Asta Powerproject

The Business Case for Using Asta Powerproject 12

asta
An Eleco plc Company

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Introduction

Powerful reasons for making **Asta Powerproject** your company standard for project management.

This document focuses on the business case for using **Asta Powerproject**.

Since 1988, Asta has focused on developing project management software that helps organisations in a multitude of industries including construction, engineering, energy, manufacturing and pharmaceutical improve their project success rates and overall business performance.

Development of the software is led by feedback from users and by using the latest technologies available.

Asta Powerproject is sold directly in the UK and worldwide via our partners. We pride ourselves on the service we give to customers and insist on these high standards from our partners. The software is currently translated into 7 languages.

It has been used to manage many high profile projects throughout the World, such as Schiphol Airport, Amsterdam; Jumeirah Park, Dubai; Space Shuttle, New Orleans; London Eye and The Shard, London; Hong Kong Airport; Petronas Towers, Malaysia; Ipswich Motorway, Brisbane; Reichstag, Berlin and the Warsaw Metro.

Asta Powerproject provides benefits, information and control for anyone involved in the delivery of projects from the client to programme managers, project managers and workers.
For example in the construction industry it is used by clients, Project Management Consultants, Main Contractors, Trade Contractors and Site Staff.

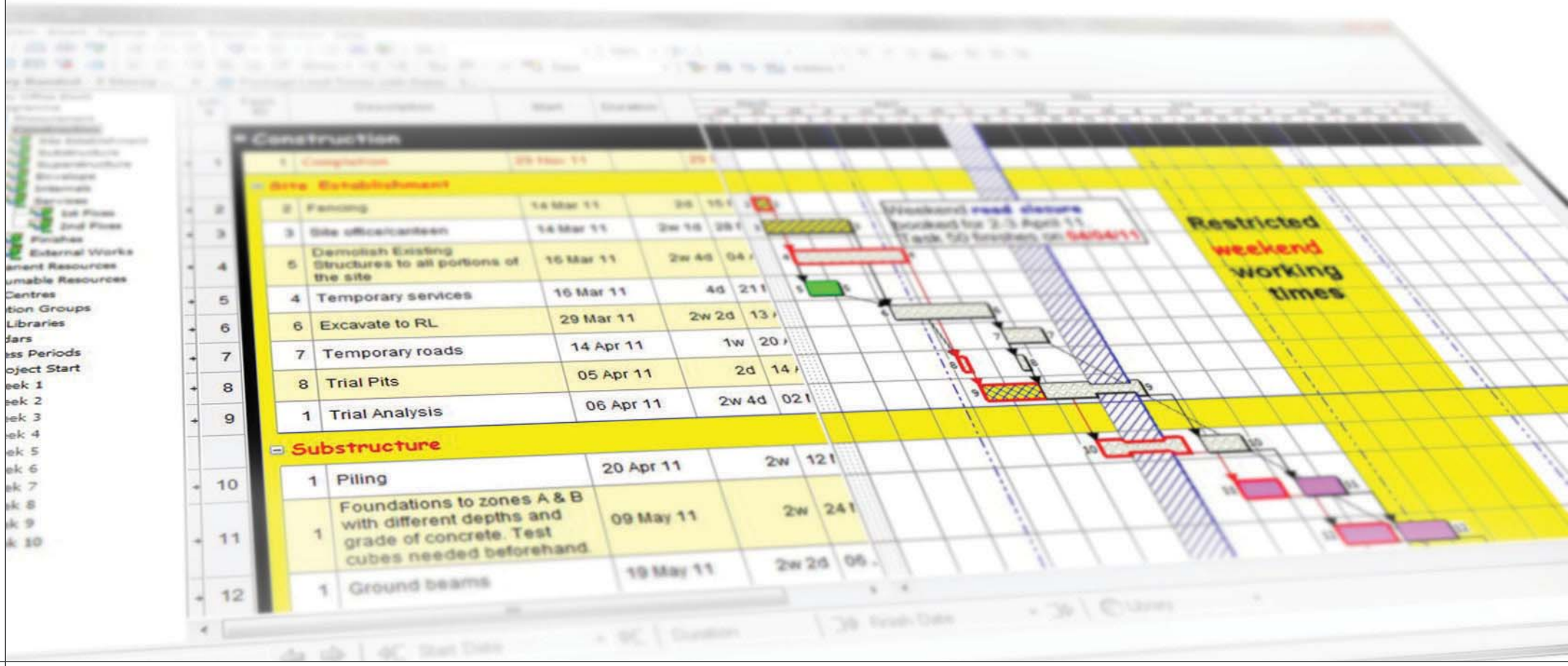
Flexible licencing and deployment options for cost effective access

Asta Powerproject is available with flexible licencing options for desktop, network and server. From the end-user perspective, the core project management functionality is exactly the same, regardless of edition. The main differences are whether software licences can be shared with other team members and whether the project database is stored centrally, with multi-user access.

