

CONGESTION MANAGEMENT SYSTEM OPERATIONS MANUAL

cms.adengineering.com.au/cms/trucksign/



Congestion Management System

Log in.

Use a local account to log in.

User name

test1

Password

Remember me?

Log in

Click here to access the live sign view

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Overview

The Congestion Management System (CMS) system has been designed by Fremantle Ports to alleviate and manage truck congestion situations. The Congestion Management System (CMS) serves four basic purposes:

- 1. Inform truck drivers of congestion via Variable Messaging Signs (VMS);
- 2. Register incoming trucks and their destination into the Truck Marshalling Area (TMA);
- 3. Call up trucks in an ordered manner to proceed to their destination;
- 4. Deactivate the system and clear the Truck Marshalling Area (TMA) in a fair and orderly manner.

The main actions for the site operator are:

- 1. Logging on to activate the CMS and VMS.
- 2. Calling up trucks from the TMA after they have been registered;
- 3. Clear trucks off the VMS when they have been processed);
- 4. Logging off (which starts the "cessation" session, to call up all remaining queued trucks from the TMA and give them a chance to get to the site ahead of newly arriving vehicles).

Preparation for Initiating the CMS

Only use the CMS for truck congestion situations that won't clear in an acceptable time period.

Before starting, please ensure you have done the following:

- 1. Determine a valid congestion situation exists.
- Ensure the Truck Marshalling Area (TMA) is open (gates unlocked, Driver Entry Screen Hut unlocked) - Call the Fremantle Ports Security Centre on 94303416 or 94303315 or Matt on 0408954313
- 3. If necessary, immediately after you have turned on the CMS, inform the excess trucks already queued outside your premises (those that are already causing a traffic obstruction) to proceed to the Truck Marshalling Area (while noting down their licence plate details and assuring them that they will be called in first, when space is available. Make sure you note the licence plate of the last truck remaining in the queue, so that you know who is legitimately queued and who is a "queue jumper".

Completing these few simple steps prior to and just after starting the CMS will significantly add to ensuring a smoother flow.

Congestion Management System Website

Start up your internet web browser and call up the Congestion Management System website. This can be found under the following address:

cms.adengineering.com.au/trucksign/

CMS Log In Screen

If you have entered the address correctly, you should receive the following screen:

cms.adengineering.com.au/cms/trucksign/	
Congestion Management System	
Log in.	
Use a local account to log in.	Use administrator to log in.
User name	Log in as administrator
Password	
Remember me?	
Log in	
Click here to access the live sign view	

To view the status of the CMS VMS signs, without having to create a diversion for your site by logging onto the system, select the "**Click here to access the live screen view**" option at the log on screen. Anyone who logs on to the CMS, even those that do not have a log in, can see the live screen view using this functionality. This means others at your site can see what is happening with trucks on the TMA screens by using this option. The live screen view link is available on most system screens.

Enter your log in details and click on the Log in button. This will bring you to the Home Screen.

If you do not have a log in, contact the Fremantle Ports CMS Administrator to assist you with a log in (phone Matt on 0408954313 or John Stenhouse on 94303416).

Your User Name is a continuous, but often shortened name that describes your organisation. Jayde is Jayde. Container Cargo Services is CCS.

You will be assigned a password. You can have the password modified if desired. Contact the Fremantle Ports CMS Administrator to arrange the password. The password must be at least 6 digits.

Home Screen

FREMANTLE PORTS	C			Welcom <u>Home</u>	a <u>dpworld</u> ! Log (About Con	Off Itact								
DP W	DP WORLD Call all trucks for next slot Call Next Truck Add Truck Add Truck												Call	
Marsh ^{Waiting T}	all \ ^{ruck}	/ard				Called Tru	ıck							
Number	BAT	Added Time	time slot	wait time	Call	Number	ват	Called Time	time slot	wait time	Arrived	Re-Call	Cancel	
1	434	27/02/2014 10:53:31 AM	1100	00:00:26	Call Remove	1	123	27/02/2014 10:53:49	1100	00:00:08	Arrived	Re-Call	Cancel	
2	676	27/02/2014 10:53:58 AM	1100	00:00:00	Call Remove			AM						

Click here to access the live sign view

The screen allows you to see the trucks waiting in the Marshalling Yard and the trucks being called. The main functions that can be performed are:-

- Call Next truck
- Add a truck.

