

The Greater London Authority

Statement of Policy: June 2020¹

Exemptions to and retrofit procedures for the Non-Road Mobile Machinery (NRMM) Low Emission Zone

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¹ This document supersedes the version published October 2018 on www.nrmm.london.

Introduction

History of the scheme

In summer 2015, the Greater London Authority (GLA) consulted on an exemptions policy to the new Non-Road Mobile Machinery (NRMM) Low Emission Zone, which applies to all construction sites in the Central Activities Zone (i.e. central London) and sites building more than ten homes or larger than 1,000 square meters in Greater London.

This document outlines the GLA's revised exemptions and retrofit policy, which has been refined since the original scheme publication and following engagement with the NRMM committee.

1. Exemption and retrofit policy (June 2020)

1.1 Exemption and retrofit policy rationale

The NRMM 'EU stages' are the basis for the NRMM Low Emission Zone (LEZ) emission requirements. Unlike on highway applications, due to the broad range of non-road engine power and applications, the latest emission level varies according to the engine category. These emission levels are deemed appropriate for the given power and application of the engine. This has led to particular classes of NRMM plant on the market not being available at the EU stage stated in the Supplementary Planning Guidance (SPG)², or in a volume insufficient to meet demand in London. Furthermore, options for re-engining or retrofitting NRMM plant to meet the latest emission stage are often limited owing to safety reasons or cost.

It is therefore necessary to outline a method of assessment for retrofit viability and exemption eligibility that secures emission savings without restricting construction activity and growth in the capital. Experience with implementing the NRMM LEZ since 2015 shows that, while compliant equipment is available for the vast majority of uses, there is still a need for support for retrofit to enable older machinery to maximize its working life and, in a limited number cases, of exemptions are still needed where there are no compliant options and appropriate retrofit equipment is not available

It is important to note that it remains a requirement of the Control of Dust and Emissions from Construction and Demolition Supplementary Planning Guidance (SPG) that all NRMM plant is inputted on the NRMM register regardless of whether an exemption is being sought and/or has been granted.

² This SPG will be revised following the publication of the new London Plan.

Enforcement officers undertake regular site visits to check compliance with the NRMM Low Emission Zone and appropriate action can be taken by the local planning authority if non-compliance is identified.

1.2 Role of the NRMM committee

The committee provides advice to the GLA on the specific needs of stakeholders, the current and future availability of NRMM plant and alternative technical options for compliance (e.g. retrofit). Terms of reference for the NRMM committee are included in Appendix B.

1.3 Updates to this policy since first publication

In collaboration with the NRMM committee, this policy statement was refined since it was first published in August 2015 to respond to a number of queries regarding ambiguity of terminology and the process whereby exemptions interface with the GLA's stance on the use of retrofit technology.

As part of the October 2018 update, truck-mounted cranes were no longer included under block exemptions. Evidence from the NRMM register has shown a sufficient quantity of compliant equipment in the market to justify granting exemptions on a case-by-case basis only. An exemption for this type of NRMM plant could still be given under the 'viability' category, where applicable (for example for those machines with small power outputs where retrofit is not possible).

Appendix A to this document is an update in response to the Covid-19 pandemic. This update introduces a time limited exemption from the uplift in standards from September 2020. The purpose of this exemption is to help site operators, hire companies and machinery and retrofit manufacturers manage disrupted supply chains and longer prior deployment times arising as a result of the lockdown procedures. The new exemption applies only between September 2020 and the end of February 2021, but wherever possible we would encourage all parties to continue to plan for compliance in the shortest possible time rather than delaying fleet upgrade and deployment decisions.

1.4 Summary of exemptions (excluding the Covid-19 limited time exemption)

Table 1 below provides a summary of exemption categories following consultation in summer 2015 and subsequent discussions with the NRMM committee.