		Ideal for
Standalone	Puts the power of **Asta Powerproject** at the fingertips of individual planners. Named user licence for laptop or PC.	Single users
Concurrent	Concurrent network licensing is a cost-effective way of letting more users have access to the software whilst only buying a small number of licences. For example, you could have 10 people with the software installed on their PC or laptop but only a 2-user concurrent licence installed on the central server. This would allow two people to use the software at any one time which is ideal where more occasional use is the norm.	Office Environment
Multi-user	Provides multi-user access to projects, sharing of project resources, integration with other business critical systems and visibility of all projects. Enables a number of people to access and work on the same project plan at the same time	Project teams or organisation-wide

The concurrent licensing model is extremely flexible in that licenses can be loaned to remote users for periods of time if required.

In addition to the above software family is Asta Easyplan, an entry level planning tool especially designed for site staff to update master projects and to create short term programmes. Opening and saving projects between **Asta Powerproject** and Asta Easyplan is seamless.



Project Management Functionality which is easy to use but very powerful

Whilst at the same time, being very easy to use and working in a familiar way to other Project Management software, **Asta Powerproject** is one of the most fully featured systems available.

This section highlights some of the most relevant features, in addition to those covered in more detail, later in this document.

Creating New Projects

Asta Powerproject has a similar 'look and feel' as Microsoft products like Word and Excel. This makes the software easier for novices to learn. Creating a new project is quick and easy. You simply complete a short dialogue box with basic project details. You can then draw on the bar chart to create your plan. With some other systems, the amount of set-up that needs to be done before you can start creating your plan is significant and can cause unnecessary delay. Projects can either be created with a Work Breakdown structure or Product Breakdown structure.

Flexible 'what-if' analysis

On larger, more complex projects it is sometimes useful to reschedule a section of the project, rather than the entire project. An example of where this feature would be useful would be where you needed to focus on the mechanical and electrical engineering (M&E) tasks within a large project. In **Asta Powerproject**, you would filter out all the M&E related work to create a view of it. You could then test out a number of different scenarios (i.e. changing dates, task durations etc) and reschedule it. If you were happy with the results, you would accept the reschedule. If not, you would undo it and the overall project plan would remain unaffected.

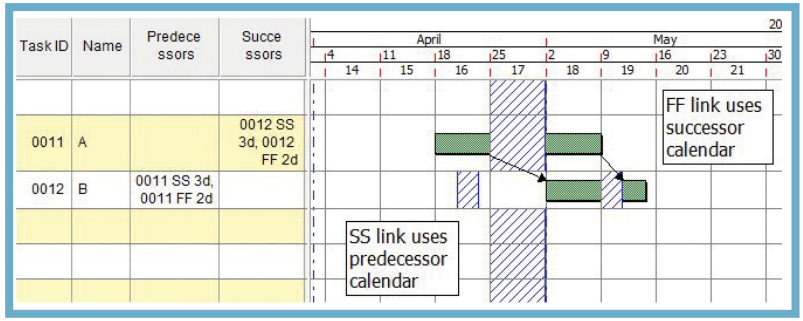
Critical Path

The creation of accurate critical paths and as a result accurate prediction of the end date of projects is possible by adding multiple logic links between tasks. (see figure 1a)

Unlike some other software, **Asta Powerproject** uses the correct calendars for different links during a reschedule. It uses the predecessor calendar for Start-Start links and the successor calendar for Finish-Finish links. This has a profound effect on the project end date when tasks with mixed calendars are involved. Software that does not have this facility will return an inaccurate project end date.

In addition, **Asta Powerproject** has the facility to model interruptible tasks correctly by either splitting a task into smaller parts or stretching it.

With Asta Powerproject you can always be confident that the project end date is accurate.

