



APPENDIX GA36b

LEVEL 7 ASSESSMENT SPECIFICATION

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Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

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1.0. UWTSD Student Building

1.1. Executive Summary

The University of Wales Trinity Saint David (UWTSD) is a multi-campus university with three main campuses in South Wales. Carmarthen, Lampeter and Swansea. The client (UWTSD) aims to provide a student social building and has procured the services of Alex Haddow to provide a report on the available procurement routes, tender process and possible contracts that can be used for the project.

1.2. Procurement Route

A recent survey conducted by the Chartered Institute of Buildings (CIOB) highlighted construction professional view procurement as absolute critical to the delivery of a project on time, on budget and to a high quality, with 87% of respondents of the belief that good procurement is synonymous with a successful project. CIOB (2010).

With procurement being a critical success factor the university has a number of options available that provide a safe and secure route to market. Namely Traditional, Design and Build, Management Contracting and Construction Management.

1.2.1. Traditional

According to the CIOB (2010) traditional contracting can be described as separating the design from the build. Traditional contracting has been used for many years within the UK and is widely recognised as a well understood process. It is seen that the model is so well known within the industry that its strength lies within that all parties understand the process.

The Latham Report (1994) describes the main problem with traditional procurement as being a lack of coordination between designers and constructors. Although the report also describes ways to mitigate this risk by pre-planning and efficient administration, while this is very much based on the employers ability to employ an efficient design team. The realisation that the Latham report is over 20 years old and the above issues are still apparent within the industry is concerning for projects employing a traditional form of contracting.

As seen in appendix 1 traditional contracting is advantages for clients who wish to understand cost certainty alongside guaranteeing the design they wish. On the flip side the buildability of the project may be hindered and timescales may be uncertain due to late contractor involvement.

The key decision-making perimeter for UWTSD with traditional contracting is that risk novation to the contractor is difficult to achieve. With previous project carried out by the university risk avoidance has been the primary decision maker. Please see appendix in appendix 2.

Advantages:	Disadvantages:
Guaranteed maximum price	High risk to inexperienced clients
High level of design and construction	No benefit of early contractor involvement
Low risk to the client	Lack of coordination between designers and constructors can be an issue
Certainty of design	Can be a timely process
A competitive form of tendering	

Table 1: Advantages and disadvantages of traditional procurement

1.2.2. Design and Build

Design and build procurement is the process whereby the contractor undertakes both the design and construction of the project. The level of design varies depending on the development of the client brief and will always require more input from the contractor than a traditional procurement route. The employer novates risk to the contractor but at a cost increase and limited design input. Design and build contracts are relatively low in risk in terms of cost and time but quality can be compromised. JCT (2021).

Advantages:	Disadvantages:
Reduction in overall delivery times.	Quality of the build may be impacted.
Lower risk to the client	Increased project costs
Early contractor involvement.	Reduced flexibility of change.
Cost certainty throughout the project.	
Increased buildability due to early contractor involvement.	

Table 2: Advantages and disadvantages of design and build procurement

1.2.3. Management Contracting

With management contracting the client will appoint a design team and a contractor to manage the project on behalf of the client. The contractor works alongside the design team to develop programmes, costs and designs for the project. This can allow for works to start on site prior to the completion of designs. Constructing Excellence (2004). It is beneficial for clients to engage early with contractors to optimise buildability and programming. Joint Contract Tribunal (JCT) (2018).

As seen in appendix 1 management contracting is advantages for client that require speed or execution, a good build quality and buildability of the design. This can be seen as a risk to inexperienced clients. The client will retain much of the risk when using management contracting and will have uncertainties on costs throughout the project.

Advantages:	Disadvantages:
Allows for works to start on site prior to the design being agreed.	Greater risk to the client.
Allows for flexibility of change.	Uncertainty of actual costs.
Well Suited to complex construction projects.	Can lead to a duplication of resources.
Works well on projects with a developing brief.	Less Suitable for inexperienced clients.

