



[www.haleys-ltd.com](http://www.haleys-ltd.com)

# HALEYS



## NEWSLETTER

**June 2011**

# Foreword

Welcome to our June 2011 Newsletter; It has been a difficult few years in the industry and during the economic recession Haleys has taken positive measures to maintain its position in the UK market.

Many of you will be aware that we have over the last 4 years introduced a 4D technology based measurement service which has provided us with new clients and new markets and



*Steve Haley*

those markets continue to grow with work from overseas.

As the opportunities are requiring more of my time to be spent on international travel in establishing the overseas business, it has become necessary to have a management restructure within Haleys. Therefore, with effect from 1<sup>st</sup> July 2011, Peter Graham is promoted to Managing Director for the Haleys UK Operation and will be responsible for the day to day running of the business and I will assume the role of Chairman and Group CEO.

I would like to thank all of our clients for their continuing support and business in 2010/11 and assure you all that Haleys will continue to provide a quality service. I also hope that you will all join with me in congratulating Peter on his much deserved promotion and I know that his drive and commitment will ensure that the Haleys ethos continues.

Our core values remain unchanged and we shall continue to provide a professional, high quality and value

for money service to clients old and new.

We hope you find this publication to be of use and if you need any further information, please don't hesitate to contact us.

In the meantime we hope you enjoy the Holiday Season that will soon be upon us.



*Peter Graham*

## ...and now a word from the New Boy!

As many of you will know I am not renowned for my brevity, however you will all be relieved to know that I will make an exception in this case as I have been told that I have a limited space available

Firstly, I would like to thank Steve Haley for his help and guidance over the last 9 years and the hard working and loyal staff at Haleys for their continuing support in the challenging times we have experienced.

There have been many changes in the World economy with the emphasis on globalisation and this is true of the construction industry too with many consultants establishing themselves overseas. Whilst Haleys is also set to

be a player in that market we realise that our domestic core business, which has been the lifeblood of the company for 22 years, is very strong and our Quantity Surveying, Design and Legal Support services will continue to be the focus of the Company. In the last 12 months we have seen some significant growth in the QS Division in particular and believe that we shall continue to do so over the next year.

To continue the growth we are set to make further key senior appointments in the management team to expand our service levels across the UK. David Simons has already joined us in the Birmingham office in April 2011 to increase our Legal Support offering with his skills as expert witness and

adjudicator and in August 2011 Andy Cooper will also join us to manage the M&E Commercial functions for the North, also based in Birmingham.

We anticipate that further appointments will also be made in the next 12 months to assist in our International expansion and further announcements will be made in that regard in due course.

In the meantime thank you for your continuing custom and support and let me assure you that I will be working closely with the management team to ensure that Haleys continues to provide the service that you require.

*Peter Graham*

# WHAT PLYMOUTH! LEADING GLOBAL BRAND



configured in a way that benefited the business; in fact it wasn't configured correctly for the air conditioning and heating. Haleys were employed to take a fresh look at the working environment and to ensure the new layouts suited the business model and were

One of the main challenges was to ensure that the staff enjoyed the fantastic surroundings and views that they worked with.

The offices are all very flexible with plenty of meeting spaces built into the environment so that everything from a 1 to 1 discussion up to a 200 person seminar can be conducted onsite.

So 5 years on why am I still there? My ongoing role is to look after the building environment on a day to day basis and make sure it receives some TLC. I look after all the maintenance issues and contracts, ensuring all items of plant are maintained as well as assisting and project managing all office moves and sub-contractors.

Wrigleys are also committed to being green so energy conservation is a priority and there's always a rumour of a move going on or an urgent requirement.

Long may it continue as Wrigleys and Plymouth are really good places to work!

Yep it's true not all leading brands base themselves in the centre of the universe and put their Head Office in or around London.

Chewing Gum, Mints and Confectionary giant the Wrigley Company (who currently boast over a 95% share of the market) enjoys a relatively sedate existence on the border of the Dartmoor National Park – and it really is on the border as the company's 42 acre manufacturing and commercial offices literally overlooks the breathtaking park, it's not unusual to be working in the Ground Floor offices and for a deer to tap it's nose on the window (or for a pheasant to fly into the window as has happened)!

5 years ago Wrigleys employed Haleys to carry out a £1.25 million refurbishment on the site and I've worked for Wrigleys ever since as their FM Manager. The initial refurbishment was due to the fact Wrigleys wanted to stay in the fantastic environment, but many incremental changes to the business and offices, the overall building had lost its purpose and was no longer

consistent throughout while at the same time flexible.

The idea was to end up with a contemporary clean, comfortable environment conducive to good communication. Haleys helped come up with a Total Solution and bought a fresh feel and vibrancy to the possibilities – the term was 'we won their hearts and minds.'

