SEMS Version 13.0.0 Release Notes

1 CONTENTS

| 2 | Ma | in Fea | atures in brief | 3 |
|---|--------------------------------|----------------------------|---|----|
| 3 | Sto | ck Ov | erview | 5 |
| | 3.1 | 3.1 Actual Stock | | 5 |
| | 3.2 | Proj | ected Stock and the Replenishment Chain | 6 |
| | 3.3 | Con | solidated Stock | 7 |
| | 3.4 | Con | solidated Stock with Provisional Supply | 8 |
| 4 | Sto | ck An | alysis Views | 9 |
| | 4.1 | l.1 Actual Stock | | 9 |
| | 4.1.1 Examining Negative Stock | | Examining Negative Stock | 9 |
| | 4.2 | Actı | ual Supply | 12 |
| | 4.3 | Actı | ual Demand | 14 |
| | 4.4 | Proj | ected Stock | 16 |
| | 4.5 | Proj | ected Supply | 17 |
| | 4.6 | Proj | ected Demand | 17 |
| | 4.7 Ou | | standing Projected Supply | 18 |
| | 4.8 | Out | standing Projected Demand | 19 |
| | 4.9 | Con | solidated Stock | 19 |
| | 4.10 | Con | solidated Stock with Provisional (Projected) Supply | 20 |
| | 4.11 | Prov | visional (Projected) Supply | 21 |
| 5 | Sto | Stock Reorder Information. | | |
| | 5.1 | List | of Settings | 22 |
| | 5.1 | .1 | Replenish Policy | 22 |
| | 5.1 | .2 | Average Daily Demand | 22 |
| | 5.1 | .3 | Stock Target Quantity | 22 |
| | 5.1 | .4 | Reorder frequency days | 23 |
| | 5.1 | .5 | Check Stock Day | 23 |
| | 5.2 | Sett | ing Average Daily Demand based on Projected Demand | 24 |
| | 5.3 | Sett | ing Stock Reorder Information | 29 |
| | 5.4 | Gen | erating the Target Quantity | 30 |
| | 5.5 | Targ | get vs Stock Level Warnings and Tolerance Factors | 31 |
| 6 | Rep | olenis | hment | 32 |
| | 6.1 | Ster | OS | 32 |

| | 6.2 | Replenishing from within an order | 32 |
|---|------|--|----|
| | Gen | nerate the replenishing orders | 34 |
| | Acti | vate the newly generated linked orders | 34 |
| | 6.3 | Replenishment directly from Process Orders | 37 |
| | 6.4 | Bulk Replenish Orders | 37 |
| | 6.5 | Replenishing (Process Orders) from Scheduled Batches | 39 |
| | 6.6 | Replenish Raw Materials for Scheduled Batches. | 42 |
| | 6.7 | Replenish from Stock | 45 |
| | 6.7. | 1 Bring the Provisional Stock forward | 46 |
| 7 | Pro | cess Order Batch – Closing Issues | 48 |
| | 7.1 | Reopening Issues | 49 |
| 8 | Syst | tem Settings | 50 |
| | 8.1 | Security Settings | 50 |
| | 8.2 | Company Settings | 50 |
| | 8.3 | Replenish Settings | 50 |

2 Main Features in Brief.

- Stock Analysis to run across multiple periods by
 - Running Balances
 - Actual Stock
 - Projected Stock (new)
 - Consolidated Stock (new)
 - Consolidated with Provisional Supply (new)
 - Transactions
 - Actual Supply (new)
 - Actual Demand (new)
 - Projected Supply (new)
 - Projected Demand (new)
 - Projected Outstanding Supply (new)
 - Projected Outstanding Demand (new)
 - Provisional Supply (new)
- Stock Analysis views are colour coded and have warnings for negative stock; below target and above maximum target; outstanding supply or demand.
- Minimum and Maximum Target factors can be set.
- Detailed Stock Analysis has new page\tab: Consolidated with Provisional Supply.
 Drill through to the Provisional Supply records.
- Stock Item Reorder information.
 - o Information stored per item per department
 - Reorder Policy
 - Average Daily Demand
 - Target Qty
 - Reorder frequency
 - Check Stock Day
 - Bulk Setting facility
 - Average Daily Demand set manually or from historical projected demand
 - o Target Qty set manually or generated
- Process Order Completed Batches. New Menu option. (SAF 757)
- Close Issues against Process Order Batches and NOT Process orders
 Can only close issues once the batch itself is closed
- Process Order Batch Detail Screen. New actions to Close Batches and Close Issues.
- Stock Replenishment.
 - Makes use of daily consolidated stock with provisional supply to detect negative stock or below targets warning.
 - Generates the proposed due date of the order based on the earliest date it can find that is in the future, acknowledges the lead time and the latest date that is needed to prevent stock dropping below target.

- Allows provisional orders to be continually added to thus preventing piecemeal orders being sent to suppliers. IE Many days of material requirements are added to the purchase order BEFORE activation.
- Warning if supply needs to be brought forward.
- Replenishment against Scheduled Batch Materials.

Miscellaneous

- Sales order list to show Capture Operator
- Process Order Issue Outstanding is not limited to Open Process orders but rather to process batches whose Issues have not been closed.
- Item Type: Moved Issued to Stage from Advanced Settings to Process Model Settings
- Material Settings for Item moved from the profile page to a separate tag. (This was due to space issues on the profile)

Bug Fix

• Unit Stock Cost value shown on Actual Sales Report

Stock-on-hand is the amount of stock available.

Stock increases by adding new Supply and is depleted by removing Demand.

Stock =
$$\sum$$
Supply - \sum Demand (+ Adjustments)

3.1

ACTUAL STOCK.

Actual Supply refers to the acquisition of physical Stock.

- Purchase Orders received from Suppliers
- Internal Orders received from another Department
- Completion of manufactured/finished goods.

Actual Demand refers to the depletion of Physical Stock.

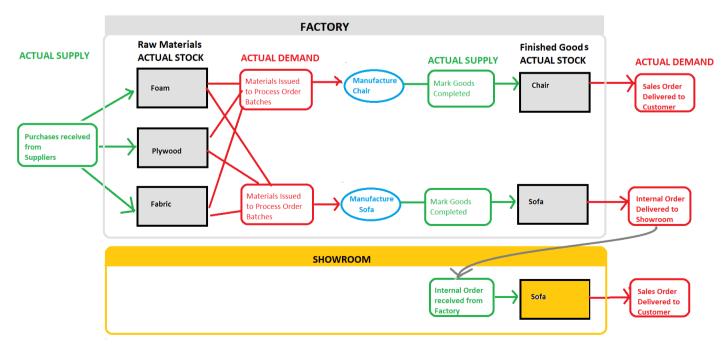
- Sales Orders Delivered
- Internal Orders Delivered
- Materials Issued to a job (process order) for manufacturing.

Stock Take can change the Quantity of Stock to reflect the quantity in the store.

• Stock Adjustment.

Typical movement of Actual Stock in a Manufacturing company.

- Purchase order received supply the raw materials.
- The raw materials are issued to the process order jobs (Actual Demand)
- The raw materials are used to manufacture the finished goods which on completion increases the Actual supply of the finished goods.
- The Finished goods are then Shipped/delivered (Actual Demand) to the customer

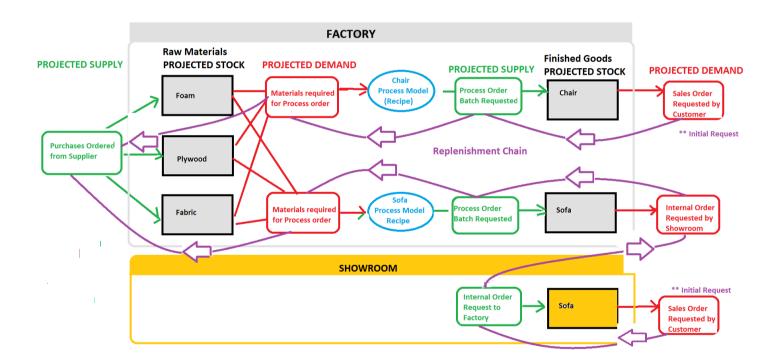


3.2 PROJECTED STOCK AND THE REPLENISHMENT CHAIN

Prior to Actual Stock changing hands we have the Request for stock and the chain of replenishment requests that consequently follow.

Typical ordering chain

- A Sales order is requested for finished goods. This is Projected Demand.
 In order to satisfy this demand we replenish/ create Projected Supply.
 Either
 - Internal Order to a supplying department to provide/manufacture the finished goods.
 - o Process Order (if this department is a factory, for items we make) or
 - Purchase Order to a supplier for an item that is pure "buy-out" (something not made, just bought and sold)
- An Internal order from a customer department will, in turn, require a Process order to satisfy it.
- A Process order requires materials.
 - The Process Order Batch Input Requirement are the Projected Demand for the raw materials.
- A Purchase Order is placed in order to fulfil/supply the demand for the raw materials.



Projected Demand represents the request for Stock

- Sales Order from Customer
- Internal Order from Customer/Requesting Department
- Materials requirement for a Process Order

Projected Supply represents the anticipated arrival of ordered Stock

- Purchase Order to Supplier
- Internal Order to Supplying Department
- Process Order planned to manufacture stock

3.3 CONSOLIDATED STOCK

Consolidated stock looks at the <u>cumulative values</u> of both the Actual and the Projected Stock. This, in essence, lets us see what we expect to have in stock at a given time.

Example.

10 cushions in stock today (Monday)

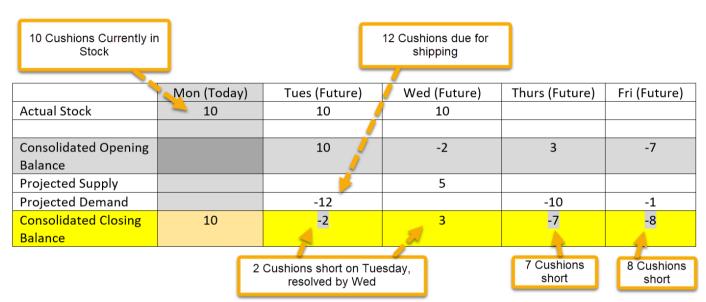
12 are due to be shipped on Tuesday

5 are expected to be supplied on Wednesday.

A further 10 to be shipped on Thursday and another 1 on Friday

The consolidated stock view alerts us to the fact that we will be 2 cushions short on Tuesday. They can be shipped on Wednesday when the extra supply arrives.

By Thursday we will be 7 short, and 8 short by Friday.



When considering stock future needs and being timeously alerted to future stock shortages this is a very useful view. It does, however, rely on the fact that your data is being kept up-to-date.

3.4 CONSOLIDATED STOCK WITH PROVISIONAL SUPPLY.

This view adds Provisional Supply to the Consolidated Balance and is especially useful for Replenishment.

The Actual, Projected and Consolidated Data use records which have been ACTIVATED. For Replenishment, and particularly material replenishment and items with the replenishment policy of STOCK, we have a mechanism to keep adding to an order (eg. A Purchase Order) for a couple of days BEFORE we activate and send to the supplier.

The Transactions which are included in the Provisional Supply refer to Provisional Projected Supply.