Table 1: Exemption categories

Exemption category	Description	Exemption period
Viability	The NRMM plant is not currently manufactured to meet the EU stage as stated in the SPG or there is an insufficient quantity of compliant plant in the UK supply chain for the task, however, it meets the next best available EU stage ³ <u>and retrofit is unviable, following robust consideration.</u>	12 months from date of approval
Short-term	The exemption can be requested in emergency situations for NRMM plant that is on site for a period of no greater than 30 days to account for a range of potential circumstances where equipment is urgently required.	30 calendar days from date of registration.

Post-January 2020

From 1st January 2020 the block exemption for constant speed engines meeting Stage IIIB in the CAZ/CW was removed and generators will be required to meet Stage V standards either by technology or by retrofit for both NO_x and PM reduction in these zones.

1.6 Viability exemption (consideration of retrofit solutions)

In conjunction with the NRMM committee, the GLA has been working with industry to identify suitable retrofit solutions so that all construction equipment in London meets the highest possible emissions standard. The GLA anticipates that a retrofit solution could be installed on the majority of NRMM plant. However, a 'Viability' exemption will be given in those instances where retrofit is demonstrated to be unviable.

In general, operators of NRMM plant must check whether the equipment is manufactured to meet the PM and NO_x requirement of the relevant EU stage and if this is not the case, they must robustly consider whether retrofit solutions are available, including a provision of a quote or similar evidence where applicable. This assessment should consider whether it can be installed safely meeting appropriate equipment regulations (i.e. Provision and Use of Work Equipment Regulations) and it

³ For example, if it is not manufactured to meet Stage IIIB then it must meet Stage IIIA as a minimum.

is effective at reducing emissions to ensure it meets the relevant EU stage in so far as is practicable. This is with the objective of mitigating both PM and NO_x emissions.

Where both a NO_x and PM reduction is required to meet the EU stage stated in the SPG, a NO_x and PM retrofit must be robustly considered (see Tables 2 and 3 below for clarification on what pollution reduction is required according to EU stage).

Table 2: Outline of EU stage requirements and pollution reduction required for variable speed engines

	Stage II	Stage IIIA	Stage IIIB	Stage IV	Stage V	Abatement required		
	Power Band	Power Band	Power Band	Power Band	Power Band	Stage II Equipment for Stage IIIA Zone	Stage IIIA Equipment for Stage IIIB Zone	Stage IIIB Equipment for Stage IV Zone
37≤kW≤56	G	J	P	-	NRE-V-4	NO _x	PM	NO _x /Tel ⁴
56≤kW≤75	G	J	N	R	NRE-V-5	NO _x	NO _x /PM	NO _x /Tel
75≤kW≤130	F	I	M	R	NRE-V-5	NO _x	NO _x /PM	NO _x /Tel
130≤kW≤560	E	H	L	Q	NRE-V-6	NO _x	NO _x /PM	NO _x /Tel

Table 3: Outline of EU stage requirements and pollution reduction required for constant speed engines⁵

	Stage II	Stage IIIA	Stage V*	Equipment vs Standard	
	Power Band	Power Band	Power Band	Stage II Equipment for Stage IIIA Zone	Stage IIIA Equipment for Stage IIIB/IV Zone
37≤kW≤56	G	J	NRE-C-4	NO _x	NO _x /PM/PN/Tel ⁴
56≤kW≤75			NRE-C-5	NO _x	NO _x /PM/PN/Tel ⁴
75≤kW≤130	F	I			NO _x
130≤kW≤560	E	H	NRE-C-6	NO _x	NO _x /PM/PN/Tel ⁴

Retrofits are expected to reduce both NO_x and PM emissions to the relevant stage.

If a Viability exemption is granted, the machine in question will be given a reference number which can be used when registering future deployments within the period of validity of the exemption. However, once the exemption period expires, a new

⁴ Stage V limit values apply where Stages IIIB and/or IV have not been defined.

