Approaching Near Zero Energy In Historic Buildings

Deliverable No: DT2.3.1

Deliverable Title: Masterplan(s) for Historic Buildings

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Deliverable Type: R

R = Document, report
DEM = Demonstrator, pilot, prototype, plan designs
DEC = Websites, patent filing, press & media actions, videos, etc.

Dissemination Level: PU

PU = Public
CO = Confidential, only for members of the consortium, including the Commission Services

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1. Background to the Project

The Energy Pathfinder Project -Approaching Near Zero Energy in Historic Buildings (EP Project) was approved by the Interreg Norther Periphery and Arctic Programme (NPA) in 19.06.2019 as Project No 360. This Deliverable is a product of EP Work Package T2 (Co-operative Design Methodology, Process and Retrofitting), and is Deliverable No: D2.3.1: Masterplans for Historic Buildings.

The Master Planning Activity (2.3) is defined by the Project as:

Co-design workshops that will communicate, generate, and share Master plan ideas with the wider community. Methods will be developed in response to earlier observations, including Lego Serious Play, Idea Farms, Storyboarding and Design Sprint activities.

We will converge stakeholders to review the master plan through a 'Dragon's den' style workshop; design teams will present the Masterplan to the community 'Dragons' - The aim will be to provoke discussion, rather than decisions by committee.

Significant ideas or concerns will be reviewed and considered. We will deliver an interactive pop-up exhibition to disseminate the master plan. Delivered in a local venue, the exhibition will invite the wider community to engage, explore and feedback.

Deliverable 2.3.1 (Masterplan) is described as follows:

In every instance where the co-design methodology is applied, a Masterplan will be produced, that represent the conclusion s of the process. This will include, user preferences, technically appropriate measure, potential sources of funding, social and financial impacts.

Out of the five Demonstrators in Energy Pathfinder Partner regions, only two Demonstrators have produced a completed Masterplan. They are Myross Wood House in West Cork, Ireland, and The Rector's House in Raahe, Finland.

The current Deliverable 2.3.1 refers to the Master Planning process and results for Myross Wood House, in West Cork, the CCAE (UCC) Demonstrator.

2. Selection of the Building

In 2019, when the Energy Pathfinder Project was approved, Myross Wood House was identified by CCAE as a historic building in rural West Cork, about to be vacated by the Missionaries for the Sacred Heart (MSH) an international missionary order with a branch in Ireland.

While the EP project was being prepared, the use of the property was being negotiated by Living Commons, a group working with asylum seekers. Energy Pathfinder initially worked with this group, in the expectation that they would be the eventual user group for the purposes of the Project. The Living Commons proposal did not go ahead.

Energy Pathfinder then approached a locally based environmental group, Green Skibbereen (GS) and proposed to this Group that they continue negotiation for use of the building for use as a community environmental centre. GS agreed to this and continued the negotiation which was successful, and the building was handed over to GS on a 5-year license, which allowed feasibility proposals to be made for its short long-term use. The GS board that is made up local environmental activists and businesspeople.

Fig. 1 Launch of Green Skibbereen

3. Financing The Masterplan

The Energy Pathfinder NPA Project budget did not contain sufficient funding for the development of a Masterplan. CCAE considered that the work required external consultancy as the staff time available within the project was insufficient to do the work justice. In discussion with the new user group, Green Skibbereen, it was agreed that the group would apply to the SECAD (West Cork LEADER) for additional funding for the drawing up of a Masterplan (architectural, and business feasibilities) for a new environmental project based at MWH. This application would be separate but complimentary to the support received from Energy Pathfinder and NPA.

In July 2020, Green Skibbereen CLG were awarded funding under the LEADER Programme 2014-2020 after our application was approved by the West Cork LCDC (Local Community Development Committee). The funding was granted for the purpose of commissioning feasibility studies for the proposed Centre of Excellence for Climate Action and Sustainability (CECAS) at Myross Wood House, Leap, Co. Cork.

Tenders were issued as result of this funding, and results were as follows:

- An Architectural Feasibility, which was won by Brady Mallalieu Architects (BMA) and
- A Business Feasibility, which was won by Exodea Consultants.