- Purchase Orders
- Internal orders from Supplying Department
- Process Orders

Using the same example shown above, but also include the Provisional Supply. We have a provisional Purchase order ear-marked for Friday with an Additional 10 items

| | Mon (Today) | Tues (Future) | Wed | Thurs | Fri |
|--------------------------------------|-------------|---------------|----------|----------|----------|
| | | | (Future) | (Future) | (Future) |
| Actual Stock | 10 | 10 | 10 | | |
| | | | | | |
| Consolidated Opening Balance | | 10 | -2 | | |
| Projected Supply | | | 5 | | |
| Projected Demand | | -12 | | -10 | -1 |
| Consolidated Closing Balance | 10 | -2 | 3 | -7 | -8 |
| Provisional Supply | | | | | 10 |
| Consolidated with Provisional Supply | 10 | -2 | 3 | -7 | 2 |

Additional Provisional Stock resolves the outstanding supply by Friday

Looking at this view we see that Friday will not be a problem and **if we bring the due date of the provisional order forward** to Thursday (bearing in mind the Suppliers Lead days) we will ensure that Thursday's orders are not late. Thus the beauty of the provisional state of the order, allowing the Due Date to change.

| | Mon (Today) | Tues (Future) | Wed | Thurs | Fri |
|--------------------------------------|-------------|---------------|----------|----------|----------|
| | | | (Future) | (Future) | (Future) |
| Actual Stock | 10 | 10 | 10 | | |
| | | | | | |
| Consolidated Opening Balance | | 10 | -2 | | |
| Projected Supply | | | 5 | | |
| Projected Demand | | -12 | | -10 | -1 |
| Consolidated Closing Balance | 10 | -2 | 3 | -7 | -8 |
| Provisional Supply | | | | 10 | |
| Consolidated with Provisional Supply | 10 | -2 | 3 | 3 | 2 |

Bring the Provisional Order forward to ensure Thursday does not fall behind

4 STOCK ANALYSIS VIEWS

Stock Analysis has a whopping 11 different Stock Type views. This section will give you some ideas of what each view is used for and tips relating to each.

4.1 ACTUAL STOCK

Actual stock shows the running stock balance over time. Actual stock can never change for a future date. When viewing actual stock look at date ranges in the past.

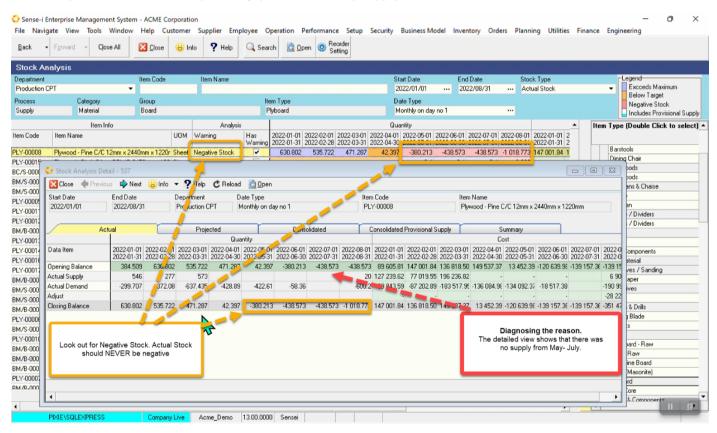
Actual Stock should NEVER be negative. Use this view to identity missing supply and potentially faulty stock values. Negative stock is generally caused by

- Failure to Capture/Activate Actual Supply Transaction (Purchase order Receipt, Internal order Receipt, Process Order Mark Complete)
- Late Capture of Actual Demand Transaction AFTER A STOCK TAKE.

4.1.1 Examining Negative Stock

Failure to Capture Actual Supply Transaction

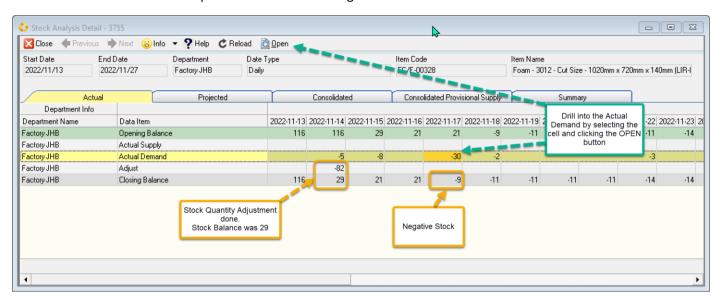
The example below shows a suspicious gap in the monthly supply.



Poorly timed capture of Actual Demand after a Stock Take.

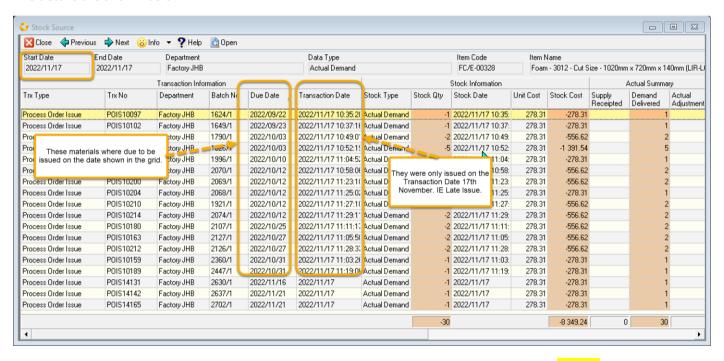
Another record shows negative stock. Notice the adjustment made by a Stock Take on 14th November.

The Actual Demand on the 17th pushes the stock into Negative value.



Drill through to the detail of this record by selecting the cell and clicking Open. (Or double-clicking the cell)

The details are shown below.



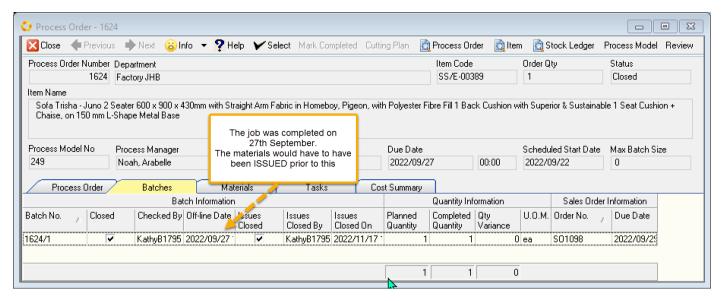
The materials were due much earlier than they were actually issued. So were the materials ISSUED late OR were the issues CAPTURED late?

To confirm our suspicions, we look at when the finished product was completed.

Taking the first record we see the Process Order number is 1624.

Main Menu > Operation > Process Order.

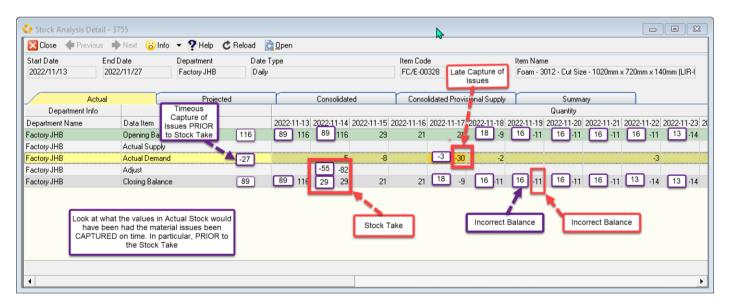
Search for Process Order 1624



As Process Order 1624 was completed on 27th September, it follows that the materials were ISSUED Before the job completed. We can thus conclude that the Issues were CAPTURED late.

Late capture of records results in a few problems: The Stock-Take PRIOR to the LATE capture of these issues results in incorrect Stock Balance.

- Opening Balance on 14th November was 116
- Stock Take on 14th November counted 29 items. (This means that the stock was adjusted by -82 and logged in G/L.)
- Materials Qty issued on 17th November was 30. (Logged in G/L as 30)
- Stock Closing Balance on 17th September was -9. This incorrect Balance is propagated forward.



Had the issued been captured PRIOR to stock take.

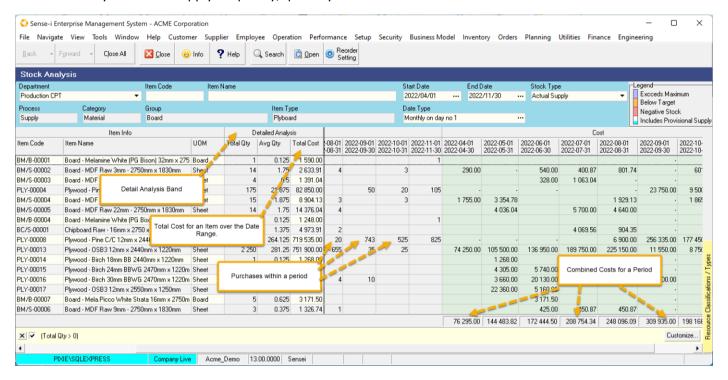
- Material Issues for September would have had an additional 2. (And added correctly to the G/L for Sept)
- Material Issues for October would have had an additional 25. (And added correctly to the G/L for Oct)
- Opening Balance on 14th November would have been 89.
- Stock Take on 14th November WOULD STILL HAVE counted 29 items, BUT this would have caused an adjustment of only -55. (-55 in G/L)
- Materials Issued for 17th November would be 3 and shown as such in the G/L
- Stock Closing Balance 17th September would be 18 and THIS CORRECT Balance propagated forward.

4.2 ACTUAL SUPPLY

Actual supply shows the specific supply for given date periods. IE Unlike the Actual Stock view this is not a running Balance. Once again, as actual transactions CANNOT occur in the future, choose dates in the past to view data.

Use this view to

- identify your most costly materials and resources over time.
- identify the actual supply frequency, quantity and cost value.

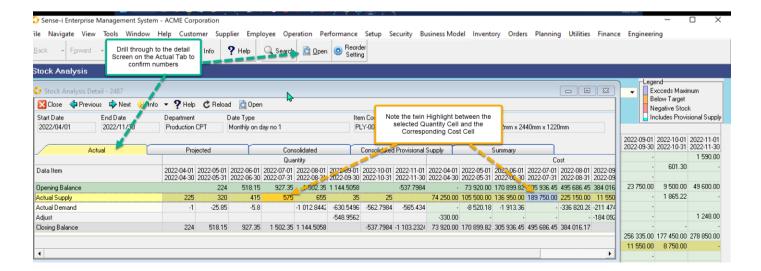


The Analysis Band Show the Total Quantity, Average Quantity and Total Cost over the given date range.

You could sort by the Total Cost to find your most expensive materials.

Also use the totals shown at the bottom of the Cost Band to see your costs per period.

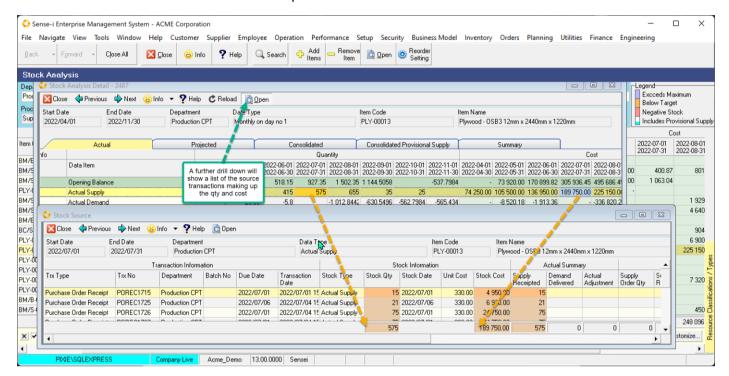
- To validate the values in the grid, select a row and Click the Open Button.
- The detailed screen will pop-up. Make sure you are looking at the Actual Stock Tab/Page.



