THE AT's POCKET BOOK

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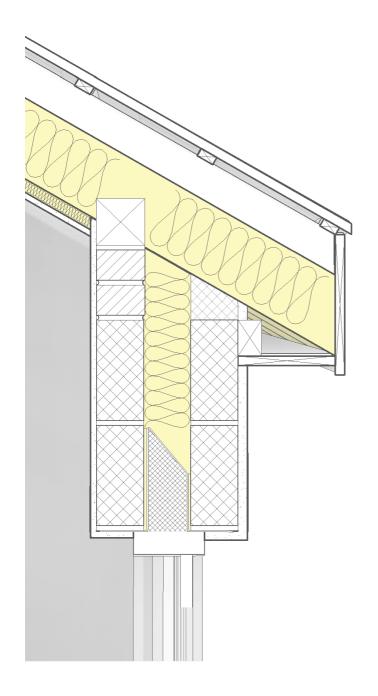


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INTRODUCTION

Architectural technology is where art meets reality, the following pocket book has been made as an easy reference guide to aid AT's throughout the RIBA Plan of Works.



STAGE 0 - STRATEGIC DEFINITION

INTRODUCTION

Stage 0 is strategic; the aims are to identify the clients' requirements to ensure that any proposals meet these outcomes. Stage 0 is for identifying project risks and budget; in some cases, carry out site surveys and planning appraisals to ensure the proposal can meet client expectations and requirements.

THE ROLE OF AT:

To provide solution-based technical feedback from previous projects. Investigate the client's requirements objectively to determine the best method to move the project forward.

SCOPE OF SERVICES

CLIENT REQUIREMENTS

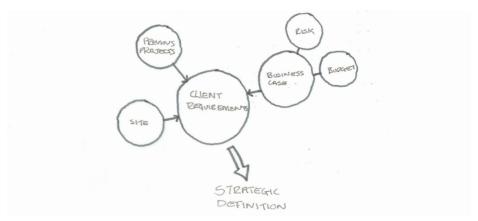
Consult with the client to understand the aims and ambitions of the proposal. Establish an outline brief for the project; the client can seek assistance from consultants and feedback from previous projects to help develop the brief.

PROJECT RISKS

Use an initial enquiry questionnaire to identify any potential project risks. Ensure that all other parties involved or previously involved are identified and notified.

PROJECT BUDGET

Carry out project cost analysis through the use of a construction budget calculator. Ensure all costings are up to date and consider the current economic climate and any likelihood of potential cost increases in both materials and labour. The budget must present costs for all professional fees, including consultants.



SITE APPRAISAL

Carry out site visits and surveys where needed to understand the site in its entirety. Desktop studies can be useful to identify many site factors. Explore the possibility of utilizing existing site elements, building components, materials and services. The proposal should consider using natural features such as orientation, elevation, vegetation and watercourses.

STRATEGIC APPRAISAL OF PLANNING CONSIDERATIONS

Consult the Local Planning Authority and government website to identify any potential planning policy issues. An external planning consultant is sometimes recommended or appointed by the client, to carry out a full planning appraisal.

CORE STATUTORY PROCESSES

PLANNING – Appraisal of planning considerations

CONCLUSION

Stage 0 is not to be seen just as a first step; it should be considered a means of testing the project's success after completion.

At this stage, the role of an AT is to identify the technical and scientific ideologies that would help steer the project in a successful manner.

STAGE 1 - PREPARATION & BRIEFING

INTRODUCTION

Stage 1 is the foundation of the process; it involves the development of the initial brief of the project. The team may consider previous work, surveying and more.

THE ROLE OF AT:

To consider the likely composition of the Design Team and discuss with the client, ensure that the teams are designated appropriately. Ensure Team is assembled before Stage 2 begins, establish or review project quality management procedures and Identify and produce a project execution plan. Establish a programme for design meetings.

SCOPE OF SERVICES

TEAM ASSEMBLY

Ensure that offices are available and of usable state. Defining a project structure, team roles and responsibilities.

