



ENTER

# WORKING TOGETHER

YOUR BUILDING PROJECT  
GUIDANCE FOR SCHOOLS



WILLMOTT DIXON  
SINCE 1852

*A completed project providing accommodation that is fit for purpose and supports good teaching and learning*

# INTRODUCTION

**Building projects in schools can offer exciting opportunities to improve the environment for teaching and learning, both for the whole school community and for particular groups of students and staff.**

The provision of a complete new block, or the major refurbishment of existing accommodation, offers the school an opportunity to rethink their approaches to teaching and learning, or to rationalise and reorganise their departments.

While some other major building projects may seem far less glamorous, they are just as important to the continued successful running of a school. For example, an essential major overhaul of the heating or electrical system, or replacing the roof or windows, may involve major building work and temporary disruption but without giving the 'buzz' that comes with a new building project. But these projects materially improve the day to day environment in the school, and can reduce ongoing running costs.



## YOUR BUILDING PROJECT

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# Types of project

### Size isn't everything

Projects vary in size from, for example, relatively small scale schemes to improve access for people with disabilities, to the building of a complete new school.

Whatever the size and cost of the project, from a few thousand pounds to multi-million pound developments, contractors have to go through the same processes to make sure that the right accommodation is delivered safely, to the agreed specification and standards, on time and within the allocated budget. The amount of disruption caused by a building project can vary enormously and smaller projects can present as many potential challenges as large ones, particularly where they are taking place in occupied buildings.

Building projects are generally described as being **'new build'**, **'remodelling'** or **'refurbishment'**. 'New build' is self-explanatory but the other two involve work to existing accommodation. The difference between them refers to the nature and scale of the work being undertaken. These terms are described in more detail in the glossary. Some large schemes may comprise elements of all three of these types of work.

### What will it mean for us?

Any contractor working in a school must take account of the potential impact of work on staff, students, the wider community and other visitors to ensure that their health, safety and well-being are guaranteed and to enable the school to function as normally as possible. Above all else, building work must not interfere with the entitlement of the students to continue their education without disruption.

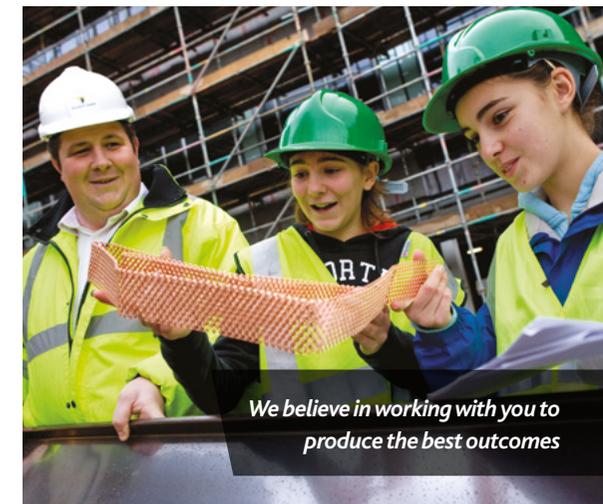
### Help is at hand

This guide has been provided by Willmott Dixon to help school leadership teams, governing bodies, Academy Trusts, Foundations, Dioceses and other key stakeholders to plan their projects and manage their school when significant construction work is being carried out. It focusses on new build, major remodelling or refurbishment projects but the same principles apply to any sort of project in any type of school.

We understand that schools operate under a range of governance and management arrangements that may involve a number of different bodies including those identified above and local authorities. The terms 'school' and 'school leadership' therefore have the broadest possible definition in this guide.



*We understand that schools' core focus is on the needs of children*



*We believe in working with you to produce the best outcomes*



## The guide will take you through:

1. The steps in the process from project initiation to bringing the new accommodation into use. It describes the purpose, actions, outcomes and success criteria for each step.
2. The roles and responsibilities of all the various people who may be involved at each stage in the process.
3. A jargon buster to ensure that communication is clear and effective. Terms included in the jargon buster are in **Bold**.

At the end of the guide you will find some examples of the documents you are likely to come across during the life of your project. Specifically, we have included:

1. An example of a **site layout plan**
2. An example of a **room data sheet**
3. An example of a **Gantt chart**

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You will see the following icons throughout this guide, here we explain what they mean:



Achievements you can take forward onto the next phase of the project.



Actions and involvement of the construction team throughout the project.



Your involvement and things you will need to action during the 3 phases.



Areas you will work together with the contractors to achieve.



Measuring success and assessing whether the phase has achieved the agreed actions.



**PHASE:**

# PRECONSTRUCTION

***Introduction***

*'every journey starts with a single step'*

*This phase is focused on identifying and agreeing the educational objectives and outcomes that your project should deliver. By the end of it, an agreed, affordable and deliverable set of proposals must be in place so that work can start on site. Spending time getting everything as right as possible in this phase is critical to the success of your project. Incomplete or inadequate planning is very likely to lead to problems for the school and contractor later.*

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## PHASE: PRECONSTRUCTION



Breaking the ground – now the work really starts...

The preconstruction phase has clear, definitive outcomes to measure success based on the actions of the school, the contractor, or both together.

### ✓ At the end of this phase:

- A clear **brief** for the project will have been agreed by the **client** (i.e. the school, or its overarching governance body), and shared with the contractor
- An overall **budget** and **cash flow** will have been agreed, divided into its **constituent parts**
- The contractor and the school will have their respective project teams in place and a joint project team will have been created and be meeting regularly
- **Stakeholder engagement** will have been completed
- A **communications** plan will have been agreed and put in place
- The **client** will have signed off the final plans for the work and the budget
- The **programme** for carrying out the work will have been agreed
- The **site logistics** will have been finalised
- An agreed **Health and Safety plan** will be in place
- **Fire and security strategies** for the construction period will have been put in place
- The school will have met the **key site personnel** for the construction period
- Any **temporary arrangements** regarding access to the site or school buildings will have been signed off
- Any necessary **enabling works** have been identified and programmed in
- A **decanting** strategy will have been agreed for both any temporary accommodation and for the final move into the new, **remodelled** or **refurbished** buildings
- Any **learning opportunities** arising from the project will have been identified and discussed
- All necessary **statutory approvals** will have been obtained
- The contract between the client and the contractor will be signed, allowing work to start on site



## PHASE: PRECONSTRUCTION

# The key actions during this phase are:



## For the school

### Initially....

- To achieve absolute clarity about the **educational objectives** of the project
- To agree the available budget and cash flow with the **funders** of the scheme
- To identify its **project leader** (an individual with sufficient seniority and time to provide effective leadership on behalf of the school), taking account of the size and complexity of the project
- To establish its own internal **consultation** and decision making processes. The most successful projects are those where there has been widespread and meaningful consultation with all the stakeholders and a transparent decision making process
- To establish links with relevant local authority (LA) officers where the LA is acting as the client for the project
- To identify and engage with other key stakeholders and to seek their views and manage expectations about what will be achievable