The Detailed Grid shows the same data within the context of the Actual Stock view. Select a cell by clicking on it. You will see the corresponding quantity or cost column will be highlighted.

To further validate these numbers, drill down to a list of the originating Source Transactions.

• Click on a cell to select and Click the Open Button

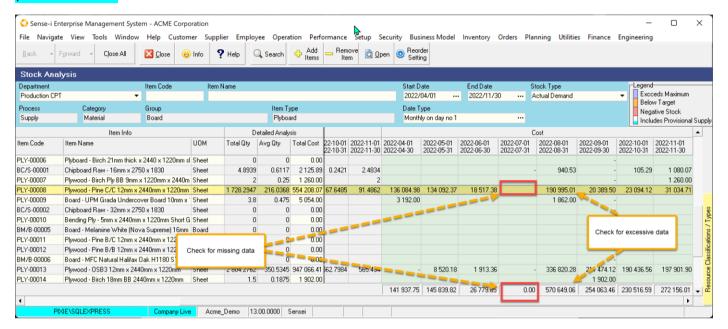


These transactions should total to the selected detailed cell value. In addition, the selected cell determines which source columns are highlighted.

4.3 ACTUAL DEMAND

Actual Demand shows the specific demand for given date periods. IE Unlike the Actual Stock view this is not a running Balance. Once again as actual transactions CAN NOT occur in the future, choose dates in the past to view data.

Use this view to identity your late capture of demand which will affect your general ledger and potentially corrupts your stock values as described in the Actual Stock discussion above.

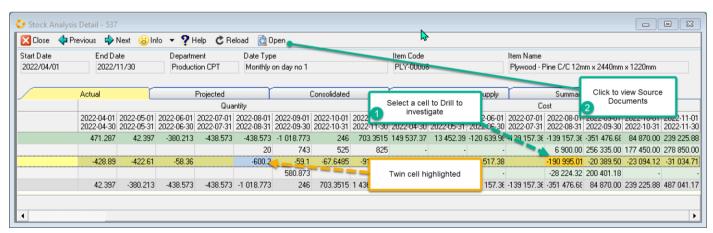


Actual Demand of commonly used materials should show a consistent pattern over time. If the total columns or specific cells show as significantly low OR high values, chances are we have late CAPTURE of demand.

We look at the excessive data following the low or missing data.

Select the excess cell and Click Open to drill through.

The detail screen is displayed.

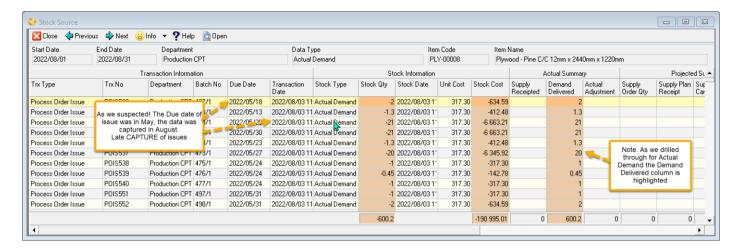


We further drill down to get to the list of source transactions.

• Select the cell and drill through to the source documents.

The Source transactions are listed.

Here we see that these materials were due to be issued in May. They were eventually CAPTURED in August.



Note: Even if one is capturing issues late, one could choose to back date the issues to their correct issue date. (As long as the accounting period has not closed for this historical back date and these incorrect issues have not been extracted for the General Ledger).

This would correct the stock.

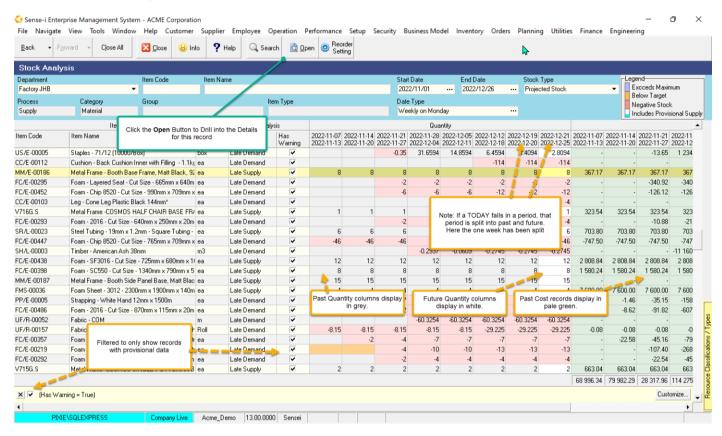
This is a topic for another time.

4.4 PROJECTED STOCK

Projected Stock displays the running values for Outstanding Projected Transactions.

The further back in time we look the more likely we are to have NO data. Historical Projected values show Late Projected Stock. Future Projected values show Expected Stock.

In the sample below we filter the grid to show only those records with warnings. Warnings indicate outstanding Supply and outstanding Demand.

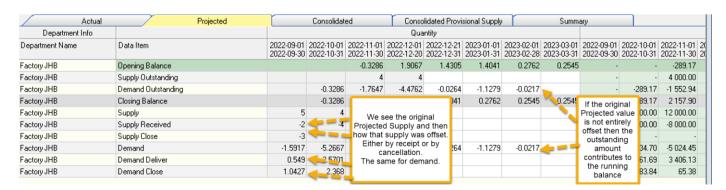


Other points to note are the standard (non-alert) colour of the Period columns.

- 1. Grey shows past Quantity values.
- 2. Green shows past Cost values.
- 3. White indicates future Quantity and Cost periods

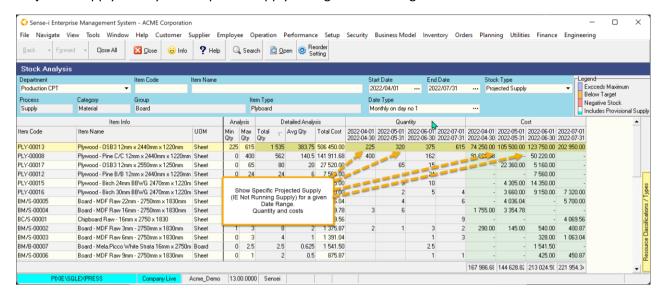
Drilling through to the details and looking at the Projected Tab we see the breakdown of the outstanding values.

Original Supply is offset by Receipt and/or Cancellation. Any remaining value is the outstanding supply. Original Demand is offset by Delivery and/or Cancellation. Any remaining value is the outstanding demand.



4.5 PROJECTED SUPPLY

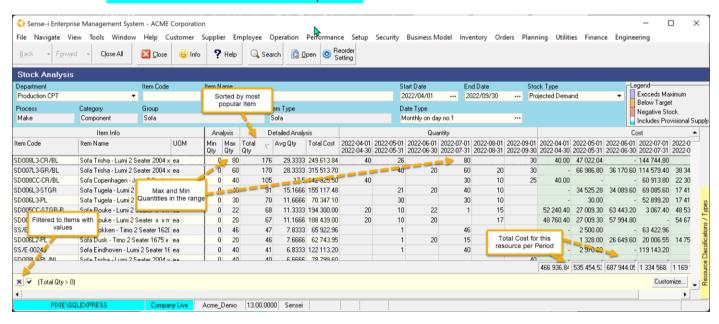
Projected Supply show you the specific supply for a given date range.



4.6 PROJECTED DEMAND

The projected demand over time lets us see which items (finished goods and raw materials) are most frequently used.

We can see the cost of these items and the monthly trends.

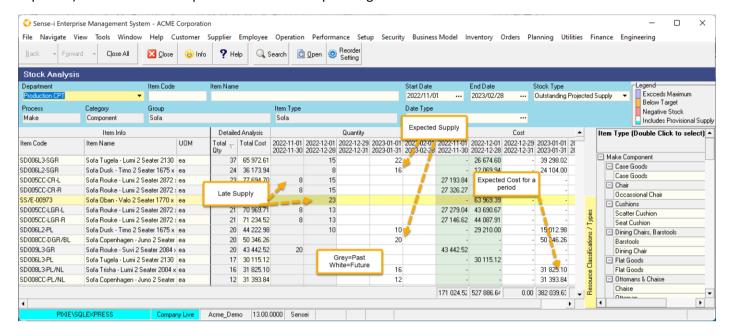


The Analysis and Detailed Analysis Bands are useful is this view as we can see the minimum, maximum, average and Total Quantities, and the Total Cost across the full range.

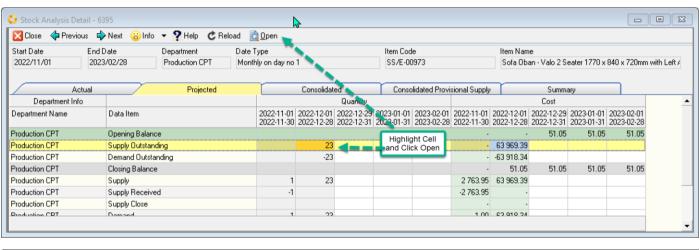
The screen above is showing finished goods (sofas) but applies also to raw materials. The materials view monthly costs can assist with future cash flow planning.

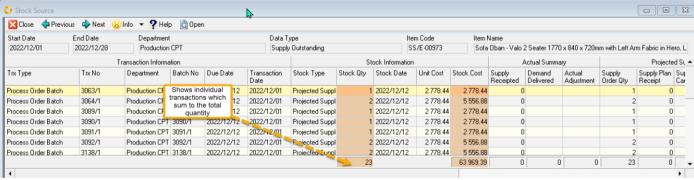
4.7 OUTSTANDING PROJECTED SUPPLY

This view lets us see which supply orders are running late and when supply records are due to arrive. (Late and expected). We can see the expected costs for the upcoming orders.



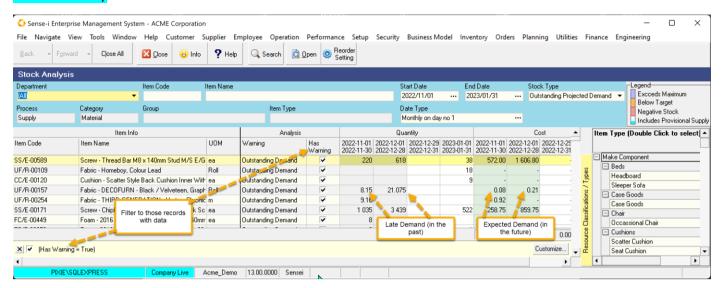
Drill through to see the breakdown.





