

The Greater London Authority

Statement of Policy – October 2018¹

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

Contents

Introduction2

Exemption and retrofit policy (October 2018)2

1.1 Exemption and retrofit policy rationale2

1.2 Role of the NRMM policy committee.....3

1.3 Updates to this policy since first publication3

1.4 Summary of exemptions3

1.5 Block exemption4

1.6 Viability exemption (consideration of retrofit solutions)5

1.8 Short-term exemption7

Appendix A - NRMM policy committee terms of reference9

¹ This document supersedes the version published March 2016 on www.nrmm.london.

Introduction

History of the scheme

In summer 2015², 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 feet in Greater London.

The GLA received twenty-seven responses to the consultation³ with a number of common themes, questions and suggestions. The GLA submitted a response to the consultation, which has since had minor amendments to be consistent with this policy⁴.

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 policy committee.

Exemption and retrofit policy (October 2018)

1.1 Exemption and retrofit policy rationale

The NRMM 'EU stages' are the basis for the NRMM Low Emission Zone 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)⁵, 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 in a limited number cases of exemptions are still needed where there are no compliant options and appropriate retrofit equipment is not available

The revised policy covers the period October 2018 to January 2020, when it will be further revised in advance of the engine stage requirements for the Low Emission Zone changing.

² 22 May 2015 to 3 July 2015

³ See https://nrmm.london/sites/default/files/upload-docs/NRMM%20Consultation%20Responses_final.pdf

⁴ Also available on www.london.gov.uk.

⁵ This SPG will be revised following the publication of the new London Plan.

Future changes to this policy document will be signposted with a 12-month lead-in time before the policy change is implemented.

It is important to note that it remains a condition 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.

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 policy 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 (eg retrofit). Terms of references for the NRMM policy committee are included in Appendix A.

1.3 Updates to this policy since first publication

In collaboration with the NRMM policy committee, this policy statement has been 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 this update, truck-mounted cranes are 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).

1.4 Summary of exemptions

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

Where an exemption expired in September 2018, that machine will have to re-register for an exemption through to January 2020.

Table 1: Exemption categories

Exemption category	Description	Exemption period
Block	The type of NRMM plant is not currently manufactured at the EU stage stated in the SPG or there is an insufficient quantity of	Until 1 January 2020

	compliant equipment in the UK supply chain and retrofit is unviable.	
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 ⁶ and retrofit is unviable, following robust consideration.	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.

1.5 Block exemption

The GLA, in conjunction with the NRMM policy committee, has identified a limited number of ‘types’ of NRMM plant that should be granted a minimum two year block exemption from the date that the SPG came into effect. This is because this equipment is not currently manufactured at the EU stage stated in the SPG or there is an insufficient quantity of compliant equipment in the UK supply chain and retrofit is widely considered unviable.

Block exemptions are outlined in Table 2 below and will apply until 1 January 2020. Further consideration of retrofit is not necessary for NRMM plant covered by a block exemption. However, it is encouraged and the GLA has committed to work with operators whom are willing to achieve ‘best in class’ where further emission reductions can be achieved using retrofit.

As explained above, where an item of plant already carries an exemption, this will expire on 1st September 2018 and a new exemption must be sought for that piece of machinery.

Table 2: Block exemptions

NRMM type	Level of exemption	Rationale
Constant speed engines (eg generators)	Exempt from Stage IIIB PM and NO _x requirement	Constant speed engines are not type approved to meet a Stage IIIB or IV standard and discussions are currently underway to bring in a Stage V standard from 2020.

The list of block exemptions has been reviewed, based on entries made in the NRMM register since 2015 and it has been found that there are no categories of machinery where there is sufficient evidence to justify a block exemption on availability grounds. The remaining block exemption acknowledges that, as Stages IIIB and IV are not defined for constant speed engines, there is no technical possibility of the exempted classes of machinery meeting the standards set out in guidance until January 2020.

⁶ For example, if it is not manufactured to meet Stage IIIB then it must meet Stage IIIA as a minimum.

For constant speed engines, it is understood there may be instances where the emissions are equivalent to those for a Stage IIIB or Stage IV variable speed engine despite the EU type approval being Stage IIIA. This should be correctly inputted in the NRMM register as a stage IIIA engine.

Post-January 2020

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

1.6 Viability exemption (consideration of retrofit solutions)

In conjunction with the NRMM policy 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 (ie Provision and Use of Work Equipment Regulations) and it 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 Table 3 and 4 below for clarification on what pollution reduction is required according to EU stage).

Table 3: Outline of EU stage requirements and pollution reduction required for variable speed engines

	Stage II	Stage IIIA	Stage IIIB	Stage IV	Stage V	Equipment vs Standard		
Power Band (kW)	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 ⁷

⁷ Stage V limit values

56≤kW≤75	G	J	N	R	NRE-V-5	NO _x	NO _x /PM	NO _x /Tel ⁷
75≤kW≤130	F	I	M	R	NRE-V-5	NO _x	NO _x /PM	NO _x /Tel ⁷
130≤kW≤560	E	H	L	Q	NRE-V-6	NO _x	NO _x /PM	NO _x /Tel ⁷

Table 4: Outline of EU stage requirements and pollution reduction required for constant speed engines⁸

	Stage II	Stage IIIA	Stage V*	Equipment vs Standard	
Power Band (kW)	Power Band	Power Band	Category/sub-category	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 ⁷
56≤kW≤75			NRE-C-5	NO _x **	NO _x /PM/PN/Tel ⁷
75≤kW≤130	F	I		NO _x **	NO _x /PM/PN/Tel ⁷
130≤kW≤560	E	H	NRE-C-6	NO _x **	NO _x /PM/PN/Tel ⁷

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 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 http://www.energysavingtrust.org.uk/domestic/products?field_product_category%5B0%5D=4812.

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

⁸ For constant speed engines, no Stage IIIB or Stage IV has been defined in the regulations therefore this is not referenced in Table 4.

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.

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 (ie Central Activities Zone, Canary Wharf or Greater London). 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 - NRMM policy 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/supplementary-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 Unit 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	# Representatives
	GLA	2
	King's College London	1
	SMMT	2
	EIC	2
	CPA	2
	NRMM Enforcement Officers	2
	HS2	1
	CPA	2
	EST	1
	TfL	1
	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) NRQ-v-1 (genset)					kW > 560			
130 ≤ kW ≤ 560		A		E		H		L		Q	NRE-v-6					130 ≤ kW ≤ 560													
75 ≤ kW < 130		B		F		I		M		R	NRE-v-5					56 ≤ kW < 130													
37 ≤ kW < 75		C		G		J		N		P	NRE-v-4					37 ≤ kW < 56													
18 ≤ kW < 37				D		K	NRE-v-3					19 ≤ kW < 37																	
kW < 18																					NRE-v-2					8 ≤ kW < 19			
																					NRE-v-1					kW < 8			

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 V						
kW > 560																					NRE-c-7 (non-genset) NRQ-c-1 (genset)					kW > 560	
130 ≤ kW ≤ 560				E		H	NRE-c-6					130 ≤ kW ≤ 560															
75 ≤ kW < 130				F		I	NRE-c-5					56 ≤ kW < 130															
37 ≤ kW < 75				G		J	NRE-c-4					37 ≤ kW < 56															
18 ≤ kW < 37				D		K	NRE-c-3					19 ≤ kW < 37															
kW < 18																					NRE-c-2					8 ≤ kW < 19	
																					NRE-c-1					kW < 8	

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