- To agree what additional accommodation or changes to existing accommodation will be required in order to achieve the educational objectives
- To identify any **temporary accommodation** arrangements that will be necessary to ensure that the school's timetable is not compromised or lessons disrupted
- To sign off the brief that will be passed to the contractor to form the basis of the design

### and then....

- To undertake a thorough Health and Safety assessment to understand the possible impact of the construction works on the day to day life of the school and develop detailed plans to mitigate any possible impact. If the work is to be completed in several phases, separate plans will be required for each phase
- To develop an emergency **fire and security** strategy for use during the construction period including the re-routing fire exit routes and revising fire drill plans, as needed
- Consider the need for additional cleaning, especially where internal areas are being refurbished

- To make sure that all staff and students are fully briefed about the impact of the work, how it will affect their day to day lives, and their responsibilities to make sure that they stay safe
- To inform parents/carers about the work and the steps that are being taken to ensure that the life of the school is not disrupted and potential risks have been addressed. This will include information about any temporary changes to parking, dropping off/picking up arrangements, pedestrian/cycle access to the site and bus arrangements
- To keep the school's neighbours informed about the nature of the work, the timetable for carrying it out and any possible impact due to parking restrictions, deliveries, or changes in the school's access arrangements. Neighbours should also be told how to raise concerns about any aspect of the work while it is going on
- To let school suppliers know about any changes to access and delivery arrangements during the construction period
- To liaise with any school bus providers about any changes that will be needed to the timing and location of student drop off and pick up arrangements



## PHASE: PRECONSTRUCTION



### For the contractor

- To assemble its preconstruction team, including the consultant team that will support the technical development of the scheme
- To appoint the team that will be responsible for running the scheme once work starts on site and arrange early meetings with key school personnel to start building relationships and establish ongoing communication
- To liaise with all the relevant statutory bodies that will have to give approval to the agreed scheme to identify their requirements and the timescales for decision making
- To submit applications for any statutory approvals that are required before work can start on site, taking account of the lead in time for obtaining these
- To identify any opportunities for joint curriculum working or work experience with the school during the construction period
- To develop plans for site access that will minimise any risks to other site users or interfere with traffic, pedestrian or cycle movements on or around the site, particularly at peak times at the beginning and end of the school day
- To identify opportunities for celebrating the project jointly with the school, such as a ground breaking ceremony, 'topping out' and hand over
- To appoint the subcontractors who will be carrying out the work on site
- To ensure that subcontractors and key suppliers are made fully aware of the key issues associated with the project, particularly in respect of the operation of the school, that they must be aware of when planning their work
- Put appropriate **insurance** in place to cover all the risks associated with the project
- Where relevant, ensure that CRB checks have been carried out on any individuals who may be working in occupied parts of the building



### Jointly with the client

- Agree a programme of meetings and milestones between the school team and the contractor team
- Agree a communications strategy and plan to ensure that all stakeholders are kept properly informed about the progress of the scheme and have the opportunity to contribute to its development
- Ensure that a shared programme is available that identifies important events, like exams or other school activities, that may impact on the contractor's activities, or periods when unavoidable but potentially disruptive work can be carried out
- Identify opportunities for direct input from the contractor into the life of the school community



## PHASE: PRECONSTRUCTION



*Children's views matter...  
They often have insights that adults don't*

## The key people involved in this stage are likely to include:

### For the school

- **The project leader:** it is usual for the school to nominate a senior member of staff to act as its lead in all matters relating to the project and to be the primary point of contact between the school and the contractor
- The School Senior Leadership Team: the Head Teacher/Principal and other senior staff will have to be involved throughout this stage to ensure that the interests of students and teaching and learning are not adversely impacted by the project
- The Governors/Trustees/Diocese: the body with the governance and oversight responsibility for the school must be kept informed and involved as it has the ultimate 'ownership' of the project
- **EFA representatives:** if the project is being funded in whole or part by the EFA, it will expect to be closely involved in its development, particularly if it is to be the signatory to the contract with the building contractor
- **Local authority (LA) representatives:** if the project is being funded in whole or part by the local authority, it will expect to be closely involved in its development, particularly if it is to be the signatory to the contract with the building contractor
- Teaching and non-teaching staff: the communication plan should set out how staff will be involved in the development of the scheme and the extent to which they will be able to influence the agreed design
- Students/pupils: as the ultimate users of the building, there should be a detailed consultation process with students to ensure that their views are listened to and, wherever possible and appropriate, reflected in the final scheme
- Parents/carers and the wider school community: parents/carers will want reassurance that their children's education and safety will not be compromised by the project. The local community will want reassurance that their day to day lives will be disrupted as little as possible by the work



## PHASE: PRECONSTRUCTION



### For the contractor

- The **project team leader** – has overall responsibility for the planning and delivery of the project and will be the primary point of contact between the contractor and the school
- The **preconstruction manager** – is responsible for getting all the 'ducks in a row' before work starts so that there is a smooth beginning to activity on site
- **The designer** – usually a qualified architect who will be responsible for turning the agreed brief into a set of design proposals and ultimately into an affordable, deliverable scheme
- The **design manager** – appointed by the contractor to work with the designer on the fine details of the scheme and to agree what materials and construction methods should be used
- **Estimators** – responsible for keeping watch on the affordability of a scheme as the design evolves
- **Quantity surveyors** – are responsible for keeping the project within budget once work starts on site while protecting quality standards. The QS checks invoices submitted by subcontractors and suppliers against actual work before any payments are made
- **Services engineers** – are responsible for the design of, for example, the electrical, heating, water and drainage systems. These services are sometimes referred to as 'M & E' – mechanical and electrical services
- **Structural engineers** – responsible for the design of the 'skeleton' around which the building is constructed. This frame may be steel, concrete or timber but will need to support whatever materials and construction methods are used to complete the building
- **Civil engineers** – responsible for the design of any roadways, bridges or other structures needed to give access to, or around, the site
- **Other specialist consultants; e.g. educational, environmental, acoustic, archaeological** – specialist advisors brought in to deal with particular aspects of the design or construction



### This phase will have been successful if...

- The proposed date for starting on site is achieved for a scheme that has been signed off by the client and is within the available budget
- All the necessary approvals have been given by the relevant authorities prior to work starting on site
- All the stakeholders understand how the scheme will be delivered and its likely impact on the day to day running of the school
- Detailed plans have been agreed and put in place to ensure the safety and welfare of all site users during the construction period
- The school's neighbours have been reassured that, as far as possible, disruption, noise, dust and vibrations caused by the work will be minimised
- All stakeholders know how to raise any concerns that may arise during the building period
- All the subcontractors and suppliers who will be working on or around the site have been fully briefed about the site and any restrictions on their movements or activities. This is particularly important if they are going to be working in, or near, occupied parts of the building
- Parents/carers, visitors and suppliers understand any changes to the school's access and layout arrangements that will occur during construction, and are familiar with any alternative plans



## PHASE:

# CONSTRUCTION

### ***'once work starts'***

*It is an exciting moment for the school when contractors arrive on site and work starts. This is the point when all the thinking and planning that went on in the pre-construction phase starts to bear fruit. We are committed to working with you to minimise any disruption to the life of the school and children's education during this phase.*

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**PHASE: CONSTRUCTION**

*Clean, modern, spacious accommodation creating a good environment for staff and students*

This phase is about delivering the scheme that has been agreed as quickly and efficiently as possible.