Trucks diverted to the TMA are required to register themselves via the kiosk or check-in bollards so the system can queue them for their destination site. The CMS adds the time the truck registered and

sends these details to your CMS Home screen. This information then appears as an entry in the "Waiting Trucks" list. Depending on the site, trucks may be registered by the truck's registration number (license plate number) or their BAT number.

FREMANTLE	Co	ngestion Ma	nagen	nent Sy	rstem								Ho	Welcom	e <u>test2</u> ! DOUL	Log Off
Patric Call all Marsh ^{Waiting -}	k trucks fo all Ya Fruck	r next slot Call	Next Tru	ick Add	d Truck]	Called Tru	ıck				Emerg	gency /	<mark>Auto Brea</mark>	ik /	Auto Call
Number	Rego	Added Time	time slot	wait time	status	Call	Number	Rego	Called Time	time slot	wait time	Arrived	Re-Call	Cancel		
1	1DDT 666	7/17/2013 11:52:58 AM	1100	00:51:45	queued	Call Remove										
2	1DDT 646	7/17/2013 12:43:52 PM	1100	00:00:50	queued	Call										

Calling Up Trucks

The system can Auto Call trucks if it has been enabled or you can manually call up trucks by one of three methods:

- 1. Call the next truck in the list (preferred method);
- 2. Call all trucks for a particular time slot; or
- 3. Call an individual truck from the list.

Call Next Truck (preferred method)

To the left of the "Add truck" button is "Call next truck". Pressing the "**Call next truck**" button will take the truck listed at the top of the list in the "Waiting Trucks" section and move it to the "Called Trucks" section. It will activate the signs in the TMA, to display a call up message with that truck add to the list of trucks which have been called up.

This is the preferred method as it is the easiest to manage and ensures the first come first served process.

Time Slots differences - Note: should there be a truck with an earlier time slot, although it may have been registered later, because it has an earlier slot, it will be promoted in the list.

The trucks in the waiting list are shaded into groups of timeslots.

Waiting Truck

Number	BAT	Added Time	time slot	wait time	Call
1	443	27/02/2014 11:01:24 AM	1200	00:47:26	Call Remove
2	317	27/02/2014 11:46:44 AM	1200	00:02:06	Call Remove
3	448	27/02/2014 11:46:30 AM	1300	00:02:20	Call Remove
4	432	27/02/2014 11:47:03 AM	1400	00:01:47	Call Remove

** Note:

For sites with time slots, please consider the legitimate call up rights of trucks which arrive much later than their time slot, particularly for manually registered trucks. Because we have purposely designed the system to allow you, as a site, to input whatever time slot you wish, what this will mean is that a truck with an earlier time slot will be placed ahead in the queue compared to a truck with a later time slot. What this means, however is that a truck with a time slot two or three hours earlier than the current time slot will be prioritised by the system. It is up to you, as the site, to say whether this is correct or not. If you have a policy that says that trucks over one hour late for their time slot will not be let in (or at least not prioritised), then you will need to consider this when calling up trucks. The system will continue to place this truck at the top of the "Waiting Trucks" list.

You can cancel a Called Truck to return it to the Waiting Truck list by pressing the **Cance**l button for that truck. A prompt will appear to confirm this action. Click OK to confirm.

Move back to waiting?		
(mm)	014	

Call all trucks for next slot

Note: This functionality will only appear for sites who work with time slots. If your site does not have time slots, you will not see this button.

You can call up trucks for a given time slot or set of time slots. This can be used by sites whose work processes are governed around the actual time slots and who do not wish to call through individual trucks.

The "**Call all trucks for next slot**" button can be found to the left of the "Call next truck" button. Pressing this button will take you into the following screen:

Congestion Manag	rement System			We <u>Home</u>	Log Off About Contact
Call Time Slot					
• There are trucks in earlier time slots					
TimeSlot 1300 V Refresh					
Waiting Trucks		Called Trucks			
1200 11:50 1ADI 302 1100 11:52 1DDT 666 1100 12:43 1DDT 646 Back to list	>> > < <<		 Add Called Trucks 		
© 2013 - A. D. Engineering International, Version: 1.30.0.0					

The waiting trucks for the timeslot are displayed. The timeslot can be incremented or decremented using the large arrow up \blacktriangle and down \neg buttons or a timeslot can be selected from a dropdown list clicking the small down arrow button in the Timeslot text box. When a timeslot has been selected, press the **Refresh** button to update the Waiting Truck list.

A warning message will appear if there are trucks from an earlier time slot in the queue as these would be included in the call up.

