



CIVIL ENGINEERING PROJECT MANAGEMENT. SITE PLANT

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Executive Summary

The purpose of this report will be to discuss a specific type of plant used on site, and assess whether purchasing or renting that specific plant is the best option for the company and future projects.

Terms of Reference

The principal focus are:

1. Discuss a specific type plant for the project
2. Evaluate and discuss the advantages and disadvantages of both purchasing and renting that specific plant.

The report was constrained by the information given and researched and the need to complete it by 13th February 2018.

Procedure

This section identifies the research sources used. The research included is from a variety of sources e.g. websites and text books secondary set out in the references and bibliography.

Findings.

Scaffolding.

Scaffolding equipment is considered a vital part of any project, therefore a decision has to be made whether or not to purchase or rent this type of equipment. This decision can prove to be difficult for the project managers, as each choice has its advantages and disadvantages. The following factors can help determine if purchasing or renting scaffolding is the best solution for a project Doran, D., (2009).

A number of leading companies have suggested, you should rent scaffolding for jobs lasting three months or less. The cost of purchasing scaffolding simply does not make financial sense for short-term projects. The length of the project is one of the most influential factors to consider when deciding between renting or purchasing scaffolding. Furthermore, if you are just getting started on a short-term project and unsure of the company's future workload renting scaffolding is a safe choice. In fact, a number of smaller contractors usually rent scaffolding equipment because they typically work on short term projects Ok Scaffolding (2018).

However, if you will be working on a job site for more than three months, or a long term project/ contract, purchasing your own scaffolding may prove to be the right option. Rental fees can quickly add up if you continually rent equipment for every job site and the cost of purchasing scaffolding equipment can pay for itself in the long-term through repeat usage Anon (2018).

Prior to any purchasing, consideration must be given the volume of equipment needed and where it will be stored. It is more costly to purchase than rent scaffolding equipment and the more equipment you need, the higher the costs. If you require scaffolding for a large project, it might be more economical to rent and avoid any storage costs Doran, D., (2009).

At the same time, once you purchase the equipment you will need an offsite location to store the equipment when the project is complete. So, in addition to the purchasing cost of the equipment, you also have to factor in the cost of land required for the storage and security of large scaffolding systems, which can be expensive. It is also vital to mindful that owning large scaffolding systems is not only an investment in equipment, but also the resources that will be required to inspect, maintain, and manouver the equipment in and out of your storage area. Ok Scaffolding (2018)

Training is also vital consideration if you are considering purchasing scaffolding, as it is essential that you have competent and trained personnel to erect and dismantle the scaffolding elements. In addition to safety, you will need a trained crew to help erect and dismantle equipment to keep it functioning efficiently and stored properly. The following are key points to consider when deciding if you have sufficient experience to make a scaffolding purchase:

- How many years of experience do you have in the construction and scaffolding industry?
- What certifications and scaffolding training courses have you completed?
- How much hands on experience do you have with erecting and dismantling scaffolding in the marketplace?

- How extensive is your knowledge of the proper NASC Technical Guidance TG20 for tube and fitting scaffolds or similar guidance from manufacturers of system scaffolds Anon (2018).

Having adequate trained resources to erect and store your own scaffolding can take a lot of time. However, a rented scaffold system can be easily and safely assembled and dismantled by a professional personnel Doran, D., (2009). Relying on a third-party scaffolding rental company can greatly reduce the time spent on the project and improve safety measures on site.

Another consideration whether to rent or buy scaffolding equipment, make sure there is no risk to the safety of your crew, the time commitment for your project, or the longevity of your scaffolding equipment due to lack of experience Ok Scaffolding (2018)

Depreciation Value Calculation.

