

2<sup>nd</sup> December 2019

**Summary note to Kamra tal-Periti (KTP) regarding Research & Innovation meetings held at BICC between January 2019 and December 2019**

Kamra tal-Periti representatives present (as/when available) at said meetings were:

- Dr Konrad Xuereb, Perit
- Dr Rebecca Dalli Gonzi, Perit

So far, five meetings were held in 2019 on the following dates. These meetings were held at BICC (Mint Street, Valletta):

- Meeting #8. Held on 18<sup>th</sup> January 2019 and attended by Dr Konrad Xuereb from KTP.
- Meeting #9. Held on 27<sup>th</sup> February 2019 and attended by Dr Rebecca Dalli Gonzi from KTP.
- Meeting #10. Held on 23<sup>rd</sup> May 2019. Dr Konrad Xuereb was overseas and Dr Rebecca Dalli Gonzi was unavailable to attend.
- Meeting #11. Held on 17<sup>th</sup> September 2019 and attended by Dr Konrad Xuereb from KTP.
- Meeting #12. Held on 1<sup>st</sup> November 2019 and attended by Dr Rebecca Dalli Gonzi from KTP.
- (Meeting #13. Not held yet)

Minutes of meeting compiled by BICC are attached in Appendix A overleaf.

Kindly note that meeting #13 has not been held yet and is scheduled to be held in first week of December 2019.

*These minutes are circulated solely for KTP internal use and should be treated by KTP as confidential. **KTP needs to seek permission from BICC beforehand if KTP would like to refer to any of these minutes and/or circulate them etc.***

The KTP representatives have been active in the meetings they attended and contributed to the topics discussed, as can be observed in the minutes of meetings of respective meetings attended.

The KTP representatives look forward to building on topics discussed to date to include other topics in future meetings.

Dr Konrad Xuereb

*cc Dr Rebecca Dalli Gonzi*

## Appendix A

**BICC Research & Innovation Meeting**

**MEETING No 8**

Date: 18<sup>th</sup> January 2019 (2.00pm – 4.00pm)

Venue: BICC Boardroom – 36, Old Mint Street, Valletta

**Members Present:**

Perit Charles Buhagiar	Executive Chairman BICC
Perit Martin Debono	Assistant to the Chairman
Ms. Alison Degiorgio	BICC Secretary
Mr. Pierre Galea	MDA
Dr. Konrad Xuereb	KTP
Perit Frans Mallia	Planning Authority
Ing. Dr. David Spiteri	BRO
Dr. Ruben P. Borg	SBE Malta (Research and Innovation WG Coordinator)

**Members Excused:**

Ing. Dr. Daniel Micallef	Chamber of Engineers
Prof. Spiridione Buhagiar	University of Malta
Mr. Philip Fenech	GRTU
Dr. David Grech	Chamber of Commerce

