

**CAUTION !! All new procedures and processes should be checked in the 'Test' environment before being applied to the 'Live' business system.**

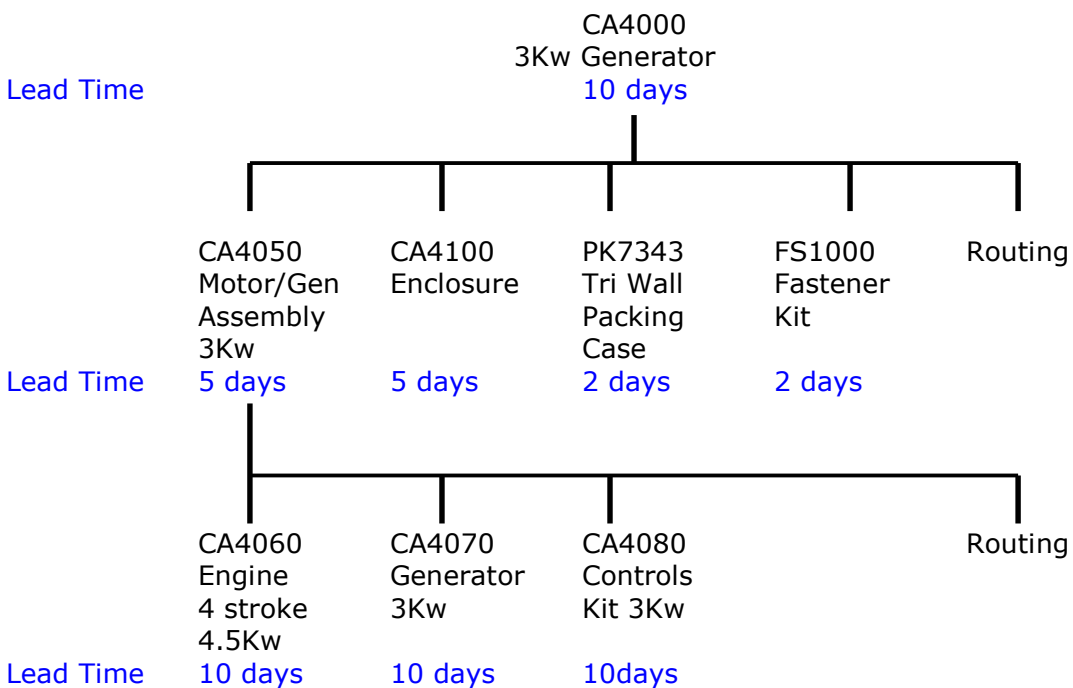
**V10 MATERIAL REQUIREMENTS PLANNING (MRP) – Ver 3**



**1. Test Data**

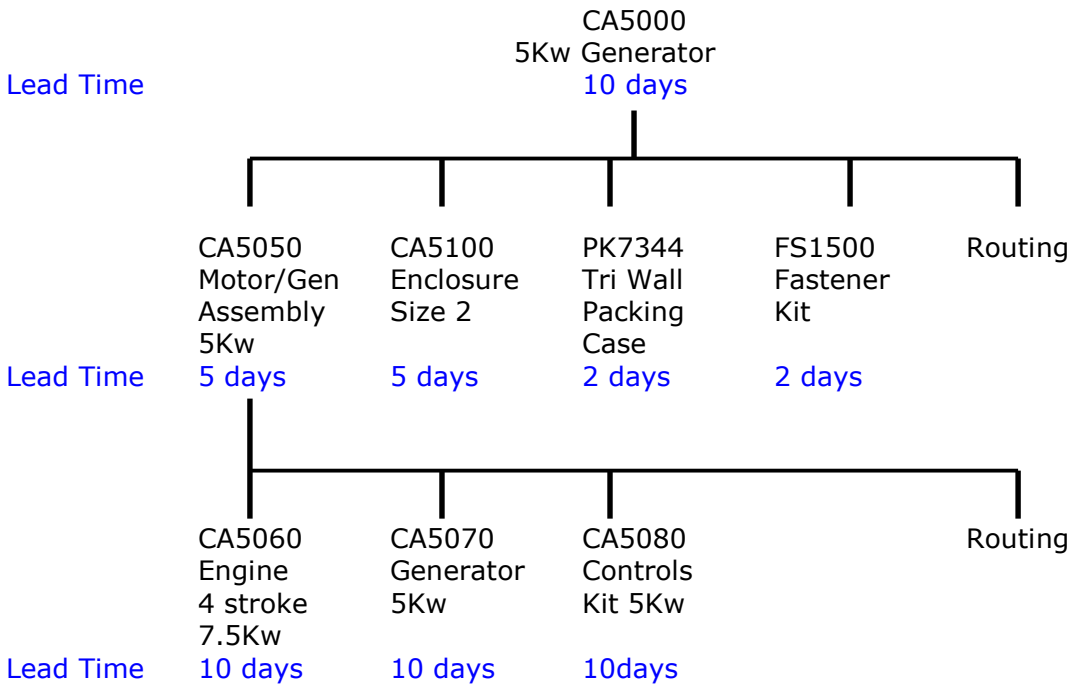
The following assemblies were used to generate the screens and documents in this datasheet. A basic dataset containing these assemblies is available for test purposes. (V10mrpmpsbase6.zip).