## ✓ At the end of this phase:

- All building work will have been finished, **practical completion** achieved and the accommodation **handed over**
- All the specified fixed and loose furniture and equipment (**FF&E**) will have been installed and, where relevant, tested and signed off, some of this may be new, some of it may be transferred from existing accommodation
- Any staff training required ensuring the proper and safe operation of the building and new equipment will have been completed. This will include familiarisation with any **Building Management System (BMS)** that has been installed
- Staff and students will have gone through a familiarisation programme so that they know the layout of the new accommodation
- The contractor will have vacated the site, having removed any temporary buildings, site accommodation and fencing and carried out any necessary **reinstatement works** to the site, access roads and surrounding area



## PHASE: CONSTRUCTION

## The key actions during this phase are:



## For the school

- To ensure that early warning is given to the contractor of any significant events in the life of the school that might impact on, or be impacted on by, the building work
- Any concerns relating to health and safety, or other aspects of the building work, raised by any member of the school community are relayed to the contractor at the earliest possible opportunity, using the agreed communications route
- To seek to ensure that the day to day running of the school is able to continue as normally as possible



## For the contractor

- To ensure that any enabling works are completed promptly so that the main contract can begin on time
- To ensure that construction work proceeds in line with the agreed brief and programme, and within the available budget
- To ensure that the school is informed as soon as possible of any proposed changes to the programme of works so that an assessment can be made of their likely impact on the life of the school and appropriate mitigation put in place, if required
- To ensure that all subcontractors are fully briefed on the programme and the school's needs and requirements during this phase
- To minimise disruption to the life of the school and the neighbouring area, and to respond proactively to any breaches of the agreed procedures for dealing with, for example, deliveries, contractor parking, noise, dust and vibration
- To ensure that the health and safety of all members of the school community is not compromised by any activities on or around the site

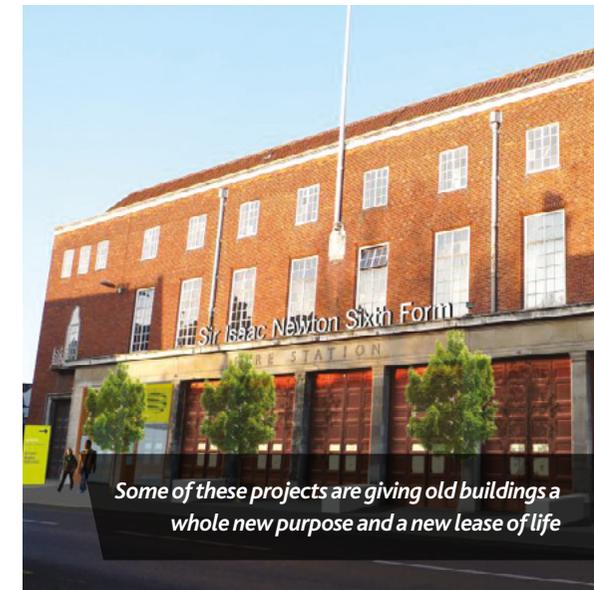


## Jointly with the client

- To keep communicating at all times and ensure that any flows of information or requests from either side go through the agreed channels. Day to day communication protocols will be set out in the jointly agreed communications plan
- To keep all members of the school community, including governors, up to date with the progress of the project. This could include the use of

a dedicated website or part of the school's existing website, newsletters, assemblies, site visits or information boards

- To plan the moving in stage, ensuring the minimum possible disruption to the management of the school, and the secure and safe installation of legacy and new equipment
- To agree and deliver a training programme for teaching and non-teaching staff so that they have an early opportunity to become familiar with any new equipment being installed as part of the project
- To agree a programme of activities for staff, students and other stakeholders to allow them to visit the site to see the progress of the scheme
- To use the construction process as a learning experience



## PHASE: CONSTRUCTION



## The key people involved in this stage are likely to include:

### For the school

- The school's project leader: will be responsible for day to day contact between the school and the contractor, and attending regular (typically weekly) meetings with the contractor's project team to discuss progress on the scheme
- The School Senior Leadership Team: must be kept fully informed of progress and told about any current or possible future issues that may impact on the life of the school
- The Governors/Trustees/Diocese: will require periodic progress reports so that they can be confident that any disruption to the life of the school is being kept to a minimum. They will also want to be kept informed of progress against the agreed programme and budget
- Teaching and non-teaching staff: ensuring that students and visitors are aware of, and comply with, any changes to the school's normal routines and, for example, fire evacuation plans, is an important role during this phase. Staff should also be offered training opportunities to ensure that they fully understand the operation of the new accommodation before they move in
- Students/pupils: a building project provides a number of excellent learning opportunities for students of all ages. The contractor will work with the school to ensure that those opportunities are maximised
- Parents and the wider school community: will inevitably have an interest in the progress of the work and want to be kept informed
- EFA representatives: the extent to which the EFA will be directly involved during this phase will vary, but it will need to be kept informed of progress and particularly of anything that may impact on the programme or the budget if it is funding all or part of the project
- Local authority (LA) representatives: depending on how the project is set up, financed and managed, the LA may be a key player during the construction phase, monitoring developments and giving support to the school where required. It will be particularly concerned to ensure that the programme is delivered on time, especially where extra places are needed by a certain date
- Client's Project Manager/Quantity Surveyor: the body that is responsible for procuring the construction contractor may also appoint their own Project Manager and/or Quantity Surveyor to ensure the project proceeds to time and budget



## PHASE: CONSTRUCTION



### For the contractor

- **The project team leader:** will continue to have overall responsibility for the planning and delivery of the project and will be the primary point of contact between the contractor and the school up to the start on site. This individual is unlikely to be based on site during the construction phase so day to day responsibility will pass to the building manager
- **The building manager:** has the lead responsibility for delivering the project once it is on site. The building manager will be the primary day to day point of contact for the school once work starts
- **The architect (or 'designer'):** will continue to come to site and deal with any queries or issues that arise on the design once work starts. A series of site meetings will be scheduled during the construction phase to check on progress against the agreed programme
- **Contractor's quantity surveyor (QS):** is responsible for keeping the project within budget once work starts on site while also protecting quality standards. The QS checks invoices submitted by subcontractors and suppliers against actual work completed before any payments are made. On larger projects, it is likely that a QS will be on site permanently
- **Health and safety manager:** responsible for ensuring that everyone on site complies with the agreed Health and Safety plans and systems. S/he will pro-actively maintain a safe environment for all site users
- **Subcontractors:** work will be divided into 'packages' that will be delivered by specialist subcontracting firms. These may include, for example, foundation work, steelwork (for the building's frame), electrical work and plumbing
- **Services engineers:** primarily deliver mechanical and electrical services; during the construction phase they will work with the specialist subcontractors to make sure that the agreed designs are fit for purpose and delivered properly
- **Structural engineers:** will ensure that the structural work delivered on site meets the agreed design standards
- **Civil engineers:** will ensure that the work in the ground is delivered to the agreed design standards
- **Other specialist consultants; e.g. educational, environmental, acoustic, archaeological:** will be used as required during this phase if there are particular aspects of the project that require their oversight



