# **RICARDO-AEA**

# Instructions for Web-Based Data Entry System (March 2014 Update)



**Instructions for** Scottish Air Quality Database, Welsh Air Quality Database, Northern Ireland Air and the Kent and Medway Air Quality Group

Ricardo-AEA/R/3398 Issue Number 1 Date 10/01/2014

#### **Customer:**

Scottish Air Quality Database, Welsh Air Quality Database, Northern Ireland Air and the Kent and Medway Air Quality Group

#### **Customer reference:**

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## 1 Getting Started

This Instruction Manual provides guidance on how to use Ricardo-AEA's Web-Based Data Entry System for diffusion tubes. Originally developed by AEA Energy & Environment for the former NO<sub>2</sub> Diffusion Tube Network, this system has been retained by Ricardo-AEA, as a convenient way for Local Authorities participating in a number of regional Air Quality Networks to store, manage, and share data from their diffusion tube monitoring sites via the internet. The system is operated on behalf of the following groups:

- The Scottish Air Quality Database
- The Welsh Air Quality Forum
- Department of Environment, Northern Ireland
- The Kent and Medway Air Quality Partnership.

The Web-Based Data Entry System will allow you to do the following:

- Enter your NO<sub>2</sub> diffusion tube results on a monthly basis, as soon as you receive them from your analyst.
- Review the data you have previously entered, and make any amendments quickly and easily.
- Look at the details of your diffusion tube sites and check that they are correct; make amendments where necessary
- Start up new sites and shut down old ones.
- Include details of co-located automatic analysers
- Keep your contact details up to date, so that Ricardo-AEA can get in touch with you if necessary.

We hope that the system will be useful to all Local Authorities in the above regional networks using diffusion tubes. This manual provides information on how to use the web-based data entry system. If you have any difficulty, please contact **Alison Loader on 01235 753632**.

#### 1.1 Logging in

To use the system, you will need your user name and password. These have been issued to all participants; if you need to re-set your password (because you have forgotten it or for some other reason), please contact Ricardo-AEA to be issued with a new one. (Please note that we do not have access to users' passwords so cannot issue a reminder of an existing password.) The system's password protection means that you can only see and amend your own data and contact details, not that of any other users. (This manual contains some real examples, used with permission of the site operators concerned, and also some dummy data).

The login page is at

http://airquality.aeat.com/NO2admintools/NO2 logon.php

(Note the underscore between "NO2" and "logon").

The screen will appear as in Figure 1. Enter your username and password in the appropriate boxes and click on "**Log on**". Both user-name and password are case-sensitive.

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The Kent and N Local Authoritie Local Authoritie	es in Northern Ireland ube data entry system is provided as part of the Defra Local Authority Air Quality Support programme, for the use of <u>UK Local</u>
Username	
Password	
	Log on
For the Instruction Ma	anual for Web-Based Data Entry please <u>click here.</u>
For 2014 monitoring o	calendar please click here.
For revised 2013 mon	nitoring calendar please <u>click here.</u>
If you have forgotten or	not received your username and password, please contact the Administrator.
This website is prepared	d and hosted by Ricardo-AEA
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NO<sub>2</sub> diffusion tube data submission system

#### Figure 1 Login Page

If you have any problems logging in, please check you have entered your name and password correctly. If the problem persists, contact the system administrator, by clicking on the link shown on the page.

Having logged in, you will be prompted with the home page explaining the options included in the system (Fig. 2). If new features are included in the future, these will be highlighted here. There are five buttons at the top of the screen immediately below the title banner: they are as follows:

- Home takes you back to the home page from wherever you are
- Monitoring Data takes you to the page where you can enter new data, or see and check the data you have already entered.
- Site Admin takes you to a page where you can add a new site and see and change the details of your diffusion tube monitoring sites.
- User takes you to a page where you can see and change the contact details held for you.
- Log off logs you out of the system.

There is also a link at the bottom of the home page, to allow you to download the latest version of these instructions: click where it says "For full system guidance, click here".

Home	Monitoring Data	Site Admin		User		Log off
	Entry System allows Local Author initoring results, and update site of	rities to	-	e to change yea	ar:	
elect the Monitoring	Data tah to:	_			lendar for year	
· ·		Year	Period	Start Date	End Date	Duration (weeks)
	by selecting the year and period ta previously entered, and	2013	1	02/01/2013	30/01/2013	4
	data previously entered.	2013	2	30/01/2013	27/02/2013	4
elect the Site Admin	tab to manage your site details.	2013	3	27/02/2013	27/03/2013	4
cludes the following of		2013	4	27/03/2013	24/04/2013	4
Add a new site		2013	5	24/04/2013	29/05/2013	5
View and amend	I existing sites	2013	6	29/05/2013	26/06/2013	4
any sites have more	than 1 tube:	2013	7	26/06/2013	31/07/2013	5
Include number (	of tubes for new sites	2013	8	31/07/2013	04/09/2013	5
	I number of tubes at each site	2013	9	04/09/2013	02/10/2013	4
our user details can b	e changed and managed by click		-	02/10/2013	30/10/2013	4
	updating your details, you can als	so change				1
ur password to some	ething easier to remember.	2013		30/10/2013	04/12/2013	5
r full system guidanc	ce click here.	2013	12	04/12/2013	08/01/2014	5

Figure 2 Home Page

## 2 Monitoring Data

The Monitoring Data section allows you to carry out the basic functions of *entering* your monthly results, and *viewing* and *amending* existing data already entered. Figure 3 shows this page.