To transfer all trucks from the Waiting list to the Called Trucks list, press the >> button. To transfer one truck, click on the truck to highlight it and then click the > button. You can select multiple trucks by holding down the Ctrl button and then click on the trucks you want to select. Then click the > button to transfer. Called trucks in the list can be transferred back to the waiting list using the same method but using the << or < arrow buttons.

ne/FirstComeFirstServeWithinOneHourTimeSlot_CallNextSlot		
Congestion Management System		Welcome <u>test2</u> <u>Home About Contact</u>
Call Time Slot • There are trucks in earlier time slots TimeSlot 1200 • • • Refresh		
Waiting Trucks 1200 11:50 1ADI 302 *	Called Trucks	

When you've finished transferring trucks to the Called list, click the **Add Called Trucks** button. The home screen appears showing the trucks in the Called Trucks list. When multiple trucks are called at the same time, they appear on the TMA screens with delay to give the trucks a chance to arrive in the correct order. The first truck is displayed almost immediately with the subsequent trucks each delayed. (Since the web page is refreshed every 30 seconds, the first one may look as if it is pending but reloading the page will show it as not pending). Trucks that are pending are highlighted with a yellow background. As they are displayed on the screen, the highlighting is removed.

FREMANTLE PORTS	Congestion Management System													
DP W(Call all tru Marsh	DP WORLD Call all trucks for next slot Call Next Truck Add Truck Add Truck Marshall Yard													
Waiting T	ruck					Called Tru	ıck							
Number	BAT	Added Time	time slot	wait time	Call	Number	ват	Called Time	time slot	wait time	Arrived	Re-Call	Cancel	
1	443	27/02/2014 11:01:24 AM	1200	00:47:26	Call Remove	1	т765	27/02/2014 11:46:15	1200	00:02:35	Arrived	Re-Call	Cancel	
2	317	27/02/2014 11:46:44 AM	1200	00:02:06	Call Remove			AM						
3	448	27/02/2014 11:46:30 AM	1300	00:02:20	Call Remove									
4	432	27/02/2014 11:47:03 AM	1400	00:01:47	Call Remove									

You can cancel a called truck by clicking on the **Cancel** button for that truck and it will be transferred back to the Waiting Truck list.

Call an Individual Truck

This option should only be used in justifiable circumstances for instance:

- There are trucks in the list which are too late for their time slot and you do not wish to call them ahead of other trucks;
- You have just started the CMS and have trucks lined up in front of your door, whose details you have noted, but who may not make it to the TMA in the right order or ahead of other trucks these trucks are legitimately supposed to be called up first according to first come first served, but due to the registration process' time stamp, will need to be called up individually in the appropriate order; or
- There is a truck with recognisably urgent freight that needs to be called up ahead of other trucks.

You can call an individual truck by clicking the **Call** button in the call column for that truck.

A confirmation window will pop up.

The page at 10.0.0.100 says:	×
Are you sure you want to call?	
	OK Cancel

Click the **OK** button to confirm and the truck will be transferred to the Called Truck section.

Auto Call

Auto Call will automatically call up trucks according to the Auto Call parameters that have been set up in the system by the administrator. Trucks are called up according to the time slot, the current time and their order in the list. If multiple trucks are to be called, they are called up one by one every 40 seconds or as set in the system configuration. If you wish to have this changed, call Matt on 0408954313.



When Auto Call mode is enabled, the Auto Call button is yellow.

Clicking on the Auto Call button brings up a pop up window asking if you want to stop Auto Call.

The page at 10.0.0.65 says:	×	
Do you want to stop AutoCall?		
OK Cancel]	

If you stop Auto Call, the Auto Call button will be white. If you press the Auto Call button when it is white, it will automatically start Auto Call and turn yellow.

Auto Break

Auto Break is used to halt Auto Call when staff are having their scheduled tea/lunch break. When Auto Break is enabled, the Auto Break button is yellow.

Emergency Auto Break Auto Call

When the time corresponds to their scheduled break, the Auto Break button turns red. This indicates that no trucks will be called during this time. When Auto Break is enabled, pressing the Auto Break button brings up a pop-up asking if you want to stop Auto Break.

ſ	The page at 10.0.0.65 says	:		×
C	Do you want to stop AutoBreak?			
		ок	Cancel	

If you stop Auto Break, the Auto Break button will be white. If you press the Auto Call button when it is white, it will pop-up a list of the break times that have been set. If you wish to have this changed, call Matt on 0408954313.

