



LONDON LOW EMISSION
CONSTRUCTION PARTNERSHIP



Non-road Mobile Machinery Register

18th March 2016
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SUPPORTED BY
MAYOR OF LONDON



What is “non-road mobile machinery”?

NRMM is defined as any mobile machine, item of transportable industrial equipment, or vehicle - with or without bodywork - that is:

- ⦿ not intended for carrying passengers or goods on the road
- ⦿ installed with a combustion engine - either an internal spark ignition (SI) petrol engine, or a compression ignition diesel engine



Examples of NRMM include, but are not limited to, the above

London's LEZ for NRMM

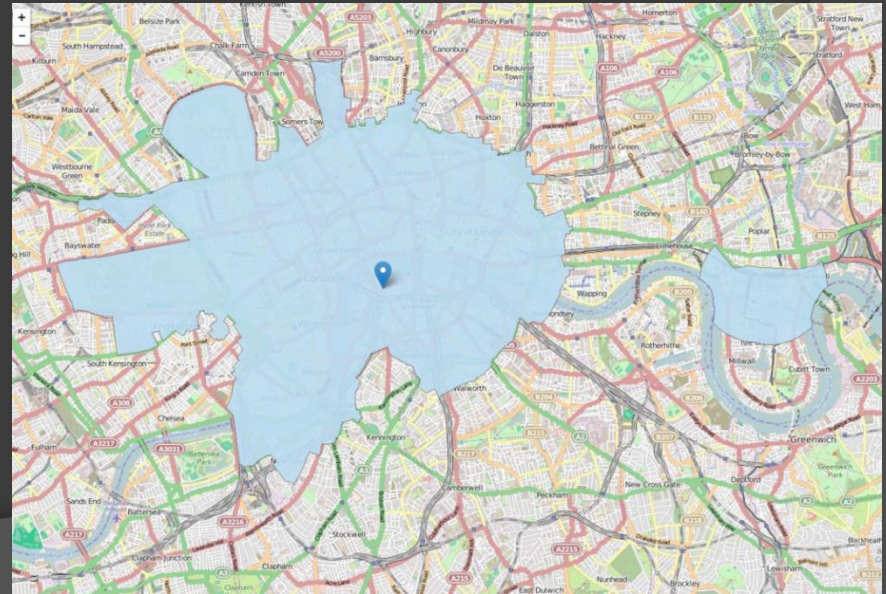
1st September 2015

NRMM (net power 37-560kW) used on **all developments** across the 'central activity zone' & Canary Wharf will be required to meet stage IIIB of the directive as a minimum

NRMM used on the site of any **major development** within Greater London will be required to meet stage IIIA of the directive as a minimum

1st September 2020

Tighter emission standards for CAZ, Canary Wharf and Greater London introduced

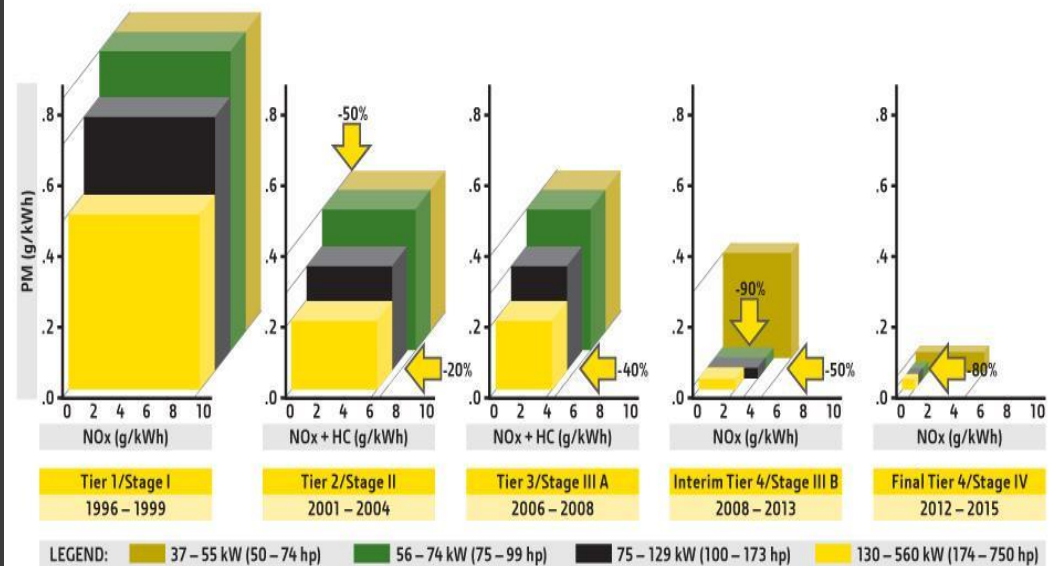


Outline of Non-Road Mobile Machinery (NRMM) Emissions Regulations

Directive 97/68/EC (emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery) adopted in 1997

