

28<sup>th</sup> January 2013

Office of Licensing, Climate and Resource Use  
 Environmental Protection Agency  
 PO Box 3000  
 Johnstown Castle Estate  
 County Wexford



Dear Sirs

**RE: APPLICATION FOR A DUMPING AT SEA PERMIT BY DUBLIN CITY COUNCIL FOR SPOIL ARISING FROM CONSTRUCTION OF RINGSEND WWTW LONG SEA OUTFALL TUNNEL - APPLICATION REFERENCE NUMBER S0018-01**

This submission is made by SLR Consulting Ireland on behalf of by Roadstone Wood Ltd. and addresses the application (Ref. No. S0018-01) by Dublin City Council (DCC) for a permit to dump at sea, approximately 824,000 tonnes of inert spoil arising from the construction of the long sea outfall tunnel for the Ringsend Wastewater Treatment Works (WwTW).

In essence, Roadstone Wood considers that the application by DCC to dump spoil at sea is wholly unnecessary, as it (and indeed other operators of land based soil and stone recovery facilities) can provide environmentally acceptable and cost-competitive land-based alternatives.

It also appears to Roadstone Wood that any decision by the Agency to approve dumping at sea would establish a bad precedent and could be unsound and open to challenge. It further considers that the environmental and economic arguments advanced by DCC in justifying its decision to apply for a dumping at sea permit are weak and do not stand up to critical scrutiny.

### Background

Roadstone Wood is one of the international group of companies within CRH plc. It is the leading quarry operator and producer of construction materials and asphalt in Ireland. In recent years, the company has committed itself to developing and operating a network of large-scale, well managed waste recovery facilities for inert soil and/or construction and demolition (C&D) waste across Ireland, principally at existing or worked-out quarries, close to major population centres.

Roadstone Wood operates a major quarry at Huntstown in Finglas, Dublin 15, which is strategically located close to (and north of) the junction of the M50 Motorway and N2/M2 Dual Carriageway. In 2002, the company obtained approval from Fingal County Council to backfill and restore the worked-out North Quarry at Huntstown using imported inert soil and stone as part of an agreed restoration plan.

Huntstown Quarry lies beneath flight paths in and out of Dublin Airport. The restoration plan was supported by Aer Rianta (now the Dublin Airport Authority), as backfilling the quarry void with soil and stone would prevent long-term flooding, which would potentially attract birds and increase the risk of bird strike for aircraft making landing approaches to, or taking-off from, Dublin Airport.

In 2002, Roadstone Wood obtained a waste permit from Fingal County Council to facilitate the importation and use of inert soil and stone to restore the North Quarry at Huntstown. Subsequently, in late 2002 and 2003, the Company imported several hundred thousand tonnes of excess soil and stone generated by the construction of the Dublin Port Tunnel and used it to progress backfilling and restoration of a worked-out section of the North Quarry. Quarry backfilling activities have progressed intermittently over intervening years, generally as large volumes of inert spoil became available from nearby construction projects.

The introduction of the Waste Management (Facility Permit and Registration) Regulations in 2008 obliged operators of large-scale inert soil and stone recovery facilities to apply to the EPA for a Waste Licence. As the Agency will be aware, Roadstone Wood submitted a waste licence application to it in February 2011 in respect of soil and stone recovery activities at the North Quarry in Huntstown. The application (EPA Reference No. W0277-01) was accompanied by an Environmental Impact Statement. Rather disappointingly, **nearly two years later**, the Agency has yet to make any substantial progress in its determination of that application.

Given that soil and stone recovery activities at Huntstown are well established, the proven performance and precedence established by the importation of spoil from the Dublin Port Tunnel project and the Agency's recent acceptance of an Article 27 by-product notification to facilitate importation of inert soil material to continue backfilling the quarry, Roadstone Wood would expect that the determination of its waste licence application for a soil and stone recovery facility at Huntstown should be less controversial, complex and time-consuming than the dumping at sea permit application under review.

