Aptean

Trip Management User Guide

Calidus TMS - 12.48

29th April 2025 - 2.0
Reference: PLANNING

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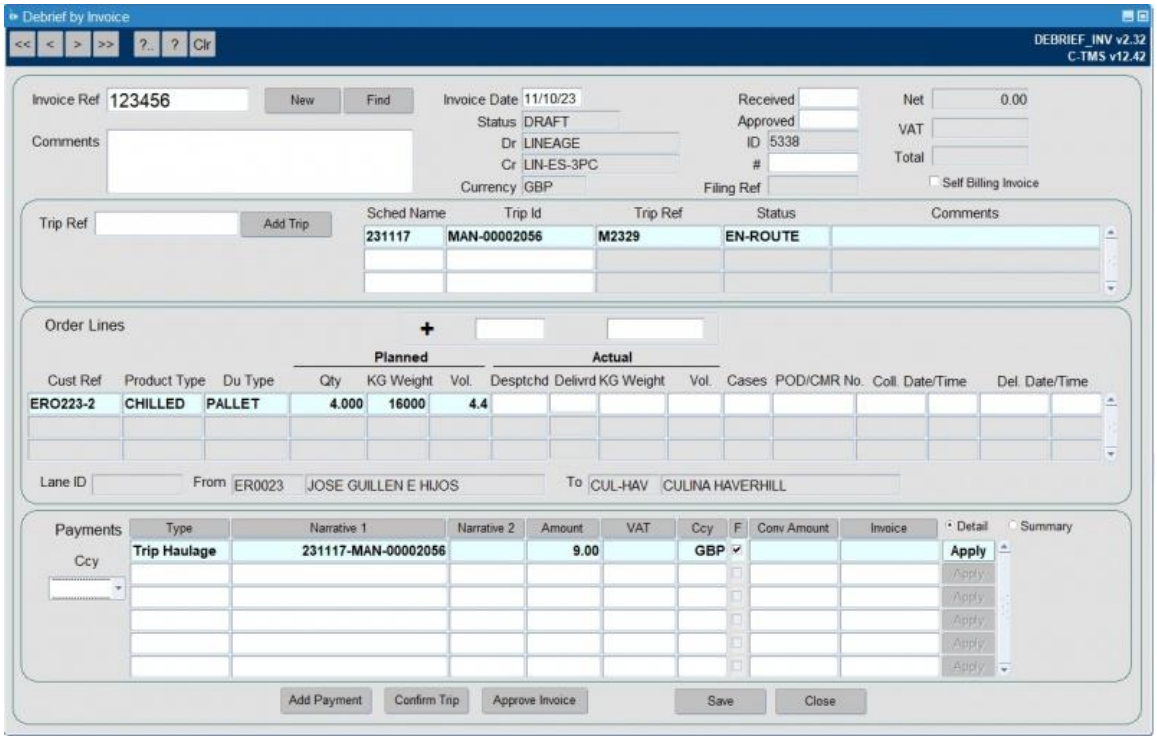
1 Debrief by Invoice

Debrief by Invoice supports the process of manually generating customer invoices based on the receipt of an invoice from the haulier for transport undertaken. The Haulier invoice will contain an invoice number; a list of trips that has been undertaken within a particular time period; the cost of each trip and any additional charges that they may have incurred.

1.1 Invoice Processing

Once the Haulier invoice has been received, the invoice reference is keyed into the Debrief form, this creates an invoice in a status of 'New'. The trips can then be added to the invoice, this is done using the trip reference (Bill of Lading).

This will then list all of the order lines and generated payments on the screen.



You can add comments to the invoice, set the received and approved date and set the filing number.

You can edit an order directly by right-clicking on an order and selecting *Edit Order*.

You can add lines to the invoice by entering the details and using the **+** button.

You can set the currency of the invoice by selecting a common currency between the carrier and cost centre using the Ccy drop-down list provided.

Once the haulier's invoice details have been stored in the system, the invoice will become payable.

- The POD - Proof of Delivery should be entered.
- The payments associated with the trip can be altered and applied to the invoice.
- The status of the trip can be promoted from 'Accepted' to 'Confirmed'.
- The status of the invoice is moved from 'New' to 'Pending'.
- Once paid the invoice is then changed to a status of 'Closed'.

In addition, the following things may happen in exceptional circumstances:

- The order may be Aborted, in which state it will still be charged for. You can do this by right-clicking on the order line in the list and selecting the *Abort Order* option.
- The Payment associated with the trip may be modified to reflect the amount shown on the Haulier's invoice. You can do this by right-clicking on the payment in the list and selecting the *Edit Payment* option. You can view the details of the payment by right-clicking on the payment in the list and selecting the *View Payment* option.

Additional Payments may be created and associated with the Trip. You can do this by right-clicking on the payment in the list and selecting the *Create New Payment* option.

You can delete payments by right-clicking on the payment in the list and selecting the *Delete Payment* option.

1.2 Key Functionality

1.2.1 New/Find

NEW allows invoices to be generated when the Haulier's invoice number is entered into the Invoice Ref field. If an invoice has already been partially entered, then by pressing the FIND button, the details will be displayed.

1.2.2 Add Trip

In order to add a trip to an invoice the Trip Reference (Bill of Lading - received from external system(s)) is entered. The first trip is used to indicate to the system which carrier and cost centre is involved to enable it to create the Haulier invoice for the correct relationship. The information pertaining to the trip will be populated, showing the Payment Transactions (in the middle section) and the Order details (bottom section)

1.2.3 Add Payments

If there are additional payments on the hauliers invoice which are not shown on the system, and these payments are agreed, then additional payments must be created using this button, these will be applied to the trip. You can also do this by right-clicking on the payment in the list and selecting the *Create New Payment* option.

1.2.4 Confirm Trip

When all the actuals have been entered, and all of the transactions applied to the invoice, the trip should be confirmed by pressing the CONFIRM button.

1.2.5 Close Invoice

Once ALL the trips on the invoice has been 'confirmed', the invoice can be 'closed', this means that no more transactions can be added to it.

1.2.6 Entering Miscellaneous Transactions

In the case where a non-allocable payment has been applied to a trip, it may be necessary to manually enter the corresponding customer charge. This can either be done directly from the order section of the Debrief Invoice form or the payment can be 'miscellaneous', in the sense that it is not associated with a trip or an order. To enter such a payment, select 'Payments' from the 'Accounting' menu. This will invoke the payments summary window, in order to add a payment manually, select the Debit and Credit accounts by selecting them from the pull-down lists.

1.2.7 Customer Invoicing

Generating customer invoices can be done by going into the Invoice Summary form. This is accessed by selecting the Accounts menu. The Debit and Credit Accounts can be filtered if a particular invoice account is required to be generated.

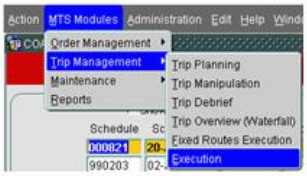
1.2.8 Printing a Customer Invoice

In order to print the invoice, select the Debit & Credit account from the drop down list and then right-click on the mouse,

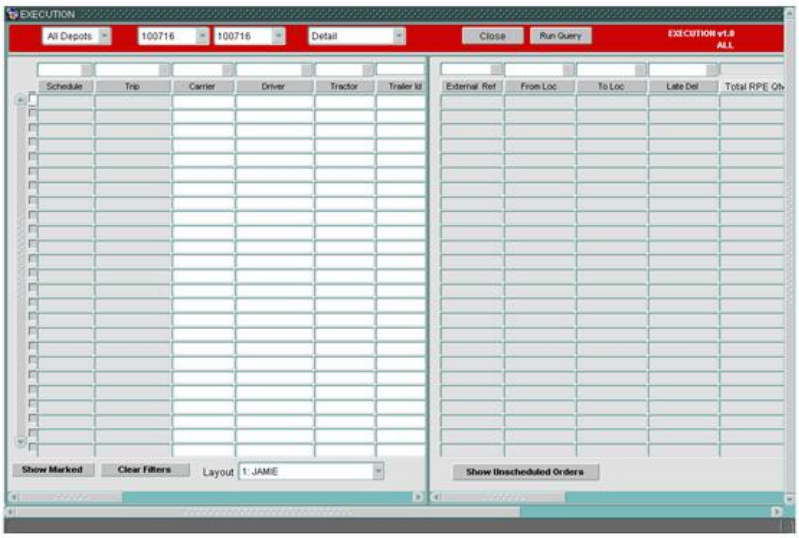
2 Execution

2.1 Accessing the Screen

To access the screen follow the menu choices highlighted below:



The screen will be displayed as below:



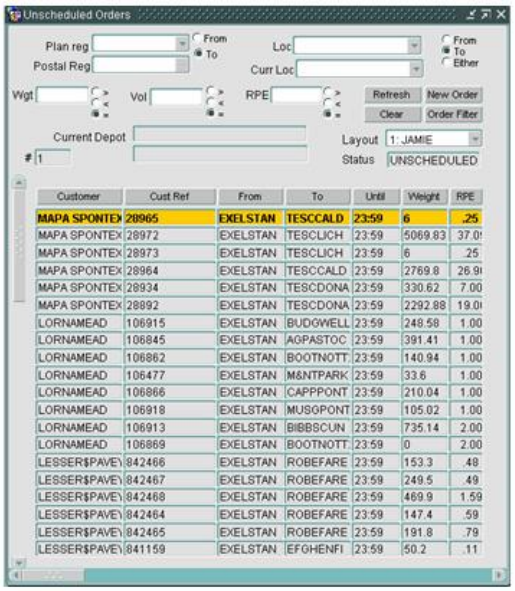
For best visibility of the screen it is best to view the screen in Full Screen Mode, see below:

2.2 Unscheduled Orders Form

The first part of the screen is the Unscheduled Orders Form it displays the same information as the Order Well in the Trip Planning and Manipulation Screens.

To access the form select the button as shown below:

The form will be displayed as below:

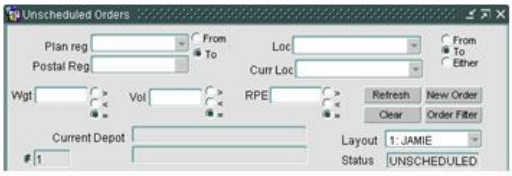


The size of the form can be reduced or enlarged by holding the cursor over the edge of the form until this ? symbol appears and then dragging the margin in the desired direction.

2.3 Data Sort

Data can be sorted either alphanumerically or reverse alphanumerically by selecting a title header (example below), data can be sorted by any column.

2.4 Data Filters



The orders which are displayed in the Unscheduled Orders Form can be filtered using the filters above. This functionality is the same as that found in the Order Well in the Trip Planning Screen and the Trip Manipulation Screen.

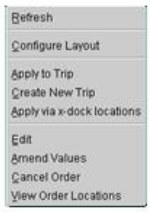
There are various filter options which can be seen above, more than one filter can be applied at a time to drill down the information being displayed. The Clear Button removes any filters applied.

The Refresh Button updates the information displayed to provide the most current information, for example if new orders are being entered by another user or if orders have been scheduled onto a trip.

A new order can be entered using the New Order Button.

2.5 Right Click Options

If you right click when over any of the order information in the form you get the following menu:

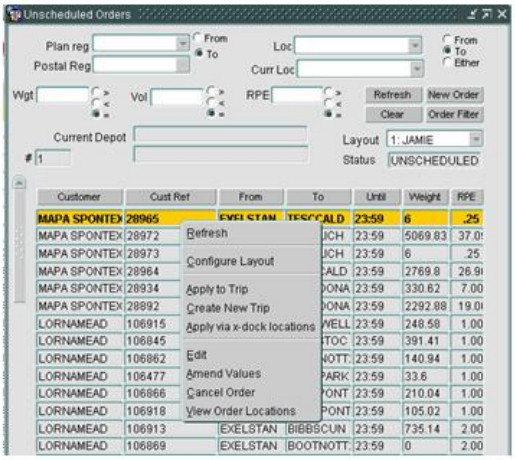


2.6 Refresh

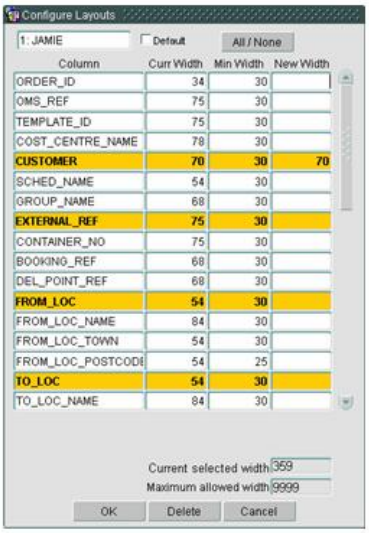
Is an alternative way of updating the data displayed (same functionality as the Refresh Button mentioned above).

2.7 Configure Layout

The fields displayed in the columns of the Unscheduled Orders Form can be configured individually for each user, to do this right click over any order information in the form and the menu shown below will be displayed:



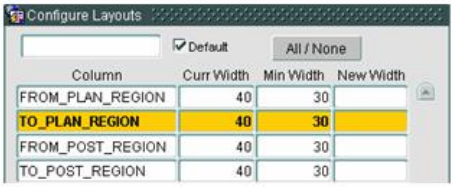
Select the Configure Layout option which will open the window shown below:



To save any changes made to layout you must give the layout a name, this can be done by typing in the box in the top left of the form (see previous page). You do not have to type the number the system generates this. It is possible for each user to have multiple layouts.

To create an additional layout select the drop down arrow next to the Layout field and select the blank space at the bottom of the drop down (see below). This will change the layout to display the system default. This drop down menu is used to switch between layouts where a user has more than one layout configured.

Repeat the right click Configure Layout mentioned above, note the top left box displayed below is blank, to save any changes made you need to name the layout in this box.



If a user has more than one layout a Default layout can be selected by checking the Default box shown above. The layout that has this box checked will always be displayed when the form is first opened.

Fields highlighted in yellow will be displayed, to add or remove a field select that field then hold down left click on the mouse and the Ctrl button on the keyboard, fields will become yellow if they have been selected and return to white if removed.

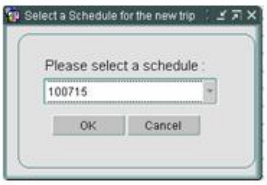
The width of each displayed column can be changed by typing in the New Width Column on the right of the form, please note that any field displayed has a minimum display width shown in the third column (above). There is also a maximum width allowed for the whole display (shown at the bottom right of the form) although the maximum for this form is so large it is unlikely to become relevant, it is worth considering how much will be visible without needing to enlarge the form.

2.8 Apply to Trip

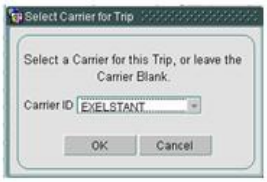
This allows you to add an order to the trip which is selected in the main Execution Screen (shown later). It is possible to select one or multiple orders to apply to a trip. To select multiple orders select the first order required by left clicking the mouse then hold down the Ctrl key on the keyboard and left click any other orders required, any highlighted orders will then be applied to the trip.

2.9 Create New Trip

This allows you to select either a single or multiple orders (as described for apply to trip) to create a new trip. Select required orders then right click and select Create New Trip you will be presented with the following box.



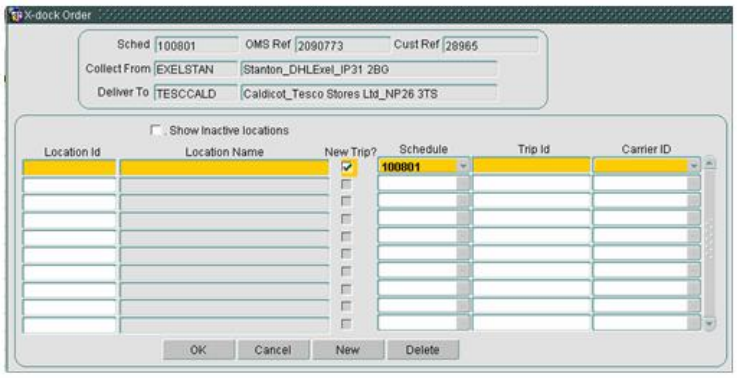
The schedule date will be populated if the main Execution Screen is displaying information for only one schedule date, if the screen is displaying a range of schedule dates you will need to select the schedule date that you want to create the trip on from the drop down list. Once selected you will be presented with the following box:



You can either select a carrier or create the trip without a carrier. A list of carriers is available by selecting the down arrow at the right of the field. When creating subsequent trips the Carrier ID field will be populated with the last carrier used.

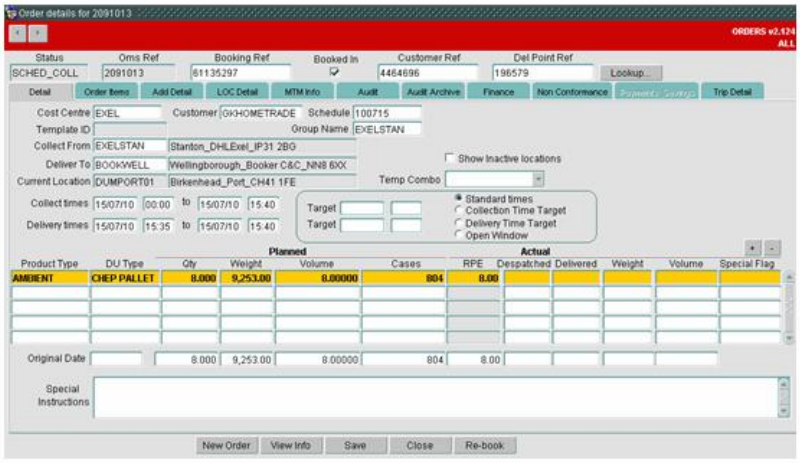
2.10 Apply via X-dock Location

This allows you to select either a single or multiple orders (as described above). Select required orders then right click and select Apply via x-dock locations you will be presented with the following form (this follows the existing functionality in the Trip Planning and Trip Manipulation Screens).



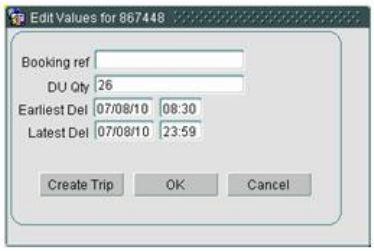
2.11 Edit

This opens up the main order detail form as shown below:



2.12 Amend Values

This provides a short cut to changing certain order details without opening the order details as above.

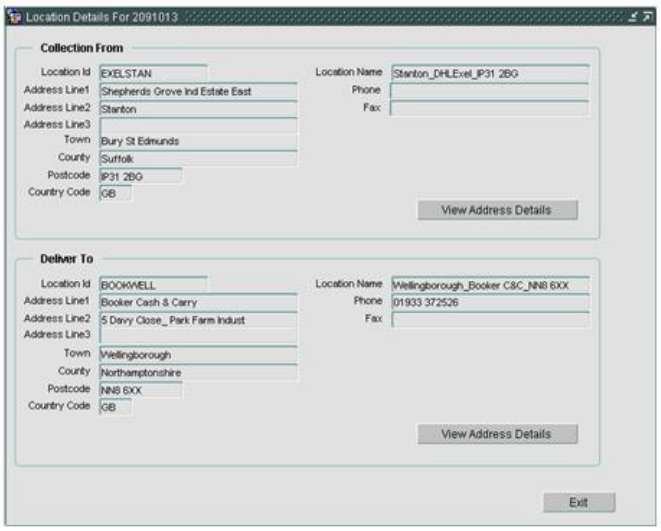


2.13 Cancel Order

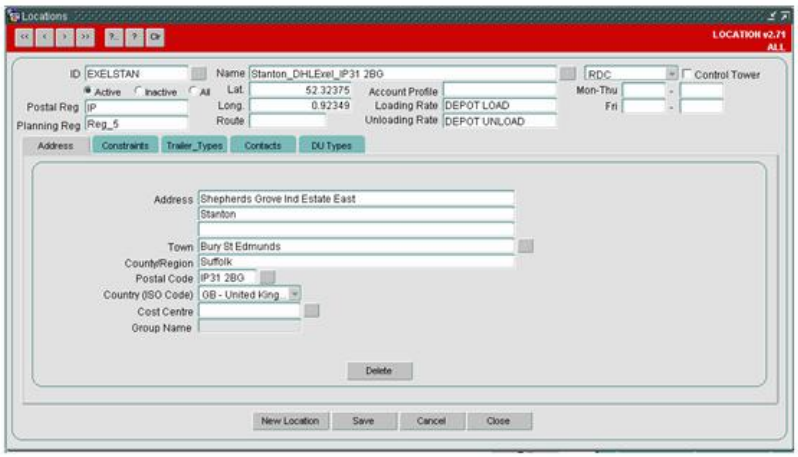
This allows a user to cancel an order and it will no longer appear in Unscheduled Orders Form or in the Order Well in the Trip Planning Screens. If required orders can be reinstated using the Orders Module of the system.

2.14 View Order Locations

This allows the user to see collection and delivery addresses for the selected order, see below:



If you select the View Address Details button you get the following screen with increased address information:



3 Main Execution Screen

3.1 Header Menu

Shown below:

3.1.1 Depot Selection

Depending on a users access this field can be used to either see all orders they are permitted to view or they can select a particular depot to limit the amount of information displayed. The screen defaults to All Depots. When making changes the Run Query button will update what is displayed.

3.1.2 Date Range

This allows the user to select either a single schedule date or a date range to view. When opened the screen defaults to the current date. When making changes the Run Query button will update what is displayed.

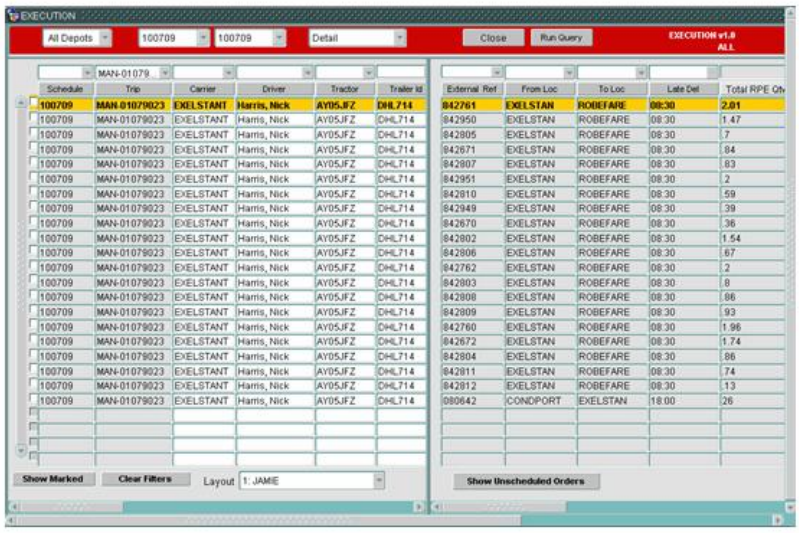
3.1.3 Detail/Summary

Users have the choice of displaying information in Detail or Summary which can be selected in the drop down on the header menu. When making changes the Run Query button will update what is displayed.

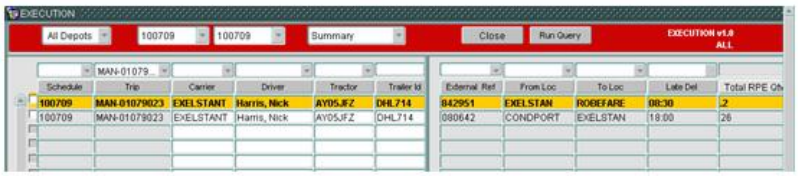
Detail Mode will display one line for each order on a trip (see example on the following page).

Summary Mode will display the first order on each loaded leg of the trip (see example on the following page).

3.1.4 Detail



3.1.5 Summary (same trip displayed)



3.1.6 Close

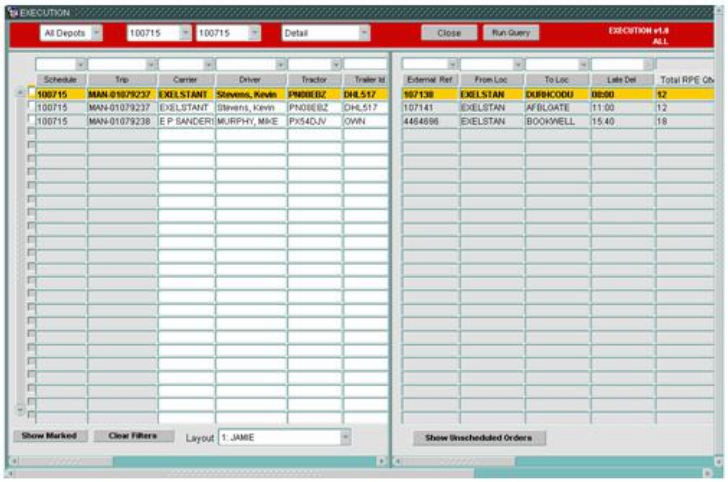
Self Explanatory

3.1.7 Run Query

When changes are made to the selection options listed the Run Query button will refresh the information displayed. When changes are made to information in the Execution Screen selecting Run Query is required to display the most current information.

3.2 Screen Panes

The Execution Screen is split into two panes the information on the left hand pane is trip information and the right hand pane displays the associated order information.

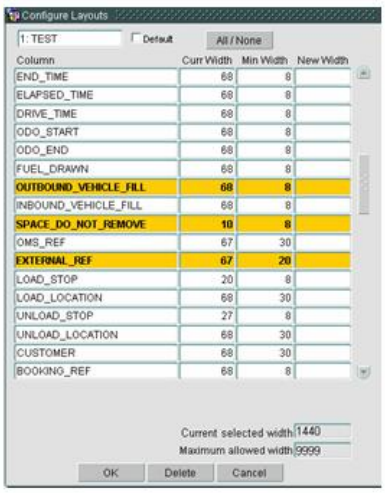


3.2.1 Configure Layout

The screen can be configured as in the Unscheduled Orders Pane (process described previously). To configure the layout right click over any column. Despite being displayed in two separate panes the layout is configured as a single block any field displayed above the SPACE_DO_NOT_REMOVE field (see below) will appear on the left hand trip pane any field displayed below the space field will appear on the right hand order pane.

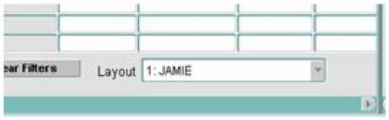
Please note if you remove the SPACE_DO_NOT_REMOVE field the Order Pane will not display.

The choice of fields available is vast and should enable users to customise the display to suit their role specifically.



3.2.2 Layout Switch

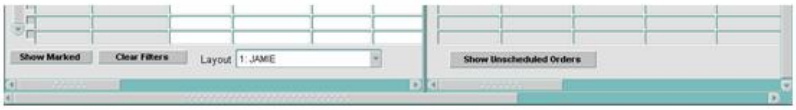
Users can set up more than one layout which can be switched using the Layout drop down (see below).



3.3 Screen Panes Revisited

The Trip Pane on the left hand side of the screen displays Trip information the Order Pane on the right hand side of the screen displays Order information.

The Trip Pane scrolls independently of the Order Pane (and vice versa), each pane has its own scroll bar (see below) above the main screen scroll bar.

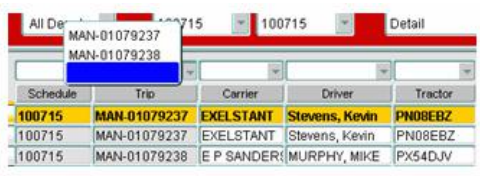


The scroll bars allow the information to be moved independently of the opposite pane (see examples below).

3.4 Screen Filters

Any columns which are displayed with a drop down box above them can be filtered. If there is no drop down arrow above the field it can not be filtered (see examples below).

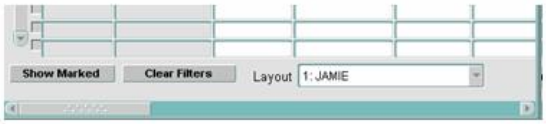
Selecting the drop down arrow will provide a choice records to filter by (see below).



More than one filter can be used simultaneously to allow further reduction of any data displayed.

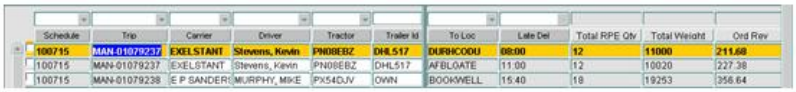
Please note that when applying a second filter the choice of options to select will be based on the information displayed in the Header Menu and not the information remaining in the display.

Filters can either be individually removed by using the drop down arrow and selecting the blank field at the bottom of the menu or be removed simultaneously using the Clear Filters button in the bottom left of the screen (see below).



3.5 Screen Sorts

Data can be sorted alphanumerically or reverse alphanumerically by any column with a darker grey menu title, those with a lighter grey menu title do not have the functionality (see below).



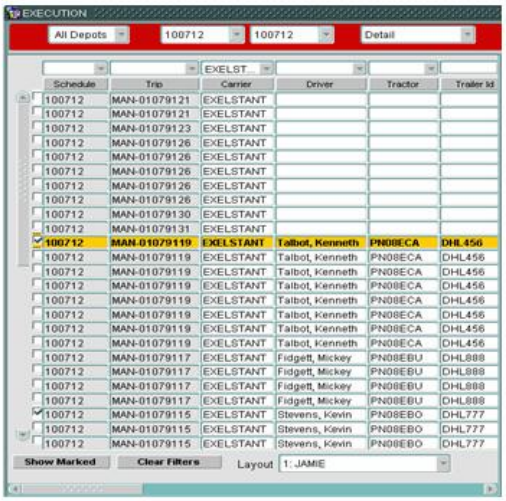
Sorting Trip information will always keep the relevant trip information together (the only exception to this is if two trailer numbers are used on one trip).

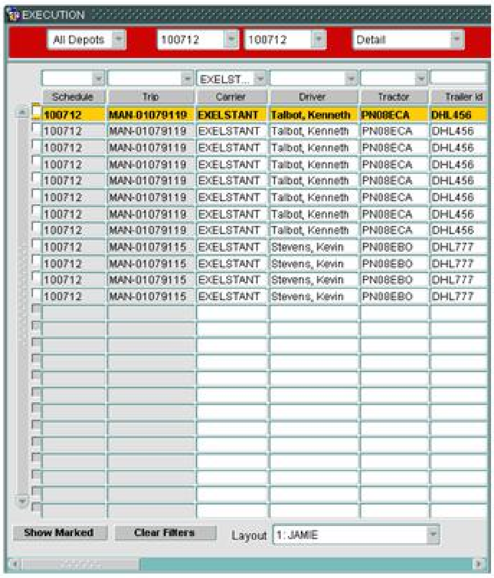
Sorting Trip information will allow users to move blank Carrier, Tractor, Driver or Trailer information to the top of the screen to show which still require allocating.

Please note that when sorting by any Order Detail Column (right hand pane) orders will be logically sorted and not be displayed in Trip groups.

3.6 Mark Trip

This allows user to see two or more trips together that may not be possible using the screen filters. To mark a trip select the white box at the far left of the display and then select the Show Marked button at the bottom left (see below). To clear the marked display use the Clear Filters button on the bottom left of the screen.



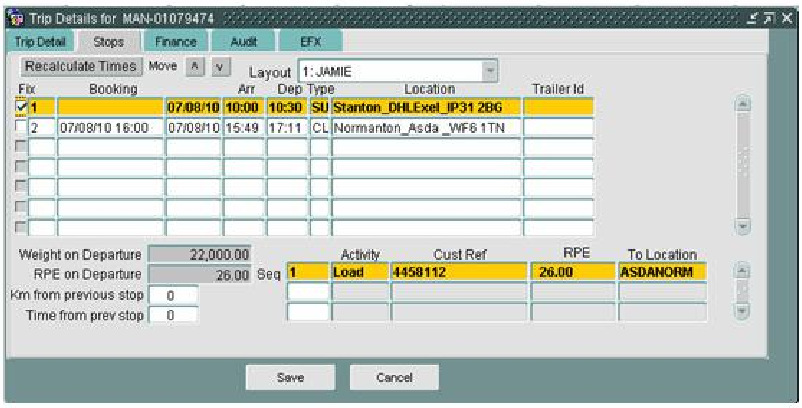


3.7 Right Click Functionality

Right click over either the Schedule or Trip columns gives the following menu:

3.7.1 Show Trip Details

Opens the Trip Details Form (see below). This form replicates the functionality provided by the section at the bottom right of the Trip Planning Screen and the top right of the Trip Manipulation Screen, it is spilt into five tabs which can be seen below.



3.7.2 Debrief Trip

This provides a short cut to the Debrief Screen for the selected trip.

3.7.3 Apply Order

Described later

Ready for **What's Next, Now**™

3.7.4 Delete Trip

This can be used to delete the selected trip, all orders on the trip will return to the Unscheduled Orders Well.

3.7.5 Set Status

This allows the update of trip status.

3.7.6 Resource Details

Right click over Carrier, Driver, Tractor or Trailer columns will give the following menu.

3.7.7 Edit Resources

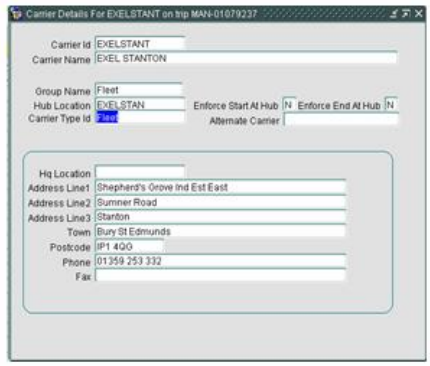
Selecting Edit Resources opens the following window.

To allocate resources type into the relevant field and use the Tab key to move between fields. The Cancel button will ignore any changes made, the Save button will apply any details entered and the Remove All button will remove driver, tractor and trailer.

Resource allocation is dependent on whether or not a Carrier is set up as Free Text or Pop List. If a Carrier is set up as Free Text anything can be entered into the fields. If the Carrier is set up as Pop List the system will not allow the entry of a resource not set up in the Pop List. For Pop List entry users can either fully or partially type in an entry that will be accepted if valid or if it is invalid a list of available alternatives will be displayed to select, alternatively selecting the grey box at the end of the field will produce a list of available alternatives. Currently the Trailer field is set as Free Text for all carriers.

3.7.7.1 View Carrier Details

View Carrier Details will display details as below:



3.7.7.2 View Tractor Details

View Tractor Details will display details as below:

3.7.7.3 View Driver Details

View Driver Details will display details as below:

3.7.7.4 View Trailer Details

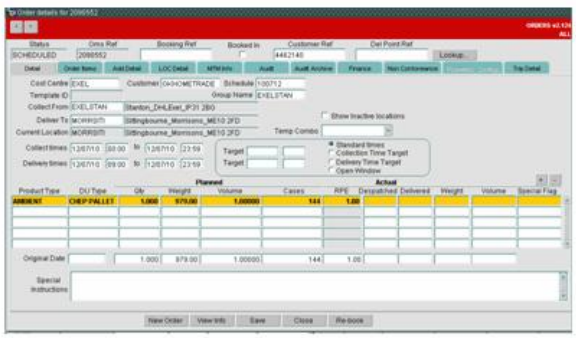
View Trailer Details will display details as below:

3.8 Right Click Functionality Order Pane

Right click over any field on the right hand Order Pane gives the following menu:

3.8.1 View Order Details

Selecting View Order Details will open the main Order details template for that order.



3.8.2 Move Order

Selecting Move Order will allow the option to select a single order to move between trips. Once selected the external reference field for the order will be highlighted in blue.

3.8.3 Apply Order

Right click over either the Schedule or Trip columns allows the order selected using the Move Order functionality to be applied to the selected trip. The customer order number for the selected order will be displayed against the Apply Order option (see below).

