MSW landfill is utilised to generate green electricity at the facility's landfill gas utilisation plant (refer to Section 3.7).

Due to the location of the facility, regard has also been had to Chapter 10 (Rural Development) of the CDP and, in particular, to those provisions and policies which relate to rural-based economic activity and boglands in these areas. In respect of these, the CDP strategy seeks to:

Promote the achievement of the goals and objectives of European and National plans and strategies. The Council will continue to support the work of local agencies and groups responsible for rural development within the county. A number of elements of the county's rural economy will be promoted including agriculture, equine, horticulture, forestry, boglands and renewable energy together with the continued modernisation of the farming/food sector. In parallel, the quality of the rural environment will be enhanced and protected from inappropriate development and/ or practices.

It is acknowledged within the Plan that there is a role for rural employment in contributing to the general economic development of the County, and that in relation to this othere is a "need to balance social and economic activity with the protection of the environment and character of the rural landscape" specifically, as set out in Section 10.4 of the CDP:

- **BL 1**: Ensure that a balanced approach is taken to the development of the county's peat resources and the restoration of cutaway bogs; in order to minimise the negative impact on biodiversity and the archaeological and cultural heritage of the county.
- **BL 6**: Support the development of the peatlands within the county for appropriate alternative uses, subject to environmental considerations and nature designations.

The existing facility fully complies with these policies in that it represents an appropriate land use, and forms part of a balanced approach to an area characterised by peatlands; involving the continued development of the existing facility within the site. The existing facility incorporates activities which have full regard to all relevant environmental considerations and nature designations.

In consideration of the above, the provisions and policies outlined within Section 10.4.10 (Rural Enterprises) also largely positively support the facility insofar as the existing waste activity is one that by its nature is appropriate, and in fact required to be located, within rural areas:

Commercial/industrial developments in rural areas may be acceptable subject to proper planning considerations, where the Council is satisfied that the proposed development requires to be located in the rural area due to its dependence on an existing local resource or source material that is required for the carrying out of the industrial process/commercial activity/service. The local





resource or source of material shall be in close proximity to the location of the proposed development.

**RE 4**: Support the provision of a high-quality rural environment, encourage diversification and improved competitiveness of the rural economy, sustain the livelihood of rural communities and promote the development of the wider rural economy, all within the context of the sustainable management of land and resources.

In the same way, and as is demonstrated within this EIAR, the existing facility also fully complies with the key rural development objective REO 1 which is set out in Section 10.5:

**REO 1**: Continue to support rural development within the county as a contributory means of sustaining the local economy.

As with the previous Kildare CDP, Chapter 14 (Landscape, Recreation and Amenity) references the Landscape Character Assessment (LCA) undertaken for the county in 2004. Within the context of this LCA, the Drehid WMF site is located within the 'Western Boglands' Landscape Character Area, as illustrated on Figure 2.3.





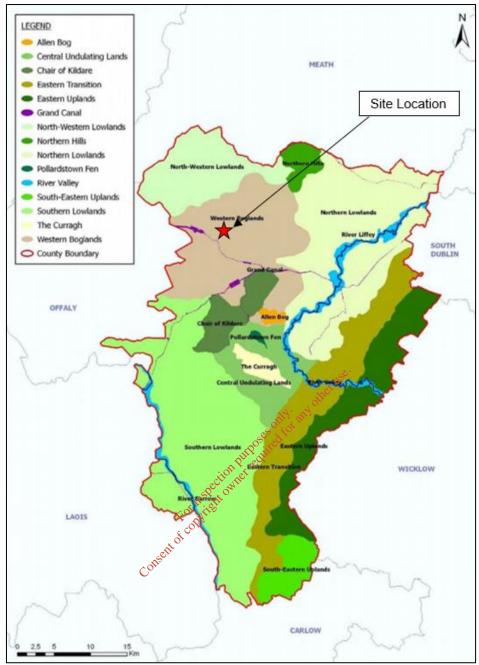


Figure 2.3: Kildare Landscape Character Areas (Source: Kildare County Development Plan 2017 – 2023)





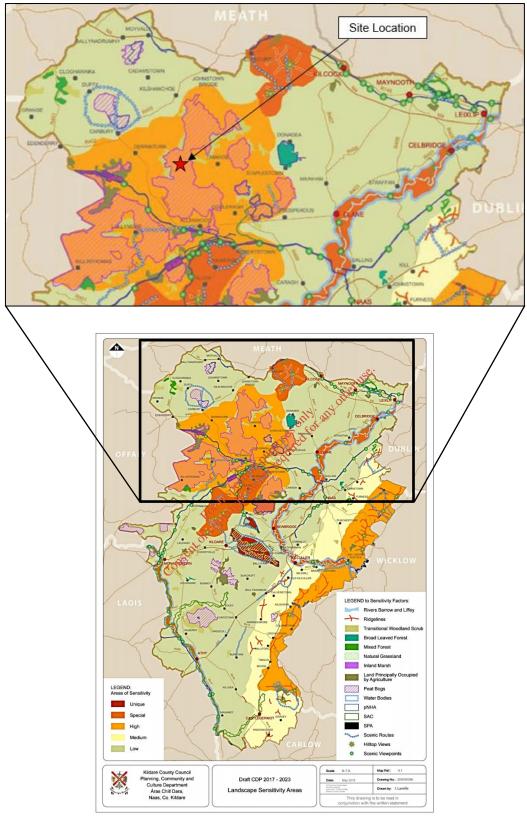


Figure 2.4: Kildare Landscape Sensitivity Areas (Source: Kildare County Development Plan 2017 – 2023)