The Agency will also be aware that another waste licence application for a soil and stone recovery facility at a worked out quarry in Milverton, near Skerries, was submitted by Roadstone Wood in October 2009. That application (EPA Reference No. W0272-01), was accompanied by an Environmental Impact Statement and disappointingly again, **nearly three and a half years later**, the Agency has yet to issue a waste licence in respect of that facility.

For completeness, and for the record Roadstone Wood has obtained one waste licence (Ref. No. W0169-01) for the smallest of its waste recovery facilities, at its worked-out quarry at Fassaroe, near Bray, Co. Wicklow in April 2011.

Roadstone Wood considers that there are six substantial grounds for rejecting DCC's application to dump at sea. These are outlined in brief below.

## 1. Questionable Legal Basis for Approval

Roadstone Wood considers that were the Applicant (DCC) requested to do so by the Agency, using the powers granted to it by Section 5(2) of the *Dumping at Sea Acts 1996-2010 (as amended)*, it **would clearly fail** to demonstrate that there is no alternative means of disposal of the spoil material arising from construction of the outfall tunnel.

The Agency will no doubt have noted that Table 1 in Section 2 of the supporting information report submitted by DCC recognizes that land-based quarry restoration is a viable alternative to dumping at sea. It will also have noted that the concluding chapter (Chapter 10) of the Tunnel Spoil Disposal Study, prepared during the planning stage for the Ringsend WwTW and presented in Appendix B of the supporting information report, recommends that '*the planning application and (EIS) documentation and submissions should be based on utilising a licensed land based disposal outlet*'.

For the sake of transparency and its own credibility and independence, the Agency therefore has no option but to request a detailed justification from the Applicant for the proposal to dump at sea and to subject its response to this request to detailed critical scrutiny.

The proposed disposal of spoil at sea also breaches the obligations laid down by Article 4 of the European Waste Framework Directive (2008/98/EC) and Section 21A of the *Waste Management Act 1996-2011* (inserted by the *European Communities (Waste Directive) Regulations (S.I. No. 126 of 2011)*), which require waste recovery and recycling activities to be promoted above waste disposal alternatives. DCC's own technical advisors draw attention to this obligation in Section 7 of the supporting documentation where they state that '*quarry restoration is considered a recovery activity under the waste hierarchy and as such it is considered more favourable than disposal at sea, as disposal should be the last resort*'.

The points raised above would, at the very least, seem to indicate that any decision on the Agency's part could be questionable and open to review. It would also appear that the Applicant's own technical advisors recognize this and for this reason have indicated that a land-based recovery option is preferable to a sea-based disposal option.

## **2. Weaknesses in Environmental Justification for Dumping at Sea**

The proposal to dispose spoil at sea appears to be based in part on an assertion by DCC that

- (i) it provides '*great social benefits to local residents*' by reducing traffic movements through the docks and along the national road network
- (ii) it results in reduced emissions of greenhouse gases (specifically carbon dioxide).

Roadstone Wood considers that the environmental arguments advanced by the Applicant in favour of the sea disposal option are overstated, do not stand-up to any critical scrutiny and in any event are out of proportion to the negative impacts associated with dumping at sea.

Roadstone Wood has identified that there are a number of oversights, overly conservative assumptions and inconsistencies in the Tunnel Spoil Disposal Report, prepared by the Applicant's technical advisors (and included in Appendix B of the supporting information report). These briefly are as follows: -