**For MRP (Sales Order Demand)**



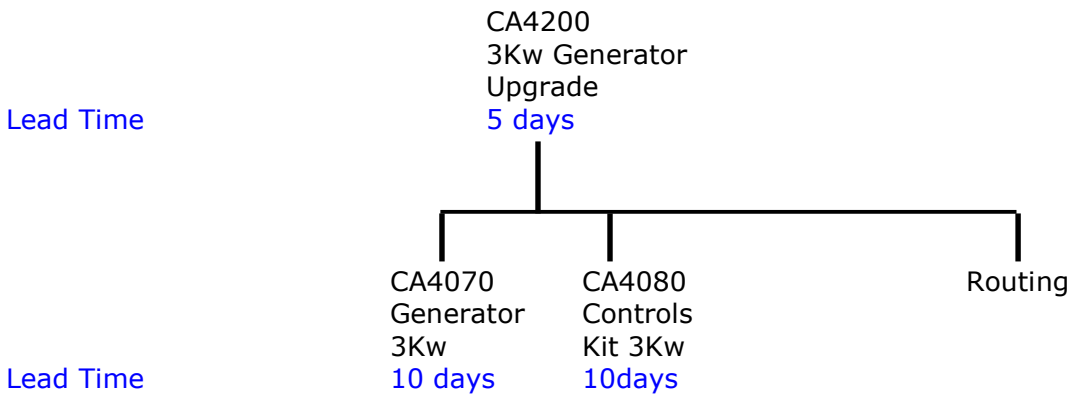
All items Product Group EL30 and MRP=Y

**For MPS (Schedule Demand – see separate datasheet)**



All items Product Group EL30, except parent CA5000 which is in Product Group MPS, and MRP=Y

**To show Batching**



All items Product Group EL30 and MRP=Y

## 2. Parameters - Options

### Material Requirements Planning, Utilities, Parameters, Options

The screenshot shows a window titled 'SMS - Sapphire MRP Data' with a tab labeled 'Material Requirement Planning Module options'. The window contains the following settings:

Material Requirement Planning Module options		
Item Demand Derived From		
- Import	<input type="checkbox"/>	
- MPS	<input type="checkbox"/>	
- Sales Orders	<input checked="" type="checkbox"/>	YES
Include Reorder Levels		
	<input type="checkbox"/>	NO
Include Free Stock		
	<input checked="" type="checkbox"/>	YES
Include WO Shortages		
	<input checked="" type="checkbox"/>	YES
Batching Horizon		
	<input type="text"/>	14
	Raise POs	
Monday	<input checked="" type="checkbox"/>	YES
Tuesday	<input checked="" type="checkbox"/>	YES
Wednesday	<input checked="" type="checkbox"/>	YES
Thursday	<input checked="" type="checkbox"/>	YES
Friday	<input checked="" type="checkbox"/>	YES
Saturday	<input type="checkbox"/>	NO
Sunday	<input type="checkbox"/>	NO
	Raise WOs	
Monday	<input checked="" type="checkbox"/>	YES
Tuesday	<input checked="" type="checkbox"/>	YES
Wednesday	<input checked="" type="checkbox"/>	YES
Thursday	<input checked="" type="checkbox"/>	YES
Friday	<input checked="" type="checkbox"/>	YES
Saturday	<input type="checkbox"/>	NO
Sunday	<input type="checkbox"/>	NO

Material Planning Options

#### 2.1 Item Demand Derived From

Sets the default demand conditions. In the above example the top-level demand will be taken from the Sales Orders.

**Import** – This allows the demand to be taken from a .CSV file  
(Please also see the [MPS Datasheet](#))

**MPS** – include top-level demand from the Master Production Schedule

**Sales Orders** – include top-level demand from Sales Orders

**NOTE !!** If both the MPS and Sales Order demands are set to 'NO' then the system will use current top level Works Orders as demand only

#### 2.2 Include Reorder Levels

If set to 'YES' supply orders for items with a Reorder Level set will be increased to meet the Reorder Level requirement. If set to 'NO' the level is ignored and sufficient stock orders placed to meet the calculated demand requirement only.

#### 2.3 Include Free Stock

If set to 'YES' the Free Stock, and projected supply P/O and W/O, are netted from the overall requirement.

If set to 'NO' then Free Stock, and projected P/O and W/O, are ignored and the MRP is effectively Gross Requirements/Make to Order. The normal setting is YES.

#### 2.4 Include WO Shortages

Would normally be set the same as the above Include Free Stock to give either a Nett or Gross MRP run

#### 2.5 Batching Horizon

The number of days over which MRP will batch supply orders

### BlueStone Solutions for Business

Unit A, Tayside Software Centre, Technology Park, Dundee, DD2 1TY

Email: [sales@bluestone-solutions.co.uk](mailto:sales@bluestone-solutions.co.uk) [www.bluestone-solutions.co.uk](http://www.bluestone-solutions.co.uk)

Offices in Leicester & Bristol. For all locations contact (0800) 027 3775

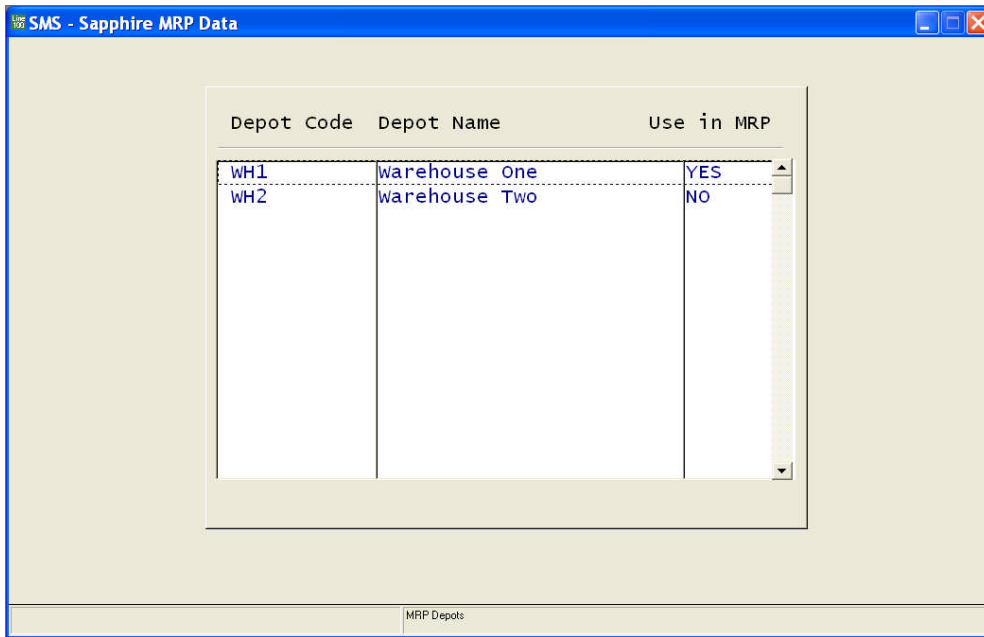
### 2.3 Raise POs/Raise WOs

Sets the days when the orders may be raised. These are effectively the working days, and if set as above with the Saturday and Sunday set to 'NO', the Works Order start date will be backed off from the Sales Order 'Our Due Date' excluding the weekends.