The Directive requires that, in order to be placed on the EU market, engines for use in NRMM must be approved to demonstrate compliance with pollutant emission limits.

EPA and EU nonroad emissions regulations: 37 – 560 kW (50 – 750 hp)



Non-road mobile machinery website

- To inform developers and contractors about which equipment is compliant for use within the NRMM low emission zone
- The SPG requires registration of NRMM details from **all developments** within the CAZ and Canary Wharf and **all major developments** within Greater London
- Allow for NRMM LEZ exemption application
- Allow for local authority enforcement

nrmm.london

- Create a unique data resource that will add to the understanding of what NRMM equipment is currently being used and allow later assessment to demonstrate the uptake of higher emission standards
- Allow for a more accurate London Atmospheric Emission Inventory (LAEI) to be developed
- It will be a portal for future GLA policy updates

nrmm.london

London's 'Low Emission Zone' for non-road mobile machinery

View Tweets

Add to NRMM Register

Submitted by [admin](#) on 26 May 2015 - 13:52

Please use this form to record use of NRMM, giving the expected deployment date, duration and equipment details. You can find [help here](#).

Site Name

daniel.marsh

If this is not correct then please logout, and then login using the correct site

Deployment Date

2015 Sep 28

Deployment Duration

days

Machinery Type

Select

Machinery Manufacturer

Select

Engine Manufacture Year

Engine Identifier

This is a code for uniquely identifying this engine e.g License Plate (for road going NRMM), engine serial number, or internal asset number. Using it will help keep track of what kit has been entered.

Engine EU Type Approval number

41197/68AP2004/2610000YY

Please edit the above example - see [how to read register entry](#).

Engine Power

kW

Retrofit Type

None

EU engine emission stage

Select

Entry Status

OK

[Accept Exemption](#) [Reject Exemption](#) [Add to register](#)

Air Pollution Forecast



[More information and health advice](#)

Tweets

- [LDH Mayer Environment](#) @LDH_environment
Nathalie Baumann @nathaliebaumann at Zurich University - 25% of flat roofs in [Munich](#) now green roofs [#greenroofs](#) [#greeninfrastructure](#) [#greenbuilding](#)
- [LDH Mayer Environment](#) @LDH_environment
Mike Cottage of Active Ecology [#activeecology](#) [#activeecology](#) managing water key to successful [#activeecology](#) [#activeecology](#) [#activeecology](#) [#activeecology](#)

Quick links

[NRMM Register](#)

Sign up for the NRMM register.

[Local Authority Use](#)

Local Authorities in London are able to view the NRMM register.

[How to use](#)

Help with using this website

[About](#)

Read more about the project.

London's 'Low Emission Zone' for non-road mobile machinery



NRMM Register

- [How to use the NRMM register](#)
- [How to read engine plates](#)
- [NRMM Exemption policy](#)
- [Retrofit technology](#)
- [Local Authority use](#)

Not sure what these are? [How to use this site](#)

Aims of the NRMM

Since 2008, heavy duty diesel road vehicles have had to meet emissions standards for PM to avoid being charged for travelling within the London Low Emission Zone (LEZ). The Mayor has recently announced his intention to introduce an ultra low emission zone in central London from 2020. This will require all vehicles to be either zero or ultra low emission.

It is also important to take action to reduce emissions from non-road mobile machinery (NRMM) to protect and improve Londoners health. The latest version of the London Atmospheric Emissions Inventory estimates that in 2010 the NRMM used on construction sites was responsible for 12% of NOx emissions and 15% of PM10 emissions in Greater London.

Want to find out more? [Read more...](#)

Does this apply to me?

From 1 September 2015 NRMM of net power between 37kW and 560kW used in London will be required to meet standards.

This will apply to NRMM engines for both Nitrogen Oxides (NOx) and Particulate Matter (PM) emissions.