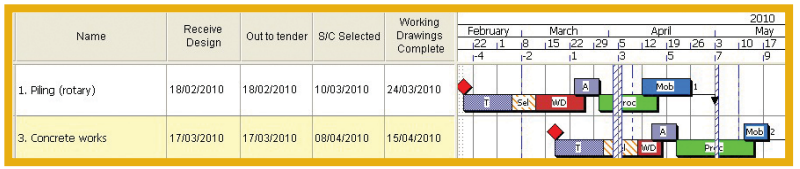


1a

Accurately predict the project end date

Present plans more compactly

Asta Powerproject enables you to create multiple tasks per line on the bar chart. This makes printouts significantly smaller and more compact. It is also a familiar way of planning housing, procurement and the finishing stages of projects. (see figure 1b)



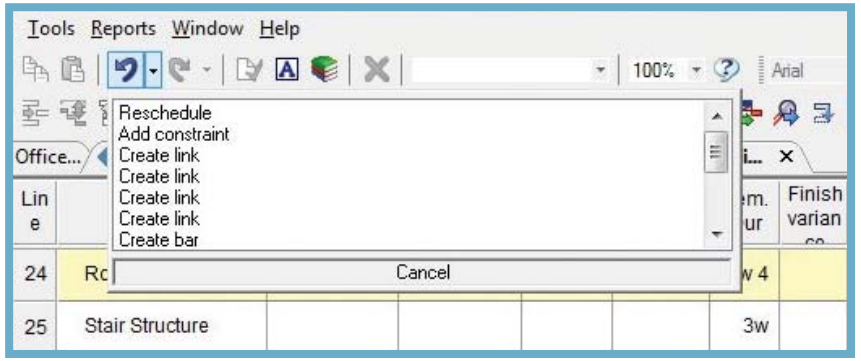
Present plans more compactly

1b

Undo and Redo

Asta Powerproject has a comprehensive 'multiple undo' feature which allows you to undo not only changes to tasks but also reschedules, changes to costs, resources, annotations etc. (see figure 2a)

By using **Asta Powerproject's** 'multiple undo' feature you will always be able to get back to exactly where you started. This provides a great safety net and will give you the confidence to test out different 'what if' analysis without the worry of not being able to revert back to your original plan.



2a

Undo feature list

Make plans more readable

In **Asta Powerproject**, you can show up to ten different time/date formats on the bar chart Date Zone at the head/foot of the bar chart, e.g. year, month, week, commencing day, week number etc. With this degree of flexibility, it is easy to show specific date formats required by your organisation and clients. It also makes plans far more readable.

Compare different versions of the same plan

With **Asta Powerproject**, you can show up to ten baselines on the bar chart at one time. This makes it possible to carry out multiple comparisons between different versions of the same plan. You can compare current data against any baseline in the spreadsheet for reporting. (see figure 2b)

Compare different versions of the same plan

2b

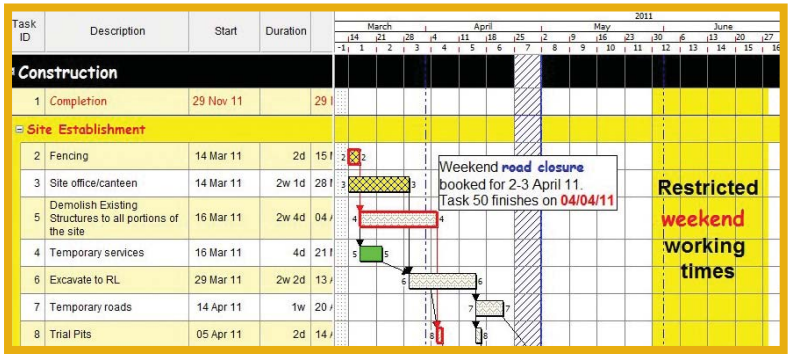
Track and control the logic underpinning your plan

With **Asta Powerproject** you can create link categories and assign them to links in order to give links a different appearance. You can then choose to exclude certain link categories from a reschedule. This is a powerful feature that allows logic changes to the plan to be easily accommodated and tracked.

Highlight important aspects of your project

Annotating tasks on your bar chart is a great way to highlight aspects of your plan. When you create an annotation, the last thing you want to do is reattach it whenever the task moves or you reschedule the project.

With **Asta Powerproject**, annotations are linked to tasks so that when a task moves the annotation moves with it. Annotations can be pretty much anything – text, videos, pictures, data derived from the task (e.g. dates). In addition, annotations have borders so it is easy to click on them and make changes. (see figure 3a)



3a

Link annotation to tasks

Reading and editing project plans from other software

Project data can be exchanged between **Asta Powerproject** and other project management software. This makes it possible to plan and manage projects in **Asta Powerproject** and export them to other software should this be required. Likewise, project files from these systems can be imported into **Asta Powerproject**.
Currently supported software is Microsoft Project, Primavera P3, Primavera P6.