For example, if the required start date fell on a Sunday (a non working day) then the start would be backed off to the previous Friday (the last available working day)

### 3. Parameters - MRP Depots

*Material Requirements Planning, Utilities, Parameters, MRP Depots*



The screenshot shows a window titled 'SMS - Sapphire MRP Data' with a table of MRP Depots. The table has three columns: 'Depot Code', 'Depot Name', and 'Use in MRP'. The data is as follows:

Depot Code	Depot Name	Use in MRP
WH1	warehouse One	YES
WH2	warehouse Two	NO

The window also has a status bar at the bottom that reads 'MRP Depots'.

Selects the Depots that will be used by MRP. In the above example WH1 is included and WH2 is excluded.

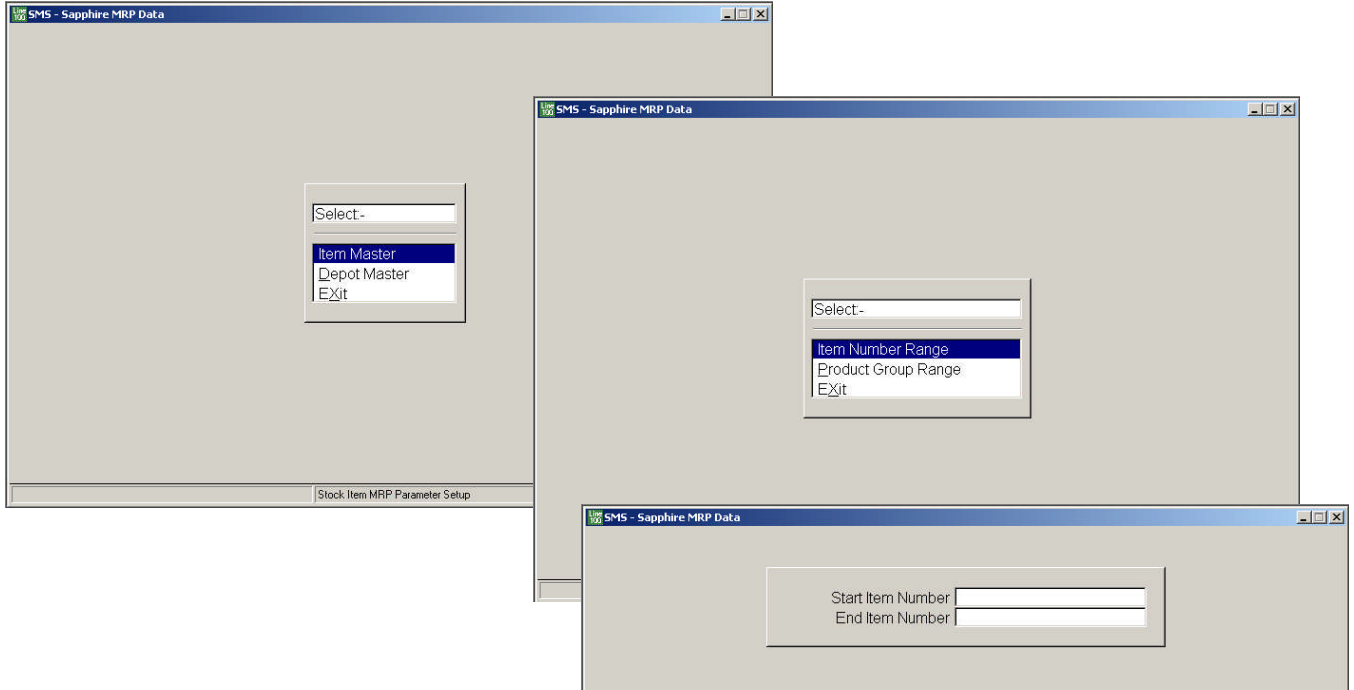
This enables Depots such as Inspection and Quarantine to be excluded, and MRP to be run against specific sites in a multi-site installation.

