

ACCEPTANCE OF NITROUS OXIDE CANISTERS AT MERSEYSIDE
HOUSEHOLD WASTE RECYCLING CENTRES
WDA/03/26

Recommendation

It is recommended that:

1. Members note the current status of matters regarding disposal of discarded Nitrous Oxide (NOx) canisters across Merseyside.
2. Members approve the proposal to install appropriate infrastructure at existing Household Waste Recycling Centres in Merseyside to enable handling and management of NOx canisters delivered by members of the public.

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**ACCEPTANCE OF NITROUS OXIDE CANISTERS AT HOUSEHOLD WASTE
RECYCLING CENTRES**
WDA/03/26

Report of the Chief Executive

1. Purpose of the Report

- 1.1 To inform Members of the current status of matters regarding disposal of discarded Nitrous Oxide (NOx) canisters across Merseyside.
- 1.2 To seek member approval to the proposal to install appropriate infrastructure at existing Household Waste Recycling Centres to enable handling and management of discarded NOx canisters delivered by members of the public.

2. Background

- 2.1 Over recent years, NOx canisters have become an increasing problem not only for MRWA's waste management system, but for waste management systems across the country. Such canisters are legitimately produced for commercial, industrial and medical purposes. However, their recreational misuse (as what is commonly known as 'laughing gas') has seen large numbers being littered across open public spaces with many then finding their way into waste management systems in an uncontrolled manner with occasional serious consequences.
- 2.2 When not depressurised, discarded NOx canisters are deemed a hazardous waste and require specialist treatment.
- 2.3 Further, the canisters are metal, heavy and (when containing gas) highly pressurised containers that can cause significant damage when heated/punctured etc. through (for example) mechanical handling in waste collections systems and at waste management facilities (such as materials recovery facilities or energy from waste plants).

3. Resource Recovery Contract and NOx canisters

- 3.1 MRWA has a contract with Merseyside Energy Recovery Ltd, MERL (the Resource Recovery Contract, RRC) for the treatment of residual waste

and MERL contract Suez to deliver the operational services on their behalf. MERL has reported an increase in NOx canisters being delivered into to the residual waste management system, with several explosions occurring at the Wilton EfW facility causing substantial damage and downtime to the plant.

- 3.2 MERL has written to MRWA to detail the level of damage and significant cost caused, to highlight the legal obligations on MRWA and District Collection Authorities for ensuring appropriate management of NOx canisters and to seek a collaborative approach to ensuring all appropriate systems and procedures are in place for the management of discarded canisters.

4. Current management of NOx canisters

Transfer Stations

- 4.1 Facilities are currently provided, through the Waste Management & Recycling Contract (WMRC) with Veolia, at all four waste transfer stations for the deposit of NOx canisters collected or received by the Waste Collection Authorities.
- 4.2 Waste Collection Authorities may collect canisters through their street cleansing activities, fly tipping removal, or delivered to them through collections from community groups.
- 4.3 It should be noted that the waste transfer stations are not accessible to the general public.
- 4.4 Merseyside's District Waste Collection Authorities, MRWA and its contractors should be doing what they reasonably can to identify waste canisters in the course of collection activities, in the course of street cleansing, and when arising at HWRCs and specifically to prevent them from being mixed with other wastes and thereby entering the residual waste stream.
- 4.5 Once identified, District Waste Collection Authorities and MRWA's waste management contractors need to have robust procedures in place to ensure that NOx canisters are kept separate and are not allowed to be mixed with other waste.

Household Waste Recycling Centres

- 4.6 There are currently no facilities provided at Merseyside's Household Waste Recycling Centres for the public to dispose of NOx canisters (which are commercial/industrial in their origin).
- 4.7 Discussions have been undertaken with the Liverpool City Region Waste Partnership on the management of NOx canisters, which is currently predominantly focussed on the Waste Collection Authorities and Veolia transfer stations. During those discussions, the Partnership asked MRWA to consider allowing members of the public to have the option to dispose of littered NOx canisters through the HWRC network in order to provide an additional disposal route.
- 4.8 MRWA has asked Veolia to provide a proposal for acceptance and management of the treatment of NOx canisters at the HWRC network. An initial outline proposal has been submitted the detail of which is currently being developed between the parties.

5. Options & recommendation

- 5.1 Option 1: Continue to provide NOx canister facilities at transfer stations only

MRWA can continue to provide NOx canister disposal facilities at transfer stations only and not provide any disposal facilities at HWRCs.

