

Contents

Executive Summary..... 1

 Further Actions.....1

1 Introduction 3

2 Definitions & Terminology..... 4

 2.1 Definition of Abnormal Indivisible Load4

 2.2 Legislation.....4

 2.3 Water Preferred Policy.....4

 2.4 Third-Party Land & Land Ownership4

 2.5 Abbreviations5

3 Candidate Turbine 5

4 Port of Entry 5

5 Site Location 6

6 Weight Review 6

7 Access Routes 7

 7.1 Route 17

8 Delivery Equipment..... 8

9 Route Constraints 9

 9.1 Route Constraint Assessment9

 9.2 Route Constraint Tables 10

10 Swept Path Assessment Terminology 15

11 Summary 16

 11.1 Summary of Route Survey Review..... 16

 11.2 Further Actions..... 16

Figures

Figure 5-1: Site Location Plan6

Figure 7-1: Proposed Access Route.....7

Figure 8-1: Dolly Clamp Trailer.....8

Figure 8-2: Tower Clamp Trailer.....8

Tables

Table 3-1: Turbine Component Summary5

Table 6-1: ESDAL Contacts.....6

Table 9-1: Route Constraint Points and Details (Dolly Clamp and Tower Clamp Trailers)..... 10

Appendices

- Appendix A Points Of Interest
- Appendix B Swept Path Assessments
- Appendix C ESDAL Responses

Executive Summary

Pell Frischmann Consultants Ltd (PF) has been commissioned by Ramboll UK Ltd (Ramboll) to undertake a Route Survey Review (RSR) on behalf of RenewCo (the Developer) to examine the issues associated with the transport of wind turbine Abnormal Indivisible Loads (AIL) associated with the development of Ravengill Renewable Energy Park, located to the west of Lettershaws, in the South Lanarkshire Council (SLC) administrative area.

This report identifies the key points and issues associated with the proposed routes and outlines the issues that will need to be considered for successful delivery of the components.

The access review has been based upon Siemens Gamesa SG170 wind turbine components and has been undertaken on the basis of the blade components loaded onto a dolly clamp trailer; and the tower sections loaded onto a tower clamp trailer.

Due to the transport configurations being classified as Special Order, in accordance with the Water Preferred Policy, King George V (KGV) Dock has been considered as Port of Entry (POE) for the project as it is the closest marine facility to site capable of dealing with this size of cargo. Also, due to the Special Order classification of the loads, full Police escort will be required along the length of all routes from KGV Dock to site.

The route travels south from KGV Dock to M6 Jct 42 Golden Fleece Interchange where the loads will exit the southbound carriageway, travel around the roundabout and re-join the M6 northbound in order to enable the loads to join the A702 southbound en route to the proposed site access point.

A review of the current structural capability of the route has been carried out; however, responses had not been received from Amey (South West Scotland) at the time of writing this report, therefore, the route has not been confirmed as structurally capable of accommodating the AILs. M6DBFO and National Highways North West Region (NHNW) have approved the use of their structural assets; and M8 DBFO have approved the use of their structural assets under operational cautions. Loads are to cross structure no. M74 6-5 75 Raith straddling lanes one and two with no other traffic on the structure at the same time.

The route from KGV Dock to A74(M) northbound at Abington is considered negotiable with tree and vegetation clearance and pruning; street furniture removals, areas of temporary load bearing surface, use of existing AIL crossings and special manoeuvres. Third-party land uptake is required at the Kings Inch Drive / M8 Jct 25A junction. Land searches are required to confirm the extent of the adopted highway at this location.

The existing carriageway from Abington Interchange is the site access junction is not negotiable for the loads, therefore, an access track from the A74(M) northbound to the site access junction on the B797 has been designed and is to be constructed suitable for the proposed loads. A Swept Path Assessment (SPA) of both junctions has been undertaken, and the loads are to oversail the proposed kerbs in multiple areas where any street furniture is to be demountable and no other obstructions are to be located.

No consideration has been given to the on site design requirements as part of this report, however, this is being undertaken as part of the wider Environmental Impact Assessment (EIA) process.