Table 14.1 of the CDP indicates the dominant sensitivity of each LCA with the accompanying note (Section 14.4) which states "It is important to note that within each of these areas there can be a wide





variety of local conditions that can significantly increase or decrease sensitivity". Within this context, the Western Boglands has been classified as having a High Sensitivity rating (Class 3).

Landscape areas of High Sensitivity are described as "areas with reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors". Landscape Sensitivity Areas based on the findings of the LCA are indicated in Figure 2.4 above. This illustrates that the Drehid WMF is situated within an area described as comprising a Peat Bog Sensitivity Factor within a High Sensitivity Area.

Within Chapter 14, Section 14.4.2 examines the impacts of development types on different landscape areas. Table 14.3 in the CDP provide guidance on the "likely compatibility between a range of land-use classes and the Principal Landscape Areas of the county classified by sensitivity". 'Industrial Projects' are indicated has having a 'Medium' compatibility rating within the Western Boglands area.

The "likely compatibility between a range of land-uses and proximity of less than 300 m to the Principle Landscape Sensitivity Factors" is provided in Table 14.4 of the CDP. In this respect, Industrial Projects are considered to be 'Very unlikely to be compatible' within Peat Bogs. Notwithstanding this and as already noted above, the Plan acknowledges the uniqueness of individual developments and that these need to be assessed at micro/local level landscapes where their ability to absorb development varies, and that each site should be assessed on its individual merits.

Additional Landscape Policies within the Chapter considered to be of relevance to the existing facility are:

- **LA 1**: Ensure that consideration of landscape sensitivity is an important factor in determining development uses. In areas of high landscape sensitivity, the design, type and the choice of location of proposed development in the landscape will also be critical considerations.
- **LA 2:** Protect and enhance the county's landscape, by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the existing local landscape.
- **LA 3:** Require a Landscape/Visual Impact Assessment to accompany significant proposals that are likely to significantly affect:
  - Landscape Sensitivity Factors
  - A Class 4 or 5 Sensitivity Landscape (i.e. within 500 m of the boundary)
  - o A route or view identified in maps 14.2 and 14.3 (i.e. within 500 m of the boundary)
- **LA 4:** Seek to ensure that local landscape features, including historic features and buildings, hedgerows, shelter belts and stone walls are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development.





#### LA 7: Be informed by consideration of the County Landscape Character Appraisal.

A Landscape and Visual Impact Assessment has been undertaken as part of this EIAR. This assessment has taken account of the landscape character area in which the site is situated - including consideration of any views and scenic routes within the vicinity of the site (Chapter 8 of this EIAR). Although located in a landscape character area of High Sensitivity, the Drehid WMF is an existing facility and the ongoing operations at the facility will continue the emerging trend within the Bord na Móna land holding.

A number of specific policies are also outlined in respect of the specific Landscape Character Areas. Those applicable to the site and relating to Lowland Plains and Boglands Character Areas (Section 14.8.2) are identified as:

- LL 1: Recognise that the lowlands are made up of a variety of working landscapes, which are critical resources for sustaining the economic and social well-being of the county.
- LL 2: Continue to permit development that can utilise existing structures, settlement areas and infrastructure, whilst taking account of the visual absorption opportunities provided by existing topography and vegetation.
- LL 3: Recognise that this lowland landscape character area includes areas of significant landscape and ecological value, which are worth of protection.
- LL 4: To recognise that intact boglands are critical natural resources for ecological and environmental reasons.
- LL 5: To recognise that cutaway and cut-over boglands represent degraded landscapes and/or brownfield sites and thus are potentially robust to absorb a variety of appropriate developments.

The Biodiversity Chapter of this EIAR (Chapter 5) examines the ecology of the site and identifies the potential impacts that the existing facility may have on the ecological features of the site and surrounding environs. The site is an established WMF located within a large area of cut-away bogland, which is deemed suitable to absorb such developments due to the robust nature of these lands and its existing use.

In addition to the above, it is noted that there is a perceived inconsistency between the landscape sensitivity classification of High12 for Western Boglands (within which area the facility is located) and Policy LL5, which recognises that cutaway and cutover peatlands (which form a significant part of the Western Boglands) are robust enough to absorb a variety of appropriate developments.