4.8 OUTSTANDING PROJECTED DEMAND

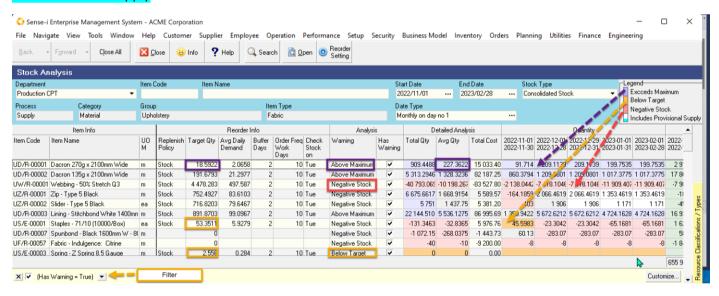
This view can hone in on late issues or late capture of issue. Internal orders and sales orders not yet delivered and due for delivery.



Many ways to filter. Screen above shows we have filter to show only records with a warning.

4.9 Consolidated Stock

This view gives us timeous warnings before the stock runs out allowing us to proactively order (replenish). It also alerts us to over supply which can affect the cash flow in the business.



Use the filter to return only records with warnings.

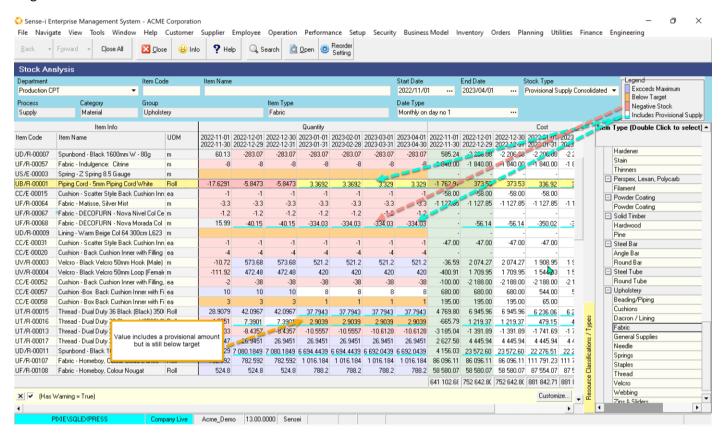
The colour coding gives a visual picture of records with warnings. Three warnings are possible. As a record can conceivable have all 3 states over the full range of dates, the warnings are displayed in the order below.

- Negative Stock
- Below Target
- Above Maximum

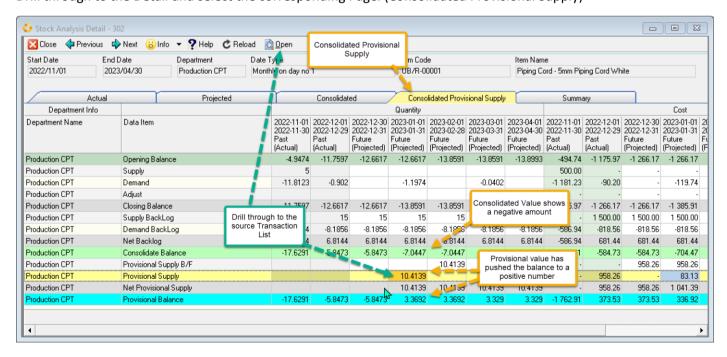
4.10 CONSOLIDATED STOCK WITH PROVISIONAL (PROJECTED) SUPPLY

This is arguably the most powerful view of the Stock Analysis. Using the consolidated Stock to proactively order stock we need to be aware of provisional supplies in the pipeline. IE A Purchase order may be being prepared. This view is geared especially for replenishing by stock. It is advantageous to keep a record in the provisional state allowing us to up the order Quantity and gather other items into the order preventing small and piecemeal orders.

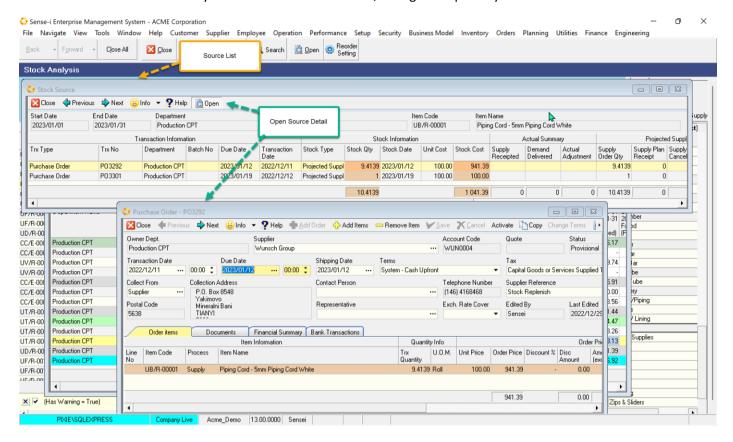
The colour coding and warnings still apply, however, if the value includes a provisional amount, it is underlined in bright blue.



Drill through to the Detail and select the corresponding Page. (Consolidated Provisional Supply)

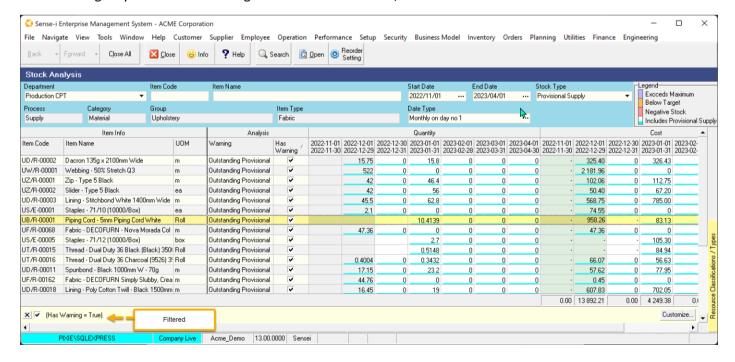


Select the Provisional Supply Cell and Click Open to see the Source List. From this screen you can further drill through to the actual order. From here you could alter the Due Date, change the quantity or activate the order.



4.11 PROVISIONAL (PROJECTED) SUPPLY

This view shows the date and amount for the provisional supply. Below the screen is filtered to only return rows with data. Once again you could drill through to the Purchase order /internal Order or Process order amend or activate.



5 Stock Reorder Information.

information is used to help manage stock. It is specific to each stock item for each department.

5.1 LIST OF SETTINGS

5.1.1 Replenish Policy

By Order

Replenish quantity is the ordered quantity.

Example. Non-standard sales goods. IE Sofa with specific materials and finishes.

Raw materials not commonly used or specific to an order.

By Stock

Replenish quantity is based on consolidated stock needs and target values.

Example. Standard common finished goods

Raw materials bought in bulk and commonly used.

*Consider too: materials with a long lead time.

5.1.2 Average Daily Demand

Before we can set a realistic target quantity, we should have a good idea of the amount of stock we generally use on a daily basis.

You can set this manually, or better yet, let the system set this based on the recent historical projected demand.

5.1.3 Stock Target Quantity

The target Quantity is used to alert the operator when to reorder more stock. It is also used to highlight those stock items who have been over supplied. Over supply of expensive items can cause cash flow problems in other areas of the business.

In order to ensure we always have enough stock we should always *reorder before the stock runs out*. If we set a **target** we can be alerted when the stock reaches this critical level and then timeously place an order.

The stock we have at the time of the reorder must last until this order arrives. The order usually takes **Lead** days to reach us. Each day we expect to use the **average daily demand**.

We could also build in protection against a late receipt of stock. This is the buffer days

Target by Lead Days.

Target = Average Daily Demand* (Lead Days + Buffer Days)

A step up from this would be to order less frequently, reducing admin and piecemeal orders. A longer time between ordering means a larger order.

Target by Order Frequency

Target = Average Daily Demand*(Order Frequency Days + Buffer Days)

(Note: If the Lead days exceeds the Order Frequency Days we revert to the lead days.

The target can be set manually or generated. If generated we need to ensure that Average Daily Demand, Reorder frequency, and (optionally) the buffer days need to be set **prior** to, or in conjunction with, generation.

5.1.4 Reorder frequency days

This is the number of PREFERRED WORK days between orders. IE. If you would generally like to order every second week the value would be set to 10 work days.

Remember – you can order whenever you need, but this value is used in setting the target quantity ensuring that under average stock usage conditions you have enough stock to last the number of work days set.

5.1.5 Check Stock Day

To help manage a large collection of stock you can use this tag to filter the records. The available values are the days of the week

5.2 SETTING AVERAGE DAILY DEMAND BASED ON PROJECTED DEMAND

From the main menu, navigate to Inventory / Stock Analysis.

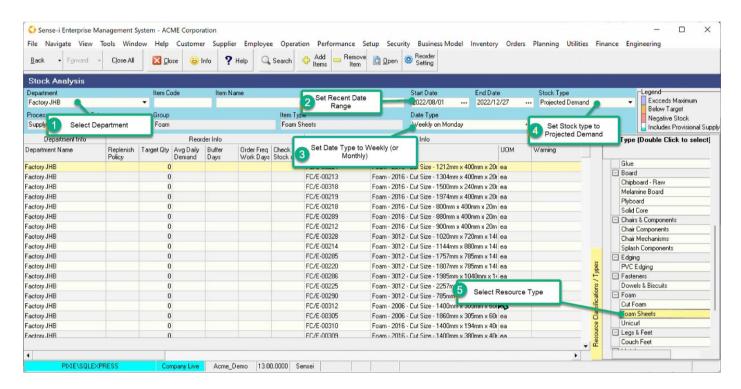
- 1. Select the Department
- 2. Set Recent Date Range.

In order to set average daily demand we should take the projected demand data from a recent period which we know has reliable up-to-date data.

3. Set the Date Type.

in order to span a couple of weeks or months change the date type to increase the span.

- 4. Set the Stock Type to Projected Demand.
- 5. Select the Resource type of interest.



Finally Press the Search button to return the data.

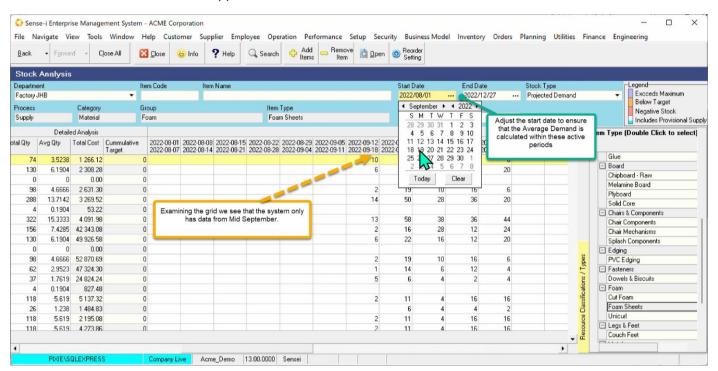
Examine the data and adjust the date range accordingly.

On examining the data, we can see no data for the first couple of weeks. Using this data range will skew the average daily demand results.

No data or low data can occur under the following conditions.

- New department
- New stock item recently added to the catalogue
- Unused / rarely used stock item
- o Range includes period during which the department was not active (Festive season)

In the example below we have a department that only came on-line in mid September. We need to adjust the start date to the week on or after data appears.