Over the following months a series of consultations were held between consultants and the Board of GS, developing the details of these feasibilities. Consultants and Board Members also conducted consultation with other stakeholders, such as, Cork County Council, UCC (CCAE and ERI), NCE Insulation and others that were incorporated into the feasibility reports.

Deliverable DT2.3.1 aims to summarise the extensive work that developing these Feasibilities involved, which in effect constitutes a Masterplan for Myross Wood House. This Deliverable and the source documents referred to in the Appendix aim to provide a guide for the Board of GS and other owners and users of historic buildings that want to follow a similar path.

In keeping with the focus of Energy Pathfinder on energy, technical and building issues we are focusing primary on the building itself and its potential uses, as proposed by the BMA Feasibility Study. The business and financial considerations explored by Exodea Consultants are considered important but outside the scope of the Energy Pathfinder Project and the current Deliverable. Owners and users of historic buildings are invited to explore these findings which they will find in the source documents linked to this Deliverable.

4. The BMA proposal

The winning tender for the architectural feasibility from BMA contained the following:

4.1 Principles and Process

BMA applied their standard architectural approach to developing the Myross Wood House Masterplan. This is described by the as follows:

All architectural, urban design projects consist of three input components:

1. The client brief and programme for the project
2. The context of the project - i.e., the site, existing building, town, or city
3. The architect/ urban designer’s creative intentions, ideas, and sensibility.

The Masterplan grows out of the combination and interaction of these three inputs.

The CECAS project aimed to develop a knowledge Centre that would spearhead the drive towards zero carbon in West Cork through education, advocation, explanation and inspiration via events, exhibitions, education, publications, monitoring and experimentation both physical and digital. CECAS aimed to be a centre for facilitators to support climate action and a catalyst for science-based solutions to sustainable questions.

4.2 Baseline

For the masterplan to create a new regional Centre for Excellence for Climate Action and Sustainability (CECAS) in Myross Wood House and Estate in West Cork, Ireland, the detailed issues which needed to be addressed in each of the 3 inputs were as follows:

4.2.1 The Client Brief and Programme for the project

4.2.2 The Client Vision

- The purpose of the new CECAS, why it was needed and the political context.

4.2.3 The Client Team

- Who is behind the project.
- Principle and target stakeholders.

4.2.4 Why is CECAS Located in West Cork

- The benefits that CECAS will bring to the region of West Cork and further afield.

4.2.5 Local Community Profile

- Local industries and employment.
- Community groups and organisations

4.2.6 Activities and Uses - the Client Brief and Schedule of Accommodation

- How CECAS will operated and disseminate its message.
- How CECAS will fund its operation - activities and revenue generation.
- How CECAS can focus on potential funding sources

4.2.7 Case Studies and Examples of Other Successful Similar Projects

4.2.8 The Context of the Project - Myross Wood House and Estate + West Cork region

4.2.9 Location - Description

4.2.10 Record of the Existing Buildings and Estate

- Existing uses
- Existing drawings set
- Condition survey
- Operation survey
- Principal building fabric issues
- Circulation system
- Access and linkages
- House and garden relationships

4.2.11 History of the House and Estate

4.2.12 The Statutory Framework for the project

- Heritage framework
- Planning framework
- Ecological framework
- Transport framework

4.2.13 Sustainability Framework - Current Good Practice in Sustainable Design

- Energy and building fabric
- Heating and power options
- Sustainable energy communities
- Wastewater treatment, rainwater harvesting and grey water systems

4.2.14 Site Constraints

- Topography
- Climate
- Existing features

4.2.15 The Creative Intentions, Ideas and Sensibility of the Architect's Master Planner.

This was the creative input of the architects giving physical shape and operational proposals to the objectives expressed by the Client Group.

The final sections of the Masterplan are the design proposals resulting from consideration of the three inputs above. In the case of CECAS, a phased approach was developed which recognised the need for the client body (CECAS) to become established and grow alongside the activities in the buildings.

This approach was then translated to a proposed work plan which was fleshed out during the year of Masterplan development.

4.3 Work Plan

The Work Plan for the project proposed by BMA after discussions with CECAS was in consecutive and cumulative phases, as follows:

4.3.1 Phase A - Start-up

To be accomplished immediately and quickly establishes a presence for the client on the site. Existing rooms are used to help generate an income and to host events.