In the above regard, it is noted that both the existing WMF and permitted MBT facility at Drehid have previously been evaluated by KCC and ABP on appeal (and through direct application as SID proposals

<sup>&</sup>lt;sup>12</sup> This differs from the 2011-2017 Kildare County Development Plan which classified the Western Boglands as an Area of Medium Landscape Sensitivity





in respect of the intensification of the Drehid WMF and the MBT facility applications). Within this context, both authorities have previously noted that the development and operation of a waste management facility, in this location, is compliant with the policies relating to landscape character areas.

Development Standards are outlined within Chapter 17 of the Kildare CDP. These are the standards which the Planning Authority uses to assess development proposals. Within this context, the CDP states that "in assessing development proposals for, or including, waste recovery / disposal facilities, the Planning Authority will have regard to the provisions of the Eastern-Midlands Region Waste Management Plan 2015-2021, planning legislation, the County Development Plan policies as set out in Chapter 7 and other relevant planning documents". The existing facility has considered and complied with all relevant planning legislation such that the planning application for the facility was validated and granted permission.

As demonstrated through the relevant extracts above, the existing facility is fully compliant with the provisions, objectives and policies of the Kildare CDP 2017 – 2023. The framework policy, as highlighted above within the CDP is thus supportive of the ongoing operation of the existing facility.

In addition, this EIAR demonstrates that all possible measures are being taken to ensure that the ongoing operation of the existing facility in accordance with the current ED Licence will not have an undue impact on the environment. Furthermore, it is clear that the existing facility will continue to facilitate the provision of the necessary waste disposal and recovery infrastructure in the county and the wider regions.

#### 2.4.1.6 Sectoral Guidance and Reports for Other Relevant Bodies

In addition to the planning policy documents dealt with previously, the existing facility is also considered in light of the general waste policy within Ireland, and key sectoral guidance, policies and reports, including:

- Government policies (including recent draft policies) on the management and treatment of waste, as issued by the Department of the Environment, Community and Local Government (now the remit of the Department of Communications, Climate Action and Environment – DoCCAE);
- Sectoral policies set out by other relevant agencies such as the EPA and Forfás; and
- Policies set out in the Regional Waste Management Plans for the Waste Planning Regions which will are served by the existing facility.

These are briefly outlined below, with a summary being provided at the end of each sectoral review.

#### 2.4.1.7 Government Waste Policies and Guidance

There has been a significant evolution in National Waste Management Policies as issued by the DoCCAE (previously the Department of Environment, Heritage and Local Government (DoEHLG)) since the mid to late 1990s.





Government policy documents have moved from an initial focus on the development of modern, engineered landfill capacity and the promotion of recycling to fiscal measures to influence environmental performance as well as policies promoting and directing the emerging technologies in this sector.

In addition, Government waste management guidance has been based on a regional approach to waste management and planning, as embodied by the various regional waste management plans. Key waste management policy statements published by the Government since the late 1990s include:

- 1. Waste Management: Changing Our Ways (1998);
- 2. Preventing and Recycling Waste: Delivering Change (March 2002);
- 3. Waste Management: Taking Stock and Moving Forward (April 2004);
- 4. National Overview of Waste Management Plans (2004);
- 5. Policy Guidance Notes under Section 60 of the Waste Management Act, 1996 (May 2005);
- 6. National Strategy on Biodegradable Waste (April 2006);
- 7. International Review of Waste Management Policy (September 2009);
- 8. Towards a New National Waste Policy Discussion Document (August 2011); and
- 9. A Resource Opportunity Waste Management Policy in Ireland (July 2012).

The following sections will provide a brief overview of each of these policy documents to demonstrate that the proposal accords with the Government's overall approach to waste management in Ireland.

# 1) Waste Management: Changing Our Ways (1998)

The policy statement *Waste Management: Changing Our Ways* was published by the Minister for the Environment and Local Government in October 1998. The policy approach adopted in *Changing Our Ways* was one of integrated waste management based on the hierarchy of options, officially adopted by the European Union.

The illustration in Figure 2.5 shows that this approach places greatest emphasis on waste prevention, followed by minimisation, re-use, recycling, energy recovery and, finally, the environmentally sustainable disposal of residual waste.





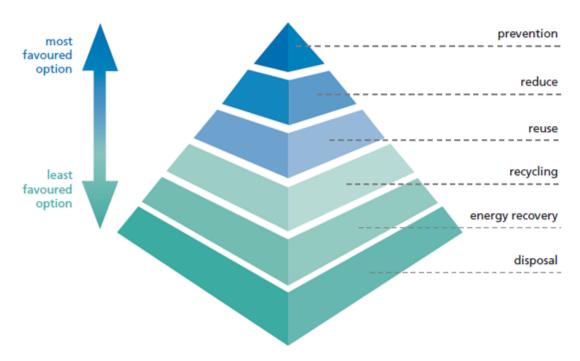


Figure 2.5: European Union Waste Hierarchy (Source: EPA, *Municipal Solid Waste: Pre-Treatment and Residuals Management* (2009))

The Government's *Changing our Ways* policy document highlighted the need for a new approach to the delivery of waste infrastructure and services, challenging the older model of stand-alone provision of waste services by individual Local Authorities. It also emphasised the need for co-operation with neighbouring Local Authorities and the utilisation of the private sector to contribute to the delivery of services.