These standards will be based upon engine emissions standards set in EU Directive 97/68/EC.

Want to find out more? [Read more...](#)

Map of the NRMM LEZ



This map shows the area of the Non-Road Mobile Machinery (NRMM) regulations will apply. These regulations are active from 1st September 2015.

There are two zones - Greater London (shown in blue), and the Central Activity Zone (CAZ) and Canary Wharf (shown in orange). The central London areas have a tighter emissions standard applied to them.

To use the interactive map you can select the layers using the control in the top right corner of the map. You can also enter an address or postcode to zoom in to and find out which of the emission standards you will need to comply with.

You can find out more details about which developments this will apply to under [What should you do next?](#)

Want to find out more? [View the full map](#)

About the NRMM register

- ⦿ Cleaner construction machinery for London – info from the SPG
- ⦿ Interactive map of the NRMM LEZ zones (zooms to street level)
- ⦿ Who should use this site?
- ⦿ Data security
- ⦿ GLA exemptions and retrofit policy

Signing up for the NRMM register

Registering an account for developers

- ⦿ Site name - registered by individual development not by developer
 - Development name and year
- ⦿ Site contact details - responsible persons contact details
 - Ideally project manager who will stay with project through all phases of development
- ⦿ Site location within the LEZ and borough(s)

London's 'Low Emission Zone' for non-road mobile machinery

[Log in](#)[Register as](#)[Request new password](#)

Sign up for NRMM Register

This form is for signing up a major development in London for the NRMM register. Please [check that this applies](#) for your site before submitting. You can find [help here](#). If you are a local authority please see the [Local Authority Use page](#).

Please add the email address **website@nrmm.london** to your email client safe list in order to receive your user account notification emails.

Site Name (memorable name for your site, including year) *

Contact Email *

A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications by e-mail.

Contact Name *

Contact Phone (direct dial or mobile) *

NRMM

☐ Within Central Activity Zone or Canary Wharf

Primary Borough *

- Select a value -

☐ Site Spans Borough Boundaries

Quick links

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[How to use](#)

Help with using this website

[About](#)

Read more about the project.

Registering NRMM

- ⦿ Deployment date and duration
- ⦿ Machine type and manufacturer
- ⦿ Engine
 - Year of manufacture
 - Unique identifier
 - EU type approval number
 - Power rating
- ⦿ Retrofit – type and certified supplier
- ⦿ EU engine emission stage

NRMM Site List

This shows a list of active NRMM sites. You can click on the headings to sort the data e.g. by borough, site name etc.

Borough

City of London

Apply

Site Name	Primary Borough	CAZ/CW	Planning Year	Number	Name	Company	E-mail	Created date	Last access	Register	Site
21 Moorfields Enabling Works	City of London	Yes			CAroline Cochrane	Mace Group	Caroline.cochrane@macegroup.com	15 March, 2016 - 16:47		view	View
20Farringdon16	City of London	No			Natasha	Erith Contractors	natasha.nicholson@erith.com	24 February, 2016 - 14:25	7 March, 2016 - 16:19	view	View
Puddle Dock	City of London	Yes			Simon Tranter	Willmott Dixon Interiors	simon.tranter@willmottdixon.co.uk	17 February, 2016 - 11:29	1 March, 2016 - 17:42	view	View
DixonHouse2015	City of London	Yes			Phoebe	ISG	phoebe.baker@isgplc.com	11 February, 2016 - 12:30		view	View
Aldermans House 2014	City of London	Yes			gordon Dingle	ISG	gordon.dingle@isgplc.com	5 February, 2016 - 12:25		view	View



View NRMM Register for all sites

This table shows NRMM register entries for all sites. You can click on the headings to reorder the list, or select sites by exemption status.