4.3.2 Phase B - Short-term

Having established a presence on the site, the inhabitation of the building expands to create spaces for local businesses, researchers, and makers. Internal and external spaces are used for collaborative initiatives which explore environmental themes. The courtyard becomes a collective laboratory which is open to the public.

4.3.3 Phase C - Mid-term

By this stage the work and presence of Green Skibbereen is well established and the building will be occupied more fully. Section by section each part of the building will be retrofitted to improve energy efficiency and suit its new activities. The building and site now gather a rich mix of uses and visitors including the CECAS visitor's hub, event spaces, business incubators, workshops, a research base and revenue earning uses such as holiday lets for tourists The site is now managed more fully, parts are re-wilded and the walled garden brought back into productive use.

4.3.4 Phase D - Long-term

More substantial physical additions are proposed in the long term once the work of the group has been consolidated and CECAS's presence has become well established in West Cork. A new hub space is built on the back of the old house addressing circulation and accessibility in the building, positively addressing the courtyard, and creating additional event spaces. Activities in the courtyard are sheltered under a new roof enabling a wider range of activities to be carried out throughout the year.

Within each phase a list of individual projects is highlighted in the manner of a shopping list applicable to different funding sources and different fabric requirements, growing in ambition as the CECAS project develops and becomes more established.

4.4 Masterplan Development

CECAS agreed with BMA a complex client brief made up of several different uses. The Masterplan envisages these as a community of interrelated 'hubs', developed in more detail in item 6 below. The Masterplan addresses the way forward for the project in terms of the implementation through funding sources, statutory permissions required and areas for further research. Connected to this are proposals for a proposed community collaboration process and co- design procedures.

The actual process of Masterplan development was as follows.

4.4.1 Identifying needs

Consultations held between BMA and the Board of GS from July 2020 to 2021 explores a series of key issues that were then reflected in the feasibility study.

MWH traditionally had a central role for the local community as a venue for religious events and activities, but it was also used by the community as a meeting place for different interest groups and the forest access provided a woodland walk that was popular with residents. The building had also provided accommodation for retreats and trainee missionaries, and other returning from missions in Africa, Asia, and South America. It was already central to the local community.

The Board of GS proposed that the current and long-terms interests of the local community could be better served by continuing the use of the building as community meeting place but also as a centre that could promote awareness and action on climate change. The centre could promote community engagement in key issues related to climate change and biodiversity and have a local focus, supporting and developing community-based initiatives and awareness through events, exhibitions, and demonstration projects. The building contained a few characteristics that made it an ideal test bed for issues related to energy efficiency, renewable energy integration, biodiversity, and agriculture. For example, the adjacent woodland area included a Special Area of Conservation (SCA).

4.4.2 Scoping the Location

The location of such a Centre at MWH was considered very appropriate, as it could provide an opportunity for increased tourism in the region. The building is just off the Wild Atlantic Way (N71) and close to many local historic, cultural, and environmental interest points. A range of activities could be developed at the house, providing opportunities for innovation, training, and employment.

4.4.3 User and Stakeholder Consultation

Consultants and board members held a series of consultations with interested stakeholders who contributed to forming a holistic vision. These included : the MSH, UCC (CCAE and ERI), NCE Insulation and SESystems, Carbery Housing Association, the Carbery Group, the Ludgate Digital Hub, Cork County Council Environment Directorate, Ludgate Centre Digital Hub, the Irish National Forestry Foundation, and others Some of these groups have continued developing joint initiatives with CECAS.