It was only when everything was taken out that the amount of space became apparent and a total new work concept was adopted.

To do this all the staff had to be taken out and moved to temporary premises for 6 months this was beneficial as it made all staff interact in the far from ideal surroundings of the temporary office that they had to use – this had not really been possible in the old office but was almost unavoidable in the new scheme.

**Andrew Munsey**



# A CHICKEN AND EGG TALE

As the old saying goes: *You should never count your chickens before they hatch.* Equally, under construction contracts, you should never count your retention until it's banked. Thus retention could be described as an egg that you must take care of until it hatches.

The subject of retention, held under construction contracts, seems to constantly be bemoaned by all those who have to entrust often considerable sums to others as insurance against some future liability. However, as much as retention is disliked within the construction industry, nobody has devised a better alternative that is acceptable to Employers, Contractors and Sub-Contractors alike.

The amount of retention is usually calculated as a percentage of the value of work completed under a contract, sometimes with an upper amount capped. The retention is then usually released in two halves: firstly, on completion of the works; secondly, at the end of the defects liability period. It is usually the final part of the retention that is the hardest to obtain. Within Sub-Contracts the date for the final release of retention can vary considerably depending upon the terms of the agreement.

The JCT 2005 Design and Build Sub-Contract provides for the final release of retention following the making good of any defects prior to the expiry of the Rectification Period of the Main Contract for the Main Contract Works. Therefore even where the Sub-Contract Works are completed many months before the Main Contract Works the Sub-Contractor will have to wait until the end of the Main Contract defects period before obtaining the final part of the retention. This is usually 12

months after completion of the Main Contract Works and all Sub-Contractors should be aware that any delay to the completion of the Main Contract Works will accordingly delay the final release of retention.

The NEC3 Engineering and Construction Subcontract provides for retention in Secondary Option Clause X16. This, like the JCT, allows for the first half of retention to be released on completion of the sub-contract works; however the second half of retention is released on issue of the Defects Certificate. Under the Engineering and Construction Subcontract the defects date (defects period) is stated in the Subcontract Data Part 1 and is usually defined as a period after completion of the subcontract works. Hence delay to the completion of the main works will not affect the final release of retention, as can be the case under JCT Sub-Contracts.

When amended standard forms of Sub-Contract or bespoke terms are agreed care should be taken to ensure that the release of retention is not tied into release under the Main Contract. It is not uncommon to see conditions that provide for the first half of retention to be released when the Main Contract Works are completed; with the final release being dependent upon the final certificate of making good defects being issued under the Main Contract.

Another area of risk to be aware of is where interim payments are made 'on account'. In such circumstances the Contractor/Sub-Contractor may be over paid and hence part or all of the retention may be used to redress the over payment. It therefore follows that in order to



accurately determine the amount of retention that should eventually become due for payment one must finally establish the value of the works completed.

But what happens if the final account has not been agreed before the final amount of retention is due for release? Can the payer withhold part or all of the retention against sums which it claims are owed to it by the payee?

The recent decision of Mr Justice Aikenhead in **PC Harrington Contractors Limited -v- Tyroddy Construction Limited [2011] EWHC 813 (TCC)** was concerned with the decision of an adjudicator who had been asked to decide how much retention had become due for payment under a sub-contract between those parties.

Harrington had agreed a sub-contract with Tyroddy in 2003 for the supply of labour to fix reinforcement at Wembley Stadium. Payment was to be assessed using rates agreed between the parties with retention then deducted from amounts due. The parties agreed that retention should be assessed at 3% of sums found to be due; however they failed to agree any mechanism for how that 3% would subsequently become payable to Tyroddy, i.e. on completion of the sub-contract works; in portions, or; after the

expiry of a set period.

The last payment certificate issued by Harrington in respect of the sub-contract was in May 2006. In its certificate Harrington identified that the gross value was 'on account' and further that the total amount of retention deducted equalled £66,628.50. Thereafter the parties did not agree the final value of the sub-contract; neither did Harrington make a further payment in respect of the retention that it continued to hold.

Some 4½ years later, having not made a further application for payment, Tyroddy issued a Notice of Intention to Adjudicate on 17<sup>th</sup> January 2011.

In short, Tyroddy advised that it would ask the Adjudicator to decide the date when the retention should have been paid; such amount being £66,628.50, or such other sum as the Adjudicator may decide.

In its Response to the Referral, Harrington submitted that since the payments to date had been 'on account' the final amount of retention could not be determined, and therefore could not become due for payment, until the final account had been agreed. Accordingly Harrington requested that the Adjudicator should decide the amount of the final account in order to establish the amount, if any, of retention due. Harrington also submitted a Rejoinder in which it clarified that it had over-paid Tyroddy to the tune of circa £225,000; hence no payment in respect of retention was due as the sum owed to Harrington by Tyroddy exceeded the claimed amount of retention.