*A typical site during the early stages of a project*



*Project complete and building ready to be used*



## PHASE: CONSTRUCTION



*Burying a time capsule to mark the end of the project*



### This phase will have been successful if...

- The scheme is finished and handed over on time, to budget and without any outstanding **snagging items**
- The accommodation meets the agreed brief and has been finished to the agreed standards
- There have not been any health and safety incidents that have affected the contractors' staff or any member of the school community
- The life of the school has been able to continue without unnecessary disruption to the quality of teaching and learning
- Any new furniture and equipment has been installed and is fully operational by the time the accommodation is occupied
- Any existing furniture and equipment that is being reused has been moved to its new position and is ready for use
- Staff have been properly trained and prepared to use any new equipment in the accommodation
- The site and the surrounding area have been left in at least as good condition as they were before work began
- The accommodation can be used from the agreed date and is fully functional
- Staff and students are excited at the prospect of moving in!



**PHASE:**

# POST COMPLETION

## ***'once it is all over'***

*We know that the completion of our work and handing over the accommodation is just the beginning of a journey for the school. It will only be possible to test the real success and impact of any project once the accommodation is brought fully into use and staff and children are able to use it.*

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**PHASE: POST COMPLETION**

*Handover – a time to celebrate*

Completion and handover provide a good opportunity to celebrate what has been achieved and to put the accommodation to work.

## ✓ At the end of this phase:

- The building will be occupied, with students and staff making the best possible use of their new or refurbished accommodation
- Any issues that were outstanding at handover will have been dealt with by the builder
- The building will be working as it was planned it should



PHASE: **POST COMPLETION**

## The key actions during this phase are:

**For the school**

- Organising events to celebrate moving into the new building
- Ensuring that any issues with the new accommodation that are the contractor's responsibility are reported as quickly as possible
- Introducing staff and students to the new accommodation and making sure that they understand how to get the most from it and to keep it in good condition
- Ensuring that cleaning and maintenance regimes are established that meet the manufacturers' requirements for the different materials used to keep the accommodation in good condition
- Ensuring that the maintenance of all equipment is carried out in accordance with the manufacturer's recommendations
- Ensuring that any crates or other containers provided to assist with decanting are returned
- Enjoying the new facilities!

**For the contractor**

- Ensuring that all the requirements imposed by planners, building control and any other statutory bodies have been met in full and all necessary final approvals have been granted
- Providing the school with all the manuals, Health and Safety information and other information that it will need to run the new accommodation safely and effectively
- Logging and addressing any snagging items identified before hand over or that have arisen since the building has been occupied
- Introducing Willmott Dixon's after care team to the key people in the school so that they know who to contact in the event of any problems

**Jointly**

- Ensuring that all staff are trained to make best use of, for example, lighting, heating and ventilation controls or any other specialised equipment. This will include site staff, teachers, technicians and other non-teaching staff
- Planning and enjoying events to celebrate the project's completion
- Monitoring the performance of the building and identifying any snagging items that are the contractor's responsibility

*Accommodation in use - the real purpose of the project**Time to say thank you – to everyone who has been involved*

**PHASE: POST COMPLETION**

## The key people involved in this stage are likely to include:



### For the school

- Site manager/caretaker and grounds staff
- Teaching and non-teaching staff, particularly those who will be based in the new accommodation
- Pupils/students



### For the contractor

- **After care team**
- We know that our responsibilities do not end on the day of handover. Our specialist after care team will continue to work with the school to provide any additional training that may be needed and to make sure that any remaining works are completed to plan and without disrupting school life. They will also deal with any issues that arise with the building once it comes into use



### This phase will have been successful if...

- The new accommodation contributes to improving teaching and learning in the anticipated ways
- There are no problems with the operation of the building's heating, lighting, ventilation, drainage, IT or other services that have been installed as part of the project
- Any remaining works are completed to plan
- There is no disruption to the life of the school as a result of anything to do with the new accommodation



**GLOSSARY:**

# JARGON BUSTER

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## GLOSSARY: JARGON BUSTER

Term	Meaning
<b>After care team</b>	Willmott Dixon knows that its responsibilities to its clients do not end when accommodation is handed over. Ensuring that clients are happy with their buildings and that any outstanding snagging issues are dealt with are important to us. The aftercare team will stay in contact with the school after completion to ensure that this occurs.
<b>Brief</b>	An agreed document provided by the client that sets out in detail the educational objectives of the project, the amount and type of accommodation to be provided or refurbished and the standards to which it will be completed. It will also detail the performance required of the heating, lighting, ventilation, IT, security and other systems within the accommodation. Where relevant, the brief should take account of the guidance and requirements set out in appropriate DfE Building Bulletins (see below).
<b>Budget</b>	The funding allocated to the project. Typically this will be broken down at high level into amounts for the building itself, the cost of fixed and loose furniture and equipment, and any professional fees to be paid to the architect and other consultants who will be involved. The building cost will include not only the 'bricks and mortar' element, but also any external works to, for example, roads, car parks, playing fields, hard and soft landscaping. The budget will usually also include a contingency sum to cover any additional, unforeseeable costs that may be incurred.
<b>Building Bulletins</b>	A number of these have been published by the DfE and provide guidance on the design of schools. Some of these bulletin focus on one specific aspect of school design: for example, science lab, ventilation, acoustics, fire safety or lighting design. Others are more wide ranging providing guidance on whole school design and include formulae to calculate the necessary floor area for different sizes and types of schools. Although the bulletins only provide 'guidance' they are used to calculate the budget allocations for new build projects. Most of the current building bulletins can be found at <a href="https://www.gov.uk/search?q=building-bulletin">https://www.gov.uk/search?q=building-bulletin</a> .
<b>Building Management System (BMS)</b>	The electronic control system that automatically operates the heating and, if applicable, air conditioning systems in the school. Some systems can be integrated with the school computer network and alarm systems too.
<b>Building manager</b>	Has the lead responsibility for delivering the project once it is on site and coordinating the work of the various sub-contractors to ensure that things proceed according to the agreed design, timetable and budget. The building manager will be the primary day to day point of contact for the school once work starts and is expected to form and develop a good working relationship with the school and particularly the project lead.
<b>Cash flow</b>	The time taken from start to finish of a major project frequently means that the work will be spread over more than one financial year. The actual funds allocated to the project will therefore be spread to match the anticipated pattern of spending over that period. The contractor is responsible for keeping to the cash flow as closely as possible and alerting the client if there is likely to be any significant deviation.
<b>Civil engineer</b>	A member of the contractor's team involved in the design of any roadways, bridges or other structures that are necessary to give access to or around the site.
<b>Client</b>	The individual or body with ultimate responsibility for approving the scheme and signing the legal contract with the contractor. Also responsible for ensuring that funding is in place and that the contractor gets paid. The contractor will expect the client to approve the brief and any proposed changes to the scheme post-approval will only be accepted with the client's authorisation and, where necessary, additional funding being provided. Several bodies may act as the client collectively, e.g. the governing body, the Academy Trust, the Local Authority, and/or the Education Funding Agency, depending on who is provided funding to meet the overall costs and/or who is deciding the brief for the project. The client may appoint a Project Manager and/or a Quantity Surveyor to provide on-going independent technical advice.