Table 3: Advantages and disadvantages of management contracting procurement

1.2.4. Construction Management

Construction Management is the principle whereby a contractor is carefully selected and paid a management fee to manage the contractors that have been appointed by the client. This form of procurement suits experienced clients and generally achieves a greater measure of control but also means the client holds the majority of the risk. Davies (2006). According to the CIOB (2010) construction management is not regularly used within the industry. The main reason for its being is for large and or complex project such as Heathrow Terminal 5 project where it was used to good effect.

Advantages:	Disadvantages:
Higher degree of control	High risk for inexperienced clients
Client ownership of contracts	Uncertainty of costs

Allows for programme to overlap design and construction	Risk of management contractor performance
Early involvement of specialist contractors	High degree of design changes can be seen.

Table 4: Advantages and disadvantages of construction management procurement

1.3. Tender Process

There is often misperception within the industry with the differences between procurement and tendering. Tendering is the bidding process to obtain a price and how the contractor will be appointed. Royal Institute of Chartered Surveyors (RICS) (2014).

1.3.1. Single Stage Open Tendering

Widely used within the industry and a well-known form of tendering, single stage open tendering is a competitive process for obtaining prices for a whole construction project. Contractors price for work via an invitation to tender (ITT). This is generally done when the design is complete, and a works package is provided. Tenders are returned and analysed by the client. A contractor is eventually awarded the contract and are expected to deliver the scheme on time, within budget and at the quality agreed by the client. RICS (2014).

1.3.2. Single Stage Open Tendering

Two Stage Tendering involves early collaboration between the client and contractors. The first stage allows for early input between the main contractor and the client assisting with early design work, cost and programme projections. Scape (2020). This form of tendering is suitable for inexperienced clients and complex projects.

1.3.3. Selective Tendering

Selective tendering can be either single stage or two stage. Selective tendering works on an invitation only basis, with the client pre-selecting suppliers and providing invitations to tender to each supplier. This form of tendering better suits complex projects and areas that require specialist suppliers Constructor.org (2019). Selective tendering is considered to potentially cause bias within the industry and ultimately reduce innovation.

1.3.4. Framework Tendering

Procurement Frameworks are an agreement put in place and are used to provide services within the construction industry without undergoing a full tender process. LGPS Framework (2020). A framework is a hybrid approach to procurement and tendering as it is a route to market but also a tender process for contractor bidding via a feasibility study. The main advantages to procurement frameworks are

that they are fast, efficient and easy to use, reduction in procurement timescales and potential reduction in costs. Pick Everard (2019). Although a number of disadvantages are also present such as contractor bias and value for money concerns.

1.4. Contract

A contract is an agreement entered into between two parties with the intention to create a legally enforceable obligation. Once completed, a contract is binding for both parties and requires each party to do the things stated within the contract. Bowmen's (2016)

1.4.1. Contractual Options

The Joint Contract Tribunal (JCT) formulate a suite of contracts that is one of the most commonly used forms of contracts in the UK. According to Pinsent Mason (2012) JCT contracts equate to around 70% of UK projects. The JCT states that Traditional, Design and Build, Management Contracting and partnering contracts are provided. The broad range of contracts and the flexible nature supporting a wide range of construction projects. JCT (2020).

The New Engineering Contract (NEC) is a family of contracts that are suitable for a wide range of construction projects spanning major frameworks projects through to minor works. The fundamentals of the contract is to provide projects on time, on budget and to a high standard. NEC (2019). NEC contracts are seen within the industry as a simpler form on contract.