**Invited:**

Mr. Anthony Aquilina	ERA
Mr. Chris Cousin	ERA
Ms. Alessia Debono	UoM

8.1	<p><b><u>Approval of Minutes</u></b> Minutes of meeting number 7 were approved.</p>	
8.4	<p><b><u>CESBA MED Interreg Med project on sustainable building and urban area assessment and rating in the Mediterranean region</u></b> Ms. Alessia Debono delivered a presentation on CESBA MED Interreg Med project and gave an introduction of the project, aims, objectives and methodology.</p> <ul style="list-style-type: none"> <li>• <b>CESBA - Common European Sustainable Built Environment Assessments</b> represents a bottom-up initiative towards promoting a <b>harmonization of assessing the built environment on sustainability from buildings to neighbourhoods to regions</b> throughout Europe.</li> <li>• Energy efficiency plans <b>do not account</b> for synergies that groups of buildings may offer</li> <li>• Building scale approach is <b>not</b> optimal</li> <li>• CESBA is a process towards a <b>new culture and standards</b> in Europe.</li> <li>• To <b>reinforce</b> the capacities of public administrations by the CESBA MED transnational methodology and set of tools.</li> <li>• This optimizes <b>energy planning measures</b> combining building and urban scale.</li> <li>• Methodology: Evaluate results obtained from <b>10 EU projects</b> which assess energy efficient measures at neighbourhood scale. Capitalization of results to define <b>ONE</b> methodology and tool which would be suitable for the MED area and refurbishment of buildings at an urban scale.</li> <li>• CESBA Partners</li> <li>• CESBA SPRINT Workshop</li> </ul> <p>Part B: CESBA Toolkit- How to use the tool</p> <ul style="list-style-type: none"> <li>• Overview of toolkit</li> <li>• Cesba SNTool</li> <li>• How does the tool work?</li> <li>• Flowchart explaining how the tool works</li> </ul> <p><i>RPB informed that the indicators are referred to the overall sustainability of a building (environmental, economic and social).</i></p> <p>Part C: Case studies of other partners</p> <ul style="list-style-type: none"> <li>• Overview of case studies from: Greece, Barcelona</li> <li>• Greece Case study: Two municipal buildings were selected, an office building (town hall) and a school complex</li> <li>• Barcelona Case Study : 1 block, 1.25ha, 27 urban estates</li> </ul> <p>Part D: Case Study Urban Scale- UM (University of Malta)</p> <ul style="list-style-type: none"> <li>• Location of UM: Centrally located in Msida, close to sea, sitting between two valleys</li> <li>• Data needed for SN Tool Urban scale</li> <li>• Indicators selected</li> <li>• UM Areas: Green Areas, Faculty areas, walkways and pedestrian areas,</li> <li>• Proximity of Public Transport to UM</li> <li>• Allocation of parking at UM</li> <li>• Population at UM</li> </ul>	

	<ul style="list-style-type: none"> <li>• Economy- Land Value of Msida</li> <li>• Employment Rate</li> <li>• C- Energy : Non-Renewable energy, Renewable and decarbonised energy, atmospheric emissions</li> <li>• E- Non-Renewables: Existing water network, re-use of greywater, re-use of rainwater, re-use of storm water</li> <li>• F- Environment: impact of construction activities on natural features, impact of construction activities on landscaping on soil stability or erosion, recharge of groundwater, noise</li> <li>• G- Social: Safety, Local food, Bicycle Parking facilities, performance of public transport</li> <li>• Preliminary Results with SN tool</li> </ul> <p>Part E: Case Study Building Scale- ICT Faculty</p> <ul style="list-style-type: none"> <li>• Data needed for SB tool building scale</li> <li>• Location</li> <li>• Description of construction materials used and method</li> <li>• Pedestrian access</li> <li>• Underground parking &amp; Bicycle Shelter</li> <li>• Environmental loadings of building</li> <li>• Indoor environmental quality</li> <li>• Service quality</li> <li>• Preliminary results with SB tool</li> </ul> <p><i>Perit FM enquired whether the results can be applied in other areas to which RPB stated that following the first exercise at the University of Malta Msida Campus a new exercise is being conducted in another entity. The type of territory we have in Malta remains a challenge. Such a project will give solutions. However it will also identify challenges in urban areas and also in the building scale.</i></p> <p><i>The European Commission has launched a related initiative, which is currently at testing phase, to encourage attaining a European framework however being sensitive to the variations. Most importantly is that we also define benchmarks.</i></p> <p><i>RPB informed that two training sessions and detailed presentations will be held during February 2019 and an invitation will be circulated for technicians (periti) and administration (Local Councils and decision makers). This tool will eventually be available once completed and it will also be presented in an international conference on Sustainability in Malta in November.</i></p> <p><i>The SB Tool looks at all buildings in an urban area, in view of the fact that every building can contribute in different ways to the sustainability of the urban environment. It was developed over the years and through this project it is being extended for the Urban zones and is looking beyond the energy efficiency aspect, i.e. the sustainability of urban areas and buildings.</i></p>	
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	<p><b>Adjournment</b> Meeting adjourned at 16.00pm. Date for the next meeting scheduled for Tuesday 26<sup>th</sup> February 2019 at 14.00pm.</p> <p>Perit Charles Buhagiar                      Alison Degiorgio Executive Chairman BICC                      Secretary</p>	
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**BICC Research & Innovation Meeting**