Local Authorities were encouraged to adopt a regional approach to waste management planning in order to secure a level of scale and activity which would provide a sound basis for the development of integrated and innovative waste management solutions.

Significantly, *Changing Our Ways* also sought to secure and progress rationalisation of the municipal landfill network, the ultimate target being an integrated network of c. 20 No. state-of-the-art facilities incorporating energy recovery and high standards of environmental protection<sup>13</sup>.

#### 2) Preventing and Recycling Waste: Delivering Change (2002)

Preventing and Recycling Waste: Delivering Change evolved from and was grounded in the Changing Our Ways document which established a national policy framework for the adoption and implementation of strategic waste management planning.

Delivering Change addressed the factors and practical considerations that are relevant to the achievement of Government policy objectives and for the prevention and recovery of waste. This policy

<sup>&</sup>lt;sup>13</sup> As stated in Paragraph. 4.1 of Changing our Ways, (1998).





statement established a series of objectives in terms of the implementation of the waste hierarchy based on minimisation of waste generation and improving levels of recycling of generated waste.

#### 3) Waste Management: Taking Stock and Moving Forward (2004)

The overall policy approach set out in *Taking Stock and Moving Forward* remained grounded in the concept of integrated waste management, based on the EU waste hierarchy and designed to achieve the ambitious targets set out in the *Changing Our Ways* publication by 2013.

While *Taking Stock and Moving Forward* acknowledged the considerable progress made in improving waste management, it made it clear that further work remained to be done to put the full range and scale of waste infrastructure in place.

#### 4) National Overview of Waste Management Plans (2004)

The National Overview of Waste Management Plans which was published in tandem with Taking Stock and Moving Forward set out on a region by region basis the progress made (up to end of 2003) in providing the principal pieces of waste infrastructure envisaged in Local Authority waste management plans.

In terms of the Kildare Region, the *National Overview* concluded that the estimated landfill capacity in the County in 2001 was two years (based on the EPA *National Waste Database Report 2001*); but that this had increased to six years in 2004 based largely on the EPA decision to issue a Waste Licence for a private municipal facility at Usk (which ultimately was never developed).

#### 5) Policy Guidance Notes Under Section 60 of the Waste Management Act, 1996 (2005)

Policy Guidance Notes pursuant to Section 60 of the Waste Management Act, 1996 (as amended), (circular WIR 04-05) were issued by the Minister in May 2005 to address the issue of actions against illegal waste activity as well as the movement of waste between waste management plan areas.

With specific regard to the movement of waste, the *Policy Guidance Notes* addressed what it termed the "unnecessarily restrictive" approach to limiting waste management facilities to dealing only with wastes arising in the area to which the relevant Waste Management Plan applied.

According to these *Policy Guidance Notes*, such an unnecessarily restrictive approach "may not be in keeping with the philosophy underpinning the regional approach to waste management planning and, by implication, the rational use of waste management infrastructure" <sup>14</sup>.

# 6) National Strategy on Biodegradable Waste (2006)

The National Strategy on Biodegradable Waste set out Government policy for the diversion of biodegradable municipal waste (BMW) from landfill, building upon the key objectives established in preceding policy documents. The primary focus of the policy, therefore, was tackling the challenge of

<sup>&</sup>lt;sup>14</sup> Page 4, Circular WIR: 04/05, DoEHLG (May, 2005)



-



meeting the limits set for the quantity of BMW which is permitted to be sent to landfill under the EU Landfill Directive (1999/31/EC).

In order to meet the targets set out in the various Waste Management Plans, the *National Strategy on Biodegradable Waste* highlighted that a "several-fold increase in recycling capacity and biological treatment capacity is required" and that "there is therefore an urgent need to procure the necessary alternative waste treatment capacity which will facilitate diversion of biodegradable municipal waste away from landfill".

#### 7) International Review of Waste Management Policy (2009)

An *International Review of Waste Management Policy* was commissioned by the DoEHLG in 2008 and published in 2009. Prepared by Eunomia Research and Consulting (and Partners) the objective of the study was to identify possible challenges to policy at a national level in order to assist Ireland to move towards a sustainable resource and waste policy, and examine the prevailing legal, institutional and organisational arrangements and analyse potential changes which could assist in achieving policy goals, as well as national and international obligations.

The report makes a number of significant recommendations and emphasises the importance of waste minimisation and prevention with only the smallest volumes of waste then requiring treatment and/or disposal. Ultimately, it concludes that the impact of waste policies should increase recycling and composting/digestion at the expense of other forms of residual waste treatment, including incineration.

## 8) Towards a New National Waste Policy (2011)

In August 2011, the Government published its own consultation document on waste management in Ireland entitled *Towards a New National Waste Policy*. This document is not intended to be prescriptive, but rather puts forward an outline of possible policy initiatives for consultation and takes on board submissions made to the previous Government's *Draft Statement of Waste Policy*.