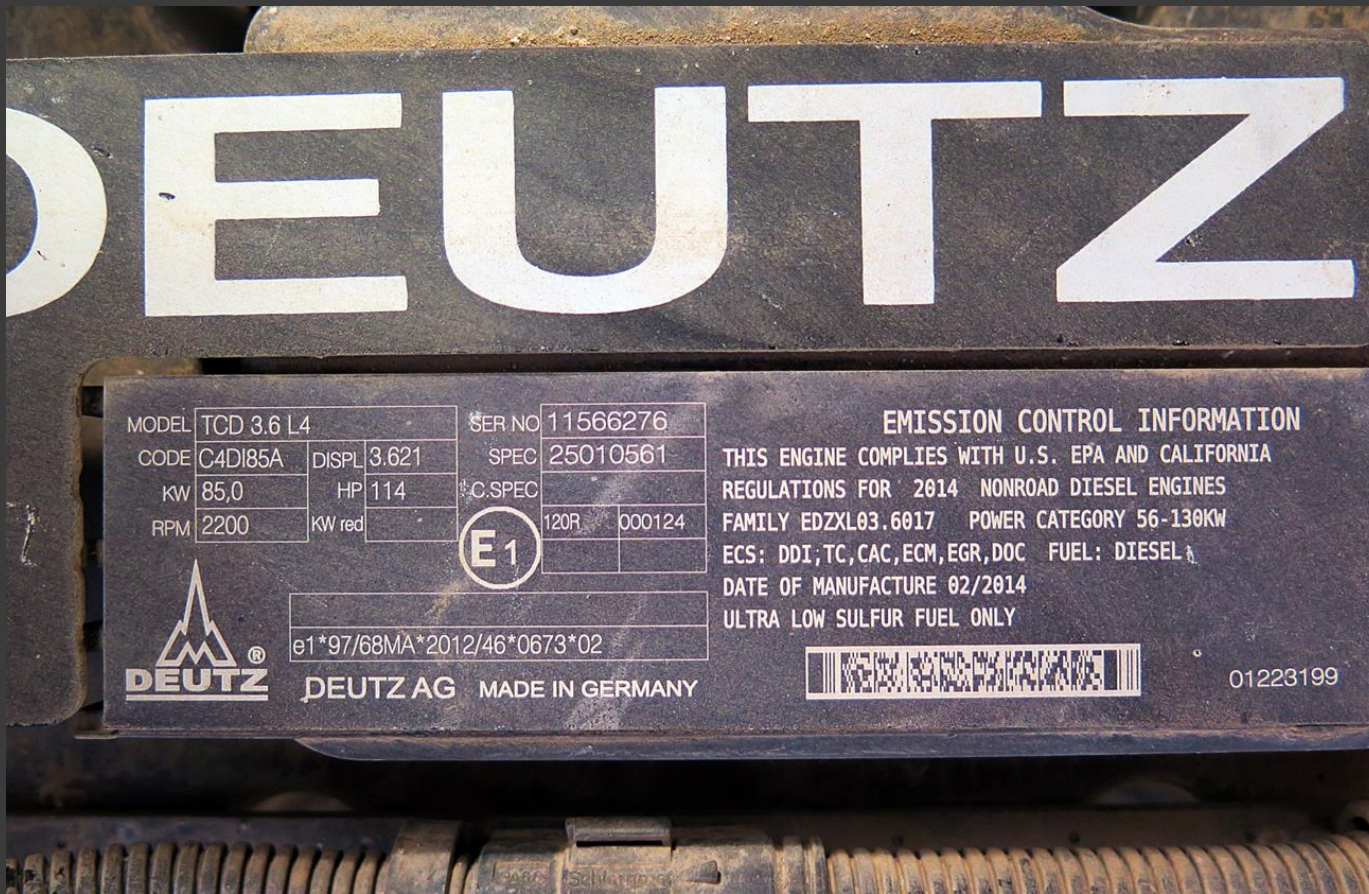
Exemption Status

- Any -

Apply

Site Name	Machinery Type	Machinery Manufacturer	Engine Manufacture Year	Retrofit Type	EU engine emission stage	Deployment Date	Deployment Duration	Entry Status	Exemption Status	
Riverwalk	Forklift	Manitou	2012		EU Stage IIIB	3 August, 2015	90	Ok		edit
Kennington NLE 2015	Excavator	Caterpillar	2012		EU Stage IIIB	13 July, 2015	80	Power mismatch		edit
Kennington NLE 2015	Dumper	Thwaites	2012		EU Stage IIIB	8 June, 2015	115	Ok		edit
Kennington NLE 2015	Dumper	Thwaites	2012		EU Stage IIIB	8 June, 2015	141	Ok		edit
Stewarts Lane Depot Roof Renewal	Telehandler	JCB	2012		EU Stage IIIA	17 August, 2015	365	Ok	None	edit
Kennington NLE 2015	Excavator	Caterpillar	2012		EU Stage IIIB	12 August, 2015	76	Power mismatch		edit
Kennington NLE 2015	Excavator	Caterpillar	2012		EU Stage IIIB	13 August, 2015	43	Ok		edit

Engine plates



All engines manufactured in compliance with the EU engine emissions Directive 97/68/EC must be marked with certain information.

