



APPENDIX 14-1

ROUTE ACCESS SURVEY

COLLETT

EXPERTS IN MOTION



Route Access Survey - 343155 - Vestas V162

Seven Hills Wind Farm, County Roscommon, Ireland

Galetech Energy Services

December 2021





Mistral Point

East Yorkshire

GOOLE

DN14 6UE

AW Nielsen Road



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APPENDIX 1 – LOADED CONFIGURATION DRAWINGS APPENDIX 2 - SWEPT PATH ANALYSIS



Report Details

Report for

Cormac McPhillips Galetech Energy Clondargan Stradone County Cavan Ireland

Attendees of Survey

Jacob Halstead

Time / Date of Survey: 24th February 2020

General weather conditions: Mixed

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Port Operation
Heavy Lift Storage
Heavy Transport
Project Management
Freight Forwarding
Heavy Lift
General Haulage
Warehousing
Test Station (DVSA-authorised)
SHEQ Training











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1. Executive Summary

- 1.1. This report comprises of a study of the road route as detailed here in for the road transport of Vestas V162 Turbine Blade Components to the proposed proposed Seven Hills Wind Farm, near Athlone, County Roscommon.
- 1.2. One route has been assessed from the Port of Galway to the proposed site entrances on the R363.

Third party land

1.3. Third party land is not required along any section of the route.

Road widening

- **1.4.** Road widening within highways owned land is required at a number of locations:
 - M6 northbound junction 13.
 - M6 Slip road / R362 roundabout.
 - R362 Roundabout.
 - R363 1st possible site entrance.
 - R363 2nd possible site entrance.

Modifications to street furniture

- **1.5.** Modifications to street furniture will be required along the route at a number of locations:
 - M6 Slip road / R362 roundabout Lamp post, trees, road signs and bollards to be removed.
 - R362 Roundabout Road signs to be removed.
 - R363 1st possible site entrance Hedge to be removed
 - R363 2nd possible site entrance Wall to be removed

Vertical Alignment

1.6. No vertical alignment issues were identified by the assessment.

Structural Assessment

1.7. No structural assessment has been undertaken as part of this route assessment.

Other areas of note

1.8. No other areas to note.



2. Introduction

- 2.1 Collett & Sons Ltd. were commissioned by Galetech Energy to undertake an abnormal loads route access study to assess the transportation of Vestas V162 Wind Turbine blade to the proposed Seven Hills Wind Farm, near Athlone, County Roscommon.
- 2.2 The road routes as detailed herein are for the road transport of the V162 wind turbine blade components. No tower specification was supplied for assessment.
- 2.3 The purpose of this report is to detail access from the Port of Galway.

3. Candidate Abnormal Loads

3.1. The turbine specification was identified by Galetech Energy.

4. Abnormal Indivisible Load Profiles

4.1. The abnormal load components are assessed based on weight, length, width and height and loaded to the most appropriate vehicle the weights and dimensions of these are detailed below. The loading diagrams are detailed in Appendix 1.

4.2.	343155-B
Vestas V162 Blade	
	Landad vahiala dimamaiana
	Loaded vehicle dimensions
Overall vehicle Length	94.183m
Overall vehicle Length Rigid Length	
•	94.183m
Rigid Length	94.183m 67.671m
Rigid Length Width	94.183m 67.671m 4.500m



4.3. Movements within the Republic of Ireland

In the Republic of Ireland, any haulier who wishes to move a load or vehicle that exceeds the limits identified within the Road Traffic (Construction Equipment & Use of Vehicles) Regulations 2003, S.I.5 of 2003 must apply and obtain a permit for the movement.

There are two permit schemes in operation depending on the size, weight and location of the proposed movements.

4.4. Permit Scheme administered by An Garda Síochána

An Garda Síochána run a scheme for the movement of vehicles and loads that do not exceed 27.4 metres in length and 4.3 metres in width on designated roads.

Note: Vehicles and loads exceeding the 4.65 metre national height limit are not covered under this scheme and require a Local Authority Permit instead.

The designated road list is often updated with additional routes. An up to date list will always be available on RSA.ie and the Garda website.