#### 4. Parameters – Item Setup

*Material Requirements Planning, Utilities, Parameters, Item Setup*

This feature enables a mass change or amendment to be made to a range of items

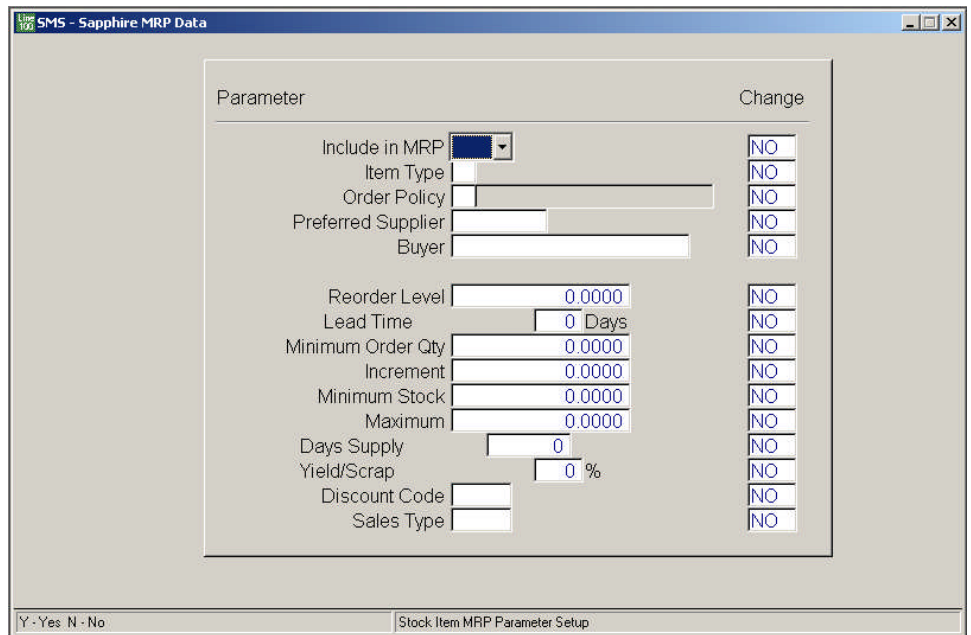
##### 4.1 Item Master



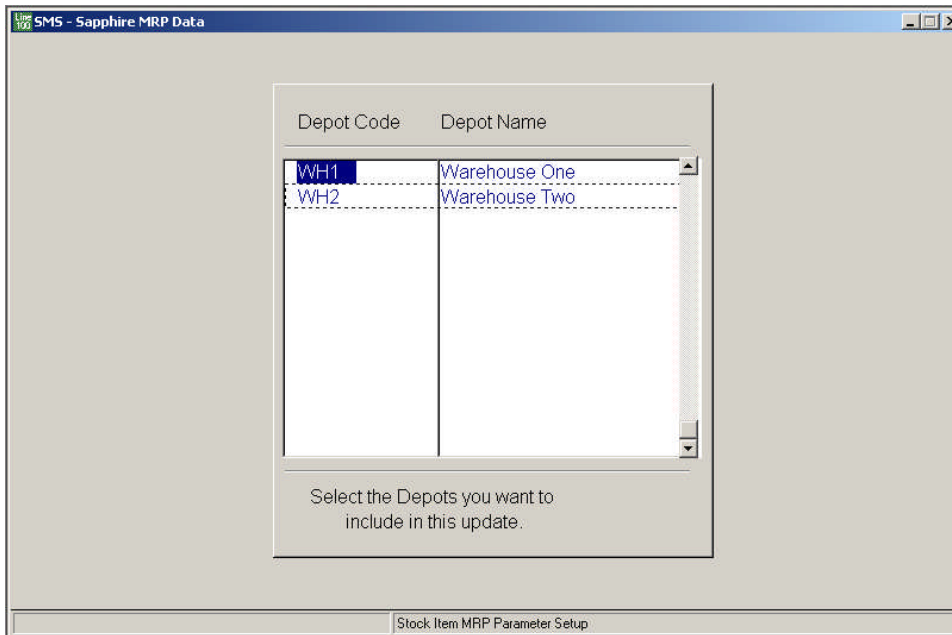
Following selection of 'Item Master' the user is able to select the Items to be amended by 'Item Number Range' or 'Product Group Range'.

The fields shown can then be amended

If the 'Change' box is amended to 'YES' then that field change will be applied to all of the selected items. If the box is left at 'NO' then the update is not made when the base menu 'Accept' is selected.

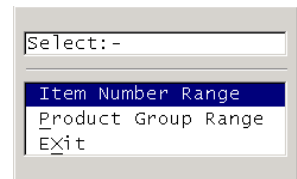


### 4.2 Depot Master



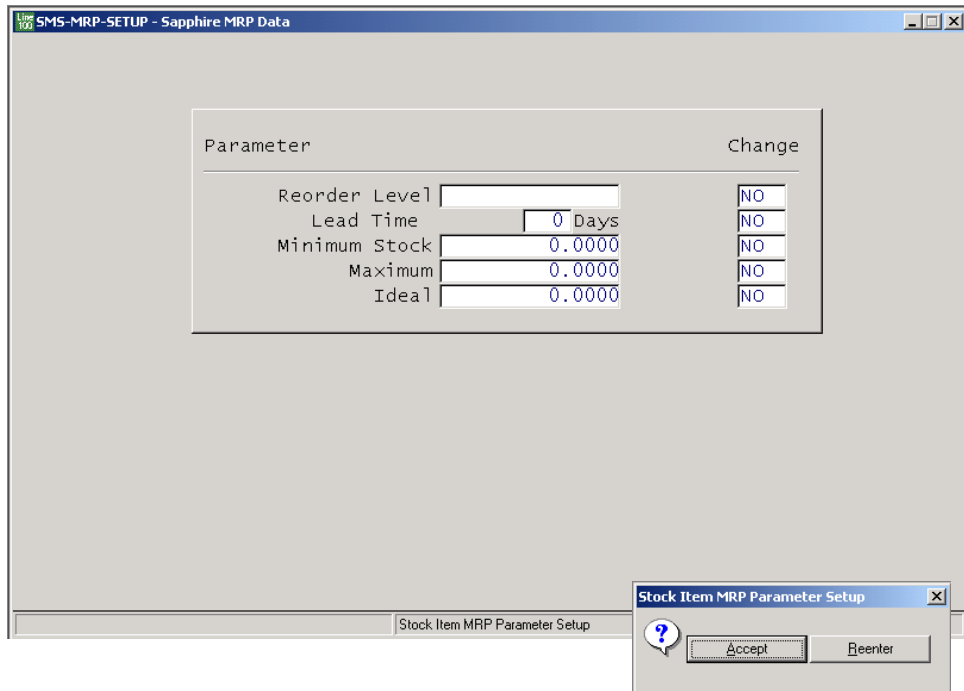
Scroll to the selected depot line and press 'Return' to select or deselect the relevant depot. In the above example WH1 has been selected as it is shown highlighted.

The base menu is then displayed, and if 'Accept' is selected the user is presented with a choice of selecting items by Item Number Range or Product Group Range.



The fields shown can then be amended

If the 'Change' box is amended to 'YES' then that field change will be applied to all of the selected items. If the box is left at 'NO' then the update is not made when the base menu 'Accept' is selected.



The field 'Ideal' is for Inter depot Transfer quantities

## 5. Using MRP

### 5.1 Sales Order Demand

The demand for MRP items is entered as a Sales Order. Note that printing the Sales Order can also generate a Works Order Loading document depending on parameter settings.