⁵ For constant speed engines, no Stage IIIB or Stage IV has been defined in any power band, therefore this is not referenced in Table 3.

exemption request will need to be sent to the GLA to account for any changes in the availability of compliant equipment and retrofit technologies. Exemptions will not be automatically renewed.

1.7 Register of retrofit solutions and suppliers

To ensure that robust and high-quality retrofit technologies are used, only retrofit systems produced by manufacturers registered with the Energy Saving Trust (EST) will be eligible for consideration. The EST register that lists emission reduction systems for NRMM can be found at

https://energysavingtrust.org.uk/business/products?field_product_category%5B0%5D=5742

Retrofit equipment is required to have been tested to the relevant ISO:8178 test cycle(s) and include ongoing telemetry once installed to maintain emissions reductions.

The EST register is a certification scheme that ensures retrofit solutions have demonstrated required reductions in pollutants and that criteria in the areas of quality management, warranty and appropriate insurance provision have been met in respect of the supplier. When a company has demonstrated compliance with the requirements of the scheme, it is eligible to use the EST Endorsed Product mark on its product and marketing literature. More information can be found at

<http://www.energysavingtrust.org.uk/businesses/non-road-mobile-machinery-certification>.

1.8 Short-term exemption

The short-term exemption recognises a range of potential circumstances, including emergencies, where equipment is urgently required and seeks to balance the benefits of the scheme without imposing disproportionate costs, particularly on small operators who are using a piece of equipment for a short period of time.

It is acknowledged, however, there is a risk that developers and construction equipment owners may seek to avoid the requirements of the NRMM Low Emission Zone by moving equipment from site to site always remaining under the 30 calendar day threshold. However, on balance, it is felt the inconvenience this would cause to developers would moderate it happening in practice.

Nevertheless, to help avoid an operator trying to move a piece of equipment on and off the same site, once the 30 calendar day period has expired it cannot be renewed simply by moving a piece of equipment from one site to another and then back again. The NRMM register provides a mechanism for checking if such a piece of non-compliant equipment is returned to a site after its 30 day exemption period has expired.

This is not an automatic process and exemption request must be sent to the GLA as soon as reasonably practicable. If, following a review of the evidence provided, the GLA decides a short-term exemption is not justified, the operator will be granted a five working day grace period to remove the equipment from the site (see section 1.9).

This stipulation does **not** mean that equipment on site for fewer than 30 days is not required to be registered or does not need to apply for an exemption. **All** machinery onsite must be included on the register.

A short-term exemption may also be granted where a site operator can demonstrate that a suitable retrofit solution has been ordered for the equipment but has not yet been fitted. Once the retrofit solution is fitted the site operator should then apply for a long-term exemption for the equipment.

1.9 Applying for an exemption

Applications for an exemption must be submitted when entering the equipment on the NRMM register, on or before its arrival on site. This is an automated process once a piece of equipment is registered that does not meet the correct emission standard for that zone (i.e. Central Activities Zone, Canary Wharf, Greater London or, from the 1st September 2020 Opportunity Areas). The exemption form uses the details already entered in the register (site and contact details, NRMM details etc.) with a free-form field and document upload function for the specific exemption request, which is then sent to the GLA. We welcome feedback on how this process works and suggested improvements.

Exemption requests will be reviewed by the GLA, in keeping with the principles adopted in this policy statement, within 10 working days. The NRMM Committee will provide advice and support as required. The GLA's decision is final. If an application is rejected then a grace period of five working days will apply, from date of notification, whereby the NRMM plant must then be removed from the site.

If an application is approved, then the NRMM plant is exempt as per the period outlined in Table 1 above.

If insufficient information is provided to make a judgement on the merit of an exemption request, then that request will be rejected with a direction to provide further information in order to reassess.

Appendix A – Time limited exemption from the new standards following the Covid-19 pandemic

The GLA recognises that many construction sites have closed during the lockdown period implemented by the UK Government in response to the Covid-19 pandemic.