This scheme is outlined under the:

- Road Traffic (Specialised Vehicle Permits) Regulations, 2009, S.I. No. 147 of 2009 and
- Road Traffic (Specialised Vehicle Permits)(Amendment)Regulations,2010

This scheme is free of charge.

4.5. Permit Scheme administered by Local Authorities

Local Authorities operate a permit system for all roads, vehicles and loads not covered under the Garda permit scheme.

You must apply for a permit through the relevant local authorities if:

- All or part of your journey is not on the routes the Garda scheme covers.
- The weight of the vehicle or load exceeds the limits outlined in SI 5 of 2003.
- The height of the vehicle or load exceeds the limits outlined in the Road Traffic (Construction and Use of Vehicles) Regulations, SI 366 of 2008.
- The dimensions of the vehicle or load exceed those allowed under the Garda scheme: 27.4 metres in length or 4.3 metres in width.

Charges for this scheme apply and may vary from one local authority to another.

This scheme is outlined under the:

Road Traffic Specialised Permits for Particular Vehicles) Regulations 2007, SI 283 of 2007

4.6. Movements within Northern Ireland

In Northern Ireland, there are only two authorities that need to be informed if you propose to move a large load along Northern Irish roads:

- Roads Service Northern Ireland
- Police Service of Northern Ireland



4.7. Roads Service Northern Ireland

An Abnormal Loads (AL1) Application Form will need submitting to notify Roads Service of any impending movements. Depending on the type and size of the loads, the Roads Service will required a set amount of days' notice as detailed below, before any movements are undertaken.

Two clear working days' notice is required for all of the above.

- All loads in excess of 38 tonnes on four axles
- All loads in excess of 40 tonnes on five axles
- All loads in excess of 44 tonnes on six axles
- All loads in excess of five metres in width

Five clear working days' notice is required for:

- All loads in excess of 80 tonnes
- All loads in excess of 6.1 metres in width
- All loads in excess of 27.4 metres in length

A special permit is required for:

- All loads in excess of 150 tonnes
- All loads in excess of 6.1 metres in width
- All loads in excess of 27.4 metres in length

Although there is no legal requirement, it is advisable to notify Roads Service regarding all loads in excess of 4.3 metres in width, due to width restrictions on certain routes throughout the province.

4.8. Police Service of Northern Ireland (PSNI)

The PSNI require a minimum of two clear days' notice to arrange movement of an abnormal load. Depending on the type and size of the load, a police escort may or may not be required. Details of whether an escort will be required can be found below:

Information about loads

- If a load is between 2.9 metres and 3.66 metres in width and the overall length of the load does not exceed 27.4 metres this vehicle / load may move unescorted.
- If a load is between 3.66 metres and 4.3 metres in width and the overall length does not exceed 27.4 metres this vehicle / load may move, provided that the haulier supplies an escort vehicle.
- If a load exceeds 4.3 metres in width or 27.4 metres in length this vehicle / load may be provided with a police escort, subject to operational constraints and other factors.
- If a load has a gross vehicle weight of 80 tonnes or more the 2 day notice rule applies irrespective of dimensions.
- The notifiable lengths start at 18.65 metres under Construction and Use and 18.3 metres under Special Types Legislation. Where the width of any vehicle or load exceeds 3.50 metres or the notifiable lengths, as above, an attendant, in addition to the driver, is required.



Legislation

The relevant legislation for movements of Abnormal Loads can be found in the following:

- Motor Vehicles (Construction and use) Regulations (Northern Ireland) 1999
- Road Traffic and Vehicles Motor Vehicles (Authorisation of Special Types) Order (Northern Ireland) 1997

Peak traffic period warning

Permission will not be granted for movement of abnormal loads during peak traffic periods except in a case of emergency.

Identified peak traffic periods for the Greater Belfast and Londonderry areas are as follows:

Monday - Friday 0730 - 0930

Monday - Thursday 1530 - 1830

Friday 1500 - 1800

Times for movement in all other areas will be considered on request.