The page at 10.0.0.65 says:		×
Break list: 00:00 to 06:13 08:27 to 08:58 11:27 to 11:58 13:42 to 14:13 16:27 to 16:58 19:27 to 19:58 21:45 to 23:59 Are you sure to enable AutoBreak?		
	ок	Cancel

When you enable the Auto Break, then the Auto Break will turn yellow (or red if it is in break time).

Emergency

The Emergency button is used to halt all call ups of trucks. The wait time being displayed is not updated until the emergency is cleared with a restart. When an Emergency is active, the Emergency button is red and a "Call-ups on hold" message is displayed on the TMA sign.

U			
Restart	Emergency	Auto Break	Auto Cal

To clear the emergency, press the Restart button. The Emergency button will then turn white, the restart button disappears, the wait time is updated and the "Call-ups on hold" message on the TMA screen is removed.



Add truck

There may be instances where a site may need to manually register a truck. For example: where the site has turned on the system and want to ensure that the trucks that were already lined up in front of their site are given priority, in first come first served order, even after driving off to the TMA.

In such cases, the site may utilise the "Add Truck" functionality. Clicking the "Add Truck" function allows the details to be entered. Enter the truck's ID details and, if appropriate, chooses the time slot. The system will default to the most appropriate time slot in relation to the actual time of day. You can adjust the timeslot using the large arrow up \checkmark and down \checkmark buttons or a timeslot can be selected from a dropdown list clicking the small down arrow button in the Timeslot text box.

rHome/FirstComeFirstServeWithinOneHourTimeSlot_AddTruck		
Congestion Management System	Home	Hello, <u>bh</u> ! Log off About Contact
FirstComeFirstServeWithinOneHourTimeSlot_AddTruck		
Rego		
TimeSlot		
Add truck		

Click the **Add truck** button after the details are entered correctly and the system will register the details entered into the "Waiting Trucks" list of the Home screen.

Arrived

When a truck arrives at your site, click the **Arrival** button for that truck so it can be removed from the list. **** It is important that you do this when trucks arrive so they are removed from the system and the signs.**

You will be asked for confirmation of arrival. Click **OK** and the truck will be removed from the system.



At times of high congestion, failing to clear trucks off as arrived may lead to a long queue of trucks appearing on the TMA screens, which may be confusing to drivers and may lead to delays of drivers seeing their call up message and arriving at your site.

It is also vital that you properly manage the trucks arriving at your site to ensure first come first served. The system will only be successful if drivers are convinced that they are enjoying the same surety of entry as if they were lined up in a queue in front of your premises.

IF YOU FAIL TO ENSURE FIRST COME FIRST SERVED, DRIVEF	RS MAY START TO
IGNORE THE SYSTEM, WHICH MEANS THE PORT COMMUNIT	Y WILL HAVE THE SAME
QUEUING PROBLEMS AS BEFORE. YOU WILL BE LIABLE FOR	R ANY INJURIES OR
ACCIDENTS CAUSED AND YOU WILL BE RESPONSIBLE FOR A	ANSWERING QUERIES AS
TO WHY FIRST COME FIRST SERVED WAS NOT MAINTAINED	

Cancel

If you wish to return a truck to the "Waiting Trucks" section for whatever reason, and thereby remove it from the TMA screens, you can do this by pressing the "**Cance**l" button next to the truck ID.

Although it is called cancel, this does not remove the truck from the system, it simply returns it to the "Waiting Trucks" section. All other information remains the same.

Remove a Truck

To remove a truck from the "Waiting Trucks" list, use the "**Remove**" button. A pop up a window asks if you are certain you wish to delete from system. Pressing OK will permanently remove the truck.

• The page at 10.0.0.100 says:		x
Delete from system?		
	OK Can	cel

**Note: You must only use this functionality sparingly and with proper justification. Choosing this option will not only remove the truck from your "Waiting Trucks" list, but also lose the registration timing information, and therefore first come first served priority.

Timing out of Trucks Re-Call

To prevent trucks remaining on the TMA screen indefinitely, CMS has a function which clears called up trucks off the screens after a given period of time (30 minutes or as set by configuration). Just prior to clearing the truck off the screen, CMS will start denoting un-arrived trucks by an olive green background, to provide a warning to the site that they have called up a truck, but it has not arrived. If you do not want the truck to be removed, you can press the **Re-Call** button for that truck. This will reset the wait time back to 0 to give another 30 minutes for the truck to arrive before it comes up for time out again.