In the example below the letters LA indicate that it is a variable speed stage IIIB engine.

Example type approval number:
e11*97/68**LA***2010/26*9999*01

1st letter = EU
Engine Emission
Category

2nd letter = EU
variable speed or
constant
speed designation
A = variable speed,
B = Constant speed

Engine Category Letter	EU Emissions Stage
A-C	EU Stage I
D-G	EU Stage II
H-K	EU Stage IIIA
L-P	EU Stage IIIB
Q-R	EU Stage IV

This engine complies with GLA NRMM LEZ requirements for all zones from 2015, and complies with the GLA NRMM LEZ requirement for all zones EXCEPT Central Activity Zone and Canary Wharf from 2020

EU emission engine plate – country of manufacture codes

Country Code	Country Name
e1	Germany
e11	United Kingdom
e12	Austria
e13	Luxembourg
e17	Finland
e18	Denmark
e19	Romania
e2	France
e20	Poland
e21	Portugal
e23	Greece
e24	Ireland
e25	Croatia
e26	Slovenia
e27	Slovakia
e29	Estonia

Country Code	Country Name
e3	Italy
e32	Latvia
e34	Bulgaria
e36	Lithuania
e4	Netherlands
e49	Cyprus
e5	Sweden
e50	Malta
e6	Belgium
e7	Hungary
e8	Czech Republic
e9	Spain
eCY	Cyprus
eIRL	Greece
eMT	Malta

Adding retrofit

Please edit the above example - see [How to read engine plates.](#)