Alternative Contract Options are: -

Association of Consultant Architects – This is a standard form of building contract which is designed to be more concise and flexible. Alternative clauses are also used and customised by all parties. Randstad (2019)

The International Federation of Consulting Engineers (FIDIC) – FIDIC contracts include the Red Book which is used for building and engineering works and the Yellow book is used for M&E, building and engineering works. The contract is well suited to construction projects whereby bidders may bid from multiple countries. (FIDIC 2010)

1.5. Conclusion and Recommendations

Mitigating risk to the university is a key factor when choosing procurement routes, tender processes and contracts. This is evident with the construction of the SA1 campus. The client passed the design

risk to the contractor by utilising a design and build contract. Coupled with a two staged tender to engage early to allow for clarity of design, cost and programme. The contract also chosen allowed for certainty of cost thus reducing the risk further.

Based on the above information it is suggested that the proposed project emulates similar values towards risk. It is suggested that a two-stage design and build procurement route is adopted, coupled with a framework agreement. Framework agreements such as Scape or Procurement Hub are available. The proposed contract would be NEC4 Option A. This contract is a priced contract with an activity schedule used for payment. Barton (2020). This allows the client to pay for activity as and when completed. The NEC contracts also employ a NEC supervisor as part of the contract to ensure works are completed in line with the activity schedule.

2.0. Sancta Maria Hospital

The Sancta Maria private hospital has employed Alex Haddow to fully investigate the current air conditioning system within the hospital and to provide guidance on the possible procurement route, tender process and available contracts for the maintenance of the systems.

2.1. Published Covid Information

The United Kingdom (UK) Health Security Agency (2021) first published a guidance document in March 2021 which addressed ventilation of indoor spaces to stop the spread of coronavirus. The Health and Safety Executive (HSE) (2021) also published guidance to support employer with the ventilation requirements during the pandemic.

Both guidance documents are very similar in nature and provide a synopsis as to why ventilation within indoor spaces is important. Alongside this identification of poorly ventilated areas and how to improve them are considered. Provisions are also given for keeping people warm and clean air filtration units. The guidance notes provided are putting pressure on organisations to provide compliant systems that not only provide safe workplaces but allow for individuals to feel comfortable working within buildings.

2.2. Maintenance Schedule Overview

The below table outlines the route to compliance that the hospital will take to provide a fit for purpose air handling unit.

Stage	Overview
Identification of poorly ventilated areas	With the use of Non-dispersive Infrared (NDIR) CO ² monitors all areas that are usually occupied will be monitored for a set period of time. Readings will be collated and areas with readings above 1500ppm will be classed as poorly ventilated.
Identification of existing air conditioning plant	Due to complexity of the associated plant a reputable and local M&E contractor will be commissioned to provide a full survey of the equipment.
Improvements	Based on the CO ² data collected on the M&E survey a full schedule of works will be developed to ensure compliance throughout the hospital.
Provisions for cooling / heating	A full policy on the balance of ventilation and keeping people warm will be developed to ensure the thermal comfort of staff and visitors.
Continuous monitoring	Continuous monitoring of the improved system will be upheld via the use of CO ² monitors.

2.3. Procurement Route

Due to the increased risk of the pandemic the main driving factor for the procurement of services is speed of action. The below section will identify options provided to procure both the initial M&E survey and the associated work in one project.

2.3.1. Framework Agreements

As stated in section 3.2.1 Procurement Frameworks are an agreement put in place and are used to provide services within the construction industry without undergoing a full tender process. LGPS Framework (2020). Framework agreements such as the Crescent Purchasing Consortium (CPC) provide a mechanical and electrical plant and equipment framework. The framework provides planned and reactive maintenance and are fully compliant with the Public Contract Regulations (2015). CPC (2020)

The strength of this procurement route is in the speed of appointments and a benchmarking service that ensures prices are competitively measured against current markets.

2.3.2. Traditional Procurement

As described in 3.1.1 traditional procurement routes are essentially the splitting of the design and the construction. Table 1 above highlights the advantages and disadvantages of traditional procurement. One of the main issues with this procurement route is the length of time to complete the process and appoint a contractor. With the risk of coronavirus this procurement route is not suitable as speed of appointment is the key consideration. A survey carried out by Gray (2012) indicates that professions within the field generally believe traditional procurement is too slow due to the sequential method of the process.