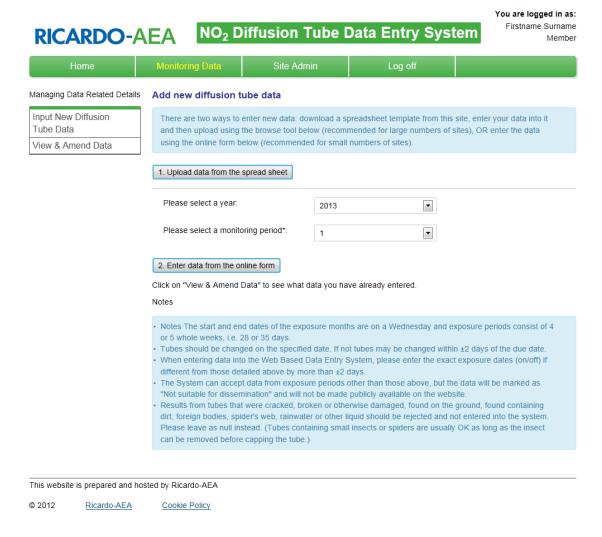


Figure 3 "Monitoring Data" page

#### 2.1 Input New Data

There are two options for entering data:

- 1. Using a bulk upload spreadsheet that you can download, complete with your data, and use to generate a .csv file which can then be uploaded using a browse tool. This is the best option if you want to upload data for many sites.
- 2. Using the online data entry form. This is the best option if you only have a few sites for which to input data.

#### 2.1.1 Bulk Data Upload

To enter data by means of option 1: click on the button which says "Upload data from the spreadsheet". You will see a screen like Figure 4.

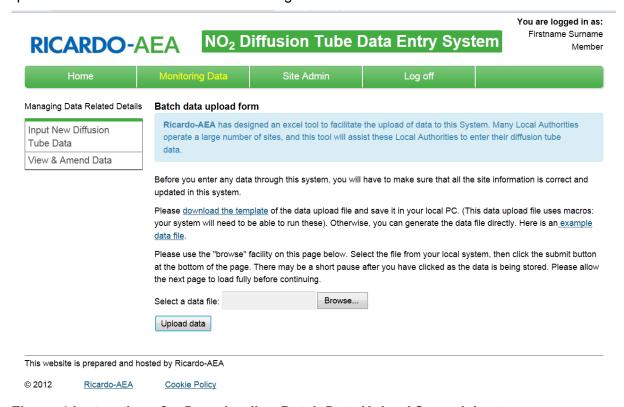


Figure 4 Instructions for Downloading Batch Data Upload Spreadsheet

From this screen, click where it says "download the template". This will let you download an Excel file and save it on your PC. (Please note that the file uses macros, and your system will need to be able to run these. If it cannot, please get in touch with Ricardo-AEA because we can supply an alternative that does not use macros.)

Open the spreadsheet, and follow the instructions for completing it with your diffusion tube data. The "Tube Data" page looks like Figure 5.

Follow the instructions carefully.

- "Site\_id" is the 5-digit site identification number, e.g. "81253". For Welsh Local Authorities, please continue to use the site id format you currently use for example: MNBC-038
- The sample tube number is always 1, for tubes exposed singly. For tubes exposed in triplicate it will be 1, 2 or 3 for the 3 tubes in the triplet.
- The exposure year must be in the format show in Figure 5 example, eg: 2014
- The exposure period "Month" must be in the format shown, e.g. March should be "3" **not** "03". Please pay particular attention to this.
- The tube result should be in µgm<sup>-3</sup>. If there is no valid result (e.g. because the tube went missing or the result has been rejected for other reasons), enter "-9999". Don't leave this column blank.

- Even if you have no result, it's still necessary to enter both a start date and end date, or the upload won't work.
- The "data status" column should be "1" unless there is a problem e.g. a missing tube, in which case it should be "3". Local Authorities in the Welsh Air Quality Forum will be asked to review their data at the end of the year and upload a finalised version: for this purpose the "data status" should be "6".
- If you enter a 3 in the data status column, you must also enter a comment in the "comment" column (select one from the drop-down menu).
- When all the results are entered into the spreadsheet, click on the green button that says "Create upload file". This will prompt you to create a .csv file containing the data you have entered. (Ignore any message telling you to send this file to Ricardo-AEA: there's no need to do this as now you can upload it directly).