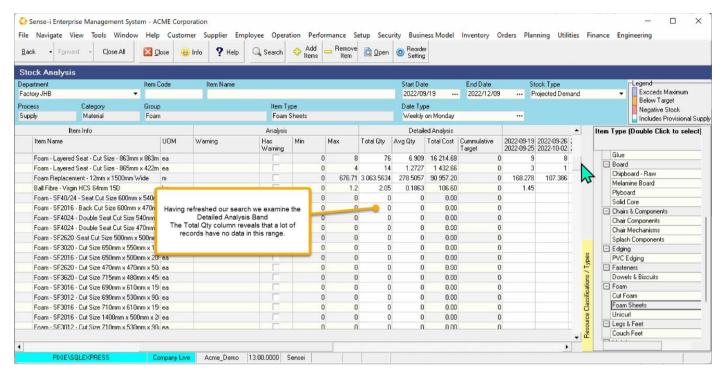
We see also that the end date has encroached into the break between Christmas and new year.

Having adjusted both the start and end date, refresh the search by clicking on the Search button.

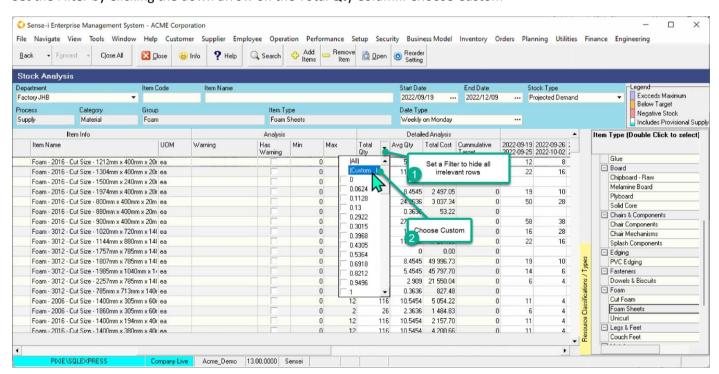
Filter the records to exclude unpopulated rows.

Looking at the data in the Detailed Analysis band we can see the Total Qty and the Average Qty.

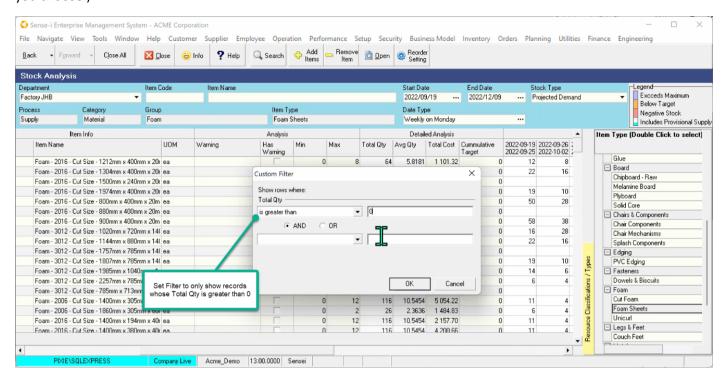
Records with a Total quantity of zero do NOT have any data in this period and so we should exclude these records.



Set the Filter by Clicking the down arrow on the Total Qty Column. Choose Custom



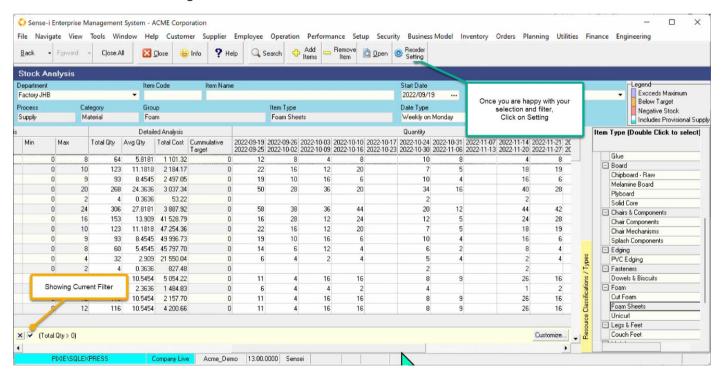
Create a filter to include only records with a total quantity greater than zero. (Or another other filter or criteria that you choose.)



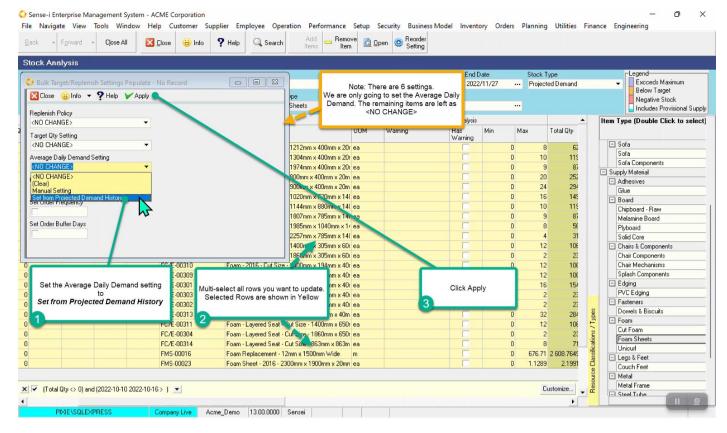
The screenshot below shows the current filter at the bottom left-hand side of the screen. Add any additional filter you wish.

Now you are ready to set your average demand.

Note: All other reorder settings could be set at the same time too.

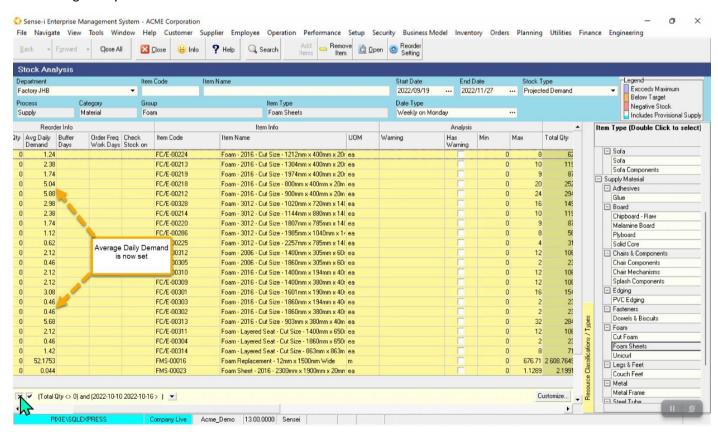


Click on the Reorder Setting button to open the pop-up Bulk Setting screen shown below.



- 1. Click the dropdown arrow on Average Daily Demand Settings and choose Set from projected Demand
- 2. Multi-select the records in the grid
- 3. Click Apply.

The Average Daily demand is now set.



5.3 SETTING STOCK REORDER INFORMATION

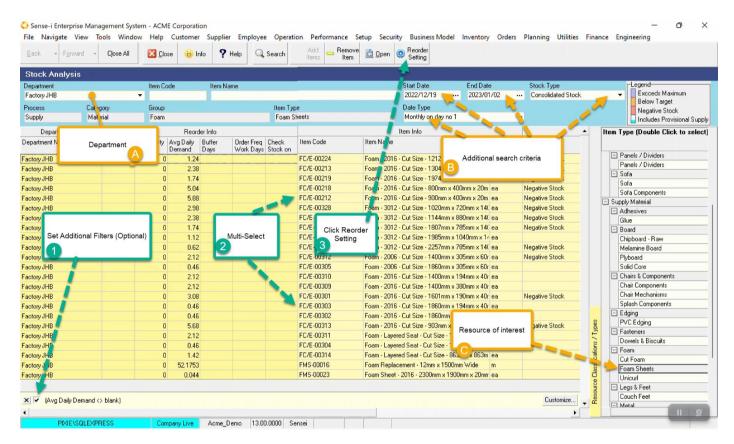
Reorder information is set from the Stock Analysis screen. It is specific to each stock item for each department. This information can be set for one or more records.

Navigate to the Stock analysis screen. Main Menu > Inventory > Stock Analysis.

Prepare Search Criteria

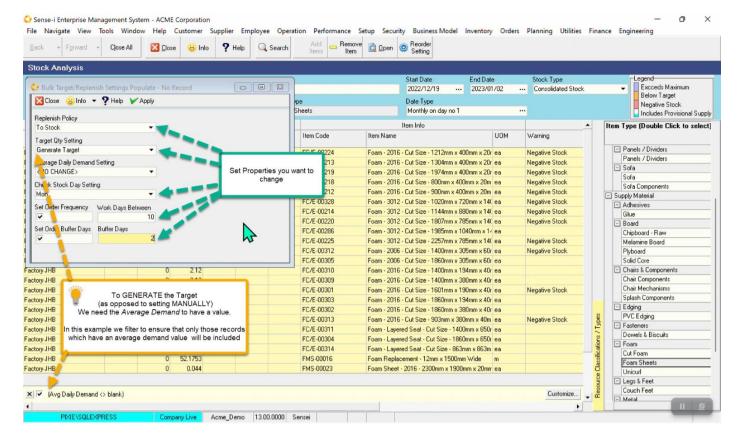
- A. Choose the Department (or all)
- B. Populate Stock Type, Date Type and Date Range.
- C. Select the resource you want to view/ change.

Click Search Button to return data.



The existing settings will show in the Reorder Info Band

- 1. Filter, if needed
- 2. Multi-select.
- 3. Click on Reorder Settings to open pop-up Bulk setter.



- Change those settings you wish to. Leaving the others as <NO CHANGE>
- Click on the Apply Button

Notes:

All reorder settings can be set at the same time.

Average Daily demand by **Projected demand history** requires the projected demand, date range selecting and subsequent filtering be used. The remaining settings are not fed by the underlying values in the grid and can be set at anytime with no regard for stock type or date setting.

5.4 GENERATING THE TARGET QUANTITY

If you choose to generate the Target quantities, it is based on the formula given above.

Target = (Average Daily Demand) * (Reorder Frequency days + Buffer days)

It follows that the values used to determine the Target have been set prior to (or at the same time as) generating the target.

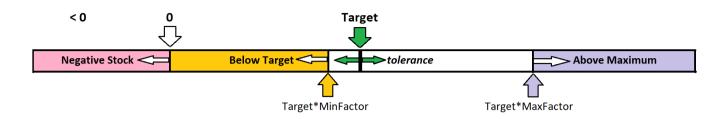
- · Average Daily Demand
- Reorder Frequency
- Buffer days

5.5 TARGET VS STOCK LEVEL WARNINGS AND TOLERANCE FACTORS

If the Stock Level is below zero, we have a Negative Stock Warning.

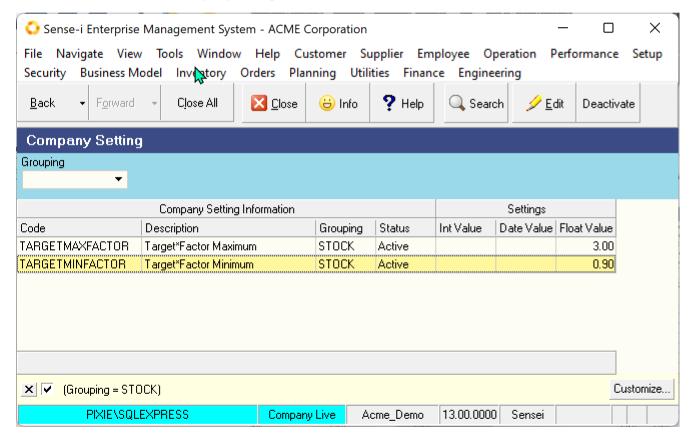
If the Stock Level is above zero but below target, we have a Below Target Warning.