2.3.3. Other Options

Other procurement route options considered but not deemed to be fit for purpose are:

Construction Management: As stated in 3.1.4 management contracting is generally used on large complex projects. The client will not require a managing contractor and will save on the management fee.

2.4. Tender Options

There are three main tender options available in construction. The tender method should be carefully selected to suit the desired outcome of the contract. Tendering is the process of inviting supplier to provide a service or good at a competitive price.

2.4.1. Open Tender

For open tendering the client will provide a specification and a works package that openly offers the tender documents to the contracting public. The process can be timely with contractors being given a set period of time to return tenders. This process can be wasteful for contracts and a general price is often given that will guarantee a profit. Constructor.org (2019)

This tender process is deemed to be unsuitable due to time constraints. Open tendering is a lengthy process that could impact on the reactive maintenance aspect of the project. This process would be suitable for a planned maintained contract.

2.4.2. Selective Tendering

Selective tendering is the process whereby the client hand picks certain contractors that better suit a certain project. From this the client may set up negotiations with the selected contractors. Alongside this a client may wish to work with only one contractor. This is known as single contractor selection. RICS (2014). By selecting a single contractor, the client will reduce the time spent tendering the works. It is suggested that pre-qualification questions are carried out in line with PAS 91: 2013 to check contractor experience and financial standing. RICS (2014).

2.4.3. Negotiated Tendering

Negotiated tenders are when the client invites a contractor to submit a price for a works package. This form of tendering can work well for specialist works or when a project has a tight timeline or emergency works. Constructor.org (2019). The key to negotiating a tender is for all parties to reach an agreement early and procure the works on a solid contract. The process can be quick but can lead to increased cost as competition has been removed.

2.5. Contract Options

2.5.1. Measured Term Contract

Measured term contracts are designed for employers who have an ongoing minor works or maintenance projects. The contracts are generally for a single contractor and for a specific period of time. Projects are well suited to conventional forms of procurement. JCT (2016)

2.5.2. Prime Cost Contract

A prime cost contract is the process whereby the client will reimburse the contractor for the costs of the works carried out. The cost will include labour, materials and also overheads and profits. The contractor will also include a management fee. LexisNexis (2020).

This form of contract allows for works to start immediately on site but can provide clients with uncertainty of upfront costs. The contract is suited to urgent repair works. JCT (2019)

2.6. Conclusion and Recommendations

Due to the increasing risk of coronavirus and recent guidance published by the HSE and Health Security Agency speed is the main factor to consider when considering the maintenance of the air conditioning unit within the Sancta Maria Hospital.

It is suggested that a local framework agreement for specialist M&E contractors is investigated. This will allow the client to procure services of a pre-qualified contractor who has been pre-audited by the framework provider. This ensures the contractor is qualified and has the skill, knowledge and experience to carry out the works.

This form of procurement lends itself well to selective tendering as the framework will have pre-selected contractors ready to undertake the works. The framework may state the required contract but if a contract is selectable a prime cost contract should be employed to allow the contractor to start works early. The client will then work with the contractor to work through costs and final payment.

3.0. Gwent and South Wales Police Estate Review

3.1. Executive Summary

Gwent Police and South Wales police have identified ten properties within the joint portfolio that require further investigation into their suitability across the estate. Each building will be scrutinised against a number of criteria to provide a rationalisation report. The ten properties are of varying age, condition and size. Each premises will be scrutinised in terms building condition, staff and space efficiency, resale value and operational effectiveness.

The aim of this report is to provide senior officers with a strategic outline plan for each premises providing a holistic approach to estate management throughout South Wales.

3.1.1. Gurnos

Gurnos Station – Merthyr Road						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Lease	1980	Good	4	115.02	57.67	135.72

The property in the Gurnos is currently leased and was built in 1980 and during a recent property condition survey was deemed to be in a good condition. The building houses 4 staff over an area of 115.02m2. The property is spread over one floor and houses the local response team.