**MEETING No 9**

Date: 27<sup>th</sup> February 2019 (2.00pm – 4.10pm)

Venue: BICC Boardroom – 36, Old Mint Street, Valletta

**Members Present:**

Perit Charles Buhagiar	Executive Chairman BICC
Perit Martin Debono	Assistant to the Chairman
Ms. Alison Degiorgio	BICC Secretary
Ing. Dr. Daniel Micallef	Chamber of Engineers
Dr. Rebecca Dalli Gonzi	KTP
Perit Frans Mallia	Planning Authority
Dr. Ruben P. Borg	SBE Malta (Research and Innovation WG Coordinator)

**Members Excused:**

Mr. Pierre Galea	MDA
Dr. Konrad Xuereb	KTP
Ing. Dr. David Spiteri	BRO
Prof. Spiridione Buhagiar	University of Malta
Mr. Philip Fenech	GRTU
Dr. David Grech	Chamber of Commerce

**Invited:**

Mr. Chris Cousin	ERA
Mr. Ahmed M. Hamed	UoM

9.1	<p><b><u>Approval of Minutes</u></b> Minutes of meeting number 8 were approved.</p>	
9.3	<p><b><u>Energy Efficiency in buildings and economic aspects</u></b> RPB introduced Mr. Ahmed M. Hamed, a PhD student at the University of Malta, studying supplementary cementitious materials in concrete.</p> <p>RPB spoke about two current, overlapping projects. One is the Historic water tower restoration project, the other the Horizon 2020 ReSHEALience project. Dr. Borg showed the plan of the five storey high reservoir structure having a diameter of about 10metres, which is located in Marsa. The structure is the only one of its type in Malta and is considered to be unique Industrial Heritage. The tower which was built in the early 1930s, consists of a 12 column structure and is severely deteriorated. The UoM embarked on the structure's restoration. The research includes the analysis of the materials and the structure to understand what it was and the not carry out advanced characterisation testing, particularly on the steel reinforcement and concrete in the structure.</p> <p>Another study is the assessment of the degradation of the materials in the structure including the corrosion of the reinforcement. New advanced materials shall be used in the restoration of the structure. For the columns all the old 1970s repair concrete is being removed and a high strength, self-compacting, self-healing material, high durability fibre enforced concrete (150 mega pascal compressive strength) is being used. The researchers are using various type of nano-additives whilst developing new sensors for structural health and degradation assessment as part of the project. The project is funded by various entities, mainly by the Ministry of Environment, however in parallel to this, the UoM is working on another project, the Horizon 2020 ReSHEALience project.</p> <p>The Horizon 2020 project is intended to look at the present situation with marine infrastructure, in particular coastal infrastructure, structures and infrastructures on the sea and in the sea. This project is not only applied research but the UoM is also developing new materials. The sectors covered are floating rafts for mussel farming and floating wind turbine structures, breakwater and harbour infrastructure and other structure where aggressive environments are of concern.</p> <p>FM enquired on the cost of these structures. RPB replied that such structures cost more but also are much more effective in that lower volumes of material are used and these are also more durable in aggressive environment, therefore having a higher performance throughout their lifetime.</p> <p>FM enquired whether the flow is temperature sensitive and RPB stated that it would make a difference if the mix is cast in Summer or in Winter. In fact one challenge that became a research activity was what happens in hot weather concreting. He added that there are self-healing materials which can heal quite impressively defects arising with time.</p> <p>There are a number of international partners involved in the project as well.</p> <p>The water tower project has been running slowly for many year and it is now in the important stage of implementation. The Horizon project is a four year project for which a lot of activity is being developed. At the moment the UoM is also leading the recycling of high performance materials and active on the self-healing concrete and sensor network systems in concrete.</p>	