- (i) fuel costs and carbon dioxide emissions are calculated on the basis of an 80km return trip to a land-based soil and stone recovery facility. Roadstone Wood's soil and stone recovery facility at Huntstown would involve a 40km round trip, that at Milverton a 64km round trip. This oversight error has the effect of overstating fuel costs and emission levels by 100% in the case of Huntstown and 25% in the case of Milverton.
- (ii) traffic impacts and haulage costs are calculated assuming that each rigid body tipper truck will haul an average of 13.6 tonnes of excavated stone to a land-based soil and stone recovery facility (824,000 tonnes spoil / 71,467 return trips). In Roadstone Wood's experience, such trucks can (conservatively) haul 15 tonnes of excavated rock material, and a greater weight of excavated soil. The under-estimation of the average weight of each load serves to increase the number of haulage journeys and this in turn increases haulage costs and overstates the perceived negative traffic impacts.
- (iii) Notwithstanding the fact that the average loaded weight of each truck movement might only be 13.6 tonnes, in calculating the fuel cost and carbon dioxide emission level, the Applicant's technical advisors nonetheless assume that each truck movement will carry 20 tonnes of excavated spoil. This is inconsistent with assumptions made in assessing the overall number of haulage journeys.

Given that the assessments made in the Tunnel Spoil Disposal Report form the basis for the environmental and economic grounds advanced by DCC in favour of the disposal at sea option, the Agency must have regard to weaknesses in the Applicant's case arising from the oversights, assumptions and inconsistencies highlighted above.

### 3. Traffic Impacts

As regards traffic impacts, Roadstone Wood notes that, in its assessment of the traffic implications of a land-based recovery option, the Applicant states in Section 2.1.2 (Page 12) of the supporting information report that the (overstated) traffic generated by the works *'will have a **negligible impact** on the East Wall / North Wall Road and Pigeon House Road / Sean Moore Road junctions. Works generated traffic represents a significant proportion (16.4%) of the existing flow through the Whitebank Road / South Bank Road junction, however it should be noted that **this junction is lightly trafficked** and, as a cul-de-sac **does not form part of a crucial strategic network**'.*

Notwithstanding these findings, the Applicant proceeds to make a blanket assertion that the reduction in the number of truck movements would have *'great social benefit'* to local residents. In this respect, Roadstone Wood notes that the scenario addressed by the Environmental Impact Assessment (EIS) for the Ringsend WwTW project comprised transfer of excavated spoil to a land-based recovery facility. The Traffic Impact Assessment of the EIS refers (in Section 12.6) to a sensitivity study to stress-test the traffic model for the project *'to take account of*

- (i) *the potential operation of the Dublin Waste to Energy site resulting in an additional 18 HGV trips in and 18 HGV trips out per hour;*
- (ii) *the potential for the permitted spoil haulage period to be reduced from 18 hours per day (i.e. 7pm to 7am and 10am to 4pm) to 6 hours per day (i.e., 10am to 4pm) resulting in each way HGV trips increasing by 17 per hour and*
- (iii) *an acceleration in tunnelling operation from a rate of 16.5 m/day to 30 m/day, resulting in an additional 19 HGV each-way trips per hour'.*

The results of the stress testing indicated that

- (i) *'when comparing the 'without project' scenario to the 'with construction traffic' scenario, vehicle delays do not differ significantly' and that*
- (ii) *'the assumptions associated with the traffic study are robust, even in the event that the Dublin Waste to Energy Plant becomes operational simultaneously with the construction of the works and a reduction in the daily spoil haulage period from 18 hours to 6 hours, vehicle delays do not differ significantly from 'without project' scenario and in this regard **are considered acceptable**'.*

An Bord Pleanála undertook an Environmental Impact Assessment of the Ringsend WwTP upgrade and issued planning permission for the project in November 2012 (Ref No. 29N.YA0010). In doing so, it did not impose any restrictions on construction traffic, and therefore implicitly accepted that the transfer of excavated spoil to a land-based recovery facility could proceed without causing any significant adverse environmental impact.

Notwithstanding the fact that the Agency is not a Planning Authority and has no jurisdiction to make decisions on land-use or planning matters, were it to accept the Applicant's argument that there are unacceptable construction stage traffic impacts associated with a land-based recovery option, it would essentially

- (i) be adopting a position contrary to that of the designated decision-making body (An Bord Pleanála)
- (ii) be adopting a position on all future land-based development along the South Docks and Poolbeg peninsula and
- (iii) be creating an unacceptable environmental precedent for future land-based development in coastal areas by facilitating unnecessary dumping at sea.