Advance Notice		WORKS LOADING		600.0000	
*****				D001	
Customer Dawson Distributors		Order Number	10009		
Bramley Business Park		Date Taken	03 Jul 2006		
Worcester Road		Delivery Sched.	01 Sep 2006		
Leominster		Customer Order	DD1234		
HR6 5GH					
No.	Product	Quantity	Date		
1	CA4000 3KwGenerator	1.0000	01 Sep 2006		

*Material Requirements Planning, Transaction Entry, Calculate Requirements*

The screenshot shows a window titled "SMS - Sapphire MRP Data" with the following parameters:

- Sales Orders: YES (dropdown menu)
- MPS: (checkbox)
- MPS schedule: (text field)
- Start Week: (text field)
- Start Date: (text field)
- End Week: (text field)
- End Date: (text field)
- Include Reorder Levels: NO (dropdown menu)
- Include Free Stock: YES (dropdown menu)
- Include WO Shortages: YES (dropdown menu)
- Batching Horizon: 14 (text field)
- Single Depot Mode: (checkbox)
- Depot: (text field)

MRP Engine

The above screen enables the user to set the requirements for a specific MRP run. In the above case the demand is being taken from the Sales Orders only. This has been defaulted from the parameter settings together with the decision to Include Free Stock, the Batching Horizon of 14 days and the 'working days' (see section 2 above). These may be amended for this MRP run if required.

Note that there are no separate horizons for the Suggested Works and Purchase Orders, as the requirements are calculated for all demands on the system. The orders are filtered for time horizons as shown below.

## 5.2 Production Schedule

*Material Requirements Planning, Transaction Entry, Production Schedule*

MRP Production Schedule Options

Show PW's up to

Order By

Default Start Date

Production Schedule

A date can be entered for the horizon up to which Planned Works Orders (PW's) will be shown. If the field is left blank, all orders will be shown.

### 5.2.1 Screen Report

* Item Number	Qty Reqd	Qty Conf	Start Date	End Date
CA4000	1.0000	0.0000	22 Aug 2006	01 Sep 2006
CA4050	1.0000	0.0000	17 Aug 2006	22 Aug 2006

In Stock  Free  Job Num

Desc  Order Num

MOQ  Inc

MRP Production Schedule

MRP Production Schedule

Confirm Discard Stock Profile

Stock Item BOM Exit

### BlueStone Solutions for Business

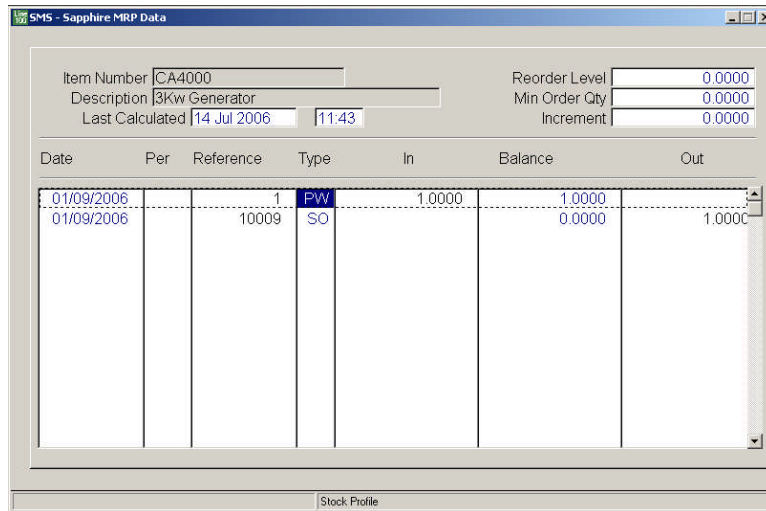
Unit A, Tayside Software Centre, Technology Park, Dundee, DD2 1TY

Email: sales@bluestone-solutions.co.uk www.bluestone-solutions.co.uk

Offices in Leicester & Bristol. For all locations contact (0800) 027 3775

From the base menu the options are given to

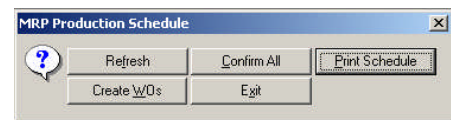
- Confirm the suggested order
- Discard the order
- View the Stock Item
  - the Stock Profile
  - the BOM



The Stock Profile screen from within MRP using the above menu selection, showing the Sales Order and the Planned Works Order

After examining the suggested items, or on exiting the screen, the second base menu offers the options to

- Refresh – return to examining the items
- Confirm All suggested orders
- Print Schedule
- Create the Works Orders
- Exit the Production Schedule