The Adjudicator continued to decide the dispute in Tyroddy's favour insofar as he found that there was an implied term that half of the retention should have been released

in June 2006 with the final payment being made in June 2007. The Adjudicator also decided that the total amount of retention that should have been paid was the amount identified in the last payment certificate, i.e. £66,628.50.

In reaching his decision the Adjudicator rejected Harrington's submission that the final account must first be agreed before retention can be released. The Adjudicator held that the dispute was concerned with the amount of retention measured by Harrington on an interim basis and hence it was not necessary, nor within his remit, to decide on a final account value.


Following the decision, Harrington commenced Part 8 proceedings in order to resist enforcement of the decision, partly on the ground that the Adjudicator committed a material breach of natural justice by refusing to ascertain the final account and consider Harrington's defence of set off.


Mr Justice Aikenhead decided the proceedings in Harrington's favour, thus overturning the Adjudicator's decision. Whilst Mr Justice Aikenhead decided that there was no implied term whereby the final account had to be agreed before retention could be paid, he did decide that as a matter of law Harrington could rely on its claim that it had previously overpaid Tyroddy in defence of the claim for payment of the retention. Accordingly the Adjudicator should have considered the final account submitted by Harrington within the Adjudication before reaching his decision of the sum due in respect of retention.


It is easy to understand why Tyroddy, and for that matter the Adjudicator, believed that retention in the sum of £66,628.50 was due for payment; after all Harrington had clearly identified that amount as

retention in the last of its payment certificates. However the decision in these proceedings serves as a reminder that until the money is in the bank retention remains to be an egg that is yet to hatch.

Haleys recommends the following:

 **Always understand the terms and conditions before agreeing any contract or commencing any work; especially those in relation to payment.**

 **Never assume the amount of retention shown on a payment certificate will be the final amount to be paid under the contract.**

 **Seek to agree final accounts at the earliest opportunity and always ensure such agreements are signed as being final and conclusive as to the amount due.**

Haleys regularly provides its clients with assistance in all of the above matters. Should you wish to discuss any such matters with us please contact us on our dedicated **Construction Law Helpline 0800 092 9272**

or alternatively at

[constructionlaw@haleys-ltd.com](mailto:constructionlaw@haleys-ltd.com)

**Phil Garlick**

*The articles contained within this Newsletter should not be taken to be, or used as, a statement of law, or for the purposes of giving advice to any party on any legal or contractual matter or dispute. Haleys therefore do not accept any responsibility for any such use or purported use and in all cases parties should seek appropriate and specific legal advice for specific cases.*

*If you would like to discuss the circumstances of any of your contracts or projects, or you require further information on the services provided by the Construction Law Services Division, please contact us on either :*

# Haleys M&E Quantity Surveying

The M&E Quantity Surveying and Commercial Support team in London and the South East is run by Jamie Brown, Associate Director. Jamie has been with Haleys since he was 18 and has worked his way up through the Company and at the age of 31 runs the largest single QS team within the business. The Editor asked Jamie to tell us a bit about his role and the service that he provides.

We rapidly approach the end of our current financial year (my first full year managing the Southern M&E QS Division) its time to reflect on a positive twelve months for the team. We have seen a steady increase in turnover coupled with an increase in staff levels which has been encouraging in the present uncertain economic climate.

Like most other professionals within the construction industry we felt the repercussions of the cuts in government spending, however we continue to grow by adapting to include new clients and additional service offerings.

We have succeeded in maintaining the confidence of our clients who see the benefits associated with the use of a strong commercial partner in Haleys which also gives them some certainty of the profitability and performance on contracts won in a depressed market.

The certainty of our service and performance has been the bedrock of the Company for the last 22 years and I am pleased to be associated with the success of the Haleys team. We understand the needs of our client's and the need to find the best commercial solution. We bring quality, cost certainty and flexibility all of which are important factors in the current economic climate.

Flexibility is becoming increasingly important to our clients, which is evident from the rise in the number of short term trouble shooting appointments we have received in the last 12 months. However our appointments to undertake commercial management services on a number of large scale and landmark projects have also increased.