Term	Meaning
<b>Communications plan</b>	Very early in the process, the client and the contractor will draw up and agree a communications plan for the whole of the project. This aims to ensure that there is clear, consistent and easy communication between all parties, with agreed roles and responsibilities. Time invested at the outset in a good communications plan can help to minimise problems and misunderstandings later. Every project's needs are slightly different but the contractor will be able to offer examples of communications plans from other successful projects as a starting point.
<b>Constituent parts</b>	The budget and cash flow forecast will consist of a number of elements that will get broken down into ever smaller parts as the scheme develops. For example, the cost of windows, doors, roofs, foundations, etc.
<b>Contractor's compound</b>	The contractor will set up a secure and self-contained area as its base for the duration of the work. Site cabins will normally be provided for its staff, with office facilities and services such as a mess room, toilets and drying facilities for site workers. Access to the compound will be strictly controlled and no one will be allowed on site unless they have booked in at the site office. Any materials being delivered will be booked in at the site office and may be stored in the compound.
<b>Construction phase</b>	The period from the first ground breaking on site through to practical completion and the handover of the completed accommodation to the client.
<b>Consultation</b>	An essential element of the preconstruction phase. This should provide an opportunity for all interested parties within and beyond the school to contribute towards the development of the brief. The most successful consultations are open and transparent and seek as wide a range of views as possible, while managing the expectations of those being consulted. The client has ultimate responsibility for signing off the brief. Consultees must feel that they have been listened to, even if all their views and ideas are not reflected in the agreed brief.
<b>Decanting</b>	The process of relocating furniture, both fixed and loose equipment and other resources, out of old and into new accommodation. Decanting may be carried out by experienced, specialist removal firms and may involve a period of storage. Relocating furniture, equipment and resources usually provides an opportunity for disposing of old, unused or unwanted items, as the client prefers.
<b>Defects liability period</b>	After a building has been handed over, there is a 'guarantee' period, usually of a year, during which the contractor is responsible for putting right any defects that become apparent should work be found not to have reached the agreed standard. This does not cover normal wear and tear or any deliberate damage, which are the school's responsibility. Under some contracts, a proportion of the contract price is retained by the client until the end of this period and only handed over on completion of any remedial work that it is agreed is needed and is the contractor's responsibility.
<b>Design manager</b>	Appointed by the contractor to work with the designer (see below) once the overall design has been agreed. The design manager will go through the fine details of the design to make sure that the building will fully meet all the required technical standards by, for example, checking that appropriate building systems and materials are to be used. If there are problems with the supply of particular materials, the design manager will investigate and may recommend alternatives that will meet the same standards.



## GLOSSARY: JARGON BUSTER

Term	Meaning
<b>Designer (architect)</b>	Usually a qualified architect who has the responsibility for turning the brief into a building design. In practice, more than one architect will typically be involved in the design of a building of any significant size, acting under the leadership of a principal designer. The designer can only work from the brief provided, which makes getting it right so important. The design will usually develop in an incremental way through a series of meetings between the school's team and the contractor's team until an affordable final design is agreed. The contractor will expect the design to be signed off formally by the client before the contract is signed.
<b>Educational objectives</b>	Any school building scheme must have an agreed set of educational objectives that will be used to judge the design solutions offered. The objective could be as simple as providing additional primary school places to meet a predicted shortfall in an area. Or it could be a complex multi-phase scheme that results in the reorganisation and refurbishment of departments within a large secondary school, alongside the provision of some extra classrooms. There needs to be clear educational objectives in any scheme of any size as the basis for judging its success.
<b>EFA</b>	The Education Funding Agency. An executive arm of the Department for Education. It has a wide range of responsibilities but, in this context, allocates central government capital funding to projects in accordance with DfE priorities and criteria. It has responsibilities for school building design and has produced a number of 'baseline' designs as exemplars for new schools. It is responsible for a number of national and regional contractor frameworks and lets some contracts itself through these. Some projects will be allocated an EFA manager to oversee the use of its funding to ensure it meets relevant criteria laid down by the government.
<b>Enabling works</b>	It is sometimes necessary to carry out other building or demolition work before the main contract can begin. This might include creating new access points to the site, demolishing existing structures to clear the ground to create an access route or for a new building, or removing asbestos or other hazardous materials from a building that is to be refurbished or remodelled. Enabling works are often carried out by specialist subcontractors.
<b>Estimator</b>	A key member of the contractor's preconstruction team. As the design evolves, the estimator is responsible for keeping watch on its affordability and raising any concerns about possible cost overruns. The estimator will use their experience of the actual costs of previous schemes and market knowledge about trends in building prices to inform their advice about scheme costs. The actual cost of the scheme will not become clear until packages of work have been agreed and prices obtained from subcontractors but there should not be any major surprises at this stage if the estimator has done a good job.
<b>FF&amp;E</b>	This term is used to describe all the fixed and loose furniture and equipment to be provided as part of a building contract. It generally excludes any consumable items. The FF&E for any particular room will be set out in the room data sheet (see page 25) for that space. The RDS will also specify whether items are new or are existing items being relocated from elsewhere in the school. Installing fixed furniture and equipment is usually part of the building contractor's contract although it is likely to be subcontracted to a specialist firm. The generally accepted definition of the difference between fixed and loose equipment is that anything that would not fall out if the building was turned upside down is regarded as 'fixed'. Loose furniture may be ordered by the contractor or may be excluded from the building contract.
<b>Fire and Security strategy</b>	Ensuring the safety of all school users is a major responsibility for the leadership of any school. All schools have their own, tailored approach to dealing with fire and security matters but building projects may make these wholly or partly inappropriate while work is going on. Alternative arrangements may be needed while building work is going on and new arrangements may need to be in place before the new accommodation is occupied.