5. Location : Myross Wood House and Estate

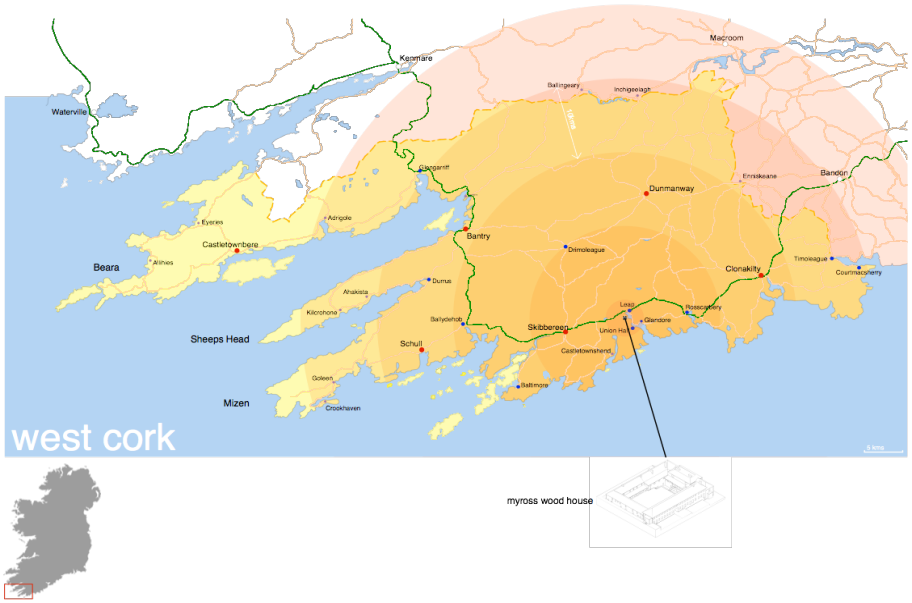

Fig.2 Myross WoodHouse (Source : BMA Architectural Feasibility 2021)

5.1 The House

MWH was originally a country house dating back to the 18th century which was purchased by MSH in 1946 and converted for their purposes. The house is situated off one of Ireland's main Southern highways, the N71 (Wild Atlantic Way). It has around 3,000 m2 floor area. It comprises 100 acres of fields and woodland including a Special Area of Conservation (SAC) and is 2 kms away from the town of Leap, 8 kms form Skibbereen and 20 km form Clonakilty. It its located in a very central position in relation to rural West Cork

The house itself is a rectangular in plan having a courtyard in its centre. Two story in height, the buildings have pitched roofs punctuated with chimneys. The house has a formal symmetrical frontage to the northeast approach which extends in an L-shape around one corner. The frontage is handled as three separate volumes with hipped roofs and some ornamental detail around windows, corners, and doors to the rendered façades. In order to mitigate the sloping site each wing of the house is set at a different floor level, the adjusting eaves and the ridge lines around the perimeter.to the northeast and west sides are surrounded by a retaining wall which rises to first floor level.

The courtyard is entered through the southeast façade through an archway in this wing. Elevation within the courtyards in this wing is similar to the exterior expression. Two other sides of the courtyards have a single-story lean-to cloister. The fourth side is to the rear of the front building having a single storey flat roof and lean-to extension separate from the courtyard by an external basement space crossed by a bridge.

Fig. 3 Myross Wood House

Fig. 4 Waterfall and SAC

5.2 - Grounds and Gardens

The house is situated on an estate of 100 acres which combines woodland and opens space, a walled garden and several outbuildings. The various parts of the estate are connected pathways in various states of repair.

The house is also surrounded by cultivated garden spaces. This includes a vast front lawn that slopes down to the Glandore Estuary, this extends to the southeast of the building and an archway that gives access to the courtyard at the back of the main house. To the north there is a walled garden, separated from the rear of the house by a retaining wall. The retaining wall extends to the southwest of the building becoming the edge of a more loosely defined set of garden spaces at the rear of the house.

5.3 History

Myross Wood House was built between 1752 and 1785 for the local vicar, the Rev. Arthur Herbert. The house then changed ownership to the Earl of Kingston, who possibly lived there until 1819. At this stage the courtyard and the retaining walls were probably built. Also, the walled garden and other surrounding features. The house was auctioned in 1826 and was purchased by the Townsend family who lived there until 1944. The entire estate was bought by the Missionaries of the Sacred Heart in 1946 for £4,600.

The house was used by the missionaries as a “study house” becoming a retreat centre in the 1970’s. During this period improvements were carried out to the building, and the porch was rebuilt. Unfortunately, PVC windows replaced the original Georgian sash windows.
In 1959 the south block was rebuilt to provide ranks of single bedrooms and a large auction room at ground level serving as the main chapel. Lean to extensions around the inner courtyard have been added to improve circulation and office spaces added to the rear of the main house. Rooms were subdivided to provide additional bedroom space. Other alterations were carried out during this period. The grounds and forest were devastated by Storm Helen in 2018, and MSH have lacked the resources to fully regenerate and reinstate the grounds and forest area to their former state.