	RPB asked the members to forward any enquiries, comments or suggestions.	
9.4	<p><b><u>Energy Efficiency in buildings and economic aspects</u></b></p> <p>The Chairman informed that he had a meeting on energy efficiency and explained that energy performance contracting means that there would be a contractor who would be involved in refurbishing a building to make it energy efficient. The contractor gets paid by the amount of money that one saves up from energy bills over a period of years. The idea is that the public buildings are near zero energy efficient by 2020.</p> <p>DM informed that it is quite a common concept in Europe and it has a lot of potential for Malta, however he is not sure how it works in terms of technicalities. CB proposed to invite these people over for the next meeting to carry out a presentation and explain the concept further.</p> <p>RPB asked DM whether he has some projects or any European project which he would want to share with the Working Group members. DM informed that he knows of a PhD student who is carrying out a research on the distribution of humidity in indoor spaces, whom might be interested in making a presentation.</p>	<p>CB</p> <p>DM</p>
	<p><b>Adjournment</b></p> <p>Meeting adjourned at 16.10pm. Date for the next meeting scheduled for Thursday 23<sup>rd</sup> May 2019 at 14.00pm.</p> <p>Perit Charles Buhagiar Executive Chairman BICC</p> <p>Alison Degiorgio Secretary</p>	

BICC Research & Innovation Meeting

MEETING No 10

Date: 23<sup>rd</sup> May 2019 (2.00pm – 4.10pm)

Venue: BICC Boardroom – 36, Old Mint Street, Valletta

Members Present:

Perit Charles Buhagiar	Executive Chairman BICC
Perit Martin Debono	Personal Assistant to Chairman
Ms. Alison Degiorgio	BICC Secretary
Ms. Debbie Schembri	MDA
Perit Frans Mallia	Planning Authority
Ing. Dr. David Spiteri	BRO
Prof. Ruben P. Borg	SBE Malta (Research and Innovation WG Coordinator)

Members Excused:

Dr Konrad Xuereb	KTP
Prof. Spiridione Buhagiar	University of Malta.
Mr Philip Fenech	GRTU
Dr David Grech	Chamber of Commerce

Invited

Mr. Chris Cousin	ERA
Mr Sergio Tartaglia	ERA
Mr Charles Tanti	MCCAA
Mr Chirstopher Debono	UOM Student.

	<p><u>Approval of minutes</u> Minutes of previous meeting approved.</p>	
	<p><u>Construction, Demolition and Waste Strategy</u></p> <p>RPB informed that the support of a research to finalise the guidelines has been approved and by the end of 2020, two guideline documents for the construction industry will be available.</p> <p>RPG introduced Christopher Debono, a UOM Masters Student, whose studies and presentation emphasised on dismantling different types of buildings and their recycling. The document is a guide to the procedures (Recycling Oriented Deconstruction).</p> <p>CD stated that his focus is on the management of deconstruction. A questionnaire was distributed to all the members to be answered on a personal basis.</p> <p>CD asked the members to share their thoughts on the Perit's knowledge on deconstruction. In his opinion, FM sees it phased in two parts, the current building aspect and the construction from now onwards. There are similarities yet these are diverse. He stated that there is a lack of documentation. He also added that time is an issue and a good percentage of the deconstruction will be carried out on old buildings. The decommissioning of current buildings will be carried out. Ing. DS stated that ultimately, one has to seek a business model and things have to be realistic.</p> <p>CC said that the estimate stock of an old building being dismantled can be established an inventory of old buildings might be necessary. RPB informed that deconstruction will bring along changes to the current method of building. DS said that a new trade is being created and depots for the storing of recycling material have to be identified. This will create an automatic financial stress on the business. FM pointed out that tenants might have done interventions on buildings along the years. MD stated that in the UK, the construction cost increased by 3% to 4%. Ing. DS stated that a large percentage of construction waste is screed.</p> <p>St informed that there are certain criteria for waste to become a resource. Once the end of life is reached, it can be considered as a product. DS asked if there is a strong market for recycled material, as otherwise this material would end up in stockpiles.</p> <p>RPB said that perhaps the industry could be sustained from certain waste, for particular applications, rather than having it imported. The uncertified materials are a problem though. MD said that some material might be used for land reclamation and FD added that it could be used for coastal defences.</p> <p>FM asked if training for demolition is provided and MD informed that the NOS's have been approved by the NCFHE&gt;</p> <p>CB stated that the size of a project does not really matter and added that small projects usually have less enforcement. FM stated that part of the problem would be addressed once there is a code of practice. DS said that small projects are more delicate and sensitive than large projects as the neighbourhood continuously monitors the site and files reports.</p>	

**Permitting goals.**

FM informed that PA had once tried to issue excavation permits, however the extent was then changed.