Provide a summarised view of progress, resources and costs

With Asta Powerproject, you can ‘roll-up’ progress from task to summary level in order to provide an executive-level summary view of the progress of your project. **Asta Powerproject** has the facility to provide different weightings for progress purposes. This means that the cumulative effect of the activities and their weightings can be ‘rolled up’ and calculated at a summary (or WBS) level.

In addition, you can allocate a cost centre or a resource allocation to a summary bar. This enables you to build up a picture of costs and resources at a project summary level.

Reports to support business decisions

Stakeholders and managers are becoming more reliant on reports that come from their project management system on which they can base future decisions.

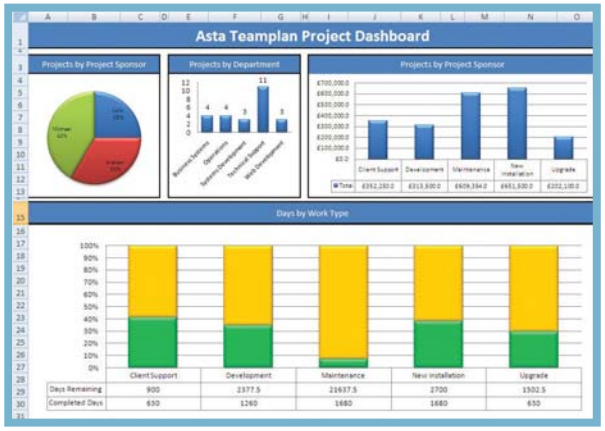
As well as standard reporting **Asta Powerproject** has two additional reporting options.

Excel Based reports

Many organisations like to see reports in excel format and some project management software does export data to this.

Asta Powerproject takes this one step further by exporting to specific worksheets and then allowing you to create further bespoke reports and format them based on the data. Uniquely, each time the report is run the formatting and links are preserved which means that not only do you see the latest data but it is always in the format you want.

By harnessing the power of Excel, you can create standard company format progress reports, dashboard reports, pivot tables and additional graphs. (see figure 4a)

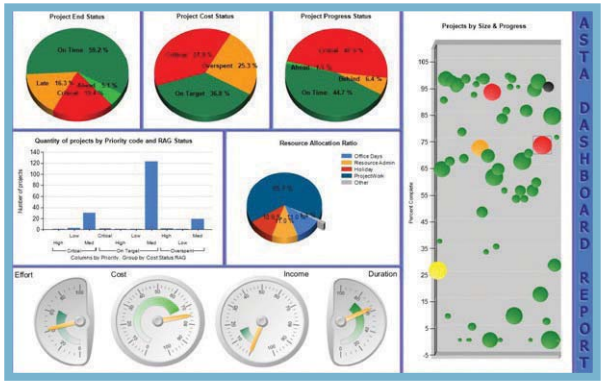


Excel based reports

4a

Business Intelligence reports

Asta Powerproject data can be viewed and reported on using Business Intelligence Tools. Portfolio Reporter uses SQL Reporting Services to deliver on demand web based reports that can be viewed via browser on PC's, Laptops, PDA's and tablets such as the Apple iPad. From any report you can drill down to see specific activity data. These reports can be exported to pdf, Excel or Word formats if required. (see figure 4b)



Business intelligence reports

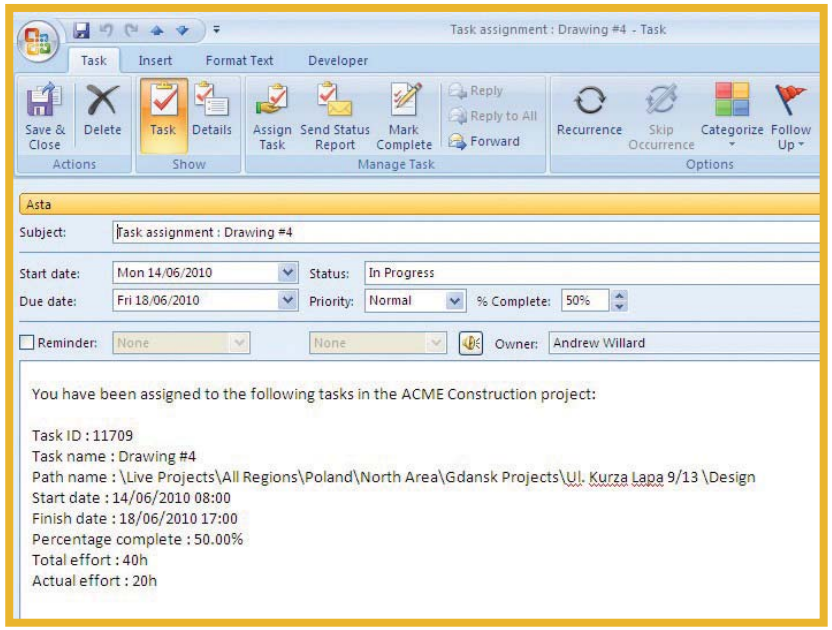
4b

Integration with MS Outlook

Asta Powerproject integrates tightly with Microsoft Outlook, thus enabling project information to be distributed by email.