Towards a New National Waste Policy was prepared in light of the transposition of the Waste Framework Directive (2008/98/EC) (WFD) into Irish law in March 2011. The substantive changes in the Directive are aimed at encouraging the greater reuse and recycling of waste, whilst it also sets out to simplify the fragmented legal framework that has regulated the waste sector to date. The Directive also requires Member States to apply the waste hierarchy as a priority order in waste prevention and management legislation and policy.

According to the publication, the development of a new waste policy is to be guided by a set of principles which, taken together with our obligations as an EU Member State, will inform how Ireland deals with its waste in the coming decade and beyond. One such principle is that "the policy will be sufficiently flexible to respond to emerging developments in relation to technology, operational practice and wider thinking in the waste management policy realm". The document goes on to state that:





"Waste, just like many other sectors, has developed a range of technologies and practices in recent decades and will develop newer, more efficient and effective technologies and practices in the years ahead. The policy will allow for flexibility to take advantage of new thinking and advances once such approaches are proven".

In relation to the overall operation of the waste management planning system, *Towards a New National Waste Policy* continues to emphasise the need for flexibility in relation to inter-regional movements of waste. According to the publication, this is to ensure "that regional boundaries do not operate in a rigid manner, preventing the most efficient use of infrastructure in pursuit of overall national targets/obligations".

#### 9) A Resource Opportunity – Waste Management Policy in Ireland (2012)

This document was published by the Government in July 2012. In the context of the EU WFD, this national policy document sets out the measures through which Ireland will make the further progress necessary to become a recycling society.

There are a number of guiding principles in this document including that "when waste is generated we must extract the maximum value from it by ensuring that it is reused, recycled or recovered, including by the appropriate treatment of mixed municipal waste or residual waste collected in our black bins".

The document notes that the waste projections set out in the EPA's *National Waste Report 2010*, which are based on the Economic and Social Research freeland's (ESRI's) sustainable development model for Ireland, "anticipate that municipal waste arisings will increase by 825,000 tonnes (to 3.7m tonnes) within the next 15 years". The point is also made that:

"While there may be sufficient management capacity in the immediate future, the predicted growth of municipal waste within the coming decade will necessitate investment in waste management infrastructure."

This national policy document required the preparation of a Regional Waste Management Plan for each of the three waste regions. This was in recognition of the nature of the Irish waste market and the movement of waste across existing boundaries to avail of waste management infrastructure. This also reflects one of the key objectives of the waste management plans in respect of principles relating to proximity and self-sufficiency, and the need to ensure a sufficiency of waste management infrastructure within the State to manage municipal waste.

#### Summary of Government Waste Management Policy

The brief review of Government waste management policy presented above indicates a growing emphasis on the need to meet ambitious landfill diversion targets set out in various EU Directives by improving Ireland's waste management system as a whole.





This approach includes adopting a more flexible approach to the regional treatment of waste flows which must be seen in the national context of Ireland's commitments to meeting its waste management policy objectives. It also entails a growing emphasis on the need for greater sustainability as regards waste management, through the provision of better facilities in order to counteract unsustainable waste management practices.

The existing facility fully accords with the above-outlined Government waste management policy approach and is assisting Ireland in aligning with the EU principles of self-sufficiency in waste management and optimisation of proximity of waste management infrastructure close to the source of generation.

#### 2.4.1.8 Sectoral Agency Advice (EPA and Forfás)

The EPA is responsible for the licensing and environmental enforcement of major waste facilities in Ireland. In addition, it is also responsible for producing national statistics on waste generation and management in Ireland, including information on waste exports and imports.

Forfás was Ireland's policy advisory board for enterprise, trade, science, technology and innovation. The board was dissolved in 2014 and the activities of the organisation were transferred to other bodies including the Department of Jobs, Enterprise and Innovation (now the Department of Business, Enterprise and Innovation), Enterprise Ireland, IDA Ireland, the Irish National Accreditation Board (INAB) and the Health and Safety Authority (HSA). From 2006 to 2014, the organisation has prepared annual Waste Benchmarking Studies in order to assess Ireland swaste management performance.

Relevant documents from these organisations are outlined below:

# 1) National Waste Report 2012 (2014) - EPA

The National Waste Report from the EPA has an objective to present the most up to date data available on waste generation and management (as reported to the EPA). The year 2012 is the most recent report available 15 and addresses MSW, waste streams subject to producer responsibility initiatives as well as construction & demolition and hazardous wastes.

Ireland met all of its EU obligations across a broad range of waste legislation in 2012. It was stated in the report that "there was 2,692,537 tonnes of municipal waste generated in 2012 which is a 4.6% lower than municipal waste generation in 2011. There was 2,478,337 tonnes of municipal waste managed in 2012 which is 2.7% lower than municipal waste managed in 2011". It is also stated that "The quantity of municipal waste disposed of to landfill continues to fall – approximately 24% less municipal waste was disposed to landfill in 2012 compared to 2011".

<sup>&</sup>lt;sup>15</sup> The most recent National Waste Report was published in August 2014 reporting waste information for 2012. There have been four bulletins published to date, the most recent for 2013 waste data.





