GUPP: Upgrading skills for EU Greener Public Procurements in Construction Works

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IO2. Development of the GUPP capacity building programme

IO LEADER: TUS

IO2 Learners' Handbook

Technological University of the Shannon: Midlands Midwest

Ollscoil Teicneolaíochta na Sionainne:
Lár Tíre Iarthar Láir

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Glossary

Award Criteria: Award criteria are the criteria on which the contracting authority will compare offers and base its award. EU procurement rules require contracts to be awarded on the basis of the "most economically advantageous tender". Relevant environmental criteria can be inserted either as a benchmark to compare green offers with each other (in the case where the technical specifications define the contract as being green) or as a way of introducing an environmental element and giving it a certain weighting.

Green Public Procurement: Green Public Procurement is a process where public authorities seek to source goods, services or works with a reduced environmental impact. The appropriateness of including environmental measures in public procurement projects will vary from contract to contract and is primarily a matter for individual contracting authorities

Public procurement (PP): Public Procurement represents the process by which contracting authorities (for example, local authorities) acquire goods and services from the market.

Selection criteria: Selection criteria is a set of criteria which operators must meet in order to be eligible for tender submission or evaluation.

Level(s): EU Level(s) is a framework and methodology that uses lifecycle thinking for building design (cradle to cradle) and provides indicators to measure impacts across carbon, materials, water, health and comfort, climate change.

Life Cycle Costing (LCC) is a technique used to estimate the total costs that are linked with a purchase. It considers not only the costs of buying a product, but also its running costs (energy, maintenance) and the disposal of it. This is often also referred to as Total Cost of Ownership (TCO). LCC can also take account of environmental externalities ("Whole LCC"). A more detailed definition of LCC and related information can be found at: ec.europa.eu/environment/gpp/pdf/toolkit/module1_factsheet_lcc.pdf.

Value for Money: Value for money is not about securing the lowest initial price, it is defined as the optimum combination of whole-life costs and quality to meet the user's requirement.

Whole Life Carbon: WLC is made up of the footprint of the operational (energy) and embodied carbon of buildings based on the lifecycle stages defined in EN 15978 (Sustainability of construction works, Assessment of environmental performance of buildings).

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Acronyms

CO$_2$eq Carbon dioxide equivalent emissions

DPER Department of Public Expenditure and Reform (Ireland)

GHG Greenhouse gases

LCA Life Cycle Assessment/Analysis

LCC Life-Cycle Costing

MEAT Most Economically Advantageous Tender

OGP Office of Government Procurement (Ireland)

S.I. Statutory Instrument

TCO Total Cost of Ownership

WLC Whole Life Carbon

1. Introduction

Welcome to the GUPP capacity building programme. This learner handbook is designed to give you all the information that you will need to complete the course successfully. It also provides links to further information that you may find useful when working in Green Public Procurement.

The courses is aimed at those working in Public Authorities, contracting authorities in local, regional, or national level, including public procurement staff, to key stakeholders representing the construction sector, policy makers, social partners and entities involved in procurement processes, as well as education's sector stakeholders, including training and adult learning providers.

The aims of this course are to:

➢ Provide learners with up-to-date knowledge and advanced aspects of GPP in construction works
➢ Enrich the broader picture of sustainable development to which GPP can significantly contribute.

Every year public authorities/municipalities in the EU spend around 14% of GDP on Public Procurement (PP), which amounts to more than EUR 1.9 trillion. To this end, 'Greening' public procurements is among the key factors that stimulate the transition to a resource efficiency and green growth, as it is strongly highlighted in the recently launched EU Green Deal. Especially for construction works, public sector is a key source of demand. Considering that the construction sector is one of the most resource-intensive sectors, Green Public Procurement (GPP) in the sector is a key driver for works with limited environmental impact, as well as a major contributor to reaching the EU environmental, sustainability and energy efficiency targets. Nevertheless, EU countries face many obstacles in implementing GPP policies, ranging from lack of information, training, and knowledge for establishing criteria and standards eligible with GPP, along with inadequate capacity building of the PP workforce and limited knowledge transfer between practitioners and the educational sector.

The GUPP project aims to have effective impact on the construction sector, by responding to current, emerging and growing needs of the sector for accelerating transition to a resource efficient and circular economy, towards EU's energy and environmental goals. In parallel, with view to the training course, the expected impact is to enhance the education's sector capacity building in addressing the above mentioned challenges, by integrating innovative learning tools and resources and facilitating the supply of high quality learning opportunities for adults, and providing online/blended flexible learning offers tailored to the learning needs of the construction industry.

## 2. GUPP Green Public Procurement in Construction Programme

This course will give you an idea of the drivers behind Green Public Procurement (GPP), as well as the social, economic and environmental benefits. It will take you through effective ways of applying GPP criteria in tenders, and go through some tools and case studies which can support effective GPP implementation. It will help you to think about the ways in which you currently procure and any changes which you can make in the ways you carry out this procurement.

 "Circular public procurement is an approach to greening procurement which recognises the role that public authorities can play in supporting the transition towards a circular economy. Circular procurement can be defined as the process by which public authorities purchase works, goods or services that seek to contribute to closed energy and material loops within supply chains, whilst minimising, and in the best case avoiding, negative environmental impacts and waste creation across their whole life cycle."[1]

This course will introduce you to a variety of ideas which are important in the practicing of GPP and particularly directed at local authorities working in the field of construction. It intends to provide a comprehensive introduction to the Green Public Procurement (GPP) process to incentivise and support local authority staff to utilise tools, coordinate information and resources, and verify the appropriate and relevant decision making in the GPP process.

This Learners Handbook will take you through the various stages of the Green Public Procurement process.

- **Introduce** Circular Economy and GPP
- **Presen**t EU and National GPP policies and legislation
- Circular Economy and GPP in **context**
- **Pre-procurement** (1. Planning + prioritisation; 2. Needs assessment; 3. Market engagement)
- **Procurement** (4. Include GPP criteria in tender; 5. Evaluate and verify GPP criteria)
- **Post-Procurement** (6. Ensure contract terms include GPP commitments; 7. Monitor + improve GPP performance)