Clearly, in light of the recent decision by An Bord Pleanála to grant permission for the Ringsend WwTW, DCC cannot credibly assert that disposal at sea is necessary, nor can it even assert that the proposal would eliminate an unacceptable traffic impact. Clearly, in such circumstances, the Agency cannot accept a traffic-based argument for permitting disposal at sea.

#### 4. Fuel Consumption and Greenhouse Gas Emissions

The only other justification offered by DCC for dumping at sea is that the associated fuel consumption and carbon dioxide emissions are appreciably lower than for a land-based alternative. Roadstone Wood considers that these grounds are too narrow and do not provide sufficient justification for any proposal to dump at sea.

Although fuel costs specifically might be higher for a land-based recovery option, the overall cost of land-based recovery may in fact be lower (this is discussed in more detail further on). In addition, when assessing the environmental impact of the land-based recovery option, the Applicant appears to have assigned an undue weighting and significance to the environmental cost of emitting greenhouse gases.

The difference in carbon dioxide emissions between the land-based recovery and disposal at sea option is calculated by DCC's technical advisors to be 10,160 tonnes over a 3 year period. This volume is wholly insignificant in a national and global context. National greenhouse gas emissions in 2015 are projected (in a 2012 EPA report titled *Ireland's Greenhouse Gas Emission Projections*) to be of the order of 58 million to 59 million tonnes by the year 2015. The additional (overstated) greenhouse gas emissions generated by the land-based recovery option, at 3,387 tonnes per year, would account for approximately 1/200<sup>th</sup> of 1 percent of national greenhouse gas emissions in 2015, placing it within the margin of error in any estimation of national emissions in that year.

If DCC is concerned about the additional greenhouse gas emissions incurred by the land-based recovery option, it is open to it, its Contractor and/or agents acting on its behalf to purchase the carbon credits to offset the perceived negative impact of the activity on the atmosphere. Based on a quoted futures price of €4.50 (as of 25/1/2013) on the European Energy Exchange for the right to emit one tonne of carbon dioxide in 2015, the monetised cost of emitting an extra 10,160 tonnes of carbon dioxide, over and above the dumping at sea option, would incur an additional cost of €45,720.

Application of market principles in monetizing the perceived negative environmental impact of the additional greenhouse gas emissions associated with land-based recovery appears to indicate that, in the context of a €10million contract for spoil removal, there is minimal environmental or economic cost incurred, and that the assertions made by DCC about the perceived environmental benefit of dumping at sea are wholly exaggerated and disproportionate.

#### 5. Economic Costs

Roadstone Wood believes that its inert soil and stone recovery facility at Huntstown offers a real and viable alternative, both in economic and environmental terms, to the proposed dumping of spoil at sea. The Huntstown facility offers a number of significant advantages over other potential spoil management options. It is the closest authorized large-scale soil and stone recovery facility to the construction site(s) and is readily accessible via high capacity national road infrastructure.

The development of a waste recovery hub for the project at Huntstown would also offer an opportunity to achieve some additional environmental benefits and efficiencies by backloading HGVs which carry spoil (or other C+D waste) to the facility, with construction materials or recovered C+D materials on a return journey to the construction site.

Roadstone Wood has assessed the cost of transferring the excavated spoil to its land-based recovery facility at Huntstown. The basis of this assessment is presented in a simple spreadsheet accompanying this submission. The Agency will note that the estimated overall cost of using the land-based recovery facility at Huntstown is **€7.7 million**. Note that this cost assumes that each HGV truck will carry a slightly higher payload than that assumed by DCC (ie. 15 tonnes per HGV) and includes toll costs at the East Link Bridge as well as the economic cost of purchasing carbon offsets (should this be necessary to address the perceived negative impact of additional fuel emissions on the atmosphere).