Term	Meaning
<b>Funder</b>	Funding for projects can come from a number of sources. These include the EFA, Local Authorities, Dioceses, National Lottery and the school's own resources. Some projects are funded from a single source, others by combining resources from a number of sources. Funders will normally expect to be involved in the preparation of the brief to ensure that any aspects of the project that they are funding meet their criteria. They may expect to be closely involved as the project progresses as part of the client role but, depending on the size of their financial contribution, may be content to let others act on their behalf.
<b>Handover</b>	The point at which the areas where the contractor has been working are handed over formally to the school. This is an important point in the process because it only occurs when the work has been finished and signed off as complete, subject to any agreed snagging items (see page 25) or other items that may still need finishing off. It is also important because the school can start using it. The school takes back the responsibility for insuring the accommodation from the contractor at handover.
<b>Health and Safety plan</b>	The school and the contractor will each have their own responsibilities for health and safety during the construction period. A joint risk assessment should be carried out by the school and contractor during the preconstruction period to make sure that nothing 'falls down the cracks' and that respective roles and responsibilities are clearly agreed and understood. Once work starts, the arrangements should be reviewed as part of every joint meeting to make sure that they are still fit for purpose. This will be particularly important in projects where work is to be undertaken in phases or is going on in occupied parts of the school. Student and staff safeguarding, in its broadest sense, is always going to be the school's main focus and the contractor has a clear duty to ensure that this is never compromised. It is, however, unrealistic to expect that simply having plans in place will automatically prevent any breaches in fire, health and safety or security occurring. All members of the school community need to be alert to possible hazards and know how to report them so they are addressed as quickly as possible. The contractor's staff will similarly be expected to be alert to the impact of their actions and to ensure that any incidents are reported and dealt with promptly.
<b>Health and Safety supervisor</b>	Willmott Dixon is proud of its Health and Safety record but this has only been achieved by having good systems in place and ensuring that everyone working on its sites is fully aware of their responsibilities to themselves and others. There will be a designated Health and Safety supervisor on the site to ensure that our high standards are maintained.
<b>Insurance</b>	The contractor will carry all appropriate insurances during the construction period. Copies of insurance documents will be available for inspection as required. A working site is the property of the contractor while construction is going on and will be insured as such. While work is going on, sites can only be accessed by school representatives with the express permission of site staff.
<b>Key site personnel</b>	The contractor will appoint a building manager with overall responsibility for all aspects of the project and who will be the school's main point of contact. The building manager will build an open and constructive relationship with the school, holding regular meetings, sometimes more than once a day where necessary. The communications plan will set out the protocols to be used to keep the school up to date on progress and to give them early warning of forthcoming work. The overall building manager will be supported by other specialist colleagues who may also be involved in liaison with the school. The number and role of the managerial staff deployed on a site will depend on the size and complexity of the project. They will be introduced to key school staff and details of their roles and responsibilities will be provided before any work starts.



## GLOSSARY: JARGON BUSTER

Term	Meaning
<b>Learning opportunities</b>	Building projects offer a wide range of cross-curricular educational possibilities for students of all ages. As a contractor with extensive experience of school projects, Willmott Dixon can offer many well developed ideas on how best to use a project to support learning in a relevant and effective way.
<b>Local Authority representatives</b>	More than 50% of English secondary schools are now Academies but Local Authorities are still responsible for the majority of primary schools in the country. This means that officers of the authority will often act as the client on projects, working in conjunction with the school's leadership team and governors. In the case of Academies, Local Authority officers may still be involved, particularly where the funding for the project is being channelled through the authority. The authority may still act as the client in these cases even though the building will be passed over to the Academy, usually at the end of the defects liability period.
<b>Mechanical and electrical ('M&amp;E') services/consultants</b>	Good, well designed and installed M&E systems have a crucial bearing on how well a building works. These systems include the heating, water, drainage, ventilation, lighting, power supplies, IT infrastructure, security systems, fire alarms and any other services that are needed to make the building function. Specialist consultants will be appointed as part of the design team to make sure that the internal environment matches the standards set out in the room data sheets (see below).
<b>New build</b>	The provision of a complete new structure where none existed before. This may be a whole new school, a new standalone block added to an existing school or the extension of an existing school building.
<b>Other consultants</b>	Every project will have a lead designer, whose role is set out above. The lead designer will be supported by a number of other specialist consultants covering disciplines such as civil engineering, structural engineering and M&E services. They may also require input from other specialists such as acoustic engineers, archaeologists, hydrologists, environmental consultants and landscape designers. It may also be appropriate on some projects to include an educational consultant who is familiar with tackling specific education issues through the design or remodelling of accommodation. The list of other consultants will vary from project to project, depending on the nature of the site and the size and complexity of the project.
<b>Practical completion</b>	The point at which the building is ready to be handed over to the school. A practical completion certificate is needed for this to happen. There may still be a small number of outstanding items to be resolved but it allows the building to be occupied and used by the school.
<b>Preconstruction manager</b>	The contractor's lead person in the run up to the start on site. The preconstruction manager will be responsible for ensuring that 'all the ducks are in a row' before work starts and there is a smooth beginning to activity on site. The preconstruction manager will spend a lot of time at the school in the run up to work starting to make sure that s/he understands the layout of the school and the site fully and will pass this information on to the site team. S/he will play a major role in developing site access plans that will work for both the school and the contractor. A lot of the work of the preconstruction manager will not be seen by the school but is critical to ensuring that the project starts on time and with all the necessary elements in place. This is a specialist role and once work starts the responsibility for managing the project will pass to the building manager.
<b>Preconstruction phase</b>	The phase is focussed on identifying and agreeing the educational objectives and outcomes that the project is expected to deliver. By the end of it, an agreed, affordable and deliverable set of proposals should be in place so that work can start on site.

Term	Meaning
<b>Project leader</b>	The school's nominated lead. This is generally a senior member of staff who has the time and seniority to act on behalf of the school on day to day matters. The school will normally set up its own internal project team to provide overall leadership but there should be an identified lead who then liaises with the contractor. This is important to ensure that there is consistency in the day to day interactions with the contractor. This individual should act as the sole conduit for all communications between school staff and the contractor's staff.
<b>Project team leader</b>	The contractor's nominated lead. This individual could come from one of a number of different professional backgrounds but will have overall responsibility for coordinating the work of the contractor's team and driving the project forward.
<b>Programme</b>	This will set out each stage of the scheme in great detail with key processes, dates and milestones identified leading up to the agreed completion date. The programme is normally presented in the form of a Gantt chart, which makes it easy to check the progress of the scheme. An example of a Gantt chart can be found in appendix at the end of this guide.
<b>Quantity surveyor</b>	The QS is responsible for making sure that the project stays within the available budget and achieves the best possible value for money, while ensuring that agreed quality standards are met. S/he manages the actual costs of the scheme once the design has been agreed and signed off and orders need to be placed with suppliers and subcontractors. The QS checks subcontractor and supplier invoices against actual work done before any payments are made.
<b>Refurbishment</b>	Minor works on existing accommodation. This will not usually involve any structural alterations but is intended to give a new lease of life to facilities that have become 'tired'. Typically, this may involve redecoration, new floor and ceiling finishes, updating electrical and ICT wiring, replacing old fixed furniture or some improvements to heating systems. It could include replacing old windows if the budget is sufficient.
<b>Reinstatement works</b>	The processes of restoring an area to its original state after building works have been completed. Creating access to areas where work is going to be carried out can require the removal of existing fences or other structures and may result in some damage to, for example, landscaping. Setting up a contractor's compound and car park may also result in physical damage to the site. Before work begins, photographs or video will be taken of the areas that are likely to be affected to ensure that any necessary reinstatement or remedial works return the affected areas to their original condition.
<b>Remodelling</b>	Major works to existing accommodation. In addition to the type of work identified above as 'refurbishment', there are likely to be structural alterations to reconfigure and, in some cases, change the use of rooms. Remodelling projects are often linked to new build projects on the same site when the new accommodation allows the school to reorganise the way its departments are organised. For example, the provision of a new science block may allow the existing laboratories to be remodelled so that they can be used by an entirely different department. Remodelling work in an occupied building can be challenging for both the school and the contractor as it will be necessary to maintain curriculum continuity and pupil safety without interfering with the completion of the agreed work.