When a resource is allocated to an activity an email can be sent to them advising of this. Additionally a calendar appointment and Outlook Task can be created. Subsequently any changes to the activity can be sent. (see figure 5a)

If required, the resource can edit the % complete field in Outlook and this will be imported into **Asta Powerproject** and the activity will be updated accordingly.



5a

Information sharing via email

Integration with other software for added value

As well as integrating with other Project Management Software, MS Outlook and MS Excel; **Asta Powerproject** can integrate with other business applications using our API, such as accounting, estimating, asset management, 4D visualisation, BIM and enterprise resource planning (ERP) software systems.

Currently there are integrations with;

BIW

CMS Contractor

COINS

DStudio

MIMS

Navisworks 3

RIB

SAP

Syncho

Tekla

Integration allows the sharing of Project Management data with other systems to enhance the value to the business.

Managing risk by proactively identifying problems

Risk Analysis is a software tool that integrates tightly with **Asta Powerproject**. It enables project risk to be quantified and allows project managers to proactively identify difficulties that may affect the successful completion of a project.

All projects are inherently risky. Tasks can have an uncertain duration, costs can vary and resources output rates can fluctuate. Risk Analysis enables project managers to identify those elements of the project that are most likely to cause delays and cost overruns. It allows uncertainty to be assigned to tasks to answer questions such as:

- What is the likelihood of completing the project on time and within budget?
- Which tasks are most likely to cause the project to be delayed?

Risk Analysis presents users with a variety of 'what if' scenarios. The project plan can then be rescheduled based on the preferred scenario, with tasks and end dates altered accordingly.

Risk Analysis is based on the Monte Carlo Simulation Method, a powerful, dice-based probability technique. Risk is recorded against tasks in order to perform realistic 'what if' scenarios for comparison against the desired outcome. Hundreds of statistically robust scenarios can be generated quickly based on thousands of iterations. Each scenario provides a percentage chance of completing the project by a certain date and identifies different degrees of task criticality.

Critical Chain Project Management to optimise the project schedule

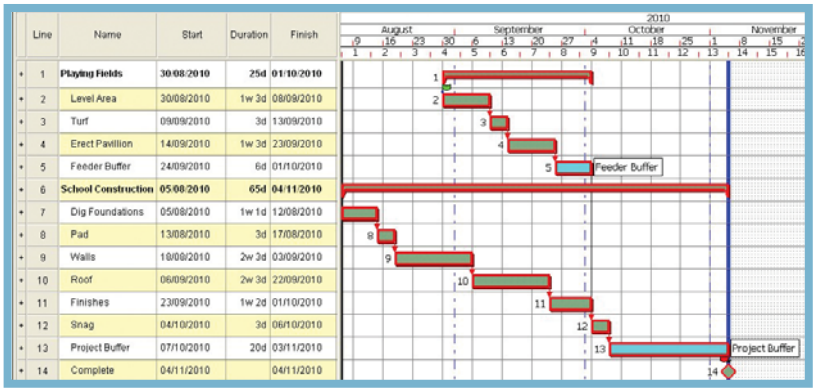
One of the main problems in planning and control is determining the project schedule. Project managers and planners use an estimated time to attempt to ensure the completion time of either an activity or a project.

However, this traditional method can sometimes fail in optimising the project schedule, which can result in unnecessary time wastage. The Theory of Constraints (TOC) and Critical Chain was proposed by Dr. Goldratt in 1990, which provide the concepts for achieving effective activity duration control.

Asta Powerproject provides the functionality required to support Critical Chain methods using Buffer Tasks.