The report highlights the importance of the existing landfill in Drehid stating that "Approximately 54% of the tonnage of municipal waste disposed was accepted at three landfills: Drehid and Ballynagran Landfills (Eastern and Midlands Region) and Gortadroma Landfill (Southern Region)".

In relation to BMW, the report states that "There was a decrease in the percentage of BMW in municipal waste sent to landfill for disposal in 2012 compared to 2011 (54% in 2012, 57% in 2011)" and that "There was a significant decrease in the amount of untreated waste going to landfill compared to 2011".

These statements by the EPA (albeit from 2012 waste data) highlight the importance and necessity for the ongoing operation of landfilling and composting at the Drehid WMF.

# 2) Waste Management Benchmarking Updates (2009 and 2010) - Forfás

In its role as Ireland's policy advisory board for enterprise and science, Forfás published regular reports on the state of the country's waste management infrastructure which is seen as having a key role to play in the overall competitiveness of the national economy. Key findings set out in the 2009 and 2010 reports state that:

- "Ireland continues to have a relatively high reliance on another interest and Irish companies continue to have a limited choice of waste treatment solutions compared to their competitors" <sup>16</sup>;
- "Waste management infrastructure rollout in Treland remains slow. A range of infrastructures necessary to meet Ireland's waste management requirements need to be accelerated including: thermal treatment capacity to recover energy from municipal and industrial waste; thermal treatment or landfill capacity for hazardous waste; biological treatment (composting, anaerobic digestion) and reprocessing capacity for recovered materials (e.g. paper, glass, plastic, metal recycled materials)" <sup>17</sup>; and
- "Although still remaining high, Irish municipal waste generation per capita decreased in 2008 (most recent data available) in line with the slowdown in economic activity and increased waste prevention measures. Future volumes of municipal waste are expected to increase within the coming decade, necessitating investment in waste management infrastructure" 18.

The most recent Forfás Waste Management Benchmarking Report (2010) set out a number of specific policy objectives which should be put in place to avoid impacting on the competitiveness of Irish enterprise. One such objective, *Delivering necessary waste infrastructure* states that:

• "There is an urgent need to accelerate the delivery of waste infrastructure projects along the waste hierarchy to deal with future projected increases in waste. Specific infrastructures that need to be prioritised include:

<sup>&</sup>lt;sup>18</sup> Page 4, Waste Management Benchmarking Update, Forfás (2010)



41

<sup>&</sup>lt;sup>16</sup> Press Release, Waste Management Benchmarking Update, Forfás (2009)

<sup>&</sup>lt;sup>17</sup> Page 2, Press Release for the Waste Management Benchmarking Update, Forfás (2009)



- Thermal treatment capacity to recover energy from municipal and industrial waste.
- o Thermal treatment or landfill capacity for hazardous waste.
- Biological treatment capacity (composting, anaerobic digestion).
- Reprocessing capacity for recovered materials" 19.

## Summary of Relevant Agency Sectoral Policy Guidance

In summary, the sectoral policy guidance documents reviewed in the previous section emphasise the challenges facing Ireland in meeting its obligations under the latest EU Waste Management Directives and in particular the EU Landfill Directive.

They also point out that, despite improvements in the country's waste management system, not enough is being done to make use of new waste management technologies. These changes in policy at the national, regional and local level provide a significantly positive context for the existing facility in highlighting the importance and necessity for the ongoing operation of critical waste infrastructure such as MSW landfill capacity and composting facilities.

#### 2.4.1.9 Regional Waste Management Plans

Since the mid-1990s waste in Ireland has been managed, and planned for, on a regional basis. The Waste Management Act 1996 introduced the requirement for Local Authorities to make and implement detailed Waste Management Plans (WMPs). Nationally, there were previously ten Waste Management Regions.

The EU WFD, published in 2008, has resulted in revisions to the waste hierarchy, the principles of proximity and self-reliance as well as waste treatment definitions. The Directive places a greater emphasis on optimising resource efficiency, prevention, reuse and the recovery of mixed residual wastes. In 2012, the Government's blueprint for a circular waste economy, as set out in *A Resource Opportunity* – *Waste Management Policy in Ireland* (see also above at Section 2.4.1.7 (9)) established a new framework for the provision of effective and efficient waste management services through the establishment of three new waste management planning regions (as illustrated in Figure 2.6). The new waste management regions comprise the Eastern - Midlands Region, the Connacht - Ulster Region and the Southern Region.

It is particularly noted that a key objective of waste management plans is to ensure a sufficiency of waste management infrastructure to manage municipal waste. The following section of this Chapter will firstly provide a brief overview of the key relevant policy document in respect of regional waste management plans - namely the Eastern - Midlands Region Waste Plan. It will also address the relevant aspects of the Southern Region Waste Plan and the Connaught - Ulster Region Waste Management Plan.

<sup>&</sup>lt;sup>19</sup> Page 7, Waste Management Benchmarking Update, Forfás (2010)



. .