PROJECT OBJECTIVES/BUSINESS CASE

Ensure that communication with the client is clear and frequent. Develop a justification within the clients needs for undertaking the project. You may do this through evaluating costs ,benefits and risks.

CORE STATUTORY PROCESSES

FEASIBILITY STUDIES - Building/Site surveys, Project Appraisal, Procurement Startegy

ROLES

LEAD DESIGNER

- Consider the likely composition of the Design Team and discuss with the client. Ensure that teams are designated appropriately. Keep client informed of this process while justifying choices.
- Ensure Team is assembled before Stage 2 begins
- Establish or review project quality management procedures
- Identify and draw out a project execution plan
- Discuss with relevant team members
- · Establish a programme for design meetings

CLIENT ADVISOR

Establish arrangements for communication between the clients representative, the principal designer, the project lead and the lead designer

PROJECT LEAD/PROJECT MANAGER

BUILDING STRATEGY

- Ensure that the client needs are met while following proper legislation and regulations
- · Advise the client on choice of procurement
- Advice the client if they have not appointed additional advisors, consultants or specialists

COORDINATING TEAMS

- Co-ordinating, monitoring and improving on the work of the Design teams
- Arranging meetings
- Preparing progress reports
- Seeking initial instructions from the client

STAGE 1 - PREPARATION & BRIEFING

CONSTRUCTION MANAGER

- Advising the development of the procurement route
- Site Inspections
- Preparing a construction programme
- · Communicating effectively with the Design team

FEASIBILITY AND STATUARY COMPLIANCES

- Making sure plans adhere to regulations
- Ensuring Construction teams adhere to regulations

PRINCIPAL DESIGNER

MANAGING DESIGN TEAMS

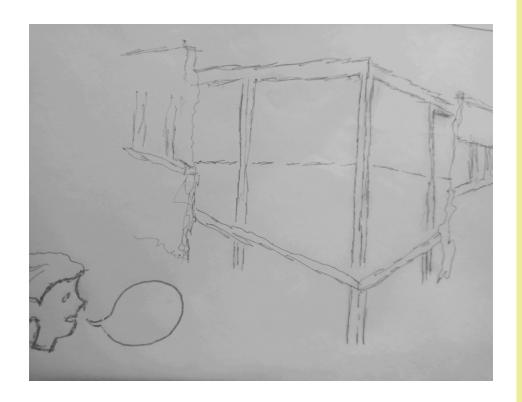
- Ensure that teams have access to proper facilities
- Ensure that teams have appropriate skills and qualifications
- Pre-construction health and safety
- Has a responsibility for co-ordination of health and safety during the pre-construction phase.
- Use influence on design to inform health and safety precautions
- Legislative obligations to client
- Ensure a CDM co-ordinator is appointed
- · Make the client aware of the code of conduct

PROJECT RISKS

Building survey, check the history of the site for contamination or the presence of hazardous substances, geological problems, underground services etc.

PROJECT BUDGET

- Assessment of projected income and expenses
- Comparison with previous similar Projects
- Analysis of Project Budget



SITE APPRAISALS

- Desktop Study
- Site Context
- Appraisals of Hazardous substances
- Consideration of local planning authorities

CONCLUSION

Stage 01 is the basic setup of the building, it is the beginning stage of the process and is more for establishing an action plan for the rest of the project as well as thorough analysis into the site and possible risks and rewards of carrying out the project. scientific ideologies that would help steer the project in a successful manner.

STAGE 2 - CONCEPT DESIGN

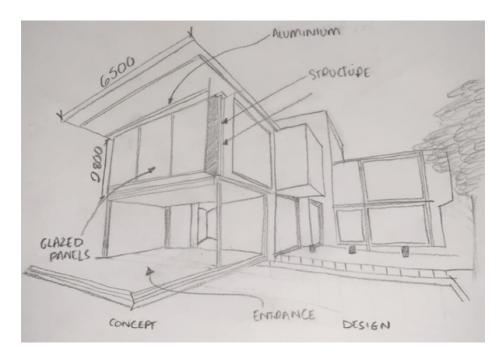
INTRODUCTION

Stage 2 aims to deliver the correct vision of the project, making sure that it is following the correct route decided of the project at initial stages. (including brief and budget). At this stage having provided the correct detail will help the project to run smoothly, however having too less of a detail will not be able to help the project in the next stage. To make sure the project is in the correct running order emphasis from design team and specialist consultant (Strategic Engineering – building services, civil and structural engineering) should always be on the project to make sure the team approves any new or old decisions. Further changes made to cost plan should also be proposed on the final Project Budget.