Areas of growth for us in the last 12 months include education, transportation and retail with some prestigious projects in the City and Stratford. These projects have been significant in the increased turnover of the Division. All of our clients are important to us and this year as well as strengthening relationships with our existing clients, we have received new appointments from new clients which has accounted for some 40% of the Division's turnover. Pre-contract assignments have also increased with

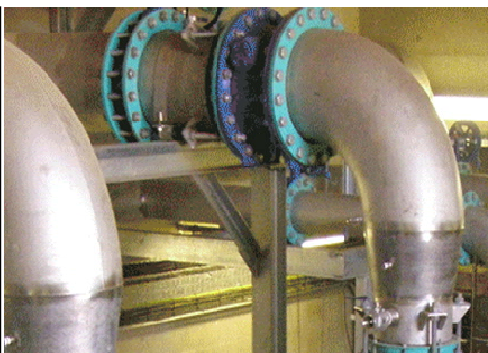
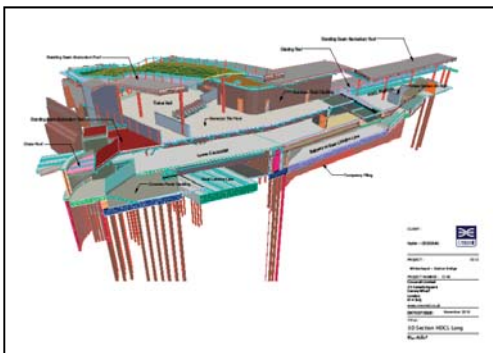
Rail and Building contractors benefiting from our expertise in Mechanical and Electrical cost planning, tendering, and sub-contract procurement for some sizable projects.

We look to the future in high spirits but with our feet on the ground in consideration of the task ahead. We aim to continue our increase in turnover over the coming year by recruiting a careful balance of experienced Quantity Surveyors and Commercial Managers with strong technical and contractual knowledge, together with the recruitment of motivated trainee's who will, with the correct tuition and mentoring, become the future of the company.

Finally, I would like to thank my dedicated team for their continuing support and hard working throughout 2011/12 and hope to announce further new arrivals in the near future.



For further enquiries with regards to our M&E Commercial and Quantity Surveying Services please don't hesitate to contact me: [Jamie.brown@haleys-ltd.com](mailto:Jamie.brown@haleys-ltd.com)



# Haleys 10 Question Interview

Jamie Brown, Associate Director tells our Editor why he decided to be a Quantity Surveyor, and why he'd like to be Jenson Button (but only on a successful day) in our 10 Question Interview.



*knowing what a QS was at the time, and recalling my other 2 options, I completed my A levels and commenced with Haleys!*

**If you could be anyone, who would you most like to be?** *Jenson Button. Driving fast cars, getting paid millions and success (well sometimes)!*

**If you had to decide again what career you wanted, would you be a Quantity Surveyor?** *A rich sportsman?*

**If you could have any type of car, what would you choose?** *Porsche 911 GT2 RS*



**Soaking up the rays in the Bahamas, or trekking through the rain forest?** *Sunshine every time!*

**If you could go back in time to see how any of the ancient monuments and buildings were created, which would it be?** *White Hart Lane??*

**What's the one song you can never get out of your head?** *Well the first song that came to mind, worryingly, was 'Cant get you out of my Head' by Kylie, I think this is a trick question!!*

**Your marooned on an deserted island, what are the three things you would miss most?** *Football, a cold pint and of course my lovely wife!*

**If you knew the world was about to end, what would your last meal be?** *Gauchos Steak*

Join us in our next edition when another Haleys employee will be invited to take the 10 question interview.

**What do you like about working at Haleys?** *Haleys have always had a great culture and a good working environment. The management team are friendly and approachable and will support you wherever possible to achieve your ambitions.*

**What made you decide to be a Quantity Surveyor?** *When I was 17 my mother dragged me off to our local Careers Centre where I was told that I should be a PE Teacher or a Policeman. As we left we spotted a job advert from Haleys. Not*

# A New Man In Birmingham

In August 2011 Andy Cooper joins Haleys in the Birmingham office as Associate Director for the Northern M&E Quantity Surveying Division.



Management levels Andy will assume some of the duties previously undertaken by Peter Graham for the day to day management of the QS team for the Birmingham and Nottingham offices.

Peter Graham of Haleys made the following statement:

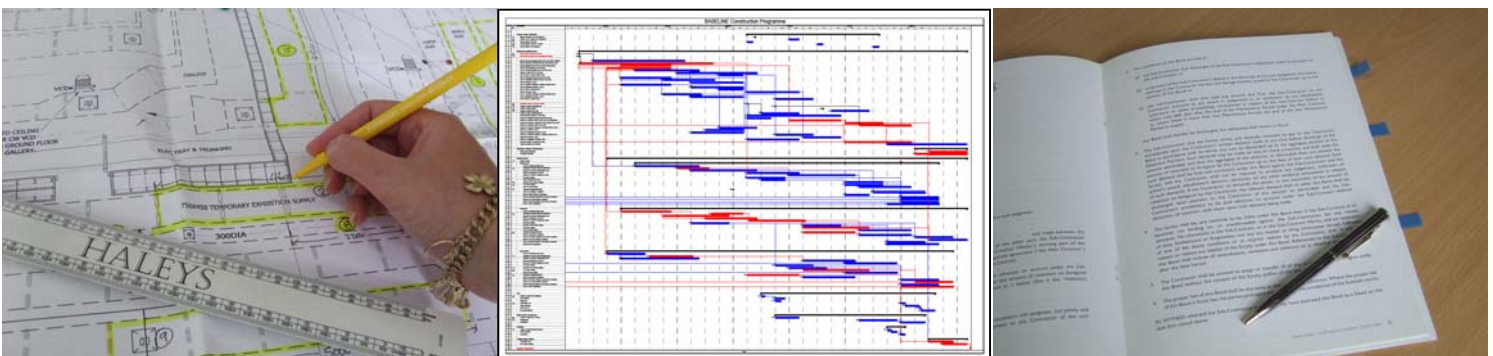
*I have known Andy for over 20 years and I am pleased to welcome him to Haleys. His skills compliment the*

*Division's offering very well .*

*The knowledge and experience he brings in both commercial and operational fields will enable our Clients to meet their expectations and will allow Haleys to continue to expand in the North.*

Andy assumes his role on the 8<sup>th</sup> August 2011 and we wish him a long and successful career at Haleys.

With over 25 years in the construction industry working for M&E contractors at Senior



# WHAT IS ‘TIME AT LARGE’ - Is it useful?

A few years ago, I was involved as an expert witness in a dispute relating to the new Wembley Stadium project. I recall there were some interesting legal arguments relating to the bespoke extension of time provisions used in the subcontracts, which led to a question as to whether there was a “time at large” situation.

It is not uncommon for delay and disruption claims from contractors and subcontractors to be accompanied by an argument that “time is at large”. The argument suggests that due to an event and/or some defect in the contract, there is no completion date; it is aimed at relieving the claimant from a calculated liability for delays and associated counterclaims, including liquidated damages.

The general rule from the old case of *Holme -v- Guppy* [1838] is that an employer cannot hold a contractor to an agreed contract completion date, if the employer has by an act or omission, prevented the contractor from completing by that date. Unless the contract contains a mechanism for recognising the delay consequences of the act of prevention by extending the completion date, time becomes at large and the date is replaced by an implied obligation to complete within a reasonable time. The rule applies to main contracts and subcontracts, but to avoid confusion, I will refer to main contracting parties only.

Time at large arguments are usually based upon the following situations:

- 1) There is no completion date. This could arise because there is no contract, or there is no

agreement as to the time for performance in the contract.

- 2) The contract contains an appropriate mechanism to extend the completion date, but the power to extend time has been wrongly exercised; (e.g. see *Rapid Building Group Ltd -v- Ealing Family Housing Association Ltd* [1984] 29 BLR 10).
- 3) The contract contains a mechanism to extend the completion date, but the provision does not cater for the act of prevention that has delayed completion; (see *Peak Construction (Liverpool) Ltd -v- McKinney Foundations Ltd* [1970] 1 BLR 111).
- 4) The extension of time provision is dependant for its operation upon a notice or some other specified action on the part of the contractor, the absence of which prevents execution of the power to extend time; (e.g. see the Australian case of *Gaymark Investments Pty Ltd -v- Walter Construction Group Ltd* [1999] 16 BCL 449).

Where the parties do not address the time for completion in an (otherwise) valid agreement as (1) above, an implied obligation to complete within a reasonable time clearly applies, in accordance with Section 14 of the Supply of Goods and Services Act 1982. However, these occurrences are unusual. What is a reasonable time depends upon the facts and circumstances in each case; it can be very difficult to prove compliance

where the parties did not have comparable perceptions of the time for performance.

Considering (2) above, there has been a statutory right to refer disputes under construction contracts to adjudication since 1998 and dispute resolution tribunals are empowered to open-up, review and revise extension of time (“EOT”) decisions under most standard forms. Unless the agreement (unusually) provides that EOT decisions are final and conclusive, situation (2) will not normally result in a time at large situation.

There is sometimes a misconception that where the contract administrator (“CA”) under JCT contracts fails to deal with a final review of EOT within the stipulated period after practical completion, then time is set ‘at large’. The courts have ruled that these review periods, (e.g. 12 weeks in Clause 25.3.3 of JCT SF’98) are ‘directory only’ and do not prevent the CA from making further EOT decisions prior to issuing the final certificate. This was confirmed in *Temloc -v- Errill Properties* [1988] 39 BLR 30.