CMS Early Slot Message Instructions

Login with your username and allocated password in the same link as the congestion management system:

http://cms.adengineering.com.au/trucksign/

Congestion Management System
Log in.
Use a local account to log in.
User name
dpwslots
Password
•••••
□ Remember me?
Log in
Click here to access the live sign view
© 2015 - A. D. Engineering International, Version: 1.59.3.0

After Logging, the following screen appears showing a map of the VMS signs around the harbour. Click the '**Message**' button on the right hand side to proceed.



Clicking on the 'Message' button will bring up the following screen.

Feel free to keep this screen logged in throughout the day as it will simply be 2 clicks for the selected message to be displayed (set and forget).

Congestion Management System Operations Manual

Conge PORTS	Welcome <u>dpwslots</u> Home About Contact						
Name	Priority	External	TMA	Schedule			
CARGOLINK UPDATE	GeneralMessage	Yes	No	From today forever;F	rom 06:00 to 18:30;Weekday	Remove	
QUBE EXTENDED HOURS	GeneralMessage	Yes	No	From today forever;F	rom 05:30 to 21:30;Weekday	Remove	
Scheduled Message:		DPW S		<u>xk</u>	Unscheduled Message: End Time:		PATRICK STOP WOF
Add Scheduled Message			Add Unscheduled Mes	sage			
Click here to access the live	e sign view						

In the drop down menu for **Scheduled Message** there are a set of pre-defined messages that are set to expire i.e.: 'DPW 1PM OPEN' will be automatically taken off the screen at 12:59pm. Select the appropriate message to be displayed and click the '**Add Scheduled Message**' button.

FREMANTLE PORTS		CARGOLINK UPDATE TMA WAIT			
Name	Priority	E 3/7 MAERSK TO TYD			
CARGOLINK UPDATE	GeneralMessage	Y DPW 8AM OPEN	ever;F	rom 06:00 to 18:30;Weekday	Remove
QUBE EXTENDED HOURS	GeneralMessage		ever;F	rom 05:30 to 21:30;Weekday	Remove
		DPW 11AM OPEN			
Scheduled Message:		DPW 12PM OPEN DPW 1PM OPEN	▼	Unscheduled Message:	
		DPW 2PM OPEN DPW 3PM OPEN DPW 4PM OPEN		End Time:	
Add Scheduled	Message	DPW 5PM OPEN DPW 6PM OPEN		Add Unscheduled Mes	sage
Click here to access the live	e sign view	PATRICK 14:00 SLOTS QUBE EXTENDED HOURS			

The message will now be added to the message listing currently displayed.

Name	Priority	External	ТМА	Schedule			
CARGOLINK UPDATE	GeneralMessage	Yes	No	From today forever;	From 06:00 to 18:30;Weekday	Remove	
DPW 1PM OPEN	GeneralMessage	Yes	No	To 7/08/2015 12	:59:00 PM	Remove	
QUBE EXTENDED HOURS	GeneralMessage	Yes	No	From today forever;	From 05:30 to 21:30;Weekday	Remove	
Scheduled Message:		DPW S	TOP WO	RK 🗸 🔺 🔻	Unscheduled Message:		
					End Time:		
Add Scheduled	Message				Add Unscheduled M	essage	

Confirmation of the current messages appearing on the VMS can be seen by clicking on the '**Click here to access live sign view**' link, bottom left hand side.

Once messages placed in the system, when they expire, they are automatically removed and will not appear again until the operator repeats this process.

Unscheduled Message is a pre-defined selection of messages that FPA can input to suit your needs. Unscheduled messages will expire at the time the operator designates.

Gate Function

Certain sites have a gatehouse, which is where the trucks arrive, but is away from the administrative area where the user sits who actually controls the call up of trucks etc. For this reason, there is a "Gate" function which allows the gatehouse to only mark off a truck as arrived.

There is a separate login for the gatehouse, which the Fremantle Ports CMS Administrator can set up. When you log as a gatehouse user, the home screen will only show called trucks.



When the trucks arrive, you can mark them off by clicking the **Arrival** button for that truck. You will be asked for confirmation of arrival. Click **OK** and the truck will be removed from the system.

	💽 The page at 10.0.0.100 says:
	Mark as arrived?
	OK Cancel
l	

You can access the live view of the screens by clicking the "<u>Click here to access the live sign</u> <u>view</u>". Trucks that have been marked as arrived will be removed from the TMA internal screens.