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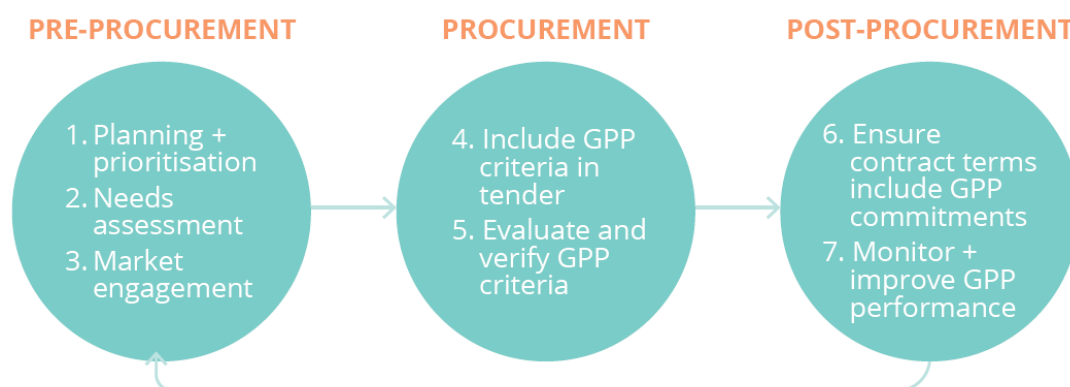
[1] Tudor, T and Dutra, JCC (2021) *The Routledge Handbook of Waste, Resources and the Circular Economy.* Routledge ISBN: 987 0 367 36464-9 ISBN: 978 0 429 34634-7

3. Tips for Using the Learners Handbook

It will be helpful if you are familiar with the principal parts of the Learners Handbook before starting the course.

We recommend the following:

- Work through the learning units in order (in sequence), as you need to learn some things in one part, before you start the next part.
- Read the learning material before class, this is known as the flipped classroom approach to learning. The class time can then enhance interactive discussion and problem-solving activities facilitated by the trainers and emphasise deeper learning.
- Complete the activities and tasks as you go along
- Take note of key points and summaries. These are designed to help you to remember important information.
- A Glossary and list of abbreviations is provided at the start of the Handbook. You can use these to check on terms you are not familiar with.

If something is unclear make a note of it, so that you can discuss it with your trainer in the class or use the discussion forum on the e-learning platform. The course is designed in this way to help you as much as possible.

Purpose of the Learner's Handbook

The Learners Handbook will outline the heading for each learning unit, clearly demonstrate the learning outcomes or objectives, list the topics to be covered and the timings of delivery for each learning unit. Directions are provided to the learners as how to complete the activities and how they will be assessed, with a breakdown of assessments, exercises and various activities to be completed by the learners. Due to the varied experiences and having mixed professionals participating, learners will interact and respond differently to the information delivered, therefore some exercises may take longer or shorter than the recommended times allocated.

The course is broken up into a number of 'activities' designed to engage you in the learning. Activities include PowerPoint presentations, videos, practical demonstrations, online assessments, discussion activities and other exercises that can be either individual or group work. These will be discussed in greater detail below. Self-study is also an important component of this course as this learning content prepares you for the next learning unit (flipped classroom approach). Resources are in the form of reading or visual learning content. Additional and further resources are also provided usually in the form of links to specific websites available in the PowerPoint presentations.

Activities may be assessed for certification purposes. Learners can be assessed individually or as part of a group. In group assessment there is an individual assessment component so learners cannot 'opt out' of the exercise. Learners must be informed prior to any assessment activity that they are going to be assessed.

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Structure of Activities

As mentioned, the delivery of the course consists of a series of activities. Icons have been developed for the course to assist you to quickly identify the purpose of the activity.

The PowerPoint presentations will use these icons to visually prompt what is required of you. Below is an explanation of some of the more commonly used icons which denote a type of activity. (all may not be used in your course.)

Presentation

PowerPoint slides to be presented or class given formal instruction and information. These presentations may include some class/group discussions.

Teamwork

The teamwork graphic indicates that at this point the group will work together to produce a single piece of work, which could include a poster, presentation or some other tasks as directed by the trainer.

Group Work

Presentation graphic indicates that the **group leader must present the findings of the group** to the class and optionally respond to Q & A from the floor or findings recorded on a flipchart by the trainer.

Videos

Video icon indicates that a video is to be shown, and learners are asked to take notes which will lead on to other activities

Activity

The Activity icon indicates that the instructor must bring the group to a practical activity or show them in a practical manner a key concept as part of the underlying theory. Learners actively work on an action to provide works for assessment.
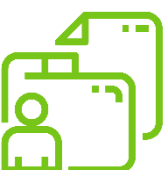
Assessment

This icon indicates that there will be an assessment. The assessment may evaluate a group exercise, multi-choice or short answer type questions which will be distributed to the learners. Generally, assignments will be submitted to the trainer immediately after completion. As this is an accredited course the trainer must retain all completed worksheets and assignments to demonstrate to external examiners that an assessment was carried out. To aid supporting documentation photographs of posters and presentations will be taken or online work is to be provided and recorded..

Video, PowerPoint presentation and Demonstrations are considered Activities and from these activities are a series of exercises. These exercises may be individual, or group based. Whether group or individual a number of 'tasks' must be completed. The diagram below shows that these tasks can be PMI, TPS, Poster work, Quizzes, Self-Study, Teamwork or Group discussion.