3.8.4 Unschedule Order

Selecting Unschedule Order will allow the option to remove an order from a trip and return it to the Unscheduled Orders Form (it will also display in the Trip Planning and Trip Manipulation screen order wells). If there is only one order on a trip and it is removed using this function the trip will still exist but not display in the Execution Screen (it will be visible in the Trip Planning and Trip Manipulation Screens), as an alternative the Delete Trip functionality is recommended to remove the last order from a trip.

3.8.5 View Order Locations

Selecting View Order Locations displays order address details. This is the same functionality as explained in the Unscheduled Orders Form.

3.8.6 View Trip Locations

If the screen is configured to show either Load or Unload location there is a right click option to view trip locations. For most orders order location and trip location will be the same but for a cross docked orders trip location will display the load and unload points of the order on that trip.

3.8.7 Carrier Cost Entry Short Cut

If carrier cost is zero; double clicking in either the Carrier Cost or Cost Column opens a new form shown below and allows a carrier cost to be entered.

Please note costs can only be applied using this short cut if there is no value in Carrier cost.

If Carrier costs have already been entered additional costs can be entered using the Trip Detail Tab.

3.8.8 Revenue, Carrier Cost, Cost and Profit Fields

Revenue, Carrier Cost, Cost and Profit fields show the totals for the trip duplicated against each line on the trip. The totals at the top of each column discount this duplication (see below).

The Order Revenue is displayed per order and there is only one line per order.

260.00	319.21	260.00	59.21	
Carrier Cost	Revenue	Cost	Profit	Ord Rev
260.00	319.21	260.00	59.21	84.92
260.00	319.21	260.00	59.21	68.09
260.00	319.21	260.00	59.21	41.83
260.00	319.21	260.00	59.21	56.62
260.00	319.21	260.00	59.21	67.75

On the example above you will notice the Carrier Cost and Cost columns display the same information.

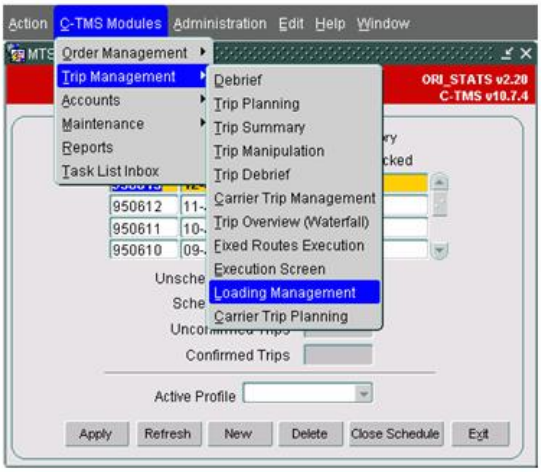
Carrier Cost is any external Carrier charges applied to the trip. The Cost column shows the total costs for the Trip, in most cases Carrier Cost and Cost columns will display the same information as in the example above.

For Trips which have been Cross docked through an internal Consolidation Centre the figures may vary. The Carrier Cost column will display any carrier charges for the trunk leg of the trip and the Cost column will display the sum of those trunk costs and any internally charged tariff for the radial delivery. The radial delivery charges will not be calculated and displayed until the trip status is set to Accepted or beyond.

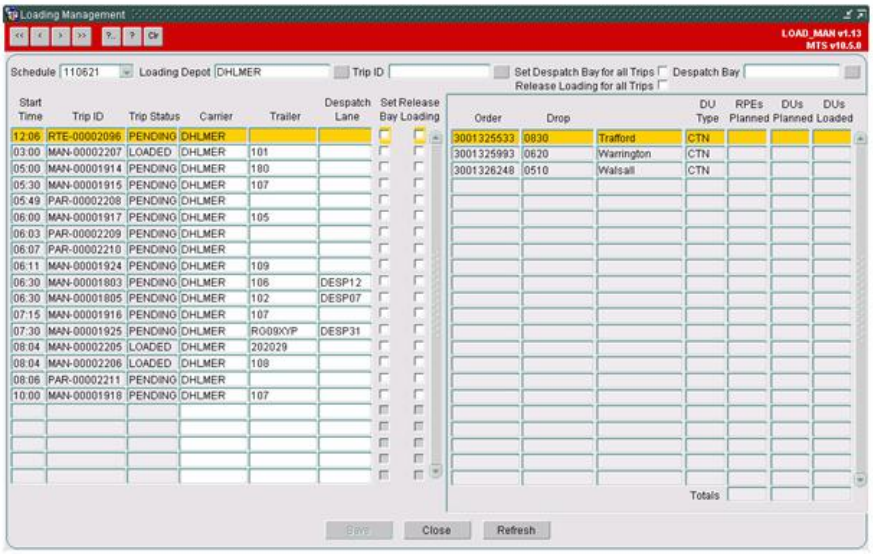
4 Loading Management

The ?Loading Management? screen is a module within C-TMS that allows the users to assign despatch bays, carriers and trailers to outbound trips, and to send a release loading message to WCS.

Access from the menu is shown below:



The screenshot below shows an example of the outbound trips present on a schedule in the loading depot:



4.1 Searching

The ?Schedule? and the ?Loading Depot?, plus the optional ?Trip ID?, may be used as search parameters and the search may be performed via the ?Refresh? button.

A list of values is available in the ?Loading Depot?, ?Trip ID?, ?Despatch Bay?, ?Carrier?, ?Trailer? and ?Despatch lane? fields.

4.2 Display

The first line displayed contains the search parameters ?Schedule?, ?Loading Depot? and ?Trip ID?, plus 2 tick boxes ?Set Despatch Bay for all Trips? and ?Release Loading for all Trips?, plus the ?Despatch Bay?: the tick boxes and the ?Despatch Bay? field are used to update the trips and not as search parameters (see the ?Processing? section below).

The screen is designed to display the active trips being loaded at the owning depot in a table on the left-hand side and the trip?s transport orders in a separate table on the right-hand side.

In the example above trip ?RTE-00002096? is on schedule ?110621? for loading at depot ?DHLMER? and it has 3 transport orders ?3001325533?, ?3001325993? and ?300132648?.

The trips are displayed in the ascending sequence of ?Start Time? and ?Trip ID? so that the earliest scheduled trips are displayed first; the transport orders assigned to the trips are displayed in the sequence of their customer references (i.e. in the ?Order? column).

Each trip will display the following data:

Heading	Description
Start Time	The start time of the trip on the schedule
Trip ID	The trip ID
Trip Status	The description of the calculated trip status based on the progress of the loading of the items onto the trailer (see notes below for a full description of the calculation)
Trailer	The trailer ID assigned to the first stop of the trip
Despatch Lane	The despatch lane in which the trailer is being loaded
Set Bay	A tick box to indicate if the despatch lane has been added, changed or deleted within the current session
Release Loading	A tick box to indicate whether the trip will generate its 'Release Loading' message when the user presses 'Save'

Each order will display the following data:

Heading	Description
Order	The customer reference of the transport order
Drop	The destination location code and name of the transport order
DU Type	The DU type of the items being loaded
RPEs Planned	The RPE quantity of items scanned for despatch
DUs Planned	The quantity of items scanned for despatch (using reason code SU, LN, ON, EN, LP, OP, EP or IA)
DUs Loaded	The quantity of items scanned as loaded (using reason code SL, XL, OL or UL)
Totals	A subtotal of the quantities per trip

The ?Trip Status? is calculated based as the situation of the scanned items:

Trip Status	Description
PENDING	The items on the trip have not been scanned for despatch and a 442 release loading message has not been sent to WCS
LOADING	An item on the trip has been scanned for despatch and a 442 release loading message has been sent to WCS
LOADED	All of the items on the trip have been scanned as loaded and a 841 loading confirmation message has been received from WCS

4.3 Processing

The screen allows the user to assign a despatch lane to the trip and thus move the items to that despatch lane, and to send the 442 release loading message to WCS.

4.3.1 Despatch Lane Assignment

There are 3 methods to assign trips to a despatch lane:

1. Enter the ?Despatch Bay? in the field of that name and tick the ?Set Despatch Bay for all Trips? box: this will then assign the despatch bay selected as the despatch lane of each trip that fulfils the following criteria:

a) A despatch lane has not been assigned already to the trip.

b) The trip has a status of ?PLANNED?, ?ACCEPTED? or ?EN-ROUTE?.

2. Tick the ?Set Despatch Bay for all Trips? box without selecting a ?Despatch Bay? in the field of that name: this will then assign a default despatch lane setup for the first drop of the trip as the despatch lane of each trip that fulfils the following criteria:

a) A despatch lane has not been assigned already to the trip.

b) The trip has a status of ?PLANNED?, ?ACCEPTED? or ?EN-ROUTE?.

c) A default despatch lane exists for the first drop of the trip.

3. Enter the ?Despatch Lane? of the trip.

Once the ?Despatch Lane? of the trip has been changed then its ?Set Bay? box will be ticked to indicate that the change has happened.

4.3.2 Despatch Lane De-assignment

If the ?Set Bay? box is ticked and the ?Set Despatch Bay for all Trips? box is unticked then the ?Despatch Lane? of the trip may be removed if it matches the ?Despatch Bay? set: this functionality allows the user to reverse the despatch lane assignment performed. Carrier Assignment The carrier may be assigned to the trip in the ?Carrier? field if the following conditions are met:

- The status of the trip is not one of 'CONFIRMED', 'ARCHIVE', 'DELETED', 'TENDERED', 'ACCEPTED', 'REJECTED' or 'EN-ROUTE'.
- The carrier is compatible with the tractor, driver and crew members.
- The current currency of the trip would not be changed.

4.3.3 Trailer Assignment

The trailer may be assigned to the trip in the ?Trailer? field if the following conditions are met:

- A carrier has been assigned to the trip.
- A compatible trailer type has been assigned to the trip.
- An incompatible tractor has not been assigned to the trip.

4.3.4 Release Loading

There are 2 methods to send a release loading message to WCS:

1. Tick the ?Release Loading for all Trips? box: this will then tick all of the ?Release Loading? boxes for the trips. If the box is unticked then all of the ?Release Loading? boxes for the trips will be unticked.
2. Tick the ?Release Loading? box for the trip.

4.3.5 Updating

If the ?Despatch Lane? has been changed then the current location of the order items will be moved to the despatch lane set if they are present in the grid or quality checked in a quarantine location.

If the ?Release Loading? box is ticked when the ?Save? button is pressed then a release loading 442 message will be sent to WCS.

5 Trip Planning

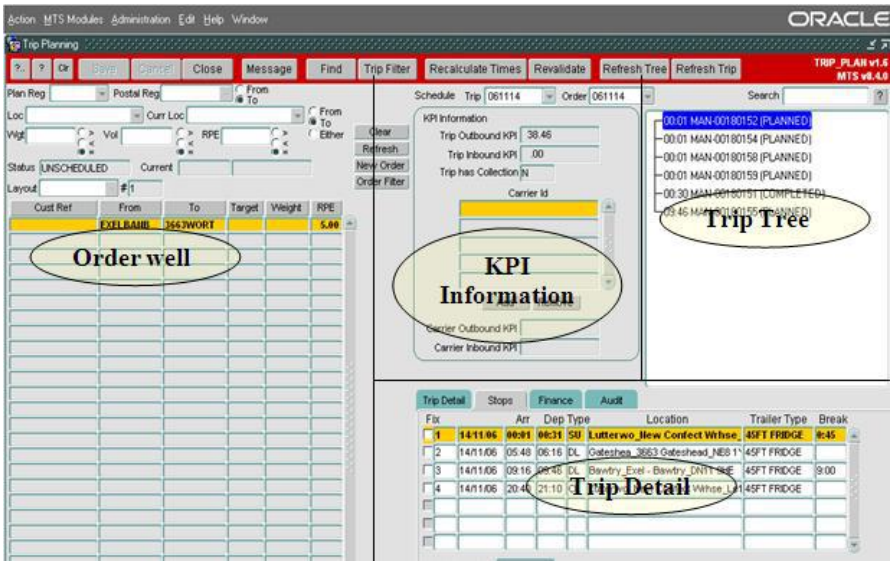
5.1 Introduction

Trip planning can be used for both the pre-planning of trips, and the execution of that plan. A planner will often be responsible for creating the orders and then putting these orders onto trips. Fixed routes will often automate part of this job for users, leaving only a few orders to be assigned to trips up manually using the skill of the planner. There is functionality within trip planning that will aid and guide the planner to making an informed decision.

For instance, the 'point to point' table held in the background of C-TMS holds details of travel times and mileages which will illustrate to the planner the planned arrival and depart times for there trips. This will then work in conjunction with the times populated on the order to show whether the deliveries will be made on time or not. C-TMS will also flag whether the planner is trying to create a trip that exceeds the trailer capacity of the vehicle type that has been allocated to this trip. Further to this, C-TMS can tell the planner if the trip exceeds a pre-set drive or duty time for each driver.

The Transport operator will then be able to allocate resources to the trips, and enter actual trip times and pallets delivered after the driver has returned from their journey.

There are four main sections to the trip planning screen.



5.2 The 'Trip tree' section

The 'Trip Tree' displays the header for the trips contained within the schedule selection (this schedule selection can be made in the top left hand drop down box named 'Sched'. The schedule refers to a date, and is the method of grouping a set of Orders and trips together into one manageable set. The schedule can be daily or weekly). The trip header contains the planned arrival time of the driver at the depot, the unique transport identifier, and the status that the trip is in.

5.3 The 'Trip detail' section

This section will display the detail of the trip that is currently selected within the trip tree section. There are four tabs in this section:

5.3.1 'Stops' tab

This tab displays the different stops on the trip selected. It shows (from left to right) the stop number, the planned arrive and depart time from each stop, the actual arrive and depart times (if this has been keyed within the debrief screen), the type of stop (SU = Start-up, DL = Deliver, PK = Pick-up, CL = Closedown), the name of the location, the type of trailer that has been allocated to the trip, the trailer ID associated with each stop, and where the driver break needs to be taken.

You can also see the orders that have been placed onto the trip within the small box below the main section. In this box you will find the orders that are relating to the stop that is highlighted within the larger section above. Double clicking on the order header will take you into the detail of the order itself, where users are able to amend time windows and pallet quantities.

5.3.2 'Trip detail' tab

This tab will allow for resources such as the carrier, the driver and the tractor registration to be allocated against the trip. There is also a Seal number box which is free text.

Users can also add comments against the trip by right clicking in the general Comments sub tab, selecting 'Add comments' and entering text. To the right of the General comments tab is the Errors tab which will display the rules that have been broken for this trip, which could include the total time of the trip or a broken delivery window. You will also find details such as the total kms, drive time and elapsed time for the trip selected.

5.3.3 'Finance' tab

This tab allows users to view, add or change the costs associated with performing a particular trip when allocated to a sub contractor. Finance can be studied in more detail within the 'Freight Payment' Module. We will however look at assigning a payment to a trip within this Module.

5.3.4 'Audit' tab

This tab enables users to view the history of the trip showing both who has created the trip, and who has amended the trip. It will also show if the trip has been set to another status, and if it has been deleted.

5.4 The 'Unscheduled Order Well' section

This section can be found at the left of the screen, and it displays orders that have not yet been allocated to trips. You are also able to create new orders or cancel existing orders here.

Each line within this 'Unscheduled Order Well' shows you the header information for an unscheduled order. The order ID is a unique sequential number allocated to an order at the time of its creation. The customer reference is an optional field on the order which is often populated when orders are imported into C-TMS. This is because you tend to import your orders from another system which will have its own reference number. You can however input this reference number manually straight into C-TMS.

You can also see where the order is being collected from, and where it is being delivered to. You will also see the region code for that order. This will typically relate to the first two alpha characters of the locations postcodes so that the planner has an idea of its location. Next to the region code is the 4 time windows that make up the collection and delivery window. Lastly you can see the weight, volume and RPE that relate to the quantity of goods that are being moved for that order.

There are several filter options relating to the unscheduled order well section, so that when the planner is undertaking the planning they are able to narrow their search to particular order types.

5.4.1 'Schedule selector'

Can be used to change the set of orders that the order well is showing you. This is a separate filter from the schedule filter found in the trip tree section of the Trip Planning screen. This means that you are able to drag orders from previous or later schedules onto trips that belong to this schedule.

5.4.2 'Region Filter'

Relates to the first two alpha characters of the postcode for a location on the order. This can either be the collection or the delivery location of the order, depending on whether the 'From' or the 'To' check box is selected. Choose whether you are interested in the collection point ('From') or the destination point ('To'), and select the relevant box. The drop down box will now show all the region codes that relate to your chosen location point against each order. Selecting one of these will filter out locations that do not have the region code you have selected (i.e. you are left with orders that are delivering or collecting from your chosen region code).

5.4.3 'Location Filter'

Relates to the order Collection from location, Delivery to location, or both. This is dictated by the check boxes to the right of the location drop down box. By selecting the 'From' check box, the locations within the drop down box will relate to the collect from locations within the orders listed in the unscheduled order well. If you then selected one of those locations from the list, the unscheduled order well would filter out any locations that didn't have your chosen 'from' location as their collection point. Conversely, selecting the 'To' check box will display the delivery locations within the well, and selecting one will filter out any locations that don't deliver to your specified location. The 'either' check box allows you to see and filter both on the collection and delivery locations of the order.

5.4.4 Weights, Volumes and RPEs

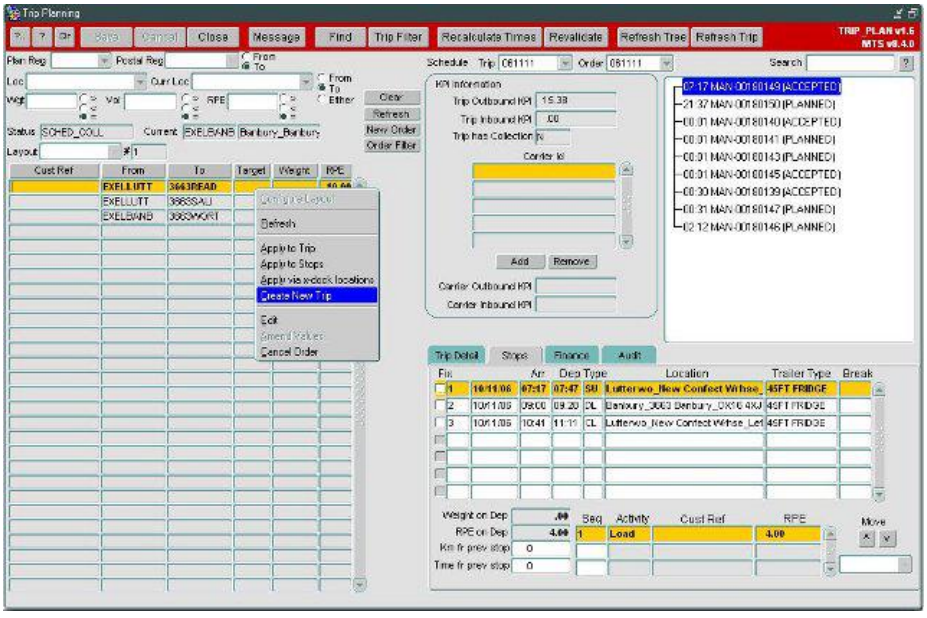
The Weight (WGT), Volume (Vol) and Pallet (RPE) filters all work in the same way. They allow you to filter out orders via the weight, volume or pallets associated with each order in the unscheduled orders well. Selecting the '>' check box and entering a figure in the associated box, will filter out any orders that have less weight, volume or pallets than your specified figure. The '<' check box will give you the opposite result. The '=' check box will keep any orders that have that exact figure on their order as you have keyed into the relevant search box.

5.5 Creating a new order

Although most of your orders will be created through different functionality (such as imports or templates), there may be times when you will need to create an ad hoc order. You are able to do this from within the Trip Planning screen. Start the process off by clicking on the **New Order** button at the bottom right of the screen. This will open up a blank 'Order Detail' screen from which you will be able to enter details of your order. For more details about entering orders see the ORDERS form page.

5.6 Creating a new Trip

Once you have a set of orders ready to plan, you can start to put them onto trips. Select one of your unscheduled orders from the unscheduled orders well by left clicking onto it. Now right click on the order and choose the 'Create new trip' option:



After you have pressed the **Create New Trip** button, your order will have been placed onto a brand new trip It will have disappeared from the unscheduled order well, as it is now scheduled onto a trip.

The trip you have just created will be the one highlighted in blue in the trip tree section of the screen. The detail section of the screen will therefore relate to your new trip. You will see that C-TMS has worked out the arrival and depart times for each of your stops on the trip. This has been driven by your collection and delivery windows on your order. C-TMS will try

and meet the windows, getting to the delivery location as early as is feasible at the start of the delivery window.

C-TMS will then work backwards / forwards from this time to work out the arrive and depart times at depot on the first and final stops. The drive time and distance are worked out from the Network table which sits behind the Trip Planning screen. The Network table keeps a record of the distance and drive time between every location and uses the applicable record when calculating times and distance on a trip.

You will also notice that at each stop, C-TMS has allocated a stop time. This can be worked out by looking at the difference between the planned arrive and planned depart times at each stop. This time will have been taken from the loading / unloading rates allocated to each location within the location maintenance screen. It may also include a break time if the driver has reached the designated limit (usually 4.5 hours drive time).

If you click on the detail tab within the trip detail section of the screen, you may see that a carrier has been allocated to your trip automatically. If this is the case, this will have been due to how you have been set-up as a user within C-TMS. You will have been allocated to a particular carrier, so whenever you create a new trip, this carrier will automatically be allocated to it. You can change the carrier by clicking on the carrier lookup button and selecting a new one from a list (this will be covered in more detail within the resource allocation section later.

5.7 Adding orders to an existing trip

Once you have created a trip, you may want to add further orders to the same trip. To do this select the trip you want to add orders to (if not already selected), and highlight the unscheduled order you want to add to that trip. Right clicking on that order will cause a menu to pop-up where you should click on the 'Apply to Trip' option. Once you have done this you will see that your order has jumped onto the selected trip, and disappeared from the unscheduled order well.

You will notice however that the stops you have just added have no dates or times against them and that the close down stop (CL) is at stop 4 instead of the last stop. To solve all of these problems you will simply need to press the **Recalculate Times** button.

5.8 Manipulating a trip

Once you have added your orders to a trip, you may then want to change the trip around some what. You will be able to manoeuvre stops around, change order details, override C-TMS derived stop times, split trips into two separate trips, merge trips together, and remove stops on existing trips.

5.8.1 Manoeuvre stops

You are able to move a stop up and down the stop order by using the move up **^** and down **v** buttons found at the right hand side of the trip detail section. Simply highlight the stop you want to move and press the relevant move button. In this example then, highlight stop 3 and press the **v** button once. This will have moved that stop up.

5.8.2 Change Order Details

If you need to change an orders planned pallet quantities or order time windows whilst the order is on a trip, you can do. This will often be the case when you have added multiple orders to a trip only to find that because of previous stops on the trip, your order will be arriving late. Also, if you have planned to squeeze 27 pallets onto a trailer that has the capacity to support only 26 pallets, then you may also want to make changes to the pallet quantities.

To do this is an easy process. Simply select the stop that the order is either collected from or delivered to on the trip, and double clicks on the order from within the Order section of trip detail.

Double clicking on the order will effectively drill down into the detail of the order where you are able to edit pallet quantities or time windows accordingly.

If you try to edit the order but C-TMS does not allow you to, this will be because of you access rights. These would have been set-up by your system administrator.

5.8.3 Over-riding C-TMS stop times

As previously discussed, C-TMS will work out the times against each stop on your trip for you. If for some reason you want to change these times against the trip, you can do. To do this you will need to utilise the 'Fixed' functionality. The first column in the trip detail section of the screen is headed 'Fixed'. Clicking in a fixed box puts a tick in that box and has effectively fixed the stop meaning that C-TMS will not recalculate that stops times.

So if you wanted to change the times on the first stop of a trip to start a driver at a later time than C-TMS had allocated, click in the first stops 'Fixed' box. Then change both the planned arrive and planned depart times for this stop. Clicking on the **Recalculate** button will leave the first stops times to how they have been set by you, but change the subsequent stops to reflect the drivers new start time. You are able to fix more than one stop on the trip, but you are unable to effectively fix a stop in the middle of a trip without fixing all previous stops. If you did try to do this, C-TMS will not work backwards to calculate its times.

When you do forcibly change the stop time of a trip, you may notice that you receive a warning message detailing windows that have been broken. Because you are overriding the times on the order, you may well have broken one of the windows on that order. Drill down into the order in question to find out by how much you have broken the window.

5.8.4 Merging two trips together

Most people use Trip Planning to track their drivers workload. Once they have scheduled all their orders onto single trips, they are likely to start looking for trips to put together to create multiple 'gate exit' trips. So a driver may go out and do a delivery, come back to base before collecting a further load for delivery. These two gate exist are likely to be represented originally by two separate trips in C-TMS. So you will need to use the merge functionality within C-TMS to bring those two trips together.

To do this, highlight the first trip you want to merge by left clicking on it within the trip tree section of the screen. You will then need to hold down the 'Ctrl' key on your computers keyboard, and while you are doing this left click on the second trip that you want to merge (again from within the trip tree section of the screen). You will notice that the results of your actions are that both trips are highlighted within the trip tree. You will now need to right click on one of your two trips in the trip tree to bring up the options menu.

Select the 'Merge Trips' option. You will receive a confirmation message telling you that the merge you undertook was successful. One of your trips will have been deleted, and the orders that were on that trip have been moved onto the other trip. C-TMS will have re-calculated the times automatically for you.

5.8.5 Splitting one trip into two separate trips

If you have merged two separate 'gate exit' trips together, but later want to reverse that merge, you will be able to utilise the split functionality. The split functionality will split one trip into two separate trips. This functionality will only work on trips that have multiple gate exits, and will only split at the point of a gate exit.

Select the trip that you want to split by left clicking on the trip within the trip tree section of the screen. You will first need to expand the trip within the trip tree so that all its trip stops are showing. To do this you will need to press the small **+** button to the left of the trip. If there is not a small '+' next to your trip, press the **Refresh Trip** button. Once you have expanded the trip you will need to select the stop where you want the split to take place by left clicking on it. The split will take place above the stop you select, so the stop you select will usually be a pick up at a depot (i.e. the start of the next gate exit).

Now right click on that same stop to bring up the menu options. Select split trip to action the split trip functionality. You will be confronted with a message box telling you that you split has been successful and that a second trip has been created for you to accommodate the second gate exit. You will also notice that the trip does not appear to have changed. This is because C-TMS has not refreshed the screen, so you will need to do it. Press the **Refresh Tree** button to update all the trips with the trip tree. You should now notice the effect of the split functionality.

5.8.6 Removing orders from a trip

If you need to remove an order from a trip there are two ways of doing it. The first involves deleting an entire stop and all of its orders from the trip, and the second is a little more subtle where you are able to remove a single order at a time. To use the 'Delete stop' functionality, highlight the stop you want to delete from within the trip detail section of the screen. Right click on that stop and select the 'Delete Stop' option from the menu.

C-TMS will ask if you are sure you want to delete the stop to which you press the **OK** button. You will notice that the stop has been deleted off the trip. You will have to recalculate the times on the trip as C-TMS has not done that for you. You

will also notice that the order(s) you have removed from the trip do not at first appear within the unscheduled order well at the bottom. To see the order, press the **Refresh** button within the unscheduled order well section.

You can also achieve similar results by using the 'Unscheduled Orders' functionality. This way will allow you to remove single orders at a time from a stop. To do this, highlight the trip that you want the order removing from, by clicking on it from within the trip tree section of the Trip Planning screen. You will then need to highlight the stop on the trip which contains the order you want to remove (remember that the order will be present at two stops on the trip, both where the order is collected and where the order is delivered). Next, highlight the order that you want taking off the trip from within the order section of the trip detail part of the screen.

Now right click on that order and select the 'Unschedule Order' option. You will be given confirmation that your order was removed successfully and the order will drop down into the unscheduled order well automatically. Finally, you will need to recalculate the times on the trip using the 'Recalculate Times' button.

5.9 Adding Resources to a trip

Once you have created a trip, you will then be able to allocate different resources to it. These include the carrier, the driver, the tractor registration, the trailer type and the trailer ID.

5.9.1 Adding a Carrier to a trip

After selecting the required trip from the trip tree section, click on the 'trip detail' tab within the trip detail section of the screen. Within this tab you will see that there is a carrier section. This may already have a carrier populated in it, which would have been derived from your user parameters previously set-up by your system administrator. If this is the case, there is a possibility that you want to change the given carrier and so you can follow the same instructions as if you were adding a new carrier to the trip.

5.9.2 Adding a Drivers name

After selecting the required trip from the trip tree section, click on the 'trip detail' tab within the trip detail section of the screen. Within this tab you will see that there is a Driver section. If the driver name box has a white background, then population of this field will be 'free-text'. This means that you are able to type the drivers name straight into the box. If the box has a grey background then population of this field is via a pre-set driver list. The type of entry is dependant on the way that the carrier you have selected is set up in resource maintenance.

5.9.3 Adding a Tractor Unit

After selecting the required trip from the trip tree section, click on the 'trip detail' tab within the trip detail section of the screen. Within this tab you will see that there is a Vehicle section. It is within this section that you are able to record the tractor registration number of that trip. If the vehicle box has a white background, then population of this field will be 'free-text'. This means that you are able to type the tractor registration straight into the box. If the box has a grey background then population of this field is via a pre-set vehicle registration list. The type of entry is dependant on the way that the vehicle you have selected has been set up in resource maintenance.

5.9.4 Adding a Tractor and Trailer Type

The tractor type is selectable from the main trip stops tab of the trip Planning screen, rather than from the trip detail tab as with the carrier, driver and tractor unit.

Select the trip that you want to allocate a trailer type to from the trip tree section of trip Planning. You may notice that the trailer type for this trip has been pre-populated for you by C-TMS. When you create a trip, C-TMS will look for the most appropriate trailer type for your trip, taking into account the trailers based at the depot and the number of pallets to be moved. This process will have taken place at the time of the trips creation.

Right click on the blank trailer type box of the first stop. This will bring a menu up,from this menu, select the 'Assign Trailer Type' option. This in turn will provide you with an entry box if you know the trailer type ID you can be enter it straight into the Trailer type box and press the 'OK' button or you can use a list of values to select the correct trailer type id.

You are able to add a different trailer type for different stops on the trip (these must be for subsequent collections, rather than stops serviced from the collection picked up at stop one). Simply repeat the process outlined above but starting off by right clicking on the desired stop number rather than the first stop. This will effectively change the trailer type for that stop, and all subsequent stops after it.

5.9.5 Adding a Trailer ID

The trailer ID is selectable from the main trip stops tab of the Trip Planning screen, rather than from the trip detail tab, as with the carrier, driver and tractor unit. Select the trip that you want to allocate a trailer ID to, from the trip tree section of trip Planning.

Right click on the trailer ID box of the first stop on the trip. This will bring a menu up, from this menu, select the 'Assign Trailer ID' option. This in turn will provide you with an entry box.

If you know the trailer ID you can enter it straight into the Trailer ID box and press the 'OK' button. Otherwise, select the trailer ID from the list and press the OK button. Your trailer ID will have been entered into the box so you will now be able to press the OK button. You will then see that the trailer ID you selected has been allocated to the trip.

You are able to add a different trailer ID for different stops on the trip. Simply repeat the process outlined above but starting off by right clicking on the desired stop number rather than the first stop. This will effectively change the trailer ID for that stop, and all subsequent stops after it.

5.10 Other Functionality within Trip Planning

5.10.1 Setting a trips Status

The trip status is a way of signifying to the operation just what stage that trip is at. A status of planned will signify that the trip is still being looked at by the planner and the trip is yet to be finalised. Planned is the status that is allocated to the trip when it is first created. When the planner is happy with the trip they will set the trip to accepted to signify this fact. Alternatively, they may set it to Tendered to show that the trip has been tendered out to a different carrier, and they are waiting for the carrier to accept or decline that piece of work (if the carrier has accepted the piece of work, the planner will then set the trip to accepted). When the driver has left site with their trip, operations will tend to set the trip to en-route. After the driver has returned and the trip has been debriefed within the trip debrief screen, the trip status will be changed to confirmed.

Setting the status of the trip is simple. Highlight your trip within the trip tree section of the screen, and then right click on it. This brings up a menu list where you should select 'Set Status', followed by the status that you want to set the trip to.

C-TMS will ask you a question making sure you want to change the status of the trip, to which you reply 'OK'. You will then notice the status of the trip change to accepted within the trip tree section of the screen.

5.10.2 Creating Trips via Crossdocks

This is new functionality within C-TMS that will allow you to create multiple trips with one order. You are therefore able to emulate a collection at point 'A', a delivery at point 'B', via a crossdock of point 'C'.

The first thing you need to make sure of is that the location ID you are to use as a crossdock has been set up as such within the Maintenance business data screen. The Location Types tab within this screen enables you to set certain locations up as crossdocks. This should be set up by a superuser or a system administrator.

To create your crossdocked trips from within the trip Planning screen, highlight the order you want to use from within the unscheduled order well. Now right click on the same order to bring up the menu box, and select the 'Apply via x-dock locations' option.

The will cause a new screen to appear titled 'X-Dock Order'. This screen will enable you to create the first legs of your crossdocked trips. The final leg will then be created back in the Trip Planning screen as normal.

The top box within this screen provides header information for the order you are to crossdock. This includes the original collection point and the final destination point. The box below it allows you to list the locations that this order will be crossdocked via.

The 'new trip?' box should be ticked if this crossdock trip is to be added to a brand new trip. If you are adding this to an existing trip, un-tick the box and enter the C-TMS trip number into the 'Trip id' box.

When you have entered all the required crossdock locations, press the 'OK' button. This will prompt C-TMS to create all the trips that you have requested via the 'X-Dock Order' screen. The final leg of the trip, the one that delivers the goods to the final destination, is still to be created. You will still be able to see the order you have used to create your crossdock

legs within the unscheduled order well at the bottom of the Trip Planning screen. Select the order and create a new trip from it. This will mean that all legs of the trip have been created and available from within the trip tree section of the screen.

5.10.3 Allocating a cost to a trip (Freight Pay)

There is a lot of setting up involved with freight pay, and this is covered fully in a separate article. This section will show you how to allocate a cost to a trip within the Trip Planning screen after all the set-up has taken place. There are two ways that the cost of a trip can be allocated. These are either manually, or automatically, both of which are covered below:

To allocate a cost automatically (assuming that freight pay has been set up), all you need to do is to allocate the relevant carrier to the trip in question, recalculate the trips times and then set the trip status to 'TENDERED'. You should then select the 'Finance' tab from within the trip detail section of the screen. You should notice that the cost of the trip has been automatically assigned to the trip. In this example the cost of £150 has been allocated to the trip, with no additional VAT cost.

This automation has been possible because the rate matrices for this carrier have been set-up in the background. If you do not have this set up, you are still able to enter a cost against the trip, but again the relevant set-up must have taken place beforehand. To do this, select your trip and allocate the relevant carrier to that trip. Re-calculate times of the trip and save your changes. Next, switch to the finance tab and press the 'Payments' button. This will bring up the 'payments for trip' screen which details all the payments that have been allocated to the trip so far. At this point this screen will be empty as you have not entered any payments yet.

To enter a payment press the 'New' button at the bottom of the screen. This will take you into the 'Create payment' screen. First enter the payment 'Type'. This will usually be 'Trip haulage' (as in the example below), but may also be payments such as fuel surcharge or demurrage. Next, enter the cost of using the selected carrier for doing this trip (the example below has a cost of £150 entered). Lastly enter the status of the payment as 'forecast'.

Once you have entered those three pieces of information you can press the 'OK' button to create the payment. This will take you back to the 'Payment for trip' screen where you will see your newly created payment. When you close this screen you will see the payment assigned to the trip. If you want to add further payments against the same trip, you will simply need to repeat the process detailed above.