Figure 2.6: New Waste Management Regions
(Source: Eastern-Midlands Region Waste Management Plan 2015 – 2021)

#### Eastern - Midland Region Waste Management Ran 2015 - 2021

The relevant regional waste plan associated with the Drehid WMF is the Eastern - Midlands Region Waste Management Plan (EMRWM Plan). It provides a framework for the safe and sustainable management and prevention of waste. The Plan is a statutory document and was prepared by the Local Authorities of the region which included Louth, Offaly, Meath, Wicklow, Westmeath, South Dublin, Dublin City, Fingal, Dún Laoghaire, Kildare, Laois and Longford.

The preparation of the EMRWM Plan allowed for the Local Authorities to evaluate the existing waste management practices in the region. This process in turn allowed for the identification of measures which were succeeding and those which were not performing as well as anticipated. The outcome of the evaluation led to the formulation of new policies and measures for the improvement of waste prevention and management in the region.

The EMRWM Plan sets out policies for infrastructural development in the region which take the findings of market analysis into consideration. The policies are largely relevant and targeted at the lead authorities, Local Authorities and operators in the waste market. In summary, policies of significance to the existing Drehid WMF are as follows:

• (E8): The waste plan supports the development of disposal capacity for the treatment of hazardous and non-hazardous wastes at existing landfill facilities in the region subject to the





appropriate statutory approvals being granted in line with the appropriate environmental protection criteria;

- (E9a): The on-going availability of disposal facilities for non-hazardous municipal residual wastes in the region will be required during the plan period. The local authorities consider there is no need to provide additional disposal facilities for residual waste over and above the existing authorised (i.e. operational, inactive or uncommenced) facilities in place; and
- (E17): The waste plan supports the development of at least 75,000 tonnes of additional biological treatment capacity in the region for the treatment of bio-wastes (food waste and green waste) primarily from the region to ensure there is adequate active and competitive treatment in the market. The development of such treatment facilities needs to comply with the relevant environmental protection criteria in the plan.

Many of the policies set out within the EMRWM Plan have a direct association with the existing Drehid WMF. This can be clearly seen in policies which address waste disposal capacity with regard to non-hazardous municipal waste and the treatment of biowaste, both of which are waste activities which are currently being carried out at the facility in accordance with the IED Licence.

Within section 16.4.3, the Plan notes that "there will be ongoing need for landfill capacity during the plan period for processed residual wastes" and that "there is a so a need to maintain a contingency supply, in response to potential situations which pose a risk to the health and well-being of citizens, livestock and the environment".

The EMRWM Plan clearly states and outlines a number of policies and objectives which present an overall consensus that there is a valid requirement for ongoing MSW landfill infrastructure and biowaste treatment capacity in the region which is currently being provided at the Drehid WMF.

## Southern Region Waste Management Plan 2015 - 2021

The Southern Region Waste Management Plan (SRWM Plan) is also applicable to the Drehid WMF as this region boundary is adjacent to the south of County Kildare. The Plan was prepared by the Local Authorities of the region which included Limerick City and County Council, Tipperary County Council, Wexford County Council, Carlow County Council, Kilkenny County Council, Waterford City & County Council, Cork City Council, Cork County Council, Kerry County Council and Clare County Council.

Similarly to the EMRWM Plan, the approach of the SRWM Plan was to put in place coherent policy objectives and actions which align with European and national policy, and support Ireland's move to an economy defined by higher resource efficiency and productivity. The Plan's policies and actions address, where possible, local, regional and national waste issues outside of the legislative structure.





The strategic vision of the SRWM Plan is to view waste streams as valuable material resources, leading to a healthier environment and sustainable commercial opportunities. The preferred treatment of nonrecyclable residual waste is recovery.

The SRWM Plan notes that significant progress was made by the Southern Region within the lifetime of the previous plan but that challenges remain. These include, in relation to infrastructure, a gap in the endof-chain residual waste treatment capacity, which has resulted in an increase in the export of waste. It is specifically noted that the amount of residual municipal waste exported increased each year since 2011, partly in response to landfill closures and a high landfill levy (€75/tonne since 2013) and partly in response to spare capacity becoming available for residual MSW in European countries which drove down gate fees in those countries.

From the analysis of the existing situation in waste management and market analysis, the plan highlights that the local authorities anticipate "that there will be an ongoing need for landfill capacity during the plan period for processed residual wastes" as was also stated in the EMRWM Plan.

According to the SRWMP, exports provide short term gains in meeting landfill diversion targets and providing competitive gate fees. However, a continued reliance on exports could:

- Pose a potential significant risk in terms of securing tong-term and cost-effective outlets, exposing market operators to potential market shocks and increasing treatment prices;
- Impact on the national policy ambition to become self-sufficient in treating residual waste, reducing the incentive to develop local waste treatment infrastructure;
- Result in the direct loss in revenue to the Irish economy through a loss of potential gate fee revenue and energy resources; and
- Result in higher greenhouse gas (GHG) transport emissions per tonne of waste<sup>20</sup>. (potentially 3.3 times higher than the self-sufficiency option, according to the Environmental Report in the SRWM Plan).