Specific details are not required at this stage, as this will follow into other stages however, having some aspects of particular elements will aid into the following parts. At this stage, no decision or design concept is correct, as this stage continues to try and trial approaches for a strong Architectural Concept for stage 3. At stage 2 a pre-application Planning Advice can be taken for the project. Focus on Spatial Requirements, how the building will pan out to be externally, according to the client's vision and landscape should all be decided and finalised.

THE ROLE OF AT:

To provide some detailed structure of the project including the clients vision of the project with brief or sketches of floorplans, elevations and landscape layouts. Including cost and time targets.



SCOPE OF SERVICES

ARCHITECTURAL CONCEPT & STRATEGIC ENGINEERING

When the outline design of the project and design is decided, it requires that the Architectural Technologists deal with the real issues of form and bulk, scale and mass and the generic appearance of a building within its surrounding urban context, resolving and capturing the principles of the scheme.

COST PLAN

When the client's vision of the project is clear, review of a cost plan is required by the Architectural Technologist. Preparation of the construction cost, changes compared to the initial cost plan and providing information to the contractor should all be approved and completed.

STAGE 2 - CONCEPT DESIGN

PROJECT STRATERGIES

This will allow the Architectural Technologists to coordinate improvements into the development of the design allowing clear instructions to be passed within the team for an effective design process.

OUTLINE SPECIFICATIONS

Specifications have to be decided at stage 2 and 3 by the Architectural Technologist so they are able to be passed on within the design and construction team. objectives are stated, a good design is sketched, and time and cost measures have been stated in the project brief.

DESIGN REVIEWS

Architectural technologists will have to explore all design options/ proposals that could meet the requirements of the design brief and develop them into Concept Design including outline proposals for structural design, services systems, outline specifications, and preliminary cost plan along with environmental, energy, ecology, access or other Project Strategies.

DESIGN PROGRAMME

A detailed Design Programme should be produced by the Architectural Technologist to include information requirements by the client and guide the process into an accurate direction.

OBTAIN PRE-APPLICATION PLANNING ADVICE

Architectural technologists should always advice clients to take a pre-application planning advice for the project. This is beneficial as it will allow the person to make new decisions according to the advice that has been provided.

AGREE ROUTE TO BUILDING REGULATIONS COMPLIANCE

Architectural technologist should be looking at building regulations from the initial stage continuing to stage 2. As the design develops it is important to make sure that the design development is in compliance with the building regulations.

CONCLUSION

Stage 2 is the assemble of the project brief and ideas, all work just be finalized, but some minor changes can be made at this point. As this stage, the role of an AT is to identify the details and drawings, as this would help get a clear vision of where the design/construction project is heading.

STAGE 3 - SPATIAL COORDINATION

INTRODUCTION

Stage 3, is testing and validating the information and design from Stage 2. Stage 3 ensures that the concept design from Stage 2 is spatially coordinated before detailed information is produced.

THE ROLE OF AT:

To review and update the sustainability strategy, ensure the conceptual design and the information received from other consultants is interpolated within the scheme. Identify materials, systems and products. Relate these to performance and their use in the architectural design

SCOPE OF SERVICES

DESIGN STUDIES

Ensure that assumptions made at Stage 2 correlate with information supplied by all consultants.