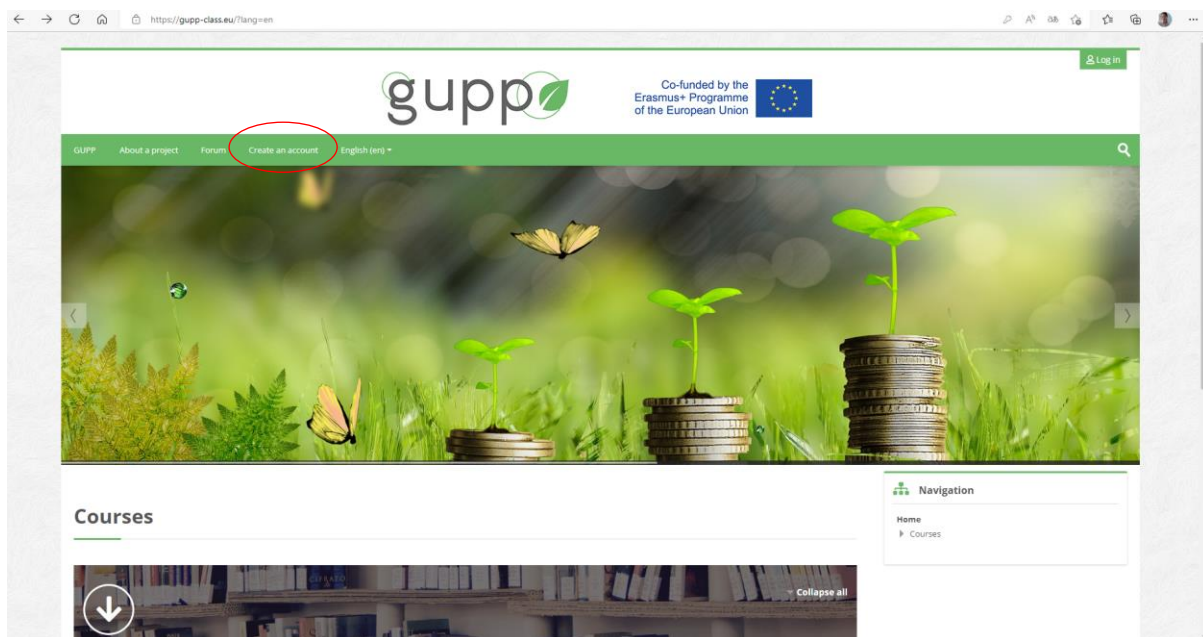The diagram below demonstrates how an 'Activity' relates to 'Tasks'.
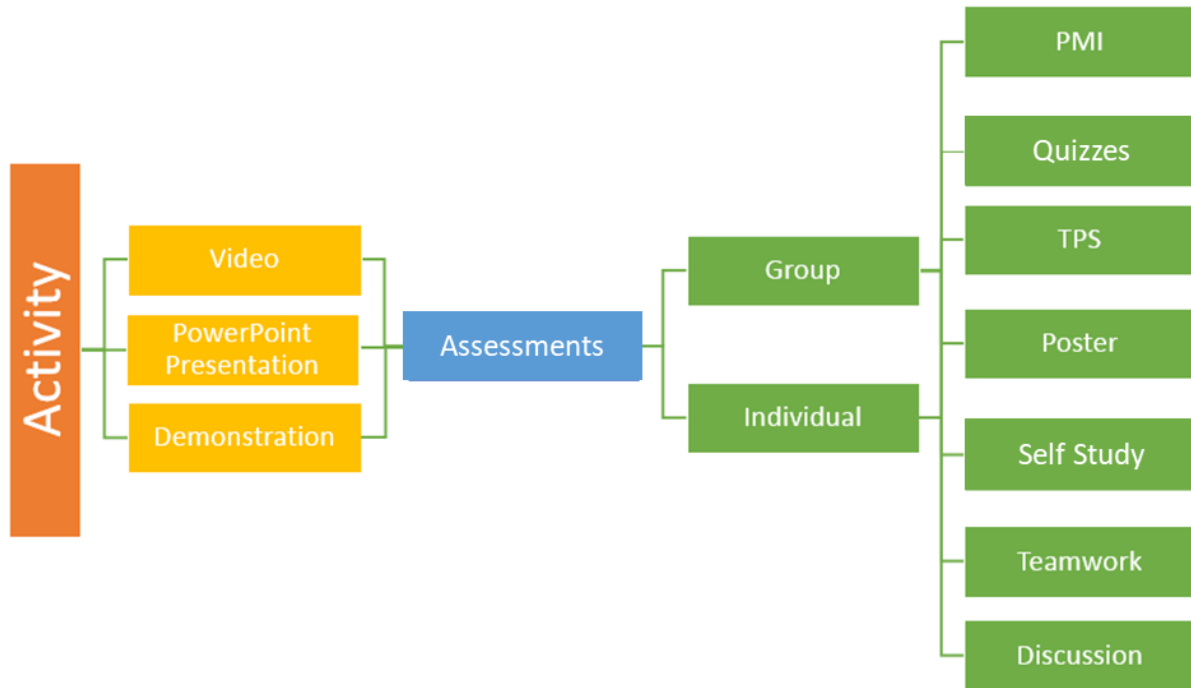
4. How to register and enrol

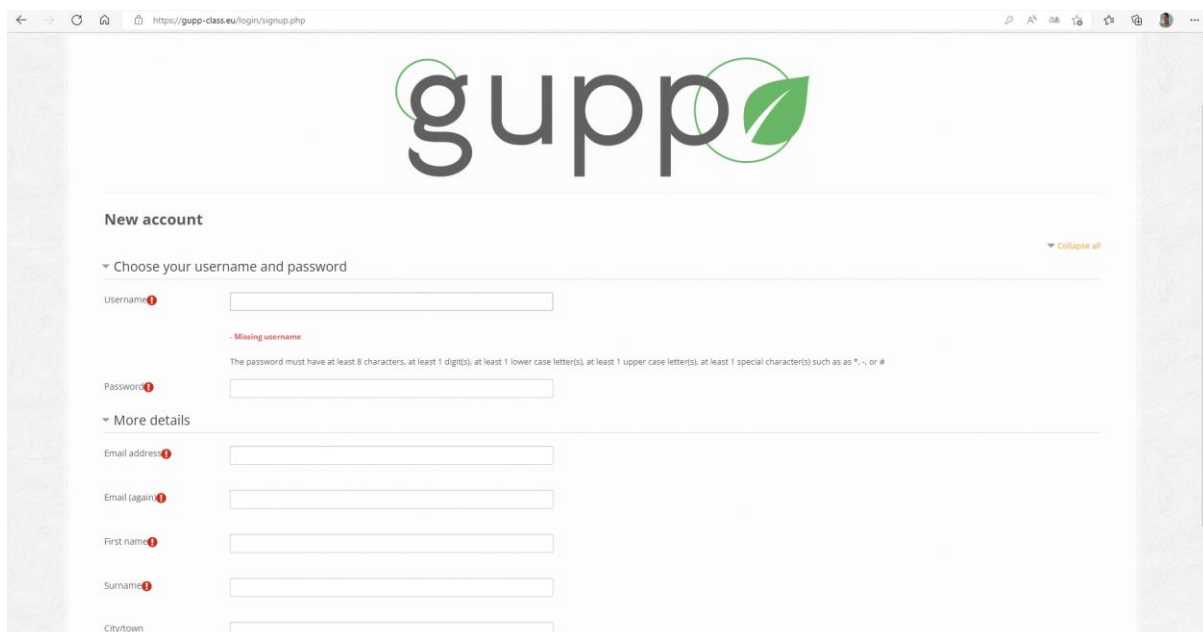You can access the GUPP Moodle platform through the link:

➔   https://gupp-class.eu/

Once you will access the webpage, you will have to choose **Create an account**.
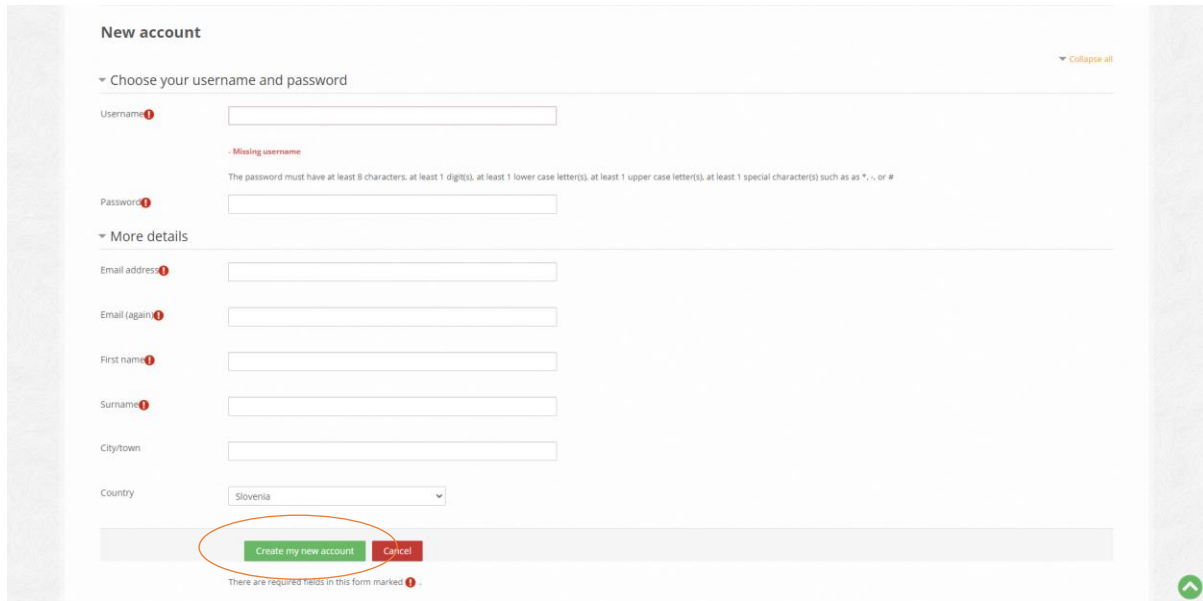
You will get to the registration portal where you should insert all the data requested.

In the end choose **Create my new account**.

After choosing "Create my account" you will receive an information that an email has been sent to you, with which you should continue the registration process by confirming your new account. If you do not receive the email, please contact your local administrator:

Ireland – Gloria.Callinan@tus.ie

Slovenia – zgigm@gzs.si

France - saliceti@oec.fr

Greece - info@pedmede.gr

World – zgigm@gzs.si

Check your email box for this new email as depicted in Photo. If you do not have the email in your Inbox, please check also the "Spam" or "Social" folder. If you do not receive the email, please contact your local administrator.

After clicking on to the link in the email, you will have confirmed the new account and you will receive the notification that your registration has been confirmed. You can now click **Continue**.
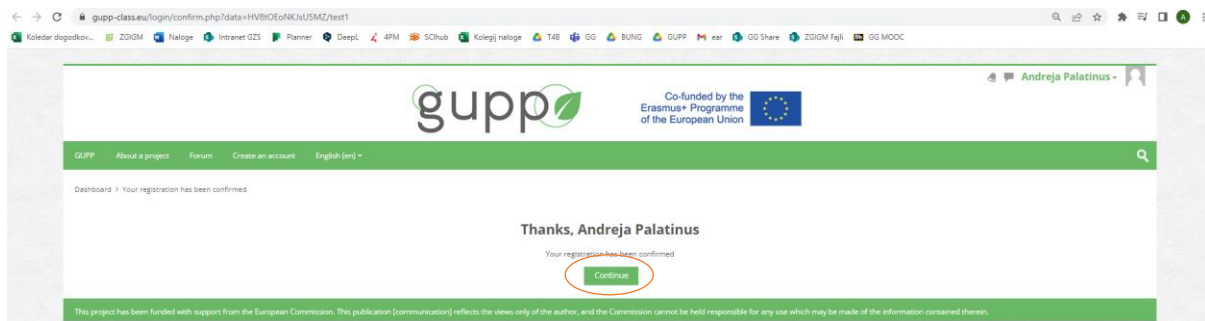
You are now free to self-enrol yourself into the Modules according to your choice. We suggest you enrol yourself into all 12 Modules. Click on Site home.

Available courses

Survey	FORUM	Introduction of GUPP Delivery of course	Introduction to GPP Benefits of GPP EU Policies and Environmental Legislation National Policies and Environmental Legislation
Click to enter this course	FORUM	Module 01 - Introduction	Module 02 – GPP and Drivers: An Overview
	Click to enter this course	Click to enter this course	Click to enter this course

Building the framework for GPP. Framework: targets and strategy. Monitoring GPP.	What is circular economy? Circular economy: a closer look. Circular procurement.	EU directives and treaty Principles. Types of the procedures. Legal exclusions.	Needs assessment. Market engagement.
Module 03 – Adoption of GPP	Module 04 – Circular Economy and GPP	Module 05 – Legal Aspects of GPP	Module 06 - Needs Assessment and Market Engagement
Click to enter this course	Click to enter this course	Click to enter this course	Click to enter this course

Click on enter this course and you are now successfully enrolled in the Module.

Welcome to GUPP Moodle. Enjoy the process of learning!

![GUPP logo]

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5. How the Course is Organised

This course has been developed in the form of a number of micro-learning units, enabling Public Authority staff to choose and complete their own training plan suited to their ambition level and need.

Figure 1 below gives a breakdown of each Learning Unit and the topics covered.

Induction

1. GUPP Introduction
- Introduction of GUPP
- Delivery of Course

2. GPP Drivers - An Overview
- Introduction to GPP
- Benefits of GPP
- EU Policies and Environmental Legislation
- National Policies and Environmental Legislation

3. Adoption of GPP
- Building the Framework for GPP
- Framework: Scope and Targets
- Monitoring GPP

4. Circular Economy and GPP
- What is Circular Economy?
- Circular Economy: A Closer Look
- Circular Procurement

5. Legal Aspects of GPP
- EU Directives and Treaty Principles
- Types of Procedure
- Legal Exclusions

6. Needs Assessment and Market Engagement
- Needs Assessment
- Market Engagement

7. Awarding Criteria
- Specifications and Selection Criteria
- Award Criteria with Contract Clauses

8. EU Levels
- Introduction to EU Levels
- Setting up a project

9. Life Cycle Assessment
- Introduction to LCA
- Business Case
- Performing Building LCA

10. Life Cycle Costing
- Introduction to LCC
- Tools

11. GPP and BIM
- Collaborative BIM
- BIM and Procurement
- BIM for Tenders

12. Verification
- Evaluate and Verify
- Monitoring and Reporting

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6. Learning Outcomes for the GUPP Programme

Learning Outcomes are the knowledge or skills which you should have developed by the end of the course, and which are written down and agreed.