The report is presented to Ramboll for consideration. Various road modifications and interventions are required to successfully access the site. If these are assessed, approved and undertaken, access to the site is considered feasible.

Further Actions

The following actions are recommended to pursue the transport and access issues further:

- Undertake topographical survey and land searches at the identified locations and repeat the swept path assessments to confirm mitigation measures;
- Obtain responses from Amey (South West Scotland) on current structural capability of the route to accommodate proposed AILs;
- Conduct a test run to confirm negotiability and identified mitigation measures;
- Undertake discussion with the affected utility providers and roads agencies;

- Prepare detailed mitigation design proposals to help inform the land option / consultee discussions;
- Obtain the necessary land options;
- Obtain the necessary statutory licences to enable the mitigation measures; and
- Develop a detailed operational Transport Management Plan to assist in transporting the proposed loads.

1 Introduction

Pell Frischmann Consultants Ltd (PF) has been commissioned by Ramboll UK Ltd (Ramboll) to undertake a Route Survey Review (RSR) to examine the issues associated with the transport of wind turbine Abnormal Indivisible Loads (AIL) associated with the development of Ravengill Renewable Energy Park, located to the west of Lettershaws, in the South Lanarkshire Council (SLC) administrative area.

The RSR has been prepared to help inform Ramboll on the likely issues associated with the development of the site with regards to off-site transport and access for AIL traffic and examines the issues associated with transport along the whole of the access route from the port to the site access junction.

The access review identifies the key issues associated with AIL deliveries and notes that remedial works, either in the form of physical works or as traffic management interventions will be required to accommodate the predicted loads.

The detailed assessment and subsequent designs of any remedial works are beyond the agreed scope of works between PF and Ramboll at this point in time.

It is the responsibility of the turbine supplier to ensure that the entirety of the proposed access route is suitable and meets with their satisfaction (depending upon contract). The turbine supplier will be responsible for ensuring that the finalised proposals meet with the appropriate levels of health and safety consideration for all road users and are in line with the relevant legislation at the time of delivery.

No liability is accepted for the use of all or part of this report by third parties. This report is © Copyright of PF 2026 and Ramboll. No section of this report may be reproduced without prior written approval.

2 Definitions & Terminology

2.1 Definition of Abnormal Indivisible Load

The Department for Transport, of which National Highways (NH) is an executive agency, state that the strict definition of an AIL refers to a load which cannot, without undue expense or risk of damage, be divided into two or more loads for the purpose of carriage on roads which, owing to its dimensions or weight, cannot be carried on a vehicle which complies with the 'standard vehicle regulations' as follows:

- The Road Vehicles (Construction and Use) Regulations 1986 (as amended)
- The Road Vehicles (Authorised Weight) Regulations 1998 (as amended)
- The Road Vehicles Lighting Regulations 1989 (as amended)

All equipment should be stripped of its ancillaries before they are transported. NH will only accept that further dismantling is not required where it cannot be economically achieved due to the requirement for its construction within factory environments or where extremely high tolerances have to be maintained.

2.2 Legislation

Conventional heavy goods vehicles have an operating weight limit of 44 tonnes. The category known as AIL covers those vehicles where the gross weight exceeds 44 tonnes. An AIL is defined as that which cannot be carried under Construction and Use (C&U) Regulations. Items which, when loaded on the load carrying vehicle, exceed the weights encompassed by the C&U Regulations, but do not exceed Special Order Permission Limits are governed by Special Types General Order (STGO) Categories 1 to 3 depending on size.

Where dimensions exceed 6,100 mm in width, 30,000 mm in rigid length or 150 tonnes gross weight, a Special Order from NH is required.

Special Order category AIL movements are authorised by the NH Abnormal Loads team, an executive agency of the Department for Transport, based in Birmingham.

2.3 Water Preferred Policy

The Department for Transport has adopted a 'water-preferred' policy for the transport of AILs. This means that, where an application is sought for the movement of a Special Order or VR1 category load (more than 5.0 m width) by road, the Department, via NH and Transport Scotland (TS), will turn down the application where it is feasible for a coastal or inland waterway route to be used instead of road.