Situation (3) is always a ‘time at large’ risk where the parties opt for poorly drafted bespoke terms (as in



*Peak -v- McKinney*) instead of relying upon a standard form. Most standard EOT clauses now completely cater for all delaying events arising from employer acts of prevention. In this context it is notable that in 2002, a further ‘catch all’ Relevant Event to cover “any impediment, prevention or default” on the part of the Employer, was added to JCT SF’98 as Clause 25.4.19. EOT clauses in the subsequent JCT 2005 family of contracts are equally comprehensive.

Unfortunately however, custom amendments to standard EOT clauses are not uncommon and typically, delaying events are deleted in the belief that delay risk is thereby transferred to the contractor. Whilst this tactic might work for ‘neutral’ events such as adverse weather conditions and strikes, deletion of events covering employer acts of prevention will clearly result in a time at large situation, if a deleted event occurs in practice. An EOT provision is fundamentally intended to preserve the completion date and not to address contractors’ claims. At Haleys, we do not therefore recommend the editing of standard EOT clauses, save where the standard form permits a choice of options or where appropriate legal advice is obtained.

In reviewing situation (4), it is clearly desirable for the contractor to give timely delay notices, particularly where progress is affected by variations. Where variations are permitted by the contract they are not employer’s breaches *per se*, but may nonetheless prevent completion by the agreed date. Thus an early notice from the contractor can assist delay avoidance or mitigation, where the variation instruction can be withdrawn or modified.

A difficulty arises however, where the contract requires a delay notice from the contractor as a *condition*

*precedent* to the operation of the EOT clause. In *Gaymark*, an Australian court decided that the prevention principle applied, barring the recovery of liquidated damages where the employer had contributed to delays and the contractor had failed to give the delay notices required to ‘trigger’ an EOT award. The difficulty here is that the decision would encourage a contractor to deliberately ignore the notice requirements, thereby preventing any counterclaim for liquidated damages and benefiting from his own breach. The contractor could at his option, set time at large and the correctness of the *Gaymark* decision has therefore been a matter of some debate.

In the T.C.C. case of *Multiplex Constructions (UK) Ltd -v- Honeywell Control Systems Ltd* [2007], Mr Justice Jackson (now The Rt. Hon Lord Justice Jackson) decided that a failure by the Defendant to comply with strict requirements for notices and other operational requirements as a pre-condition, did not set time at large: “...*If the facts are that it was possible to comply with [the requirements] but Honeywell simply failed to do so (whether or not deliberately), then those facts do not set time at large...*”. It is notable that in spite of the *Gaymark* style provisions, the subcontract in this case also retained a post-completion EOT review clause derived from standard form DOM/2.

From this brief analysis, it can be seen that for a great majority of present-day construction contracts based upon standard forms, completion dates are not easily set aside. Where a time at large situation does occur, the consequences may be only superficially attractive because the contractor, having avoided a claim for liquidated damages, might then be required to prove his actual construction duration as



‘reasonable’, which is more difficult than it sounds. He might also still face a claim or counterclaim from the employer in un-liquidated damages.

In conclusion, time in construction contracts may be set ‘at large’ in the circumstances described above but this can also result in uncertain and unhelpful consequences; – so “*be careful what you wish for...*”

**David S. Simons**

### CONGRATULATIONS TO ANTON MALIA



For successfully completing his BSc (Hons) Quantity Surveying

Since joining Haleys last summer, Anton has been attending Nottingham University on day release.