CB stated that for large projects, an application for excavation has to be accompanied by a parallel application which states what will be done instead. The excavation will be phased, like Smart City. Clearances from other Authorities are required.

ST stated that a depot would require a waste management permit. In the case that material will be used on site, no waste management permit might be required. Uncontaminated soil and excavated material that will be used on site throughout the construction activity, will be excluded from the waste regime. He asked if there is a synergy between the authorities to monitor that the conditions imposed on the permit and if these are truly being executed. CB stated that the conditions imposed are included in the permit with the respective authorities enforcing them. FM said that it is within the remit of the authorities concerned to enforce and check on such execution. MD informed that the new Building Authority would monitor the building after it has been built to make sure that the conditions on the permit are sustained.

ST asked how the implementation of the pre demolition audit would be integrated and if it will be mandatory. RPB said that its scope is not yet known, however it might indicate how much waste is generated. An exercise was performed on an office and a residential property. According to CD, primarily there has to be a record of what is available to issue a percentage of what material has been recycled and disposed.

Ing. DS suggested having economic models and waste management plans.

**Procurement**

CB informed that the holder of the Skill card will be adequately trained and have proof of competence in the skill that one has, besides health and safety.

**Execution of works.**

CB stated that the BRO are supposed to upload the method statement and make it available online.

RPB stated that the materials have to be classified and CB informed that this should be the remit of the suppliers and contractors. The depot must be certified by ERA and be competent to the materials classification. ST said that the waste regulations directive regulates waste. A confirmed critical demand for a product is compulsory in order for waste to reach the end of life level. Unless there is a market, it is not viable.

	<p>RPB proposed to disseminate the questionnaire with the Advisory board members, to which the Chairman agreed.</p> <p>ST gave an update on the waste strategy and informed that ERA prepared the first draft and a number of meetings were held to discuss the matter with the Ministry and local agencies. The aim is to issue the document for public consultation. The current waste management plan elapses in 2020 and the new plan will cover years 2021 until 2027.</p> <p><u>Adjournment</u></p> <p>Meeting adjourned at 16.00pm. Date for the next meeting is scheduled for Wednesday 09<sup>th</sup> October 2019 at 14.00pm.</p>	
	<p>Perit Charles Buhagiar Executive Chairman BICC</p> <p>Frans Chircop obo Secretary</p>	

BICC Research and Innovation

MEETING No 11

Date: 17<sup>th</sup> Sep 2019 (12.00pm – 14.00pm)

Venue: BICC Boardroom – 36, Old Mint Street, Valletta

Members Present:

Charles Buhagiar	Executive Chairman BICC
Martin Debono	Personal Assistant to Chairman
Frans Chircop	Director
Daniel Micallef	Chamber of Engineers
Muriel Grech	MDA
David Spiteri	BRO
Ruben P. Borg	SBE Malta.
Christopher Cousin	ERA
Konrad Xuereb	KIP

### Approval of minutes

Minutes of previous meeting approved.

### Matters arising

Perit Martin Debono asked for any comments or matters arising from the minutes of the previous meeting and proceeded to ask Prof Ruben P Borg on the third item of the agenda – SBE 19 Malta.

### SBE 19 Malta – Sustainable Built Environment 2019.

Prof. Ruben Borg explained that SBE Malta would be discussing current issues on sustainability and Resilience in an international conference. The conference will be organised on the 21<sup>st</sup> and 22<sup>nd</sup> Nov at the Dolmen Hotel in Qawra. He explained that this conference would be similar to the conference held in 2016. It is going to be organised by Maltese branch SBE in partnership with different entities, and it will be one of a series of international conferences.

The conference is in partnership with different Maltese entities including BICC. There will also be a construction exhibition. He explained that from last experience SBE had a good feedback with other international key speakers that tackled diverse issues concerning the building industry. In the coming conference, he further explained that there would be a presentation on environmental behaviour with contribution to the Maltese environmental behaviour. Prof. Marie Attard, at UOM where different presentations of research in Maltese transport will be carried out will discuss pollution and transport.