6. BMA Masterplan Proposals

6.1 Development Hub

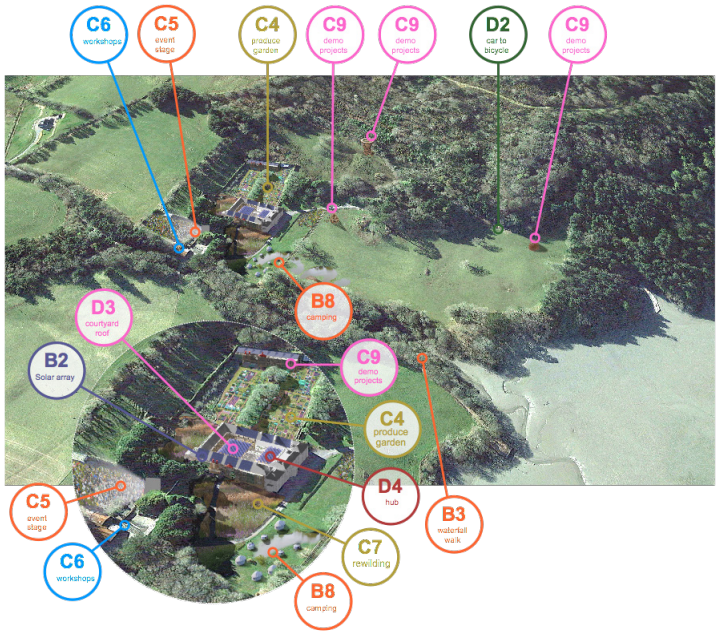

Fig. 5 Proposed Hubs at CECAS (Myross Wood House)

Building off the current layout and different parts of the building, a series of Hubs could be developed, which would allow the rolling out of the various activities proposed by CECAS:

- Information Hub (reception area)
- Events Hub
- Training and research Hub
- Central Services Hub
- IT Hub
- Residential Hub
- Café
- Business Hub

Each one of these Hubs corresponds to a section of the building. The division into different hubs would be the basis for the proposed phased development schedule of the different activities and their hubs.

6.2 Phased Implementation

BMA proposed a phased approach to the development of Myross Wood House:

A. Start Up
B. Short Term
C. Mid Term
D. Long Term

There are various reasons why such a phased approach is required at MWH:

6.3 Legal Interest - 5-year License

MHS was unwilling to give a license for occupation of more than 5 years to GS. They explained the role of their board of management was time limited, and the next board might not agree on arrangements made. This limitation meant that GS could not apply for or secure significant public funding or private investment to carry out repair or improvements to the building. A phased approach would provide the possibility of exploring options and providing proof of viability during an initial 5 year “trial “period. The board of GS is currently approaching MSH will a view to negotiating a legal interest of at least 15 years, which would allow the Group to carry out improvements beyond the initial phases.

6.4 Cost of Operations

When GS took possession of the building, no property survey or costing of required repairs had been carried out. The board of GS with the help of the EP project has now made a start in establishing this, surveying the building, and securing costings for repairs from local builders. Although this is now known, the 5 years license being the only legal interest held by GS in the property, makes it impossible for GS to apply for the required funding or seek investments. GS has agreed to pay a substantial rent to MSH which helps them meet the considerable costs of heating the building (and other costs). This also limits the amount of revenue that GS can spend on the buildings.

6.5 Feasibility of activities

Although some guidance was provided by the feasibility studies, the identification of sources of revenue income from the centre has proven a matter of trial and error. Many grant applications have been made, some hobbled by the limited legal interest held by the Group. Many revenue earning activities like letting rooms, letting offices and workshop space, holding courtyard markets, conferences, and other events, have also been tried, which have demonstrated an element of viability. However, the limited legal interest and the lack of identified improvement also acts as a deterrent to potential funders and revenue generation.

To date the initial phase has been moderately successful, allowing GS to continue operating the building as a community centre and allowing it and its grounds to be extensively used by local groups. But we have to date been unable to secure any significant funding that could guarantee its sustainability into the future.

7. BMA Materplan Phases.

7.1 Phase A - Start Up

Fig. 6

-Develop 'pop-up' revenue earning facilities that require low expenditure to active & generate income for centre (A1, A2 & A4)

-To put management systes in place to meet the obligations required of them by the license with the building owner.