5.11 KPI Information

KPI information details are included in Trip Planning screen as shown in the first screen shot on this page. The Trip outbound KPI is calculated based on the RPE on the departure figure and the capacity of the trailer, in the example given above the Trip Outbound KPI value of 26/26 = 1.00 or a vehicle fill of 100.00 percent.

If there are any collection, then the Trip has collection flag is set to 'Y'. It is now possible to see that the KPI has been calculated based on the RPE on departure figure and the capacity of the trailer, in this instance 26 RPE. This gives a Trip Outbound KPI value of 1 / 26 = 0.03846 or a vehicle fill of 3.85 percent. The Trip Inbound KPI is based on the vehicle fill after the first PK stop on the trip which is not at the start up location is calculated as the Trip Inbound KPI of 13/26 = 0.50 or a vehicle fill of 50 percent.

The Carrier Outbound and Inbound KPI values are populated, these are calculated based on the totals for the selected carriers and also take into account the different trailer types and capacities associated with each trip.

6 Planning

The Planning screen can be accessed via the drop-down menus C-TMS Modules / Trip Management / Planning.

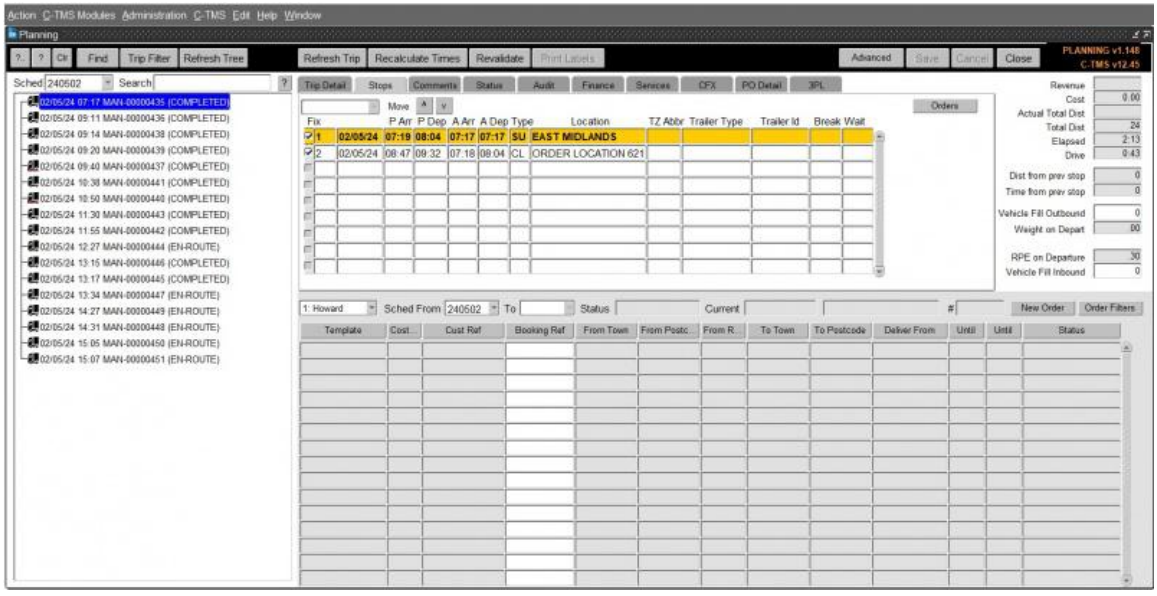
Trip manipulation can be used for both the pre-planning of trips and the execution of that plan. A planner will often be responsible for creating the orders and then putting these orders onto trips. Fixed routes will often automate part of this job for you, leaving some orders to be tripped up manually using the skill of the planner. There is functionality within trip manipulation that will aid and guide the planner in making an informed decision.

For instance, the Network (point-to-point) table held in the background of C-TMS holds details of travel times and mileages that will illustrate to the planner the planned arrival and departure times for these trips. This will then work in conjunction with the times populated on the order to show whether the deliveries will be made on time or not. C-TMS will also flag whether the planner is trying to create a trip that exceeds the trailer capacity of the vehicle type that has been allocated to this trip. Further to this, C-TMS can tell the planner if the trip exceeds a pre-set drive or duty time for each driver.

The Transport operator will then be able to allocate resources to the trips, and enter actual trip times and pallets delivered after the driver has returned from their journey.

6.1 General Use

The following is an example of the Planning Screen:



The screen consists of multiple sections

- Left - Trip tree - a list of all trips on the schedule.
- Middle Top - Trip Details - for specific details of the trip.
- Top Right - Trip Summary Details
- Bottom - Order Well - unscheduled orders.

Key functions may be accessed by buttons above the section:

- **Revalidate** - validate the currently-selected trip displayed in the Trip Details section.
- **Recalculate Times** - recalculate distances and times on the currently-selected trip displayed in the Trip Details section.
- **Refresh Trip** - refresh the currently-selected trip displayed in the Trip Details section.
- **Advanced** - advanced integration features
- **Save** - save any changes you have made. The button will only be enabled when you have changes to save.
- **Cancel** - cancel any changes that have not yet been saved. The button will only be enabled when you have changes to cancel.
- **Close** - close the Planning form and exit.

Many of these key functions are discussed in more detail in the following sections.

6.2 Trip Tree section

By default, the screen will open with the latest active schedule already shown, with all the trips that have already been created, either automatically or manually.

The trip tree will display only trips that match your user's depot (BASED_AT) parameter (if you are a planner for a single depot), or all trips if your user is configured to see all depots (a control tower-style configuration set by using the ALL_DEPOTS user parameter). Trunk trips (trips between depots) will be shown for any trips that are from or to your depot. Owning depot configuration is covered in the Owning Depot guide.

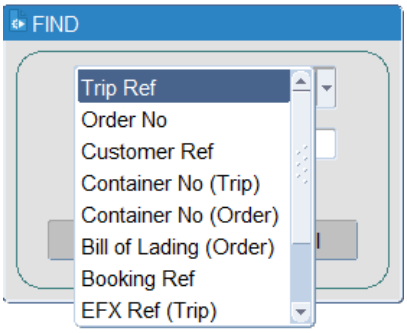
The Trip Tree displays the header for the trips contained within the schedule selection.

The trip header contains the planned arrival time of the driver at the depot, the unique transport identifier, and the status of the trip. This is also configurable to display the route. The trip header in the trip tree can also indicate if there are any outstanding warnings or errors with this trip, with a red highlight - you can see these warnings on the Comments tab in the *Trip Details* section, discussed below. Note that this icon may also display in RED, depending on how you want the screen implemented for your system.

This schedule selection can be made in the top left drop-down box named "Sched". The schedule refers to a date and is the method of grouping a set of orders and trips together into one manageable set. The schedule can be daily or weekly.

You can change the schedule shown on the screen by clicking on the Sched box and selecting or typing a schedule.

The **Find** function can find trips across schedules by many criteria.



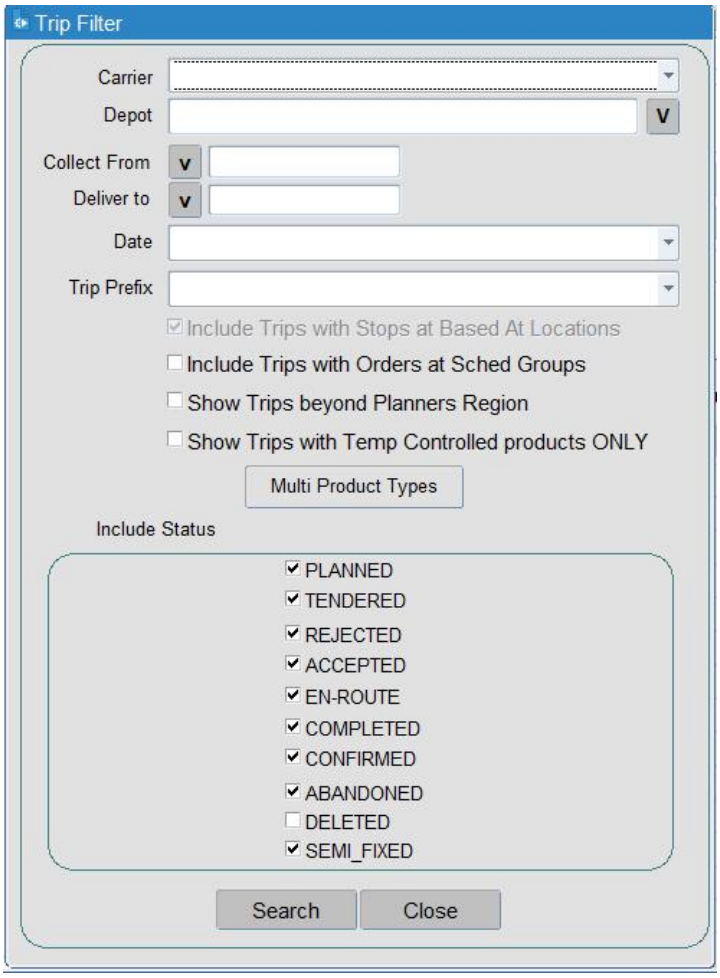
You can select one of:

- Trip Ref
- Order No
- Booking Ref
- Customer Ref
- Container No (Trip)
- Container No (Order)
- Bill Of Lading (Order)
- EFX Ref (Trip)
- EFX Ref (Order)
- Route Code
- Tractor ID

Enter the value you wish to search for (note: case-sensitive) and then click **Find** (or **Cancel** to cancel the search.

When you click **Find**, the system will find all matching trips across all schedules and display the results in the trip tree.

The **Filter** function can filter the trips that are displayed in the trip tree.



You can choose to filter by:

- Carrier - a drop-down list of all available carriers your user can see.
- Depot
- Collect From - a list of locations from which the orders are being collected. You can use the **v** button to initiate a pop-up lookup.
- Deliver To - a list of locations from which the orders are being delivered. You can use the **v** button to initiate a pop-up lookup.
- Date
- Trip Prefix
- Checkboxes can also apply a filter:
    - ♦ *Include Trips with Stops at Based At locations* - this is initially checked.
    - ♦ *Include Trips with Orders at Sched Groups* - this is initially unchecked.
    - ♦ *Show Trips beyond Planning Region* - this is initially unchecked.
    - ♦ *Show Trips with Temp Controlled Products ONLY* - this is initially unchecked.
- Product type - you can select multiple product types to match trips against through the **Multi Product Types** button.
- Include status - you can filter the trips at particular statuses only through the check-boxes provided. By default, all trips at all statuses bar DELETED will be shown.

Once you have entered the criteria, click **Search,** and the trip tree will be filtered by your criteria. If you don't want to search, click **Cancel**.

The **Refresh Tree** button refreshes the trip tree.

Many key functions can be accessed through a right-click menu on the trip in the tree.

- *Refresh* - refresh the trip.
- *Validate Trip* - revalidate the trip to see any validation errors.

- *Set Status* - set the status of the trip from a sub-menu of statuses.
- *Change Schedule Date* - move the trip onto a different schedule.
- *Split Trip* - split the trip from the stop selected on the Trip Stops section - a second trip will be created with all stops from that point removed from the original trip.
- *Merge Trip* - merge two selected trips together.
- *Merge Trip across Schedules*
- *Merge Trip with...*
- *Delay Trunk* - mark the trunk as delayed and unplan every order on this trip.
- *Delete Trip* - delete the selected trip and unplan every order on this trip.
- *Unschedule Orders* - unschedule orders from this trip.
- *Edit Order*
- *Resend NAKs*
- *Show Map* - show a map in a new browser window showing all the stops on that trip, plus navigation instructions.
- *Print Maps* - print the map above.
- Several standard documents can be generated from this trip tree - the report run is configured through system parameters shown later in this document:
    - *Print Manifest*
    - *Loading List*
    - *Delivery Docs*
    - *Despatch Note* - This will generate the Despatch Note report in PDF form for the trip that is currently highlighted in the trip tree.
    - *CMR Note*
    - *Combined Documents*
- *Send Message*
- *Send Enabling Message*
- *Resend PO Message*
- *Debrief Trip* - open the trip in the Trip Debrief screen.
- *Trip Volumetrics*
- *Redirect Trip*
- *Reject Trip*

Many of these key functions are discussed in more detail in the following sections.

6.3 Trip Summary section

Summary trip and stop information is presented here.

- Revenue - the total revenue allocated to this trip from orders planned on this trip.
- Cost - the trip cost calculated from the carrier tariff, if present.
- Actual Total Dist
- Total Dist - the planned total distance travelled on this trip.
- Elapsed - the planned elapsed time taken for this trip.
- Drive - the planned drive time taken for this trip.
- Dist from Prev Stop - the distance of the stop selected from the previous stop.
- Time from Prev Stop - the time of the stop selected from the previous stop.
- Vehicle Fill Outbound - the percentage of vehicle fill on departure of the trip. **Note:** This is only available if there is a trailer type associated with the trip and stops, and that type has a defined capacity. Trailer types may be automatically assigned to the trips when created from fixed routes. This guide shows how to assign trailer types in the Key Functions section below. Trailer Type definitions are covered in the Resources screen guide.
- Weight on Departure - the total weight of orders on the trip at departure.
- RPE on Departure - the total RPE of all orders on this trip loaded at the departure point.
- Vehicle Fill Inbound - the percentage of vehicle fill on completion of the trip.

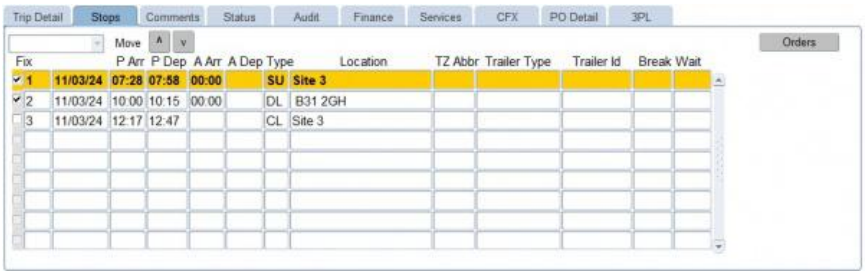
6.4 Trip Details section

This section will display the details of the trip that is currently selected within the trip tree section. There are multiple tabs in this section, the default of which is the Stops tab, which displays the different stops on the trip selected.

- *Trip Detail* - This shows the general information on the trip. Resources can be assigned, and the references edited here.

- *Stops* - This shows all stops on the trip, and is the default tab. This is where the key functions for a trip can be accessed. Orders on stops can be accessed here through the Orders button.
- *Comments* - You can add or edit general comments here. You can also view rejection comments, errors and contract auditing from this tab.
- *Status* - The screen shows general trip status changes here.
- *Audit* - The screen shows detailed auditing information on the changes to the trip here.
- *Finance* - The screen displays generated finance (trip cost and revenue from orders) here. Payments and additional costs can be added here.
- *Services* - You can see, add or modify any trip services here.
- *CFX* - You can see, add or modify CFX information here.
- *PO Detail* - You can see, add or modify PO information here.
- *3PL* - You can see details of the 3rd-party carriers here to compare costs.

6.4.1 Stops Tab



It shows by default (from left to right):

- the stop number,
- the planned arrival and departure times from each stop,
- the actual arrival and departure times (if this has been keyed within the debrief screen),
- the type of stop (SU = Start-up, DL = Deliver, PK = Pick-up, CL = Closedown),
- the name of the location,
- the type of trailer that has been allocated to the trip,
- the trailer ID associated with each stop,
- where the driver break needs to be taken,
- any wait time at the stops.

This layout is configurable, and the following fields may also be added to the display:

- Booking Time
- Pick By
- Pick By Time
- Location Town
- Location PostCode
- Trailer ID (2)
- Mother Feeder
- Vessel ID
- Voyage
- Port
- Stop ETA Date
- Stop ETA At Date
- Warehouse Loading Time
- Stop Lifts
- RPE on Arrival
- REP At Stop
- Bordero
- Drop Number - a Fixed Drop Number. **Note:** This is specific to the Fixed Drop Scheduling Engine.

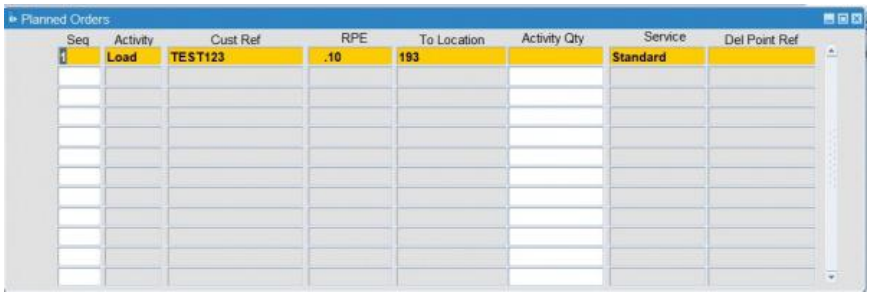
Many key functions can be accessed through a right-click menu on the trip stop in this tab:

- *Configure Layout* - configure the columns on this table.
- *Insert Stop* - insert a stop at this point.

- *Append Stop* - append a stop to the trip at a specified point.
- *Delete Stop* - delete the selected stop.
- *Abort Stop* - abort the selected stop.
- *Assign Trailer Type*.
- *Remove Trailer Type*.
- *Assign Trailer ID*.
- *Remove Trailer ID*.
- *Print Material Checklist*.
- *Move Stopover back*.
- *Reset Stopover*.
- *Move Stopover Forward*.
- *Move Stop* - move the stop to a new position.
- *Desp Conf Message Hold*.
- *Transfer Orders* - transfer all of the orders on the stop onto a different trip (also Job Swap).
- *Create Pickup*.
- *Create Delivery*.
- *Print Labels*.
- *Send Trip Stop*.

Many of these key functions are discussed in more detail in the following sections.

You can also see the orders that have been placed on the stop on the trip through the **Orders** button, which will open a pop-up window to show you the orders.



In this window, you will find the orders that are related to the stop that is highlighted within the larger section above, and it shows the following information:

- Seq
- Activity
- Cust Ref
- RPE
- To Location
- Activity Qty
- Service
- Del Point Ref

Double-clicking on the order header will take you into the details of the order itself, where you will be able to amend time windows and pallet quantities.

Several key functions are available from this stop orders list, accessed via right-clicking on an order in the list:

- *Unschedule Order* - unschedule the order from this trip.
- *Unschedule Order from Trips* - unschedule the order from all trips.
- *Show Shipment*
- *Transfer Order* - transfer the selected order on the stop onto a different trip (also Job Swap).
- *Find and Replace/Replace* - replace the order with another order.
- *Carry Forward* - this configurable option allows you to select orders and carry them forward to another route on the following schedule.

6.4.2 Trip Detail Tab

The "Trip Detail" tab in this section will allow for resources such as the carrier, the driver and the tractor registration to be allocated against the trip.

You can right-click on the driver and choose to show resource details of the driver, carrier or tractor - a pop-up window will be shown with these details.

You can also enter the following:

- Seal number - free text entry
- Container no
- Shift Code - with lookup
- Delivery type - The Delivery Type is set from the first order planned against a trip and is triggered automatically. In normal circumstances, this is display only and for information only.
    - For the NHSBT Scheduling Engine and Fixed Templates processing, this is critical to the adding of orders automatically to these trips.
    - Note also that for Carriers that are marked as LogiNext enabled (i.e. they are executing tasks through the LogiNext 4PL platform), this can be configured through a system parameter ALLOW_TRP_DEL_TYPE_UPDATE configured per carrier, to allow the Delivery Type to be changed to a curated list, available through a drop-down list. The list will display only those values that have been configured in the decode list for LogiNext use. No manual entry is allowed.
- Route Code - a free text route code. If this trip was created from Paragon or from fixed routes, this will be populated with the route code. See note below.
    - Route code can also be set to be a lookup item as well as free text - this is controlled through a system parameter LOOKUP_FOR_ROUTE_CODES. In this case, a lookup button will be provided. This lookup will display the 'Route Code', 'Route Name', and 'Trip ID' if a trip already exists for the given Route Code. If multiple trips exist, the first one will be displayed that is in either PLANNED, ACCEPTED, EN-ROUTE state. You can then select a trip, and the route code and description will be set for you against this trip.
- Route Name - a free text field describing the route, for informational purposes.
- Status - the trip status, display only.
- Carrier - the carrier assigned to the trip, and from whom the resources (driver, crew, tractor/trailer/vehicle) will be sourced. You can change this with the lookup button provided.
- Carrier Ref - if this is a third-party carrier, then a carrier reference may have been provided, and is displayed here.
- Crew 1/2 - additional crew.
- PO Number
- ADR Reg
- Full Trailer Load
- Groupage
- Subcontractor

6.4.3 Comments Tab

You can add comments against the trip by right-clicking in the general Comments sub-tab, selecting *Add comments* and entering your text.

To the right of the General comments tab is the Errors tab. This displays the rules that have been broken for this trip, which could include the total time of the trip or a broken delivery window.

You can also view rejection comments and contract auditing from this tab.

Note that any information regarding the tendering, acknowledgement or acceptance of trips and orders for 3rd-party carriers using the LogiNext interface may be displayed here, such as indications when all orders have been acknowledged or accepted.

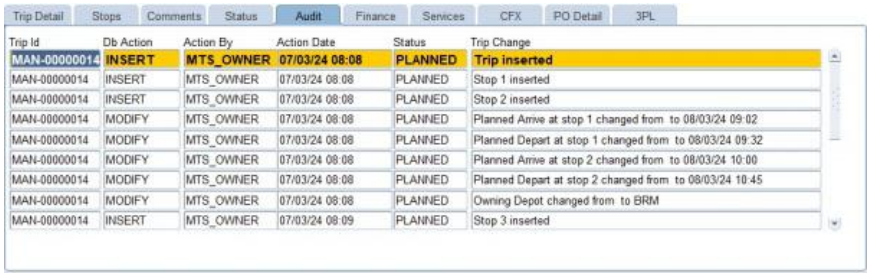
6.4.4 Status Tab

This tab shows the auditing of the change of status of the trip.

It also shows whenever a carrier is changed, and who made the change and when, the last change date and whether the manifest has been produced or sent.

6.4.5 Audit Tab

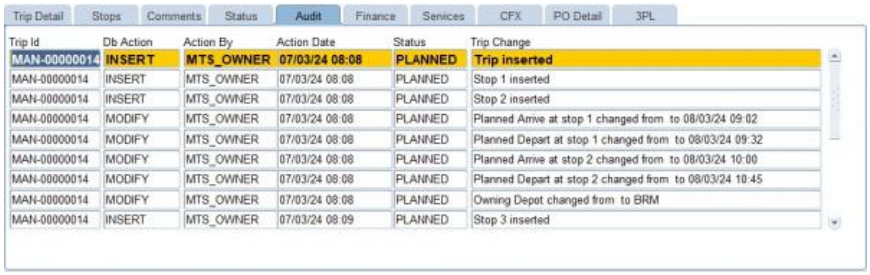
The screen shows detailed auditing information on the changes to the trip here.



This enables you to view the history of the trip, showing both who has created and amended the trip. It will also show if the trip has been set to another status, and if it has been deleted.

6.4.6 Finance Tab

The screen displays generated finance (trip cost and revenue from orders) here. Payments and additional costs can be added here.



This allows you to see, add or change the costs associated with doing this trip when allocated to a subcontractor. Finance can be studied in more detail within the Contracts Module.

The cost against a trip indicates the amount paid to a subcontractor to carry out the trip. If the trip is being carried out by an own fleet carrier, there is generally no charge. Subcontractor charges can be created automatically from Contracts, in a similar way to Order revenue. The payments are automatically generated when the order is set to Accepted. The revenue displayed is a sum of the revenue generated for the orders being collected on the trip.

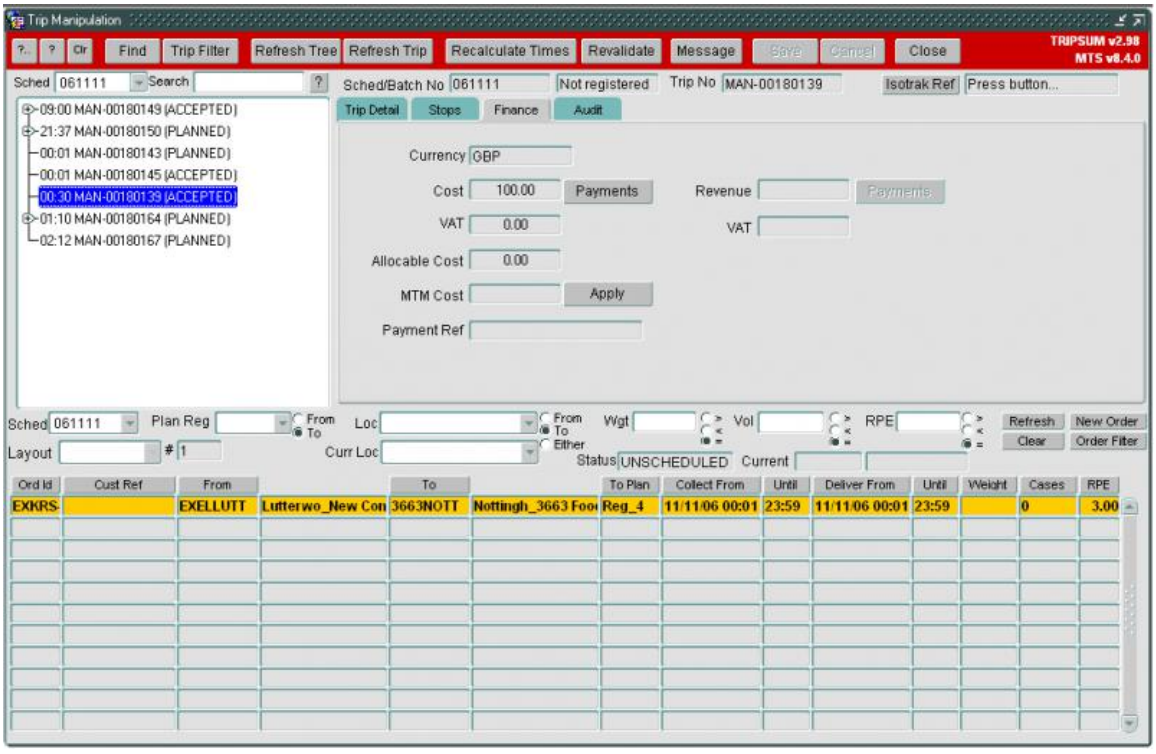
The trip revenue displays the sum of the revenue against the orders on the trip.

The Profit Loss fields show the revenue minus the cost. Where there is a loss, the field will be coloured red.

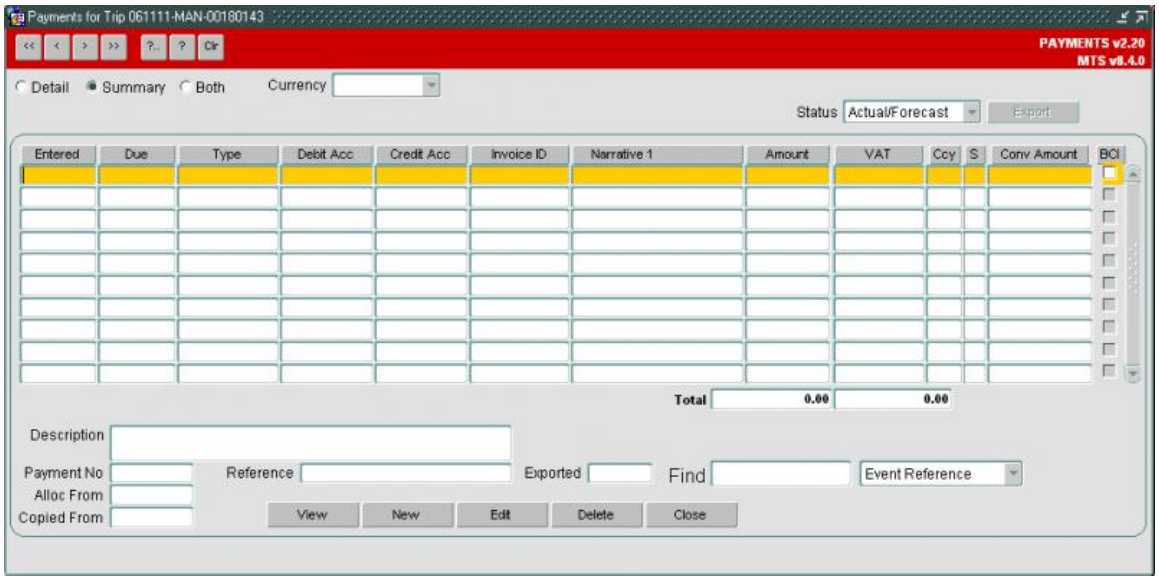
The set up of account charges, is covered fully in the Accounts module. This section will show you how to allocate a cost to a trip within the trip manipulation or Planning screen after all the set-up has taken place.

There are two ways that the cost of a trip can be allocated. These are either manually, or automatically, both of which are covered below.

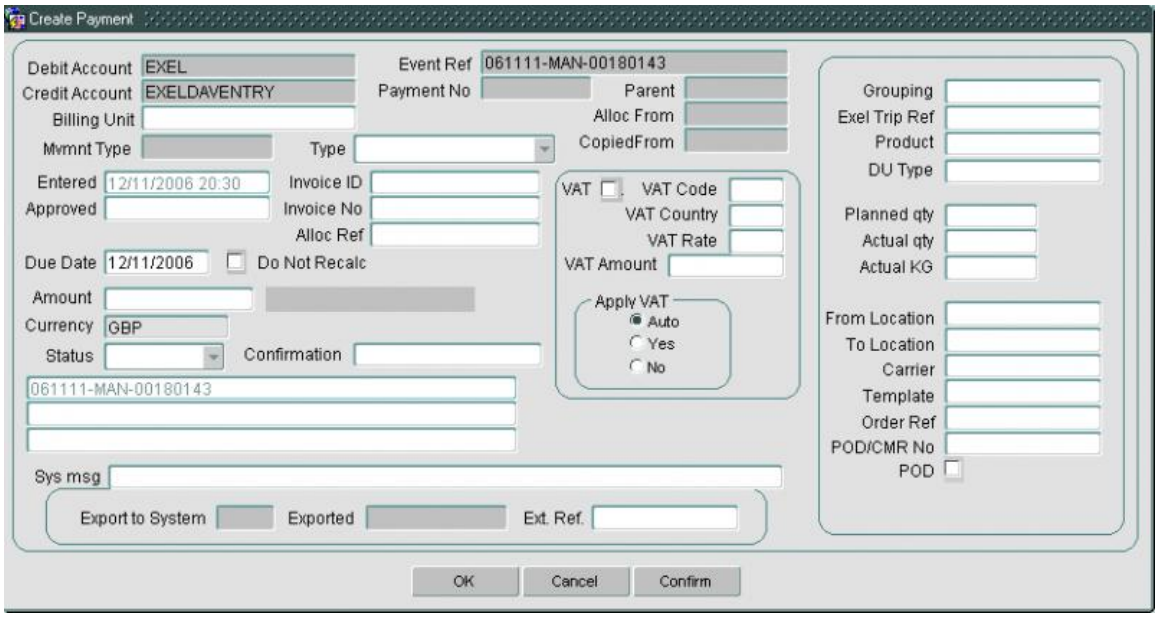
To allocate a cost automatically (assuming that rates and contracts have been set up), all you need to do is to allocate the relevant carrier to the trip in question, recalculate the trips times and then set the trip status to "TENDERED". You should then select the "Finance" tab from within the trip detail section of the screen. You should notice that the cost of the trip has been automatically assigned to the trip below. In this example the cost of £100 has been allocated to the trip.



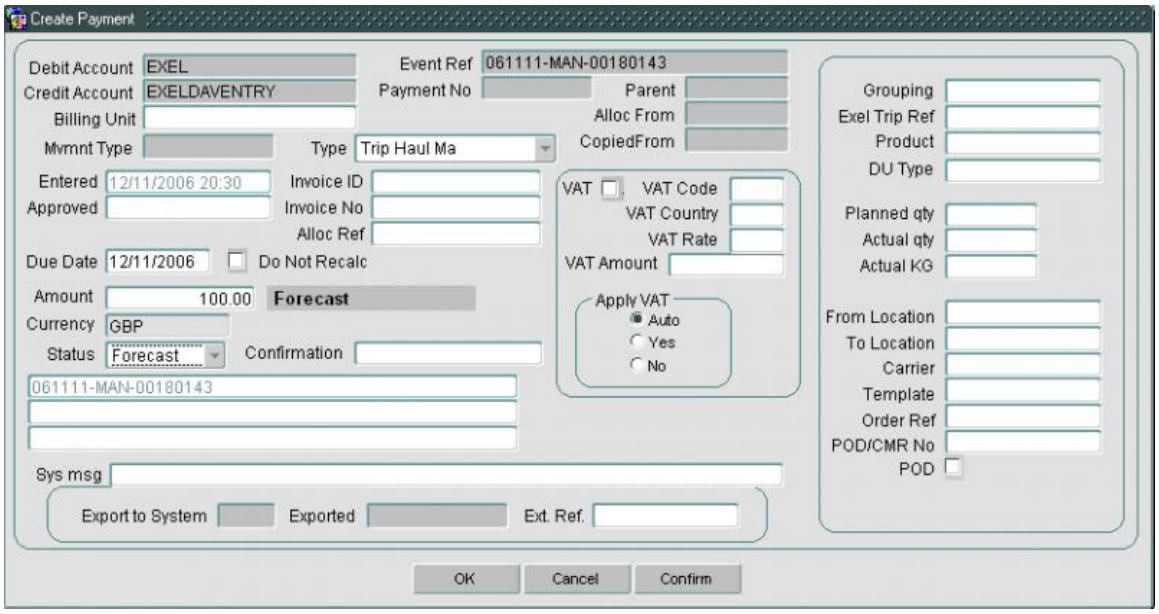
This automation has been possible because a contract and rate matrix have been set up for this carrier. If you do not have this set up, you are still able to enter a cost against the trip, but again the relevant set-up must have taken place beforehand. To do this, select your trip and allocate the relevant carrier to that trip. Re-calculate times of the trip and save your changes. Next, switch to the finance tab and press the ?Payments? button. This will bring up the "payments for trip" screen which details all the payments that have been allocated to the trip so far. At this point this screen will be empty as you have not entered any payments yet.



To enter a payment press the **New** button at the bottom of the screen. This will take you into the "Create payment" screen.



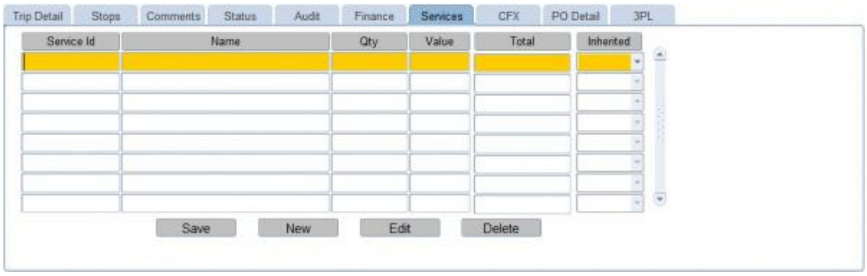
First enter the payment type. This will usually be "Trip haul ma" (as in the example below), but may also be payments such as fuel surcharge. Next, enter the cost of using the selected carrier for doing this trip (the example below has a cost of £100 entered). Lastly enter the status of the payment as "forecast".



Once you have entered those three pieces of information you can press the **OK** button to create the payment. This will take you back to the "Payment for trip" screen where you will see your newly created payment. When you close this screen you will see the payment assigned to the trip. If you want to add further payments against the same trip, you will simply need to repeat the process detailed above. If you chose to add a manual payment, the system will no longer calculate the cost from contract, recognizing that you have chosen to overrule the cost.

6.4.7 Services Tab

This tab allows you to see, create, amend and delete any trip services.



