## **Table of Contents**

## Chapter/Page No.

Introduction and Methodology	
Introduction & Terms of Reference Definition of EIA and EIAR EIA Legislation EIA Guidelines Screening – Requirement for an EIA Scoping Purpose of this EIAR Objectives of this EIAR Format and Structure of this EIAR EIA Project Team Non-Technical Summary Links Between EIA and Appropriate Assessment Availability of EIAR Documents Impartiality Statement of Difficulties Encountered Quotations EIA Quality Control and Review Errors	1/1 1/2 1/3 1/4 1/4 1/6 1/7 1/8 1/10 1/13 1/15 1/15 1/16 1/16 1/16 1/16 1/16 1/17
Project Description and Alternatives Examined	
Introduction and Terms of Reference Site Location and Description Project Overview Statutory Planning Context Alternatives Examined Characteristics of the Project The Existence of the Project Related Development and Cumulative Impacts Mitigation Measures	2/1 2/1 2/4 2/6 2/6 2/20 2/25 2/30 2/30
Population and Human Health	
Introduction Study Methodology The Existing Receiving Environment (Baseline Situation) Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts 'Do Nothing' Impact Avoidance, Remedial & Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement	3/1 3/1 3/2 3/6 3/7 3/13 3/13 3/14 3/14 3/15 3/15
	Introduction & Terms of Reference Definition of EIA and EIAR EIA Legislation EIA Guidelines Screening — Requirement for an EIA Scoping Purpose of this EIAR Objectives of this EIAR Format and Structure of this EIAR EIA Project Team Non-Technical Summary Links Between EIA and Appropriate Assessment Availability of EIAR Documents Impartiality Statement of Difficulties Encountered Quotations EIA Quality Control and Review Errors  Project Description and Alternatives Examined  Introduction and Terms of Reference Site Location and Description Project Overview Statutory Planning Context Alternatives Examined Characteristics of the Project The Existence of the Project Related Development and Cumulative Impacts Mitigation Measures  Population and Human Health  Introduction Study Methodology The Existing Receiving Environment (Baseline Situation) Characteristics of the Proposed Development Potential Cumulative Impacts 'Do Nothing' Impact Avoidance, Remedial & Mitigation Measures Predicted Impacts of the Proposed Development Monitoring

3.13 References 3/16

Archaeology, Architectural and Cultural Heritage	
Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References	4/1 4/1 4/5 4/19 4/20 4/22 4/22 4/22 4/24 4/25 4/25 4/25 4/25
Biodiversity (Flora and Fauna)	
Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impacts of the Proposed Development Potential cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Residual Impacts Monitoring Reinstatement Interactions Difficulties Encountered in Compiling	5/1 5/1 5/6 5/24 5/24 5/28 5/28 5/29 5/33 5/34 5/34
References and Sources	5/34 5/35
References and Sources  Landscape & Visual Impact	
	Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References  Biodiversity (Flora and Fauna)  Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impacts of the Proposed Development Potential cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Residual Impacts Monitoring Reinstatement Interactions

7.0	Land and Soils	
7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9 7.10 7.11 7.12 7.13 7.14	Introduction Study Methodology The Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Remedial and Mitigation Measures Predicted Impact of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling Information References	7/1 7/1 7/1 7/7 7/8 7/10 7/10 7/10 7/11 7/11 7/12 7/12 7/12 7/12
8.0	Water	
8.1 8.2 8.3 8.4 8.5 8.6 8.7 8.8 8.9 8.10 8.11 8.12 8.13 8.14	Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References	8/1 8/2 8/5 8/8 8/11 8/12 8/12 8/14 8/14 8/15 8/16 8/16
9.0	Air Quality and Climate	
9.1 9.2 9.3 9.4 9.5 9.6 9.7 9.8 9.9 9.10 9.11 9.12 9.13 9.14	Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References	9/1 9/2 9/7 9/12 9/13 9/16 9/16 9/17 9/18 9/19 9/19 9/20 9/20
10.0	Noise and Vibration	
10.1	Introduction	10/1