The above property is leased by the force. Booty (2009) suggests that a leasehold property is when the occupier hold the premises for rent over a period of time in exchange for payment. For this exercise it is suggested that the lease term and any break clauses are investigated further to determine when the lease may be coming to an end or when a lease can be legitimately broken. According to Gharmount (2019) a break clause allows both parties to agree a flexible mechanism to terminate early.

The main issue highlighted with the above property is space efficiency. The RICS (2015) suggest that business use lease agreements are calculated on the Net Internal Area which means the force will only pay for usable space within the building. As seen in appendix 3 the space utilisation figure for the Gurnos is just over 50%. This is seen as a poor use of the overall site space.

The station is used by the response teams in the local area and significant impacts would be seen if the property was disposed. It is suggested that a long-term purchase option is investigated in the local area that better utilises space efficiency and provides a fit for purpose station for response officers.

3.1.2. Rhydyfelin

Rhydefelin – Pontypridd						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Lease	1950	Good	0	76.42	54.69	N/A

Rhydyfelin is in a good condition and was constructed in 1950. The property has a GIA of 76.42m2 and is spread over one floor. The property is lease by the force and utilised as a drop-in centre.

Space efficiency is relatively good with a utilisation rate of 71.56%. The main issue highlighted is the staff utilisation of the space. With a utilisation rate of zero staff this space is deemed to be underutilised. It is suggested that the lease term be investigated, and any release clause activated at the earliest possible date. With the utilisation rate being zero, little to no impact to operational policing will be seen justifying the proposal.

3.1.3. Bridgend Bridewell

Bridgend Bridewell						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	2015	Excellent	180	4,317.90	4,317.00	N/A

Bridgend Bridewell is a freehold property that was constructed in 2015 and is also deemed to be in an excellent condition. The building houses 180 staff within a GIA of 4317 m2.

Bridgend Bridewell Suite consists of a custody suite and is classed as a high value asset to the force. The building is freehold which means the occupier owns the premises outright for an ultimate length of time. Booty (2009).

Due to the operational value it is suggested that the building remains within the estate portfolio and a regular maintenance schedule be adopted to ensure value and operational effectiveness is retained.

The figures presented within the NIA appear to be an anomaly and should be investigated. The figure being so close to the GIA would suggest a building with no internal walls. This is deemed to incorrect as the building consists of a custody unit which is made up of a high volume of internal walls.

3.1.4. Pencoed

Pencoed – Bridgend						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	1950	Poor	4	116.46	98.88	137.42

Pencoed station is a freehold premise that was constructed in 1950 and is deemed to be of a poor condition. The building is used as a general office with four staff reside in the building and a GIA of 116.46m².

With the building being in a poor condition the force has the option to either refurbish the space or sell the building on. Another contributing factor would be the cost associated with a full refurbishment. Alongside the energy efficiency and future running costs of the building. It would be beneficial for the force to commission an energy performance certificate on all building being investigated. According to the British Government (2017) an energy performance certificate will provide a building with an energy efficiency score from A (most efficient) to G (least efficient). This will allow the force to identify buildings that have a poor efficiency rating and will inform future decision making.

Space utilisation also needs to be considered. With only four staff utilising the building, based on the GIA each person equates to just over 24m² per person. The HSE suggest that a minimum of 11m³ should be adopted per person based on a 3m high ceiling. HSE (2019). For example, where a ceiling is 2.8 high a floor area of 4m² will be a minimum. Note this does not include amenities such as WC and showers.

3.1.5. Blaenymaes

Blaenymaes – Swansea						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Ground Lease	1950	Poor	0	82.27	49.05	97.08

Blaenymaes was constructed in 1950 and is considered to be in a poor condition. The property is used as a drop-in centre with no prominent staff residing in the property. The tenancy is a ground lease and is used as a drop-in centre. The building is 82.27m² spread over 1 floor.

According to Practical Law (2021) a ground lease is effectively a long-term lease for land. The lease may allow a tenant to construct new developments on the land and range from 25 to 99 years.