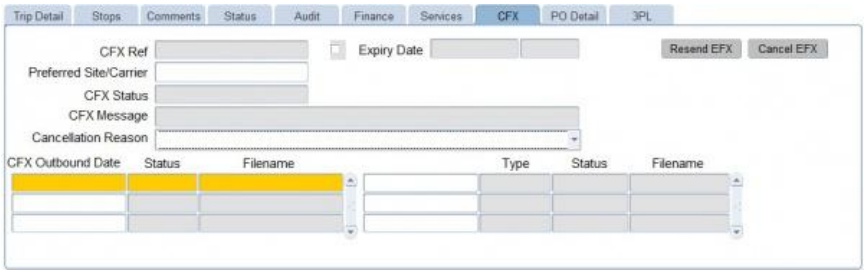
These are additional costs accrued against a trip from the carrier.

The buttons below are available:

- **Save** - save any changes you have made.
- **New** - create a new service in the table - you enter the details there.
- **Edit** - edit a selected line
- **Delete** - delete a selected line.

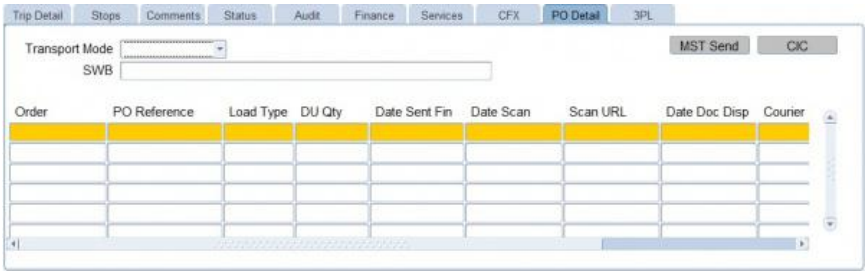
6.4.8 CFX Tab

This tab shows specific CFX interface parameters.



6.4.9 PO Detail tab

This tab allows POs to be entered against a trip. See Purchase Orders for more information on this process.



6.4.10 3PL Tab

When a carrier is known, the carrier may simply be selected for the trip created for these orders. If the carrier is not known or multiple carriers exist, you can ask the system to select the best 3PC for the trip.

To use this functionality:

Enter the carrier of the trip as "3PL" and click **Save**.

The system will calculate the charges for each carrier specifically and compare costs, selecting the best. The calculated charges from the carriers will be specified in the audit trail, and the total charges are displayed in this 3PL tab in this section.

6.5 Order Well Section

This section can be found at the bottom of the screen, and it displays orders that have not yet been allocated to trips. You are also able to create new orders or cancel existing orders here.

The order well will display only orders that match your user's depot (BASED_AT) parameter (if you are a planner for a single depot), or all trips if your user is configured to see all depots (a control tower-style configuration set by using the ALL_DEPOTS user parameter).

Each line within this Order Well shows you the header information for an unscheduled order. The order ID is a unique sequential number allocated to an order at the time of its creation. The customer reference is an optional field on the

order that is often populated when orders are imported into C-TMS. This is because you tend to import your orders from another system that will have its own reference number. You can however, input this reference number manually straight into C-TMS.

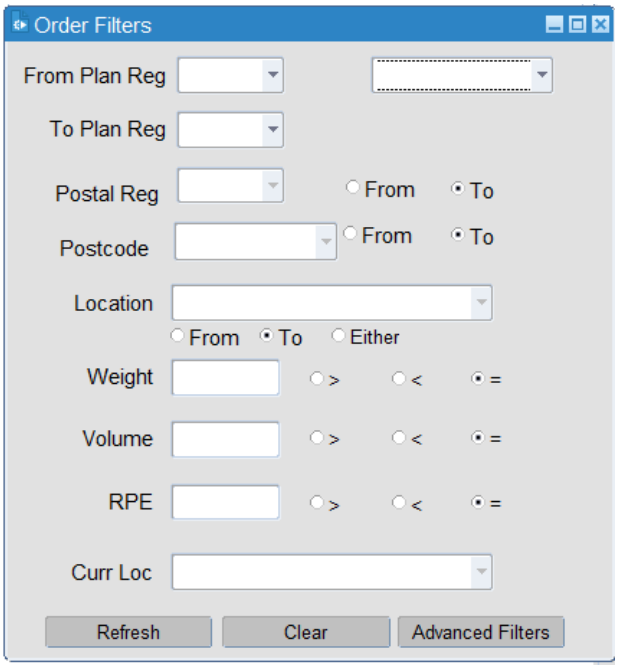
You can also see where the order is being collected from and where it is being delivered to. You will also see the region code for that order. This will typically relate to the first two alpha characters of the locations' postcodes so that the planner has an idea of its location. Next to the region code is the 4 time windows that make up the collection and delivery window. Lastly, you can see the weight, volume and RPE that relate to the quantity of goods that are being moved for that order.

Note: Emergency orders are shown in red and will always be at the top.

You can change the layout of the field in this section and filter by many attributes.

You can add a new transport order using the **New Order** button from this section - you will be taken to the New Order form to enter the details.

There are several filter options relating to the unscheduled order well section, so that when the planner is undertaking the planning, they are able to narrow their search to particular order types.



The "Schedule selector" can be used to change the set of orders that the order well is showing you. This is a separate filter from the schedule filter found in the trip tree section of the trip manipulation screen. This means that you are able to drag orders from previous or later schedules onto trips that belong to this schedule.

You can access additional order filters using the **Order Filters** button.

The Planning Region filter allows you to select the Planning Region from/to that the orders have been assigned to. Orders are assigned to planning regions automatically based on their postcode and postal area.

The Postal Region Filter relates to the first two alpha characters of the postcode for a location on the order. This can either be the collection or the delivery location of the order, depending on whether the ?From? or the ?To? check box is selected. Choose whether you are interested in the collection point ("from") or the destination point ("to"), and select the relevant box. The drop-down box will now show all the region codes that relate to your chosen location point against each order. Selecting one of these will filter out locations that do not have the region code you have selected (i.e. you are left with orders that are delivering or collecting from your chosen region code).

There is also a filter to find orders that have specific trailer type requirements.

The Location Filter relates to the order Collection from location, Delivery to location, or both. This is dictated by the check boxes to the right of the location drop-down box. By selecting the "From" check box, the locations within the drop-down box will relate to the collect from locations within the orders listed in the unscheduled order well. If you then selected one

of those locations from the list, the unscheduled order well would filter out any locations that didn?t have your chosen "from" location as their collection point. Conversely, selecting the "To" check box will display the delivery locations within the well, and selecting one will filter out any locations that don?t deliver to your specified location. The "Either" check box allows you to see and filter both the collection and delivery locations of the order.

The Weight, Volume and RPE filters all work in the same way. They allow you to filter out orders via the weight, volume or pallets associated with each order in the unscheduled orders well. Selecting the ">" check box and entering a figure in the associated box, will filter out any orders that have less weight, volume or pallets than your specified figure. The "<" check box will give you the opposite result. The "=" check box will keep any orders that have that exact figure on their order as you have keyed into the relevant search box.

There is also a filter on Current location - this allows you to select orders based on where they have been planned up to. So an order that has been planned from the from location FROM 1 to RDC1 (on the way to location TO1) will be found if you search for the current location "RDC1".

You can right-click on orders here to access many key features.

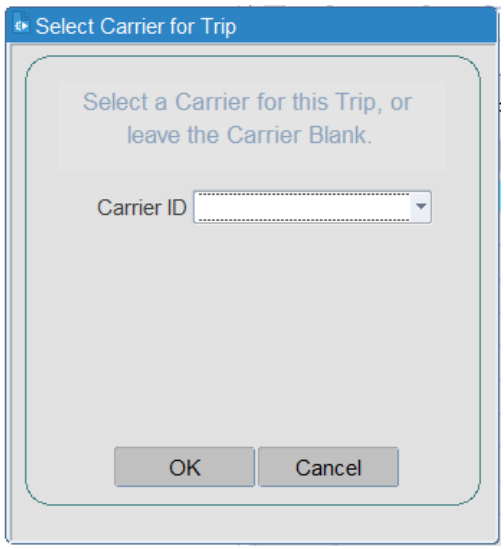
- *Configure Layout*
- *Refresh*
- *Apply to Trip*
- *Send to Paragon*
- *Apply to Stops*
- *Apply via X-Dock Locations*
- *Create One Order Trips*
- *Create One Order Trips and Brief*
- *Create New Trip*
- *Add Order to Milk Round*
- *Move to Schedule* - You can use this to carry forward orders onto another schedule.
- *Edit*
- *Find External Reference*
- *Amend Day Offset*
- *Amend Values* - You can amend an unscheduled orders booking ref, planned DU quantity or latest delivery through this option.
- *Cancel Order*
- *View Order Locations*
- *Show Volumetric Information*
- *Set Order to On Hold*
- *Suggest Trip* - This option will search for planned, accepted or en-route trips where the from and to locations of the order are present, where the stops have not been arrived at yet, and where the collection and delivery windows of the order match up to the stop arrival and departure windows. **Note:** This will IMMEDIATELY plan the order onto the first trip it finds with that location on it. This option will only suggest trips on cost centres that have been configured for this functionality through a system parameter - see Further Configuration for more details.
- *Reset Auto-Scheduling* - This configurable option allows you to select orders that have been marked for Manual Planning and reset that flag, so that they can be processed by the scheduling engine again.
- *Carry Forward* - This configurable option allows you to select orders and carry them forward to another route on the following schedule.

6.6 Key Functions

6.6.1 Create New Trip

Once you have a set of orders ready to plan, you can start to put them onto trips. Select one of your unscheduled orders from the unscheduled orders well by left-clicking onto it. Now right-click on the order and choose the *Create New Trip* option. Note that you can multi-select orders from the well by holding down the SHIFT or CTRL keys when clicking.

After you have selected the *Create New trip* option, a pop-up window will appear asking you to select a carrier.



Using the drop-down list, select the required carrier. **Note:** For subsequent trips, the carrier ID will default to the previously selected carrier - you can change the carrier if required by reselecting using the drop-down list.

The order will now disappear from the unscheduled order well, as it is now scheduled onto a trip, and the new trip will be visible (and selected) in the trip tree.

The trip you have just created will be the one highlighted in blue in the trip tree section of the screen. The detail section of the screen will relate to your new trip. You will see that C-TMS has worked out the arrival and departure times for each of your stops on the trip. This has been driven by your collection and delivery windows for your order. C-TMS will try and meet the windows, getting to the delivery location as early as is feasible at the start of the delivery window.

C-TMS will then work backwards / forwards from this time to work out the arrival and departure times at the depot on the first and final stops. The drive time and distance are worked out from the network table that sits behind the trip manipulation screen. The network table keeps a record of the distance and drive time between every location and uses the applicable record when calculating times and distance on a trip.

You will also notice that at each stop, C-TMS has allocated a stop time. This can be worked out by looking at the difference between the planned arrival and planned departure times at each stop. This time will have been taken from the loading / unloading rates allocated to each location within the location maintenance screen. It may also include a break time if the driver has reached the designated limit (usually 4.5 hours drive time, but configurable against the carrier).

If you click on the detail tab within the trip detail section of the screen, you will see that the carrier has been allocated to your trip. You can change the carrier by clicking on the carrier button and selecting it from a list (this will be covered in more detail within the resource allocation section module).

6.6.2 Assign Resources

Within the Planning form, it is possible to assign resources to a Trip.

Once you have created a trip, you will then be able to allocate different resources to it. These include the carrier, the driver, the tractor registration, the trailer type and the trailer ID.

A Carrier can be selected from a list of valid Carriers. This is done by pressing the button to the right of the carrier name box, which activates the lookup. This will list all the carriers available for selection. If your intended carrier does not appear here, you will first need to set it up from within the resources maintenance screen.

When you have found the required carrier, you can either double click on its name, or left-click once to highlight it and press the **OK** button. You should then notice that your selected carrier's ID has been populated in the relevant box on the trip.

It is then possible to populate a Driver (and optionally 2 crew members), Vehicle and Trailer Id. Depending on the set-up of the carrier (i.e. Fleet or Haulier) these values will either be selected from a list or entered as free text. If a Haulier is being used, the details of all resources will not be stored in C-TMS, so they will need to be entered manually. If selecting

from a list, the list will be restricted to those resources that are available to the Carrier that is assigned to the Trip.

How you assign fixed driver, crew, tractor and Trailer resources like this can vary depending on configuration.

- Simple - just select from a drop-down list of all available resources.
- If the resource diary has been maintained and the tractors/trailers are all fixed, then this can be done through the resource diary allocation.

6.6.2.1 Simple Resource Allocation

Adding a Driver's name - After selecting the required trip from the trip tree section, click on the Trip Detail tab within the trip detail section of the screen. Within this tab, you will see that there is a Driver section.

If the driver name box has a white background, then the population of this field will be free-text. This means that you are able to type the driver's name straight into the box.

If the box has a grey background, then the population of this field is via a pre-set driver list. The type of entry is dependent on the way that the carrier you have selected is set up in resource maintenance.

If the name box has a grey background, then by pressing the button to the right of the Driver name box, this activates the lookup, and a list of all the drivers available for selection would appear. If your intended driver does not appear here, that driver has either not yet been set-up, or the driver is not allocated to that carrier. As part of the driver set-up (covered in the resources Module) you will see that each driver is allocated to a particular carrier, so if you select that carrier on a trip, the drivers selectable will only include those that have been allocated to that carrier.

When you have found the required driver, you can either double click on their name, or left-click once to highlight it and press the **OK** button. You should then notice that your selected Driver name has been populated in the relevant box on the trip.

Adding a Tractor Unit - After selecting the required trip from the trip tree section, click on the "trip detail" tab within the trip detail section of the screen. Within this tab you will see that there is a Vehicle section. It is within this section that you are able to record the tractor registration number of that trip. If the vehicle box has a white background, then the population of this field will be free-text. This means that you are able to type the tractor registration straight into the box. If the box has a grey background, then the population of this field is via a pre-set vehicle registration list. The type of entry is dependent on the way that the vehicle you have selected has been set up in resource maintenance.

This is done by pressing the button to the right of the Vehicle box, which activates the find box. This will list all the vehicle registrations available for selection. If your intended vehicle registration does not appear here, that registration has either not yet been set-up, or the vehicle is not allocated to that carrier. As part of the vehicle set-up (covered in the resources Module) you will see that each vehicle is allocated to a particular carrier, so if you select that carrier on a trip, the vehicle registrations selectable will only include those that have been allocated to that carrier. When you have found the required vehicle registration, you can either double click on the relevant registration, or left-click once to highlight it and press the **OK** button. You should then notice that your selected vehicle registration name has been populated in the relevant box on the trip.

Adding a Trailer Type - The trailer type is selectable from the main trip stops tab of the trip manipulation screen, rather than from the trip detail tab as with the carrier, driver and tractor unit.

Select the trip that you want to allocate a trailer type to from the trip tree section of trip manipulation. You may notice that the trailer type for this trip has been pre-populated for you by C-TMS. When you create a trip, C-TMS will look for the most appropriate trailer type for your trip, taking into account the trailers based at the depot and the number of pallets to be moved. This process will have taken place at the time of the trip's creation.

Right-click on the blank trailer type box of the first stop. This will bring up a menu. From this menu, select the *Assign Trailer Type* option. This in turn will provide you with an entry box.

If you know the trailer type ID, you can enter it straight into the Trailer type box and press the **OK** button. Otherwise, type in a percent symbol ("%") into the Trailer type box. Pressing the **OK** button in this instance will provide the find box, which

will list all the trailer types available for selection. Select the trailer type from the list and press the **OK** button. Your trailer type will populate the trailer type field and you will now be able to press the **OK** button. You will then see that the trailer type you selected has been allocated to the trip.

You are able to add a different trailer type for different stops on the trip (these must be for subsequent collections, rather than stops serviced from the collection picked up at stop one). Simply repeat the process outlined above, but starting off by right-clicking on the desired stop number rather than the first stop. This will effectively change the trailer type for that stop and all subsequent stops after it.

Adding a Trailer ID - The trailer ID is selectable in exactly the same way as the trailer type above.

6.6.2.2 Allocate Resources (Diary)

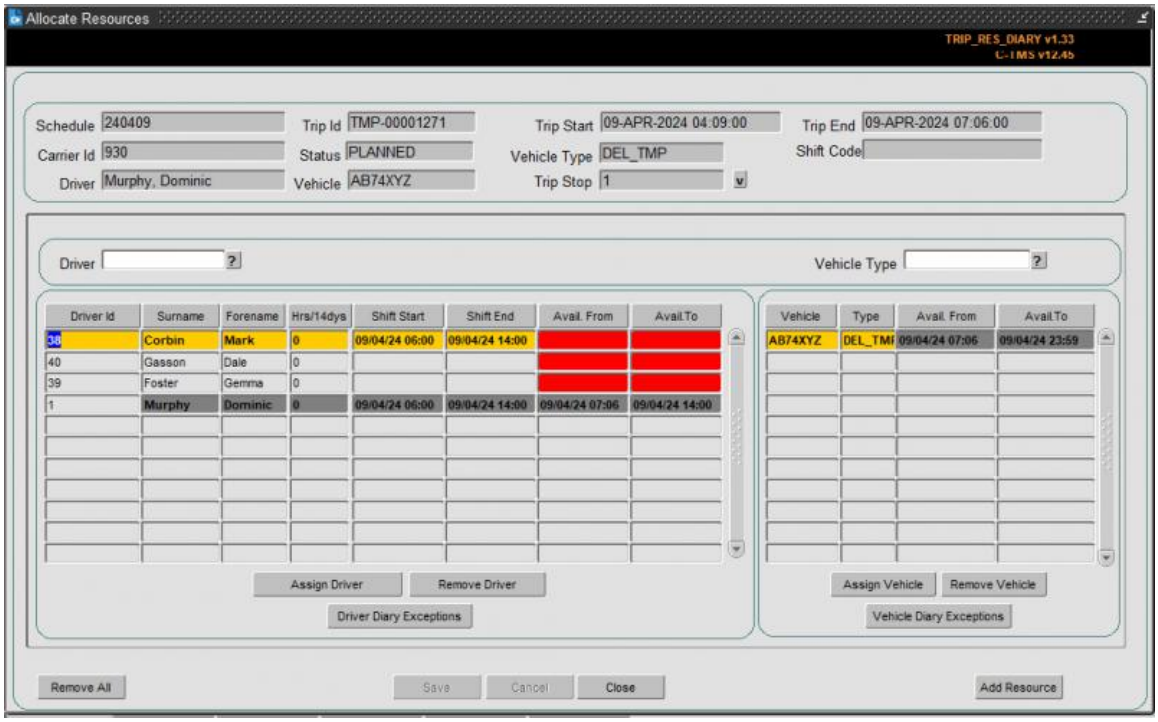
The Allocate Resources (Diary) screen is accessible via the **Alloc Resource** button in the PLANNED and ACCEPTED sections of the Trip Overview screen and through the Planning screen.

In order for this functionality to be available, the system parameter RES_AVAILABILITY_ALLOC must be set to "Y" for the applicable cost centre - you can use the System Parameters screen to do this.

From the Waterfall screen. select a trip from the well, that you want to allocate resources to, then click the **Alloc Resource** button.

From the Planning screen, select to resource a driver, tractor or trailer against a trip or trip stop.

The screen below will be displayed:



Note: All fields on the driver and vehicle part can be sorted by clicking on the button above that column.

The Drivers and Vehicles that appear in the bottom of the screen are those available to be allocated to the current trip.

Only Drivers and Vehicles linked to the Carrier assigned to the trip are available for selection.

If a Trailer Type has already been assigned to the trip then only Vehicles of that Trailer Type are available for selection. Only Drivers that can drive that Trailer Type will be available for selection.

If no Trailer Type has been assigned, then all Drivers and Vehicles will be available.

See the Resources screen for the set up of these links.

You can filter drivers and vehicles using the filters above each panel, and then clicking the **?** button to the right.

The screen displays the availability of the drivers, based on their assigned shifts and resource diary. If the driver has been assigned to another trip, this will be accounted for in the availability.

The screen displays the availability of the vehicles, based on their assigned trips and VOR/Inactive status.

RAG colouration is applied to make it easy to see which drivers and vehicles are available.

- GREEN - available
- RED - unavailable for any of the reasons above.

The Driver column marked Hrs/14dys is an indication of the hours the driver has worked in the last 14 days, allowing you to take into account a driver working too many hours.

The currently allocated driver and vehicle are displayed in the top of the screen, and darkened in the driver and vehicles lists.

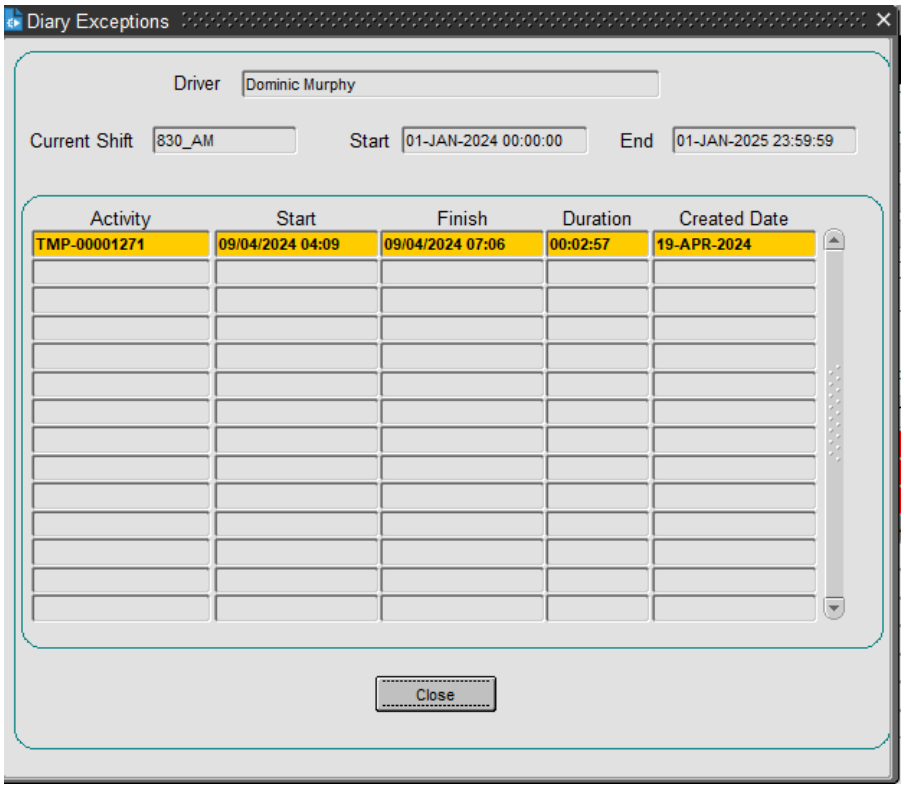
If a Trailer Type has not been assigned, this can be done using the **V** lookup button next to that field in the header.

Those resources that are currently in use between the trips start time and finish time are high-lighted in grey to show the user they are currently in use, although they can still be allocated.

To assign a resource, select it from the list and click the associated **Assign ...** button. When assigned, the name/id will appear in the header. Use the **Remove ...** button if a resource needs to be removed.

You can remove all resources applied to the trip using the **Remove All** button provided.

You can view the resource availability in detail using the **... Diary Exceptions** buttons provided.



Note: When you add the last resource for this carrier, the screen will warn you of this in a pop-up.

Whilst in this screen, you may need to add or change a resource to make them available for the trip. You can do this by clicking on the **Add Resource** button - you will be taken to the Resources maintenance screen.

Once happy that resources have been added, click **Save**. If during a **Save**, all resources have been added to a PLANNED trip, the system will automatically update the trip status to ACCEPTED.

6.6.3 Apply to Trip/Apply to Stop

Allows any Unscheduled Orders on that Schedule to be applied to a new or existing Trip.

Once you have created a trip, you may want to add further orders to the same trip. To do this, select the trip you want to add orders to (if not already selected), and highlight the unscheduled order (or orders) you want to add to that trip. Right-clicking on that order will cause a menu to pop up where you should click on the *Apply to Trip* option.

Once you have done this you will see that your order has jumped onto the selected trip and disappeared from the unscheduled order well. Notice that only one stop has been added as the order was collected from a location already on the trip.

By default, an Order will be automatically applied to what the system believes to be the most appropriate stops.

It is also possible to apply an Order to a specific pair of stops to reduce the need for manual manipulation. When multiple orders are being applied to a trip, the system will try to minimise the number of stops required by selecting the largest trailer type available.

6.6.4 Revalidate Trip

Performs validation checks on the selected Trip to ensure that the trip is valid and feasible. If the trip breaks any validation rules these will be reported back to the user.

These checks include:

- Ensure that the trip has at least 1 load and unload activity and these activities are in the correct order.
- Ensures that the trip complies with driving regulations such as Driver's Breaks.
- Checks whether the Trip will deliver within the delivery windows of the Orders.
- Ensures that a valid Trailer Type is assigned to the Trip. If a Trailer has been 'fixed' onto a Trip (see Fixed Routes for more details) it will not be overwritten.

6.6.5 Recalculate Distance and Time

Allows the times on a Trip to be recalculated, wait times will be optimised and Driver's Breaks included (this can include an overnight stopover), all departure times will be made unique. This may result in Delivery windows being breached, however, these failures will be reported during Trip Validation.

6.6.6 Set Trip Status

The trip status is a way of signifying to the operation just what stage the trip is at.

Typically this follows the process as below:

PLANNED -> TENDERED (optional) -> ACCEPTED -> EN-ROUTE -. COMPLETE -> CONFIRMED (Optional).

A status of planned will signify that the trip is still being looked at by the planner and the trip is yet to be finalised. Planned is the status that is allocated to the trip when it is first created.

When the planner is happy with the trip, they will set the trip to accepted to signify this fact.

Alternatively, they may set it to Tendered to show that the trip has been tendered out to a different carrier, and they are waiting for the carrier to accept or decline that piece of work (if the carrier has accepted the piece of work, the planner will then set the trip to accepted). Note that some interfaces to 3rd/4th party carriers will automatically change the status from TENDERED to ACCEPTED (such as LogiNext 4PL interfaces)

When the driver has left the site with their trip, operations will tend to set the trip to EN-ROUTE. Note that certain Electronic POD systems will automatically handle this change of status (such as Aptean POD systems and LogiNext 4PL interfaces), as will use of Calidus MCS Despatch.

After the driver has returned and the trip has been debriefed within the trip debrief screen, the trip status will be changed to complete. Note that certain Electronic POD systems will automatically handle this change of status (such as Aptean POD systems and LogiNext 4PL interfaces), as will use of Calidus MCS Receipt.

Confirmed status may be used for any other purpose that your operation needs, such as to mark as dealt with for Invoicing, etc.

Setting the status of the trip is simple. Highlight your trip within the trip tree section of the screen, and then right-click on it. This brings up a menu list where you should select *Set Status*, followed by the status that you want to set the trip to.

C-TMS will ask you a question, making sure you want to change the status of the trip, to which you reply **OK**. The system will check whether there are any dependencies on changing the status to the selected value (such as resources allocated when changing to Accepted status). You will then notice the status of the trip change to accepted within the trip tree section of the screen.

6.6.7 Manipulating a Trip

Once you have added your orders to a trip, you may then want to change the trip around somewhat. You will be able to manoeuvre stops around, change order details, override C-TMS-derived stop times, split trips into two separate trips, merge trips together, and remove stops on existing trips.

6.6.7.1 Manoeuvre Stops

You are able to move a stop up and down the stop order by using the move up **^** and down **v** buttons found at the top of the Trip Detail section.

Simply highlight the stop you want to move and press the relevant move button. C-TMS will not let you move the order's delivery above the order's collection, which is logical as you cannot deliver an order before you have collected it.

It may not always be feasible to move stops, in which case C-TMS will warn you if delivery windows will be missed.

6.6.7.2 Merge Trip

Most people use Trip manipulation to track their drivers' workload. Once they have scheduled all their orders onto single trips, they are likely to start looking for trips to put together to create multiple "gate exit" trips. So a driver may go out and do a delivery, come back to base before collecting a further load for delivery. These two gate exits are likely to be represented originally by two separate trips in C-TMS. So you will need to use the merge functionality within C-TMS to bring those two trips together.

To do this, highlight the first trip you want to merge by left-clicking on it within the trip tree section of the screen. You will then need to hold down the CTRL key on your computer keyboard, and while you are doing this, left-click on the second trip that you want to merge (again from within the trip tree section of the screen). You will notice that the result of your actions are that both trips are highlighted within the trip tree. You will now need to right-click on one of your two trips in the trip tree to bring up the options menu.

Select the *Merge Trips* option. You will receive a confirmation message telling you that the merge you undertook was successful. One of your trips will have been deleted, and the orders that were on that trip have been moved onto the other trip. C-TMS will have recalculated the times automatically for you.

Two configurable system options are now possible for this function. Either duplicate Stops will be removed and stops will be combined together where possible, or Stops will be appended on to the end of the resulting trip.

6.6.7.3 Split Trip

If you have merged two separate "gate exit" trips together, but later want to reverse that merge, or you have a large over-capacity trip that you want to split, or a time-limited resource problem to solve, you will be able to utilise the split functionality.

The split functionality will split one trip into two separate trips.

Select the trip that you want to split by left-clicking on the trip within the trip tree section of the screen. You will first need to expand the trip within the trip tree so that all its trip stops are showing. To do this, you will need to press the small **+** button to the left of the trip. If there is not a small **+** next to your trip, press the **Refresh Trip** button. Once you have expanded the trip, you will need to select the stop where you want the split to take place by left-clicking on it. The split will take place above the stop you select.

Select *Split Trip* to activate the split trip functionality. You will be confronted with a message box telling you that you that split has been successful and that a second trip has been created for you. You will also notice that the trip does not appear to have changed. This is because C-TMS has not refreshed the screen, so you will need to do it. Press the **Refresh Tree** button to update all the trips with the trip tree. You should now notice the effect of the split functionality.

Each Trip will then be validated to ensure that it has the relevant SU and CL activities.

6.6.7.4 Delete Trip

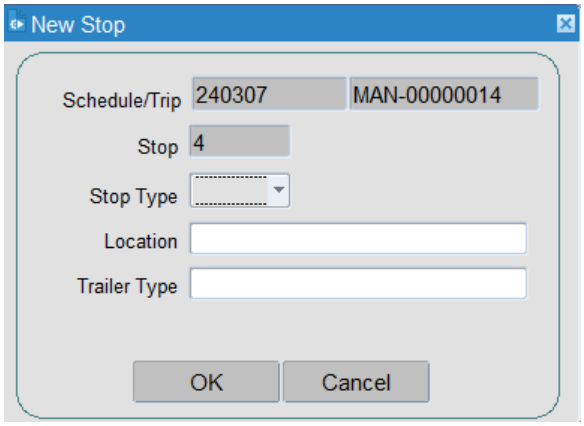
If a trip is no longer required, it can be deleted. The trip will remain on the database with a status of deleted, the stops will be removed and the Orders set back to Unscheduled.

6.6.7.5 Insert Stop

Allows a new stop to be manually added to a Trip after the selected Stop, an Activity Type, Location and Trailer Type are required.

Specific stops may be added to trips as a manual task. This will then allow orders to be added to the trip, with the load and unload at the required part of the trip.

Select a stop, then right-click in the Stops and choose *Insert Stop*.



This will display a pop-up screen where the details of the new stop are specified, including where the stop is to be added (the stop number) and the stop (PK, DL). You must also select the location, using a lookup if required.

6.6.7.6 Append Stop

Allows a stop to be appended to the end of a Trip, an Activity Type, Location and Trailer Type are required.

This works in the same way as Insert Stop above, but automatically assumes that the stop will be after the final stop on the trip.

6.6.7.7 Move Stop

Moves the currently selected stop. You will be asked where the stop will be moved on this trip, before/after a specific stop number. Clicking **OK** will confirm the movement and this will be reflected on the stops tab. Clicking **Cancel** will cancel the move.

6.6.7.8 Overriding Stop Times

C-TMS will work out the times against each stop on your trip for you. If for some reason you want to change these times against the trip, you can do this using the "Fixed" functionality.

The first column in the Trip Detail section of the screen is headed "Fixed". Clicking in a fixed box puts a tick in that box and has effectively fixed the stop, meaning that C-TMS will not recalculate that stops times.

So if you wanted to change the times on the first stop of a trip to start a driver at a later time than C-TMS had allocated, click in the first stop's "Fixed" box. Then change both the planned arrival and planned departure times for this stop.

Clicking on the **Recalculate** button will leave the first stop's times to how they have been set by you, but change the subsequent stops to reflect the driver's new start time.

Note: You are able to fix more than one stop on the trip, but you are unable to effectively fix a stop in the middle of a trip without fixing all previous stops.

When you do forcibly change the stop time of a trip, you may notice that you receive a warning message detailing windows that have been broken. Because you are overriding the times on the order, you may well have broken one of the windows on that order. Drill down into the order in question to find out the details, for example, by how much you have broken the window.

6.6.8 Removing Order(s)

If you need to remove an order from a trip, there are two ways of doing it. The first involves deleting an entire stop and all of its orders from the trip, and the second is a little more subtle, where you are able to remove a single order at a time.

6.6.8.1 Delete Stop

Allows a stop to be deleted from a Trip, any Orders at that Stop will be Unscheduled.

To use the "Delete stop" functionality, highlight the stop you want to delete from within the trip detail section of the screen. Right-click on that stop and select the *Delete Stop* option from the menu.

C-TMS will ask if you are sure you want to delete the stop to which you press the **OK** button. You will notice that the stop has been deleted from the trip. The order(s) you have removed from the trip may not at first appear within the unscheduled order well at the bottom. To see the order, press the **Refresh** button within the **Order Filters** pop-up on the unscheduled order well section.

6.6.8.2 Unschedule Orders

You can also achieve similar results by using the Unschedule Orders functionality. This way will allow you to remove single orders at a time from a stop. To do this, highlight the trip that you want to remove the the order from, by clicking on it from within the trip tree section of the trip manipulation screen. You will then need to highlight the stop on the trip that contains the order you want to remove (remember that the order will be present at two stops on the trip, both where the order is collected and where the order is delivered). Next, press the **Orders** button and highlight the order that you want taking off the trip.

Now right-click on that order and select the *Unschedule Order* option. You will be given confirmation that your order was removed successfully, and the order will drop-down into the unscheduled order well automatically.

6.6.9 Change Order Details (whilst on a trip)

You can change an order's planned pallet quantities or order time windows whilst the order is on a trip. This will often be the case when you have added multiple orders to a trip, only to find that because of previous stops on the trip, your order

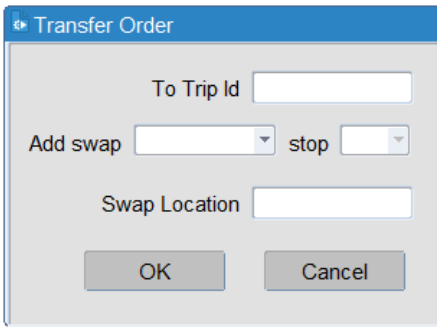
will be arriving late. Also, if you have planned to squeeze 27 pallets onto a trailer that has the capacity to support only 26 pallets, then you may also want to make changes to the pallet quantities.

Select the stop that the order is either collected from, or delivered to, and click the **Orders** button. Then double click on the order from within the pop-up. This opens the order details form, where you are able to edit pallet quantities or time windows accordingly.

Note: If you try to edit the order but C-TMS does not allow you to, this will be because of your access level. These have been set up by your system administrator.

6.6.10 Transfer Order(s)

You can transfer an order from a trip stop or all orders on a trip stop.



You will be asked to select the trip onto which you want to transfer the order or orders. A lookup of available trips is provided, with information to help you decide which trip to select.

- Trip ID
- Trip Status
- Route Number.
- Route Description.
- Trip departure time.
- RPE on departure.
- Number of stops.
- Trip completion time.
- Last non-RDC stop departure time.