Engine Power *

kW

Retrofit Type

Diesel Particulate Filter - Regenerative ▼

Retrofit Company

- None - ▼

Retrofit Details

The model or name of the retrofit equipment

Retrofit Date

Year ▼

Month ▼

Day ▼



Retrofit Approver

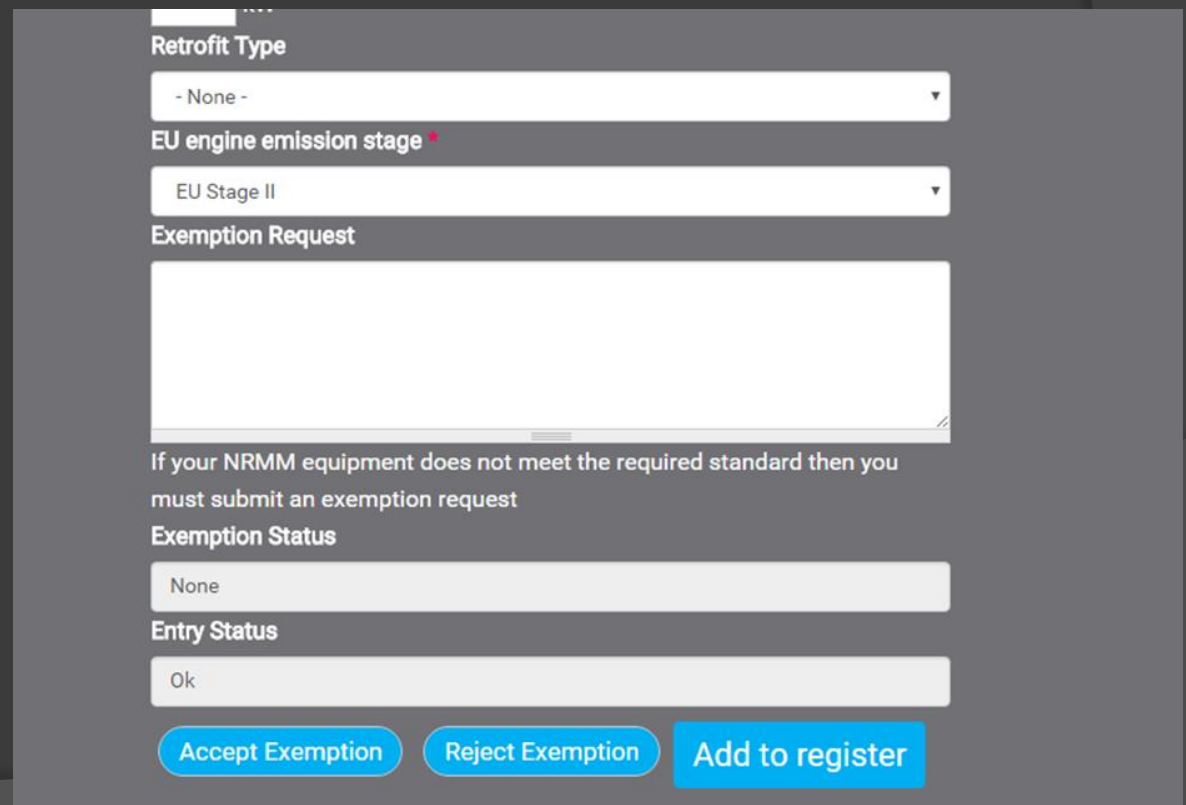
- None - ▼

Applying for an exemption

If the NRMM details submitted do not meet the minimum standard required for the LEZ zone that the development is registered in a 'hidden' field is made available for an exemption request.

14 exemptions applied for so far...

All exemption requests are dealt with by the GLA and their decision is final!



The screenshot shows a web form for submitting an exemption request. It includes several dropdown menus and a text area. The form is titled 'Retrofit Type' and 'EU engine emission stage'. Below these is a section for 'Exemption Request' with a large text area. A note states: 'If your NRMM equipment does not meet the required standard then you must submit an exemption request'. Below this is a section for 'Exemption Status' with a dropdown menu showing 'None'. There is also an 'Entry Status' dropdown menu showing 'Ok'. At the bottom are three buttons: 'Accept Exemption', 'Reject Exemption', and 'Add to register'.

Retrofit Type

- None -

EU engine emission stage *

EU Stage II

Exemption Request

If your NRMM equipment does not meet the required standard then you must submit an exemption request

Exemption Status

None

Entry Status

Ok

Accept Exemption Reject Exemption Add to register

Borough access to the register

- ⦿ Each borough has a unique secure login to the register
 - Email nrmm@london.gov.uk to request user account details
- ⦿ Ability to 'filter' entries to see which sites have registered for an account and which NRMM details have been uploaded
- ⦿ Ability to 'sort' data i.e. by date registered or alphabetically
- ⦿ Check for LEZ policy compliance/ desktop enforcement
 - Has a development registered for an account?
 - Has a development registered any NRMM and is it current?
 - Is all NRMM listed compliant within the LEZ zone?
 - Has a development registered in the correct borough?
 - Are there multiple entries for the same development?
- ⦿ Check for retrofit details or exemption status

NRMM register – use so far...