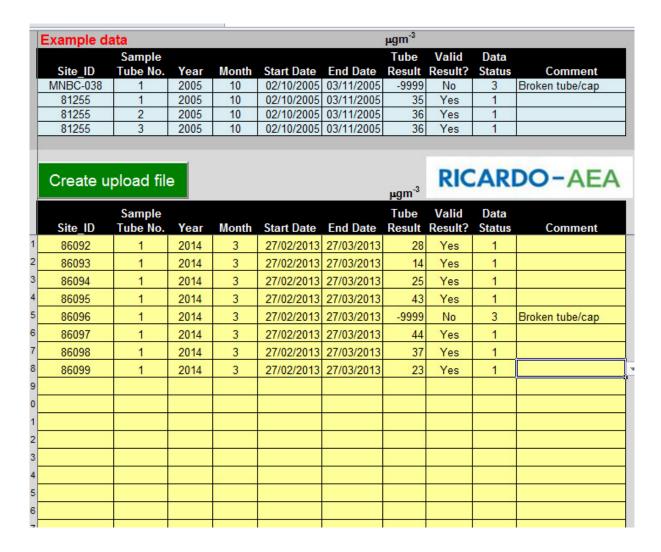


Figure 5 "Tube data" page in data upload spreadsheet

Save when completed.

The .csv data file you have created will look like Figure 6 if opened in Excel. It's this file, <u>not</u> the spreadsheet template above, that you'll actually upload.

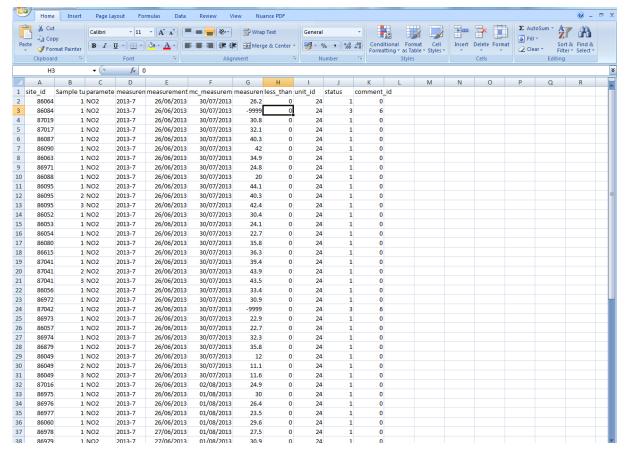


Figure 6 Data upload file

When ready to upload your data, return to the web-based data entry system and to the page shown in Figure 4.

Use the "Browse" tool to select the .csv file you have created from your system, and click on "Upload data" to send it to the web-based data entry system.

If the upload has worked OK you should see a message on the screen saying that the data have been successfully uploaded.

#### 2.1.2 Using the Data Entry Screen

If you have a small number of sites, it's more convenient to use the data entry screen.

From the screen shown in Figure 3, select the year and period, and click on button "2". This will open up the online data entry form (Figure 7).

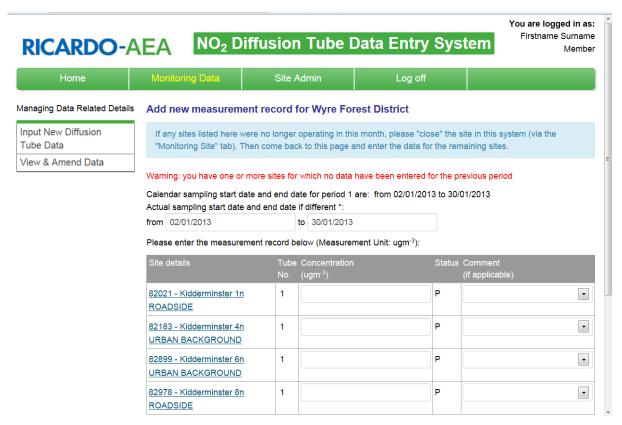


Figure 7 Online Data Entry Screen

First, enter the sampling start and end dates (i.e. the dates that the tubes were put out and collected), if they are different from the calendar dates shown. Please note that if the actual sampling dates differ from the calendar sampling date by more than  $\pm 2$  days, the results will be considered unsuitable for upload. These data will be stored in the database but will not be uploaded to your regional air quality website. If the actual sampling dates are within  $\pm 2$  days, the calendar sampling dates will be stored in the database instead of the actual dates.

If only one site is outside the calendar sampling dates (for example one tube was changed late for some reason), highlight this in the Comment by using the option Different Exposure. Only the results from this site will be considered "Not suitable for upload".

Having entered the calendar dates, if necessary, enter the data for each site in the appropriate box (see Figure 7). Move through the boxes using the tab key on your keyboard to move forwards, and <shift> tab to move backwards. (You can also select a box using the mouse).