It is suggested that the ground lease is first investigated to determine the lease term. Once this is understood decisions can be made weather to redevelop the premises or not.

3.1.6. Neath

Neath						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	1996	Good	174	1,756.48	1,231.65	2058.04

Neath station is a freehold property that was built in 1996. The building is in a good condition and is occupied by 174 staff. The building is 1756.48m2, spread over 2 floors.

The above building house the major crime and response team and is a critical building for policing. The property is freehold and in a good condition. The age of the building would suggest a modern construction which lends itself well to energy efficiency measures. Space efficiency is also deemed to be good at just over 70%.

It is suggested that the building remains within the portfolio.

3.1.7. Ely

Ely – Cardiff						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Lease	1950	Fair	74	503.95	335.15	594.78

Ely station is a leased property that was constructed in 1950. The building is deemed to be in a fair condition. 74 staff are house in the building over a GIA of 503.95m2. The property houses the cybercrime team.

With the building housing the cybercrime team it is deemed to be of high value to the force. According to the Lease Advisory Service (2021) it is generally the freeholder of the property that is responsible for maintenance and repair of the building. It is suggested that the landlord is contacted to provide a programme for refurbishment to ensure the building is fit for purpose.

Alongside this it is suggested that the lease term is investigated to ensure adequate time remains on the lease and a full agreement remains in place for during and after the refurbishments.

3.1.8. Bettws

Bettws						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	1960	Good	35	615	Unknown	150

Bettws station is a freehold property and was constructed in the 1960. The property is in a good condition and is currently occupied by 35 staff in a two-floor building that is roughly 615m². The property is utilised by the local response team.

The above building is seen to be a high value premises to the force which houses the local response teams. The building is deemed to be in a good construction but with the previous use of the building being a post office energy efficiency is poor.

It is suggested that full energy audit of the building fabric and mechanical plant is carried out to fully understand the energy efficiency of the building. From this a future proofing remodelling exercise should take place in line with the force's decarbonisation strategy.

3.1.9. Garndiffaith

Garndiffaith						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	1970	Poor	8	59	Unknown	0

Garndiffaith stations is also a freehold property and was constructed in 1970. The property is in a poor condition and is currently occupied by 8 staff. The station is relatively small at 59m².

The main issue highlighted with Garndiffaith is overcrowding during times of high footfall. The building is very small and houses 8 staff plus storage. The Management of the Health and Safety at Work Regulations state that employers must assess the risk associated with overcrowding and take practical steps where possible to prevent overcrowding. Unison (2010).

The overcrowding risk identified needs to be further investigated. One option would be to provide alternative space for staff via a new workplace or a shared facility. An alternative option would be disposing of the site. The second option would be to risk assess the site and provide an alternative approach such as staggered shift patterns and working from home.

3.1.10. Monmouth

Monmouth						
Tenancy	Date of Construction	Property Condition	Total Staff	GIA (m2)	NIA (m2)	GEA (m2)
Freehold	1900	Poor	87	96	Unknown	100

Monmouth station is a listed building that was constructed at the turn of the century (1900's). The building also sits within a conservation area. The building is deemed to be in a poor condition and hold 87 staff over a floor area of 96m2.

Monmouth station is the oldest property within the investigation and is deemed to be in a poor condition. With the building being listed and of a poor condition resale value could be impacted. According to Historic England (2018) freehold properties may be difficult to sell.

With the building being of 1900's construction the functionality for modern day policing is also impacted. The site is deemed not fit for purpose.

Due to the age and restrictions on the site the property become difficult to resell or refurbish. The property has also been a police station for a considerable amount of time and would not lend itself to other forms of activities.

It is suggested that the building is retained, and a full building survey is carried out to produce a schedule of work for refurbishment in line with the current restrictions (listed building and conservation area). Once a cost is highlighted for the works and a value for money exercise is carried out a full appraisal should be formulated highlighting the refurbishment vs resale value.