Learning Outcomes (or Objectives) are used by trainers and learners, so that everybody is clear on what the training is trying to achieve. You can use the learning outcomes to ask yourself whether the training is achieving for you what it is intended to achieve, and to take action if it isn't.

The following outlines the aim of the GUPP training course and the overall learning outcomes for the GUPP course.

Green Public Procurement for Local Authorities in Construction

Description	Target	Public and contracting authorities Procurement professionals of construction works

TRAINING AIM

The aim of the programme is to increase the learners' knowledge of principles and practices applied to the Green Public Procurement process in construction for Local Authority Staff. This improved knowledge will allow such staff members to apply their existing skills, so that relevant GPP techniques, methods and standards are achieved.

PROGRAMME OBJECTIVES/LEARNING OUTCOMES

ACTIVITY STATEMENT

On completion of the training programme learners will be able to:
1 List and describe the key policy and legislative drivers, relevant to GPP in construction
2 Explain the key terms and principles associated with GPP in construction
3 Understand what GPP is and how it fits into current National and European policy and law
4 Obtain an understanding of the main criteria and legal contract clauses of GPP
5 Obtain an understanding with the main tools and techniques for circular economy and GPP (EU Level(s), LCA, etc)
6 Obtain an understanding with the main tools for life cycle costing and GPP (LCC etc)
7 Identify areas of specific relevance to your organisation as a local authority
8 Plan a strategic approach to implement GPP for construction effectively

7. Course Overview

The full set of Learning Units are delivered over 40 hours of structured and self-directed learning (much of which can be drawn from case studies) as a blended or online delivery.

Each micro-learning unit is 1-4 hours in duration. This ensures flexibility on how the course is delivered. These units can be completed as follows:

Type of delivery	Delivery of units	Timeframe
Full time (blended or online)	In 2-3 sessions	2-3 weeks
Part time (blended or online)	In 3-6 sessions	3-6 weeks
Part Time (online)	In 6 sessions	unlimited

Number of Hours	Total: 40 hours – 14-16 hrs contact and 24-26 hrs self-independent study
Type of discipline	e-learning tools, facilities for practical demonstration and training, and assessment/examination procedures
Preliminary requirements	The learners are expected to have some general knowledge on public procurement in the building and construction field.
Assessment procedure	Continuous Assessment
Delivery	Part-Time OR Full Time Blended and/or Face to face/in house /Online
Technical secure (Hardware and software)	White board; Multimedia facility; Access to relevant digital tools; Practical training models; Demonstration videos.
Lectures	Online facility Classroom facility Expert guest speakers
Resources	e-learning platform (Moodle) Induction pack: structure of programme, registration information, introduction to programme, helpdesk details and forum) Learning resources: reading resources, videos, materials, etc

It is expected that all learners are to carry out self-directed learning, utilizing the reading and video resources before attending the next class - this is known as a flipped classroom approach. You are encouraged to come prepared for the next training which will enable higher discussion of the topics and interaction between all learners. A discussion forum is also set up in Moodle to enable trainers and learners to interact outside of class, as well as encourage additional discussion between learners. It is anticipated that trainers will post a comment for discussion regularly to advance participation from you.

The online e-learning platform Moodle will include access to all the PowerPoints with downloadable pdfs, videos and additional reading resources to complement the relevant learning content.

It is expected that learners become familiar with the content before class, where the trainer will encourage discussion in group activities and completion of a number of interactive activities. Demonstration and tutorial videos and case studies will be used to support the learner's experience.

Independent self-study resources are available to download in the form of readable or video resources. To carry out further research, a number of hyperlinks to websites are provided within the PowerPoints to encourage further learning and direction to other trainings.

Continuous assessment is evaluated through a number of activities, such as individual online quizzes or online/face to face practical demonstration assignments and group work and practical activities. Online gamification quizzes will be provided in the form of multiple-choice questions or short answer responses and assessment will be carried out automatically online.

All other assignments are to be uploaded onto Moodle within a time limit as directed by the trainer, where they are to be assessed and graded by the trainer.

It is important that learners ensure that the following learning outcomes for each Learning Unit is understood relevant to the specific topic.

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
1	**Induction**	**THEORY**	**PRACTICAL**	**TOTAL**
	Introduction to the Course	**1.00**	**0.00**	**1.00**

LEARNING UNIT AIM

To equip the learner with the knowledge necessary to state the planned outcomes and the conditions attached to the attendance on the course; apply good health & safety and hygiene practices; understand the rules of the centre and explain the meaning of equal opportunities.

Objectives/Learning Outcomes

1. Outline the aim and objectives of the Green Public Procurement training programme.
2. Outline the indicative programme, timeframe, use of different learning methods and tools, and the delivery mode used for the training
3. Confirm the type of credits/badges available, accepted for continuous development.
4. Get to know fellow learners and trainer.
5. Confirm the roles, responsibilities and functions of the training provider. (housekeeping)
6. State the supports available for the learners (Access to e-learning platform, online and other resources, etc)
7. Complete the feedback surveys to assist with improvements of the programme

Competences/Responsibilities

Conform to the rules and regulations of the training centre.
Observe safe practices in the workplace (H&S), maintain a high standard of personal hygiene.
Listen to others with respect
Accept responsibility for individual independent learning
Accept professional ethical standards
Demonstrate a willingness to present personal views and participate in group/class discussions
Show sensitivity towards individual differences and opinions.

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
2	**GPP and Drivers: An Overview**	**THEORY**	**PRACTICAL**	**TOTAL**
	Introduction to GPP The benefits of GPP Environmental Standards EU Policies and Environmental Legislation National Policies and Environmental Legislation	**2.50**	**0.00**	**2.50**

LEARNING UNIT AIM

To present an overview of the strategic role of GPP for public authorities and equip the learner with the relevant knowledge necessary to outline the principles and demonstrate the purpose of green public procurement, as a tool for addressing different policy objectives and the benefits with specific reference to construction.

Objectives/Learning Outcomes

1. Outline the principles and benefits of GPP for construction
2. Outline how GPP is relevant to current national and EU policies and drivers
3. Identify and describe the importance of standards in GPP for local authorities

Competences/Responsibilities

Identify and outline the principles of GPP relevant to construction

Identify and outline the EU policies and drivers relevant to GPP.

Identify and outline the National policies and drivers relevant to GPP.

Outline how to stay up to date with National and EU policies relevant to GPP

Outline the importance of standards for GPP

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Identify and describe the up-to-date EU and National policies and drivers relevant to GPP for construction, meeting environmental policy objectives

Discuss in detail the importance of GPP as a tool to tackle climate change

Identify the key benefits for successful GPP

Outline how GPP has economic benefits in the long term

Display an understanding of the importance of GPP as a powerful market force.