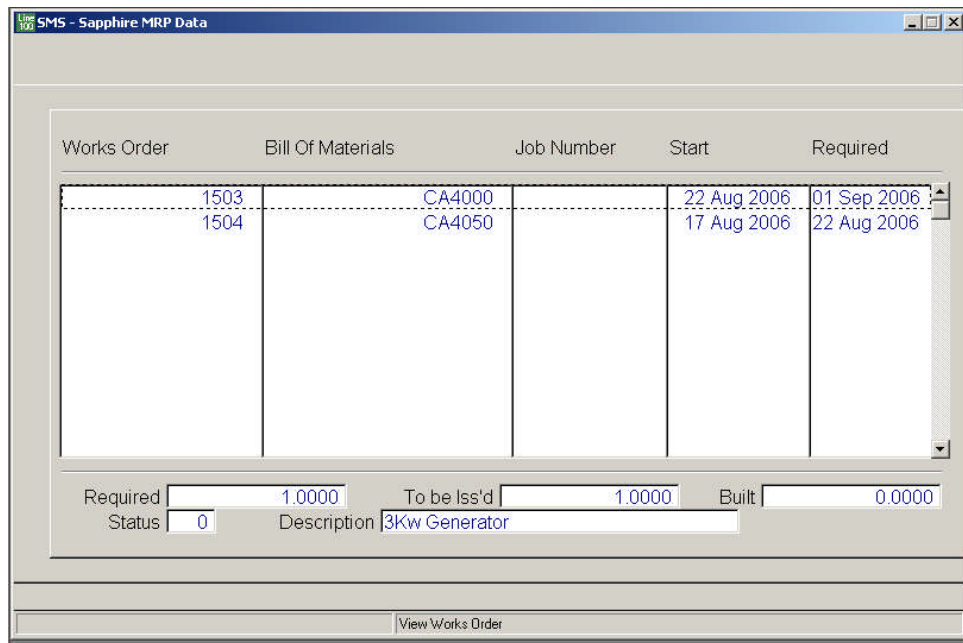


### 5.2.2 Printed Report

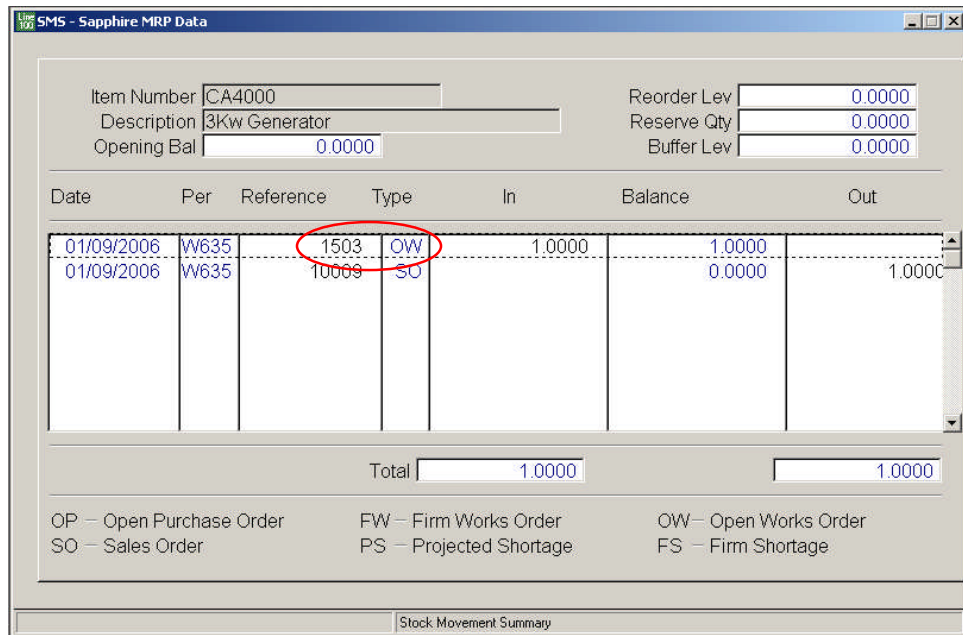
Production Schedule		10	Printed By						
Item Number	Item Description	Qty Suggested	Qty Ordered	Start Date	End Date	Std Cost	Line Value	Date Printed	Page Number
CA4000	3Kw Generator	1.0000	0.0000	22 Aug 2006	01 Sep 2006	0.0000	0.0000	14 Jul 2006	1
CA4050	Motor/Generator Assembly 3Kw	1.0000	0.0000	17 Aug 2006	22 Aug 2006	0.0000	0.0000		

### 5.2.3 Works Orders

The following orders are created following the Confirm and Create options.



The Items can now be viewed through the Stock Enquiry View Supply/Demand. The Planned Order is now shown as an Open Works Order and the order number shown.



### BlueStone Solutions for Business

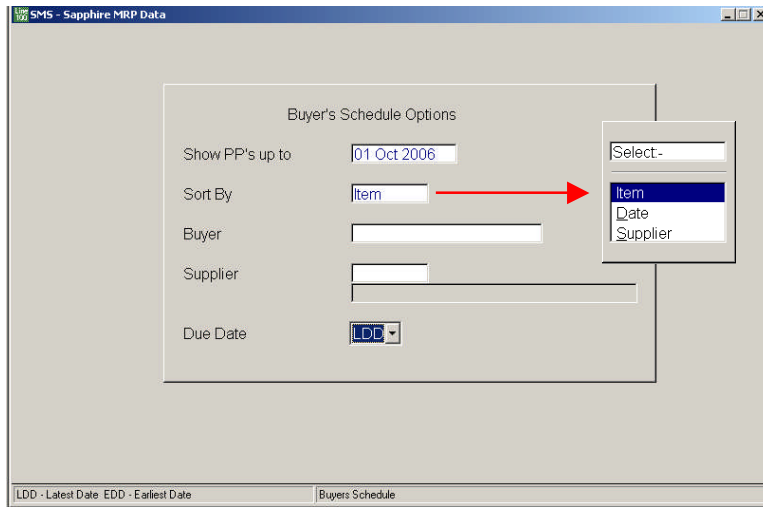
Unit A, Tayside Software Centre, Technology Park, Dundee, DD2 1TY

Email: sales@bluestone-solutions.co.uk    www.bluestone-solutions.co.uk

Offices in Leicester & Bristol. For all locations contact (0800) 027 3775

### 5.3 Buyers Schedule

Material Requirements Planning, Transaction Entry, Buyers Schedule



The screen allows Planned Purchase orders to be shown up to a selected date. The available sort orders are

- Item
- Date
- Supplier

The Due date options are

- LDD = MRP Calculated Required Date – Lead Time
- EDD = Today + Lead Time

Optionally orders shown can be restricted to those for a selected Buyer or a single Supplier.

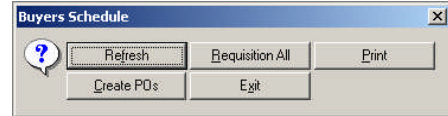
The filtered list is shown below

Due Date	Item Number	Supplier	Required	Ordered	Req PO
22 Aug 2006	CA4100	P001	1.0000	0.0000	
17 Aug 2006	CA5060	C001	1.0000	0.0000	
17 Aug 2006	CA5070	C001	1.0000	0.0000	
17 Aug 2006	CA5080	C001	1.0000	0.0000	
20 Aug 2006	FS1000	B001	1.0000	0.0000	
20 Aug 2006	PK7343	B001	1.0000	0.0000	

Description: Enclosure

After examining the suggested items, or on exiting the screen, the second base menu offers the options to

- Refresh – return to examining the items
- Requisition All suggested orders
- Print
- Create Purchase Orders
- Exit the Production Schedule



The purchase orders are confirmed in a similar way to the works orders. Confirmed orders (Req=YES) can then be converted to Open Purchase Orders.