10.2 10.3 10.4 10.5 10.6 10.7 10.8 10.9 10.10 10.11 10.12 10.13 10.14 10.15	Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Cumulative Noise Impacts Inward Noise Impact Assessment Do Nothing Impact Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References  Wind	10/1 10/5 10/10 10/10 10/16 10/17 10/18 10/18 10/21 10/22 10/23 10/23 10/23 10/23
11.0	wind	
11.1 11.2 11.3 11.4 11.5 11.6 11.7 11.8 11.9 11.10 11.11 11.12	Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential Cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions References	11/1 11/1 11/2 11/4 11/6 11/10 11/10 11/11 11/11 11/11 11/12 11/12
12.0	Material Assets	
12.1 12.2 12.3 12.4 12.5 12.6 12.7 12.8 12.9 12.10 12.11 12.12 12.13 12.14	Introduction Study Methodology Existing Receiving Environment Characteristics of the Proposed Development Potential Impact of the Proposed Development Potential cumulative Impacts Do Nothing Impact Avoidance, Remedial and Mitigation Measures Predicted Impacts of the Proposed Development Monitoring Reinstatement Interactions Difficulties Encountered in Compiling References	12/1 12/1 12/2 12/5 12/6 12/11 12/11 12/12 12/12 12/13 12/13 12/13 12/13
13.0	Interactions Between Environmental Factors	
13.1	Introduction	13/1

Summary of Mitigation and Monitoring Measures	
Introduction	14/1
Mitigation Strategies Mitigation and Monitoring Strategies	14/1 14/2
	Measures Introduction Mitigation Strategies

Figure No.	Index of Figures	Chapter/Page No.
2.0	Project Description and Alternatives Examined	
2.1 2.2 2.3 2.4 2.5 2.6	Site Location Map Masterplan of Clay Farm (Phase 1 and 2) Submitted Site Location Plan Ref.: D06A/0531 Site Layout Plan submitted at FI Stage Three Village Concept Proposals Site layout plan presented at pre-application meeting no. 4	2/2 2/4 2/10 2/10 2/12 2/14
2.7 2.8 2.9 2.10 2.11 2.12 2.13 2.14	CGI of the Proposed Scheme Bridge construction drawing Extract from DBFL bridge elevation (proposed) Site Layout Plan of the Proposed Development Indicative Phasing Plan Landscape Masterplan for Phase 2 Open Space Provision Sub-phasing of the Phase 2 development	2/14 2/16 2/17 2/19 2/21 2/22 2/24 2/26
3.0	Population and Human Health	
3.1	Image of the Electoral Area of Glencullen	3/4
4.0	Archaeology, Architectural and Cultural Heritage	
4.1 4.2 4.3 4.4	RMP Site Locations and Proposed Development Area, Showing Previous Investigations RPS Sites Rocque's Map of Dublin (1760) with the Approximate Site Location Taylor's Map of Dublin (1816) with the Approximate Site Location First Edition (1843) 6 –inch OS Map, with Site	End of Chapter End of Chapter End of Chapter End of Chapter
4.5a 4.5b	Location Revised Edition (1874) 6-inch OS Map, with Site Location	End of Chapter End of Chapter
4.5c	Revised Edition (1906) 25-inch OS Map, with Site Location	End of Chapter
4.6	Geophysical Survey, Targeted Detail Gradiometer Survey Areas	End of Chapter
4.7	Layout of Archaeological Test Trenches and Archaeological Areas 1-4	End of Chapter
5.0	Biodiversity (Flora and Fauna)	
5.1 5.2	European Sites in relation to the study area Conservation areas (non-European Sites) in relation to the study area	5/7 5/8