Enter your data. If you have a result that is invalid for any reason, leave the concentration cell as "0.0" and select one of the comments from the drop-down boxes on the right hand side. Although the cell shows 0.0 as a default value, this will be stored as a null value, not a zero. An error message will appear if the zero is deleted and not replaced, or is replaced with a non-numeric value. (Do not add a comment for values that are OK.)

When you have entered a value for each of your sites, click on the "Proceed" button (at the bottom of the page). The data you have just entered will appear in a table on the screen, so you can check they are correct. Click on "submit" to send the data to the database.

#### 2.1.1 Warning Messages You May See

We hope that you will find the system easy to use and will not have any problems. However, here are some warning messages you may see.

#### 2.1.1.1 Selecting a period with existing data

If you select a period for which you have already entered data, you will be prompted with the following message "**Measurement data are found for the year .... period ...**". Unless there are some sites for which you have not yet entered data, please select another period. If unsure which periods you have already entered, click on "View & Amend Existing Data".

#### 2.1.1.2 Entering data when none have been entered for the previous period

If you miss an exposure period, (for example March), and then attempt to enter data for the subsequent period (for example April) you will be prompted with the following message "Warning: you have one or more sites for which no data have been entered for previous period". You will also see this message if you have entered the previous month's data for some, but not all of your sites.

This message won't prevent you entering data for the month you have selected. However, it does mean you should then go back to the previous month and either enter that month's outstanding results, or enter comments explaining why there are no valid results.

#### 2.1.1.3 Entering a null value without a comment

All months and sites need to be accounted for. If you leave the cell blank you will get an error message unless you enter a comment explaining why there is no data for this site. The cell value defaults to "0.0", which is stored as a null value. Null values must be accompanied by a comment of "No Valid Data", if applicable. Please ensure that all months are accounted for, with either a valid measurement OR a comment.

#### 2.2 To View And Amend Existing Data

The system allows you to view data previously entered, and to amend it if necessary. Click on the "Monitoring Data" tab (at the top of the page), then select "View and Amend Data". From the screen shown in Fig. 8, select the appropriate year –



Figure 8 Select "View and Amend Data"

Your data for the year will be displayed as in Figure 9 -



Figure 9 "View and Amend" Data Table

#### 2.2.1 Data Status

The data are highlighted with a coloured background, according to their status:

- Provisional (green). You can still amend these data.
- Exported (**pink**): these data have been exported to your regional air quality website, but you can still change them.
- Ratified and exported (grey): these data have been finalised and can no longer be changed.
- Not suitable for upload (**yellow**) cases where the exposure period does not match that specified, or results highlighted as suspect with a comment after being audited.

The rules for how and when data are ratified vary between the various regional networks, but in most cases the Local Authority is asked to check and finalise the data from each calendar year by a given deadline. Ricardo-AEA will then "lock down" the year's data, by a later specified deadline depending on reporting requirements (in the case of the Kent Network it is usually before June the following year). You should have the opportunity to check your data and make sure you are satisfied they are correct, before the dataset is finalised.

Null values are displayed as normal data with "n/a".

In the example below (Figure 10), to amend the existing values the user should click on the "Amend" button, at the *bottom* of the table below the results they wish to change.

#### Concentrations are in ugm-3 (microgrammes per cubic metre) Site details 81017-31.1 42.4 38.3 30.6 28.0 27.6 26.3 22.8 30.6 Whitburn 1n 81019-21.2 25.4 20.9 17.4 11.3 13.6 9.0 \*n/a 16.1 Livingston 3n 81020-18.1 20.0 15.5 11.7 8.7 6.9 9.2 13.4 \*<u>n/a</u> Bathgate 4n 83669-31.2 33.8 30.5 <u>25.2</u> <u>16.5</u> <u>17.7</u> <u>17.8</u> <u>15.3</u> 23.2 Linlithgow 6n Click button: Amend Amend Amend Amend Amend Amend Amend Amend Amend Keys: P-Provisional N-Not suitable for upload E-Provisional & Exported R-Ratified RE-Ratified & Exported

The NO<sub>2</sub> measurement records of West Lothian in year 2013

Figure 10 Click here to amend any site's data in a specified month

Each individual site's data for the selected period can then be amended if necessary (Figure 11).



Figure 11 Data amendment screen

Click on "Proceed" when you are happy with the changes you have made, then "Submit" Figure 12) to finalise them.

