

Incentivisation

Incentivisation is the act whereby the two parties will agree an incentive to motivate a party to do something more efficiently, this is used commonly by the client in construction to enhance the productivity of the contractor (workforce) usually agreed within a contract at the beginning of a project.

There are two common forms of incentivisation.

Financial incentives – (two groups hard and soft)

- Hard - to provide benefit to the client through money or duration (to provide benefit to the client through money or duration)
- Soft - . Soft incentivisation would include the contractor increasing production by providing regular training courses to the workforce.

Psychological incentivisation

- client incentivises contractors without financial profit, the contractor benefits from recognition, encouraging feedback, the promise of appointing them the main contractor for future work and job promotion etc.

These can be positive or negative

Positive - used in construction to incentivise the contractor with regards to cost, time and quality

Negative - used to motivate the contractor from aspects such as liquidation or loss of work etc, although these will not bring the client any tangible benefits.

The advantages to incentivisation are:

- *“To increase productivity.*
- *To enhance commitment in work performance.*
- *To psychologically satisfy a person which leads to job satisfaction.*
- *To shape the behavior or outlook of subordinate towards work.*
- *To inculcate zeal and enthusiasm towards work.*
- *To get the maximum of their capabilities so that they are exploited and utilized maximally.”* Management study (2017).



Figure 1 - Darge, G. (2019)

There are many individuals who do not agree with incentivisation stating the disadvantages as:

- Lack of production
- Often work is rushed and quality is worsened
- It can encourage individuals to cut corners and can result in work being poor or uncompleted.
- If tasks are repeated often a contractor may decide to focus on achieving a minimum standard repeatedly to 'get the job done faster' potentially achieve more financial gain than if the contractor takes his/her time.

Case study - Heathrow Terminal 5 2007 (BAA)

T5 agreement - sophisticated incentive contract (for suppliers)

Over 50,000 workers throughout the construction lifecycle including:

- Engineers
- Architect
- Design consultants
- Sub/contractors
- Fabricators etc.

The project was broken into 18 separate sub projects costing over 4.3bn and taking over 5 years to fully complete.



Figure 2 - Terminal 5, Heathrow – (2004)

All incentives used were financial incentives

Valence, G. (2018) describes the contract as a partnering and alliance approach separated into 3 tiers with grouped teams to “encourage suppliers to support each other”.

“Teamwork, commitment and trust” Valence, G. (2018)

The cost-plus incentive contract allows the client (BAA) to take full responsibility for risk management on the project, allowing the suppliers and BAA to estimate target costs for broken down tasks. Incentives were paid as lump sums for the estimated tasks.

Benefits of cost-plus incentives include:

- Suppliers do not price risk in their estimated
- The target costs encourages performance and proactive problem solving.
- Tasks if underbudget would be split 3 ways (supplier, BAA and the rest to be paid to the supplier at the end of the project).
- Performance standards and cost targets could be agreed
- Mitigates arbitration and litigation (no pain contract).
- Each team shares liability for success or failure.

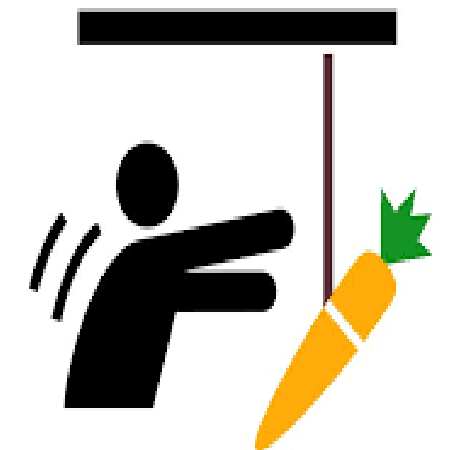


Figure 3 - Siewann.com. (2018)

References

Valence, G., 2018. *Procurement Case Study: Heathrow Terminal 5 2007*. [online] Gerard-de-valence.blogspot.com. Available at: <<http://gerard-de-valence.blogspot.com/2018/05/procurement-case-study-heathrow.html>> [Accessed 14 May 2020].