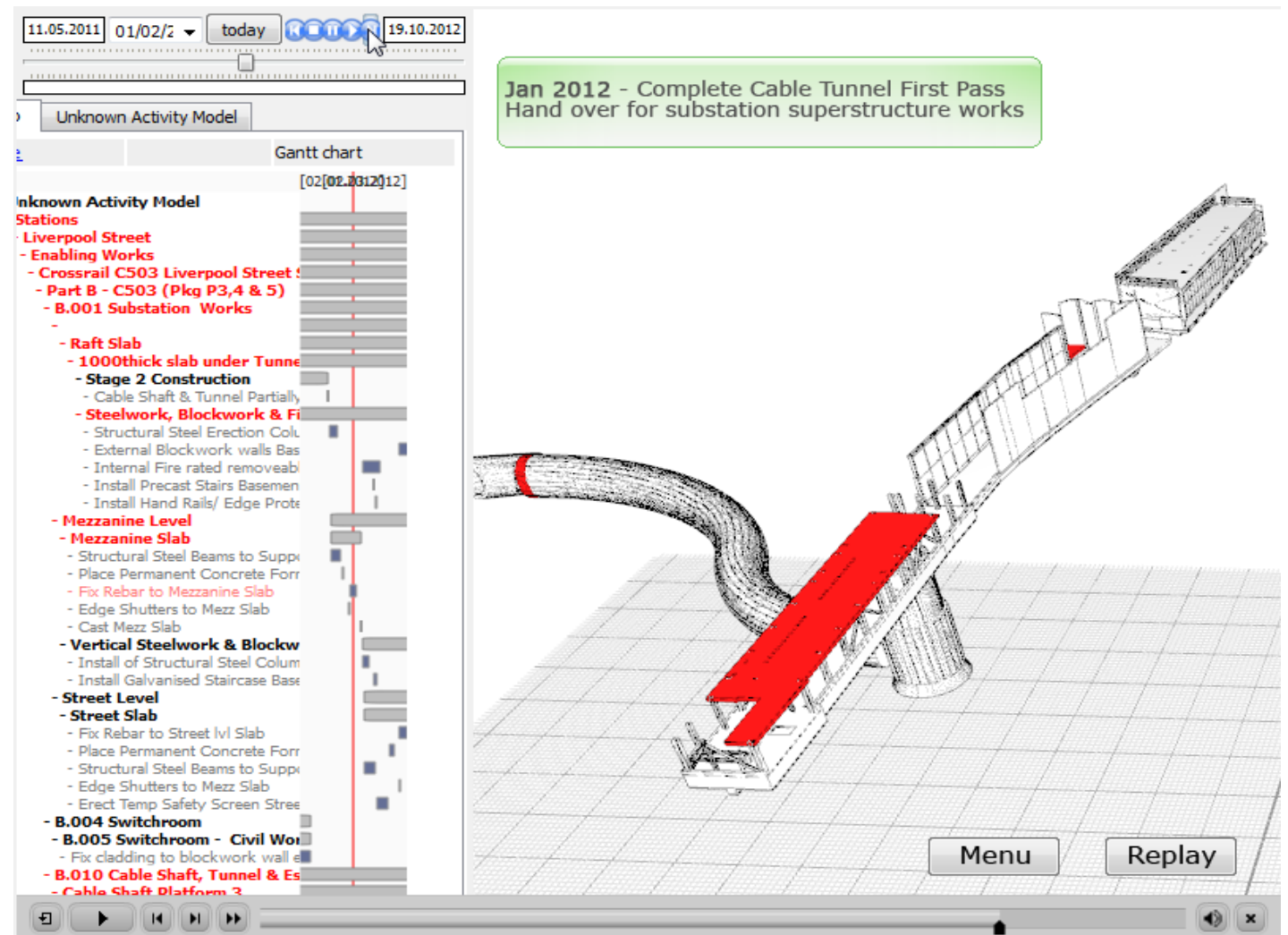
All at Haleys are very proud of Anton’s achievement, which is the latest in a long line of staff achievements, and reflects Haleys commitment to staff training.

## 4D Simulation

Haleys have completed and delivered their latest 4D building simulation.

3D models have been used for several years to take off measurements and quantities more quickly and more accurately. The quantities are then be used to build a cost plan or a Bill of Quantities.

A 4D building simulation is the same 3D model but linked to a full logic linked project programme.



The result of this process was converted into an interactive Adobe Flash document. Our client used this document to enhance their tender presentation and provide additional assurance of planning integrity to the developer.

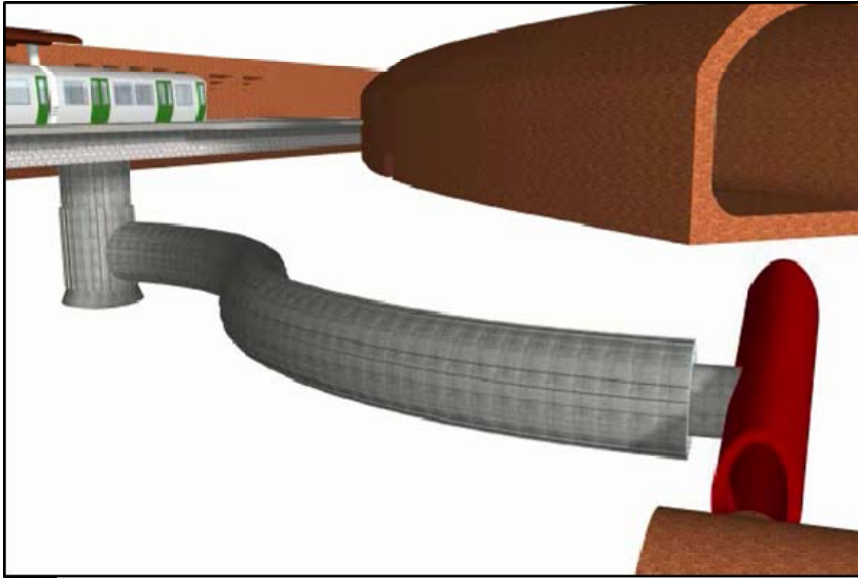
Haleys have been offering 3D cost modelling for over 4 years whereby the process creates a building model from architect's / engineer's drawings and can be used at any stage of the construction cycle. The virtual building has many advantages over the traditional drawing take-off, such as improved accuracy, discipline clash detection and time savings.