The function of project buffers is to protect the promised finish date from variation in the critical chain. The function of feeding buffers is to protect the critical chain to maintain its relay race performance by buffering the activities in non-critical chains and critical chains where they merge with activities in critical chain. (see figure 6a)

Monitoring is, in some ways, the greatest advantage of the Critical Chain method. Because individual tasks will vary in duration, there is no point in trying to force every task to complete “on time;” estimates can never be perfect. Instead, we monitor the buffers that were created during the planning stage. If the rate of buffer consumption is low, the project is on target. If the rate of consumption is such that there is likely to be little or no buffer at the end of the project, then corrective actions or recovery plans must be developed to recover the loss. When the buffer consumption rate exceeds some critical value (roughly: the rate where all of the buffer



Feeding buffer function

6a

may be expected to be consumed before the end of the project, resulting in late completion), then those alternative plans need to be implemented. (see figure 7a)

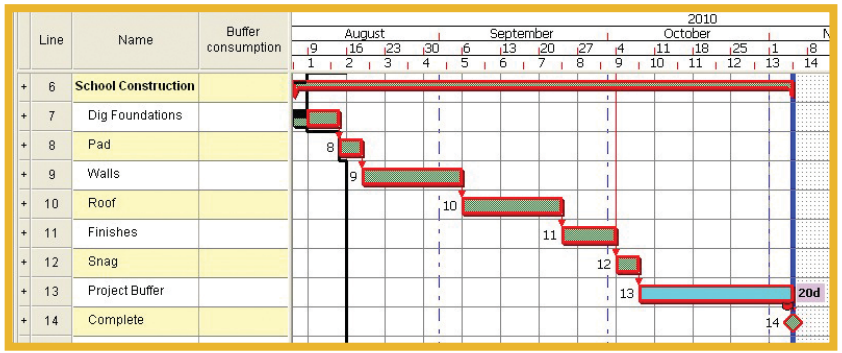
As the plan progresses we can plot the buffer consumption in **Asta Powerproject**. In the example the consumption of the buffer is monitored and as long as the consumption is within the green area we can assume the project is progressing well. Movement into the red and amber areas would be cause for concern. (see figure 7b)

With a buffer management approach using **Asta Powerproject**, buffers prevent the critical chain from changing during project execution. The critical chain project management provides a rigorous plan and simplifies project control and utilises buffers to reduce the risk of a delay in construction and can bring in projects ahead of schedule without increasing costs.

Another practical use for buffers deals with the common practice in a construction project of having an “internal” or “target” schedule which is less than the “contract” schedule. Instinctively this is a practice to mitigate against Parkinson’s Law. Thus for a contract duration of 95-weeks the contractor may be operating on a target plan of 85-weeks.

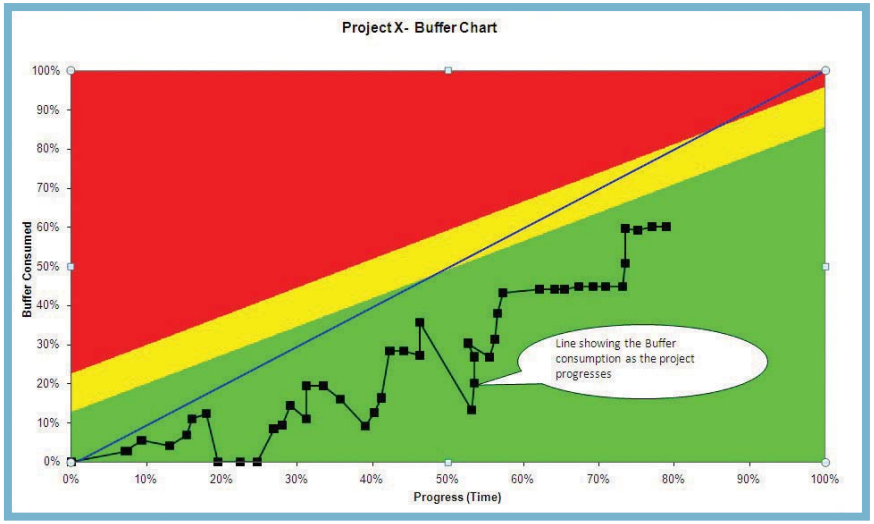
The motivation for this is to reduce the likelihood of over-runs and limit the exposure to fines (Liquidated Damages) for exceeding the project end date. Progress on the plan is reported to the client’s representative and design team against the original 95-week plan. The contractor has great reluctance to declare the 85-week plan as he is fearful that someone will remove the 10-weeks contingency.

This does cause some serious problems – particularly in the early stages of a project (before the contingency/buffer starts to be used up). The client needs a reasonably accurate cash-flow



7a

Monitoring buffer consumption



Monitoring the buffer

7b

prediction so that he can arrange funding for the project. This is initially provided from the 95-week plan, but the contractor is likely to be 10% ahead of the payment plan and so can cause the client to experience funding difficulties.

In addition the procurement steps before each major Work Package are planned to arrive at a meaningful schedule of when the design information is required. Presenting design required dates from the 85-week plan can be very difficult to justify if only the 95-week plan is made public. Two plans have to be updated for progress – the target and the contract. This makes un-necessary work for the project manager.