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Site layout

Site layout is a vital factor when managing a complex construction site. Facilities and resources are allocated an area that best suits its surroundings. It allows for issues to be mitigated and enables the designer to locate services and facilities in the most appropriate places to the specific site.

A site layout plan should be considered throughout the development stages right through to the completion date of the project, often utilising different plans for different stages of work.

A site layout plan is a drawing and specification that illustrates the:

- Site offices and welfare facilities
- Site access/delivery route and storage
- Site hoarding and boundary (with relevant warning signs and posters)
- Wheel washing facilities
- Location of materials, plant and equipment (e.g. crane, cement, bricks etc)
- Temporary services (car park)
- Pedestrian and worker walkways

A well managed site plan will:

1. Improve travel time thus reducing waiting time for workers
2. Boost moral through high quality facilities and resources being located correctly
3. Provide a safe working environment for the site

Important factors that need to be considered when developing a complex site layout plan:

Safety	Productivity	Maximising utilisation
Medical requirements (first aid)	Resources and facilities located in correct areas	Storage
PPE	Easy accessibility (for moral)	Space allocation
Fire safety prevention	Reducing hazards	
Site cleaning		
Security/fencing		

If the site layout plan is not undertaken correctly the consequences will be:

- Increased cost and overall time
- Double/triple handling of materials
- Decreased workers moral
- Material, plant and equipment located in wrong areas (too far away)
- Inadequate space allocation



Figure 1 – well managed site

Cost is a huge consideration for complex project, labour costs are usually a large contributor. Overall costs can be reduced if resources are distributed effectively, with workers being able to manoeuvre freely without disruption.

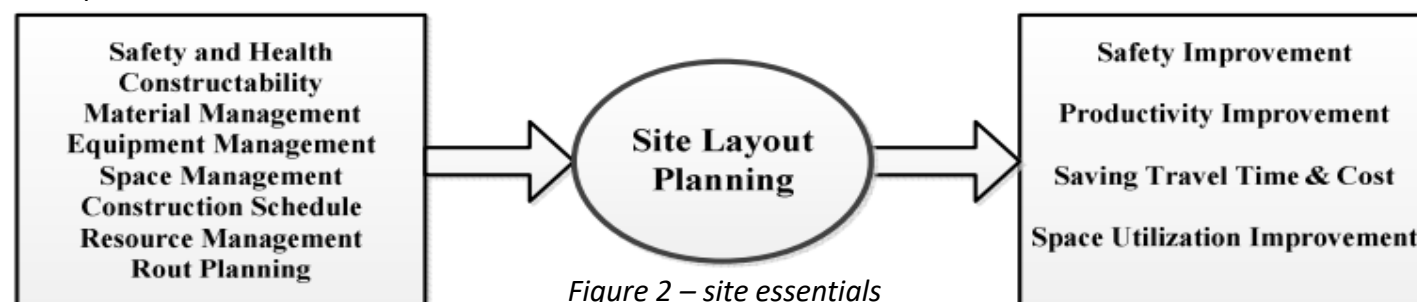


Figure 2 – site essentials

“Temporary facilities are important elements that can either enhance or adversely affect construction productivity”
Site layout planning (2003)

Case study – Typical example from chudley, R. (1999)

The case study illustrated is an example of a typical site layout plan extracted from the Chudley, R book, it consists of all the relevant facilities and resources used to maintain a high-quality standard site.