Resilience and sustainability rating of buildings, sensor systems to control buildings and structures. Another section about concrete. Restoration using concrete, distribution of energy and another section about renewable by the institute of renewable energy. So far, Prof. Borg said that there was a good feedback of around 150 contributions. There will also be a roundtable discussing the climate change and on renewable energy which happens to be worked upon by MCAST through an EU project under Horizon 2020.

The conference organising committee is from UOM, the private industry, and other international participants. There will also be prominent international keynote speakers who will be speaking on climate resilience and coastal effects. Another from South Africa – on sustainable buildings and another from Canada. He further explained that the organising committee is still looking for conference sponsors who together with the existing green building suppliers as main sponsors can contribute towards the success of this conference.

### Scientific contributions.

Prof R. Borg explained that this time the contributions would be published online – as an open access to everyone. Among some of the conference, topics are - sustainable materials, building assistant methods and refurbishment of buildings. C. Buhagiar said that BICC is a key partner and the Minister will be opening the conference on the 21<sup>st</sup> of November 2019. ERA representative Mr Christopher Cousin asked if noise pollution on the effects on buildings was taken in consideration or if there are any contributions in this regards. Prof R Borg explained that no, - out of the 150 contributions received so far, he does not recall that any of the sort has been submitted and invited ERA to participate or submit such a contribution.

*Item 4 Waste Recycling – construction , demolition and excavation.*

Prof. R. Borg explained that a research by a student will be presented at BICC next time around – describing how we can tackle disassembly and deconstruction standards which is being formulated.

Ideally, he further explained that we have a standard on deconstruction – with points on waste audits, recycling, waste classification and re-using. Interviews in this research resulted in very interesting facts which now this research is assessing. In the coming next meeting the student, he will present his findings to the board. Prof. Borg explained that sometimes we are criticized that research is not down to earth and factual – this time we went directly to the industry and through these interviews concrete and solid findings will be presented.

The starting point is what products from the industry we can absorb to create another product to be reused. MD asked if at this stage we ought to think about design for deconstruction. Prof. Borg explained that through this thesis research-BICC could help in identifying a pilot project to set an example in such a project. Dismantling and disassembly project was taken. Such a gov. project could set an example for the private sector to copy.

MD explained that abroad there are definite sizes and standards even for apertures that can easily be adopted and reused. In Malta this is not yet done and is difficult and not worth dismantling. Prof Borg explained that when re-using of products there is gap in business modelling and Maltese companies are not prepared for this. In this regard, a life cycle model was done to test the impact of this. Dismantling in a controlled manner takes time, space and costs.

Prof Borg asked if it is worth it, to propose through BICC a prototype model template, which projects a design for deconstruction and rebuilt. The scope is to dismantle instead of demolition at the end of its life span.

MDA Ms Mauriel Grech was asked if the proposal on housing collaboration is deemed as an exposure platform for such a collaborative project. Prof Borg explained that such a green building – truly sustainable could be developed in collaboration with Housing Authority and design for deconstruction should be initiated by Government.

CB asked that the problem of demolition waste should be discussed and tackled. If waste is intended to be re-used, it should be classified. Planning authority is asking for underground spaces and hence creating a lot of excavation waste. CB asked if we ought to re-design for car spaces. Limit excavation to limit waste for car spaces. Rethinking of the whole concept should be done – e.g. shelving the cars in front of buildings instead of excavating.

Perit Konrad Xuereb from KTP who worked in UK was asked by CB what is done if no car spaces are provided in a project. Konrad explained that in UK there are incentives – e.g. best energy



Regulating minimum standards in designing modern building should take in consideration energy efficiency models. On excavation waste – Prof R. Borg suggested a policy recommendation by BICC in which building policies and incentives should be looked at. Mr Cousin Christopher from ERA explained that they are currently also working on such a paper in this regard.