If Stock level is above Maximum level, we have a Exceeds Maximum Warning.



The Target is a specific number but the Below Target and Exceeds Maximum warnings only kick in the tolerance factor is exceeded.

These values are set in the company settings.



6 REPLENISHMENT

Replenishment is the act of placing a supply order for an item in response to the demand for it.

This act can be in direct response to a demand order (sales, internal or a process order's raw material requirement) or be indirectly by monitoring stock levels.

As with any order, we require the Supplier, Quantity; and Due Date to be set. Replenish action, therefore, consists of the following

6.1 STEPS

- 1. Determine/Confirm the supplier of the item
- 2. Set the Quantity to order
- 3. Select the items to replenish
- 4. Generate the order. (Due date is calculated based on replenish settings.)
- 5. Activate the generated orders (optional)

There are many different screens in Sense-i to view and manage replenishment.

- Sales Order Replenishment.
- Sales Order Material Replenishment.
- Internal Order Replenishment.
- Internal Order Material Replenishment.
- · Process Order Replenishment.
- Bulk Sales Replenishment.
- Scheduled Production Batches Replenishment (Process order for finished goods)
- Scheduled Batch Materials Replenishment (Purchase orders for raw materials)
- Stock Replenishment

6.2 Replenishing from within an order

There are numerous entry points to initiate replenishment from an order:

Sales Order Replenishment

An Active Sales order Replenishes to

- o Internal Order when another department (factory) is the supplier
- o Process Order when this department (factory) makes it
- Purchase order when the supplier is external to the company. A Buy-out.
- Sales Order Material Replenishment.

For a factory department, those items which have replenished to a Process order have a corresponding process model which provides the list of materials required to make the item. Once these process orders are ACTIVATED, the raw material quantities are determined and can be replenished.

- Purchase order for raw materials
- Internal Order Replenishment.
 Generally this department is a factory.
 An Active Internal order replenishes to

- Process Order
- Internal Order Material Replenishment.

 Once the linked Process orders are ACTIVATED, the raw materials are listed and can be replenished.
 - Purchase order for raw materials
- Process Order Replenishment.

This is the replenishment of the raw materials making up the input requirements. These materials generally replenish to a

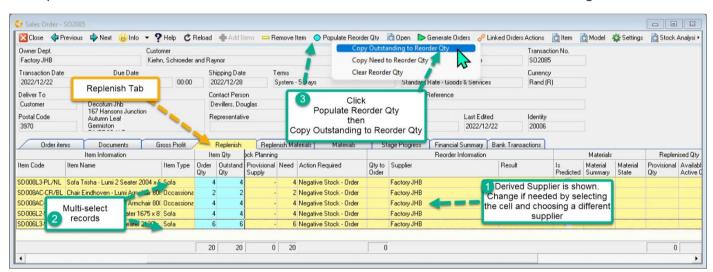
o Purchase Order

The process shown below works for all replenishments which originate from an order (as opposed to stock).

Once order has been activated, move to the Replenishment tab.

Set the Replenishment Order Quantity

The replenishment Tab lists the items associated with the order and these can be selected in the grid.



- 1. Check the derived Supplier and change if needed.
- 2. Multi-select the records
- 3. Populate Order Quantity
 - a. Click Populate Reorder Qty Button
 - b. Click Copy Outstanding to Reorder Qty.

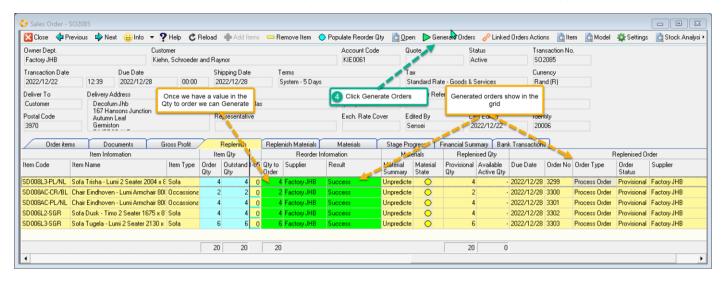
You could choose to type the quantity directly into the Qty to Order Column.

Generate the replenishing orders.

Keep the records selected or change to another selection.

4. Click on the Generate Orders button.

The system determines which **type of order** to generate based on various criteria: the source order's department; whether the item has a process model; which department is a factory; and the preferred supplier.

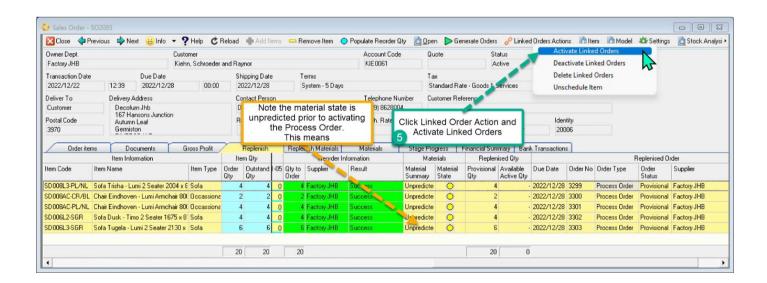


Activate the newly generated linked orders.

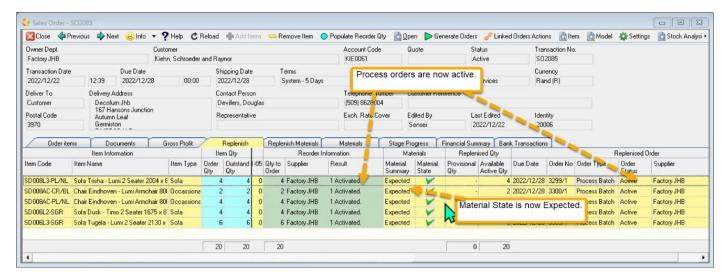
While still on this screen you can activate the linked orders Process Order. (In the above example we have replenished the Sales Order Items to Process Orders.)

Select those records you want to activate

5. Click on the Linked Orders Actions button and then Activate Linked Order



Once any linked Process orders are activated the Materials State becomes **expected**. This means that we expect the raw materials to be issued when the process order is scheduled. This is the projected demand for the materials

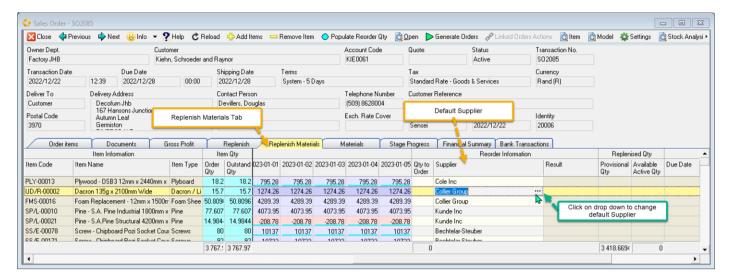


Both the sales order and internal orders have two replenish pages.

The Replenish Page deals with finished goods and buy-out goods.

The Replenish Materials Page deals with the raw materials only applicable if the finished goods generated process orders.

The **Replenish Materials** page works in the same way. Generating Purchases orders against the raw materials.

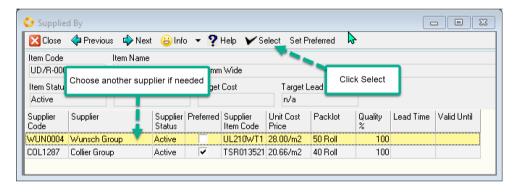


Things to note. The default Supplier is listed. If you want to change the supplier, click on the drop-down button in the grid on the supplier column.

A List of the available suppliers is displayed.

Select the supplier record and Click **Select** button to change.

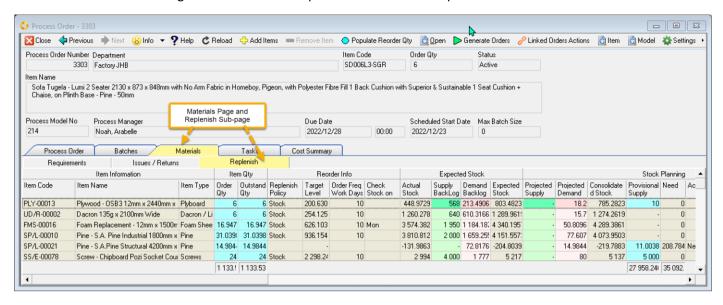
Note: This is a once off selection for the record you are replenishing. If you want to permanently change the preferred supplier then click Set Preferred.



6.3 Replenishment directly from Process Orders

From the menu Navigate to the Process Orders.

From the Detail screen navigate to Materials > Replenishment tab and replenish as described above.

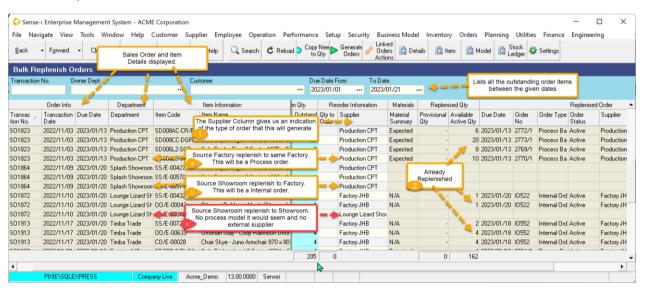


6.4 Bulk Replenish Orders

Bulk Replenishment shows a selection of outstanding sales order items. These can be replenished in bulk.

From the menu navigate to Operation > Bulk Replenish Orders.

The Search parameters let us filter between dates.



The order details are displayed (including customer and address not shown here).

Replenishment mechanism remains the same.

Notes:

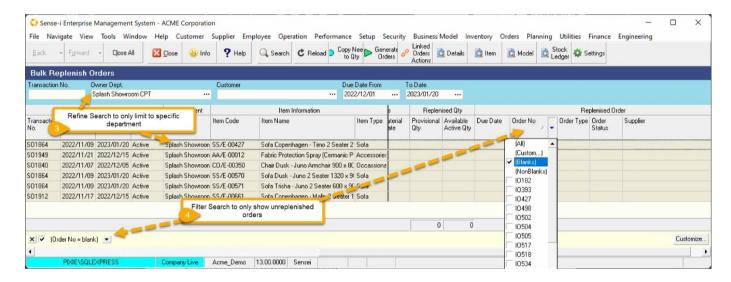
- 1. If we look at the order **Department** and compare it to the **Supplier**, we can determine the type of order that will be generated.
 - a. If the source department **is a factory** and the reorder supplier is the **same factory**, we assume this will be a process order.
 - b. If the source department is **not** a **factory** but the reorder supplier **is** a **factory** then this will be an internal order to the factory department.

- c. If the source department is **not a factory** and the reorder supplier remains the same, we can conclude that there is no process model and no external supplier able to source this item. Potential problem.
- 2. Looking at the Replenish Band we can see which records have or have NOT yet been processed. We could filter these records to only show those records NOT yet replenished.

6.4.1.1 Limit the list

- 3. You may choose to refine the search by entering additional search parameters.