ENGINEERING ANALYSIS

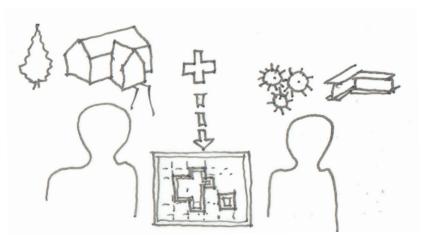
Ensure that assumptions made at Stage 2 correlate with information supplied by all consultants.

COST EXERCISES

Test the design against the project budget to ensure that any changes that need to be made are not detrimental to the overall project budget. The development of the outline specification will now also have to be addressed and associated costs reviewed.

ARCHITECTURAL CONCEPT

Address the architectural concept regarding information received from all consultants and ensure that the original design remains substantially the same but addresses the changes needed.



SPATIAL COORDINATION

Spaces must be adjusted as required to comply with others' information and any changes in legislation.

PROJECT STRATEGIES

Update the project strategy; this will help to inform the design programme and ensure that the right tasks are undertaken at the correct time.

OUTLINE SPECIFICATION

Outline specification is to be created and amended as needed when the design is tested against the cost plan, and it aligns with the project budget.

CORE STATUTORY PROCESSES

BUILDING REGULATIONS – Review design against Building Regulations

PLANNING APPLICATION – Prepare and submit Planning Application

CONCLUSION

Stage 3 is about testing the architectural design concept against information supplied by others and current legislation. The stage ensures that the architectural concept aligns with the outline specification, allowing the project to move forward and be in line with the overall project budget.

STAGE 4 - TECHNICAL DESIGN

INTRODUCTION

Stage 4 aims to deliver preparation work for the next stage which involves manufacturing and construction. Therefore, stage 4 heavily relies on procurement strategies. The procurement strategies decide who takes responsibility of Manufacturing Information and Construction Information.

When the building system is designed it could be influenced because of the Procurement Strategy. As specialist subcontractors will need to design Building Systems after the Building Contract is honoured. Additionally, the structure of the project team could also be influenced under the Procurement Strategy. As the design Team (Architectural Technologists) may be noted to the construction team. Through this it should be decided that the Architectural Technologist should head the design team and review the design work. Furthermore, Building Regulation Application should be considered at stage 4 before the work officially start on site. Through the procurement Strategies update on cost plan, bill of quantities or pricing schedules should all be looked through thoroughly. Lastly, the building contract has to be signed and sealed at this point, as this will allow the commencement of the next stage.

THE ROLE OF AT:

Architectural Technologists should constantly be reviewing design work before the work is proceeded to the official manufacturing and construction work on site. Any problems made here, will be easier to fix rather than the site. Within stage 4, regardless of the procurement strategy. It is important to review the Responsibility Matrix before stage 4 starts, therefore it would be easier to understand who will produce the manufacturing. Information and construction information and whether the design team will produce Prescriptive Information or Descriptive Information.

SCOPE OF SERVICES

COORDINATE DESIGN TEAM BUILDING SYSTEMS INFORMATION Design activities should be undertaken by specialists (Architectural Technologists) or subcontractors, due to this design work prepared should be developed at a very good level.

INTEGRATE SPECIALIST SUBCONTRACTOR BUILDING SYSTEMS INFORMATION

On a traditional project, specialist subcontractors will design Building System after the Building Contract has been awarded.

SUBMIT BUILDING REGULATIONS APPLICATION

Preparing the application for building regulation approval has to be completed by the Architectural Technologist. The Building Regulations Application should be submitted with full plans, with relevant documents and payment.

DISCHARGE PRE-COMMENCMENT PLANNING CONDITIONS

During stage 4 before work commences on site it will be necessary to discharge any pre commencement planning conditions.

SUBMIT FORM F10 TO HSE IF APPLICABLE

Information for inconclusion in preconstruction health and safety information to be passed to the principal designer, F10 forms should be handed into HSE website.

CONCLUSION

All design work required to manufacture and construct the building is undertake in stage 4, regardless of the procurement strategy. It is important to review the Responsibility Matrix before stage 4 starts, therefore it would be easier to understand who will produce the manufacturing. Information and construction information and whether the design team will produce Prescriptive Information or Descriptive Information.