The SRWM Plan additionally identifies the importance of energy recovery in terms of waste management and confirms that the development of waste infrastructure will be driven by the private sector as current disposal capacity is seen to be quite low, with an increase in capacity required. It also states that there is a need for the disposal facilities for a range of different wastes, including hazardous and non-hazardous wastes.

# Connacht - Ulster Region Waste Management Plan 2015 - 2021

The Connacht - Ulster Region Waste Management Plan (CURWM Plan) is an amalgamation of three previous waste management regions - Connacht, Donegal and the North-East Region. Whilst Kildare

<sup>&</sup>lt;sup>20</sup> Potentially 3.3 times higher than the self-sufficiency option, according to the Environmental Report in the SRWM Plan.





does not physically border this region, particular aspects of the Drehid WMF have larger catchment areas that would expand beyond that of the waste management region in which the proposal is situated.

Similarly to the other waste management plans, the CURWM Plan establishes the framework for prevention and management of waste by safe and sustainable means within the region, and is also a statutory document. The CURWMP encompasses the administrative areas of the Local Authorities within the region, including; Mayo County Council, Cavan County Council, Donegal County Council, Leitrim County Council, Sligo County Council, Monaghan County Council, Roscommon County Council, Galway County Council and Galway City Council.

The strategic vision of the CURWMP is to assess the approach to waste management towards viewing and establishing waste streams as valuable material resources. The plan highlights that resource efficiency and the reduction in the leakage of materials (i.e. waste) from the economy will deliver economic and environmental benefits.

The plan highlights the fact that the safe and sustainable management of wastes will be a challenge into the future and specifically notes that some of the challenges posed include a decrease in waste infrastructure facilities within the region and a lack of treatment capacity for certain waste streams. To illustrate this point, the plan identifies that there were previously eight operating licensed landfills in the Connacht-Ulster Region in 2008, which accepted menicipal waste, but that by 2012 this had been reduced to four. It is also highlighted that further reductions in the total waste accepted at landfills occurred within the region in 2013 and 2014 due to the closure of landfills and that there were only two active landfills in the region (at the time of preparation of the Plan). These were the landfills at Rathroeen, Ballina, County Mayo (operated by Mayo County Council), and at Castleblayney, County Monaghan (operated by Monaghan County Council)21.

The Plan states that Local Authorities in the region support the diversion of waste away from landfill sites and are proposing conditions to abolish the direct disposal of unprocessed residual waste to landfills. Notwithstanding this, it is highlighted that the Local Authorities anticipate that there will be an "ongoing demand for landfill capacity for the disposal of processed residual wastes".

#### Summary of Regional Waste Management Plans

The outline of key policies presented above is significant as it highlights the ongoing requirement for the provision of MSW landfill capacity within the Eastern-Midlands Waste Region as well as from the Southern and Connacht-Ulster Waste Regions. Crucially, it is highlighted that there is a lack of capacity nationally for current and future waste disposal of non-hazardous waste streams and the treatment of biowaste.

<sup>&</sup>lt;sup>21</sup> According to email correspondence from the Connacht-Ulster Regional Waste Co-ordinator on 13 November 2017, there was only one operational landfill for municipal waste in the Region - East Galway operated by Galway County Council.





It is clear therefore, that the ongoing operation of the existing WMF not only complies with the recommended approaches to waste management set out in the regional waste management plans but provides critical waste disposal and recovery infrastructure to prevent the development of potential situations which pose a risk to the health and well-being of citizens, livestock and the environment.

#### 2.5 CONCLUSION

In conclusion, it can be seen that the ongoing operations at the existing Drehid WMF are in accordance with the relevant planning permissions, strategic planning and policy considerations and the waste management principles set out in the relevant strategy and guidance documents. This is achieved principally through:

- Having full regard to and being in full compliance with all relevant Kildare CDP policies relating to the industrial development in the Western Boglands landscape character area;
- Supporting the policies of the Eastern Midlands Region Waste Management Plan which seeks
  to ensure the on-going availability of landfill disposal capacity for non-hazardous municipal
  residual wastes in the region;
- Helping to achieve the objectives set out in the RPGs by providing options for the treatment of waste in the region;
- Playing an important role in addressing infrastructural requirements highlighted in the NDP by
  ensuring the provision of more efficient, reflective and cost effective waste management
  infrastructure in the Greater Dublin Area.
- Supporting EU, national and regional waste policy objectives through the pre-treatment of biowaste prior to landfill in the composting facility;
- Contributing to the national effort of meet targets set out in Government waste management policy aimed at increasing sustainability within the waste disposal sector in Ireland;
- Providing key physical infrastructure to support continued population and economic growth whilst
  managing waste arising in the State in a sustainable and self-sufficient way, as favoured by
  sectoral policy; and
- Providing an appropriately sized waste management facility at a suitable location which is
  positioned to take advantage of the inter-regional economies of scale required to ensure the most
  efficient treatment and disposal of waste.

Finally, it can be seen that the existing facility has been designed and sited and is operated in accordance with best practice for the protection of human health and the natural environment (as indicated within this EIAR).