5.3	Habitats present in Clay Farm Phase 2	5/9
5.4	Surveyed hedgerows and location of 30m survey sections showing hedgerow labelling system referred to in Table 5.1	5/16
5.5	Map of Hedgerow Significance	5/17
6.0	Landscape and Visual Impact	
6.1 6.2 6.3 6.4 6.5 6.6	Clay Farm Landscape Context Clay Farm Landscape Planning Context Green Infrastructure Corridor 6 Open Spaces (Annotated Extract) Overall Open Space Strategy Landscape Masterplan	6/2 6/4 6/7 6/9 6/14 6/18
7.0	Land and Soils	
7.1 7.2 7.3 7.4 7.5 7.6 7.7	Bedrock Mapping of Area by GSI Extract from EPA Soils Mapping Extract from GSI Quarternary Mapping Extract from GSI Groundwater Data Viewer showing groundwater wells and springs Location of calcareous spring Extract from GSI Groundwater Vulnerability Mapping Extract from GSI Groundwater Data Viewer	7/2 7/3 7/4 7/5 7/5 7/6 7/7
8.0	Water	
8.1	Diversion Constants in the Ministry of the Oite	0.40
8.2	River Systems in the Vicinity of the Site EPA Water Quality Map for Ballyogan stream	8/3 8/4
_	·	
8.2	EPA Water Quality Map for Ballyogan stream	
<ul><li>8.2</li><li>9.0</li><li>9.1</li><li>9.2</li></ul>	Air Quality and Climate  Windrose for Dublin Airport 2005-2009  Baseline Air Quality Monitoring Locations AQM1 & AQM2  Construction Phase dust monitoring locations D1 —	9/8 9/12
9.0 9.1 9.2 9.3	Air Quality and Climate  Windrose for Dublin Airport 2005-2009 Baseline Air Quality Monitoring Locations AQM1 & AQM2 Construction Phase dust monitoring locations D1 – D5	9/8 9/12
<ul><li>8.2</li><li>9.0</li><li>9.1</li><li>9.2</li><li>9.3</li><li>10.0</li></ul>	Air Quality and Climate  Windrose for Dublin Airport 2005-2009  Baseline Air Quality Monitoring Locations AQM1 & AQM2  Construction Phase dust monitoring locations D1 – D5  Noise and Vibration	8/4 9/8 9/12 9/19

11.8	Residential Development at Clay Farm Phase 2 Site Layout Plan	11/6
11.9	Proposed Development at Clay Farm	11/7
11.10	Northwesterly winds across Site	11/7
11.11	Southeasterly winds across Site	11/8
11.12	Southerly Winds	11/9
11.13	Wind Screens on Balconies	11/11

Table No.	Index of Tables	Chapter/Page No.
1.0	Introduction	
1.1 1.2 1.3 1.4	EIA Guidelines Consulted as Part of the Preparation of this EIAR Structure of this EIAR Methodology Employed to Evaluate Each Environmental Topic EIAR specialist consultants	1/4 1/10,11 1/12,13 1/14,15
3.0	Population and Human Health	
3.1 3.2	Seasonally Adjusted Standardised Unemployment Rates Population Change in the State, Dun Laoghaire Rathdown and ED Level 2006-2011	3/3 3/4
5.0	Biodiversity (Flora and Fauna)	
3.1 3.2	Summary of hedgerow survey and evaluation Bird Species Identified, Numbers Present and Breeding Status	5/11-15 5/20,21
6.0	Landscape and Visual	
6.1	Summary Table of Open Space Provision	6/11,12
9.0	Air Quality and Climate	
9.1 9.2 9.3	Air Quality Standards Regulations 2011  EPA 2014 Assessment Zone Classification Assessment criteria for the impact of duct emissions from construction activities with standard mitigation in place (NRA, 2011)	9/3,4 9/4 9/5
9.4	Meteorological Data for Dublin Airport 2011-2016	9/8
9.5	Summary of the 2015 Air Quality data obtained from the Dublin Zone A	9/10
9.6	Results of passive diffusion tube monitoring at Clay Farm Phase 2 development site	9/11
10.0	Noise and Vibration	
10.1 10.2	Construction Phase Noise Limit Values Likely impact associated with change in traffic noise level	10/3 10/3