Night Time Moves

The movement of abnormal loads during the hours of darkness is not allowed, unless the police Abnormal Loads Office have granted permission.

4.9. Designated Roads as specified in Statutory Instrument S.I. No. 147/2009 – Road Traffic (Specialised Vehicle Permits) Regulations 2009)

- M1 from Dublin Port to Dundalk
- N1 from Dundalk to Border
- N4 from M50 to Leixlip
- M4 from Leixlip to Kinnegad
- M6 from Kinnegad to Athlone
- N6 from Athlone to Galway
- N7 from M50 to Naas
- M7 from Naas to Portlaoise
- N7 from Portlaoise to Limerick
- N8 from Portlaoise to Cashel
- M8 from Cashel to Fermoy
- N8 from Fermoy to Cork
- N8 from Dunkettle Interchange (Lower Glanmire Road) to Tivoli Flyover into Cork Port)
- M9 from Newbridge to Kilcullen
- N9 from Kilcullen to Prumplestown
- M9 from Prumplestown to Powerstown
- N9 from Powerstown to Waterford
- M11/N11 from Dublin to Wexford
- N25 from Cork to Wexford
- N25 from Wexford to Rosslare
- N25 from Dunkettle Interchange (via Lee Tunnel) to Bloomfield Interchange
- N28 from Bloomfield Interchange into Ringaskiddy Port
- M50.



5. Route Assessment Overview

- **5.1.** This section of the report illustrates the route assessed for the delivery of Vestas V162 Wind Turbine blade component to the proposed Seven Hills Wind Farm, near Athlone, County Roscommon. No tower specification has been assessed.
- **5.2.** For the purpose of this report, one route to the site was surveyed. The route surveyed in this report have been identified by Galetech.

5.3. Map Overview

Start Location	Galway Port	Distance of Route	Km	Miles
Via:	M6 / R362 / R363	Distance of Route	98.3	61.1

- · Exit Port of Galway onto Lough Atalia Road,
- Merge right onto R339,
- Turn left onto unnamed road at Connelly Avenue junction,
- Turn right onto R336,
- Turn right onto N6,
- At roundabout turn left onto N6/M6,
- Continue on M6 to junction 13,
- At junction exit onto roundabout junction with R362,
- Continue on R362 through 1 roundabout,
- Continue on R362 to merge onto R363,
- Continue on R363 to site entrance at approx. Irish grid ref: M 95339 43381.

5.4. Map Overview



5.5. Amendment Categorisation

For the purposes of this report, the route amendments have been identified into 3 categories.

Major Amendments - Third Party Land, Road Widening

Minor Amendments – Modifications to Street Furniture, Pruning, Contraflow Manoeuvre, Manual Steering No Amendments - Location is suitable as assessed during this survey

5.6. Key Amendments

The categories have been colour coded for each report item as per the below key.

KEY			
	Major Amendments	Minor Amendments	No Amendments



5.6 Map extract of survey locations





5.6.1 LOCATION **ITEM NUMBER** Exit from Galway Port DIRECTION Exit the Storage Area and turn right onto Lough Atalia Road. GRID REFERENCE M 30175 24820 MODIFICATION AND DESCRIPTION PHOTOGRAPH OF LOCATION *Visual inspection indicates that the V162 blade will NOT navigate out of Galway port. Previous discussions with the port may suggest that modifications be carried out to accommodate this size blade in the future. *

NO

TYPE

FURTHER INVESTIGATION RECOMMENDED

N/A



			EXPERTS IN MOTION
ITEM NUMBER	5.6.2	LOCATION	Lough Atalia Road / R339 junction
DIRECTION	Turn right at this junction		
GRID REFERENCE	M 31010 26058		
MODIFICATION ANI		PHOTOGR	APH OF LOCATION
manoeuvre will be Loaded blade comp	dicates that a contraflow required at this junction. onent may be required to run rb to avoid street furniture on		ETTER CAPE
		O ATTROCTS	
FURTHER INVESTIG	ATION RECOMMENDED	NO	TYPE N/A