You must also identify a swap transfer point if you are only transferring the delivery of the order. You can identify the stop and whether the swap should be before or after the stop you identified. If you are transferring the collection, this is not required.

The position of the new load in the swap trip is identified by defining AFTER or BEFORE an existing stop on the swap trip. The swap location selected must exist in C-TMS to be selected as a swap location. You may manually create locations.

Selecting OK will complete the following changes:

- Original Trip - The order is unloaded at the new swap location. If the trip does not currently have a stop at the swap location, a new stop will be created. The new stop will be inserted after the last stop to be debriefed. Checks will ensure the new stop is not inserted before the stop on which the order is loaded.
- Swap Trip - If the swap or unload location do not exist on the trip, 2 new stops will be created. The swap location will be created in the position as defined in the screen above and the unload location will be added to the end of the trip. The unload location will be set to the same unload location on the original trip.

6.6.11 Move to Schedule

You can use this to carry forward orders onto another schedule.

You can select multiple orders using the CTRL or SHIFT keys when clicking on orders in the order well.

You will be prompted for confirmation, and then prompted on to which schedule you want to move the order, selected from a drop-down list.

The system will then automatically refresh the order well, at which point your updated orders may well be removed from the order well for the schedule selected (depending on your selection criteria of course).

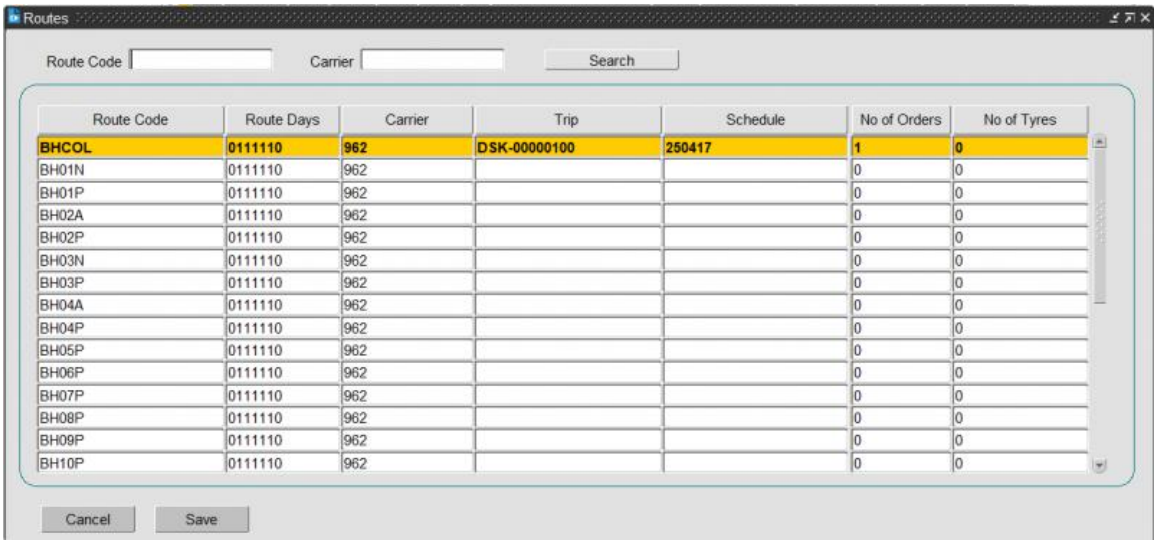
Note that this will not change the orders' collection and delivery windows - this option just changes the schedule. You may then want to change the order's windows through the New Order screen.

6.6.12 Carry Forward

This configurable option allows you to select orders and carry them forward to another route on the following schedule.

You will be prompted to select a route or trip from the next available schedule.

The screen will display a list of all routes that are available in the system (provided you have access), indicating whether a trip has already been created for that route on the schedule.



The information displayed is:

- Route Information:
  - Route Code
  - Route Days - the days that the route is active, from Sunday to Monday
  - Carrier
- Trip information (if there is a trip created for that route):
  - Trip
  - Schedule
  - No of Orders
  - No of Tyres

You can filter by partial carrier or route code, then click the **Search** button to filter the list.

When selected and confirmed with the **Save** button, this will add the selected order to the selected trip, or create a new trip for that order from the selected route.

If the order was already planned on to a trip, this order will be moved.

6.6.13 Amending Order Values

You can amend an unscheduled orders booking ref, planned DU quantity or latest delivery by highlighting the required order in the order well, right-clicking and selecting *Amend Values*. This will display a pop-up screen where you can do the following:

- Amend the details - save with the **OK** button.

- Create a trip for the unscheduled order with the **Create Trip** button.
- Cancel any changes with the **Cancel** button.

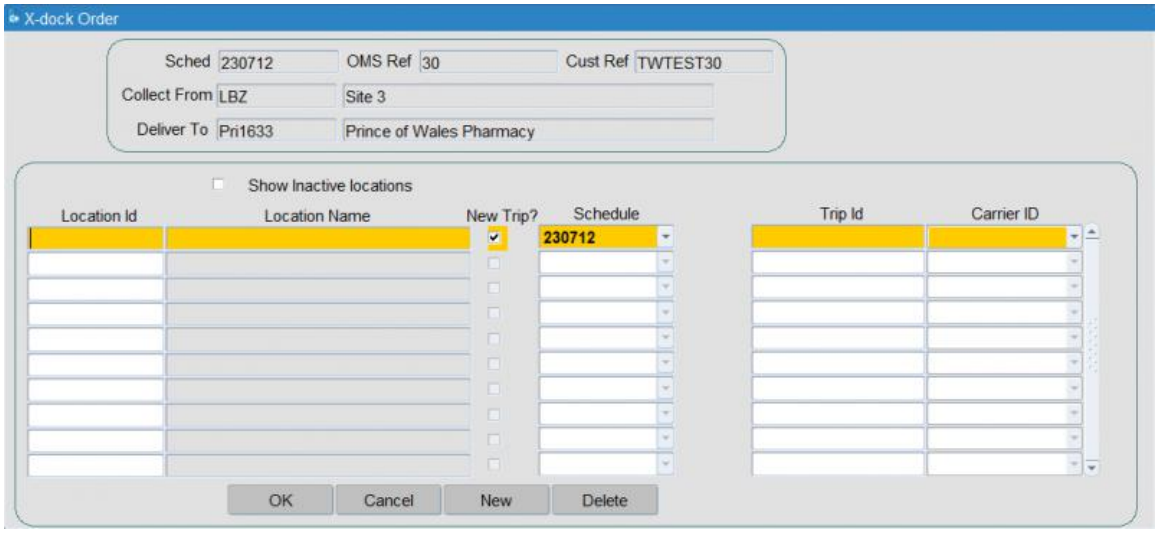
6.6.14 Creating Trips via Crossdocks

This is functionality within C-TMS that will allow you to create multiple trips with one order. You are therefore able to emulate a collection at point "A", a delivery at point "B", via a crossdock at point "C".

The first thing you need to make sure of is that the location ID you are to use as a crossdock has been set up as such within the Maintenance business data screen. The Location Types tab within this screen enables you to set certain locations up as crossdocks. This should be set up by a superuser or a system administrator.

To create your crossdocked trips from within the trip manipulation screen, highlight the order you want to use from within the unscheduled order well. Now right-click on the same order to bring up the menu box, and select the *Apply via x-dock locations* option.

This will cause a new screen to appear titled "X-Dock Order".



This screen will enable you to create the first legs of your crossdocked trips. The final leg will then be created back in the trip manipulation screen as normal.

The top box within this screen provides header information for the order you are to crossdock. This includes the original collection point and the final destination point. The box below it allows you to list the locations that this order will be crossdocked via. If a further crossdock location is required, press the ?New? button and enter a second crossdock location ID in the row below.

The "New Trip?" box should be ticked if this crossdock trip is to be added to a new trip rather than a pre-existing one. If you are adding this to an existing trip, un-tick the box and enter the C-TMS trip number into the "Trip id" box.

When you have entered all the required crossdock locations, press the **OK** button. This will prompt C-TMS to create all the trips that you have requested via the "X-Dock Order" screen. The final leg of the trip, the one that delivers the goods to the final destination, is still to be created. You will still be able to see the order you have used to create your crossdock legs within the unscheduled order well at the bottom of the trip manipulation screen with a status SCHED-COLL, indicating the collection has been scheduled but not the delivery. Select the order and create a new trip from it. This will mean that all legs of the trip have been created and are available from within the trip tree section of the screen.

6.6.15 Pass a Depot Trip to Another Depot or Carrier

It may be that a lack of resources means that your depot may not be able to complete a trip. In that case, you can pass your trip on to another carrier. This may be another of your internal fleet carriers or a third-party carrier (3PC). To do this:

- Select the trip in the trip tree.

- Go to the Trip Details tab.
- Change the Carrier to the new carrier - select it from a list of available carriers.

New SU and DL stops at the new carrier location will be added to the trip.

6.6.16 Change a Driver on a Trip

It may be that drivers change after execution has started, perhaps due to sickness. In this case, you may not want to change the driver allocation (which might require resending manifests to third parties, execution systems like C-ePOD or APOD, etc). In this case, if you just want to record the changed driver, you can use the crew to record this:

- Retain the existing driver on the trip.
- Add the name of the new driver in to the Crew field on the trip detail tab.
- Select the comments tab and edit comments to record the stop where the driver was changed.

6.7 Notes

6.7.1 Distance and Fuel Units

Please note that distance and fuel units, displayed throughout C-TMS, but specifically on the Planning form, are now controlled within C-TMS via 2 system parameters: GEO_DT_DISTANCE_UNITS and RES_DT_FUEL_UNITS. These are initially set up to only be edited by your implementation team. They will default to "Miles"' and "Litres" respectively if the operation does not request alternative units such as Kilometres and Gallons.

It is assumed that any external system to C-TMS will be configured by to pass data using the correct units.

6.7.2 Break Times

Within C-TMS, when calculating the planned stop times, the system takes into account the legal driver regulations as regards the regular breaks and overnight stops.

This includes an overnight break (stopover or layover) once the driver has exceeded his maximum number of working hours for a day.

The data used within this calculation is configurable at the carrier level.

- Trip Threshold Hours
- Standard Shift Hours
- Overtime Factor
- Work Break Threshold (Hrs)
- Work Break Threshold (Mins)
- Stopover Threshold (Hrs)
- Stopover Threshold (Mins)
- Stopover Duration (Mins)
- Max Shift Hours
- Standard Factor
- Driver Break Threshold (Hrs)
- Driver Break Threshold (Mins)

If not specifically set for the carrier, then the values will default to the database-level system parameters.

- TRM_APPLY_DRIVER_BREAK_RULES - This can be used to switch off this functionality altogether
- TRM_MAX_DRIVING_HOURS - This can be used to default the maximum driving hours for a driver (within a shift) when it has not been specified at the carrier level. This value is compared against the total driving hours for each trip to ensure that the trip does not exceed the maximum shift driving hours permissible for a driver.
- TRM_MAX_SHIFT_HOURS - This can be used to default the maximum shift hours for a driver when it has not been specified at the carrier level. This value is compared against the total hours for each trip to ensure that the trip does not exceed the maximum shift hours permissible for a driver.

The following parameters can be used to default the appropriate values to be used in planned stop time calculations when they have not specified at the carrier level:

- TRM_DFLT_DRV_BREAK_MINS
- TRM_DFLT_MAX_DRV_HRS_WO_BREAK
- TRM_DFLT_MAX_DRV_HRS_WO_STOPOVER
- TRM_DFLT_MAX_WRK_HRS_WO_BREAK
- TRM_DFLT_MAX_WRK_HRS_WO_STOPOVER
- TRM_DFLT_STOPOVER_BREAK_MINS
- TRM_DFLT_WRK_BREAK_MINS

The TRM_MAX_WAIT_TIME parameter is used to optimise the wait time, i.e. Will cause any waiting time incurred at a stop to be moved to end of the preceding stop, if the latter is an RDC.

The MTM_OPTIMISE_WAIT_TIME parameter is used to restrict the amount of time that a driver can wait at a location.

The planned arrival and departure times are then calculated using the driving times between stops and loading/unloading time required at the stop to determine the planned times.

It keeps track of the total time and drive time since the last break and then adds on any necessary breaks (including stop-overs), before calculating the next time, also taking into account any slack time.

These breaks and layovers can be seen on the trip planning form against each stop (depending on the configurable layout - layover) as break time.

They can be manually adjusted, and options exist on the right-click menu to move the stopover position.

- *Move Stopover back*.
- *Reset Stopover*.
- *Move Stopover Forward*.

6.7.3 Wait Times

A planned order may have restrictions on it as to when it can be delivered or collected. CTMS will, by default, plan the departure times of the trip to be flexible, in order to accommodate the least amount of time out of the depot. But if the departure time is fixed from the depot (for example, leaving at 6AM, the first delivery is at 9AM, but the travel time is only half an hour), then wait times occur.

In this case, a 2.5 hour wait time will be accrued against the stop and displayed in the wait time column.

Note that CTMS will always do its best to accommodate order and location delivery times within the plan, which sometimes results in wait times. However, if the planned sequence of stops means that CTMS can't get to the order for collection or delivery, it will still retain the order, but will note that the collection or delivery window has been missed on the stop and order.

6.8 Further Configuration

The following system parameters affect this functionality:

Parameter	Description	Level
SUGGEST_TRIP	Suggest an appropriate trip for an order	COST_CENTRE
GEO_DT_DISTANCE_UNITS	Current distance unit - miles or kilometres	SYSTEM
RES_DT_FUEL_UNITS	Current fuel unit - Litres or Gallons	SYSTEM
RES_AVAILABILITY_ALLOC	Determines how resources are allocated to a trip.	COST_CENTRE
FORMS_DEFAULT_ORDERS_MODULE	Default Orders Form - ORDERS_WIDE, ORDERS or ORD_ENTRY_TARGET	SYSTEM
TRIP_ALWAYS_SHOW_EMERGENCY_ORDERS	Emergency Deliveries are always displayed regardless of filter criterion	SYSTEM
TRIP_HAZARD_DISPLAYED	Show the Trip hazardous Totals or not.	SYSTEM

Parameter	Description	Level
TRIP_LABELS	Indicates the name of the report to be run from the Print Labels menu option in the trip tree in the Planning screen.	COST_CENTRE
CMR_NOTE	Name of the CMR note report	COST_CENTRE
CMR_NOTE1	Name of the CMR note report	COST_CENTRE
COMBINED_DOCUMENTS_REPORT	Name of the Combined Documents report.	COST_CENTRE
DELIVERY_NOTE	Name of the delivery note report	COST_CENTRE
DESPATCH_REPORT	Name of the despatch note report printed from the trip tree	COST_CENTRE
LOADING_REPORT	NON Cost centre Loading Report	SYSTEM
MANF_REPORT	Indicates the name of the manifest report to be automatically generated when a trip is accepted	COST_CENTRE
MANF_REPORT	Driver Manifest Name	COST_CENTRE
REP_DELIVERY_DOCS	Name of the Delivery report printed from trip tree	COST_CENTRE
SEND_MANF_TO_SUPP	Indicates if the supplier manifest report will be automatically generated when a trip is accepted for the cost centre of the trip being collected.	COST_CENTRE
SEND_MANF_TO_SUPP	Indicates if the supplier manifest report will be automatically generated when a trip is accepted for the cost centre of the trip being collected.	CUSTOMER
SUPPLIER_MANF	Indicates the name of the supplier manifest report to be automatically generated when a trip is accepted.	COST_CENTRE
TRIP_SHEET	Trip Sheet Report	COST_CENTRE
TRM_LFS_PRINT_TRIP_POD_POC	Display LFS Trip Sheet POD POC report menu option (Y/N)?	SYSTEM
TRM_APPLY_DRIVER_BREAK_RULES	Switches Driver Breaks on or off - Y or N	SYSTEM
TRM_MAX_DRIVING_HOURS	Maximum Driving Hours	SYSTEM
TRM_MAX_SHIFT_HOURS	Maximum Shift Hours	SYSTEM
TRM_DFLT_DRV_BREAK_MINS	Default Driver Break (minutes)	SYSTEM
TRM_DFLT_MAX_DRV_HRS_WO_BREAK	Default maximum drive hours without break	SYSTEM
TRM_DFLT_MAX_DRV_HRS_WO_STOPOVER	Default maximum drive hours without stopover.	SYSTEM
TRM_DFLT_MAX_WRK_HRS_WO_BREAK	Default maximum work hours without break	SYSTEM
TRM_DFLT_MAX_WRK_HRS_WO_STOPOVER	Default maximum work hours without stopover.	SYSTEM
TRM_DFLT_STOPOVER_BREAK_MINS	Default stopover duration (minutes).	SYSTEM
TRM_DFLT_WRK_BREAK_MINS	Default work break duration (minutes)	SYSTEM
TRM_MAX_WAIT_TIME	Maximum waiting time at Location (minutes)	COST_CENTRE
MTM_OPTIMISE_WAIT_TIME	Should wait time incurred at a stop be moved to end of the preceding stop if the latter is an RDC.	SYSTEM
RESET_MANUAL_SCHEDULE	Provides described new menu functionality to allow reset of manual schedule flag and carry forward.	SYSTEM
LOOKUP_FOR_ROUTE_CODES	Display lookup button in PLANNING beside Route Code	SYSTEM
ALLOW_TRP_DEL_TYPE_UPDATE	Allow Delivery type updates in the planning screen	CARRIER

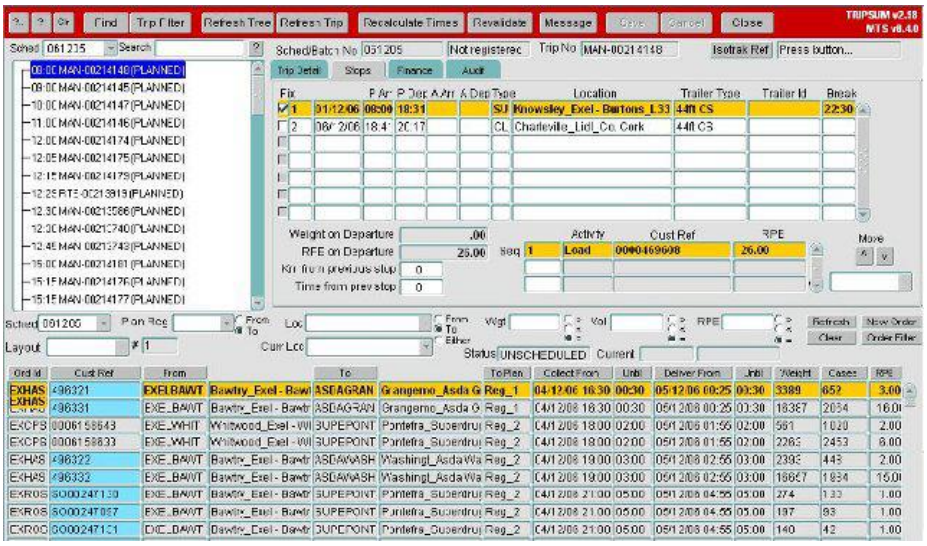
7 Trip Manipulation

The Trip Manipulation module provides users with a view of all the trips on a particular schedule. The unscheduled Orders on the Schedule chosen by the user are also displayed. Trips can be created directly within C-TMS Host from unscheduled Orders or can be created in a external scheduler and then transferred back to C-TMS Host (see the Interfaces for further details).

All key information relating to a trip is displayed on the Trip Manipulation form and a mechanism is provided to link back to the Orders that are delivered on the Trip. A number of manipulation functions can be accessed through Trip Manipulation and these are discussed below.

A Trip Planning screen is also available in C-TMS and displays mostly the same information as is displayed in Trip Manipulation but shows more Orders to assist users in the planning process.

The following is an example of the Trip Manipulation Screen:



The Postal Region, Planning Region, Location, Weight, RPE and Volume filters allow a user to restrict which Unscheduled Orders they are able to see, this helps to speed up the planning process. The number of Unscheduled Orders displayed has also been increased to speed up the creation of manual trips.

Please note that distance and fuel units, displayed throughout C-TMS, but specifically on the Trip Manipulation form, are now controlled within C-TMS via 2 system parameters: GEO_DT_DISTANCE_UNITS and RES_DT_FUEL_UNITS. These are initially setup to only be edited by the OBS Support team. They will default to 'Miles' and 'Litres' respectively if the operation does not request alternative units such as Kilometres and Gallons.

It is assumed that any external system to C-TMS will be configured by to pass data using the correct units.

7.1 Trip Filter

The Trip Filter allows a user to control which Trips they can see.

The key functions are:

7.1.1 Apply Order to Trip

Allows any Unscheduled Orders on that Schedule to be applied to a new or existing Trip. By default an Order will be automatically applied to what the system believes to be the most appropriate stops, it is also possible to apply an Order to a specific pair of stops to reduce the need for manual manipulation. When multiple orders are being applied to a trip, the system will try to minimize the number of stops required by selecting the largest trailer type available.

7.1.2 X-dock Order

It is possible to crossdock an Order via one of many locations, for example an Order going from Loc1 to Loc2 can be x-docked via Loc3. An order can be x-docked on a single Trip or multiple Trips. An Order can be x-docked in the

TRIPSUM and ORDERS forms.

7.1.3 Validate Trip

Performs validation checks on the selected Trip to ensure that the trip is valid and feasible. If the trip breaks any validation rules these will be reported back to the user.

These checks include:

- Ensure that the trip has at least 1 load and unload activity and these activities are in the correct order.
- Ensures that the trip complies with driving regulations such as Drivers Breaks.
- Checks whether the Trip will deliver within the delivery windows of the Orders.
- Ensures that a valid Trailer Type is assigned to the Trip. If a Trailer has been ?fixed? onto a Trip (see Fixed Routes for more details) it will not be overwritten.

7.1.4 Recalculate Distance and Time

Allows the times on a Trip to be recalculated, wait times will be optimised and Drivers Breaks included (this can include an overnight stopover), all departure times will be made unique. This may result in Delivery windows being breached, however, these failures will be reported during Trip Validation.

7.1.5 Set Trip Status

Trip Statuses include ACCEPTED, TENDERED, DELETED, EN-ROUTE. This function allows the status to be changed to another status, there are restrictions to control the changes that are permitted. For instance it may not be valid to change a trip from EN-ROUTE to DELETED.

7.1.6 Split Trip

Allows a trip to be split into 2 separate trips. Upon splitting a new trip will be created and Stops below the split point will be placed on the new Trip. Each Trip will then be validated to ensure that it has the relevant SU and CL activities.

7.1.7 Merge Trip

Two trips can be selected and merged together to make 1 trip. Two configurable system options are now possible for this function. Either duplicate Stops will be removed and stops will be combined together where possible, or Stops will be appended onto the end of the resulting trip. Upon completion the first trip will remain and the second trip will be deleted.

7.1.8 Delete Trip

If a trip is no longer required it can be deleted, the trip will remain on the Database with a status of deleted, the stops will be removed and the Orders set back to Unscheduled.

7.1.9 Insert Stop

Allows a new stop to be manually added to a Trip after the selected Stop, an Activity Type, Location and Trailer Type are required.

7.1.10 Append Stop

Allows a stop to be appended to the end of a Trip, an Activity Type, Location and Trailer Type are required.

7.1.11 Delete Stop

Allows a stop to be deleted from a Trip, any Orders at that Stop will be Unscheduled.

7.1.12 Costs and Revenue

Cost and Revenue details are displayed for a Trip, costs can also be allocated to a Trip (see the Accounting documentation for more details as to how these costs are generated).

7.1.13 Assign Resources

Within the Trip Manipulation form it is possible to assign resources to a Trip. A Carrier can be selected from a list of valid Carriers. It is then possible to populate a Driver (and optionally 2 crew members), Vehicle and Trailer Id. Depending on the set up of the carrier (i.e. Fleet or Haulier) these values will either be selected from a list or entered as free text. If a Haulier is being used the details of all resources will not be stored in C-TMS so they will need to be entered manually. If selecting from a list the list will be restricted to those resources that are available to the Carrier that is assigned to the Trip.

It is also possible to manually assign a Trailer Type to a Trip. If a trailer is manually assigned to a stop it is also assigned to all subsequent stops and is ?Fixed?. The fact that it is fixed means it will not overwritten by validate trip and gives the user the ability to force a trip to use a particular trailer. A large number of Trips that are created from Fixed Routes will have a trailer ?fixed?. A trailer can be ?un-fixed? by removing it from all stops, once this has happened validate trip will again try and assign the best fit trailer.

If multiple orders are being added to a trip, the system will automatically select the largest trailer available and ?fix? it to the stops when the 2nd order is added. The user can then manually change the trailer assignment as desired. Both assignment method are subject to the same trip validation routines and may still have to be altered before a trip?s status can be changed.

It is possible to configure the fields that are displayed in the Trip Stop and Unscheduled Orders section, thus allowing a user to view the fields that are most relevant to their role.

In order to speed up the Scheduling process multi select functionality has been added, thus making it is possible to select multiple orders and add them to a Trip in one go.

7.2 Recent Changes

- 249378 (PA-7DDFH9) Check and enhance EFX data export

8 Trip Debrief

Trip Debrief functionality is used within C-TMS software to enter the actual milestones of the trip, actual despatched and delivered quantities, order info, POC/POD, Odometer reading, etc.

The Aptean TMS Calidus Edition Debrief process has the capability to capture the following debrief information:

- Trip level:
  - General comments.
  - Fuel Drawn.
  - ODO start/end.
  - Comments - general/rejection/errors.
- Stop level:
  - Arrive/Depart times.
- Order level:
  - Actual quantities/weights.
  - POC/POD complete.
  - Additional Coll/Del debrief information, such as weighbridge/weight.
  - Additional order references.
  - Order level non-conformity/information/late codes.
- Order Items:
  - Actual quantities/weights.
- Additional finance payments.
- Additional trip services (for generation of trip cost).
- Additional Order Services (for capture of additional services per order, generating order revenue).
- Trip Tasks/Trip Stop Tasks - additional extensible task information.

Order and trip statuses can be set to identify the status of the order, and rebooking of incomplete or partially incomplete orders is supported.

Order and Trip Debrief information may also be captured through various bespoke interfaces, from external systems (such as C-ePOD or APOD), through Calidus Portal and through Imports:

- DEBRIEF

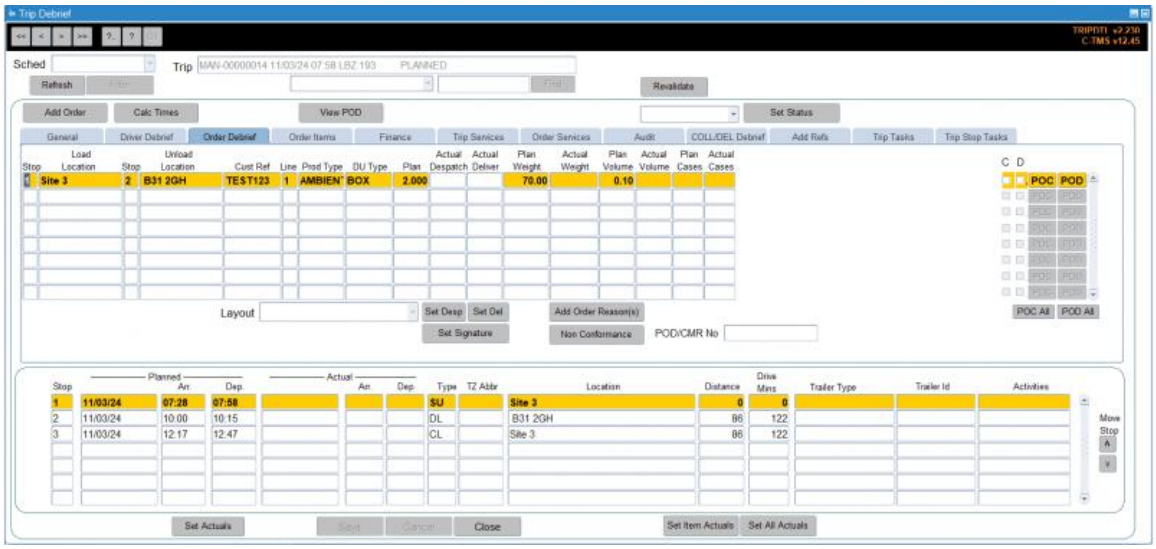
The Trip Debrief screen can be accessed from the C-TMS Modules menu, Trip Management, Trip Debrief.

8.1 Usage

The Sched and Trip drop down lists are used to select the required trip. If you are entering this debrief screen from another screen (such as the Planning screen, through the *Debrief Trip* right-click option), then the Schedule and Trip will be selected for you.

Once a specific trip is selected, the bottom section will display details on trip stops along with planned arrive and depart time. Here you can update the stops with actual arrive and depart times, or assign trailers to a stop.

This data layout is configurable.



You can add an order to the trip on debrief using the **Add Order** button provided.

You can calculate times for the stops using the **Calc Times** button.

The trip debrief form has a **View POD** button in order to call an external system for the display of the stored POD Document. Note that this is applicable ONLY to the Calidus ePOD system. The URL is configurable through system parameters. When clicking on the the **View POD** button, a POD report is produced and opened in a new tab in your browser. This can then be emailed to a recipient by completing the email to field and pressing the **Email** button.

The status of the trip can be updated by selecting a status from the drop down list and clicking the **Set Status** button. An informational message appears to inform you that the status has been changed.

The **Set Actuals** button will pre-populate all the Stops actual arrive and actual depart date/times with those values held in the planned fields. The user can debrief by exception here by only entering in the actual times at the stops where the planned times were not met. Clicking the **Set Actuals** button at this point will fill in the rest of the actuals, except if the stops actuals can not be met when compared to the depart time at the previous stop.

E.g. If the manually entered Actual Depart time at Stop 2 is after the Planned Arrive time at Stop 3, the system will not pre-populate Stop 3 Actuals as it is not possible to meet this Planned Arrive deadline when compared to the Actual Depart Time at Stop 2.

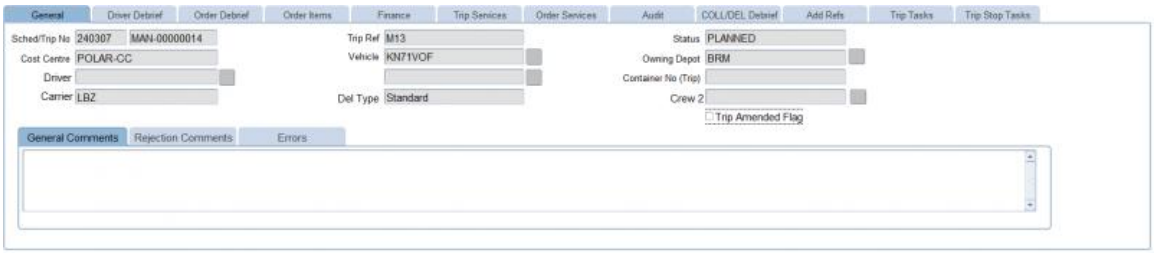
The **Set Desp** button in the *Order Debrief* tab will pre-populate Actual Despatched Quantity, Weight, Volume and Cases with those values held in the Planned columns, for each order line. This also has the Debrief by Exception functionality, where if the user manually enters Actuals for 1 order line and clicks **Set Desp** then all other Order Line quantities will be pre-populated, except those manually entered.

The **Set Del** button in the *Order Debrief* tab will pre-populate Actual Delivered Quantity with the value held in the Planned column, for each order line. This also has the Debrief by Exception functionality, where if the user manually enters Actuals for 1 order line and clicks **Set Del** then all other Order Line quantities will be pre-populated, except those manually entered.

The **Set All Actuals** button is a combination of the functionality for the **Set Actuals**, **Set Desp** and **Set Del** buttons. Users can debrief by exception in all areas as detailed above, and then click **Set All Actuals** to populate all other actuals quantities where feasible.

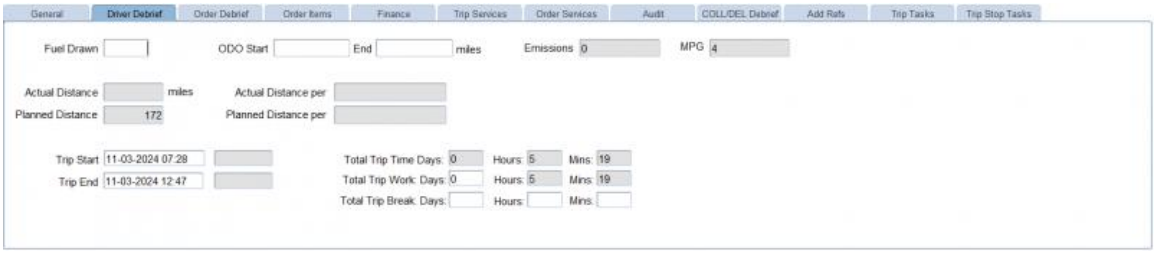
8.2 General tab

The *General* tab is used to enter Driver and Vehicle info, if they previously weren't entered. You can add General Comments here by right-clicking on the General Comments area and selecting *Add Comment*. You can also edit existing comments using the *Edit Comments* pop-up option. You can view rejection comments and errors here.



8.3 Driver Debrief tab

In the *Driver Debrief* tab, you can enter the information related to the Fuel Drawn, ODO Start and End readings. You will notice that the 'Actual Distance', 'Actual Distance per litre', 'Emissions' and 'MPG' are displayed here, calculated by the system if configured to do so.



Note that the units for ODO readings are set against the system, not per vehicle.

You can also enter total trip work days, and total trip break days, hours and minutes.

8.4 Order Debrief tab

The *Order Debrief* tab is used to capture the Actual Quantities/Volume/Weight Despatched, Actual Quantities/Volume/Weight Delivered, POC/POD and Non-conformances, if any.

This data layout is configurable and by default will show the following information:

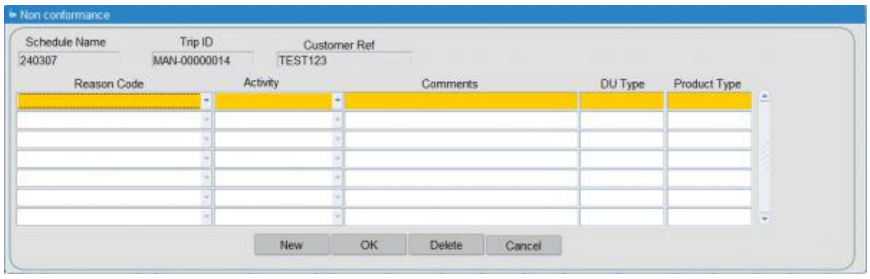
- Stop
- Load Location
- Stop
- Unload Location
- Cust Ref
- Line
- Product Type
- DU Type
- Plan
- Actual Despatch
- Actual Deliver
- Plan Weight
- Actual Weight
- Plan Volume
- Actual Volume
- Plan Cases
- Actual Cases
- C - checkbox to show collected
- D - checkbox to show delivered
- **POC**
- **POD**

Additionally, you can also view and in some cases enter the following against each order line:

- Packed Quantity
- Temperature at delivery stop.
- Returns -
    - ♦ Exchange DU Type and Quantity
    - ♦ Received DU Type and Quantity
    - ♦ Ticket Returned and Date
- Time Variance
- Actual Despatched RPE Quantity
- Actual Dimensional Weight
- Contractual Weight
- Signature

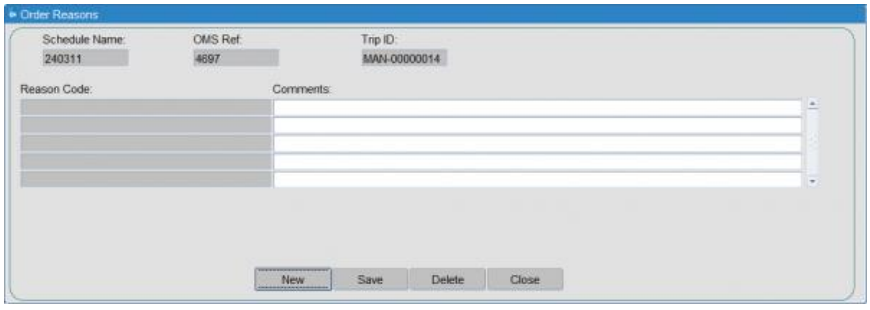
If the actual delivered quantity is less that the actual despatched quantity, this will prompt a message box stating that there is a discrepancy between the despatched and the delivered.