Straight line value

Dn : Annual depreciation charge

P: Initial Value

F: Salvage Value

N : Useful life in Years

$$D_n = \frac{P - F}{N}$$

$$D_n = \frac{£241,980.00 - £27,560.00}{20} = £10,721$$

Conclusion

On average, renting scaffolding is considered more affordable than buying on a per project basis. The savings gained will enable additional funds to be invested in other areas of your project, such safety equipment or other resources needed for the project. As discussed earlier, scaffolding budgets are based on the volume of equipment required and the duration of the project. Most contractors and project managers rent scaffolding equipment for shorter term projects Doran, D., 2009. If a project is 12-18 months or longer, purchasing equipment could be a consideration because monthly rental invoices would pay off the purchased gear. The could potentially be an option for this high rise development. In addition, the equipment could be re-sold after the project is complete and the equipment no longer needed. This would enable the contractor to recoup their initial investment Ok Scaffolding (2018).

Apenndix 1

OK SCAFFOLDING LIMITED

2 Hill Street, Carnetown, Abercynon, Mountain Ash, Rhondda Cynon Taff, CF45 4PH

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James Barry EngTech MICE.

12/10/2017

Peiriannydd Cynorthwyol/ Assistant Engineer
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Site: Commercial Building Blocks

To supply erect, dismantle and clear away physically tied access scaffolding to the following commercial buildings as follows

Block A 5 Floors **£84,000.00**

Block B 7 Floors **£115,710.00**

Block C 11 Floors **£185,136.00**

Block D 15 Floors **£254,562.00**

Total floor 2000m² per block (assuming simple oblong plan lay out) All prices exclude VAT to be charged in addition at the appropriate rate.

Note: Any loss or damage direct/consequential to be customer's responsibility.

All prices exclude VAT, to be charged in addition at appropriate rate.

All works to be carried out during normal working hours T.B.A.

Any alterations / adaptations will be charged extra.

Note; - Any loss or damage direct / consequential how so ever caused to be customer's responsibility.

Unauthorised access to be prohibited at all times M.C.R

Customer to provide

All access permits and requirements, mechanical handling requirements, safe working environment, road traffic management, off / on loading in safe secure area in close proximity to job, suitable pedestrian management / segregation / safety zone, cat scan, permit to dig, sharps clearances, adequate bases, setting out lines and levels, any peculiar apertures twist scaffold and structure fabric to be suitably in filled by others, prohibit unauthorised access at all times, emergency snow / inclement weather procedures, shared welfare facilities / first aid assistance and suitable disposal facilities bins etc.

Customer to ensure structure able to support scaffold / temporary works self- weight and super imposed load of men and materials there on. Whilst all due care and attention will be undertaken during all scaffolding / temporary operations, any damage direct/consequential to be customer's responsibility.

**Directors T. S. Evans D. Evans Registration Number 1639435 VAT No. 359
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Appendix 2

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Site: Commercial Building Blocks

Sale of scaffolding materials to the following commercial buildings as follows

Block A 5 Floors **£241,980.00**

Block B 7 Floors **£345,685.00**

Block C 11 Floors **£553,097.00**

Block D 15 Floors **£760,508.00**

Total floor 2000m² per block (assuming simple oblong plan lay out) All prices exclude VAT to be charged in addition at the appropriate rate.

All transport if required to be charges at extra cost.

All prices exclude VAT, to be charged in addition at appropriate rate.

**Directors T. S. Evans D. Evans Registration Number 1639435 VAT No. 359
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References

Anon 2018, Scaffold checklist. Construction - Scaffold checklist - HSE. Available at: <http://www.hse.gov.uk/construction/safetytopics/scaffoldinginfo.htm> [Accessed February 1, 2018].

Doran, D., 2009. Site engineers manual, Dunbeath, Scotland: Whittles Pub.

Juan. A Ferriz . Papi G. 2017 (23 January 2018): Equipment within construction projects. University of Wales Trinity Saint David

Ok Scaffolding 2018, 2 Hill Street, Carnetown, Abercynon, Mountain Ash, Rhondda Cynon Taff, CF45 4PH