

TRANSPORT ASSESSMENT/
TRAFFIC IMPACT ASSESSMENT

APPENDIX O

SERVICING PLAN

PROPOSED BIOMASS FUELLED POWER PLANT

BALLYVANNON ROAD, NR GLENAVY

PLANNING REFERENCE S/2008/0630/F

ROSE ENERGY

JUNE 2009

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PREAMBLE

This report has been prepared by Mr Stephen Lockwood, Managing Director of Doran Consulting, a Chartered Civil Engineer, Member of the Institution of Civil Engineers, Member of the Institution of Structural Engineers, Member of the Institution of Highways and Transportation.

Mr Lockwood has in excess of 25 years of civil engineering experience including the preparation of traffic and transportation studies, for both public and private sector clients, in support of a wide variety of developments types.

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SERVICING PLAN
ROSE ENERGY PROJECT GLENAVY

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1 INTRODUCTION

1.1 Following a meeting with Roads Service and Atkins on 28 October 2008 at which the Atkins Review of the Doran Consulting Transport Assessment/Traffic Impact Assessment (TA/TIA) May 2008 was discussed it was agreed that a Servicing Plan should be prepared that considers the viable routes the proposed Power Plant traffic can travel and recommends their suitability for use.

1.2 The theoretical capacity of the existing road network's ability to accommodate the increase in traffic associated with the proposed Power Plant has been robustly proven in the TA/TIA.

2 ROUTE ASSESSMENT

2.1 A route assessment has been carried out to inform the Servicing Plan and demonstrate the safe management of heavy vehicular traffic.

2.2 The route assessment considers the carriageway quality and cross section through a visual inspection.

2.3 Three routes beyond Ballyvannon Road have been assessed for Power Plant traffic to take; a northern route, middle route and southern route, refer to Figure 1:

- Lurgan Road (north)/Aughnadarragh Road/ Crumlin Road/Gobrana Road
- Edenturcher Road/Glen Road/ Main Street (south)
- Lurgan Road (south)/Crumlin Road/Station Road/Glenavy Road

2.4 These are the most viable routes based on the hierarchy of the road network and the immediate origin/destination of the traffic which is assumed to be the A26. Figure 2 summarises the existing road conditions.

2.5 Tipper trucks intend to be used to import poultry litter however some larger articulated lorries may also be used to deliver to the Power Plant. To demonstrate such a scenario a high sided articulated lorry, refer to Photograph 31, has been photographed and videoed travelling the northern and southern routes as part of the route assessment. Refer to Figure 3 for photograph locations. Photograph 32 shows a lorry that is used to transport Ash in a Power Plant in England.

- 2.6 The articulated lorry is too high to use the middle route due to the height restriction imposed by the railway bridge so it was not photographed on the middle route. Smaller tipper trucks would be able to negotiate this route hence this route was included in the Route Assessment.
- 2.7 *Ballyvannon Road (Photos 1-3)*
- 2.7.1 Ballyvannon Road has a carriageway width of 6m with narrow grass verges both sides near its junction with the Lurgan Road. This narrows to a carriageway width of 5.5m closer to the Ulster Farm By-Products access. The carriageway width allows all vehicles to pass each other but requires Heavy Goods Vehicles to slow down.
- 2.7.2 The road surface is in poor condition in places. There is no street lighting.
- 2.7.3 As noted in the TA/TIA December 2008 School children wait in the morning on the south side of Ballyvannon Road near the Lurgan Road junction to catch the 0800 hours, No. 53 Ulsterbus. Parents tend to wait in their cars at this location too. As there is no formal bus stop or footway provision children have to wait on the carriageway edge. This is not an ideal scenario as space would be cramped if an HGV was to pass during this 15 minute period.
- 2.7.4 Visibility at the Ballyvannon Road/Lurgan Road junction is constrained by hedging to fields though an elevated cab in an HGV has better visibility than a car.
- 2.7.5 Both rigid and articulated lorries need to 'swing' onto the other side of the Lurgan Road and Ballyvannon Road carriageway when turning left into Ballyvannon Road. This is due the existing small junction radius.
- 2.8 *Northern Route*
Lurgan Road (north)/Aughnadarragh Road/ Crumlin Road/Gobrana Road
- 2.8.1 Lurgan Road has recently been recently resurfaced in this location and is of good quality with a carriageway width generally of 6m and narrow grass verges both sides. There are no footways. All vehicles can pass each other. There is no street lighting. Refer to Photos 4 and 5.
- 2.8.2 Aughnadarragh Road is a rural road in fair condition with a carriageway width generally of 5.5m. All vehicles can pass each other though HGVs need to slow down to do so. There is no street lighting. Refer to Photos 6 and 7.