CB explained that there should be 3 phases – reduce, recycle and land reclamation. Reduction – e.g. reducing the level of excavation or the method of excavation – e.g. taking out large blocks that could easily be reused. This requires a policy shift – e.g. a developer who opts not to excavate can be allowed to build two meters higher etc. What about the visual effects –height limitations etc. These points ought to be looked at. Konrad Xuereb also suggested that we should look at developing car ports in central areas – and people walk to their apartments. It was concluded that the current policy of excavating for the provision of more garage spaces ought to be completely re-thought.

Item 5 Common European Sustainable Building Assessment method – Buildings and urban Areas in the Mediterranean region. – Prof Borg explained that the outcome of this project is to develop a tool, which was more of a sustainability tool for building assessment. The tool was tested by the university campus that tested it on a number of buildings within the limits of the campus itself. The tool helps to improve sustainability –e.g. transport system energy conservation etc. An online training platform was developed and hosted by UOM and managed by a European consortium. The platform is also being used in Spain and on the 3<sup>rd</sup> of October, there is a seminar in which the tool is going to be presented. The whole idea is to look at a whole area and not just on a particular building. This seminar will help to present the CESBA tool, which is sensitive to local issues to be adopted and used locally.

Adjournment

Meeting adjourned at 1600pm. Date for the next meeting is scheduled for Friday 1<sup>st</sup> November at 1400.

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Perit Charles Buhagiar  
Executive Chairman BICC

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Frans Chircop  
obo Secretary

## BUILDING INDUSTRY CONSULTATIVE COUNCIL

### Research and Innovation Meeting

Date: Friday 1<sup>st</sup> November 2019

Venue: BICC Boardroom – 36, Old Mint Street, Valletta

#### Members Present:

Charles Buhagiar (CB)	Executive Chairman BICC
Martin Debono (MD)	Personal Assistant to Chairman
Muriel Grech (MG)	MDA
Ruben P. Borg (RB)	SBE Malta
Christopher Cousin (CC)	ERA
Frans Mallia (FM)	PA
Dr. Nadia Theuma (NT)	
Dr Konrad Xuereb	KTP
Dr. Rebeccah Gonzi Dalli (RGD)	KTP
Sergio Tartaglia (ST)	
Dr. Mary Gauci (MG)	

#### **Approval of Minutes**

Mr. Frans Mallia drew the attention that he was present during the previous meeting as opposed to what has been reported in the minutes.

Minutes of previous meeting approved

#### **Matters arising from the minutes of the previous meetings**

FM requested a clarification of the statement in the minutes of meeting that held that *“It was concluded that the current policy of excavating for the provision of more garage spaces ought to be completely re-thought”*.

CB, in order to clarify the matter held that this comment related to the current difficulty that the Planning Authority has with excavation waste. We need to find a solution to address excavation waste vis-à-vis parking problems caused by lack of excavation for underground parking. This can be addressed if the policy is amended and includes specific incentives to address parking problems, such as that of allowing higher buildings to compensate for ground level and above ground level parking.

FM emphasised that the current policy to limit excavation has resulted in a loss of around 25,000 to 30,000 car spaces. Applicants are requested to pay a compensation for not having enough car spaces in their development, and such compensation goes into the planning fund. CB emphasised again on the cost of excavation waste, which at times, it would be easier for developers to pay the compensation rather than provide underground parking facilities as excavation costs and disposal of excavation waste are quite high. This is increasing the parking problem, which should be addressed through policies. PA has to think out of the box and if needs be, provide a policy encouraging centralised car parking facilities. FM held that this is a good idea but its implementation is challenging. In principle it's good but it is very hard to implement.

MD held that through experience of living abroad, centralised parking is highly beneficial for both Government and users if these are developed well. For example, one can develop a holistic plan which incorporates adequate infrastructure, such as facilities for charging stations, etc. FM agreed with MD's recommendation, but emphasised that such parking can only be carried out if these are part of an integrated legislation/regulation and comprehensive policy

CB recommended that BICC carries out a study and develops a paper to link all subjects discussed which could address the issue of excavation and the disposal of excavation material, car parking, the benefit of having electric vehicles and recommend amendment in policies to address such issues. One recommended policy can be that of allowing higher buildings to compensate for ground/elevated ground level parking

SB reminded the members of the board regarding the S19 conference, and stated that during this conference, the development of smart cities will be discussed. Smart cities shall link all the issues discussed during the meeting, such as transport and waste amongst other factors. Smart cities shall also deal with sustainability auditing of all areas to address the issue of climate change. FM suggested that Malta enters into projects with the EU to assist in a national strategy on developing smart cities.