The best technique to unify the “target” and “contract” plans is to explicitly declare the contingency as a buffer and monitor it’s consumption. The barriers to such a declaration are mainly political with an organisation and can be affected by the type of contract – e.g. the NEC form of contract recognised a project buffer as terminal contingency which is owned by the contractor and not the project (unlike the float).

Collecting Progress from site for greater efficiency

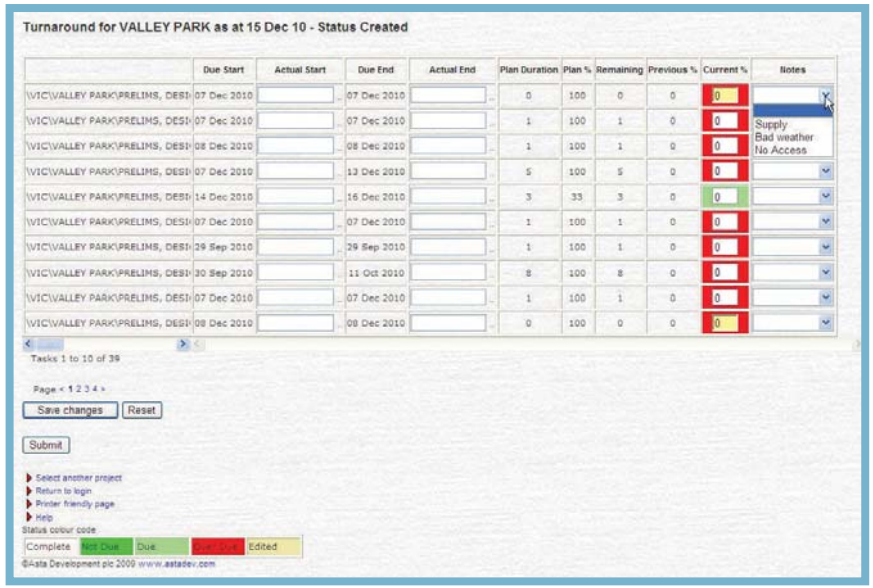
Often projects are managed from Head Office and there is a need to update progress from a remote office or site where the work is actually being done.

Other project management systems have web based tools that allow man hours to be reported by a Timesheet (Powerproject, too has a timesheet module), however, many projects are progressed by Actual Start, Actual Finish, Remaining Duration and Percent Complete.

Site Progress allows site staff to complete progress forms using a web page. This results in a large cost saving for the organisation as they do not have to go the expense of purchasing the full Project Management system for every user.

Site staff only have to progress activities that are overdue and due in the current period. When imported the project plan is automatically updated and the planner can revise the project as necessary.

(see figure 8a)



8a

Activity progress form

Protect your organisation from claims with detailed history of project progress

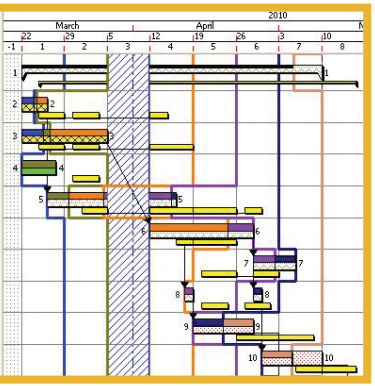
In the world of construction the financial penalties for poor project delivery can be crippling. As a construction company, you need to be able to prove that you delivered the project effectively and that any deviations from the contract programme were addressed and reflected in an updated version of the plan. It is therefore vital to keep accurate records of project progress to protect your organisation should a dispute arise.

In **Asta Powerproject**, you can have multiple Progress Periods (known as 'Date' dates in other systems), e.g. for each week or month of the project. The amount of progress, work and cost during each period can be recorded so that the variable progress of an activity can also be recorded. The result is a far more detailed history of project progress. This is vital should a dispute arise and you need to prove what happened at any point in time.