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SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
3	**Adoption of GPP**	THEORY	PRACTICAL	TOTAL
	Building the framework for GPP Framework: Scope and Targets Monitoring GPP	**3.00**	**0.50**	**3.50**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge necessary to provide guidance on how GPP should be implemented and managed within a public administration. This Learning Unit is to outline the basic steps required when using GPP, explain target setting establishing a GPP strategy, and the importance of monitoring, reviewing and reporting. Emphasis is placed on the importance of pre-procurement planning and post procurement monitoring stages for successful green procurement.

Objectives/Learning Outcomes

1. Outline the principles and benefits of implementing GPP within an organization.
2. Explain why a procurement strategy is important and define the steps for GPP in construction
3. Outline why the pre and post contract phases are important for successful GPP.
4. Outline the importance of monitoring and reporting in GPP practice.

Competences/Responsibilities

Outline the steps which are required to put a GPP implementation strategy in place.

Explain why GPP implementation is beneficial for an organisation

Identify best practice of GPP implementation in construction.

Identify and define the steps in developing and implementing a GPP strategy.

Identify the different levels of GPP policy (general commitment, commitment within related policy, comprehensive GPP policy)

Outline the importance of setting a scope & targets for successful GPP, and the steps to do this.

Outline what should be considered when developing a GPP action plan and strategy (actions, communication, monitoring, reviewing)

Outline the steps in setting up a monitoring and reporting system for GPP in construction

Discuss a case for implementing GPP within an organisation

Identify where to go for further information on GPP

Apply critical and problem-solving skills

Demonstrate the ability to collaborate in a team and transfer information effectively

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Propose how you would gather support for GPP within an organisation

Discuss the different levels of GPP policy that exist within organisations

Devise a strategy for implementing GPP within an organisation, from setting scope and targets through to monitoring and reporting

Demonstrate recognition of the importance & benefits of having a procurement strategy within an organisation

Demonstrate competency in developing a strategy for implementing GPP within an organization

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
		THEORY	PRACTICAL	TOTAL
4	**Circular Economy and GPP** What is Circular Economy Circular Economy: A Closer Look Circular Procurement	**3.50**	**0.50**	**4.00**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge required to understand what circular economy is, and the benefits at an EU and national level. The role of procurement to support a circular economy, and practical guidance in using GPP to support the transition towards a circular economy for the construction sector.

Objectives/Learning Outcomes

1. Describe the key policy and legislative drivers, relevant to circular economy and sustainable construction
2. Introduce a range of specific actions and targets to achieve a transition to circular economy
3. Identify who should be involved in the circular procurement process and their roles
4. Outline the ways that GPP can support the circular economy in construction

Competences/Responsibilities

Explain the key principles and drivers behind the transition to a sustainable circular economy at EU and National level

Define circular economy (European commission definition)

Outline the principles of circular economy for buildings

Outline the importance of circular economy for local authorities in construction for local authorities

Outline circular business models for Local Authorities in construction

Outline circular economy strategies for all phases of construction for a building

Define circular procurement

Discuss the benefits of a circular economy and how GPP can support it

Discuss the opportunities for circular procurement throughout the procurement cycle

Outline the steps involved in a circular procurement process

Outline the impact public procurement can have on delivering the circular economy

Outline the principles of certification and EPDs

Demonstrate the importance of collaboration and engaging stakeholders for circular procurement

Identify circular opportunities from procurement case studies

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Outline the benefits of a circular economy on an environmental, social and economic level.

Specify the opportunities for circular procurement in construction

Determine high potential product groups relevant to construction for circular procurement

Explain ownership model vs usership model for circular economy

Compare key environmental impacts with a GPP approach in construction

Define the energy resource efficiency in construction

Demonstrate the appropriate selection of materials and products for GPP

Demonstrate the understanding of the requirements for certification and EPDs in GPP in construction

List the factors to take into account when identifying high-potential product groups in construction for circular construction

Demonstrate competency in identifying opportunities for circular procurement

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
5	**Legal Aspects of GPP**	**THEORY**	**PRACTICAL**	**TOTAL**
	EU Directives and Treaty Principles Types of Procedure Legal Exclusions	**2.50**	**0.50**	**3.00**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge required to understand the legal framework for GPP, according to the Procurement Directives, the different types of procedures which are available as well as the rules around exclusion.

Objectives/Learning Outcomes

1. Outline how GPP is governed (EU procurement directives, Treaty principles, case law, national legislation)
2. Outline the different types of procedures in which GPP can be applied.
3. Explain the rules under the 2014 directive for exclusion and selection, technical specifications, award criteria, contract performance at national level

Competences/Responsibilities

Explain the terms and definitions relevant to the legal aspects of GPP

Outline the relevant sources of law for GPP

Outline the provisions which were introduced for GPP to address environmental considerations under the 2014 procurement directives

Outline the different types of procedure which are available under the EU directives,

Explain why the choice of procedure is important.

Discuss the importance of choosing the most appropriate procedure for GPP

Explain the benefits of flexible procedures

List what must be considered in contract performance clauses for GPP, and how they can be enforced.

Demonstrate an understanding of the legal requirements when implementing GPP

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

List and explain the various aspects of the EU Treaty principles (transparency, proportionality, mutual recognition) which must be adhered to when implementing GPP.

List and explain the 2 types of technical specifications (performance based/functional or specification based on standards)

Explain the benefits of flexible procedures

Explain the difference between specifications vs award criteria, and give examples relevant to construction

List and outline the legal considerations that can be taken into account at selection stage relevant to GPP

Outline what legal conditions must be considered for weighting and scoring award criteria

Outline the legal requirements related to Life Cycle Costing (LCC)

Outline the legal context for market engagement

Outline the legal requirements that exist around verification under the 2014 directives

Outline the mandatory and discretionary grounds for excluding bidders

Explain minimum requirements and variants and outline how variants are used.

Identify titles and descriptions of contracts which explicitly include environmental aspects

Identify criteria that do or do not meet requirements for using labels

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
6	**Needs Assessment and Market Engagement**	THEORY	PRACTICAL	TOTAL
	Needs Assessment Market Engagement	**3.00**	**0.50**	**3.50**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge required to understand the importance of needs assessment and market engagement for successful GPP, presenting real examples from public authorities and recommended techniques. Practical steps for how to carry out needs assessment and market engagement will be explained.

Objectives/Learning Outcomes

1. Outline the steps you need to take prior to including GPP criteria in a tender.
2. Identify pre-procurement techniques and how to run them effectively for GPP.
3. Outline the risks and benefits involved in GPP.