NH advise that this decision is based on a number of factors including whether the load is divisible, the availability of a suitable route, the amount of traffic congestion that is likely to be caused and the justification for the load to be moved.

The NH Abnormal Loads Team is the department responsible for the authorisation of Special Order AILs and government policy is that the closest available port of access should be used for the delivery of such oversized items.

2.4 Third-Party Land & Land Ownership

A review of third-party land should be undertaken by the client to ensure that no additional land rights are required to enable deliveries or mitigation works. PF accepts no responsibility for the accuracy of land ownership assumptions, all of which should be confirmed across the entire access route by a qualified land agent.

The limits of road adoption can vary depending upon the location of the site and the history of the road agencies involved. The adopted area is generally defined as land contained within a clear boundary where the road agency holds the maintenance rights for the land. In urban areas, this is usually defined as the area from the edge of the footway across the road to the opposing footway back edge.

In rural areas, the area of adoption can be open to greater interpretation as defined boundaries may not be clearly identifiable. In these locations, the general rule is that the area of adoption is between established field boundary lines or a maximum 2 m from the road edge. This can vary between area and location.

2.5 Abbreviations

AIL	Abnormal Indivisible Load
C&U	Construction and Use
EIA	Environmental Impact Assessment
ESDAL	Electronic Service Delivery for Abnormal Loads
KGV	King George V
LHA	Local Highway Authority
NH	National Highways
NHNW	National Highways North West Region
OHL	Overhead Line
OS	Ordnance Survey
PF	Pell Frischmann Consultants Ltd
POE	Port Of Entry
Ramboll	Ramboll UK Ltd
RSR	Route Survey Review
SLC	South Lanarkshire Council
SPA	Swept Path Assessment
STGO	Special Types General Order
TS	Transport Scotland

3 Candidate Turbine

Ramboll have indicated that they wish to consider a Siemens Gamesa SG170 blade and a worst-case tower, which is 30 m long and 4.8 m in width for the route assessment and are detailed in **Table 3-1** below.

Table 3-1: Turbine Component Summary

Component	Length [m]	Width [m]	Height / min. Diameter [m]	Weight [te]
SG170 Blade	83.74	4.186	3.5	29.0
Worst Case Tower	30.0	4.8	4.8	-

4 Port of Entry

As the loads are classified as Special Order, due to a rigid length in excess of 30 m, in accordance with the Water Preferred Policy, KGV Dock, Glasgow has been considered POE for the site and all routes assessed within this report originate here.

The port has sufficient quay and storage space and is well located for the strategic trunk road network.

Loads can be offloaded by geared vessel or onshore mobile cranes, and this port has been used for the delivery of components for a number of wind farms / electrical infrastructure projects and is therefore well-proven as being capable of dealing with AILs of the size considered in this RSR.

5 Site Location

The proposed development site is located to the west of Lettershaws, South Lanarkshire. **Figure 5-1** illustrates the site location.