			EXPERTS IN MOTION
ITEM NUMBER	5.6.3	LOCATION	R339 / R338 Junction
DIRECTION	Continue straight at this junction	n	
GRID REFERENCE	M 31119 26239		
MODIFICATION ANI	O DESCRIPTION	PHOTOGRA	PH OF LOCATION
Visual inspection in	dicates that a contraflow required at this junction.	Sance Management	The continue of \$1.00 and the continue of \$1.00 and \$1.0
FURTHER INVESTIG	ATION RECOMMENDED	NO .	TYPE N/A



ITEM NUMBER	5.6.4	LOCATION	R339 / Unnamed Road junction
DIRECTION	Turn left at this junction		
GRID REFERENCE	M 31786 26676		
MODIFICATION AND	D DESCRIPTION	PHOTOGR <i>A</i>	APH OF LOCATION
Visual inspection increquired on nearsid	dicates road widening will be le of junction side required to be removed to		Thema King Indias Sill Band
V162: Traffic light to be removed V162: Road wider	ning		
FURTHER INVESTIGA	ATION RECOMMENDED	YES	TYPE Swept Path Analysis



ITEM NUMB	BER	5.6.5	LOCATION	1	Unnamed Road / R336
DIRECTION		Turn right at this junction			
GRID REFEREN	NCE	M 31840 26985			
MODIFICATIO	N ANI	DESCRIPTION	PHOTOGR	APH OF	LOCATION
offside is requ vehicle.	uired t	dicates that the area on the o be overrun by the loaded Ifside is required to be	on some	popera inn &: Ren nunni	Mico Princing A financial Complian List Switters Param Financial James Condesi
			V162: L to be re	amp pos emoved	ea to be overrun
FURTHER INV	ESTIG.	ATION RECOMMENDED	YES	TYPE	Swept Path Analysis



5.6.6 LOCATION **ITEM NUMBER** R336 / N6 junction DIRECTION Turn onto N6 GRID REFERENCE M 32049 27159 MODIFICATION AND DESCRIPTION PHOTOGRAPH OF LOCATION Visual inspection indicates that a contraflow manoeuvre will be required at this junction. Railings and Traffic light on offside of slip road to be removed due to oversail. (M17) Sligeac V162: Barrier and traffic light to be removed Barrier to be removed **FURTHER INVESTIGATION RECOMMENDED** YES TYPE **Swept Path Analysis**



			EXPERTS IN MOTION
ITEM NUMBER	5.6.7	LOCATION	N6 Coolagh Roundabout
DIRECTION	Take 1st Exit at the roundabout		
GRID REFERENCE	M 34757 26617		
MODIFICATION ANI	D DESCRIPTION	PHOTOGRAI	PH OF LOCATION
street furniture will 2x road signs on the oversail.	dicates that modifications to be required at this location. e offside to be removed due to quired to assist navigation.		and the state of t
Road s	igns to be removed		

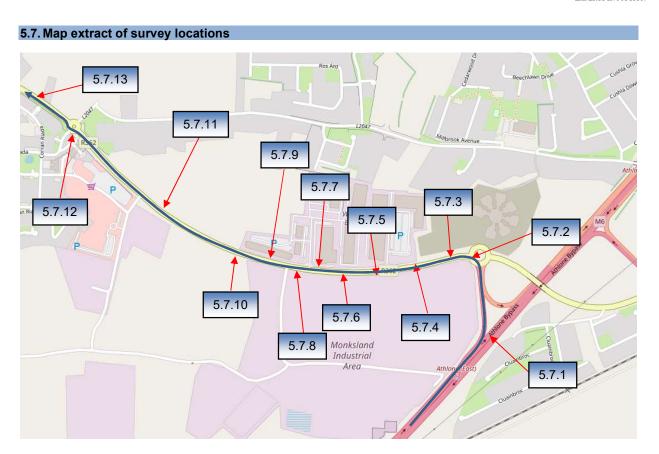
NO

TYPE

FURTHER INVESTIGATION RECOMMENDED

N/A







ITEM NUMBER	5.7.1	LOCA	ATION	Exit M6 northbound at junction 13
DIRECTION	Turn left onto slip road			
GRID REFERENCE	N 01152 40992			
MODIFICATION AN	ID DESCRIPTION		РНОТО	GRAPH OF LOCATION
	s indicates that loaded blad ning on the offside.		Road widening required Direction View of slip road	
Road widening required				
V	iew on slip road			View of exit of slip road
	Aeria	Niew View	M6 M6 of Locat	Danes fort
ELIDTHED INIVECTION	GATION UNDERTAKEN	i view	YES	
			152	
RELATED DOCUME	INT INUIVIDENS.			343155-50