You can click on the **Non Conformance** button to bring up the Non Conformance form where you can select the reason:

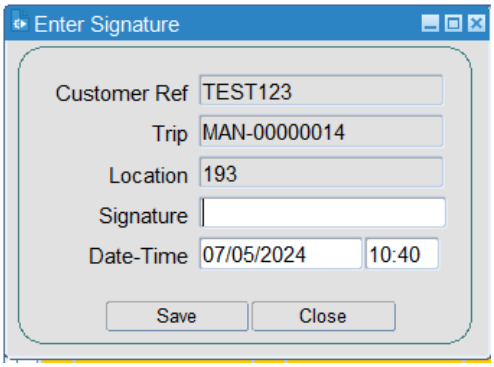


You can be offered to rebook or return here - see the Rebooking process below for more details.

You can add an order-level reason here using the **Add Order Reason(s)** button:



Selecting **Set Signature** allows you to record the name of the signatory at the delivery location.



The date and time are pre-populated with the current date and time when the set signature button was selected. The date and time may be overwritten.

Note that you can add the signature to the table as well, for visibility.

Clicking the **POC** or **POD** next to an order line will set the POC/POD flag to Y, for that particular order. Clicking the **POC All** or **POD All** buttons will set the flag to Y for all orders on the current trip.

Your implementation team can enable equipment movement tracking. This audits the movement of equipment (DU types) through the network. This is based on the "actual" values entered against these lines, whenever there are changes to the values.

Equipment moves will track:

- Changes to Actual Despatched Quantities (action type "DESP")
- Changes to Actual Delivered Quantities (action type "DEL")
- Changes to Media Returns Quantities (action type "EXCH")
- Changes to Received Quantities (action type "RET")

The data stored against these can be extracted from the system using the Equipment Moves extract.

8.5 Order Items tab

The *Order Items* tab is used to capture the Actual Quantities/Volume/Weight Despatched, Actual Quantities/Volume/Weight Delivered and Non-conformances, if any.

This data layout is configurable and by default will show the following information:

- Identifier - display only
- Product - display only
- AKA Code - display only
- Item Description - display only
- Factor - display only
- Lifts - display only
- Stack - display only
- Ordered - display only
- To Deliver
- Delivered

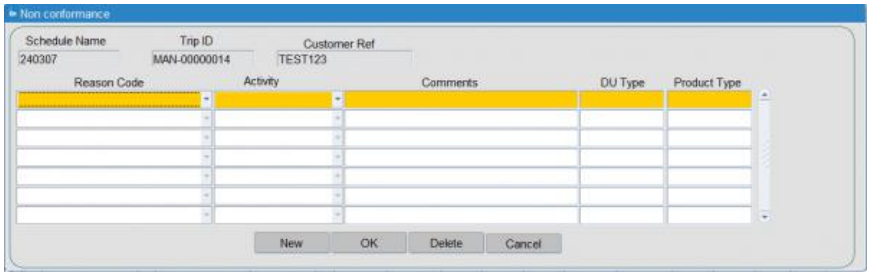
- Diff - display only - calculated difference from above quantity fields
- Weight
- Volume
- Actual Weight

Additionally, you can also view and in some cases enter the following:

- Actual Dims:
  - Length
  - Width
  - Height
  - Weight - display only
- Contractual (Charge) Weight
- Pallet ID - You can also indicate if your items are palletised through the Pallet ID.
- Units
- SAP Line No - display only

You can set the actual To Deliver and Delivered quantities for the selected line using the **Set Item Actuals Selected** button, or set all of the order items actual values using the **Set Item Actuals** button.

You can click on the **Non Conformance** button to bring up the Non Conformance form where you can select the reason:



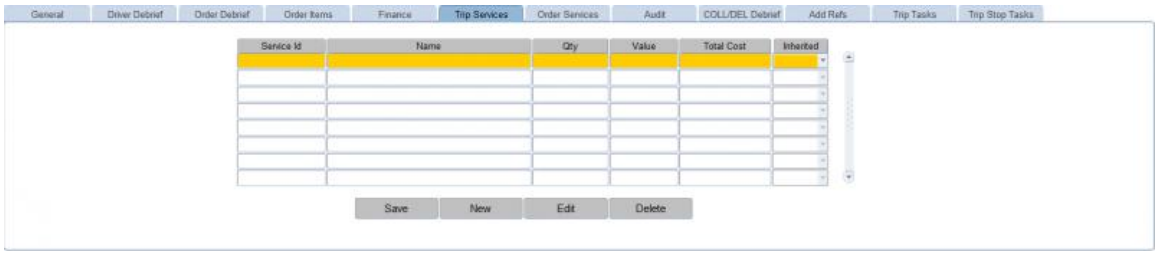
8.6 Finance tab

The *Finance* tab is used to display Trip Costs and allow the user to add payments.

You can access the detail of the payments using the **Payments** button to bring up the Payments screen.

8.7 Trip Services

The *Trip Services* tab can be used to add any additional services to the trip:



You can add or edit the trip services using the **New** or **Edit** buttons provided. When adding or changing, you can use a lookup on the service ID to identify any services configured at trip level. You must enter the quantity and value. The total cost will calculate from the quantity and the value, and the charge will default to not being inherited.

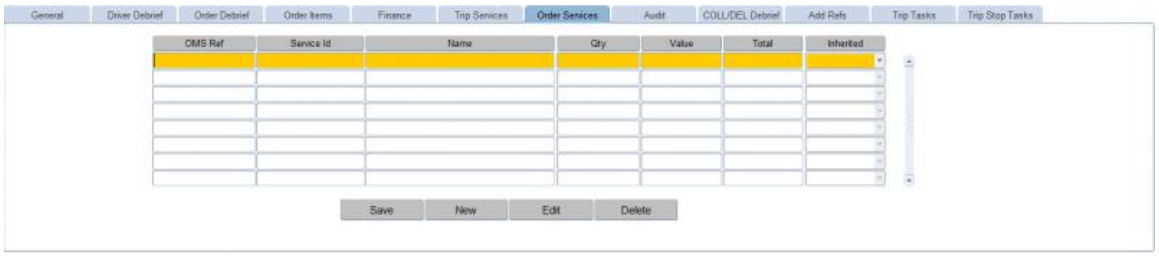
Trip level services may generate costs against a trip.

When you have finished editing or adding, you can save your changes using the **Save** button provided.

You can delete services using the **Delete** button provided.

8.8 Order Services

The *Order Services* tab can be used to add any additional services to the orders on the trip:



You can add or edit the services using the **New** or **Edit** buttons provided. When adding or changing, you can use a lookup for the orders on the trip, and a lookup for the service ID to identify any services configured at order level. You must enter the quantity. If Services Capture has been set up in Accounts with a charge value for the Service for that customer (or all customers), then the change value will be defaulted, otherwise you must enter a charge value. The total cost will calculate from the quantity and the value, and the charge will default to not being inherited.

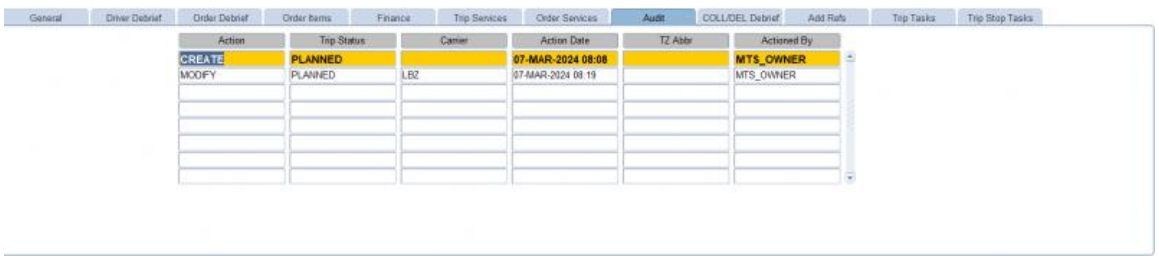
Order level services may generate revenue against an order.

When you have finished editing or adding, you can save your changes using the **Save** button provided.

You can delete services using the **Delete** button provided.

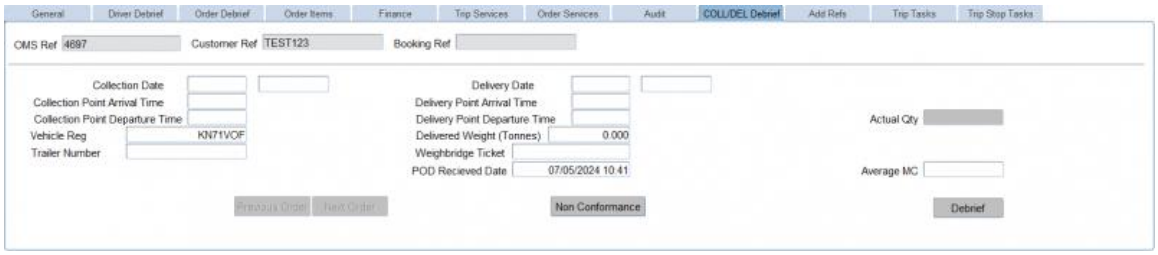
8.9 Audit tab

The *Audit* tab is used to display details on trip status change.



8.10 COL/DEL Debrief tab

The *COL/DEL Debrief* tab can be used to capture additional collection/delivery information on orders/stops. This is commonly used for bulk loads.



The first order is selected for you by the screen. You can navigate to the next or previous orders using the buttons provided.

You can enter:

- Collection Date and Time.
- Delivery Date and Time.
- Collection Point Arrival Time
- Delivery Point Arrival Time
- Collection Point Departure Time
- Delivery Point Departure Time
- Vehicle Reg
- Trailer Number
- Delivered Weight (Tonnes)
- Weighbridge Ticket
- POD Received Date
- Average MC

You can quickly debrief the entire trip from here using the **Debrief** button provided, as long as you have already entered the required stop times.

8.11 Add Refs tab

The *Add Refs* tab allows you to view or edit additional order references.

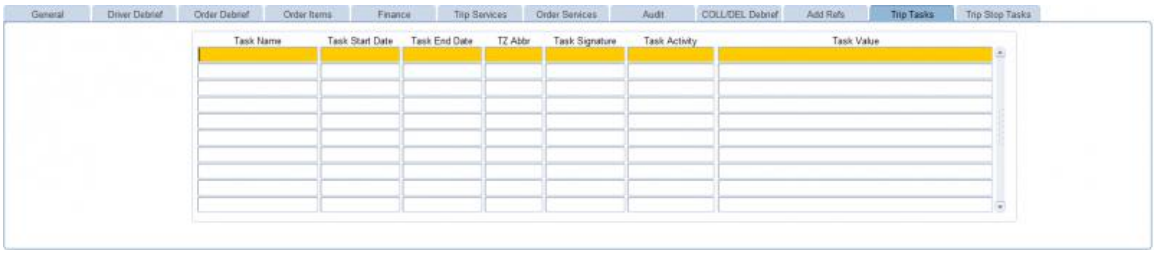
You can use the button to the right of the entry on the screen to view the value if it is too long for the screen to display.

You can add a new order reference on this screen by finding an empty line and entering the details here.

You can save changes to additional order references using the **Save References** button provided.

8.12 Trip Tasks tab

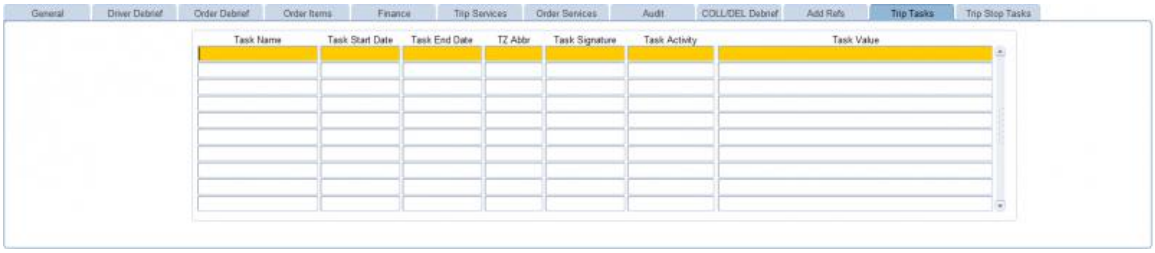
The *Trip Tasks* tab allows you to view trip tasks stored against the trip.



Note: Trip Tasks can only be added through the interface or through automatic debrief from some external POD application - as such its use is limited to those operations only.

8.13 Trip Stop Tasks tab

The *Trip Stop Tasks* tab allows you to view trip tasks stored against the trip stop.



Note: Trip Stop Tasks can only be added through the interface or through automatic debrief from some external POD application - as such its use is limited to those operations only.

8.14 Rebook Process

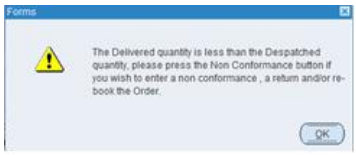
This section covers the rebook process.

It is natural to ask whether a failed order can be moved to another trip. This is not the process in CTMS. If a delivery is not completed the order should be zero debriefed. This is to keep the data integrity as to what has been planned against the actuals.

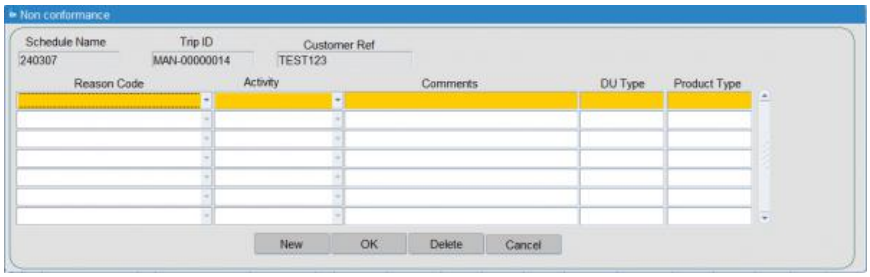
The order must then be rebooked onto another trip. The act of rebooking the order creates a new order within CTMS.

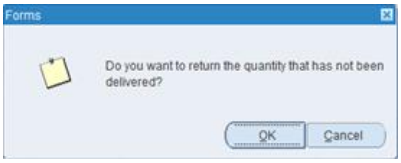
Within the debrief screen enter the despatch quantity this is the quantity that has been collected from the customer depot. You then need to enter the Actual Deliver quantity to zero as the delivery has not been made.

A popup box will appear advising to use the Non-Conformance process as the delivered quantity is less than the despatched quantity



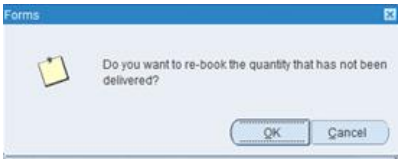
You can click on the **Non Conformance** button to bring up the Non Conformance form where you can select the reason:





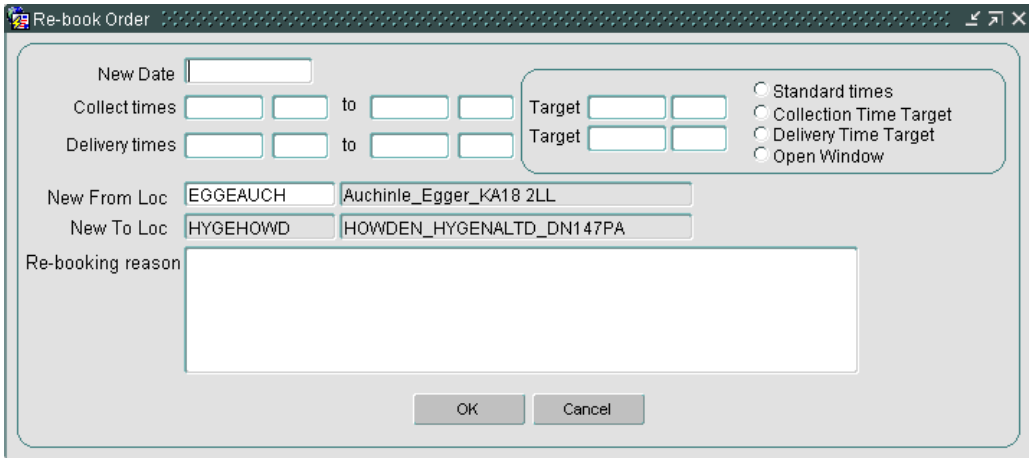
When you click **OK** the system will prompt for you to return the goods to the customer. In this case click **Cancel** as the goods are going to your depot.

The system will now prompt for you to rebook the Quantity.

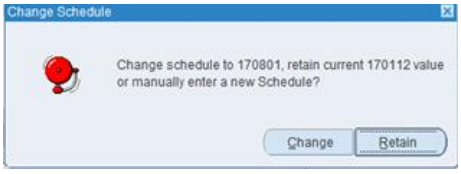


Click **OK**.

Enter the new date for the rebooked order. A new from Location should be entered as the depot the goods are originating from for the rebook. A rebook reason can also be entered.



Click **OK**. You will be prompted for confirmation to change the schedule of the rebooked order if applicable. You can **Change** it by manually entering a schedule or **Retain** it.



You will be advised that the order is rebooked and will then be in the order well for planning purposes.

When you view this rebooked order in the order well or planning screen, the customer reference will have an "_R1" displayed on the end to highlight that this is a rebook order.

Depending on system parameter configuration, several order references may be added to the order:

- Rebook Required - if a non-conformance has been entered against an item, and the reason is marked as can be rebooked, the order will be marked with Rebook Required set to "Y". When the order is rebooked, this will be reset to "N", to show that it has been successfully rebooked already.
- Rebook Count - the number of times this order has been rebooked.
- Rebook Ext Ref - the original Customer reference of the order.
- Rebook OMS Ref - the original OMS reference of the order.

Note that, when automatic debriefing of orders comes from an outside source, such as EPOD, FleXipod/APOD, 3rd party carrier POD messages, this may have set shortages and non-conformances against items automatically. In this case, as you are not manually debriefing, you can review the order quantities on the Order Debrief tab. You can double-click on the order line to review the order details, and see non-conformances, references and whether rebook is required. A Rebook button has been provided on this tab to allow you to trigger the start of the rebooking process as above.

8.15 Diary Exceptions Update

Once the trip has been completed, the actual completion time is checked and if it differs from the planned completion time the diary exceptions for the vehicle and driver attached to the trip will be updated. The diary exceptions based on the trip actuals will now show the amended time against the Vehicle. The diary exceptions are also updated against the Driver.

8.16 Further Configuration

The following system parameters affect this functionality:

Parameter	Description	Level
EPOD_VIEW_POD_URL	URL for C-ePOD Documents	SYSTEM
ALLOW_POC_EDIT	Allow users to edit the POC Flag in Debrief	SYSTEM
ASSET_DEBRIEF	Indicates if assets debriefed with Items	COST_CENTRE
CHANGE_DEBRIEF_LABELS	Controls the labels for certain items in the debrief and orders screen	SYSTEM
DEBRIEF_DRIVERS_HOURS	Enter Drivers hours worked at debrief	COST_CENTRE
DISPLAY_DESPATCHED_RPE	Display the Actual Despatched RPE Quantity in the Order Detail and Trip Debrief screens?	COST_CENTRE
OMS_ACTUALS_MANDATORY	Governs which ACTUAL_QUANTITY fields require mandatory population in Debrief forms.	SYSTEM
ORD_DEBRIEF_DAYS	Default number of days used to restrict Orders displayed by Order Debrief form.	SYSTEM
ORD_STACK_DEBRIEF	Order Stack Debrief	COST_CENTRE
TRM_DEBRIEF_SCREEN_TIME_VARIANCE_DISPLAYED	Is the Time Variance field displayed and updateable in the Trip Debrief screen.	SYSTEM
TRM_DESP_FOR_DEL	Maintain the Actual Despatched Quantity for a Delivery Trip in Trip Debrief (Y/N).	COST_CENTRE
TRM_ODO_DISTANCE_LIMIT	Limit used to validate difference between odo start and end entries in debrief areas of Trip Forms	SYSTEM
TRM_PREVENT_ALL_DEBRIEF	Prevent setting of actuals in trip debrief	SYSTEM
TRM_SHOW_TIME_DEBRIEF_BTNS	Show time debrief buttons in trip debrief	SYSTEM
TRM_STACK_DEBRIEF	Trip Stack Debrief	COST_CENTRE
TRM_TEMP_DEBRIEF	Display temperature on Trip debrief	SYSTEM
TRM_TRIP_STATUSES	List of Trip Statuses to control which trips displayed in Tripdtl/Trip Debrief form.	SYSTEM
TRM_UPDATE_ALL_ACTUALS	When a line actual is debriefed all actuals are set	COST_CENTRE

Parameter	Description	Level
TRP_STACK_DEBRIEF	Trip Stack Debrief	COST_CENTRE
BGW_AUTO_REBOOK	Indicates if auto rebook is switched on when non conformance is added	COST_CENTRE
DEFAULT_REBOOK_DEL_TYPE	Default Del type for Rebook	COST_CENTRE
REBOOK_COPY_SUB_REF_CONTACTS	Set as Y or N to copy Sub References on Rebook, contact details only i.e. SMS and Email details	COST_CENTRE
OMS_ALTERNATE_REBOOK	Alternative Rebook Functionality	COST_CENTRE
REBOOK_ALT_STATUS	If set to Y when an order is rebooked the original orders status will not be changed	SYSTEM
ORD_ENHANCED_REBOOK	Controls which rebook screen is displayed in the orders form	COST_CENTTRE
REBOOK_REQ_SUBREF	Add Rebook Sub reference when CBR exception added to item	SYSTEM
REBOOK_SERVICE_LEVEL	Service Level For rebooked orders when set to copy use existing	SYSTEM

9 Carrier Trip Management

Carrier Trip Management (CTM) is a module within the C-TMS application that can be used to manage those trips that require a third party carrier to perform the trip and therefore the haulage, loading and unloading of orders associated with that trip.

CTM has been written in order to improve the communication process that occurs between the Planning Centre and Carriers. Currently automatically generated messages are used to make a carrier aware of the trips that they have been invited to perform. The carrier then responds to this email to inform the planning centre whether they wish to Accept or Reject the Trip. However, there can sometimes be a delay in the time taken to create, send and deliver the messages to the recipient. In addition it leads to a lot of paperwork and is sometimes confusing to the carrier.

Not all Carriers have access to the C-TMS screens and may wish to continue to receive email notification, it is possible to have some Carriers using email and some using CTM and is down to the configuration in a particular database.

The concept of CTM has been introduced to provide the carrier with a view of the C-TMS database from a specially designed form for the trips that have

1. Been invited to the carrier for undertaking
2. Been amended by the planning centre
3. Been rejected by the carrier
4. Been accepted by the carrier
5. Been accepted by the carrier and are now En-Route
6. Been accepted by the carrier and have now been Completed.
7. Been deleted
8. Been abandoned

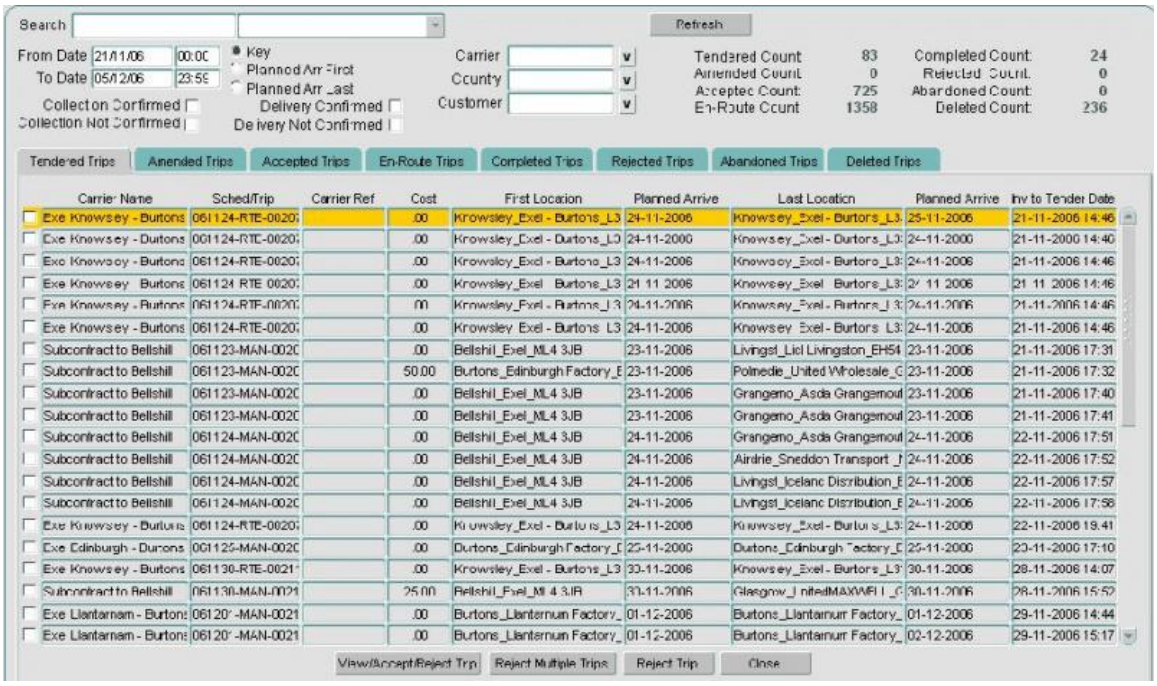
The information that is displayed is specifically tailored to meet the requirements of Planners and Carriers who are involved with the Tendering, Accepting and Rejecting of Trips.

There are 2 main groups of users for CTM, the Planning Centre and a Third Party Carrier. Typically the view of information that the Planning Centre will be able to see is more detailed than the view of information that a given Carrier will be able to see.

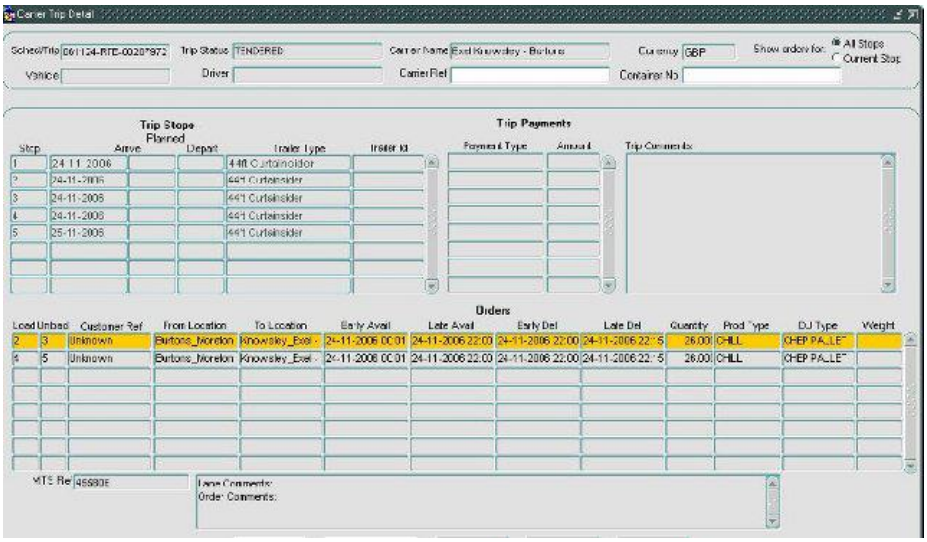
Once logged onto the application and depending on access rights users are able to:

1. View high level trip data.
2. View detail trip data.
3. View high level order data associated with a given trip.
4. View detail order data using a link to the Order Detail form.
5. Accept to undertake a trip.
6. Reject to undertake a trip, providing rejection comments.
7. Reject to undertake many trips at the same time, providing the same rejection comments for all trips rejected at the same time.
8. View trips that have been amended by the Planning Centre and either Accept or Reject them again depending on the amendment.
9. View trips in a variety of different statii.
10. View a count of the number of trips in each of the different statii.
11. View information about a trip and its orders in Tender Invitation or Manifest format.
12. Filter the information that they see within the form by applying date, country, customer and carrier filters.
13. Search for a given trip by Trip Ref (Bill of Lading) or Schedule/Trip combination.
14. Search for a given order by C-TMS Ref or Customer Ref.
15. Chase carriers for a trip that they have not accepted or rejected.
16. View and enter the Carriers Reference for a particular Trip.

The main screen layout for CTM is as follows, this provides an overview of the Trips in a particular status: -



It is also possible to see a more detailed view of a Trip, this often needs to be viewed to allow the Carrier to make a decision about Accepting or Rejecting the trip.

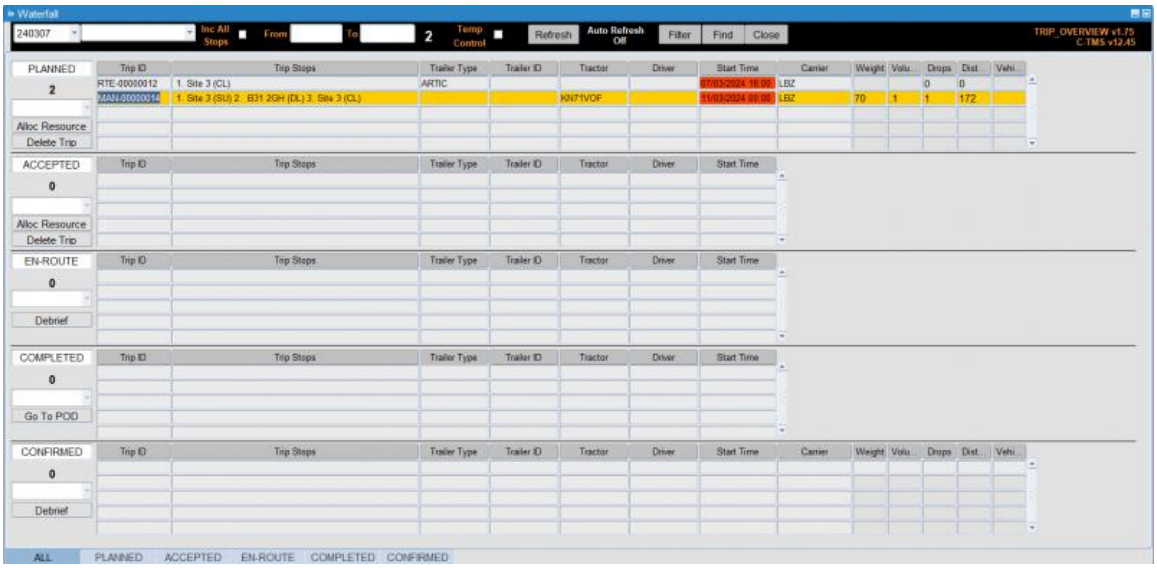


In those situations where a Carrier is permitted to debrief the Trips they have undertaken, the above screen will allow the Carrier to open the Order Debrief screen to debrief the Orders they have delivered on the Trip. This mechanism provides a straight forward and efficient means of capturing the actual collection and delivery information from the Carrier.

10 Trip Overview (Waterfall)

The Trip Overview is used to give the user a general overview of all trips on a particular Schedule, sectioned into Statuses. If required, all trips with a particular status can be displayed on a page of their own using the tab pages at the bottom.

The Trip Overview or Waterfall screen allows you to view multiple trips and move them on by status all in one place, also allowing the user to allocate or change resources and debrief the trips. The screen can be accessed through C-TMS Modules/ Trip Management/ Trip Overview (Waterfall) menu option.



This screen can be used to Allocate Resources to Planned and Accepted trips, Debrief trips which are En-Route or Confirmed and update PODs for trips at status of Completed.

10.1 Basic Usage

Initially, the screen displays all trips for the current schedule.

You can change the filters at the top of the screen to change the trips displayed:

- Schedule - The Schedule defaults to the current date but the drop down list button shows all other available schedules.
- (Depots) - the drop-down list next to Schedule. This field allows the user to select "All depots" or filter trips to show for a specific Depot. This is based on user privileges. (See Access and Login Guide).
- All Stops check box.
- From/To - The date range fields can be used as an alternative to using a schedule. The Schedule field must be blanked out prior to putting in a date range.
- Temp Control check-box.

You can apply the filter with the **Refresh** button.

10.1.1 Total Order Count

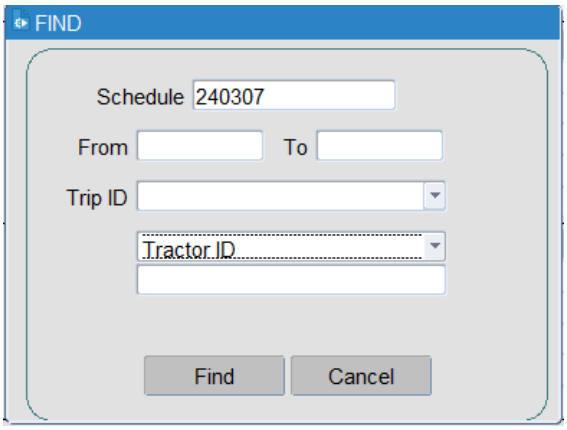
There are two indicators that give you the Trip order count after the search parameters have been entered. The first being the total amount Orders against all the trips shown at the top of the form, the other being by Trip Status shown to the left of each panel.

10.1.2 Refresh

If you press the **Refresh** button the screen will refresh and show any changes that have been updated by other users. There is an option to auto refresh the screen. (See Preferences)

10.1.3 Finding Trips

The buttons at the top of the screen are used to help you find specific trips and each section can have its layout configured to suit your needs. The number below each status, in bold, is a count of the number of trip in that particular status for the schedule selected from the drop down list.



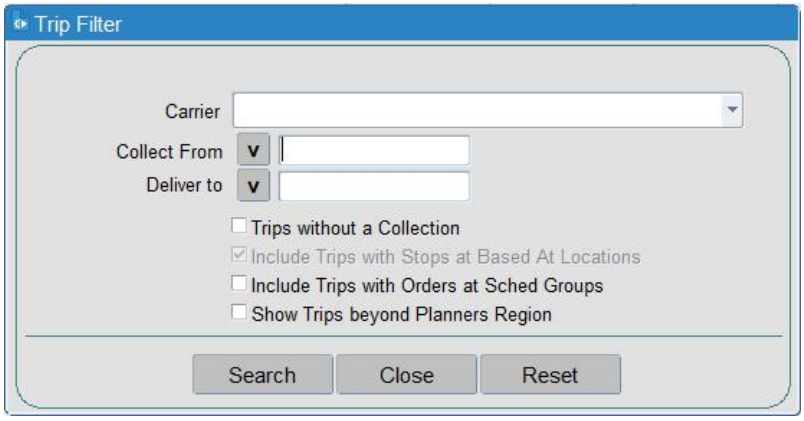
The trips can be found by clicking the **Find** button and entering the following criteria:

- Schedule - The Schedule defaults to the current date but you can enter any available schedule.
- From/To - The date range fields can be used as an alternative to using a schedule. The Schedule field must be blanked out prior to putting in a date range. After the date range has been entered you should press the **Refresh** button for the data to be populated.
- Trip ID - an optional drop-down list of available trips.
- One additional other optional criteria from the following list:
    - Trip Ref
    - Order No
    - Booking Ref
    - Customer Ref
    - Container No (Trip)
    - Container No (Order)
    - Bill Of Lading (Order)
    - EFX Ref (Trip)
    - EFX Ref (Order)
    - Trailer ID
    - Driver
    - Tractor ID

When found, the screen will display all matching trips in the appropriate sections of the screen.

If you decide not to use the find trips you can click the **Close** button to exit the screen and return back to the overview without any changes taking affect.