#### Amend measurement record Calendar sampling start date and end date are:from 04/09/2013 to 02/10/2013 Please update the data records below(Measurement Unit: ugm-3): 30.6 • 81017 - Whitburn 1n ROADSIDE • 16.1 81019 - Livingston 3n URBAN BACKGROUND • 13.4 81020 - Bathgate 4n URBAN BACKGROUND • 23.2 83669 - Linithgow 6n ROADSIDE Submit Cancel Keys: P-Provisional N-Not suitable for upload E-Provisional & Exported R-Ratfled RE-Ratfled & Exported

Figure 12 Click "Submit" to submit your changes

You can also delete data completely if necessary. Selecting "Cancel" will abandon the changes and take you back to the previous screen.

If only one tube result needs amending, you can click on the result itself and you will be able to amend that result only (see Figure 13).

Concentrations are in ugm-3 (microgrammes per cubic metre) Site details Measurement Period 81017-1 31.1 42.4 38.3 30.6 28.0 27.6 26.3 22.8 30.6 Whitburn 1n 81019-25.4 20.9 21.2 <u>17.4</u> 13.6 9.0 <u>16.1</u> 11.3 \*<u>n/a</u> Livingston 3n 81020-13.4 <u>18.1</u> 20.0 15.5 11.7 8.7 \*<u>n/a</u> 6.9 9.2 Bathgate 4n 83669-31.2 33.8 30.5 25.2 <u>16.5</u> <u>17.7</u> <u>17.8</u> <u>15.3</u> 23.2 Linlithgow 6n Amend | New | New | Keys: P-Provisional N-Not suitable for upload E-Provisional & Exported R-Ratified & Exported

The NO<sub>2</sub> measurement records of West Lothian in year 2013

Figure 13 To Amend One Tube Result Only

Again, click on "Proceed" then "Submit" when done.

It is also possible to enter new data via this route. Click on "New" at the bottom of the column for the selected exposure period (Figure 14).

The NO<sub>2</sub> measurement records of West Lothian in year 2013

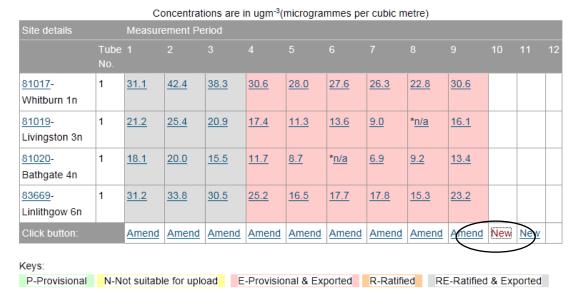


Figure 14 To Enter New Data via the "View and Amend" Screen

You will be prompted with the same form as you use when entering the data from the "Input New Data" tab (Figure 15). However, if you have a substantial amount of new data to enter, it is better to use the data entry screen or the bulk upload route.

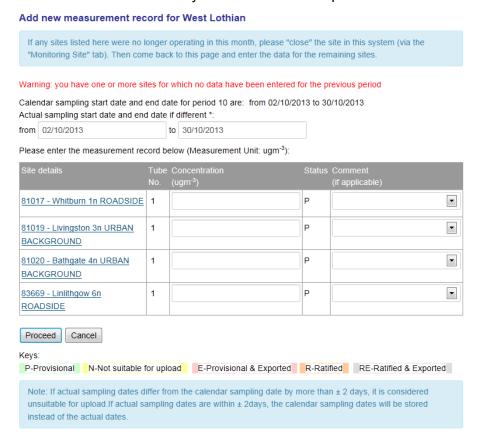


Figure 15 New Data Input Page

#### 2.3 Entering Data For Multiple Tube Sites

If any of your sites are set up for multiple tube exposure (see section 3.2 for how to do this), the data entry and data amendment screens will provide a "box" for each tube at the site – see Figure 16, which shows an example of a site with three tubes (highlighted here with a coloured box). In this case, the site "GR08" has three tubes.

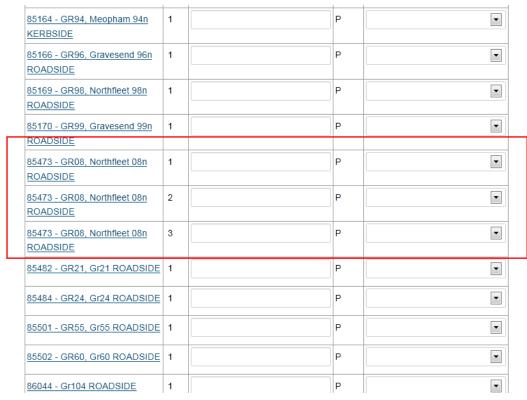


Figure 16 Data Entry Screen for Multiple Sites

## 3 NO<sub>2</sub> Site Administration

The system also allows you to add and amend details of your sites – select the tab marked "Site Admin". The screen will appear as in Fig. 17

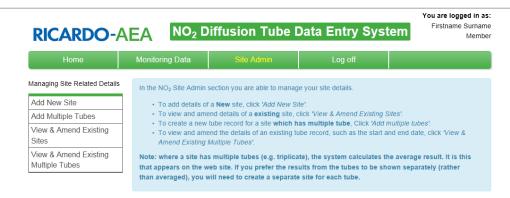


Figure 17 Site Admin Screen

#### 3.1 Adding, viewing & amending sites

#### 3.1.1 To Add A New Site

Click on the button marked "Add New Site". The screen will appear as in Figure 18a or Figure 18b for Welsh Local Authorities. A site identification number (a five-digit number) will be automatically assigned. This is unique to the site.