				EXPERTS IN MOTION
ITEM NUMBER	5.7.2	LOCAT	ION	M6 slip road / R362 Roundabout
DIRECTION	Take the 1 st exit at the rou	undabout	t	
GRID REFERENCE	N 01131 41160			
MODIFICATION AN	D DESCRIPTION	P	ОТОН	GRAPH OF LOCATION
require road widen the offside of the end Lamp post and tree allow rear projection All road signs on end are required to be a oversail.	s on offside to be removed on to oversail strance and exit splitter isla- removed to allow blade to d sign on nearside to be llade to oversail.	I to		Lamp post and trees to be removed View of approach to roundabout
Lamp post and sign to be removed	Road signs to be removed		Road	Road widening required
	entrance roundabout			View on roundabout
[362]	R352	R362		R362 R362
	Aeria	al View of	Locati	on
FURTHER INVESTIG	ATION UNDERTAKEN?		YES	TYPE Swept path analysis
DELATED DOCUME	NT NUMBERC.			242455 60

RELATED DOCUMENT NUMBERS:

343155-60



ITEM NUMBER	5.7.3	LOCA	ATION		1 st splitter island
DIRECTION	Continue on R362				
GRID REFERENCE	N 01047 41162				
MODIFICATION ANI	D DESCRIPTION		PHOTO	GRAPH OF I	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will			virection View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A

ITEM NUMBER	5.7.4	LOC	ATION		2 nd splitter island
DIRECTION	Continue on R362				
GRID REFERENCE	N 00930 41136				
MODIFICATION ANI	D DESCRIPTION		РНОТО	GRAPH OF	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will	Toring a second		Direction
					View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A



ITEM NUMBER	5.7.5	LOC	ATION	3 rd splitter island
DIRECTION	Continue on R362			
GRID REFERENCE	N 00891 41131			
MODIFICATION AN	D DESCRIPTION		РНОТО	OGRAPH OF LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will		Direction View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE N/A

ITEM NUMBER	5.7.6	LOC	ATION	4 th splitter island	
DIRECTION	Continue on R362				
GRID REFERENCE	N 00795 41133				
MODIFICATION AN	D DESCRIPTION		РНОТО	GRAPH OF I	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will	ALCO CALL	T. CAN	Direction View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A



ITEM NUMBER	5.7.7	LOC	ATION	5 th splitter island
DIRECTION	Continue on R362			
GRID REFERENCE	N 00711 41141			
MODIFICATION AN	D DESCRIPTION		РНОТО	OGRAPH OF LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will		Direction View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE N/A

ITEM NUMBER	5.7.8	LOC	ATION		6 th splitter island
DIRECTION	Continue on R362				
GRID REFERENCE	N 00648 41156				
MODIFICATION ANI	D DESCRIPTION		РНОТО	GRAPH OF	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will			Direction
					View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A



ITEM NUMBER	5.7.9	LOC	ATION		7 th splitter island
DIRECTION	Continue on R362				
GRID REFERENCE	N 00648 41156				
MODIFICATION AN	D DESCRIPTION		РНОТО	GRAPH OF	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will			Direction View of island
ELIPTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A
TORTHER HAVESTIG	ATTOTA RECOMMENDE		110	1116	IN/IN

ITEM NUMBER	5.7.10	LOCATION			8 th splitter island
DIRECTION	Continue on R362				
GRID REFERENCE	N 00430 41243				
MODIFICATION ANI	D DESCRIPTION		PHOTO	GRAPH OF	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will			Direction View of island
FURTUED INVESTIG	ATION DECOMMANDED		NO	TVDE	
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A