An Audit report is produced to show the Purchase Orders that have been created

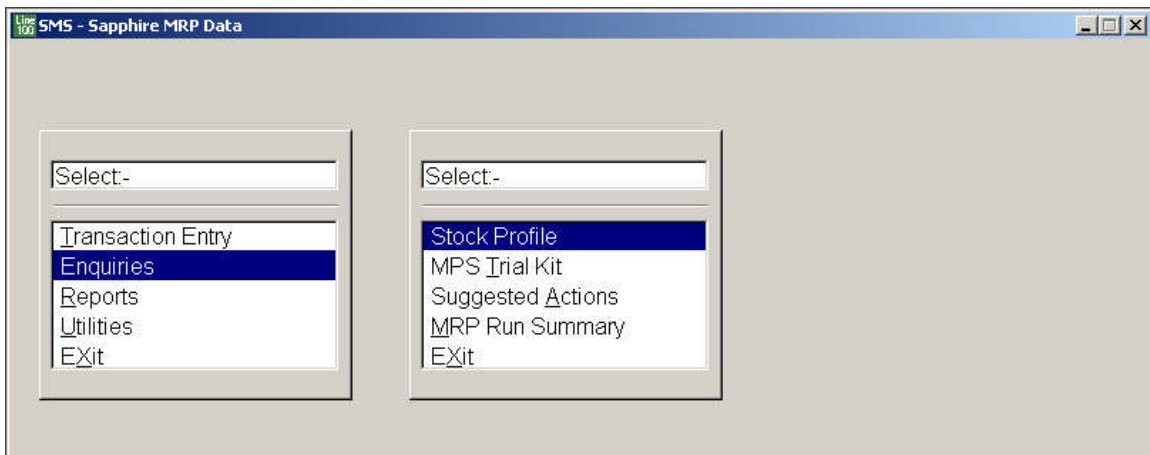
Sapphire MRP Data										Printed By
Purchase Orders Created From MRP Requisitions										Date
Order Number	Supplier	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value	Page Number	SMS
0000000004	B001	20 Aug 2006	1.0000	1.0000	1.0000	Each	0.0000	0.00	1	14 Jul 2006
Blakewood Factors										
Item Number	FS1000	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Fastener Kit										
Item Number	PK7343	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
TriWall Packing Case										
								TOTALVALUE	0.00	
Order Number	0000000005	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Supplier C001 Classic Components										
Item Number	CA5060	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Engine 4stroke 4.5Kw										
Item Number	CA5070	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Generator 3Kw single phase										
Item Number	CA5080	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Controls Kit 5Kw										
								TOTALVALUE	0.00	
Order Number	0000000006	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Supplier P001 Phoenix Metals										
Item Number	CA4100	Due Date	Suggested Quantity	Actual Quantity	Factored Qty	UoT	Cost Price	Value		
Enclosure										
								TOTALVALUE	0.00	

### 5.3.1 Screen Report

Sapphire MRP Data							Printed By
Buyer's Schedule							Date Printed
Buyer							Page Number
Action Date	Item Number	Item Description	Qty Required	Approved Supplier	Req. Price		
22 Aug 2006	CA4100	Enclosure	1.0000	P001			
17 Aug 2006	CA5060	Engine 4 stroke 4.5Kw	1.0000	C001			
17 Aug 2006	CA5070	Generator 3Kw single phase	1.0000	C001			
17 Aug 2006	CA5080	Controls Kit 5Kw	1.0000	C001			
20 Aug 2006	FS1000	Fastener Kit	1.0000	B001			
20 Aug 2006	PK7343	Tri Wall Packing Case	1.0000	B001			

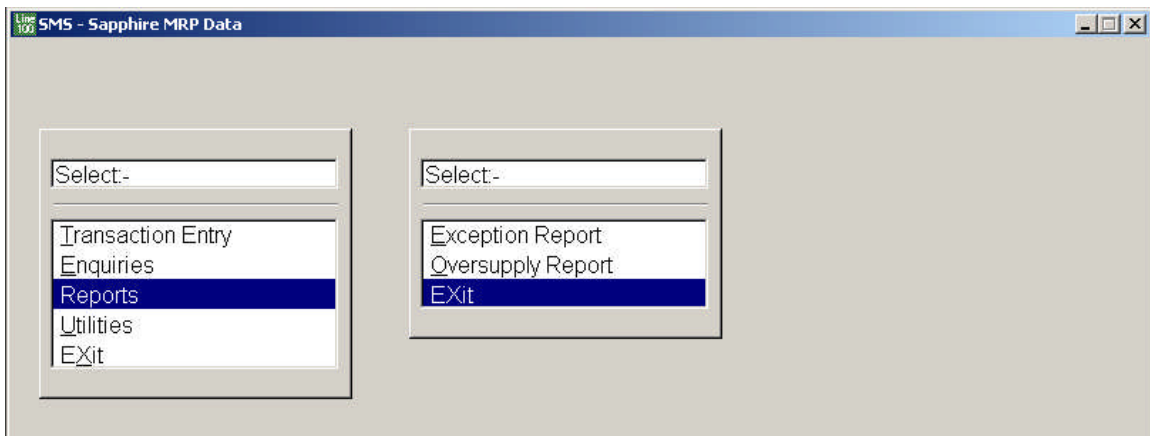
## 6. Enquiries

The following Enquiries are available from within the MRP menu



## 7. Reports

To be defined



The Exception and Oversupply reports within MRP are not currently available, but a separate datasheet on the use of the Projected Reorder Report to locate Under and Over Supply conditions is available