Site went live for the start of the policy in September 2015

Use as of March 2016

- **221** registered sites
- **330** pieces of registered NRMM

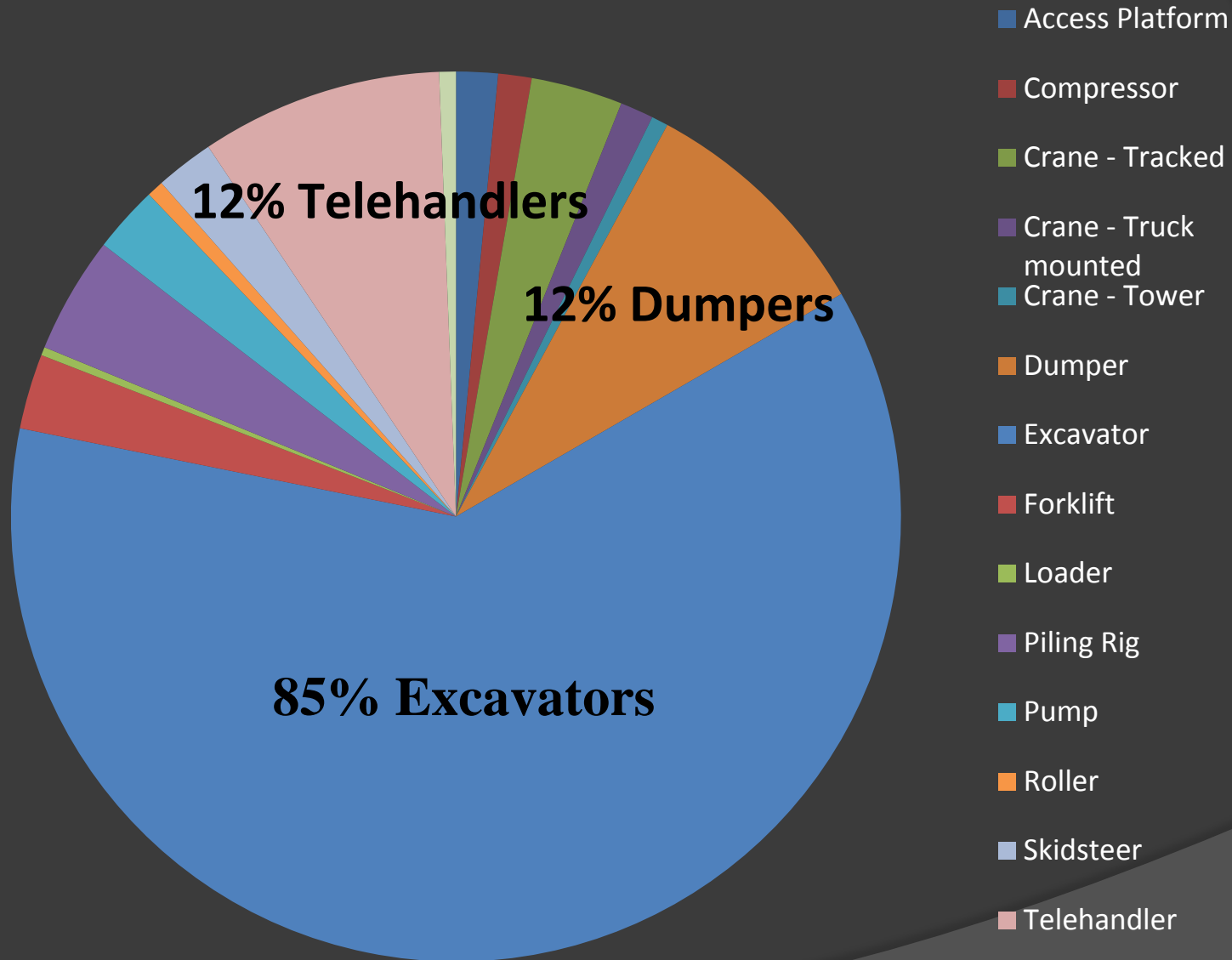
Sites registered by borough

Borough	Sites
Barking and Dagenham	4
Barnet	3
Bexley	1
Camden	6
City of London	40
Croydon	5
Ealing	1
Enfield	1
Greenwich	9
Hackney	8
Hammersmith and Fulham	12
Haringey	6
Harrow	2
Havering	1
Hillingdon	4

Borough	Sites
Hounslow	7
Islington	5
Kensington and Chelsea	9
Kingston	1
Lambeth	19
Lewisham	5
Merton	2
Newham	7
Redbridge	2
Richmond	2
Southwark	10
Tower Hamlets	8
Wandsworth	15
Westminster	26

NB: Figures not verified by the boroughs and may include incorrect entries

NRMM registered by Type



Still no generators registered for any site in London!

Further development of register

New tools for borough 'cross-boundary' enforcement officers

- Allows for selection of individual sites for audit
- Create 'live' list of current NRMM registered at the site
- Allow for inspection notes and comments
- On-line recording for London-wide site visits to highlight if there are regular occurrences of non-compliance across individual developers or boroughs

Further development of register

‘Frequently Asked Questions’ section

‘Super user’ access for London infrastructure projects and developer projects overview with CSV download function

Help desk support for all boroughs

NRMM register and planning

Inclusion by planning authorities into future planning consent documents

Supply of 'template' wording for planning for all London boroughs

Highlighting requirements to use the GLA's NRMM register

For ALL developments in the CAZ and Canary Wharf

- ⦿ The use of Non Road Mobile Machinery of net power between 37kW and 560kW is required to meet at least Stage IIIB of the EU Directive 97/68/EC and its amendments. This will apply to both variable and constant speed engines for both NO_x and PM.

For major developments across London

- ⦿ The use of Non Road Mobile Machinery of net power between 37kW and 560kW is required to meet at least Stage IIIA of the EU Directive 97/68/EC and its amendments. This will apply to both variable and constant speed engines for both NO_x and PM.

For all major developments

- ⦿ Prior to works commencing on site, the developer/applicant is to register any Non Road Mobile Machinery of net power between 37kW and 560kW on the web-site <https://nrmm.london/> to help monitor the use of such equipment across London.



llecp.org.uk

nrmm.london

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erg-construction@kcl.ac.uk