### **Introduction: Circular Economy of the Role of the Construction Industry – Waste**

Dr. Nadia Theuma and RB explained the effects of construction waste and how it relates to circular economy, and how one can look at waste, visas the construction industry.

### **Presentation – Circular Economy**

Dr. Nadia Theuma delivered presentation on circular economy, which presentation shall be sent to all participants.

The presentation shall be sent to BICC who shall then forward a copy to all members

### **Questionnaire on the Circular Economy**

All members present have filled in an online questionnaire related to circular economy

### **Feedback Session and Discussion**

ST raised the question as to whether construction waste is considered as hazardous waste. NT replied that excavated material is not deemed to be hazardous unless it is contaminated with specific hazardous material such as asbestos.

CB raised the concern that due to the size limitations on site, recycling of construction waste cannot be done on-site in Malta but is ideally carried out in a quarry. However, we are now faced with the issue that there is not enough quarry space for the construction material being generated. NT emphasised that we need to find solutions to this problem.

RB-replied that one such solution could be to use construction waste, particularly franka stone to produce bricks. Studies have been carried out in this regard, and it has been concluded that franka stone can be crushed and used to produce bricks, which can also be CE marked, which makes them better than the current bricks as these are not certified. This issue is to find a partner to take over the production of such bricks as the initial investment is quite high and once brick producers are currently selling all their productive, it is difficult to convince them to invest in new technologies.

MG commented that people are afraid of change, but once the technology starts to work, others will follow. This is how the market works. CC suggested that the government can create the need for such type of bricks through its green public procurement requirements in tenders. MG1 suggested that the government can help initially with this initiative through a PPP and then privatise.

RB emphasised that cost could be a barrier for investors. He also said that other studies have been made to determine the use of franka construction waste. This included in producing small bricks. However, studies concluded that it would be best to produce traditional sized bricks from construction waste. This proved to be best option, required the least technological investment, and is the most load bearing type of bricks. This brick can easily be used for partitions. The conversion of globigerina stone waste in a usable brick will also break the misconception that franka stone cannot be re-used.

MD suggested that a code can be developed to oblige developers to dismantle rather than demolish properties to be in a better position to recycle specific material. CB reminded that old buildings are dismantled, and it is only newer buildings that are demolished. MG raised the issue that dismantling will create a storing of material problem. Contractors are already encountering this issue and at times suffer the consequences by being fined for storing construction material in an area where this is not permitted.

CB recommended that waste recycling depots can be a solution but these are not possible currently as it is difficult to obtain a Planning Authority permit. MD held that we should start to think laterally. In fact, in Copenhagen, a recycling plant has been developed in a city centre and a ski slope has been built on top of it. This shows that where there is good planning, everything would be possible.

RB recounted that some years back, some people from Austria carried out a visit in Malta, they have commented that Malta has an issue with excavation waste but if an investment is made, this can be converted in an opportunity rather than a threat. The solution is to convert waste to a usable product, such as bricks. Once this starts to be implemented, bricks made out of franka stone will compete with a product that is not even certified, hence, it should have a competitive edge.

CB commented that in Malta we have an issue to transpose research carried out to marketable products. BICC can help in this and can work on a paper.

RB reminded that results of studies carried out have been forwarded to ERA, who, on their end are working on a strategy for public consultation. ST added that that this strategy addresses most of the issues that have been raised during the meeting. Once concluded, this study shall be passed on to BICC to be discussed between all entities involved. MD further emphasised that currently we have an opportunity to consolidate all these strategies, policies and regulations in a code, and we should welcome this opportunity and work hard to attain good results. ST agreed on this comment and held that we need to ensure that all policies are coherent and not fragmented and should work towards one common goal for the interest of everyone.

Adjournment

Meeting adjourned at 14:00. Next meeting will be held on the 3<sup>rd</sup> December, 2019 at 14:00hrs.