For Welsh Local Authorities, please use the existing naming protocol for your local authority. Please check the last site id first, and then add the next consecutive site id, for example, if the last site id was MNBC-038, they add MNBC-039, with no spaces. The system will not allow you to duplicate a site id.

Choose a site name. Different regional networks have different rules for this, but the site name should:

- Be different from any other site within your regional network.
- Include the name of the town or city in which it is located.

Most users of this system use a numbering system for their site names – for example Gravesham District Council use GR01, GR02 GR03 etc.

Avoid ambiguous site names such as "High Street", and don't re-use site names: each site requires a unique name.

LA Reference – this can be added which is your specific tube references/label

Enter the other parameters requested.

#### Please ensure that you enter:

- the 1<sup>st</sup> line of the address, i.e. the nearest building to the site\*
- Town
- Postcode

- Location Type
- OS Grid Ref
- Site Easting and Northing\*
- Altitude
- Site Height
- Start Date of Monitoring.
- Comment (for example if tube attached to building downpipe or a sign/post

The parameters indicated by a \* are mandatory. The system will not let you start up a new site without specifying these.

It is not compulsory to enter the altitude (i.e. height above sea level) of the site. However, if it is a traffic-related (roadside or kerbside) site, you will need the distance in metres of the site from the kerb.

Please see our other document "NO<sub>2</sub> Diffusion Tubes for LAQM: Guidance Notes for Local Authorities" for detailed siting criteria. Kerbside sites are within 1m of the kerb of a busy road, Roadside sites must be within 1-5m of the kerb of a busy road, and Urban Background sites must be at least 50m from any busy road. Height of tubes above ground should be between 2-5m: this is intended to approximate to human breathing height while keeping the tubes out of reach of the public, especially children.

Leave "End Date" blank: this will remain blank until the site closes.



Figure 18a Adding a New Site

Home	Monitoring Data	Site Admin	User	Log off			
Managing Site Related Details	ADD SITE						
Add New Site	Local Authority Region *	Monmouthshire Cou	nty				
Add Multiple Tubes	Site ID *						
View & Amend Existing Sites		(Please add the next consecutive site id for your local authority. Please check what the last site id was, for example, if the last site id					
View & Amend Existing Multiple Tubes		was MNBC-038 and then type in MNBC-039 with no spaces. The system will not allow you to duplicate a site id.)					
	Site Name *						
		Please add a site name, which clearly identifies the location of the tube, for example: 3 Willow Street, Monmouth. Please keep the site name short, and do not include postcode details in this field.					
	LA reference						
	Address building/structure *	This is your local ref	erence name. Max. length	15 characters			
	Town						
	Postcode						
	Location type	Please select					
	OS Grid Ref	0					
	Site easting *						
	Site northing *	(As 6 figures) Irish	grid easting if applicable (s	ites in NI only)			
		(As 6 figures) Irish grid northing if applicable (sites in NI only)					
	Attude (m)		(Above the	e sea level)			
	Sife Height (m)						
		(Above the ground).	Please do not include the	unit.			
	Distance to Kerb (m)	(Applicable to roads field.	ite site onlyt). Please do n	ot place unit in the			
	Start Date of Monitoring *		(dd/mm/yy	99)			
	End Date of Monitoring		(dd/mm/yy	799)			
	Comment						
		Proceed					
This website is prepared and ho	sted by Ricardo-AEA						
0 2012 Ricardo-AEA	Cookie Policy						

Figure 18b Adding a New Site – Welsh Local Authorities

#### 3.1.2 View and Amend Existing Sites

The system will let you amend details of your sites, such as address and grid reference. However, please note that this is only intended to allow you to correct errors and make minor changes to the address of an existing site. *In cases where a site is replaced, or re-located to a different address, this constitutes a new site.* It must be entered as such, using the "Add New Site" option, and requires a new number and name.

To view your existing site details, select the NO<sub>2</sub> Site Admin tab, then "View and Amend Sites". All your active and ceased sites details will be displayed as in Figure 19.

To make changes, click on the blue "update" button to the right hand side of the site name, as circled in Figure 19.