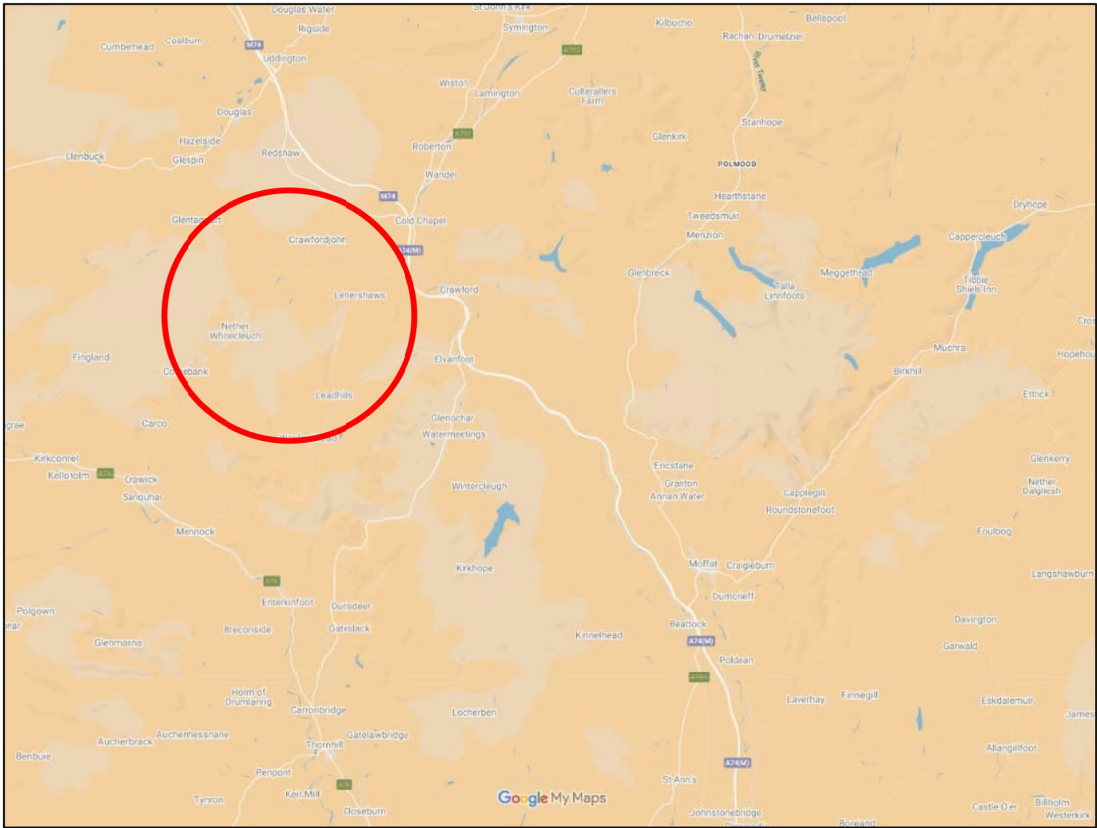


Figure 5-1: Site Location Plan

6 Weight Review

A weight review has been undertaken via the Electronic Service Delivery for Abnormal Loads (ESDAL) contacts database using the National Highways website www.esdal.com.

All of the relevant Local Highway Authorities (LHA) are noted in **Table 6-1**, and all have been contacted to ascertain if there are any relevant constraints that should be noted. Where comments are received, these are included within **Table 9-1** and **Appendix C**. Where no comments have been received, this does not confirm the suitability or otherwise of the structures and a full review will be required with the LHAs.

Table 6-1: ESDAL Contacts

Organisation	Email Address
Amey (South West Scotland)	swabloads@amey.co.uk
M6 DBFO (Autolink M6 ROM)	abnormal.loads@m6dbfo.co.uk
Cumbria Constabulary	AbnormalLoads@cumbria.pnn.police.uk
M8 DBFO (Scottish Roads Partnership)	m8dbfo.abloads@amey.co.uk
National Highways North West Region	nwabnormalloads enquiries@nationalhighways.co.uk
Police Scotland	OSDAbnormalLoadsScotland@scotland.police.uk
Transport Scotland	abnormalloads@transport.gov.scot

7 Access Routes

7.1 Route 1

The proposed access route to the western site access junction is as follows:

- Loads will exit KGV Dock and travel straight on at three roundabouts continuing on Kings Inch Drive westbound;
- Loads will turn left and join M8 eastbound at Junction 25A;
- Loads will exit M8 at Junction 22 and merge onto M74 eastbound;
- Loads will merge from M74 onto A74(M) southbound at Junction 13;
- Loads will merge from A74(M) onto M6 southbound at Junction 45;
- Loads will exit M6 southbound at Junction 42 Golden Fleece Interchange and use the roundabout to re-join the M6 northbound;
- Loads will merge from M6 onto A74(M) northbound at Junction 45;
- Loads will exit A74(M) onto the proposed access track and travel westbound to cross the B797 onto the site access track.