FREMANTLE	Congestion Management System	Weld	ome <u>test1g</u> !	Log Off Contact
Truck L External	ive Message View			
DP Wor ^{Congestion} GO TO				
TMA 1112 to dp l	GOTO			
<u>Back</u>				
© 2013 - A. D. Engi	neering International, Version: 1.29.0.0			

Cessation

While you are logged on, the signs will continue to show that there is congestion at your site and will ask drivers to divert.

Once you are confident that congestion is clearing and that you can accept direct arrivals again, you stop the CMS simply by logging off. There is no need to press any shut down or turn off function.

When you attempt to log off, the system will ask you whether you are sure you wish to log off and start cessation logic.

On logging off, the cessation logic commences:

- All trucks in the "Waiting Trucks" section are called up this prevents trucks being stranded in the TMA that may have not been called up prior to a site logging off;
- Delay logic gives trucks in the TMA time to make their way to your site, ahead of trucks arriving directly. This assists the first come first served integrity so trucks waiting at the TMA are not disadvantaged.

Following the log off, the remaining trucks in the "Waiting Trucks" section are called up one by one, in first come first served order. Once these last trucks have been called, CMS then commences a delay until it turns off the signs. In the meantime, the signs continue to show the congestion deviation message.

The time for the cessation countdown can be adjusted individually per site. For example, a site like QUBE Central, which is located near the exit to the TMA, may only need to have the cessation delay of two or three minutes, to ensure that the trucks waiting in the TMA get through prior to other directly arriving trucks. Other sites, such as Patrick, at the opposite end of North Quay to the TMA, may require ten or fifteen minutes, as directly arriving trucks turn straight into their site, while trucks from the TMA have a long distance to go.

After the countdown period, the external signs remove the congestion diversion message and return to their normal state.

Sign View when logged off

To view the status of the CMS VMS signs, without having to create a diversion for your site by logging onto the system, select the "**Click here to access the live screen view**" option at the log on screen. Anyone who logs on to the CMS, even those that do not have a log in, can see the live screen view using this functionality. This means others at your site can see what is happening with trucks on the TMA screens by using this option.



Fremantle Ports Web Site



Clicking the Fremantle Ports logo will bring you to the Fremantle Ports web site home page. To return from this page, use the browser's back button.

Glossary

BAT# - A number assigned by a site (predominantly DP World) that is linked to a trucks registration number. The BAT number is usually displayed on both driver and passenger doors of the truck. A site may choose to use truck registration number (licence plate number) or BAT number for registering a truck into the TMA.

CMS - Congestion Management System - system has been designed by Fremantle Ports to alleviate and manage truck congestion situations. Trucks entering the TMA (Truck Marshalling Area) are registered and called up in an appropriate order.

CMS Administrator - the person controlling the functionality of the system at Fremantle Ports. This is currently John Stenhouse and can be contacted on 94303416.

External signs - these are VMS (Variable Message Signs) located on the public roads to inform drivers of Site Congestion.

First Come First Served – trucks registered first are the first to be called up. This mirrors the way drivers line up in queues when waiting to go into sites.

First Come First Served within Time Slot – trucks will be ordered according to first come first served when they are within a given time slot. Trucks with an earlier time slot will be ordered earlier than trucks with later time slots, even though they may have been registered by the system earlier. For example, if there are three trucks, A, B & C arriving at the TMA in that order, but A & C have the same time slot, but B has an earlier time slot, the system will list B ahead of the other two.

ID - Identification - a means of identifying a truck or driver.

Internal Signs - these are the signs located within the TMA (TMA_1 & TMA_2). These signs show Called Truck information.

Kiosk- A touch-screen computer terminal for truck drivers to enter their details for registering to the system so they can be called up.

LPR - Licence Plate Recognition - Technology utilised within the camera used at the TMA. This technology takes an image, looks for recognisable characters and turns those characters into text. The most common usage is to turn licence plate information into text. This is being utilised here purely for (i) recognition purposes and (ii) to ease the driver registration process.

TMA - Truck Marshalling Area. This is the limestone land area set aside near the corner of Rudderham Drive and North Mole Drive, next to the current asphalted Truck Parking Area and Lunch Bar, of approximately 1.6 ha. containing 35 Long Truck parking bays.

VMS - Variable Messaging Signs - the signs used to provide information to drivers. These are electronic signs that can display messages and information under software control.

Blank for notes