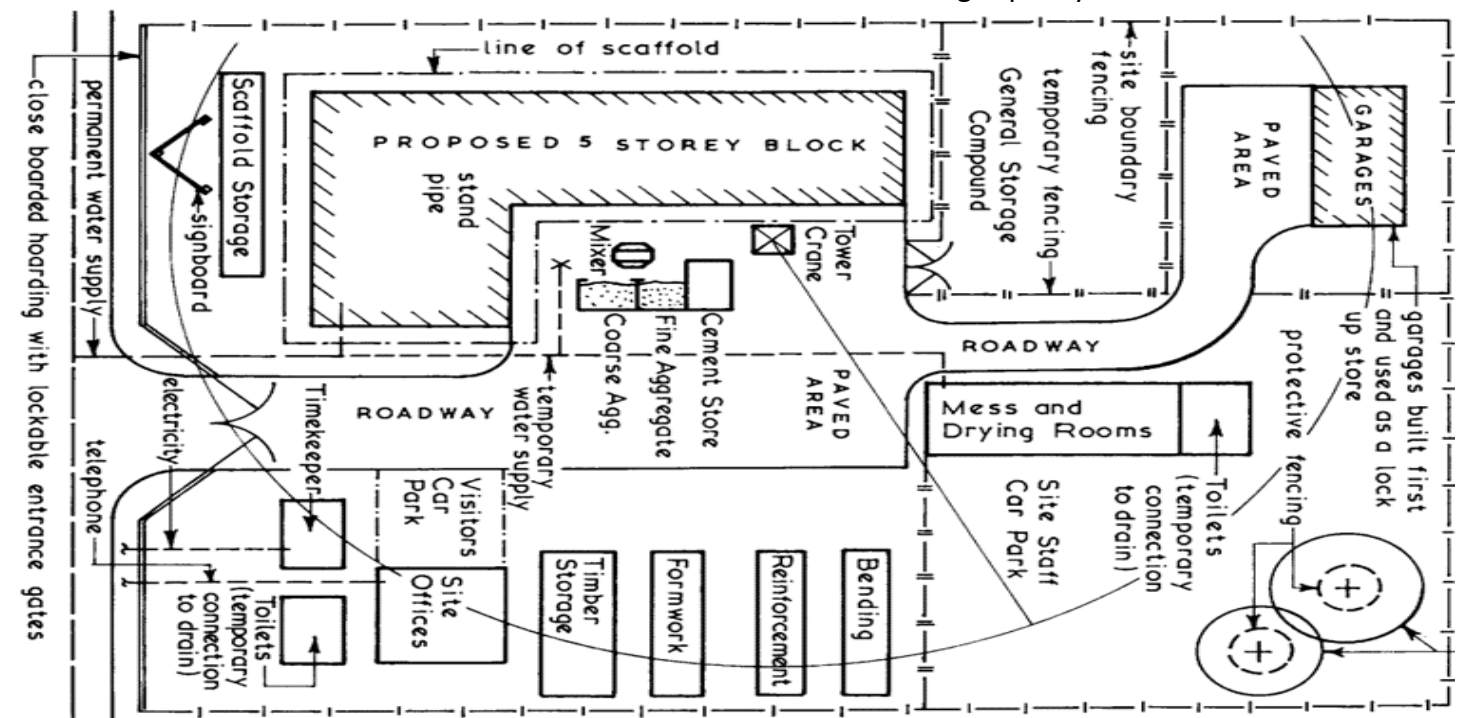


Figure 3 – site layout plan case study

Issues for the case study site layout:

- The material are too far away from the crane (reinforcement, timber)
- Visitors car park and site offices are too close to the material storage that is in active use by the crane (falling object can potentially cause a hazard)
- No walkways for pedestrians or workers
- No highlighted safe zones
- No security and not enough signage on hoarding
- No obvious delivery route/drop off area
- No first aid point/ washroom/ canteen

Positives for the case study site layout:

- There are 2 toilets at different areas of the site
- Large car park for workers
- The hoarding around the preserved trees provides good protection.
- Well protected secure storage in garages
- Good use of site hording
- Water supply provides safe drinking water
- Mess and dry room to maintain workers moral

References

Chudley, R. 1999. *Advanced construction technology*. Third edition.

Building engineer. 2014. *SITE LAYOUT CONSIDERATIONS*. [online] Available at: <<http://www.buildersengineer.info/2013/12/site-layout-considerations.html>> [Accessed 15 May 2020].
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