Competences/Responsibilities

Explain needs assessment and the reasons why it is important

List and explain the steps involved in needs assessment

Explain a needs statement and the reasons why it is useful.

Outline the benefits of joint procurement

Explain market engagement and why it is of use

List the risks and benefits of market engagement, and how to manage risk

Outline the steps in planning market engagement for GPP (including market analysis)

Assess the need for new constructions or major renovation

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

List and explain the techniques used for needs assessment (observation, user discussions, user survey, review and planning, demonstrations)

Explain why estimating volume/value is important and why it is important to buy flexibly.

Give some examples of how needs assessment can be used in GPP tenders for construction.

Identify who would be involved in a user consultation for various types of construction projects

Outline how the subject matter of the contract is defined, and what it includes.

Explain what performance/output-based specifications are, using an example.

Suggest an example of how needs assessment may inform the scope of a contract in construction

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
7	**Awarding Criteria**	THEORY	PRACTICAL	TOTAL
	Specifications and Selection Criteria Award Criteria with Contract Clauses	**3.00**	**1.00**	**4.00**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge required to understand how to implement GPP at each stage of the procurement process and outline the type of criteria which can be applied at each stage, relevant to construction.

Objectives/Learning Outcomes

1. Outline the role of specifications, selection and award criteria and contract clauses in GPP.
2. Demonstrate the understanding of the key National GPP criteria for the construction sector.
3. Identify and prepare strategies for combining and weighting criteria.

Competences/Responsibilities

Explain what can be included in the selection criteria

List the discretionary exclusion grounds relevant to GPP

Outline what should be included in technical specifications, and why it is important to set the right ambition level

Explain what can be included in award criteria

Explain why award criteria is particularly important for GPP in construction

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Describe the differences between core and comprehensive criteria

Identify examples of GPP criteria that can be used in construction (selection criteria, technical specifications, award criteria, contract clauses

Identify some strategies that can be used for contract performance clauses

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SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
8	**EU Level(s)**	THEORY	PRACTICAL	TOTAL
	Introduction to EU Levels Setting up a project	2.00	1.50	3.50

LEARNING UNIT AIM

To equip the learner with the basic knowledge required to understand the importance of the EU Level(s) for assessing and reporting on the sustainability performance of all stages of the building project for local authorities

Objectives/Learning Outcomes

1. Identify and outline why Level(s) should be applied into National GPP at each stage of the building project
2. Identify and outline how the use of Level(s) in GPP can benefit public authorities
3. Understand the 6 Level(s) macro-objectives and the indicators that support each one
4. Understand why and how the objectives (and therefore indicators) are included from the beginning of a project

Competences/Responsibilities

Outline the macro-objectives in the Level(s) common framework
Define which sustainability macro-objectives the project will address
Outline how indicators support each other in the building project
Outline the benefits of using level(s) for Local Authorities
Outline the different user groups for local authorities, professionals and construction contractors
Define the roles and responsibilities of key players in the local authority
Establish to which 'level' project performance assessed for the building project
Decide which objectives (and therefore indicators) will be included from the beginning of a project
Outline the functionality of the Level(s) calculator tool for local authorities as a case study

Specific Competences/Responsibilities

Define relevant objectives at each stage of the building process
Assess performance at each stage of the building process
Identify and describe the indicators relevant to each objective
Apply indicators to each stage of the building process
Apply indicators to each stage of the building life cycle
Identify which indicators are used to assess performance against,
Plan what resources will be needed to assess performance and when in the project life cycle
Demonstrate the use of the Level(s) calculator tool over the life cycle of a building project case study

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
9	**Life Cycle Assessment**	**THEORY**	**PRACTICAL**	**TOTAL**
	Introduction to LCA Business Case Performing Building LCA	**2.00**	**2.00**	**4.00**

LEARNING UNIT AIM

To equip the learner with the basic knowledge required to understand the importance of the Life Cycle Assessment (LCA) and the tools and software to support LCA for assessing and reporting on the sustainability performance of all stages of the building project for local authorities

Objectives/Learning Outcomes

1. Outline the importance of taking a Whole Life Carbon approach for local authorities
2. Outline the principles and benefits of LCA for local authorities in construction
3. Outline the role of LCA in GPP and the rules that apply under procurement law.
4. Identify the methodology for LCA and how to apply them in construction projects
5. Demonstrate the estimation of environmental savings.

Competences/Responsibilities

Define the principles of LCA

Explain the terms and definitions associated with LCA

Identify key impacts of LCA for local authorities in the field of construction

List the building life cycle stages and their impacts

Outline the steps involved in LCA to support life cycle assessment in a construction project

Explain the purpose of an impact assessment and the tools that are available to support this

Outline how LCA data can be used in a construction project

Outline the relationship between product LCA data and building LCA data

Outline the principles and importance of Environmental Product Declarations (EPDs)

Outline the roles and responsibilities of various stakeholders in decarbonising the built environment (e.g., designers, builders and product manufacturers)

Specific Competences/Responsibilities

Explain why it is important to take a whole-life approach to calculating environmental impact

Explain the increasing importance of building LCA within the global construction industry

Explain the different types of LCA calculation in different project stages, and how they are measured

Define the Goal and Scope of a LCA case study (ISO 14041)

Outline how to make a model of the product life cycle, referred as Inventory analysis

Identify the environmental relevance of Life Cycle Impact Assessment (ISO 14042)

Demonstrate the purpose of an impact assessment and the supporting tools

Outline how to interpret the LCA study (ISO 14043)

Identify and outline the applications of LCA for local authorities relevant to a construction project

Outline when EPDs should be used

Identify and demonstrate how to use EPD national databases

Outline how LCA and Level(s) assist in the transition towards a circular economy

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
10	**Life Cycle Costing**	THEORY	PRACTICAL	TOTAL
	Introduction to LCC LCC Tools	**2.00**	**1.50**	**3.50**

LEARNING UNIT AIM

To equip the learner with the basic knowledge required to understand the importance of Life Cycle Costs (LCC) analysis. The software and tools for calculating LCC will be outlined so that local authorities can consider not just the up-front purchase costs of a given solution, but its total economic and environmental cost from cradle to cradle for the building project.

Objectives/Learning Outcomes

1. Outline the role of LCC in GPP and the rules that apply under procurement law.
2. Identify tools, techniques and databases for LCC and how to apply them.
3. Outline the general principles of Economic Appraisal.
4. Demonstrate the estimation of financial and environmental savings.