STAGE 5 - MANUFACTURING & CONSTRUCTION

INTRODUCTION

Stage 5 aims to deliver the manufacturing and construction of a project agreed through the Building Contract. It discusses how materials and equipment will be getting in and out of site efficiently. Important programmes are set in stage 5 making sure that the construction process is running smoothly. Such as: site queries, Construction Quality, inspecting works and producing Defects List.

In stage 5 the issue of practical completion certificate is set out, to show that the building is ready to be handed over. Many tasks however still have to be completed before and after the certificate handover, to make sure everything is in working order. At this stage it is better to have a project manager allocating task and making sure everything is running smoothly and no task are left incomplete, this will aid with the next 6 stage. However, the main focus remains to see the performance of the building rather than completing construction work.

Final stages of stage 5 will include the preparations of stage 6 (handover). Building Manual, Verified Construction Information and Asset Information all have to be completed and ready to be handed over in the final stages. These documents will allow the client to receive the best information, effective performance and management of their new property.

THE ROLE OF AT:

To make sure that all drawings and any additional sheets for specific tasks are completed so that stage 5 – manufacturing and construction process runs smoothly.

SCOPE OF SERVICES

SITE LOGISTICS

Visits of Architectural Technologists to the site will allow to observe and comment on the contractors site supervision, and how the site is being handled. With materials and equipment's being taken in and out of the site in an orderly manner.

MAUFACTURE BUILDING SYSTEMS

The manufactured building system is drawn up in accordance with the construction programme and Building Contract.

CONSTRUCTION PROGRAMME

The Architectural Technologist has to check whether the contractor is working according to the construction programme, which was set at the initial stages, and then report back to the client. Working accordingly to the Construction Programme set, it will allow the project to be complete within sufficient time.

CONSTRUCTION QUALITY

When Site Logistics are set, it is very important to keep reporting on the Construction Quality for inspections and monitoring work progress. The design team such as Architectural Technologist will depend on procurement strategy, on how the client decides to review Construction Quality (progress).

COMMISSIONING OF BUILDING

Architectural Technologist have to review the detailed commissioning programme and Plan for Use Strategy. They will have to establish their responsibility towards contributors and the non-technical user guide.

BUILDING MANUAL

Towards the end of stage 5 Architectural Technologists have to contact the contractor and make sure that commission of building is complete, and Building Manual is available before the building is handed in (understandable for client users)

STAGE 5 - MANUFACTURING & CONSTRUCTION

CARRY OUT CONSTRUCTION PHASE PLAN

The construction phase plan will mostly be constructed by the construction team. All accordance and guidance of contractor and Architectural Technologist.

COMPLY WITH PLANNING CONDITIONS

Most decision will have been set at this point as the next stage is the handover, therefore, complying by the planning condition is important, it should never be over-ruled, and works should continue within the planning policies provided.

CONCLUSION

Stage 5 is all about construction and manufacturing, as it is mentioned in the name. All work should be carried out by the construction team should be in accordance with the design team and client. All work should be coming to its end preparing for the next stage which is the handover of the building.



STAGE 6 - HANDOVER

INTRODUCTION

Stage 6, is the handing over of the project to the client, with aftercare initiated and the building contract concluded. The final certificate will be issued approximately 12 months after practical completion, which completes all parties' involvement. A project performance session should be facilitated to share experiences for the benefit of future projects.

THE ROLE OF AT:

To carry out visual site inspections and comment on the resolution of defects related to the architectural design and issue site reports to the client. Ensure that all faults are recorded and a solution to rectify is in place.

SCOPE OF SERVICES

PLAN FOR USE STRATEGY

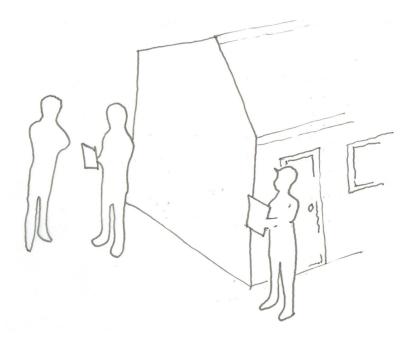
Ensure that the occupant can utilise the building to its full potential. Things to be considered are; energy performance certificates, building manual, records of trials and recommendations, light touch post-occupancy evaluation feedback.