The estimated cost of transferring excavated material to Roadstone Wood Wood's soil and stone recovery facility at Huntstown is **significantly lower** than the estimated €11.0million to €17.8million identified for the land-based recovery option identified in Section 9.6 of the Tunnel Spoil Disposal Report (see Appendix B of the supporting information report). The estimated cost also compares very favourably with the projected cost of €10.4million for disposing of spoil at sea (on the Burford Bank). Clearly on this basis, it is not possible for DCC to advance an economic argument in favour of the proposal to dump spoil at sea.

## 6. Social and Economic Impact of Dumping at Sea

In advancing its proposal for dumping at sea, DCC appears to have overlooked the fact that any outlay incurred on a land-based recovery option would sustain several local lorry drivers and site operatives in employment for a period of up to three years, with the resulting fiscal benefits accruing to the exchequer from additional employment and spending in the local economy (including VAT).

In contrast, were the dumping at sea option to proceed, it is likely that the outlay incurred in leasing and crewing the barge would **leak out of the national economy**, to firms and employees based overseas. It is arguable that in view of the ongoing national economic crisis, creating and/or sustaining jobs in the local construction industry would be a much greater social benefit than an almost imperceptible reduction in number of HGV traffic movements through the south docks and over the national road network.

### Conclusion

Roadstone Wood considers that the application by Dublin City Council for a Dumping at Sea Permit for spoil arising from the construction of the long sea outfall tunnel for the Ringsend WwTW is unnecessary. As has been demonstrated, Roadstone Wood (and possibly others) can provide proven, environmentally acceptable and cost-effective land-based alternatives. For this reason, it is incumbent on the Agency not to issue a permit to DCC to dump at sea.

Roadstone Wood considers that the Agency should move quickly to address any lingering uncertainty arising from the delay in processing and issuing waste licences for its proposed soil and stone recovery facilities at both Huntstown and Milverton. In so doing, the Agency will facilitate a viable alternative to dumping at sea and finally remove the uncertainties created in the absence of such licences for planners, cost accountants and risk managers working on the Ringsend tunnel outfall project.

Yours sincerely  
**SLR Consulting Ireland**

  
Derek Luby  
**Technical Director**

cc Ronan Griffin Property Manager, Roadstone Wood  
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**Ringsend WWTW Tunnel Outfall Project  
Dublin City Council Dumping at Sea Permit Application (Ref. No. S0018-01)  
Spoil Removal Costs - to Roadstone Wood Inert Soil and Stone Recovery Facilities**

	<b>Huntstown</b>	<b>Milverton</b>	<b>Comment</b>
<b>A</b>	824,000	824,000	from DaS Application
<b>B</b>	20	32	
<b>C</b>	40	64	
<b>D</b>	€4.90	€6.30	RW Estimate
<b>E</b>	15	15	RW Conservative Estimate
<b>F</b>	54,933	54,933	= A / E
<b>G</b>	€8.60	€8.60	from NRA Website
<b>H</b>	€4.00	€4.00	RW Typical
<b>I</b>	0.45	0.45	from DaS Application
<b>J</b>	0.19	0.19	from DaS Application
<b>K</b>	57.09	91.34	= C * E/2 * J
<b>L</b>	3,136,144	5,017,830	= K * F
<b>M</b>	4.50	4.50	European Energy Exchange
Toll Costs (Exclusive of VAT at 23%)	€384,087	€384,087	= F * G
Soil Recovery Gate Fees	€3,296,000	€3,296,000	= A * H
Haulage Cost (incl. fuel)	€4,037,600	€5,191,200	= A * D
CO2 Emission Costs (Carbon Credits)	€14,113	€22,580	=L / 1000 * M
<b>Total Costs</b>	<b>€7,731,799</b>	<b>€8,893,867</b>	

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\* Note - Loading costs at construction site not included as these costs are incurred by both recovery on land and disposal at sea options