Competences/Responsibilities

Outline the role of LCC in green public procurement
Outline the principles of LCC and when it can be applied
Identify and list the tools that are available for LCC nationally and at EU level
Identify and outline LCC standards and databases at EU and National level
Outline the use of LCC at award criteria during the tendering process.
Demonstrate how LCC can be included in award criteria using a case study
Identify the Sector Applications of Economic Appraisal.
Discuss LCC versus Value for Money
Outline the principles of the level of Economic Appraisal and Value for Money evaluation ("Economic Appraisal 2021 - 2027 Vademecum).

Specific Competences/Responsibilities

Identify types of good/services which allows the environmental costs of purchases to be evaluated
Outline relevance of Directive 2014/24/EU to award contracts.
Identify and outline the LCC method to be applied from tenderers in the procurement documents.
Identify the data criteria required using the LCC methods (objectively verifiable, non-discriminatory, accessible, data can be required with reasonable effort, transparency)
Demonstrate how LCC can be applied at pre procurement (cost estimation) stage, during tender evaluation and as part of contract monitoring
Identify the costs over the life cycle of a product, service and work.
Demonstrate how LCC can evaluate the total cost or real cost of goods, services and works for project cost estimation and during the offer evaluation stages.
Demonstrate how LCC can evaluate the total cost or real cost of goods, services and works as part of contract monitoring.

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
11	**GPP and BIM** Collaborative BIM BIM and Procurement BIM in Tenders	**THEORY** **2.00**	**PRACTICAL** **2.00**	**TOTAL** **4.00**

LEARNING UNIT AIM

To equip the learner with the basic knowledge required to understand the role of BIM use as a prerequisite for participation in public tenders and how to implement criteria around BIM use for successful GPP.

Objectives/Learning Outcomes

1. Outline the key drivers behind digitalization relevant to construction
2. Outline how BIM can support the Project Procurement construction process through collaboration and management for local authorities
3. Outline how BIM and LCA can be integrated in the decision-making process at an early stage to support GPP.
4. Explain the various ways that BIM can be specified in a tender

Competences/Responsibilities

Outline the types of initiatives at national and EU level to incentivize the use of digital technologies in the construction sector

Explain what BIM is and who it involves

Outline the principles and benefits of BIM for sustainable performance assessment

Identify and outline the benefits of BIM for construction by local authorities

Outline the design principles for a BIM suitable for LCA automation using the "oneclick" tool

Cognitive and practical skills to perform tasks related to the process of designing a sustainable building.

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Identify the BIM Project Collaboration requirements based on the Project Performance Requirements (BIM Uses), and Project Roles and Responsibilities – Contractual Hierarchy.

Identify and select the Project Procurement Model requirements in the form of the Delivery Model (Contract) and Procurement Strategy.

Demonstrate using a case study how to set up LCA automation with a model and LCA checker

Apply clear and consistent material labelling using BIM and a basic LCA calculation

Apply layered elements for multi-material objects

Export a model and check the elements are classified IFC

Apply analytical capacity.

SEQUENCE NUMBER	LEARNING UNIT TITLE	DURATION IN HOURS		
12	**Verification**	**THEORY**	**PRACTICAL**	**TOTAL**
	Evaluate and Verify Monitoring and Reporting	**1.50**	**2.00**	**3.50**

LEARNING UNIT AIM

To equip the learner with the relevant knowledge required to understand how to verify claims made by bidders in response to GPP criteria, what types of evidence to ask for, the role of environmental management systems, standards and labels (Including ecolabels and other forms of third-party certification) and how to measure the impact of GPP.

Objectives/Learning Outcomes

1. Outline the verification methods that claims can be made by bidders in the response to GPP criteria
2. Outline the role of environmental management systems, labels, certifications, and test reports.
3. Outline how to evaluate equivalent evidence and when you can accept a self-declaration.

Competences/Responsibilities

Outline the reasons why we need to verify in GPP

Explain greenwash and the different types of greenwash that exist

List and explain the different types of verification.

Explain the rules around verification under the treaty principles.

Outline the benefits and requirements of using labels in tenders

Explain the principles and benefits of an environmental management system for GPP

Outline best practice around verification during contract performance

Demonstrate responsibility for evaluating and following best practices.

Specific Competences/Responsibilities

Identify and outline an example of verification provision in the construction sector.

Explain what is meant by equivalence

Explain the process of accepting equivalent labels/self-declarations

Identify and list examples of environmental labels that can be used for GPP in construction

List and explain the rules on referring to labels

Outline the dos and don'ts of using labels

Course Approach

The course is planned as a sequence of short theoretical explanations of concepts followed by a set of activities and discussions for application of theoretical knowledge. This will enhance the fast application of theoretical into practical and to consolidate the knowledge.

MAIN COURSEWARE

Resources developed for all the topics.

> For learners

- Course notes: pdf file
- Short Activities (in class): between explanations, part of the pdf file
- Practical Activities to develop on their own (out of class): Exercises, files and different type of material needed.
- Videos – created by GUPP project and online free resources.
- International bibliography
- External links.

Software Tools

> Objective: to promote collaboration tools that enable the development of the LU in a face-to-face and distance format.

- Microsoft Teams or Slack: for fast communications (they can use it for being connected between them)
- Videoconferences: to enable the work communication sessions for development some group activities.
- Doodle: to arrange meetings in an easier way between team members during the course.
- Quiz tools enhancement (this can provide the teacher feedback to check that what is being taught is understood)
  - Kahoot
  - Google forms
- Use of specialised tools:
  - LCA Tools (OneClick)
  - LCC Tools

8. ASSESSMENT SCHEDULE

The learning will be continuously assessed with relevance to the learning outcomes/objectives, and these will be evaluated as follows:

Theoretical:
- A series of online quizzes relevant to each Learning Unit.

Practical:
- Uploading of assignments displaying application of learned concepts/digital tools.

The following table gives an overview of an indicative assessment schedule.

Indicative Assessment Schedule

Learning Unit	Description/Type	% of Total	Timing of Assessment
	Pre survey questionnaire	2.5	Before Course
Induction	Assessment 1 – Discussion Forum	5	During Course
Adoption of GPP	Assessment 2 – GPP Strategy	5	During LU 3
Circular Economy and GPP	Assessment 3 – Quiz on 1, 2, 3, 4 Learning units	15	End of LU 4
Needs Assessment and Market Engagement	Assessment 4 – Group presentation	10	During LU 6
Awarding Criteria	Assessment 5 – Quiz on 5, 6, 7 Learning Units	15	End of LU 7
Life Cycle Assessment	Assessment 6 – Quiz on 8, 9 Learning Units	10	End of LU 9
GPP and BIM	Assessment 7 – Individual/Pair Activity	15	During LU 11
Verification	Assessment 8 – Quiz on 10, 11, 12 Learning Units	20	End Learning Unit 12
GUPP Close	Post survey questionnaire	2.5	Completion of Course
		100	