10.3	Transient vibration guide values for cosmetic	10/5
	damage	. 0, 0
10.4	Guidance on the effect of construction vibration levels on humans	10/5
10.5	Location 1: Baseline Noise Survey Results	10/8
10.6	Location 2: Baseline Noise Survey Results	10/8
10.7	Location 3: Baseline Noise Survey Results	10/9
10.8	Location 4: Baseline Noise Survey Results	10/9
10.9	Indicative construction noise predictions associated with Enabling works	10/12
10.10	Indicative construction noise predictions associated with Construction works	10/12
10.11	Likely Impact Associated with Change in Traffic Noise	10/17
10.12	Recommended sound insulation values for internal party walls / floors	10/17
10.13	Recommended Indoor Ambient Noise Levels From BS 8233: 2014	10/18

Plate No.	Index of Plates End of Chapter
4.0	ale and a management of the second control o
4.0 Ar	chaeology, Architectural and Cultural Heritage
Plate 4.1	View of Field 4 facing west/northwest
Plate 4.2	View of Field 5 facing southeast
Plate 4.3	Pathway along top of bank, Pale Boundary DU026-087(outside development
area)	
Plate 4.4	Section through bank showing stone revetment, Pale Boundary DU026-087
Plate 4.5	Excavated section of pale ditch by O'Flanagan at the
	Jamestown/Carrickmines Great townland boundary (Licence Ref. 09E0300)
Plate 4.6	Recorded linear earthwork DU026-115 (outside the development)
Plate 4.7	'Pathway' along earthen bank field boundary, between field 7 and field 5
Plate 4.8	View north of the earthen bank profile of the field boundary between field 8
and 6	
Plate 4.9	'Pathway' along earthen bank field boundary, between field 6 and field 8
Plate 4.10	Loose rubble stone on the north facing side of the bank field 6 and field 8
Plate 4.11	Field 7, facing northwest
Plate 4.12	Field 8, facing northeast along route of proposed access road
Plate 4.13	Field 9, facing southeast
Plate 4.14	Plate 4.14 Field 12, facing southwest
Plate 4.15	Field 14, facing northeast
Plate 4.16	Track along northeast side of field 9
Plate 4.17	Track along southeast side of Phase 2 lands, facing east
Plate 4.18	Walled garden of Kilgobbin Cottage and laneway to Clay Farm House
Plate 4.19	Clay Farm house, facing southwest
Plate 4.20	Front gateway entrance to Clay Farm, facing west
Plate 4.21	Engraved pillar, Clay Farm
Plate 4.22	Late 19th century structure, Clay Farm, northwest gable
Plate 4.23	Late 19th century structure, Clay Farm, northeast facade
Plate 4.24	Water pump inside entrance to modern house adjacent Clay Farm
Plate 4.25	Outbuildings and rear gateway in eastern corner of courtyard, Clay Farm
Plate 4.26	Ballyogan stream between fields 1 & 2
Plate 4.27	Field boundary between field 1 and 2 to the south of the Ballyogan stream
Plate 4.28	Archaeological Area 3, Trench 14 west-southwest facing section of ditch C23

No.	Index of Chapter Appendices
NO.	index of Chapter Appendices
4.0	Archaeology, Architectural and Cultural Heritage
4.1 4.2 4.3	Detail of Archaeological Testing Results Summary of Relevant Legislation Glossary of Impact Assessment
5.0	Biodiversity
5.1 5.2 5.3 5.4 5.5	Fisheries Protection/Construction Method Statement Proposed Clay Farm Ecopark: Habitat and Ecological Management Guidelines Hedgerow Survey A Bat Assessment of Clay Farm In Relation To The Phase 2 Breeding Bird Survey
6.0	Landscape & Visual Impact
6.1	Photomontages
7.0	Soils and Geology
7.1	Drawing No. 133094-3099, Site Investigation Plan
8.0	Water
8.1	DBFL Drawings
10.0	Noise and Vibration
10.1	ESB Letter