PROJECT PERFORMANCE REVIEW

Ensure that a project performance review is carried out so that the project team can share experiences to benefit future projects.

POST OCCUPANCY EVALUATION

Post occupancy evaluation to take place once any seasonal commissioning has been completed. A complete understanding of how the building is performing needs to be recorded. This information must be analysed to ensure it aligns with the original presumptions; if not, why not.



CORE STATUTORY PROCESSES

PLANNING CONDITIONS – Comply with Planning Conditions as required

CONCLUSION

Stage 6 begins with handing the building over to the client and ensuring that the aftercare elements are initiated, and concluding the building contract. Post-occupancy evaluation recording takes place and ensures that sufficient information has given for the correct operation and use of the building and it's associated systems.

STAGE 7 - USE

INTRODUCTION

Stage 7, many projects may opt not to cover Stage 7 duties; however, both the design and construction teams may be interested in receiving ongoing feedback to understand how to improve the performance of future projects.

THE ROLE OF AT:

To carry out Post Occupancy Evaluations along with ensuring that the building is performing as prescribed. Amending the Building manual and Asset information if changes need to be made to address any issues, problems in performance, and amendments made to the project.

SCOPE OF SERVICES

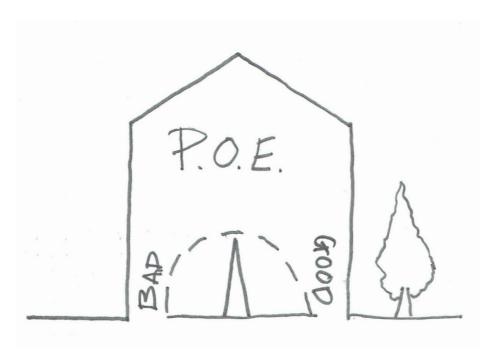
IMPLEMENT FACILITIES MANAGEMENT & ASSET MANAGEMENT Ensure that the correct level of understanding and support has been given to use the building and its systems properly.

POST OCCUPANCY EVALUATION

Evaluate and understand how the building is performing whilst in use. This information must be analysed to ensure it aligns with the original presumptions; if not, why not.

PROJECT & SUSTAINABILITY OUTCOMES

The primary aim is to ensure that the project parameters set in Stage 1 are correctly implemented during the use of the building and that the sustainable strategy has been implemented as intended.



CORE STATUTORY PROCESSES

PLANNING CONDITIONS – Comply with Planning Conditions as required

CONCLUSION

Stage 7 is understanding how the building performs and whether it meets and complies with the parameters put in place during Stage 1. Post Occupancy Evaluations are taken to understand the building's performance whilst in use; although not used on all projects, it offers a wealth of information for future projects for both the design and construction teams.

STAGE 7 - CIRCULAR ECONOMY

INTRODUCTION

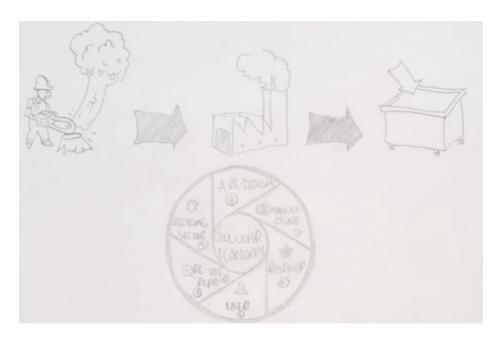
Stage 8 aims to deliver Circular Economy through keeping materials and resources in use and retaining their value, rather than consuming and disposing them off. Through this process all products will be designed to live longer, to be reused, remanufactured and resembled instead of being discarded.