- 2.8.3 Crumlin Road allows access over the railway and is of good quality with a carriageway width of generally 6.5m, refer to Photo 8. It becomes more residential in character closer to Glenavy with the introduction of footways both sides of the carriageway and street lighting, refer to Photo 9. The speed limit changes to 30mph and there is a recent housing development accessed via a right turn pocket near the approach to the Gobraña Road junction.
- 2.8.4 The Gobraña Road has direct frontage housing near its junction with the Crumlin Road, refer to Photo 10. This section of the road has a carriageway width of generally 5.5m with discontinuous footway and street lighting. After this the Gobraña Road is of rural character, refer to Photo 11. Its carriageway surface is of poor quality in places and has a minimum width of 5.2m with narrow verges both sides. All vehicles can pass but HGVs have to slow down and use the verge if passing each other.
- 2.8.5 The A26 has a narrow right turn pocket at the Gobraña Road junction. The junction has good visibility.
- 2.9 *Middle Route*
Edenturcker Road/Glen Road/ Main Street (south)
- 2.9.1 Edenturcker Road is classified as a B road. It has recently been resurfaced at its junction with Lurgan Road and the road surface is generally of good/fair quality elsewhere. The carriageway is generally 6.5m wide with grass verges. Refer to Photographs 12-14.
- 2.9.2 The Glen Road becomes more residential in character as Glenavy is approached. There is a continuous footway link into town from this point. Refer to Photographs 15 and 16. The railway crosses the Glen Road via a bridge that has a height restriction of 3.4m. Tipper trucks, oil lorries and refuse trucks can negotiate the bridge, refer to Photograph 17. The carriageway is 6m wide at the Bridge.
- 2.9.3 Glen Road has two lanes at the approach to the Main Street junction and there is a right turn pocket on Main Street at the Glen Road junction. Refer to Photograph 18.
- 2.9.4 Main Street (south heading towards the A26) is of good quality and has a carriageway width of 8.5m with generous grass verges and footway on one side. There is street lighting. Refer to Photograph 19.

- 2.9.5 There is no right turn pocket on the A26 at the junction with Main Street. Roads Service are currently carrying out a study of the A26. One of the proposals being considered to take forward from the study is the construction of a right turn pocket at the A26/Main Street junction.
- 2.10 *Southern Route*
Lurgan Road (south)/Crumlin Road/Station Road/Glenavy Road
- 2.10.1 Lurgan Road is classified as a B road. Its surface is of good quality having been recently resurfaced. The Lurgan Road carriageway is generally 6m wide with narrow grass verges and no footways or street lighting. Refer to Photograph 20.
- 2.10.2 Lurgan Road becomes the Crumlin Road heading south. Forward visibility on the Crumlin Road is constrained for approximately 1.3km by the horizontal alignment of the carriageway and direct frontage buildings. This constraint on forward visibility reduces vehicle speeds to 30-40mph on what is a National Speed Limit road. Refer to Photograph 21-24.
- 2.10.3 All vehicles can pass each other with HGVs having to slow down in places to do so.
- 2.10.4 The Crumlin Road/ Station Road junction has restricted visibility. Visibility to the right at the junction looking from Station Road is constrained by a Public House and the vertical geometry of the Crumlin Road. Visibility to the left at the junction looking from Station Road is constrained by a hedge.
- 2.10.5 Station Road is classified as a B road. Station Road has recently been resurfaced between its junction with the Crumlin Road and Haddockstown Road. The remainder of the road is in good condition. Refer to Photograph 25 and 26.
- 2.10.6 The Station Road carriageway is generally 6m wide with narrow grass verges and no footways or street lighting. Refer to Photograph 27-29.
- 2.10.7 All vehicles can pass with HGVs slowing down in places to pass each other.
- 2.10.8 Vehicles pass over the railway via the old Glenavy Road which connects to the A26, refer to Photograph 30. A narrow right turn pocket on the A26 provides access to the old Glenavy Road.

2.11 *Route Assessment Summary*

2.11.1 There are deficiencies in carriageway widths and visibility on all three of the routes when compared to the full design standards for new roads as detailed in the *Design Manual for Roads and Bridges (DMRB)*. This is often the case on existing roads throughout Northern Ireland which have evolved historically. In this situation the proposed development should not be assessed against strict compliance with *DMRB* for new roads but on the following criteria:

- existing traffic volume
- proposed increase in traffic volume
- road capacity
- road safety
- actual speeds as opposed to speed limit

2.11.2 The TA/TIA May 2008 that is informed by traffic surveys robustly concludes the existing and proposed traffic levels are low. Junction analysis demonstrates that the existing road network operates well within capacity under the proposal.