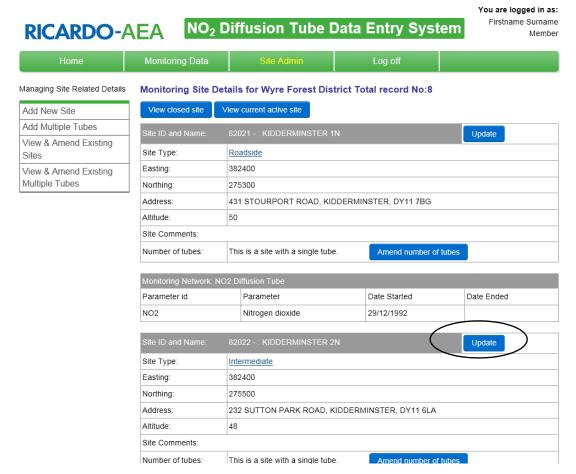


Figure 19 To view Existing Site Details

This will display details of the selected site (Figure 20a) which can then be updated as necessary.

Home	Monitoring Data	Site Admin	Log off	
anaging Site Related Details	AMEND SITE			
Add New Site	Local Authority Region *	Wyre Forest District		
Add Multiple Tubes	Site ID *	82021		
/iew & Amend Existing		(This number is assig	ned automatically. Please do	not change it.)
ites fiew & Amend Existing	Site Name *	KIDDERMINSTER 1N		
Multiple Tubes		XN' where X is a number other NO <sub>2</sub> site of the to	e should be of the format 'TOV er. X should be a number not o own/city. If you wish to treat mu uld be indicated in the site na N tube 1.	used for any ultiple tubes as
	LA reference			
		This is your local refere	ence name. Max. length 15 ch	aracters
	Address building/structure *	431 STOURPORT RO	DAD	
	Town	KIDDERMINSTER		
	Postcode	DY11 7BG		
	Location type	ROADSIDE	•	
	OS Grid Ref			
	Site easting *	382400.00		
		(As 6 figures) Irish grid	d easting if applicable (sites in	NI only)
	Site northing *	275300.00		
		(As 6 figures) Irish grid	d northing if applicable (sites i	n NI only)
	Altitude (m)	50	(Above the sea	level)
	Site Height (m)	3		
		(Above the ground). Pl	lease do not include the unit.	
	Distance to Kerb (m)	1.5		
		(Applicable to roadsite field.	site only!). Please do not place	ce unit in the
	Start Date of Monitoring *	29/12/1992	(dd/mm/yyyy)	
	End Date of Monitoring		(dd/mm/yyyy)	
	Comment			
		Submit		

Figure 20a Site Details Update

Home	Monitoring Data	Site Admin	User	Log off
anaging Site Related Details	AMEND SITE			
dd New Site	Local Authority Region *	Monmouthshire County		
Add Multiple Tubes	Site ID *	MNBC-092		
View & Amend Existing Sites View & Amend Existing Multiple Tubes		(Please add the next cons Please check what the las was MNBC-038 and then system will not allow you to	t site id was, for examp type in MNBC-039 with	le, if the last site id
	Site Name *	2 Riverside Park, Mayhil	I, Monmo	
		Please add a site name, v tube, for example: 3 Willon name short, and do not in	which clearly identifies t w Street, Monmouth. Pl	ease keep the site
	LA reference	MM14		
		This is your local reference	e name. Max. length 1	5 characters
	Address building/structure *	2 Riverside Park		
	Town	Mayhill, Monmouth		
	Postcode	NP25 3LT		
	Location type	SUBURBAN	•	
	OS Grid Ref			
	Site easting *	3351277.00		
		(As 6 figures) Irish grid ea	asting if applicable (site	es in NI only)
	Site northing *	212822.00		
		(As 6 figures) Irish grid no	orthing if applicable (sit	es in NI only)
	Altitude (m)	15.85	(Above the	sea level)
	Site Height (m)	1.77		
		(Above the ground). Pleas	se do not include the u	nit.
	Distance to Kerb (m)	98		
		(Applicable to roadsite site	e only!). Please do not	place unit in the
	Start Date of Monitoring *	08/01/2014	(dd/mm/yyyy	<b>'</b> )
	End Date of Monitoring		(dd/mm/yyyy	<b>'</b> )
	Comment			
		Submit		

Figure 21b Site Details Update – for Welsh Local Authorities

To submit your changes, click on the "submit" button at the bottom of the form, as circled in Figure 21.

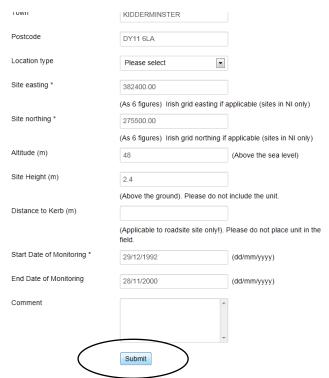


Figure 22 To Submit Your Changes to a Site's Details

#### 3.2 Multiple Tube Exposure

Tubes are exposed singly at the majority of sites. However, there are a substantial number of cases where tubes are exposed in groups, to make replicate measurements and gain information on the precision of the method. The most common of these scenarios is triplicate exposure. The web-based data entry system is designed to cope with multiple tube exposure.