The proposed access route is illustrated in **Figure 7-1**.

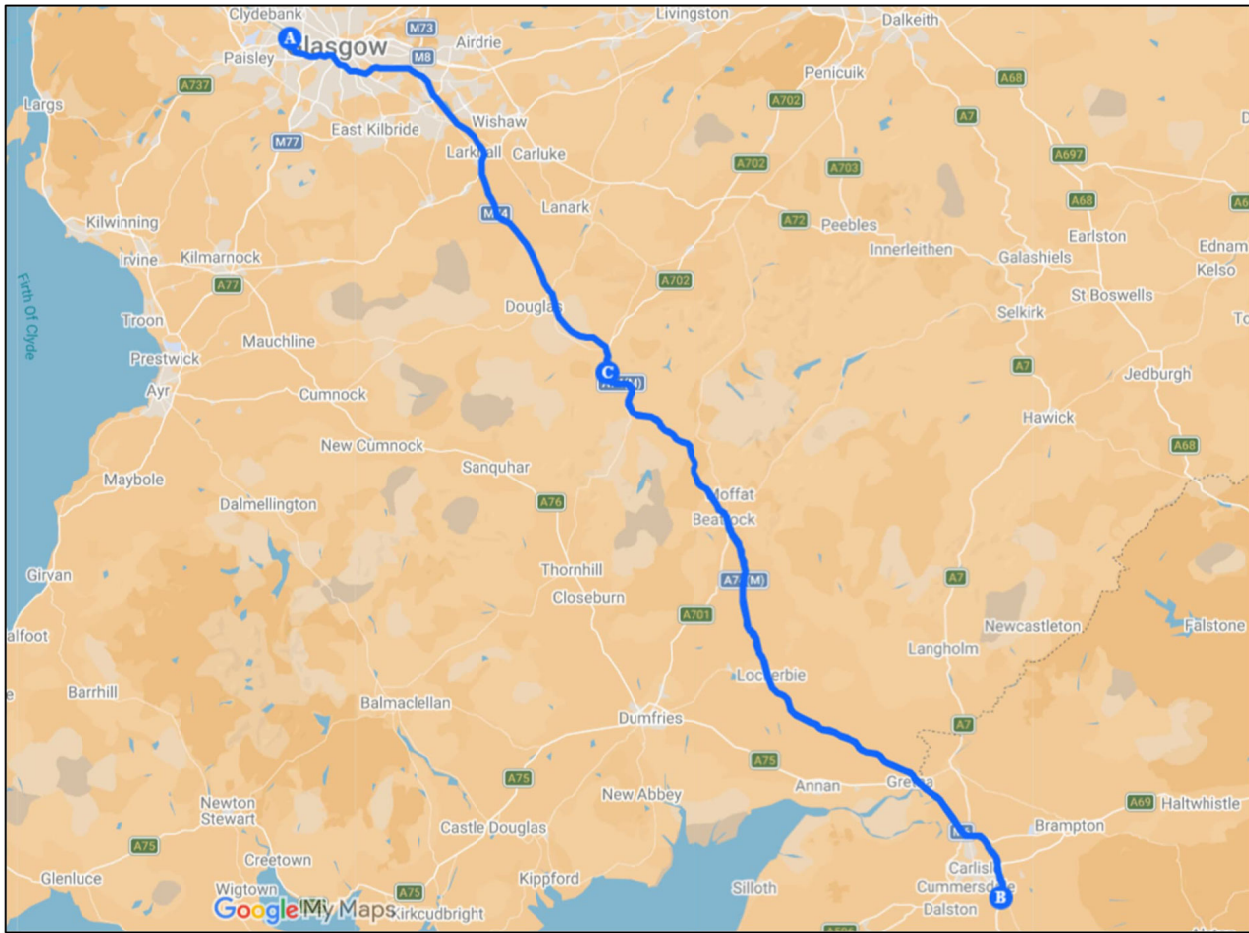


Figure 7-1: Proposed Access Route