2.11.3 Accident statistics for the period 1 April 2005 - 31 March 2008 have been obtained from the PSNI at key junctions and stretches of road in between the junctions on the assessed routes. These are summarised in detail in the TA/TIA May 2008.

2.11.4 The accident statistics do not reflect a particular cause of concern along the routes the modest increase in Power Plant traffic will be travelling.

2.11.5 The speeds on the assessed routes are less than the National Speed limit and the roads are of a consistent standard, i.e. there is not a scenario where there is a particularly poor stretch preceded or followed by a stretch of high standard where speeds of 60mph would be reached. Roads of consistent standard create a safer road environment.

2.11.6 It is therefore concluded that all three routes are viable options for Power Plant traffic subject to recommendations in the Servicing Plan which have been informed by the Route Assessment.

3 SERVICING PLAN

3.1 The three routes assessed could accommodate the modest additional traffic generated by the proposed Power Plant with the following recommendations in place:

- The Number 53 Ulsterbus currently stops on Ballyvannon Road at 0800 and 1635 hours Mondays – Fridays during School term time. It has been observed in the morning that some pupils wait with their parents in their cars on Ballyvannon Road up to 10 minutes prior to the bus arriving. Approximately 8 children have been observed boarding the 0800 bus. Only two passengers (one School pupil) have been observed alighting the 1635 bus and they disperse immediately therefore no restrictions are proposed during this time period. No HGV deliveries for poultry litter, Ash and MBM (excluding MBM from Ulster Farm By Products Ltd) to and from the Power Plant on the stretch of Ballyvannon Road between the Edenturchar Road/Lurgan Road crossroads and the existing Ulster Farm By Product access will be allowed between 0740-0810 hours to ensure there is no conflict with School children waiting for the bus. The Power Plant Manager is to liaise with Translink, Roads Service and the Education Board transport officer on an annual basis to review bus stop arrangements.
- As the visibility at the Crumlin Road/Station Road junction is constrained heavy goods traffic associated with the Power Plant must only use this route for departing the Power Plant not arriving. This would also resolve the concern of lorries swinging onto the other side of the carriageway when turning left into Ballyvannon Road from the Lurgan Road.
- The middle route, Edenturchar Road/Glen Road/ Main Street (south) is only suitable for tipper trucks that have a height less than 3.4m due to the height restriction imposed by the railway bridge.
- To ensure the enforcement of the above restrictions on access the following measures must be adhered to by the Power Plant through the induction of HGV drivers to the *HGV Access Code of Practice*, refer to Appendix O1 :
 - HGV delivery vehicles shall be identifiable as associated with the Power Plant as outlined in the HGV Access Code of Practice
 - HGV drivers must be made aware of route restrictions

4 CONCLUSIONS

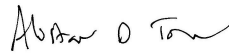
- 4.1 To ensure the safe management of HGV traffic associated with the Power Plant the Servicing Plan must be enforced with restrictions to delivery times and routes taken as outlined in this report.



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APPENDIX O1

HGV Access Code of Practice

HGV ACCESS CODE OF PRACTICE

1 PURPOSE

- 1.1 To provide a procedure for the management of HGV delivery access to the Power Plant.

2 SCOPE

- 2.1 This procedure covers all HGV deliveries to and from the Power Plant that transport Poultry Litter, MBM and Ash with the exception of MBM transportation from Ulster Farm By Products via the Ballyvannon Road.

3 RESPONSIBILITY

- 3.1 The Power Plant Manager shall have day to day responsibility for this procedure.

4 SPECIFIC REQUIREMENTS ON HAULIERS

- 4.1 Each haulier shall ensure that each vehicle or container used by him in connection with the carriage of material to and from the Power Plant:
 - is labelled as required by the Animal By Products Regulations
 - Is clearly identified as servicing the Power Plant, in accordance with details to be submitted to and approved by the Department

5 ROUTES

5.1 Only the following three routes will be used for HGV deliveries:

- Lurgan Road (north)/Aughnadarragh Road/ Crumlin Road/Gobrana Road
Arrivals and departures
- Edenturchar Road/Glen Road/ Main Street (south)
Arrivals and departures 3.4m height restriction due to bridge
- Lurgan Road (south)/Crumlin Road/Station Road/Glenavy Road
Departing only, arrivals not allowed

5.2 HGV deliveries are not allowed to and from the Power Plant on the stretch of Ballyvannon Road between Edenturchar Road/Lurgan Road crossroads and the existing Ulster Farm By Products access between 0740-0810 hours weekdays.

5.3 The Power Plant Manager shall be responsible for ensuring the haulier is aware of the route restrictions and shall provide the driver and contractor with a copy of this Code of Practice and a Route Restrictions Map.