10.1.4 Filtering Trips



The trips can also be filtered using the following criteria:

- Carrier - a drop-down list of all available carriers you your user.
- Collect From - a list of location from which the orders are being collected. You can use the **v** button to initiate a pop-up lookup.
- Deliver To - a list of location from which the orders are being delivered. You can use the **v** button to initiate a pop-up lookup.
- Checkboxes can also apply a filter:
    - *Trips without a Collection* - this is initially unchecked.
    - *Include Trips with Stops at Based At locations* - this is initially checked.
    - *Include Trips with Orders at Sched Groups* - this is initially unchecked.
    - *Show Trips beyond Planning Region* - this is initially unchecked.

You can apply the filter with the **Search** button. You can exit without changing the filters with the **Close** button. You can reset the filters to the default values using the **Reset** button.

When found, the screen will display all matching trips in the appropriate sections of the screen.

10.2 Configuring the Layout

Each table layout is configurable - right click on the table in the *ALL* tab and select *Configure Layout*.

The Layout can be given a name and save as the Default layout. Multiple layouts can be created but note these are only layouts for the current logged on User.

The Yellow highlighted rows are the columns currently being used. They can be deselected by holding down the CTRL key and clicking the line. This same function is also used for adding new columns to the layout. The display size of individual fields can be amended down to the minimum width to allow more fields to be added.

The columns are:

- *Column* - This is a full list of all the columns that can be added to the layout.
- *Curr Width* - This is the current Width of the fields
- *Min Width* - This is the minimum width of the fields
- *New Width* - You can enter a new Column Width, this cannot be less than the minimum width
- **Ok** button - when happy with your selection you should press this, which will return you back to the overview screen.
- **Delete** button - This button deletes a column from the list. This button does not work unless the privilege has been given to you to do so.
- **Cancel** button - To Cancel any changes you should click the **Cancel** button, which will take you back to the overview screen without making any changes

Note that each status section can have its own respective layout.

Note that at the bottom of the screen there are two view only fields that show the user the Current total selected Width and the Maximum allowed Width. Ensure that by adding additional fields the size remains within this maximum allowed width, or you will not be able to save or apply the layout.

Each trip status table can be configured with a different layout. If you have a saved layout configuration for a particular trip status, you can select it from the drop-down list on the left of the table.

The configured layout applies to the trip status on the *ALL* tab and on the specific trip status tab, selected from the bottom of the screen.

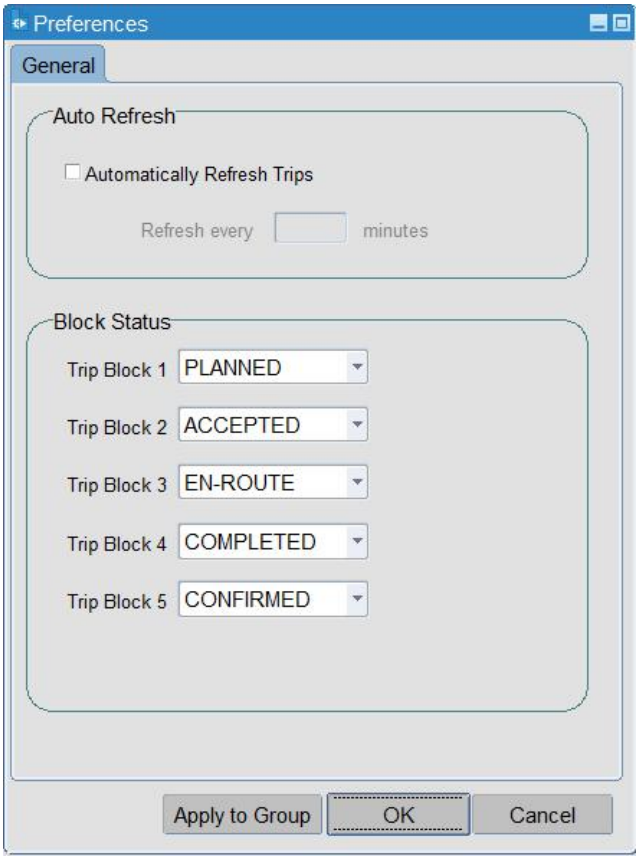
10.3 Status Tabs

At the bottom of the form you have the ability to see all trips by their respective status. All blocks can be expanded to show all the trips with the respective status.

On these specific status tabs, you can see the same columns that have been configured in the layout against each status section.

10.4 Preferences

The tabs can be configured as to which trip status to display on each tab. You can access this through the right-click *Preferences* option against any trip status table.



You can select which statuses to display in the screen, up to 5.

You can also set the auto-refresh settings from this pop-up window. This will enable the auto-refresh functionality and set the refresh time.

You can also switch auto-refresh on or off from the main screen heading.

If you switch on auto-refresh, this screen can be used as a real time monitor of trip statuses.

10.5 Actions

Each trip status allows different available button functionality, as below:

- PLANNED/TENDERED/ALLOCATED status:
  - **Alloc Resources**
  - **Delete Trip**
- EN-ROUTE/CONFIRMED status:
  - **Debrief**
- COMPLETED status:
  - **Go To POD**

Each panel has right-click options:

- Common to all statuses:
  - *Refresh*
  - *Configure Layout*
  - *Set Trip Status*
  - *Set Sub Contractor*
  - *Remove Sub Contractor*
  - *Desp Conf Message Hold*
  - *Preferences*
  - *Edit Trip*
  - *Run Report* - the screen will display a popup window showing any extracts which have been configured for use in the Waterfall screen. You can then select and run the extract and the results will be downloaded through your browser. A list of all extracts including those specified for use in the waterfall screen can be found in the Extracts List.
- PLANNED/TENDERED/ACCEPTED status
  - *Remove Driver*
  - *Remove Tractor*
  - *Remove Trailer*
  - *Allocate Resources*
  - *Delete Trip*
- EN-ROUTE/COMPLETED/CONFIRMED status
  - *Debrief*

10.5.1 Set Trip Status

Right click to see the option to set the status. Note that a single trip line will need to be highlighted in order to move the status on for that trip.

The exception to this is when setting multiple trips to ACCEPTED status - you can select multiple trips when doing this.

When changing a trip status from ACCEPTED to ENROUTE a message is displayed informing you that a departure time must be entered. Press **OK** to enter the departure time.

10.5.2 Allocate Resources

Select a trip from the well that you want to allocate resources to, then click the 'Alloc Resource' button.

The Allocated Resources screen will be displayed - depending on your configuration, it may be one of two:

- Allocate Resources
- Allocate Resources (Diary)

10.5.3 Debrief

Clicking the **Debrief** button or selecting the *Debrief* action option will take you into the Trip Debrief screen when you can debrief the trip as normal. This guide does not cover the debrief process, but this is covered in a separate guide.

10.5.4 Go to POD

Clicking the **Go to POD** button will again take you into the Trip Debrief screen when you apply a POD.

10.5.5 Edit Trip

Yoiu can right-click on any single trip in any tab and select *Edit Trip* - this will take you to the planning screen, showing the schedule and trip selected.

You can also double-click any trip on any panel to do the same.

10.6 Trip Completion

At the end of a working day all status blocks should be completed with the exception of "Completed" and "Confirmed".

You can press the **Close** button to close the waterfall screen.

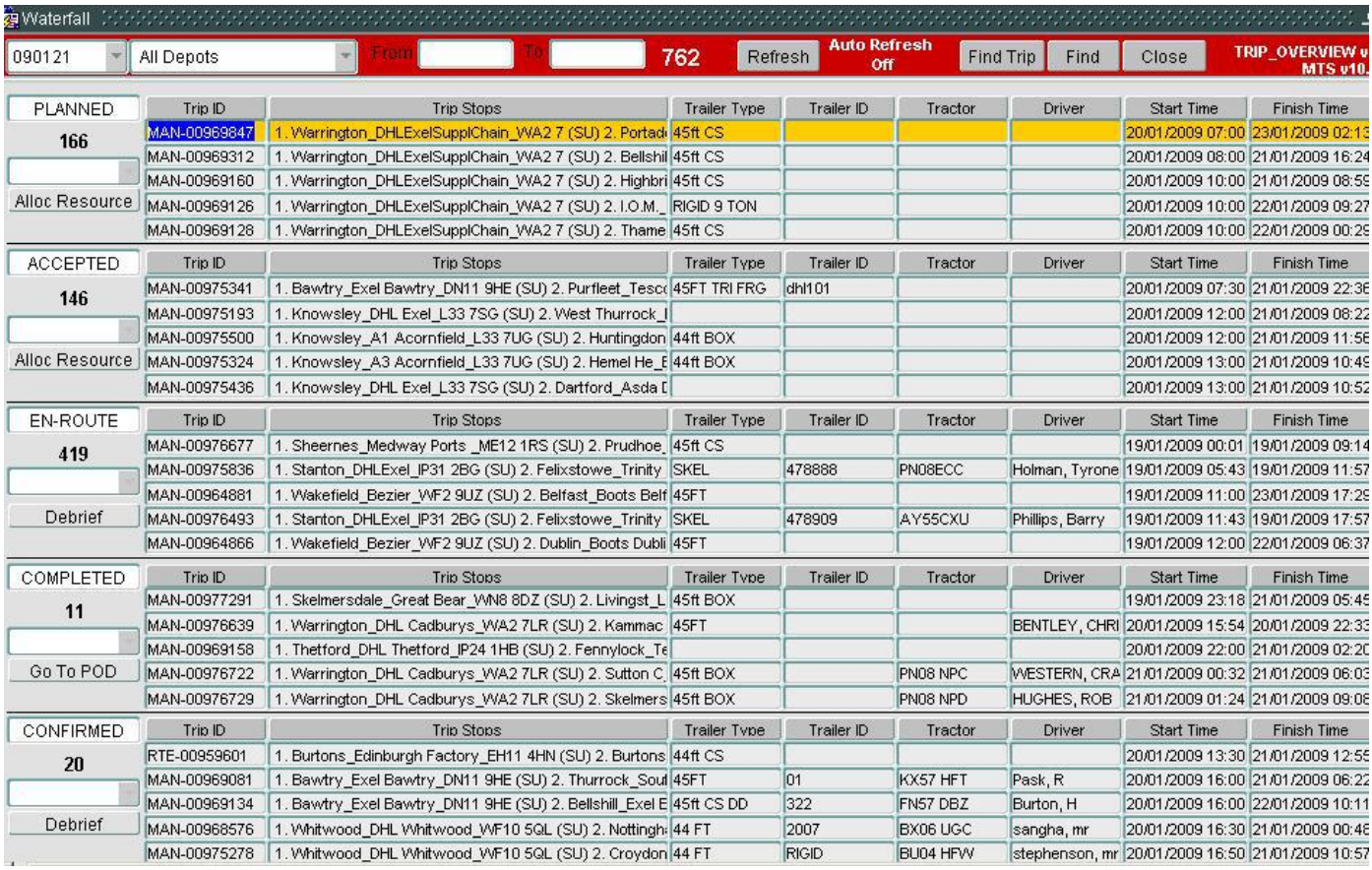
10.7 Further Configuration

The following system parameters affect this functionality:

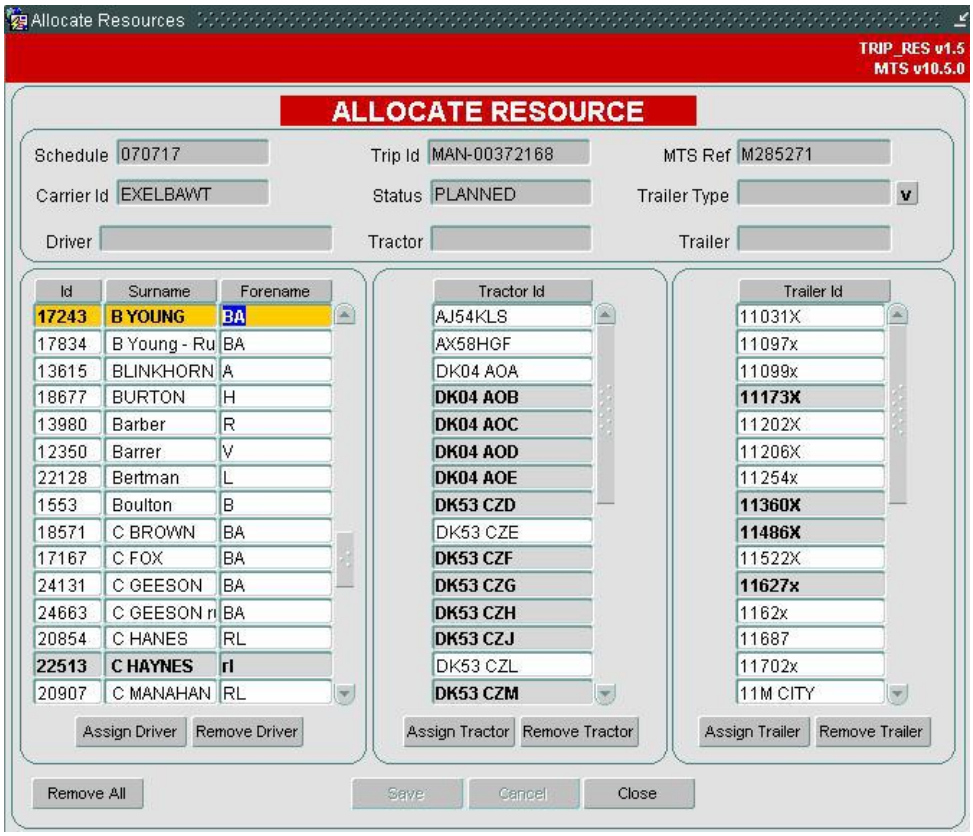
Parameter	Description	Level
TRIP_OVERVIEW_CURRENT_TYRES	Use the current quantity of tyres in the Trip Waterfall screen (Y/N)	SYSTEM
TRIP_TRAMPS_ON_WATERFALL	Allow tramping trips to be shown in waterfall form by date not schedule	SYSTEM
TRM_HIGHLIGHT_OVERDUE_FINISH	Trip Status used in Trip Overview screen to highlight overdue finish time	SYSTEM
TRM_HIGHLIGHT_OVERDUE_START	Trip Status used in Trip Overview screen to highlight overdue start time	SYSTEM
TRM_ORD_OVERVIEW	Include Orders in Trip Overview screen	COST_CENTRE
TRM_OVERVIEW_AMBER_TIME	Time allowed before start and finish times are amber in TRIP OVERVIEW	SYSTEM
TRM_OVERVIEW_RED_TIME	Time allowed before start and finish times are red in TRIP OVERVIEW	SYSTEM
USE_PACK_QUANTITY	Use the current quantity of tyres in the Trip Waterfall screen (Y/N)	SYSTEM
WATERFALL_UPDATES	control updates on the waterfall screen	SYSTEM

11 Allocate Resources

The Allocate Resources screen is only accessible via the **Alloc Resource** button in the PLANNED and ACCEPTED sections of the Trip Overview screen. You can see an example of this in the screen below:



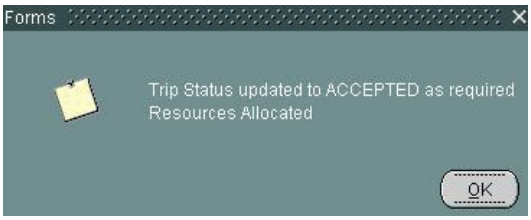
Select a trip from the well, that you want to allocate resources to, then click the **Alloc Resource** button. The screen below will be displayed:



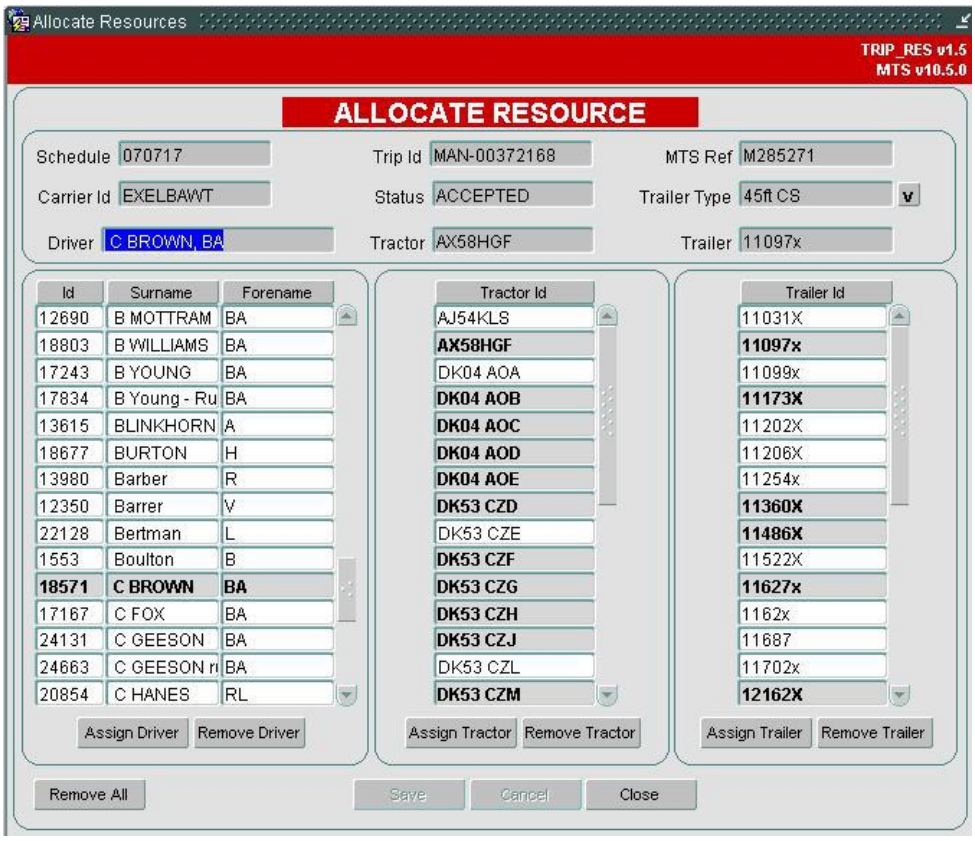
The Drivers, Tractors and Trailers that appear in the bottom of the screen are those available to be allocated to the current trip. Only Drivers and Tractors linked to the Carrier assigned to the trip are available for selection. If a Trailer Type has already been assigned to the trip then only Trailers linked to that Trailer Type are available for selection, but if no Trailer Type has been assigned, then all Trailers will be available. See the Resources screen for the set up of these links. Note that if a Trailer Type has already been assigned when entering the form, you will be unable to change it at this point.

If a Trailer Type has not been assigned, this can be done using the **V** lookup button next to that field in the header. Those resources that are currently in use between the trips start time and finish time are high-lighted in grey to show you they are currently in use, although they can still be allocated.

To assign a resource, select it from the list and click the associated **Assign** button. When assigned, the name/id will appear in the header. Use the **Remove** button if a resource needs to be removed. Once happy that resources have been added, click **Save**. If during a **Save**, all resources have been added to a PLANNED trip, the system will automatically update the trip status to ACCEPTED. You will get a message like below:



Clicking **OK** will update the status in the header to ACCEPTED as shown:



When you **Close** the form and return to the Trip Overview screen, the trip will now be moved from the PLANNED section to the ACCEPTED section.

12 Allocate Resources (Diary)

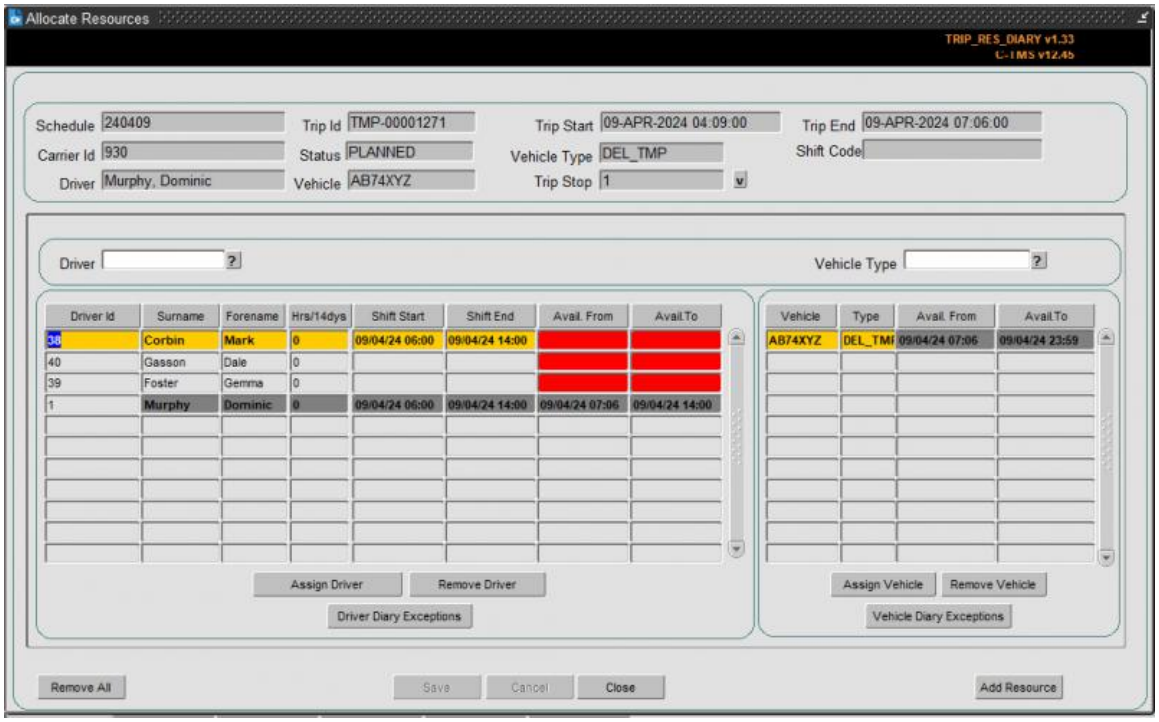
The Allocate Resources (Diary) screen is accessible via the **Alloc Resource** button in the PLANNED and ACCEPTED sections of the Trip Overview screen and through the Planning screen.

In order for this functionality to be available, the system parameter RES_AVAILABILITY_ALLOC must be set to "Y" for the applicable cost centre - you can use the System Parameters screen to do this.

From the Waterfall screen. select a trip from the well, that you want to allocate resources to, then click the **Alloc Resource** button.

From the Planning screen, select to resource a driver, tractor or trailer against a trip or trip stop.

The screen below will be displayed:



Note: All fields on the driver and vehicle part can be sorted by clicking on the button above that column.

The Drivers and Vehicles that appear in the bottom of the screen are those available to be allocated to the current trip.

Only Drivers and Vehicles linked to the Carrier assigned to the trip are available for selection.

If a Trailer Type has already been assigned to the trip then only Vehicles of that Trailer Type are available for selection. Only Drivers that can drive that Trailer Type will be available for selection.

If no Trailer Type has been assigned, then all Drivers and Vehicles will be available.

See the Resources screen for the set up of these links.

You can filter drivers and vehicles using the filters above each panel, and then clicking the **?** button to the right.

The screen displays the availability of the drivers, based on their assigned shifts and resource diary. If the driver has been assigned to another trip, this will be accounted for in the availability.

The screen displays the availability of the vehicles, based on their assigned trips and VOR/Inactive status.

RAG colouration is applied to make it easy to see which drivers and vehicles are available.

- GREEN - available
- RED - unavailable for any of the reasons above.

The Driver column marked Hrs/14dys is an indication of the hours the driver has worked in the last 14 days, allowing you to take into account a driver working too many hours.

The currently allocated driver and vehicle are displayed in the top of the screen, and darkened in the driver and vehicles lists.

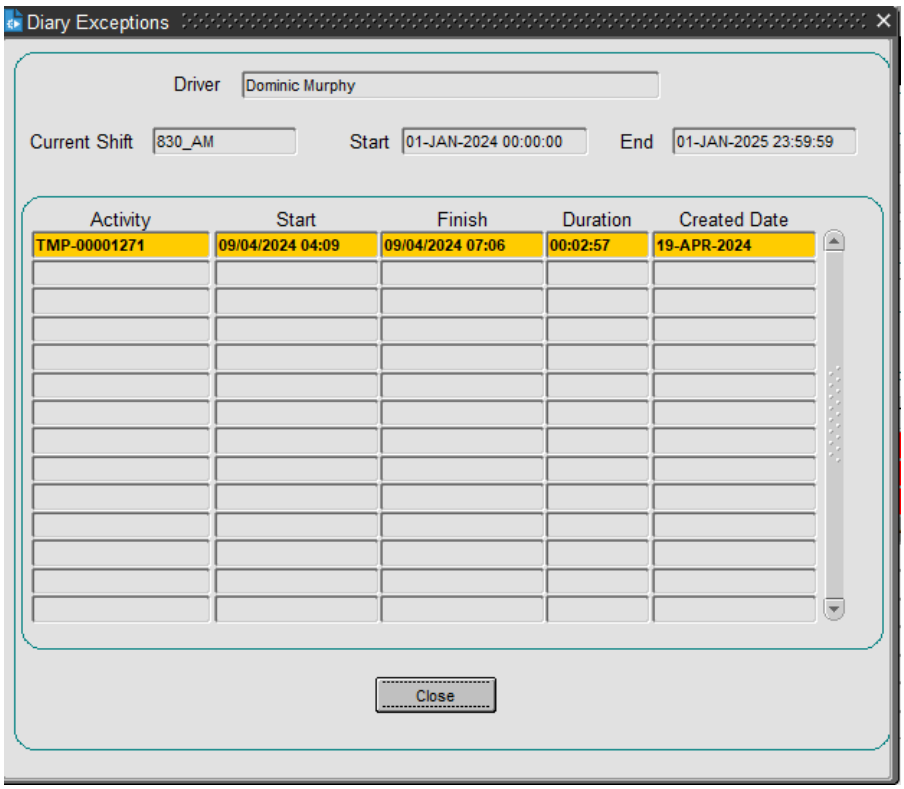
If a Trailer Type has not been assigned, this can be done using the **V** lookup button next to that field in the header.

Those resources that are currently in use between the trips start time and finish time are high-lighted in grey to show the user they are currently in use, although they can still be allocated.

To assign a resource, select it from the list and click the associated **Assign ...** button. When assigned, the name/id will appear in the header. Use the **Remove ...** button if a resource needs to be removed.

You can remove all resources applied to the trip using the **Remove All** button provided.

You can view the resource availability in detail using the **... Diary Exceptions** buttons provided.



Note: When you add the last resource for this carrier, the screen will warn you of this in a pop-up.

Whilst in this screen, you may need to add or change a resource to make them available for the trip. You can do this by clicking on the **Add Resource** button - you will be taken to the Resources maintenance screen.

Once happy that resources have been added, click **Save**. If during a **Save**, all resources have been added to a PLANNED trip, the system will automatically update the trip status to ACCEPTED.

13 Fixed Routes

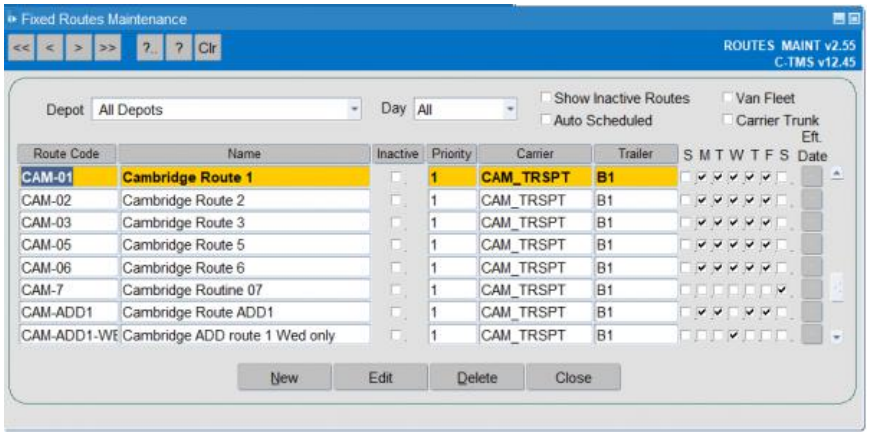
Fixed Routes is a module within C-TMS that provides a mechanism to define a set of "template" Trips that can be built from a pool of unscheduled orders. This functionality will typically be used to try and plan certain trips before sending the remaining unscheduled orders to an external scheduling tool or building them manually. Typically these Trips will be key routes that are repeated on a frequent basis.

Fixed Routes consists of two areas, configuration and execution. Two screens, Fixed Routes Maintenance (ROUTES_MAINT) and Fixed Routes Execution (ROUTES_EXEC) are used.

13.1 Fixed Route Configuration

You can access Fixed Routes Maintenance from the C-TMS Modules/Maintenance menu.

The following form opens:



The screen automatically displays active routes for all depots your user has access to on all days, for fixed routes that can be manually run.

Note: The list of fixed routes will be automatically restricted to your user's accessible depot, set through Access Control. Your user will either show all depots, or will be restricted to a single depot.

You can change what is displayed on this screen through the criteria at the top of the screen

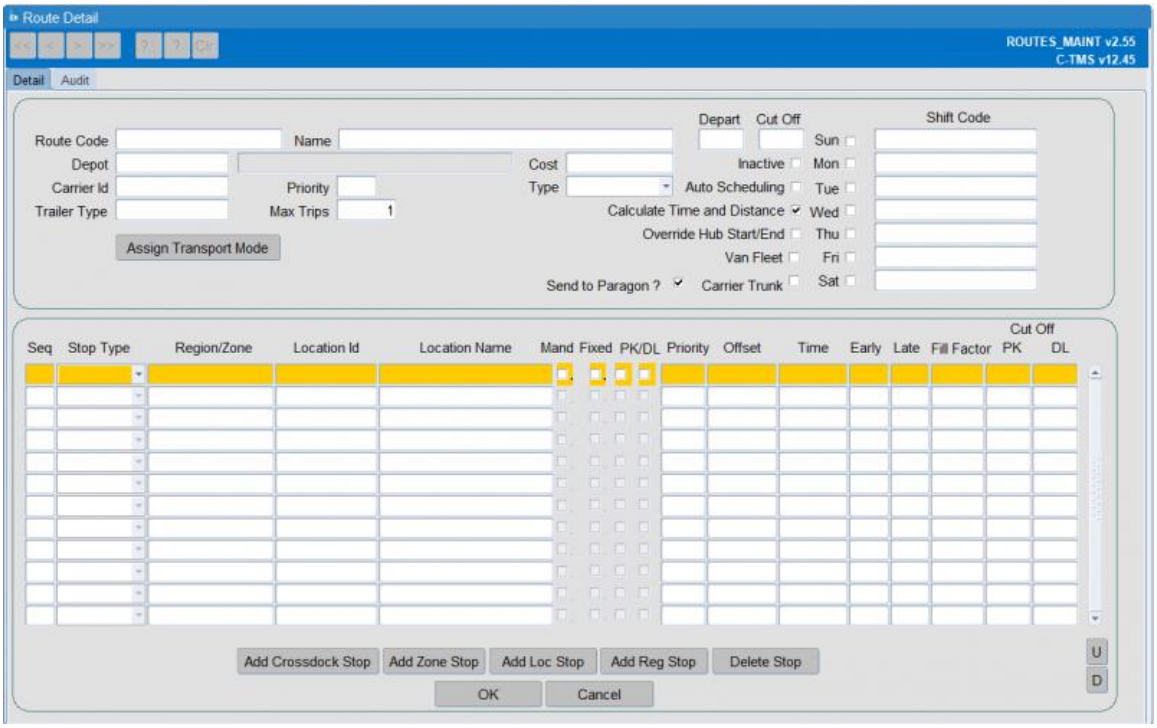
- *Depot* - you can select the depot from the drop-down list to filter the list of fixed routes shown.
- *Day* - you can select the active day from the drop-down list - all routes that are active on at least that day are shown
- *Show Inactive Routes* - you can check this box to show just routes that are currently inactive, so that you can re-enable them if required.
- *Auto Scheduled* - you can check this box to show Auto-scheduled fixed routes, as opposed to manual run fixed routes.
- *Van Fleet* - you can check this box to show just Van Fleet fixed routes.
- *Carrier Trunk* - you can check this box to show just Carrier Trunk fixed routes.

From here, you have the following buttons:

- **New** - create a new fixed route - see New Route below.
- **Edit** - click an existing route in the list and then this button and you can edit an existing route - this will allow you to change fixed routes similarly as to when creating a new route.
- **Delete** - click an existing route in the list and then this button and you can delete an existing route - you will be prompted for confirmation.
- **Close** - close this form.

13.1.1 New Route

"Fixed Routes" are used to automatically allocate orders onto predetermined trips; new routes can be created by selecting the **New** button which will take you into the screen shown below



The route code will govern the order in which the routes are displayed in the main screen.

The "Name" should concisely describe the route detail.

The "Depot" is the one with which the route is associated and the "Priority" will control which route takes an order if there are two possibilities (i.e. one order could allocate to two different routes).

The "Carrier ID" field determines the carrier that will be associated when the route is generated.

Likewise the "Trailer Type" field will determine the trailer associated with the trip and the "Cost" populates the MTM cost field on the trip detail tab, note this is for reference and not applied to the trip in the fixed route process.

If a Trailer Type is assigned it will be assigned to all Trip Stops on the created Trip, the Trailer will also be fixed (pegged) so that it cannot be overwritten by trip validation (see Trip Manipulation for further details of fixing Trailers).

Each route can be made inactive if no longer required.

The "Max Trips" number defines the number of each particular route that can be generated, in the example below three trips could be generated provided that there were sufficient orders available. Routes can be allocated to individual days or all through the week.

The "Route End Time" defines the expected end time of the trips created from the fixed route. For most scheduling purposes, this is for information only. The exception is fixed drop scheduling, which uses this to set the return to base time for the CL stop.

The route should be set for the days of the week for which it is active and the "Shift Code" can be applied to each day and is stamped against the trip created.

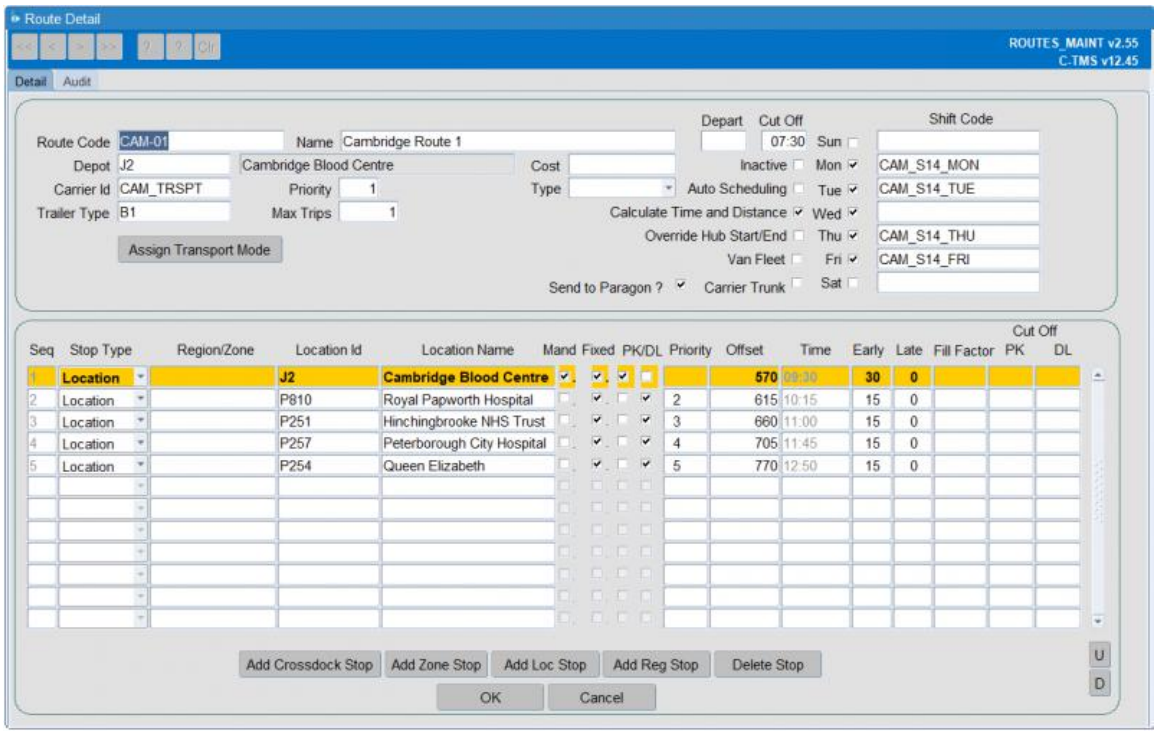
Each Route can be specified for any or all days of the week.