ITEM NUMBER	5.7.11	LOC	ATION	9 th splitter island
DIRECTION	Continue on R362			
GRID REFERENCE	N 00270 41370			
MODIFICATION ANI	D DESCRIPTION		PHOTO	OGRAPH OF LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will	Cortis Sept III	Direction View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE N/A



				EXPERTS IN MOTION
ITEM NUMBER	5.7.12	LOC	ATION	R362 Roundabout
DIRECTION	Take second exit to contir	nue on	R362	
GRID REFERENCE	N 00170 41480			
MODIFICATION AN	D DESCRIPTION		PHOTOG	RAPH OF LOCATION
will be required on nearside of the exit The road widening to avoid the remov on the nearside ent	ral island required to be	uired		Direction View of entrance
	removed widening quired	MI E		Road widening required
Vie	w of roundabout			View of exit
	RS62		L. 72	
	Aeria	l View	of Locatio	
FURTHER INVESTIG	ATION UNDERTAKEN		YES	TYPE Swept path analysis

RELATED DOCUMENT NUMBERS:

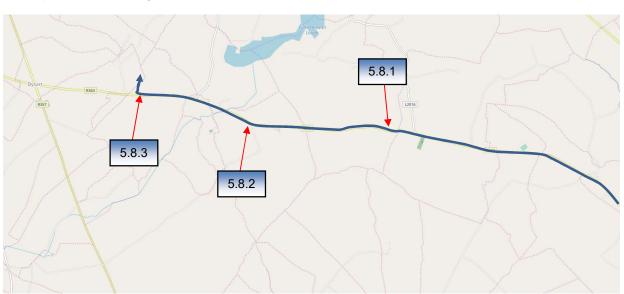
343155-70



ITEM NUMBER	5.7.13	LOC	ATION		10 th splitter island
DIRECTION	Take second exit to contir	nue on	R362		
GRID REFERENCE	N 00111 41526				
MODIFICATION AN	D DESCRIPTION		РНОТО	GRAPH OF	LOCATION
Visual inspection in navigate this island	dicates that loaded blades without.	will			Direction
					View of island
FURTHER INVESTIG	ATION RECOMMENED?		NO	TYPE	N/A



5.8. Map extract of survey locations





5.8.1 LOCATION ITEM NUMBER R363 1st POSSIBLE SITE ENTRANCE **DIRECTION** Turn left towards proposed site entrance GRID REFERENCE M 90935 45329 MODIFICATION AND DESCRIPTION PHOTOGRAPH OF LOCATION *Note* This is an intended site entrance. The direction would be a left turn off the R362 onto the proposed site entrance. Swept path analysis indicates that loaded blade will require a suitable site entrance to be constructed in accordance with the turbine specification. Swept path analysis indicates loaded blade will navigate this bend utilising manual steering. View prior to bend View after bend View on bend

Aerial View of Location

YES

TYPE

FURTHER INVESTIGATION UNDERTAKEN

RELATED DOCUMENT NUMBERS:

Swept path analysis

343155-80B1.1



				T
ITEM NUMBER	5.8.2	LOCA	ATION	R363 2 nd POSSIBLE SITE ENTRANCE
DIRECTION	Turn left at Cloonaugh Up	per		
GRID REFERENCE	M 88929 45412			
MODIFICATION AND			РНОТО	OGRAPH OF LOCATION
require a suitable si in accordance with Swept path analysis	indicates that loaded blade te entrance to be construct the turbine specification. s indicates that the loaded e this location using manua	ted		Direction
				View prior to entrance
	Field next to entrance			View on unclassified road
VICW OF	RS63			Ballyforan Health Centre
	Δοτίο	l View	of Locat	ation
FLIRTHER INIVESTIG	ATION UNDERTAKEN?	ı view	YES	
RELATED DOCUMEN			ILJ	343155-90B1.1
ALLATED DOCUME	VI IVOIVIDENS.			343133 JOD1.1