Similarly supply chains needed for new machinery or retrofit solutions may also have been disrupted, affecting the ability of construction and hire companies to source or provide compliant machinery.

As sites re-open it is also anticipated that NRMM may remain on existing sites for longer to make up for lost working time, which may have a knock-on effect especially where newer machinery was anticipated to be released for redeployment.

The GLA believes that these disruptions may make it more difficult for construction and hire companies to prepare for the new NRMM Low Emission Zone standards which come into effect in September 2020. Those who had previously put in orders or taken other action to ensure compliance may find that disruption to supply chains and project overruns make it more challenging to comply immediately with the new standards.

Time limited exemption:

In response we are introducing a “time limited” exemption from the new standards for a period of 6 months.

Unlike other exemptions the time limited exemption applies only for a specific deployment (rather than for a year as is normally the case). For relevant machinery the exemption will normally be granted without the need for the site operator to provide additional supporting information.

However, the GLA will review each application on a case by case basis and reserves the right to ask for supporting information where required.

The time limited exemption also only applies to the new standards introduced in September 2020, so to benefit from this exemption machines must meet at least meet the previous standard for the zone that they are in:

Table a1: Engines which can benefit from the time limited exemption

Zone	Minimum engine standard prior to September 2015	New minimum engine standard from September 1 st 2020	Engines that can benefit from the “time limited” exemption
Central Activity Zone and Canary Wharf.	Stage IIIB	Stage IV	Stage IIIB*
Opportunity Areas	Stage IIIA [§]	Stage IV	Stage IIIA* and Stage IIIB*
Remainder of Greater London	Stage IIIA	Stage IIIB	Stage IIIA*

Notes:

* Engines that already benefit from an exemption due to retrofit will also qualify for the time limited exemption.

§ For most of the new opportunity areas set out in the London Plan the standard prior to September 2020 is IIIA. However, in a few cases opportunity areas overlap with the CAZ or Canary Wharf, in these cases the previous standard was stage IIIB.

Retrofitted machinery:

Machines or engines that benefit from a current exemption because they have been retrofitted will also be able to benefit from the time limited exemption.

For instance:

A stage IIIA engine that has previously been retrofitted to enable it to operate in the CAZ would be able to benefit from the time limited exemption if it is redeployed to another site in the CAZ, Canary Wharf or in an opportunity area. Or

A stage II engine that has been retrofitted for use in Greater London would be able to benefit from the time limited exemption if it is redeployed to another site in Greater London but not in the CAZ, Canary Wharf or in an opportunity area.

Applications for the time limited exemption for retrofitted engines or machines should include the reference number for the existing exemption to enable the GLA to process them correctly.

Machines that are being retrofitted for the first time should be retrofitted to the new standard and should apply for a full exemption in the normal way.

For instance, a stage IIIA engine in a machine being deployed in Greater London on or after the 1st September 2020 can apply for a 1-year exemption if it has been retrofitted with a DPF. If granted this exemption would last for 1 year and is transferrable and renewable in the normal way.

Grant of the time limited exemption and relevant dates:

The time limited exemption will be granted to relevant engines and machines that are deployed to site and entered onto the NRMM register between the 1st September 2020 and the 28th February 2021 only.

Register entries made after the 28th February 2021 will not be eligible for the time limited exemption even if the machine was deployed before this date.

The time limited exemption only applies to the specific deployment and is not transferable if the machine is moved to another site. However, if a machine is redeployed to another site within the relevant period of time an additional exemption may be granted.

For instance:

A stage IIIA excavator deployed to site (a) in Greater London on the 3rd September 2020 would benefit from the time limited exemption for the length of that deployment. If it is subsequently moved to site (b) in Greater London on the 31st January 2021 it would be granted a new time limited exemption. But if the same excavator is moved again to site (c) in Greater London on the 1st March 2021 it would no longer benefit from a time limited exemption for the new deployment.

The GLA will normally grant exemptions within 10 days of the application being made. However, if there is a high volume of applications for the time limited exemption this may take longer.