**APPENDIX 1 – PROGRAM DETAILS**

The main programs within the MRP module are shown below

Material Requirements Planning

Transaction Entry

Calculate Requirements  
Production Schedule  
Buyers Schedule

Calculate Requirements	SMS-MRP-CALCULATE-2
Production Schedule	SMS-PROD-SCHEDULE
Create Works Orders	SMS-MRP-CREATE-WOP
Buyers Schedule	SMS-BUYER-SCHEDULE
Create Purchase Orders	SMS-MRP-CREATE-POP

**BlueStone Solutions for Business**

Unit A, Tayside Software Centre, Technology Park, Dundee, DD2 1TY

Email: [sales@bluestone-solutions.co.uk](mailto:sales@bluestone-solutions.co.uk) [www.bluestone-solutions.co.uk](http://www.bluestone-solutions.co.uk)

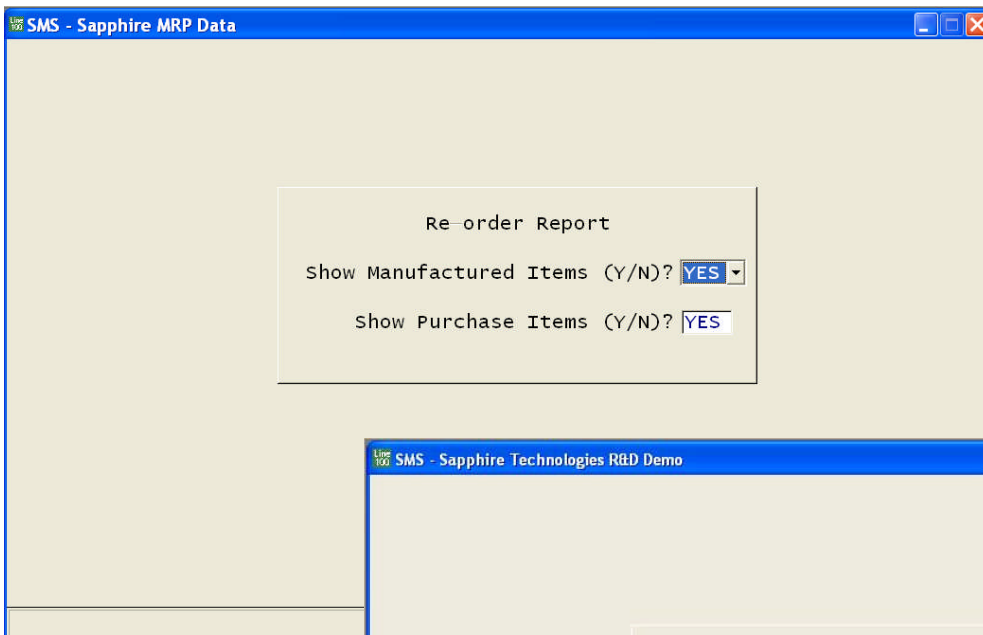
Offices in Leicester & Bristol. For all locations contact (0800) 027 3775

## APPENDIX 2

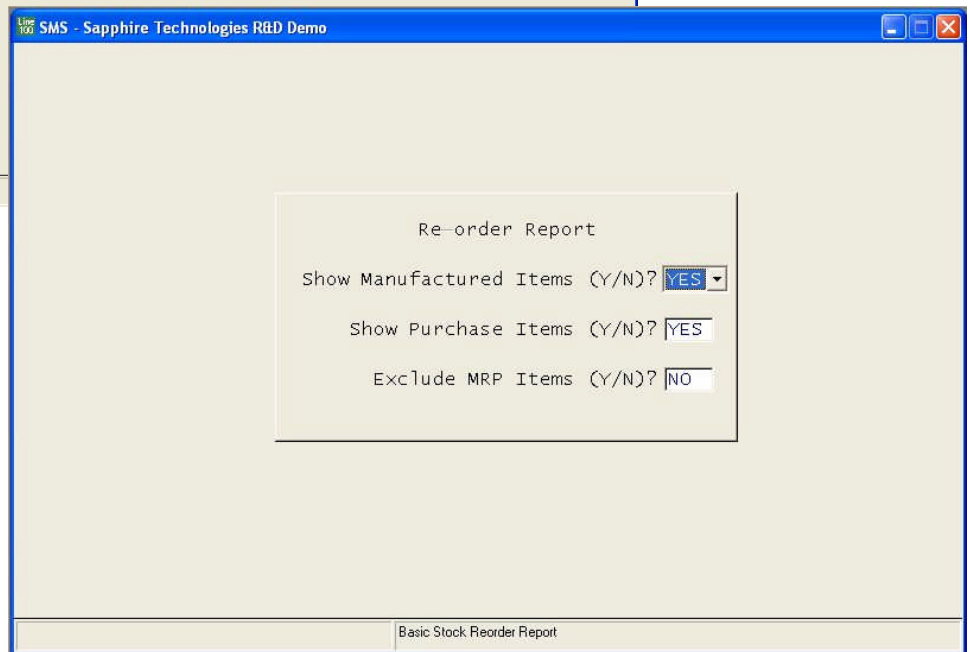
Items that are not flagged as MRP on the Stock Item record, and hence controlled by MRP, are normally controlled on a Max/Min basis.

In version 10 the Basic Stock Reorder Report has been modified by the addition of a filter to allow MRP items to be excluded, and therefore act as a Max/Min Reorder Report.

### *Stock Control, Reports, Stock, Basic Stock Reorder*



ORIGINAL SCREEN



NEW SCREEN

Set 'Exclude MRP Items' to Y for Max/Min Report

### **BlueStone Solutions for Business**

Unit A, Tayside Software Centre, Technology Park, Dundee, DD2 1TY

Email: [sales@bluestone-solutions.co.uk](mailto:sales@bluestone-solutions.co.uk) [www.bluestone-solutions.co.uk](http://www.bluestone-solutions.co.uk)

Offices in Leicester & Bristol. For all locations contact (0800) 027 3775