The virtual model is enhanced by the addition of additional layer of information such as duration of activity, resource levels etc. This additional information has been retrieved from multiple sources such as the estimate and the Microsoft Project plan, provided by our client.

A thorough analysis of the project schedule was undertaken to add value and identify work-site clashes. This task has been made easier by having the building model graphically illustrating every activity. This offered a unique insight in the

sequence of works and site locations.

The links between the objects of the 3D model and the activities of the time schedule had to be established manually. The team had to analyse the schedule provided and then select certain objects and assign them to a related activity in the time schedule.



Duration	Start	Finish	Predecessors
1 day	Wed 12/10/11 780	Thu 13/10/11 781	
1 day	Thu 13/10/11 781	Fri 14/10/11 782	
2 days	Tue 15/10/11 785	Thu 17/10/11 787	
1 day	Fri 14/10/11 782	Sat 15/10/11 783	
1 day	Mon 17/10/11 784	Tue 18/10/11 785	
2 days	Tue 19/10/11 786	Thu 21/10/11 788	
1 day	Thu 20/10/11 786	Fri 21/10/11 787	
2 days	Fri 21/10/11 787	Sat 22/10/11 788	
3 days	Tue 20/10/11 786	Thu 22/10/11 788	
3 days	Tue 20/10/11 786	Thu 22/10/11 788	
3 days	Tue 20/10/11 786	Thu 22/10/11 788	
1 day	Mon 07/11/11 791	Tue 08/11/11 792	
2 days	Wed 09/11/11 792	Thu 10/11/11 793	
1 day	Wed 13/03/12 822	Thu 14/03/12 823	
2 days	Wed 14/03/12 823	Thu 15/03/12 824	
1 day	Fri 16/03/12 825	Sat 17/03/12 826	
1 day	Tue 20/03/12 829	Wed 21/03/12 830	
1 day	Wed 21/03/12 830	Thu 22/03/12 831	
3 days	Tue 20/03/12 829	Thu 22/03/12 831	
2 days	Wed 28/03/12 837	Thu 29/03/12 838	
1 day	Fri 30/03/12 839	Sat 31/03/12 840	
2 days	Mon 02/04/12 841	Tue 03/04/12 842	
7 days	Wed 04/04/12 843	Fri 06/04/12 845	
3 days	Mon 25/04/12 855	Wed 27/04/12 857	
8 days	Wed 25/04/12 855	Mon 03/05/12 863	
30 days	Fri 11/11/11 809	Thu 15/03/12 826	
2 days	Fri 11/11/11 809	Mon 14/11/11 810	
1 day	Tue 15/11/11 811	Tue 15/11/11 811	
1 day	Tue 15/11/11 811	Thu 15/11/11 813	
30 days	Thu 17/11/11 813	Wed 11/01/12 812	
2 days	Thu 19/01/12 814	Fri 20/01/12 815	
2 days	Mon 23/01/12 816	Tue 24/01/12 817	
4 days	Wed 01/02/12 820	Mon 06/02/12 824	
2 days	Fri 10/02/12 831	Mon 13/02/12 834	
1 day	Fri 17/02/12 835	Mon 20/02/12 838	
5 days	Tue 21/02/12 840	Tue 27/02/12 846	
1 day	Tue 28/02/12 849	Wed 01/03/12 850	
7 days	Wed 29/02/12 850	Thu 08/03/12 857	

Since the time schedule defines sequences of activities and allocates resources such as material and labour, it plays an important role in optimising and managing a construction project and creates opportunities for value engineering. In the future, model based working can offer more to construction sequence planning than just a visualisation of the construction sequences, in which the term '4D simulation' is today commonly understood it will allow programmes to be interrogated for their suitability and feasibility.

Ian Criddle; Associate Director, [ian.criddle@haleys-ltd.com](mailto:ian.criddle@haleys-ltd.com)

# HALEYS

If you would like further information on any of the articles contained within this Newsletter please contact us at either;

Nottingham on 0845 367 8820, or  
Birmingham on 0845 367 8830  
Purley on 020 8645 9707

**Birmingham London Milton Keynes Nottingham Purley**  
Email [enquiries@haleys-ltd.com](mailto:enquiries@haleys-ltd.com) Website [www.haleys-ltd.com](http://www.haleys-ltd.com)

Newsletter June 2011