The "View and Amend Sites" screen (Figure 19 above) shows the number of tubes currently exposed at your sites. For single-tube sites it says "This is a site with a single tube". To designate the site as a multi-tube site, click on the blue "**Add Multiple Tubes**" button (Figure 22, circled).

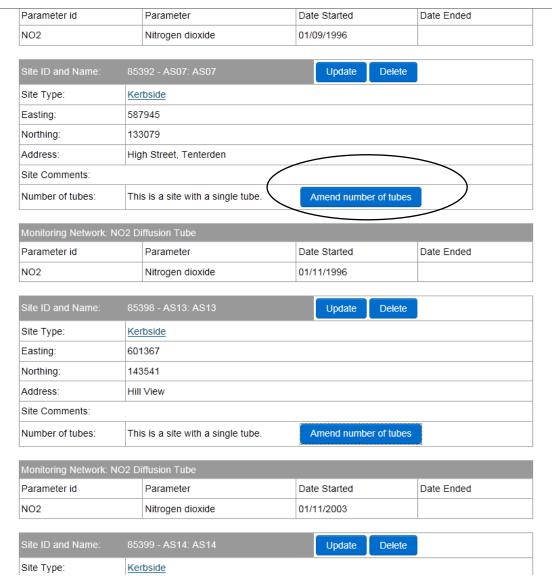


Figure 23 To Amend the Number of Tubes at a Site

This will take you to a form which will allow you to add new tubes at the sites, one by one (Fig. 23). (Note: if you see a message saying you are not authorised to use this function, please contact the Administrator who will set up the new tubes for you.)



Figure 24 Adding a New Replicate Tube

Maximum number allowed is **five** replicate tubes. Follow these steps:

- 1. In the box marked "Tube" enter the number 1. (Despite being a single tube site already, we need to assign the existing tube as tube 1.)
- 2. Enter the date at which this tube started operating. This will usually be the same as the start date of the site.
- 3. Leave the end data blank.
- 4. Click "Submit". This will take you back to the screen in Figure 22.

Click on "Amend number of tubes" again, and follow the steps above, this time entering "2" for the tube number.

Repeat for the third tube (tube 3), and a fourth and fifth tube if necessary.

Since the starting dates of the additional tubes may be different from that of the original site, you can enter a different start date in each case. (These are the dates that the multiple exposures started, not the exposure dates of any individual tubes).

If, at a later date, the number of tubes at the site is reduced (e.g. if the site goes back to being a single exposure site), you can enter an "end date" for the multiple exposures via this screen.

#### 3.2.1 Treating Multiple Tubes as Single Sites

Setting up a multiple tube site, as in the example above, will mean that the database will calculate the average of the replicate tube results, and it will be this, rather than the individual values, that appears on the public-facing website.

If your organisation would prefer the results of each one of the multiple tubes to be shown individually rather than averaged, the tubes will need to be treated as separate sites rather than as one single site with multiple tubes.

The site names you choose for the three "sites" should reflect this: for example "DV06 tube 1", "DV06 tube 2" and "DV06 tube 3". Also, it is important to be consistent, so if you have more than one multiple tube site, this approach should be used for all of them.

## 4 Amending User Details

#### 4.1 To Change Your Password

The password originally issued by Ricardo-AEA (possibly some time ago) would have been assigned randomly. If you have not already done so, we recommend that you change your password to something easy to remember. From time to time you may wish to change your password for a variety of reasons, or need to re-set it because you have forgotten it.

To do this, please log out (if you are already logged in) and click the link on the home page to contact the administrator for a password re-set.

#### 4.2 To Update Your Contact Details

The system allows you to make changes to any contact details: the name, address, phone number and e-mail address of the site operator. We suggest that the contact details supplied should be those of whoever normally changes the diffusion tubes, as he or she is usually the best person to answer any questions we may have about the data or sites.

To check whether the contact details held for you in the system are up to date: from the home page, select the green "User" tab from the menu options at the top of the page. Your existing contact details will be displayed. Make any changes needed, then click the "submit" button at the bottom.

We will not pass your contact details on to any other organisations. If we need to get in touch with you, it will usually be by e-mail or occasionally by phone, so please make sure these details are kept up to date.

## 5 Logging off

To log off, just click on the "log off" tab, (top RHS – see Figure 3 above). This will take you back to the Log On page (Figure 2.)

We hope you will find the web-Based Data Entry System easy to use, and that it will provide a quick and convenient way of storing and sharing your NO<sub>2</sub> diffusion tube data with Ricardo-AEA. However, if you do have any difficulties, please click on the link from the log on page to contact the Administrator, or else Alison Loader (01235 753632).

This manual will be updated whenever there are significant changes to the Web-Based Data Entry System. Rather than distribute printed copies, we will make the updated version available from a link on the system's Home Page.

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