 This is useful particularly if you choose to ONLY replenish to another department (create internal orders) from this screen and generate the process order only once the job has been scheduling described below. If this is the case, we can refine the search accordingly.
- 4. You could also filter the records and only show those items not yet replenished.
 - Click on the Column header containing Replenished data.
 - Filter by selecting (Blanks). Only Blank data (IE Not Replenished data) will be shown



Replenish as usual.

- Select the records to upgrade
- Set the Order Qty (Click the Copy Need to Qty Button)
- Click the Generate Orders Button

6.5 Replenishing (Process Orders) from Scheduled Batches

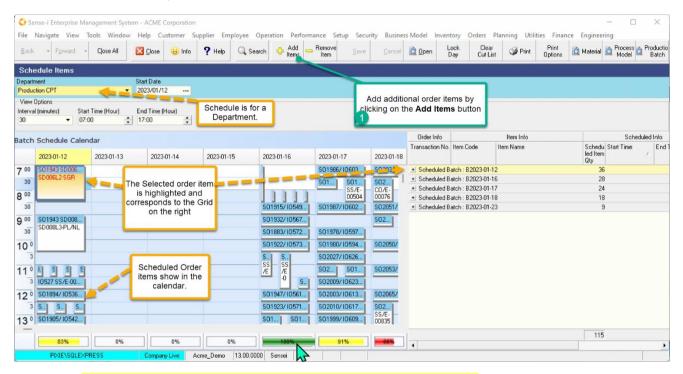
If you replenish to process order prior to scheduling, the system will determine a scheduled date and place the job in the calendar. In order to schedule the jobs yourself, you would need to schedule the items first and then Replenish by generating the Process Orders.

Navigate to Operation > Schedule Order Items.

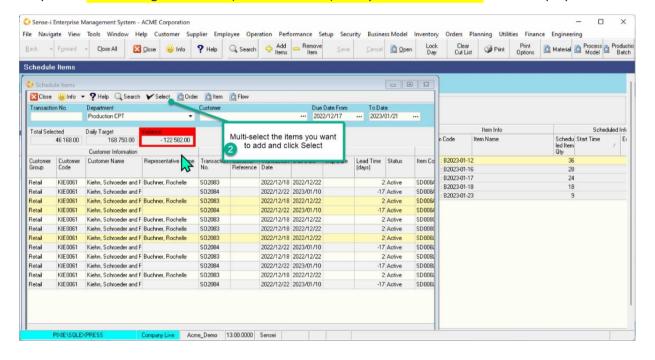
Select the department and the Starting date before Searching.

The Calendar will display populated with the existing scheduled items.

1. To add new items, click the **Add Items** button.

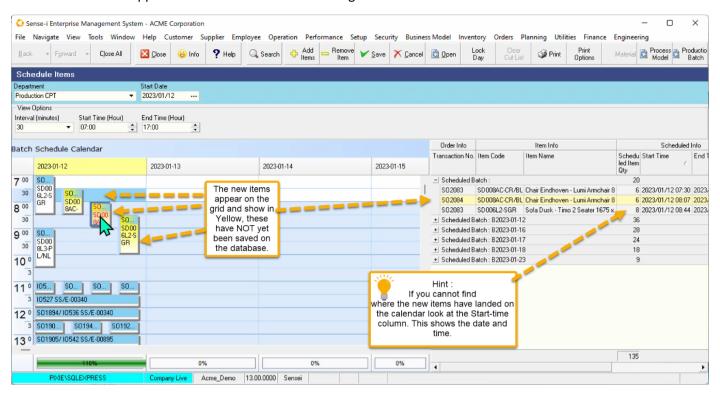


Only those outstanding order items(sales or internal) NOT yet on the calendar will be displayed.

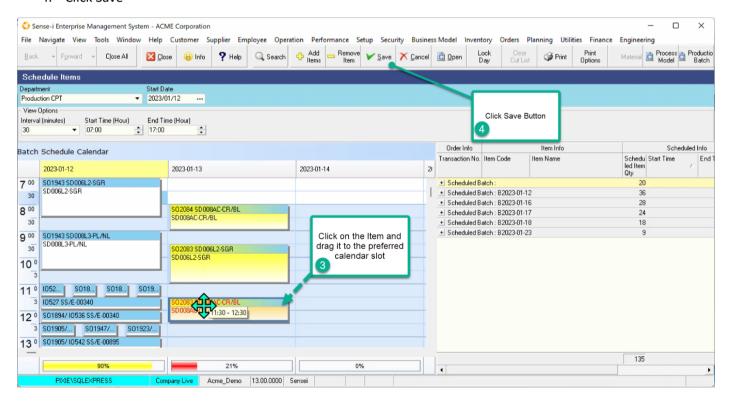


2. Multi-select the records you want to add and Click Select.

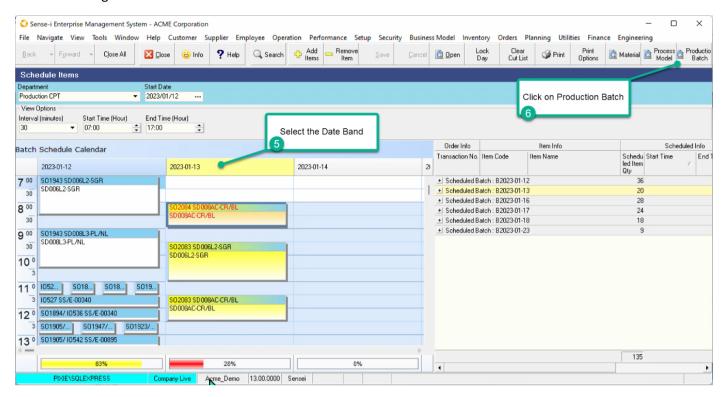
The new items now appear both in the calendar and the grid.



- 3. Move the items to the preferred date and time.
- 4. Click Save



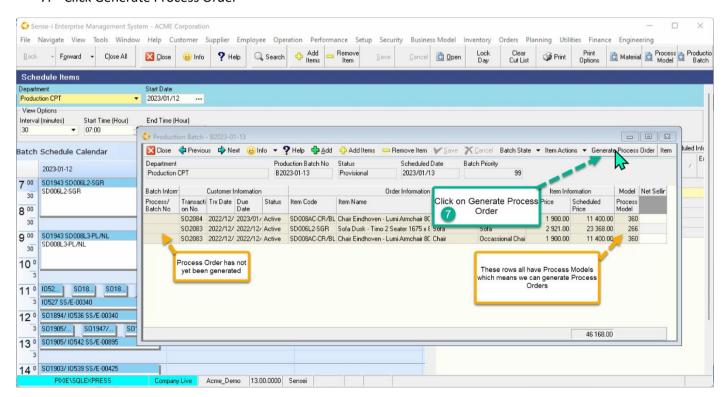
- 5. Open up the Production Batch by selecting the Date Band and
- 6. Clicking the Production Batch button.



The Production Batch opens and lists all the order items in it.

Check to see whether any rows have not yet had a process order generated.

7. Click Generate Process Order

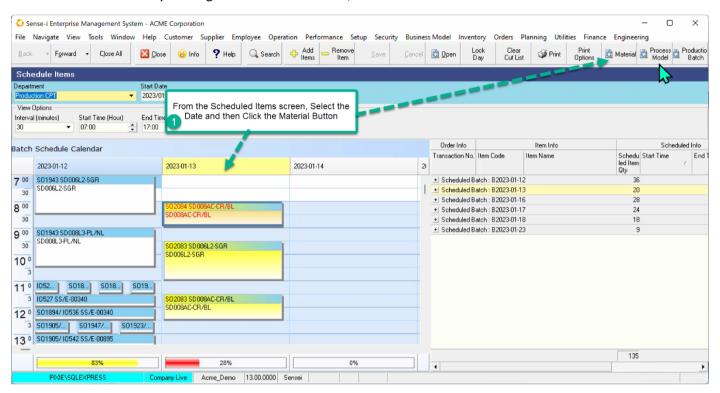


The process orders are generated AND activated. The scheduled order items are thus replenished.

6.6 Replenish Raw Materials for Scheduled Batches.

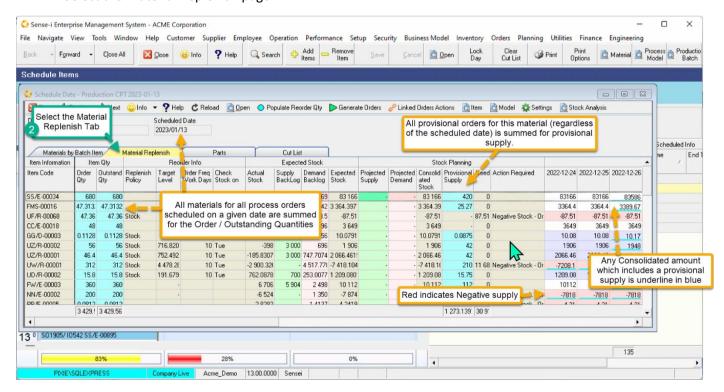
From the Scheduled Items screen

1. Select the date by clicking on the column header, then click the Materials button.



The Materials Detail Pop-up screen is displayed.

2. Select the Material Replenish page

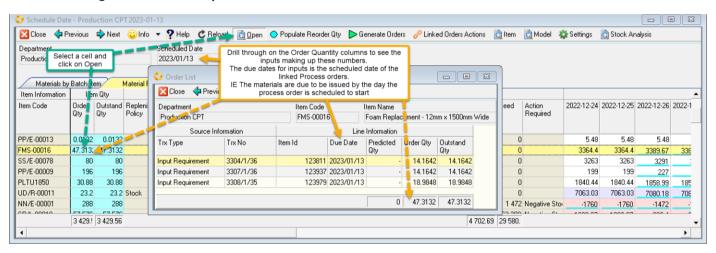


Notes:

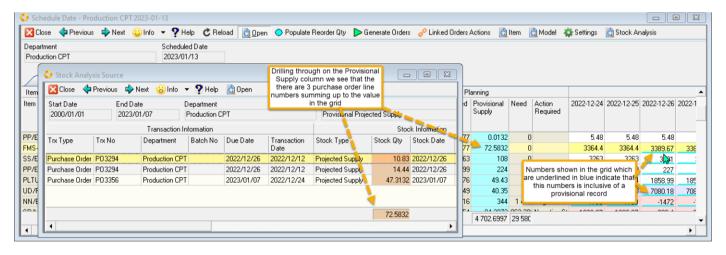
- All materials for all the process orders scheduled for this department on this date make up the Order Quantity and Outstanding Quantities.
- The existing provisional purchases orders are summed and shown in the Provisional Supply column. This
 means that we can begin to build purchase orders from each day's requirements and only activate the
 orders when we are ready.
- The colour coding alerts us to negative stock or surplus stock.
- 3. Replenish as usual: Set Order Quantity & Generate Order.