Pros: This approach would provide a compliant, limited outlet for any discarded NOx canisters collected by the District Waste Collection Authorities (including from community groups).

Cons: This may be considered too limited a disposal option given the increase in arisings of NOx canisters and may not demonstrate (under challenge) all reasonable actions being undertaken to address the concerns raised by the RRC contractor.

- 5.2 Option 2: Provide NOx canister disposal facilities for the public at certain specific Household Waste Recycling Centres initially (in addition to the facilities provided to Districts through the transfer stations).

MRWA can provide NOx canister disposal facilities at the HWRCs. Should this be the preferred option, it would be proposed to put these facilities into a limited number of specific HWRCs initially (and to assess the public demand for the service) before rolling them out to all HWRCs across Merseyside.

Pros: It would provide an outlet for the public to dispose of NOx canisters and demonstrate further efforts by the Liverpool City Region Waste & Resources Partnership in managing NOx canisters to prevent their uncontrolled disposal through the residual waste system.

Cons: There would be additional costs for infrastructure and ongoing revenue costs for handling, transport and treatment of the canisters.

- 5.3 Whilst it is recognised that significant numbers of NOx canisters are being littered and ultimately find their way into the residual waste system, given that their legitimate use is for commercial/industrial purposes only (recreational use being illegal) it is entirely unknown how many may be disposed of by members of the public into the HWRCs. In this regard, it is extremely difficult to provide a fully informed estimate of likely annual costs.
- 5.4 The initial set up costs for each HWRC is £3,515 to provide for a compliant storage cage, collection boxes and signage (costs being subject to final quotations). There will then be ongoing operational (revenue) costs to include transport, treatment and consignment charges.
- 5.5 For the reasons set out in this report, it is recommended that Members approve Option 2, for MRWA to install disposal facilities for NOx canisters at certain specified HWRCs initially and to roll the service out to all HWRCs should demand prove it reasonable to do so.

6. Risk Implications

- 6.1 The following risk analysis has been considered in relation to this report:

Identified Risk	Likelihood Rating	Consequence Rating	Risk Value	Mitigation
That MRWA may be open to challenge for not providing NOx canister disposal facilities at HWRCs, limiting opportunities	3	4	12	<ol style="list-style-type: none">1. Provide facilities at HWRCs2. Publicise the facilities to ensure awareness amongst the public3. Monitor HWRC use and expand

for the public to ensure segregation of canisters from other waste				service if necessary
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7. HR Implications

7.1 There are no immediate HR implications associated with the report.

8. Environmental Implications

8.1 The provision of additional facilities to allow NOx canister to be deposited and recycled is expected to have a beneficial effect on the local environment where such canisters may otherwise be discarded.

9. Financial Implications

9.1 There will be a requirement for funding of £3,515 per site for initial infrastructure installation, expected to be 5 HWRCs to start with (one per District area). Subject to demand, this could then be expanded to all 14 Merseyside HWRCs meaning capital costs for infrastructure could be between £17,575 and £49,210 in total.

9.2 Revenue costs will depend on the amount of NOx canisters deposited and the number of collections required from HWRCs. As such, it is difficult to estimate the likely annual revenue costs which would arise from handling, transport and treatment of disposed canisters. For the purposes of budgeting, an initial estimate of £250,000 per annum has been made.

9.3 The above costs are not currently budgeted in this financial year (2025/26), but are provisionally included in the 26/27 budget, which is separately subject to Member approval.

10. Legal Implications

10.1 Legal advice has been sought with regards to MRWA's position under the terms of the Resource Recovery Contract, and that advice supports the provision of NOx canister recycling facilities at HWRCs. Support from legal advisors will continue whilst discussions on the matter remain ongoing with MERL and Suez.

11. Conclusion

- 11.1 Members are asked to:
 - i) note the current status of matters regarding disposal of littered Nitrous Oxide (NOx) canisters across Merseyside
 - ii) approve the proposal to install appropriate infrastructure at existing Household Waste Recycling Centres to enable handling and management of Nitrous Oxide canisters.
- 11.2 Subject to Members' decision, budget provision for initial capital and ongoing revenue charges will either be included in the 2026/27 budget proposals or removed.

The contact officer for this report is: Ian Stephenson
7th Floor, Number 1 Mann Island, Liverpool, L3 1BP

Email: ian.stephenson@merseysidewda.gov.uk
Tel: 0151 255 1444

The background documents to this report are open to inspection in accordance with Section 100D of The Local Government Act 1972 - Nil.