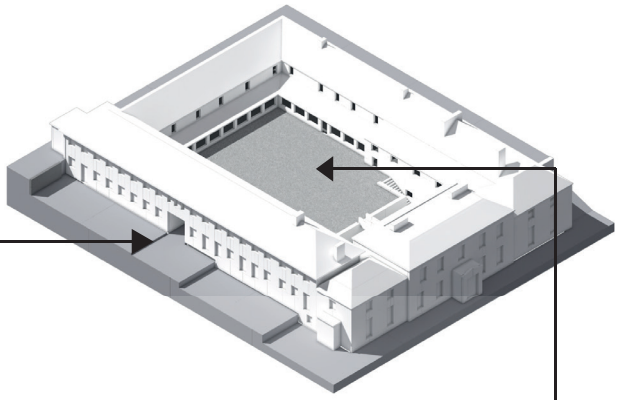

Fig. 7

Fig. 6 & 7 - Illustration of Start Up Phase

This phase would develop the following activities:

A3 – CECAS Hub

This would provide an initial operating centre for the GS board to manage the use of the building. It would involve using the southeastern corner of the building as a visitor hub and reception centre. This corner has an adjacent kitchen and toilet and is accessible by ramped access from the courtyard. This hub would provide a space for meetings or welcoming causal visits. The wall around the hallway can be used for displays and exhibitions. The hub also connects to the courtyard and allows the possibility of outdoor events such as markets or exhibitions. The hub would provide an easy starting point for CECAS activities,

A2 – Rent rooms

The front section of MWH includes a collection of bedrooms in good decorative order fitted with an en suite bathroom and these can be offered for rental. The kitchen and the lower ground floor function rooms are available for breakfast and other catering requirements. This could quickly establish an income stream for CECAS.

Single rooms also available in the two wings of the building and these can be offered for overnight accommodation (through Airbnb) and as single workspaces for local entrepreneurs, crafts persons, or artists. These provide residential accommodation but also office and light workshop facilities which can be used during the day.

A3 Enable functions

The ground floor of the building is in good decorative order and consists of a suite of rooms which can be catered from the well-equipped main kitchen. These spaces could be hired out for as variety of different uses, such as business meeting and presentations, small weddings and social functions, community events, yoga or keep fit classes, etc.

A4 Caretaking

The front rooms of the house could be used to create a room for a board meetings. One wing of the house could be good sized three-bedroom flat. Some minor modifications would be needed to create a kitchen, bathroom and a front door.