## GLOSSARY: JARGON BUSTER

Term	Meaning
<b>Room data sheets (RDS)</b>	An essential tool for ensuring that there is complete understanding between the school and the contractor about the detailed requirements for every space included in a scheme. The RDS will generally include information such as the room dimensions, the number of people to be accommodated, the acoustic, heating, lighting and ventilation standards, internal finishes, requirements for specialist electrical, gas or drainage, the number of electrical and computer access points, details of any fixed furniture and any other specialist requirements. They are used at the end of the construction phase to check whether the new accommodation meets the agreed requirements and are usually contractually binding on both the school and the contractor. It is important that the school invests time in preparing RDSs as early as possible as it can be difficult and costly to make changes to the required standards post-contract signature. An example of a room data sheet is included in the appendix.
<b>Services engineers</b>	This group is responsible for making sure that all the mechanical, electrical and other services in the building are properly designed, installed and meet the requirements of the room data sheets.
<b>Snagging items</b>	At the very end of the construction period there will be a joint, detailed inspection of the completed works involving the contractor and the school prior to handover (see above). One of the purposes of this inspection is to identify any outstanding items that need attention by the contractor in order to bring all the accommodation up to the agreed standard. Any outstanding items are identified as snags and recorded and there will be a reinspection later to make sure they have been dealt with. Willmott Dixon always aims to have 'snag free' handovers by carrying out its own detailed inspection as each element of the project is completed.
<b>Site logistics</b>	The contractor will work with the school to identify the most effective solution to allow an operational school and a building site to coexist safely and successfully in a relatively small area. Any working construction site is likely to disrupt the normal pedestrian and traffic flows in the surrounding area. Working on operational school sites creates specific challenges because of the high number of pedestrian movements, staff vehicles, school buses, deliveries and parent vehicles that need to access the site on a daily basis. The pattern of the school day means that many of these movements come in two peaks at the beginning and end of the day. Many schools have significant problems with traffic movements on and around their site at the best of times which are only exacerbated by the need for contractors' and delivery vehicles to access the site. Contractors are experienced at working out how best to arrange a site to allow school life to continue as normally as possible while not impeding its ability to get on with the building work and will work with the school to minimise disruption. An example of a site logistics plan is included in the appendix.
<b>Stakeholder/ Stakeholder engagement</b>	The most successful projects ensure that all stakeholders have had an opportunity to input into the development of the agreed brief, are kept informed about progress and are allowed to develop a sense of ownership of the built solution. Deciding who and how to involve stakeholders will vary from project to project but Willmott Dixon's experience is that time invested at the start of a project with staff, students, governors, parents, the local community and others who will be using or affected by a project always pays dividends later. 'None of us is as clever as all of us' is a good maxim to apply to the stakeholder engagement process.

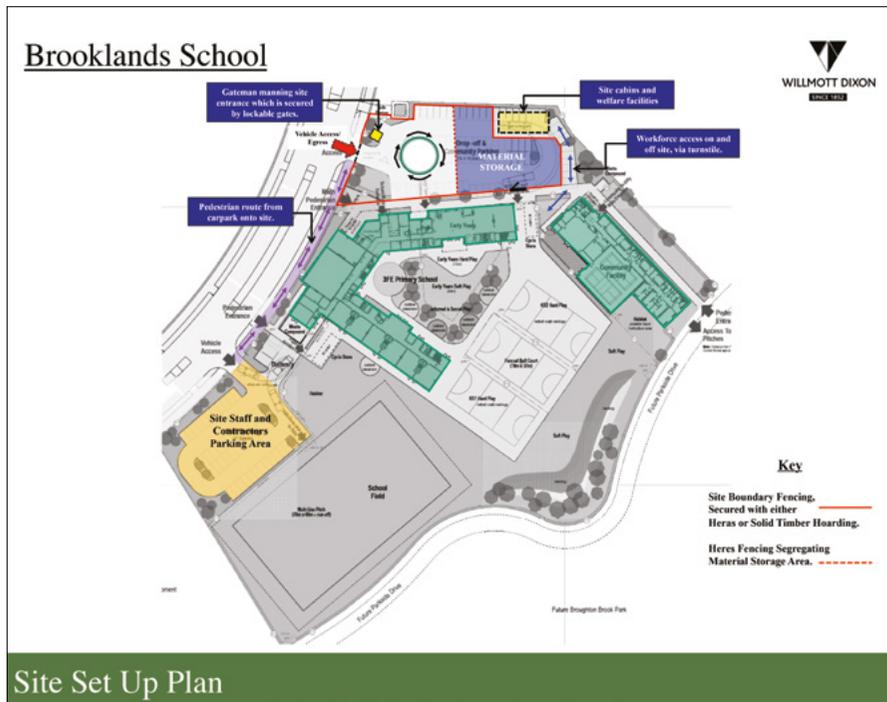
Term	Meaning
<b>Statutory approvals</b>	Any scheme has to go through a number of statutory approval processes. The most important is getting planning permission from the relevant Local Authority. The contractor and the designer will work closely with the Local Authority's planners from an early stage to ensure that any proposed designs comply with local standards around building heights, styles, finishes, materials used, location, and potential impact on the surrounding area or other specific requirements. Experience shows that early engagement with planners should help to prevent delays later when detailed plans are submitted for formal approval. The other major permission required is Building Regulations approval. This focusses on the details of the actual form and method of construction to ensure that it will be safe, complies with local requirements on energy usage, has disabled access that meets current standards, and complies with a range of other technical standards. Other specific approvals may be required such as, for example, listed building consent, if work is being carried on a listed structure.
<b>Structural engineer</b>	Responsible for producing the design of the 'skeleton' around which the building will be constructed. Building frames are most commonly built of steel, concrete or timber, with walls and roofs in a variety of materials. The underlying structure needs to be designed and built to support whatever materials and construction methodology is used to make a complete building.
<b>Subcontractors</b>	Firms like Willmott Dixon are usually described as 'managing contractors'. They are legally the 'main contractor' on a scheme but do not employ many trades people (e.g. electricians, plumbers, etc.) directly themselves. They focus on organising work into 'packages' that are then put out to tender for specialist, subcontracting firms. Typical packages might include doing all the foundation work, steelwork, brickwork, electrical work, plumbing, IT installation or painting. Willmott Dixon will generally invite known key firms with which it has worked successfully and safely before to tender for work packages. As a company, Willmott Dixon puts great importance on building solid, long term relationships with its subcontractors to build trust and ensure that work is completed to the required standards. It also tries, wherever possible, to use subcontractors and suppliers that are local to its sites to support the local economy and as part of its carbon reduction strategy.
<b>Temporary accommodation</b>	Sometimes it is impossible to carry out work on a school without bringing temporary classrooms or other accommodation to site, particularly when it involves the substantial refurbishment or remodelling of existing buildings. This is generally avoided if at all possible because of the disruption caused by moving in and out of temporary accommodation, and the increase in costs from having to hire and bring in temporary accommodation. This cost is typically measured against the additional costs that would be incurred if work has to be broken down into many phases or could only otherwise take place at, for example, weekends, holiday periods or during the evening to limit the potential disruption to learning. In most cases where temporary accommodation is used, it is the only option that allows the scheme to proceed in a timely, safe and cost effective manner.
<b>Temporary arrangements</b>	This usually refers to any temporary pedestrian or vehicle access arrangements that have to be put in place while work is going on. It may also refer to the need to re-timetable some parts of the school day, alter the normal break or lunchtime arrangements or change fire escape routes. The school will, of course, be consulted on every aspect of any proposed changes and will need to agree each and every adjustment to existing arrangements, however small or temporary.