Checking the source of the numbers

All the replenish screens we have seen so far allow you to drill in to specific cells and confirm the numbers. We click on a cell in the grid and click the **open** button



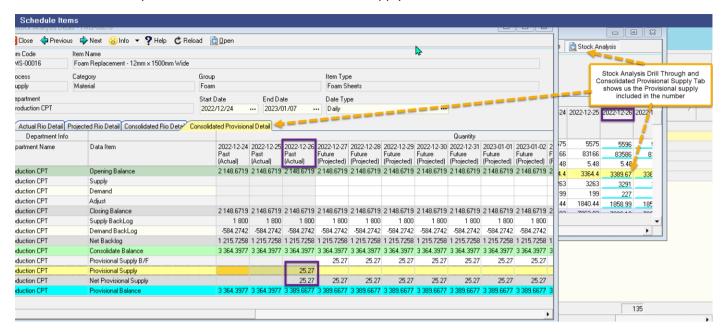
Similarly drill through on the Provisional Supply we can see the breakdown.



The grid shows which values in the date columns have provisional supply included.

Check numbers in the Date columns by viewing the Stock Analysis columns.

These number correspond to the Consolidated Provisional supply Tab.



6.7 Replenish from Stock

If you choose to replenish from stock, you must ensure your stock quantities are accurate.

The mechanism of replenish remains the same. The difference lies in the fact that there is no underlying order to work with. This means you must

- Search for the stock items of interest as opposed to letting the underlying orders produce the list.
- Populate the replenish quantity either manually or copying the system calculated Need

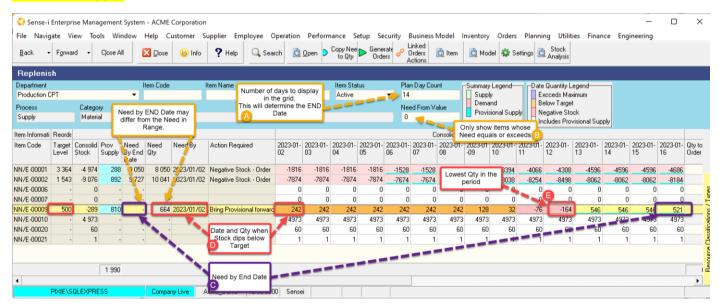
Navigate from the main menu. Operation > Replenish Stock.

From the replenish screen choose the Resource group to Replenish.

Search Parameters of interest

- A. Search parameter **Plan Day Count** returns the number of dates to show in the calendar and derives the values in the Stock Planning Band up to the end date. (IE Current Date + Play Day Count)
- B. The **Need from Value** can be used to refine the search to only show records whose need equals or exceeds a certain value.

The grid returns the expected stock values for a range of dates. The values correspond to the Consolidated with Provisional Supply Stock View.



There are 2 need columns.

C. Need by the end Date.

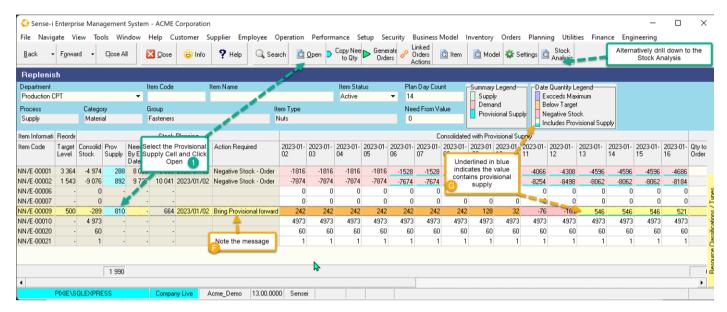
By the end of the period we need a certain amount of stock to be ordered to achieve the Target Level.

As this is a negative value, another order is not yet required.

D. Need by Calculated Date.

The first date where the stock dips below target is the Need by Date. The screen above shows that the stock level is already below target for TODAY. It is 242 and the Target is 500. The need by date is set to today.

E. The Need Quantity is calculated based on the lowest quantity in the period.

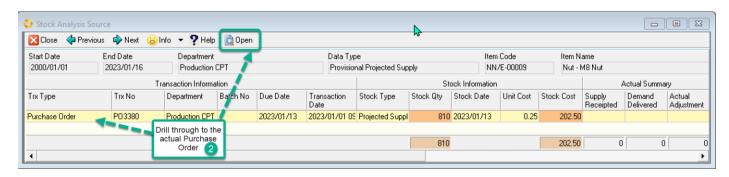


- F. The required action states that the Provisional Supply needs to be brought forward. We can see that there is sufficient stock at the end of the period but there will be a stock shortage during the period. Stock level drop below negative.
- G. The provisional supply pushes the stock value to an acceptable level.

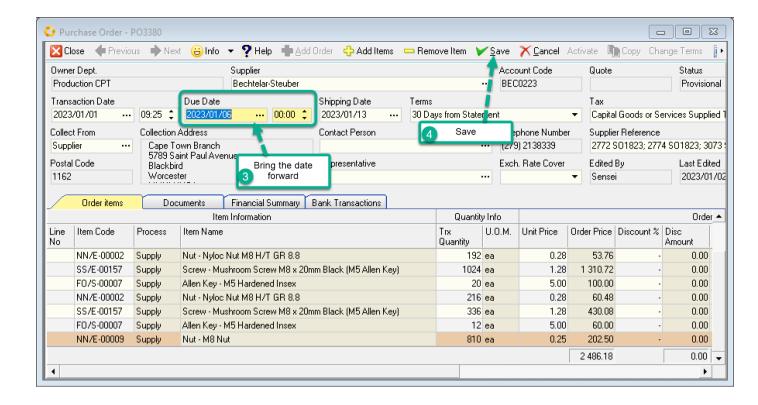
6.7.1 Bring the Provisional Stock forward

1. Select the Provisional supply cell and Click Open.

The list of source documents is listed.



2. Drill through to the purchase order.

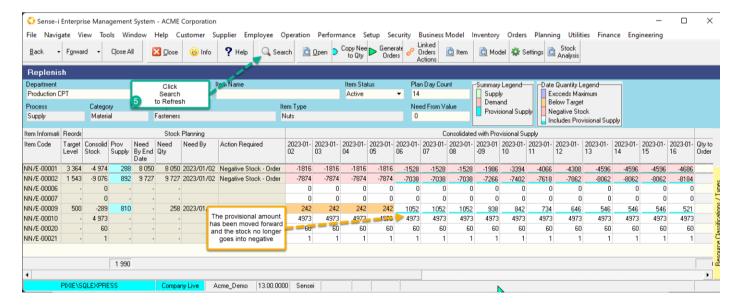


The purchase order opens and highlights the Item we are querying. (Change the quantity of the order if needed.)

- 3. To bring the due date forward, change the due date.
- 4. Save the record.

Close down the drill through screens.

5. Click the Search button to refresh



Process orders document the manufacturing of finished goods.

The process model serves as the recipe and lists the inputs required to make the item. One would generally issue the materials prior to and during the manufacture process. Certain inputs are marked as **Issue on Dispatch**. These inputs are not part of the finished good but rather accompany it on delivery. Examples. Screw on Feet for a couch packed separated; Scatter Cushions etc.

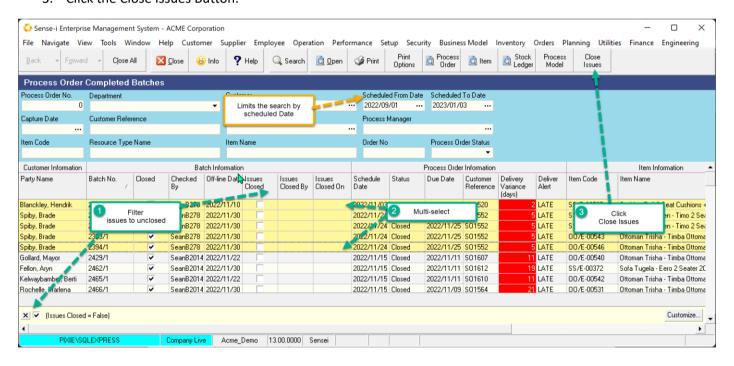
On finishing a job (IE Marking the finished goods completed) the operator is given the opportunity to issue outstanding materials; cancel the demand for them or do nothing. This EXCLUDES those items marked, issue on dispatch. Issue on dispatch should be a deliberate action when at time or prior to dispatch.

Closing Issues

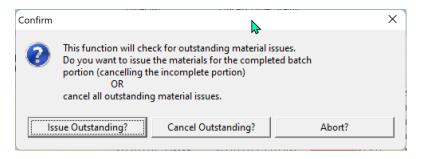
- Can only be done on a Completed/Closed Batch
- Gives us another opportunity to issue or cancel the outstanding items.
- It INCLUDES issue on dispatch.
- It prevents further issuing of materials against a process order batch.

From the main menu, navigate to Operation \ Process Order Completed Batches.

- 1. Filter the list to only show batches with Open Issues (Issues Closed =False)
- 2. Multi-Select the records to close
- 3. Click the Close Issues Button.



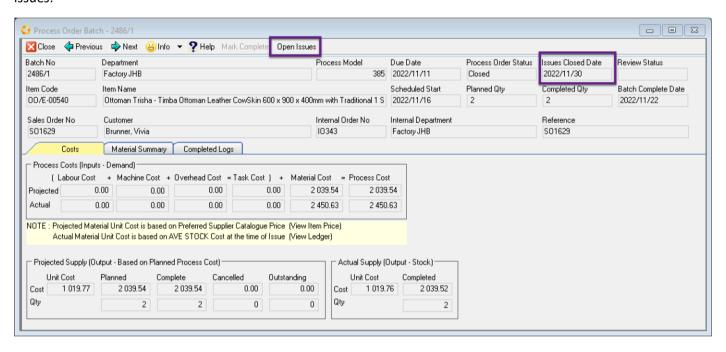
Closing Issues clears the unissued materials by issuing them or cancelling the demand. The following message popsup.



Opening the Process Order Batch Detail screen, you will see a button which will **toggle** between *Close Issues* or *Open Issues*, depending on the state of the issues.

7.1 REOPENING ISSUES

If you have closed issues but now you want to return issues or add additional issues, you may wish to reopen the issues.



8 System Settings

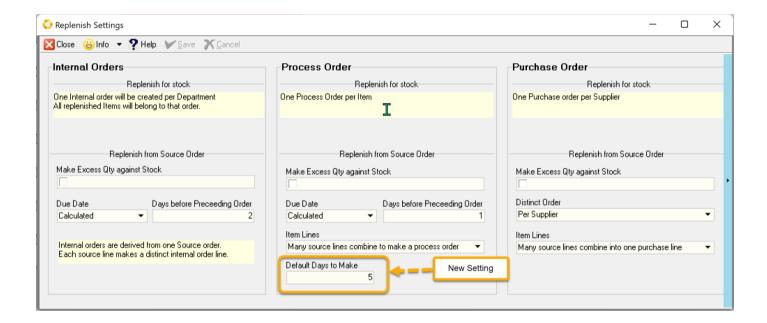
8.1 SECURITY SETTINGS

- 309 Replenish Materials for Scheduled Batches
- 312 Process Order Replenish Materials
- 756 Process Batch Close Issues
- 757 Process Batch Complete List

8.2 COMPANY SETTINGS

- Target Max Factor
 Positive number greater than or equal to 1
- Target Min Factor
 Positive number less than or equal to 1

8.3 REPLENISH SETTINGS



If the output item does not have a lead time set, the default days to make will be used.