ITEM NUMBER	5.8.3	LOCATION		R363 3 rd POSSIBLE SITE ENTRANCE					
DIRECTION	Turn right onto proposed entrance								
GRID REFERENCE M 87287 45864									
MODIFICATION AND DESCRIPTION			PHOTOGRAPH OF LOCATION						
Swept path analysis indicates that loaded blade will									
require a suitable site entrance to be constructed in accordance with the turbine specification.									
Swept path analysis indicates that the loaded									
vehicle will navigate this location using manual									
steering.			a U Tari						
			Phys.						
				Direction					
				View prior to entrance					
		100							
Salari and A	* * * *								
	SAME .								
	Mark William								
		7 .							
		EU LA							
View of field next to entrance			View on proposed entrance.						
X 32 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				T COO					
						R363		Daca	to the E of Many
					16 100	кэба		0.75	THEOD STATE OF THE
The second of th									
				THE RESIDENCE OF A STATE OF A STA					
Aerial View of Location									
FURTHER INVESTIG	ATION UNDERTAKEN?	1.000	NO	TYPE N/A					
RELATED DOCUMENT NUMBERS:			.,0	343155-100B1.1					
				0.0200 1000211					



6. Important Notes

- 6.1. The recommendations in this report are made from a purely transport orientated view, and do not consider any political issues in terms of land ownership, or any other precincts raised that may otherwise be restrictive.
- **6.2.** The information contained in this report is privileged and confidential and is for the exclusive use of the client nominated herein.
- **6.3.** A Garda escort or pilot car will be required in order to assist with traffic control for the entire route surveyed.
- **6.4.** Permits will be required for the movement of all loads. These permits are at the discretion of the local authorities (L.A). Therefore, approval of these permits by the L.A is a major consideration before any movements can be undertaken.
- **6.5.** It is recommended to have adequate warning signs implemented to warn other road users at critical points.
- **6.6.** All hedges, shrubs, bushes, trees and overhanging branches along the nominated routes must be trimmed to allow a suitable minimum envelope.
- **6.7.** All street furniture, signage etc. along the nominated route must be removed to allow a suitable minimum envelope on the road. Other specific street furniture has been nominated in this report to facilitate oversailed and swept areas.
- **6.8.** The turbine manufactures transport guidance notes will state the minimum road width required for the transport of components. Any roads below this stated width will require widening to reflect this.
- 6.9. In areas where land take or road widening is required, the road construction must be formed to the minimum specification suitable for the transfer of axle loadings up to 16Te, the road construction must be formed to the minimum specification contained in the selected manufacturers transport and erection guidance notes.
- **6.10.** Overhead utility cables have not been measured as part of this survey and correspondence with the utility companies regarding cable heights and possible remedial solutions should be undertaken prior to any delivery.
- **6.11.** It should be noted that all assessments and inspections have been done so with the intention of producing information to highlight anticipated problems. This includes highlighting of potential land take requirements, possible street furniture implications, and highway alignment issues.
- **6.12.** Land take is usually referred to when land is required from private land owners; road widening is usually referred to when land is required within highways boundaries. However, the details of the nominated land take and road widening contained in this report are highlighting the expected areas of concern, and can only be confirmed by swept path analysis. The boundaries between private land and highways property are assumed by using obvious demarcation such as fence lines/hedges etc. It should be noted that actual boundaries between highways and private land are not substantiated in this report and can only be authenticated by carrying out land searches.
- **6.13.** All inspections and assessments are made for the road movement of loaded trailer equipment carrying specific storage tank components. These dimensions are based on the turning circles and specification of Collett & Sons trailer equipment.
- **6.14.** All route inspections and assessments, and subsequent conclusions and recommendations are deemed accurate by Collett & Sons Limited at the date that this report is created. We cannot be held responsible for the development of future road schemes or alterations to the routes surveyed that may leave this report inaccurate.
- **6.15.** This report is based solely on a preliminary visual inspection. Nothing in this report shall be construed in any way as committing Collett & Sons Limited to being able to deliver to site using this route before further structural analysis has been undertaken, and any accommodation/remedial works undertaken which are to Collett & Sons satisfaction.