It is a better option to use materials originally that are made from biological materials without any toxic chemicals mixed into them so that they are safely returned to the biosphere. Therefore, when materials are initially designed, considerations on how these materials will return back to its roots to be reused again should always be regarded in the beginning stages. In Stage 8 Circular Economy suggests replacing the end-of-life concept with restoration, through the use of renewable energy, eliminating the use of toxic chemicals and elimination of waste through designed materials, which do not follow the reusable application.

Within the circular economy stage lies two types of distinctive circles, Biological Materials and Technical Materials. Each process has a different way of working therefore working accordingly will benefit with recycling the materials in the correct way.

THE ROLE OF AT:

To make sure that within early design and concept stage of RIBA, ideas and proposals on materials and products are given extra time, importance and exploration for the purpose of the project. This will allow easier distribution, to separate materials that will be present at end-of-life recycling into Biological Material and Technical Material diagrams for the Circular Economy Stage 8.



SCOPE OF SERVICES

REUSING BUILDINGS AND COMPONENTS

Once all the options for refurbishing the current building have been considered and the building is going to be demolished, then the next question should be: can the components be reused?

DESIGNING-OUT WASTE

Prioritizing the refit and refurbishment of existing buildings, as this preserves the most resource-intensive elements of the building. Using reclaimed materials and remanufactured products along with leaner designs will reduce the demand for raw materials.

DESIGN FOR ADAPTABILITY

Buildings can be retained for longer. Designs have to consider how the building could be converted to other uses and how that affects the structural design and internal reconfiguration.

STAGE 7 - CIRCULAR ECONOMY

DESIGN FOR DISASSEMBLY

Reuse components, just like buildings can be important factors which value them more because of site and retain their value longer, equally, materials will have more value if they can be extracted, turning buildings into 'materials banks'.

BIOLOGICAL MATERIALS AND TECHNICAL MATERIALS

When selecting building materials and products, the constituent elements have to be known and they have to be split into biological and technical materials to allow them to be either returned to the biosphere or kept in an industrial loop of recycling or reuse. Technical materials that are difficult to reclaim or recycle at end-of-life can be replaced however, with biological materials that can simply be returned to the biosphere.

CONCLUSION

Stage 5 mentions everything about Circular Economy and how we can give everything back to the original owner, so materials are reused and recycled again for the next project. Circular Economy does not only mean using fewer resources, but also states to create and retain value in buildings and their components. Through this we are able to provide positive legacy for the future generation. Also, Architectural Technologists and designers can deliberately design for a short lifetime and ensure that the elements of the building can be readily disassembled and reused at end-of-life. There is even the potential to design buildings that can be demounted and reassembled in new locations and reconfigured for new uses.

USEFUL LINKS FOR RESORCES

STAGE 0

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Planning - www.planningportal.co.uk, www.gov.uk

STAGE 1

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Planning - www.planningportal.co.uk, www.gov.uk

STAGE 2

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Building Regulation - Approved Documents - GOV.UK (www.gov.uk)

STAGE 3

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Building Regulation - Approved Documents - GOV.UK (www.gov.uk)

Planning - www.planningportal.co.uk, www.gov.uk

STAGE 4

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Building Regulation - Approved Documents - GOV.UK (www.gov.uk)

HSE Website - https://www.hse.gov.uk/forms/notification/f10.htm

Stage 5

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Building Regulation - Approved Documents - GOV.UK (www.gov.uk)

Stage 6

RIBA Job Book, Forms & Checklists - https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-job-book-10th-edition-checklists-and-forms

Building Regulation - Approved Documents - GOV.UK (www.gov.uk)

Planning - www.planningportal.co.uk, www.gov.uk

Stage 7

RIBA Post Occupancy Evaluation and Building Performance

Evaluation Primer - ribapoebpeprimerpdf.pdf (architecture.com)

Stage 8

ACan Youtube

THE AT'S POCKET BOOK

A resource for guidng Architectural Technologists through the RIBA Plan of Works.

This book covers all of the current stages within the Plan of Work. An additional stage has also been added; Stage 8 - Circular Economy.