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Appendix 1 – Summary of advantages and disadvantages of contract strategies.

Project Objectives		Appropriateness of Contract Strategy in Meeting Project Objectives				
Parameter	Objectives	Traditional	Construction Management	Management Contracting	Design & Manage	Design & Build
Timing	Early Completion	☐	☒	☒	☒	☒
Cost	Price certainty before construction start	☒	☐	☐	☐	☒
Quality	Prestige level in design and construction	☒	☒	☒	☐	☐
Variations	Avoid prohibitive costs of change	☒	☒	☒	☒	☐
Complexity	Technically advanced or highly complex building	☐	☒	☒	☐	☐
Responsibility	Single contractual link for project execution	☐	☐	☐	☒	☒
Professional Responsibility	Need for design team to report to sponsor	☒	☒	☒	☐	☐
Risk Avoidance	Desire to transfer complete risk	☐	☐	☐	☐	☒
Damage Recovery	Ability to recover costs direct from the contractor	☒	☐	☒	☒	☒
Buildability	Contractor input to economic construction to benefit the department	☐	☒	☒	☒	☐

☒ - appropriate
 ☐ - not appropriate

[CUP Note: This table is for guidance only. Generally the appropriateness of the contract is not as clear cut as indicated. The project manager must advise the project sponsor on this.]

Source: CUP Guidance Note 36. "Contract Strategy Selection for Major Projects", June 1992.

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Appendix 2 – Case Study

The current SA1 campus was constructed and opened to students in 2018 at a cost of 350M pounds. UWTSD (2019). The existing campus was built with a hybrid approach to procurement with the UWTSD employing a team of consultants to produce a masterplan for the whole site. The procurement route chosen for the build was a two-stage design and build contract with Kier. This form of procurement allowed the university to engage early with the contractor. Early engagement for designs, cost and programme lowered the risk to the client. NEC Contracts (2019).

Kier were appointed in October 2016 on a NEC3 Engineering and Construction Contract Option A. NEC describe the option A contract as a priced contract with an activity schedule where the risk of carrying out the work at the agreed prices is largely borne by the contractor. NEC Contracts (2013). The contractor for SA1 was appointed via the Sewscap2 South-East Wales schools and public buildings construction framework. The Public Contract Regulations 2015 refer to a framework contract as *“an agreement between one or more contracting authorities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged”*. Sewscap (2021), Legislation.gov (2015).

Appendix 3 – Space Efficiency Calculations

Gurnos - Space efficiency calculation: $GIA / NIA \times 100$

$$57.67 / 115.02 \times 100 = \mathbf{50.14\%}$$

Rhydyfelin - Space efficiency calculation: $GIA / NIA \times 100$

$$54.69 / 76.42 \times 100 = \mathbf{71.56\%}$$

Bridgend - Space efficiency calculation: $GIA / NIA \times 100$

$$4317.0 / 4317.9 \times 100 = \mathbf{99.99\%}$$

Pencoed - Space efficiency calculation: $GIA / NIA \times 100$

$$98.88 / 116.56 \times 100 = \mathbf{84.83\%}$$

Blaenymaes - Space efficiency calculation: $GIA / NIA \times 100$

$$49.05 / 82.27 \times 100 = \mathbf{59.92\%}$$

Neath - Space efficiency calculation: $GIA / NIA \times 100$

$$1231.65 / 1756.48 \times 100 = \mathbf{70.12\%}$$

Ely - Space efficiency calculation: $GIA / NIA \times 100$

$$335.15 / 503.95 \times 100 = \mathbf{66.50\%}$$

Bettws - Space efficiency calculation: $GIA / NIA \times 100$

Unable to calculate due to no NIA

Garndiffaith - Space efficiency calculation: $GIA / NIA \times 100$

Unable to calculate due to no NIA

Monmouth - Space efficiency calculation: $GIA / NIA \times 100$

Unable to calculate due to no NIA