## APPENDIX

### SITE LAYOUT PLAN

- A detailed plan will be agreed with the school that clearly shows how the site will operate during the construction phase.



### ROOM DATA SHEET

- A room data sheet will be prepared jointly and signed off by the contractor and the school for every space that is to be provided new, refurbished or remodelled. These are used to make sure that the contractor meets all its obligations and that the agreed standards are met.

Room No:	G01	Notes: Read in conjunction with A+G Architects drawings and specifications.	
Room name:	Main Classroom	Contract Heading:-	
Area:	60 sq m	Project Number:-	
Function:	Classroom		
Adjacencies:	G00 Lobby, G15 Corridor		
Occupancy:	30 children plus teaching staff (2)		
Critical Dims:	Length / Width (m)	Refer to drawing L1410 / 110	Min Height (m) 2.7m

General Room Data			
Floors:	Type:	Carpet to main classroom area. Non slip vinyl sheet to entrance floor, cloak and around sink	
	Finish:	PUR finish to vinyl	
	Slip resistance:	R-13	
Skirting:	Type:	SW / MDF	
	Finish:	Gloss paint. Skirting sealed to sheet vinyl flooring	
External walls:	Type:	Metsec; SFS. Internal lined with Gyproc Duraline and skim	
	Finish:	Diamond matt emulsion. Tiled splash back above sink worktop	
Partition types:	Between rooms	Metal stud with insulation to void	Acoustic Rating- 47 Rw (dB)
	Finish:	Diamond matt emulsion	
	To corridor:	Metal stud with insulation to void	Acoustic Rating- 40 Rw (dB)
Ceiling:	Type:	Suspended lay in grid ceiling system (See layout for)	
	Finish:	Natural finish of ceiling tile	
Internal doors:	Type/Number	1 No Veneer / Laminated finish door complete with vision panel	
	Width: mm	Security:	Acoustic:
	1010	lockable	10 Rw (dB)
External doors:	Type/Number	Polyester powder coated framed glazed door complete with manifestations	
	Width: mm	Height: mm	Security:
	1010	2550 with fanlight over	lockable with internal panic latch. No external key access
Windows:	Type/Number	Refer to drawing	
	sill height: mm	Head height: mm	Width: mm
	900	2550	1500

**Notes:**  
 Classroom benching and hat and coat hooks to cloak area. Half height wall to cloak area  
 Stainless steel inset sink complete with worktop and base units. Mini lever action taps  
 Ceramic tile splash back to wall at rear of sink and worktop  
 Interactive white board ( Refer to specific I.A.E. requirements, fixing height, etc.)  
 Worktop mounted on legs on external wall  
 2 No 2400 x 1200 pin boards  
 2 No 2400 x 1200 notice boards

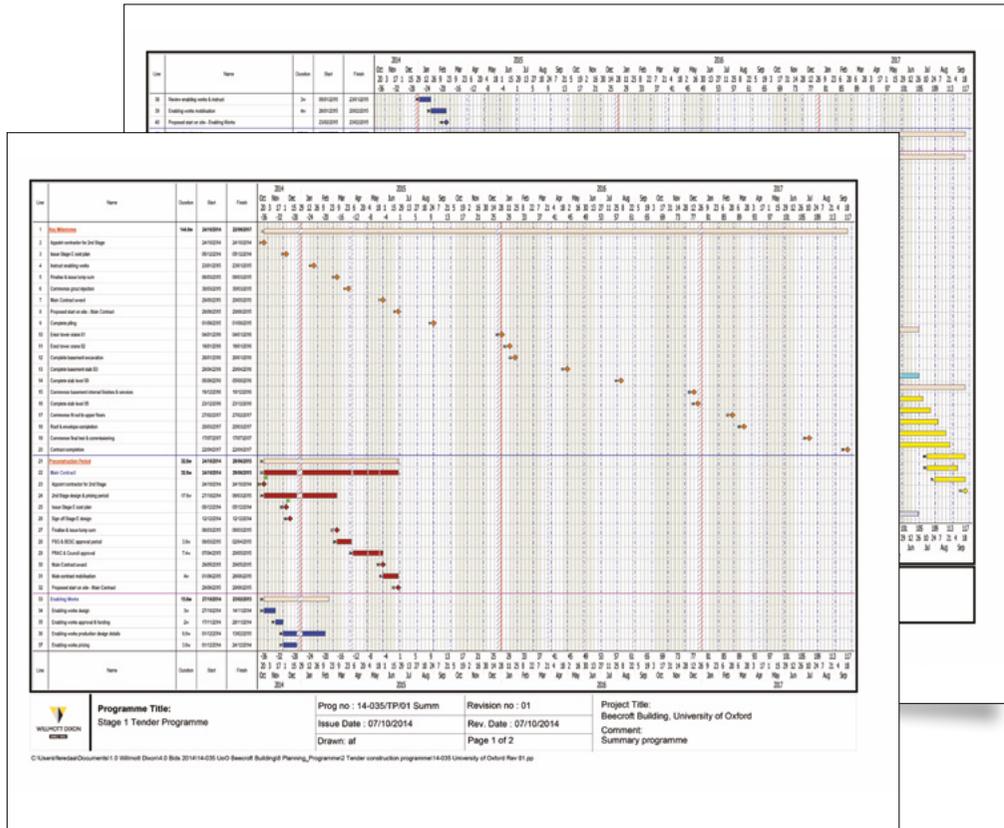
Client Sign Off:-  
 Date Agreed



# APPENDIX

## GANTT CHART

- Detailed programming of each element of the project is essential to ensure that actual progress can be checked easily and accurately against what was planned. They are used at site meetings to identify any potential areas of concern so that, if necessary, remedial action can be taken.



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