Machinery that is already on site on the 1st September 2020 will not need to apply for a time limited exemption for the current deployment.

Appendix B - NRMM committee terms of reference

Foreword

The GLA recently published the Control of Dust and Emissions from Construction and Demolition Supplementary Planning Guidance (SPG), which includes the Low Emission Zone (LEZ) for Non Road Mobile Machinery (NRMM) used at construction sites, being introduced from 1 September 2015.

A version is available online and available to download from:

<https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/planning-guidance/control-dust-and>

The GLA would like to prepare the industry in advance of the policy. In that vein, the GLA's Air Quality Team has convened an NRMM Committee of industry experts based on their expert knowledge of this sector to discuss possible exemptions.

Committee Activity Table

Item	Description	
Duration	On-going	
Frequency	Bi-annual	
Purpose	<ul style="list-style-type: none"> ▪ To advise on Non Road Mobile Machinery (NRMM) that may not be able to meet the NRMM LEZ either due to unavailability or technical specifications, and should therefore be exempt. ▪ In future, to review existing exemptions to make sure they are still relevant. 	
GLA Roles and Responsibilities	<ul style="list-style-type: none"> ▪ Chair ▪ Secretariat <ul style="list-style-type: none"> - Committee coordination (meetings) - Minutes - Recorded actions - Recommendations - Provide draft plans and information to the committee ▪ Committee minutes will be made publicly available on request 	
Committee Roles and Responsibilities	To maintain confidentiality; to comment and advise on possible exemptions; to advise on prior to the formal consultation. The committee will operate in a purely advisory capacity. It is not a decision-making body. All exemptions discussed will be made separately and independently by the GLA.	
Membership	Member	No. Representatives
	Greater London Authority	2
	King's College London	1
	Society of Motor Manufacturers & Traders (SMMT)	2
	Environmental Industries Commission (EIC)	2
	NRMM Enforcement Officers	2
	High Speed 2 (HS2)	1
	Construction Plant-Hire Association (CPA)	2
	Energy Savings Trust (EST)	1
	Transport for London (TfL)	1
	Construction Equipment Association (CEA)	1
	Association of Manufacturers of Power Generating Systems (AMPs)	1

EU Non-Road Mobile Machinery (NRMM)																													
This chart covers variable speed diesel engine NRMM Applications																													
Power Bands at Stage II	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Power Bands from Stage IV
kW > 560																							NRE-v-7 (non genset) NRG-v-1 (genset)					kW > 560	
130 ≤ kW ≤ 560			A			E					H				L								NRE-v-6					130 ≤ kW ≤ 560	
75 ≤ kW < 130			B			F					I				M								NRE-v-5					56 ≤ kW < 130	
37 ≤ kW < 75			C			G					J				N								NRE-v-4					37 ≤ kW < 56	
18 ≤ kW < 37						D																	NRE-v-3					19 ≤ kW < 37	
kW < 18																							NRE-v-2					8 ≤ kW < 19	
																							NRE-v-1					kW < 8	

EU Emission Stages		Stage I
		Stage II
		Stage IIIA
		Stage IIIB
		Stage IV
		Stage V

EU Non-Road Mobile Machinery (NRMM)																												
This chart covers constant speed diesel engine NRMM applications																												
Power Bands at Stage II	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Power Bands from Stage IV							
kW > 560																							NRE-v-7 (non genset) NRG-v-1 (genset)					kW > 560
130 ≤ kW ≤ 560						E																	NRE-v-6					130 ≤ kW ≤ 560
75 ≤ kW < 130						F																	NRE-v-5					56 ≤ kW < 130
37 ≤ kW < 75						G																	NRE-v-4					37 ≤ kW < 56
18 ≤ kW < 37						D																	NRE-v-3					19 ≤ kW < 37
kW < 18																							NRE-v-2					8 ≤ kW < 19
																							NRE-v-1					kW < 8