Establish an accurate 'As-Built' plan

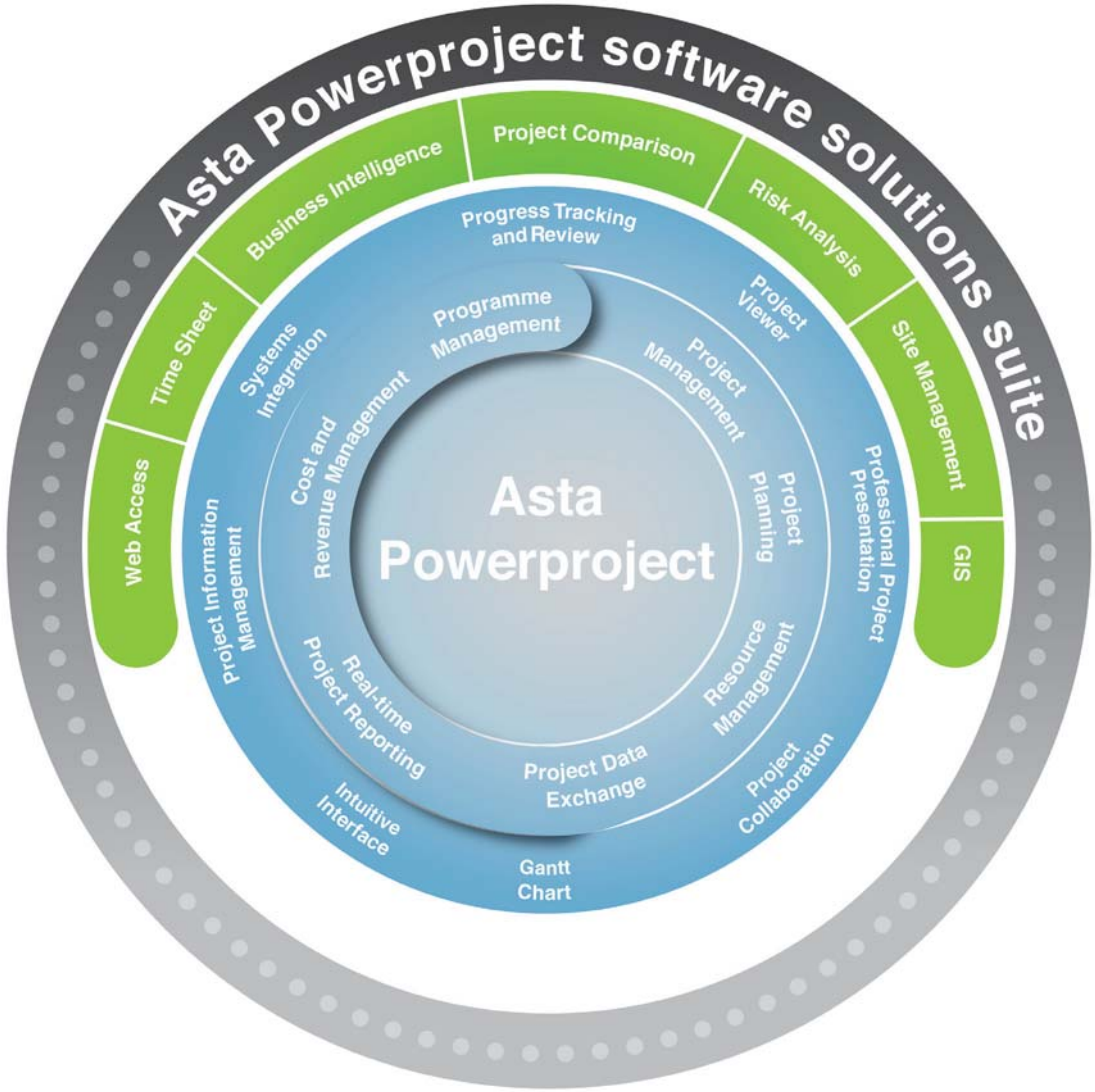
When tasks are progressed, the exact nature of the progress can be recorded in**Asta Powerproject**. You can have multiple suspend and resume dates. This means that you do not just have an actual start and end date; you can also record how the activity progressed across its span, including any breaks. This means that the history of a project is far more accurate in **Asta Powerproject** than in many other systems. This is important when it comes to establishing an accurate 'As-Built' plan. (see figure 9a)

Line	Description	Wk 1%	PWk 1%	Wk 2%	PWk 2%	Wk 3%	PWk 3%	Wk 4%	PWk 4%
1	**Site Establishment**	5%	23%	16%	40%	44%	55%	66%	72%
2	Fencing	50%	100%	60%	100%	100%	100%	100%	100%
3	Site office/canteen	25%	50%	33%	100%	100%	100%	100%	100%
4	Temporary services		100%	100%	100%	100%	100%	100%	100%
5	Demolish Existing Structures		20%	25%	70%	66%	100%	95%	100%
6	Excavate to RL					75%	42%	100%	83%
7	Temporary roads							50%	
8	Trial Pits						50%	50%	50%
9	Trial Analysis #1								71%
10	Trial Analysis #2								



Clearly show progress on plans

9a



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