The "Auto-Scheduling" check box determines whether this fixed route should be used by the Scheduling Engine process, or whether this route is used solely by the manual fixed route execution process.

The route can be identified as a Bank Holiday route ONLY through the check box provided.

13.1.2 Route Stops

Stops can be added, deleted or inserted and also moved up and down within the route if desired using the available **U** (up) and **D** (down) buttons.



When setting up a new route, as a minimum two route stops must be added - the origin and destination locations need to be entered, a close-down location for own fleet is not required as this will adhere to the standard carrier Hub location functionality.

A route stop can be set as a specific single point location or a more general region or zone, encompassing several potential stops contained in an area.

If the Route Stop is defined at a region them the Fixed Routes processing will consider all locations in that region when identifying potential Orders.

Stops can be made mandatory and it must be stated which activity type they are:

- Pick-ups "PK"
- Deliveries "DL"

The "Offset" determines the target time for each stop and the "Early" and "Late" times signify the permitted window for which the round could pick-up at that location. For example, a trip may be able to:

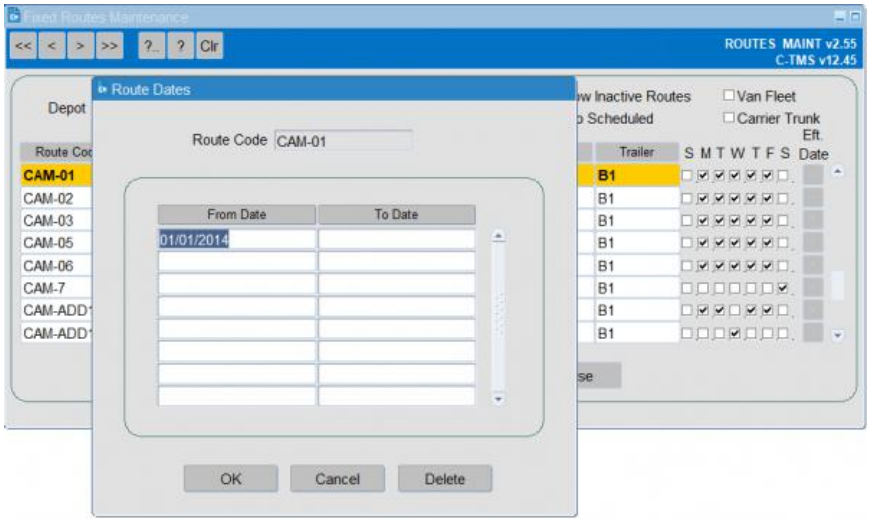
- Collect at stop 1 target time of 10:30 with an early of -30 mins and a late of +0 mins which creates a window between 10:00 day and 10:30 on the schedule day
- Deliver at stop 2 target time of 11:00 with an early of 10:45 and late of 11:00

Note: The times are calculated in total minutes from midnight on the schedule day i.e. midday 12:00 is represented by 720 minutes. Negative numbers can be used to indicate times before the schedule day.

It is possible to "Fix" the times on a Route Stop at a Location so that they don't get recalculated as part of Recalculate Distance and time. **Note:** It is not possible to fix times at Region stops as it is possible that C-TMS may identify a number of Orders within that region resulting in multiple Trips stops being created from single Route Stop. If a number of optional stops are entered they must be prioritised in order of importance, this way it is possible to define the order in which stops are considered within Fixed Routes allowing C-TMS to fill the important stops before considering the less important stops.

13.1.3 Effective Dates

The routes can be marked with an "Effective date" so that they are considered active while effective dates are in force.



The effective dates functionality will allow date ranges for which each route is active and this will allow specific routes to be setup on bank holidays or other key days where a reduced schedule might be operated.

The effective dates are not mandatory, if no records exist on this new table for a route then it will be assumed that there is no limits to how long the route is to remain active and is considered permanently active accordingly.

For a route to be set up specifically for bank holidays then the date ranges entered will be for the bank holiday date or date range.

Note: This function is only effective with the automatic fixed routes execution.

13.1.4 Imports

Fixed routes and stops may be imported through Imports:

- FIXED_ROUTE

13.2 Fixed Routes Execution - Advanced Creation

Note: This is a bespoke process - this is not normally required for scheduling orders onto fixed routes - the normal process is covered in section Fixed Routes Execution - Order Scheduling Engine below.

It is possible to run an automated background in C-TMS process which will generate Trips automatically from Fixed Routes and process any orders in the Order Well which might be applicable to the route.

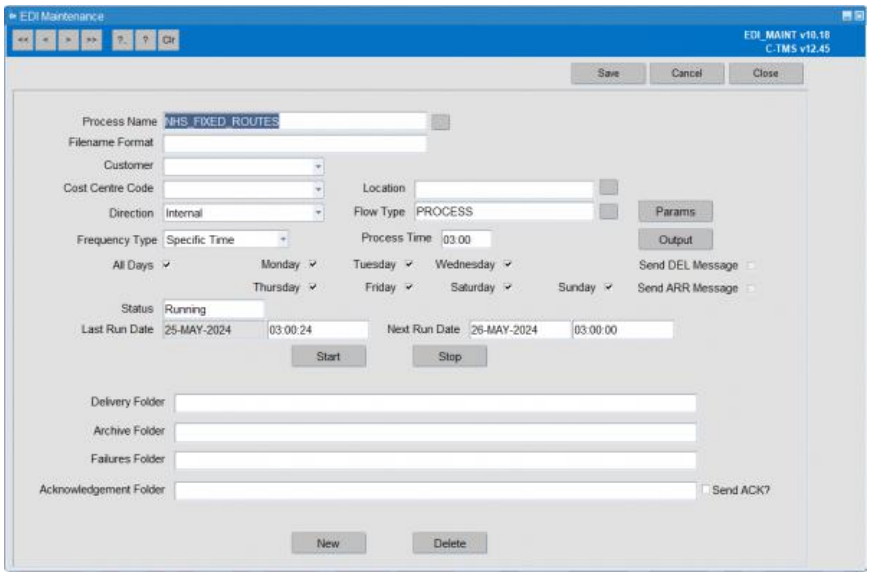
This will run based on an advance schedule date which is determined by a System Parameter SCH_SCHEDULED_ADV_DAYS which is proposed to will be set to 21 days in advance.

This will run in two distinct phases:

1. Generate the trips from the Fixed Routes templates initially for the specific advance schedule day.
2. Assess all the unplanned orders from the order well from the advance schedule day to current and determine if any orders can be planned into existing Fixed Route trips.

13.2.1 EDI Maintenance - Fixed Routes Scheduler

The standard EDI Maintenance form is be used to setup the automated job which will run the Fixed Routes advanced creation processing.



This controls the following:

- The process type - the data validation and trip planning functionality that is applicable.
- The processing frequency - whether the process is running and at what frequency of occurrence.

These processes should always be managed by the EDI_OWNER user ID.

13.2.2 Trip Creation

The fixed route trips (prefixed with "RTE-") will be generated for the schedule 21 days in advance (dependent on the new system parameter "SCH_SCHEDULE_ADV_DAYS") automatically from the fixed routes standing data via an overnight process. This will create trips including all trip stops for each Fixed Route and Route Stop that exist for that particular day and which are active based on the effective dates.

This process will loop through all of the fixed routes data and when active for the appropriate day it will create the trip with its appropriate stops. The trip is created at PLANNED status.

The Trip Header and Trip stops are created as per the Fixed Route template, with the key Route Code, Shift Code, Carrier and Trailer Type set on the trip as per the Fixed Route template.

13.3 Fixed Routes Execution - Order Scheduling Engine

The Scheduling Engine process will plan orders to the appropriate trip stops based on the Route Stop time and location details compared to that of the order collection/delivery locations and associated time windows. If advance creation is not configured, then the scheduling engine process will create the trips automatically for you.

The process will loop through any unscheduled orders (with the appropriate delivery type and schedule name - from current day/time of running up to and including the parameter setting value - recommended setting 21 days) and try to schedule them onto any previously generated RTE trips. The appropriate delivery types are those setup to automatically schedule (Auto Sched is ticked) within Business Data Maintenance.

Fixed Routes also provides the mechanism to part built Trips if only some of the Orders are present and then re-build

them at a later date when all the Orders are present. This stops Orders being sent to the Scheduling tool if it is likely that C-TMS will be able to plan them and is achieved by using the Semi Fixed trip status. If the Semi Fixed Trips have not been turned into complete Trips near to their planned departure point they can be disbanded and all the Orders returned to Unscheduled so that they can be sent to the Scheduling tool to be planned.

A Semi Fixed Trip will be created if either the highest priority optional stop or all stops have not been satisfied or if the fill factor or trailer capacity has not been met at each stop. These options are configurable.

The success or failure of he scheduling engine process can be viewed in the Scheduling Maintenance screen, on the Audit tab.

13.4 Fixed Routes Execution - Manual

There are two main sections to Fixed Routes, the execution and the maintenance. The maintenance of fixed routes will usually be left up to a site superuser or the C-TMS team. This section will therefore concentrate on the manual execution of Fixed Routes.

The aim of fixed routes is to speed up the planning process by anticipating trips that occur on a regular basis. These trips can be created automatically. Fixed routes are set up in the maintenance screen with certain criteria (such as delivery / collection times and trailer fill) which need to be adhered to before the fix route will be used.

C-TMS will create a trip from the fixed route and then proceed to find an order that matches its fixed route's criteria. If it doesn't match the criteria it will disband the trip, if it does then C-TMS will keep the trip and it can be viewed from within the trip manipulation screen.

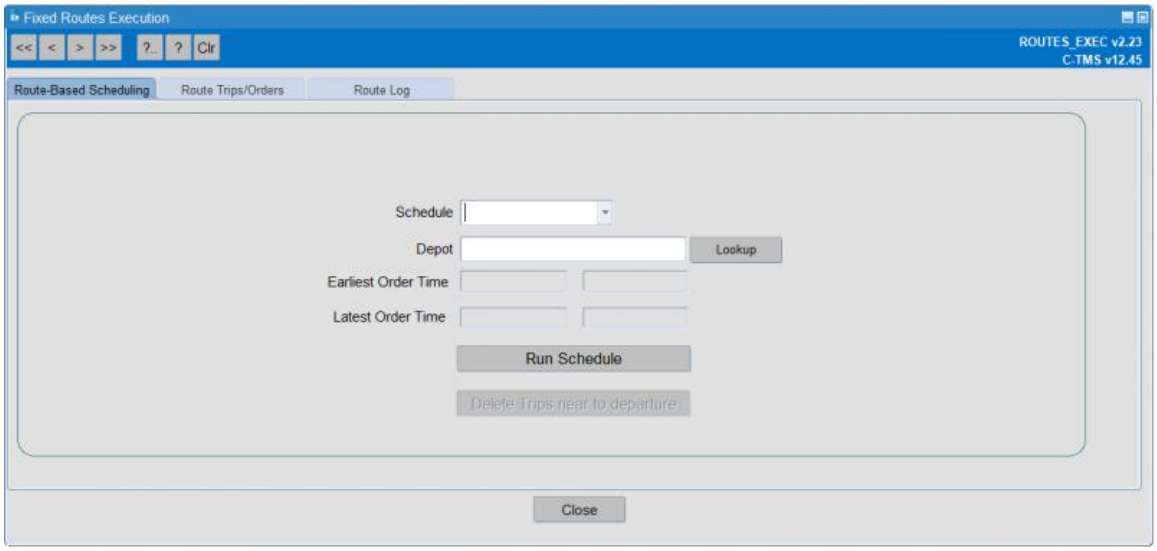
Fixed routes Execution will generally be ran after all the orders for a day's plan have been created.

13.4.1 Running Fixed Routes

Fixed routes execution can be accessed via the drop down menus of C-TMS Modules / Trip Management / Fixed Routes Execution.

Once you are in the fixed routes execution screen, the process for running fixed routes is very simple. You will first need to select the schedule that you want fixed routes generated for. Use the drop down box to select your schedule.

You then need to specify which group of fixed routes you want to run. Fixed routes are grouped by depot which is controlled from the fixed routes maintenance. Each fixed route is assigned to a depot which means that you can run fixed routes one depot at a time. If you do the planning for the whole of your contract you are more likely to select "All" depots at this point which will have the effect of running every depots fixed routes in one go. You can either type the depot location ID straight into the depot box, or you can use the Lookup button to bring up a list of all the depots that you can run fixed routes for.



Once you have selected the depot you can now run your fixed routes. To do this, press on the **Run Schedule** button. You will then be prompted with a message that asks "Applying unscheduled orders to fixed routes Continue?" to which you click **Yes**. This will start the process of matching any unscheduled orders in that schedule with your fixed routes. If these unscheduled orders match all the criteria specified in the fixed routes maintenance screen then the trips will be created.

Execution is performed for a Schedule and optionally for Depot. Access control is used to control which Depots a user can run Fixed Routes for. Upon execution it is possible to identify the day that Fixed Routes is being executed for. The process considers all Routes that are defined to run on the specified day (Note - if 7 day schedules are being used it is possible to select the days within that schedule that fixed routes should execute for) and attempts to match any Unscheduled Orders to the user defined Fixed Routes. Fixed Routes will check the number of Trips that have already been created on that schedule from that Route and will attempt to create trips until it reach the maximum number if sufficient demand exists. Fixed Routes will process all stops that have been defined on the Route on the following order: -

1. Mandatory Pickup - Mandatory Delivery
2. Mandatory Pickup - Optional Delivery
3. Mandatory Delivery - Optional Pickup
4. Optional Pickup - Optional Delivery

If an order cannot be found to satisfy a mandatory stop the Trip will be immediately disbanded. Each time an order is added to a Fixed Route the Trip is validated to ensure that the resulting trip is still valid, if validation fails the Order will be removed and processing will continue. Once a Fixed Route has been built additional checks are performed to ensure that the required stops have been included and that the trailer of fill factor has been satisfied, if not the Trip will either be disbanded or set to SEMI_FIXED. A system parameter defines the measure that is used to calculate fill factor, this is either RPE, weight or volume. Finally the Trip is set to its final status, usually TENDERED or ACCEPTED. During this process a comprehensive Audit log is written and is visible from the Fixed Routes Execution screen. From this log it should be possible for users to identify the reason why a route has not built. In addition to the Audit Log the Fixed Routes Execution screen also allows a user to view the Trips that have been created via Fixed Routes and also the Orders that have been assigned to the Trips.

When C-TMS has completed the fixed route execution process it will inform you via the Route based scheduling message. This message will give you details of the number of trips created from fixed routes and the number of orders that were placed on those trips. It will also detail the number of trips that were subsequently disbanded because the criteria on those fixed routes were no met (i.e. the volume was too much or too little, or the time windows on the order did not match the time windows on the fixed route).

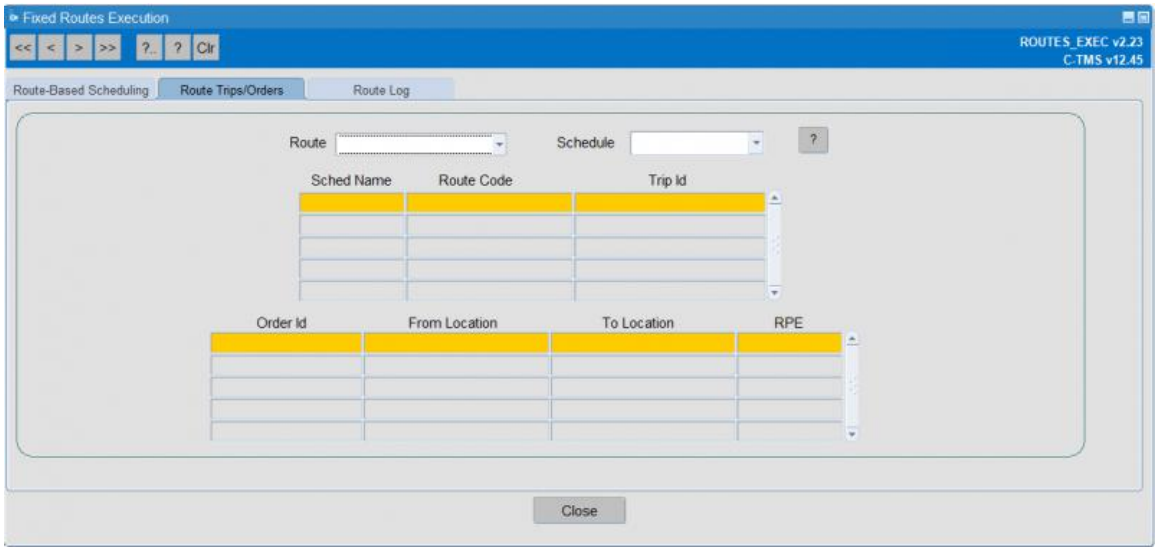
You will also note that the message details the first and last messages to look between within the fixed routes log.

You can now click on the **OK** button and go and view the trips you have just created in the trip manipulation screen.

13.4.2 Viewing Generated Fixed Route Trips/Orders

Staying within the fixed routes execution screen you will notice that there are two further tabs, the middle of which is labelled 'Route Trips/Orders'. The 'Route Trips/Orders' tab allows you to view the fixed routes that have successfully had

trips created from them. It will detail information regarding the orders that have been placed onto those fixed routes, the C-TMS trip ID number, the collection and delivery locations and the RPE (roll pallet equivalent). The "Route Trips/Orders" tabs are displayed.



You are able to search for the information via two different filters. You can either search by "Route" or by "Schedule". The route is referring to the fixed route ID which was set up in fixed routes maintenance. The **?** button activates the filter.

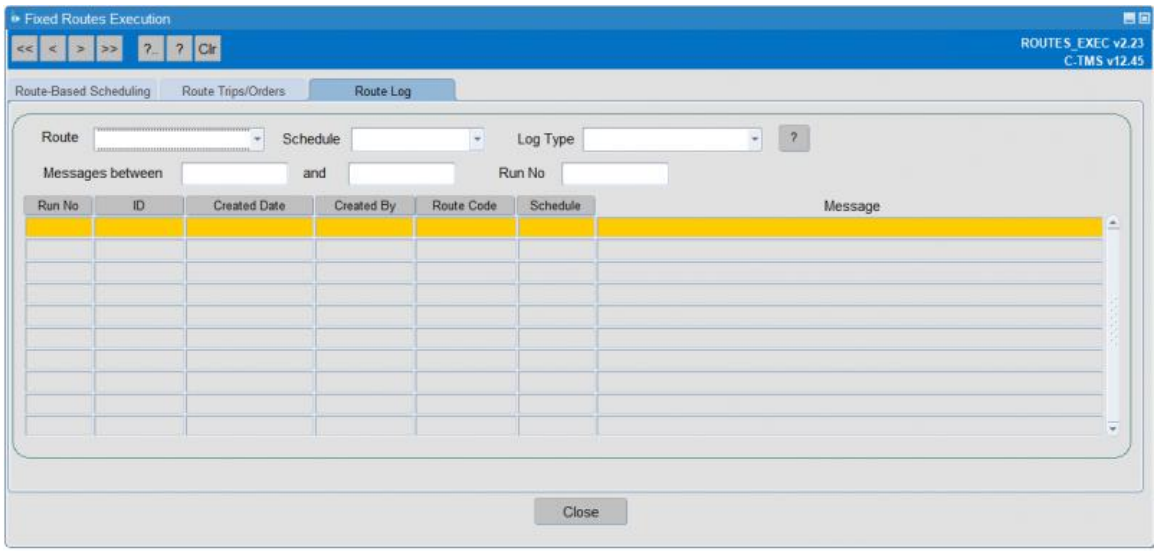
You then see the details of all the trips that have been created from a particular fixed route.

The bottom box containing the 'Order ID' etc. is showing the order details pertaining to the highlighted trip in the top box.

The other filter option is the schedule, which can be activated in the same way as you activate the route filter. This will detail the trips that have been created within the schedule provided.

13.4.3 Viewing the Fixed Route Log

The end tab on the fixed route execution screen is the Route Log. This will enable you to dissect the processes that C-TMS has followed when it has ran fixed routes. This can be used to understand the reason why a trip from a fixed route was not created when it might have been expected to do so. It will be in a technical language and may be difficult to dissect, but you will often be able to get to the bottom of a problem using this functionality.



Each line in the main table displays details of each step taken by C-TMS within its fixed routes execution process. It gives you an audit on who ran the fixed routes and when they were ran. It tells you the fixed route code and schedule that the message belongs to, and it gives the message itself. The message is a description illustrating the "thought process"

undertaken by C-TMS within that particular step.

You are able to filter this data in several ways using the different drop down boxes and free text boxes available. You could filter the data by fixed route ID (using the "Route" drop down box), the schedule, the log type, and perhaps most usefully of all, the messages between boxes. This is where you can enter the numbers that were given to you when you ran your fixed routes. After fixed routes execution has finished you are prompted with a note that details the messages between numbers that relate to that run of fixed routes. You should note those numbers and enter them into the messages between boxes within this screen. Whichever filter method you go for, you will be able to action it by pressing on the **?** button.

13.5 Further Configuration

The following system parameters affect this functionality:

Parameter	Description	Level
RTE_LOG_DEL_DAYS	Number of days that Fixed Routes log messages should be kept for	SYSTEM
RTE_MAINT_RDC_ALL_USAGE	Allow the values for the fixed route locations to include an RDC location when the depot has not been assigned to a customer or a customer group (Y/N)	SYSTEM
RTE_ORDERS_ASC_OR_DESC	Should orders be orders in Ascending or Descending order (ASC or DESC)	SYSTEM
RTE_PLAN_BY_REGION	Allow Fixed Routes to plan by Postal Region or Planning Region, values are PL and PO.	SYSTEM
RTE_PRIORITISE_URG_LATE_ORDS	Controls whether urgent and late orders are to prioritised in the Fixed Route process.	SYSTEM
RTE_REGION_AND_ZONE	Will fixed routes crossdock by planning region and location zone? (Y/N)	SYSTEM
RTE_SCHED_OFFSET_HRS	Fixed Routes Schedule Offset in hours	SYSTEM
RTE_SEMI_FIXED_CAPACITY	Determines whether capacity is checked by FILL or TRAILER capacity.	SYSTEM
RTE_SEMI_FIXED_FUNCTION	Should trips go to SEMI_FIXED if they are not optimum, Y or N.	SYSTEM
RTE_STOPOVER_MINS	Default number of minutes for a stopover for the network route.	COST_CENTRE
RTE_TRIPS_DEL_DAYS	Fixed Route RTE Trips in status DELETED on schedules older than this value will be deleted	SYSTEM
RTE_TRIPS_FIN_STATUS	Fixed Routes final status	SYSTEM
RTE_TRIPS_TO_ACCEPTED	Defines if ACCEPTED or PLANNED Trips are deleted in Rev TI, if yes then ACCEPTED, otherwise PLANNED - Y or N	SYSTEM
RTE_USE_CROSSDOCK	Should Fixed Routes allow crossdocks to be used.	SYSTEM
SCH_SCHEDULE_ADV_DAYS	Determines how many days in advance to generate fixed routes Schedule	SYSTEM

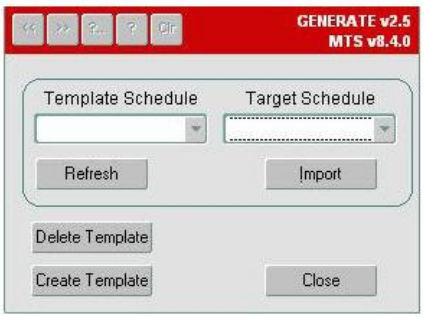
14 Fixed Templates

Fixed Templates provides functionality to copy an entire Schedule of Trips, Orders and their associated Haulage Activities for a specific Depot in to a named Template. The Template can then be generated into another Schedule to effectively copy a Depot based Schedule from one Schedule Date to another.

Fixed Schedules allow users to create a template based on orders and trips which can be used to generate future schedules. The template will generate new orders and plan them on the new trips, eliminating the need to create orders or perform planning.

The Fixed Schedule screen is accessed from the Administration menu in C-TMS.

Selecting the menu item will display the following screen. Within the screen, users may create templates and generate schedules from the templates. There is a list of available templates and a list of target schedules.

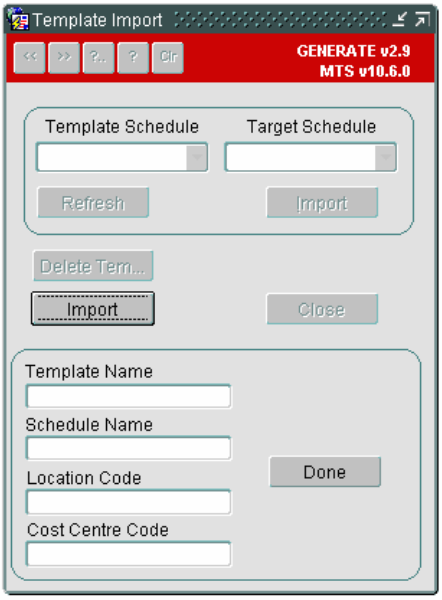


The target schedule will be required to be created, so that it is available to select from the drop down menu

14.1 CREATE TEMPLATE

Allows you to specify a Schedule of Trips, Orders and the Haulage Activities that associate the Loading and Unloading of Orders on Trip Stops for a user specified Depot to be copied into a Fixed Template. The Fixed Template can be named with an appropriately descriptive name such as TUE_SWI_NP for a typical Tuesday Non-Perishable Schedule for the Swindon Depot. This function effectively takes snapshot of a Depot Schedule so that it can be reused on an alternative Schedule in the future.

Selecting Create Template displays the following screen.



You will specify a name for the template, this should be named so it is easily identified in the drop down list. A suggested naming convention would be "MON-SUMMER", "MON-WINTER","TUES-SUMMER" etc.

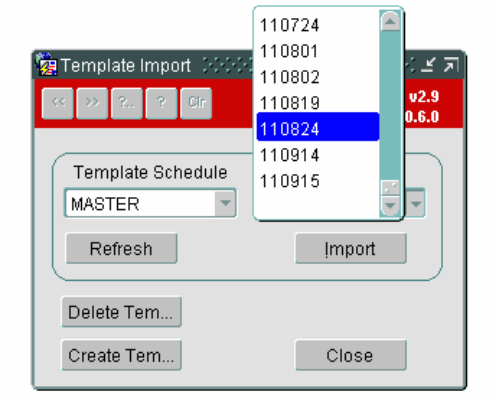
You will then specify the source schedule to be copied for the template. Where there are orders and trips for more than one cost centre or location, you may specify to base the template on orders for a specific location or cost centre.

Once the data is populated, select **Import** to create the template.

When the import is complete, the system will confirm the number of orders and trips created for the template. Select **OK** to confirm the creation of the template.

14.2 IMPORT SCHEDULE

This provides the facility to generate a new Schedule of Trip, Order and Haulage Activities for a specific Depot from a previously created Fixed Template. A stored fixed Template can be selected along with a target Schedule date and then the Template generated into the target Schedule creating all the Trips, Orders and associated Haulage Activities that were stored in the Fixed Template.



This functionality is typically used to generate Depot Schedules for particular days of the week where the deliveries made on the day do not vary greatly from week to week.

You first select a schedule you wish to copy, all orders and trips on the schedule will be copied. Any unscheduled orders on the schedule will also be copied.

The schedule will include orders being collected today for delivery tomorrow and orders which were collected yesterday for delivery today. The schedule will be based on a day of the week - eg MONDAY and will show the orders collected on a Monday and the orders delivered on a Monday.

14.3 Further Configuration

The following System Parameters affect this functionality:

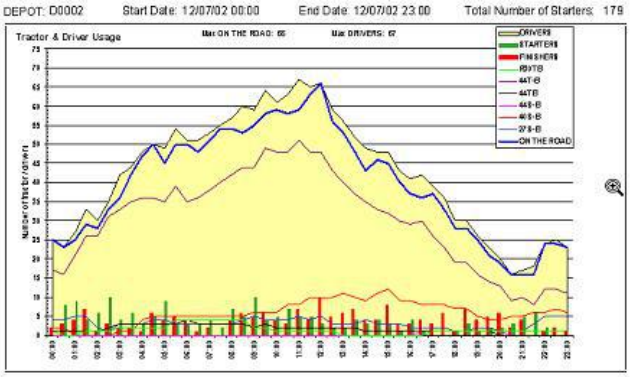
Parameter	Description	Level
FIX_NULL_BOOKING_REF	Set booking Ref to Null for fixed schedules	COST_CENTRE
ORD_FIXED_SCHEDULE_CHECK	Check for existing fixed schedule generated orders	CUSTOMER
SCH_DEFAULT_FIXED_TEMPLATE	Default Fixed Template Name for Auto Generation	SYSTEM
TRM_FIXED_TRIP_STATUS	Determines status of trips created via Fixed Schedules. P for PLANNED or A for ACCEPTED.	SYSTEM

15 Fleet Minimization

In C-TMS, a schedule consists of a number of trips, each of which has a defined start and end time. At any given time instant, there will be a number of concurrent trips under way, and this is approximately the number of tractor units and drivers who are required to be employed at that time.

The reason that it is approximate is that a trip may return to the depot to reload, before going out on the road again, so even though this trip may be current, it does not in fact require a driver nor a tractor for the time it is back at the depot.

From the graph of resource utilisation, an example of which is shown below, it can be seen that there will be a peak, at the point where the most vehicles are out on the road, in the example shown, 66 vehicles and drivers at around midday. This peak is referred to as the ?Fleet Defining Point?.



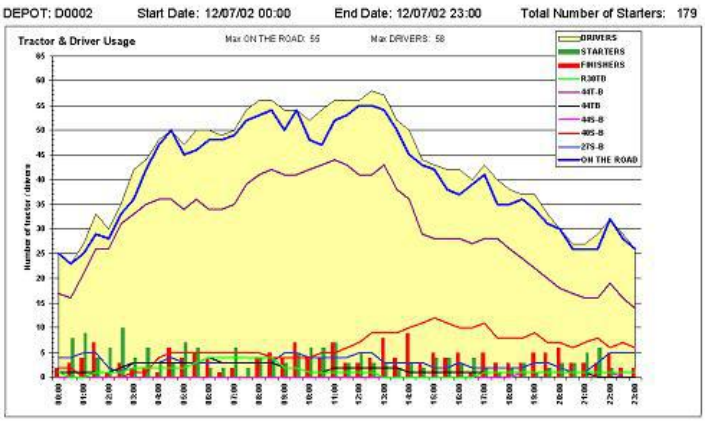
In general, the starting time of a trip will have a certain amount of flexibility, which is to say that it could start earlier or later, whilst still meeting all of its collection and delivery window commitments. It is therefore possible to reduce the total number of vehicles and drivers required, either by delaying trips which start near the peak, or starting earlier some of the trips which end around the peak.

However, because of the way in which external systems perform scheduling, trips will generally endeavour to occur as early as possible, so as to hit the start of the collection and delivery windows. This is not always true where continuous moves is deployed, in which the optimal start time may not be the earliest possible start time. However, in this situation it would not be desirable to start the trip earlier in any case. This is also true of the C-TMS Recalculate Distance and Time function.

This fact simplifies the requirement, reducing it to the need to delay the trips which start around the peaks such that they no longer contribute to the peak, but without delaying them such that they arrive at stops too late. This, in essence, is the purpose of the Minimize Fleet function.

15.1 Resource Utilisation

The resource utilisation graph shown below shows the same schedule as that above, but after having had the Minimize Fleet function applied. From this it can be seen that the total number of vehicles on the road has been reduced from 66 to 55, representing a saving of 11 tractors, or 17%.



Each time a trip is delayed, it is being moved such that its start time occurs immediately after the end time of a preceding trip, thereby making these two trips non-concurrent.

15.2 Trip Merging

There is another optional step that the fleet minimization process can perform, which is the merging together of trips, to create a driver?s day. This is controlled by the use of a system parameter that flags whether this function is turned on or off.

With merging switched on, the program will examine these two trips to see if they can be merged without violating any of the rules governing legal trips (eg maximum driving and shift hours), and if so, then they are merged into a single (multi-petal) trip.

Note that when a trip is merged, recalculate distance and time is called automatically, which may have to insert driver breaks as required. In certain circumstances this could temper the reduction in units.

15.3 Fleet Optimisation

The minimize fleet function operates on a single schedule, and will generally operate on all of the trips within that schedule. It can, however, be restricted to consider only those trips with a specified carrier, and/or only those trips that start at a specified depot.

The Fleet Minimization process will normally be run after trips have been obtained from a scheduling package. Once the user has obtained those trips using the Get Trips functionality they can then run Minimize Fleet. Once the program has completed it will display a summary of the results to the user.

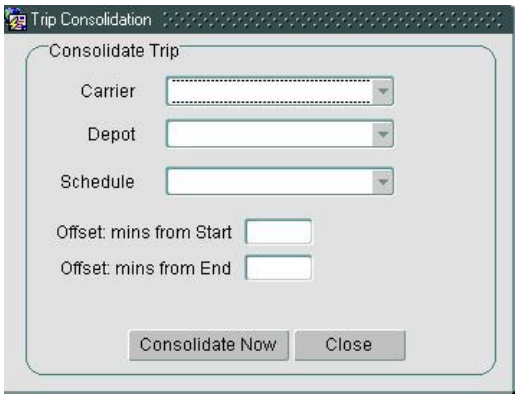
The user would then need to examine the audit log to obtain more information about the work that the Fleet Minimisation program has completed. The audit log will detail the start date and time of the minimization process, each trip that has been delayed, and the number of minutes inserted, each pair of trips that have been merged any errors that have occurred and the end date/time of the process, along with the results.

If Fleet Minimization comes across an invalid/infeasible trip then it will ignore the trip and count it as an error.

16 Trip Consolidation

Trip Consolidation is responsible for automating the process of combining trips together to provide an improved use of resources (Trailers and Drivers). These Trips had not previously been combined due to constraints imposed in external scheduling tools.

The trips that are considered to be candidates for Trip Consolidation are deemed to be short trips (the maximum length of a ?short? trip is controlled by System Parameters). The Trips are also filtered on Schedule and Carrier parameters that are selected via the following form:



Once a set of trips has been identified Trip Consolidation will work its way through the trips and attempt to merge each trip with every other trip using the existing merge routines from the TRM package. The trips that can be created by the Consolidation routine are controlled by Maximum Trip Duration, Trip Threshold Duration and Trip Overlap Duration system parameters to ensure they are feasible. The Trip Validation routine from the TRM package is used to ensure that all merged trips are valid trips.

Each attempted merger and its associated ?cost? is recorded in memory but no changes are written to the database at this point, invalid trips will be discounted. Once each combination has been attempted a number of potential Consolidation options will exist. The option that provides the best solution (lowest ?cost?) is then selected and applied to database.

The cost of a trip is calculated using a formula involving its duration (D), e.g. 10 hours, and three constants shown on the Resources screen (Carriers tab): Standard Shift (S), e.g. 9 hours, Standard Factor (s), e.g. 1, and Overtime Factor (t), e.g. 0,5. The cost of the Consolidation Option is therefore the sum cost of all the trips in that option.

The average start time for each option is also calculated. If two options have the same cost the option with the earliest average start time is selected, giving preference to the option that consolidates the early trips.