7.2 Phase B - Short-Term

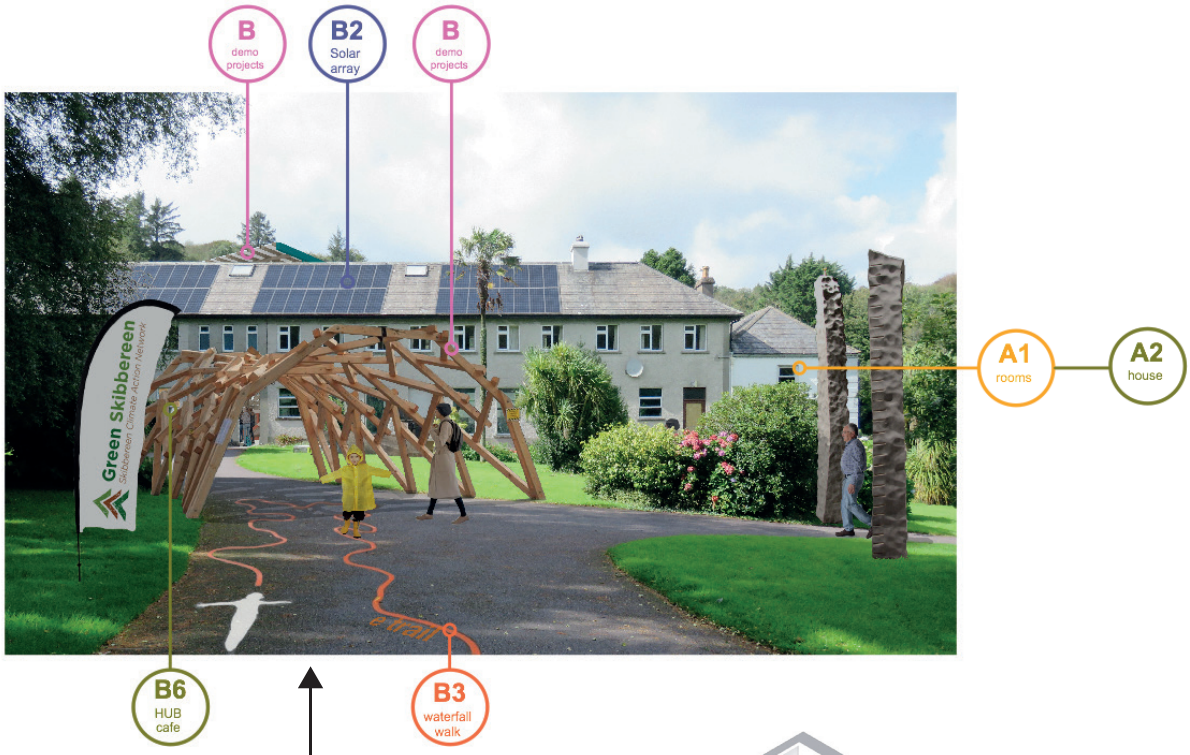

Fig. 8

-Develop 'pop-up' revenue earning facilities that require low expenditure to active & generate income for centre (A1, A2 & A4)

-To put management systes in place to meet the obligations required of them by the license with the building owner.

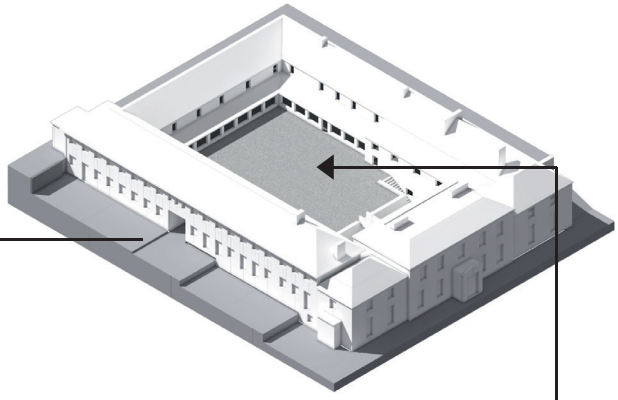

Fig. 9

Fig. 8 & 9 - Illustration of Short-Term Phase

B1 Entrance marker

In order to better mark the location of the Centre, BMA recommended that an iconic entrance marker could be commissioned from a local artist or as an architectural student project. It should be unusual in appearance and draw attention from passing cars.

B2 Solar array

The existing building has pitched roofs with large expanses sloping on the south-east. PV panels in combination with solar thermal panels could provide electrical and thermal energy for the building and become, and provide a visible demonstrator of renewable energy and sustainable intervention, reflecting the ethos of CECAS

B3 Waterfall walk

The grounds already contain a rustic walk past the waterfall down to the estuary edge and quayside. The reports proposed that the walk, which passes through the SCA area, could be improved, and developed as an “eco-walk” to helps showcase the biodiversity of the woods and the water cycle and to provide visibility for the various eco-systems at work in and around MWH. The walk should be properly signposted with information boards, steps, and railings on the edges for safety. B3 would be a test case for the more ambitious proposals outlined in C1 Woodland Walks in the next Phase.

B4 Rooms for accommodation

This would increase the rental of rooms identified in the Start-up phase. There are 53 rooms in MWH which could be used in different ways:

These rooms have diverse designs and layout, with the ones at the front being larger and ensuite and the ones at the back being more compact study bedrooms with common toilet and shower facilities. All of these could be used on a bed and breakfast basis, as a hostel for cyclists, or for students or school aged children, for conferences, residential trips, or study visits. The number of rooms used would depend on planning regulations. Catering arrangements would have to be carefully organised, making use of the two kitchens available (which are not adjacent to the rooms). Accessibility to these rooms is currently limited, and access needs to be improved, say by the introduction of ramps or lifts or additional staircases (as suggested in Phase D)

B5 Rooms as business units and workshops

Some of the 53 bedrooms could be let out to entrepreneurs, artists or craft persons as office or light workshop accommodation.

The group of rooms on the ground floor around the L shaped cluster could be used for business startups and researcher laboratories. These could be offered for rent

where individuals rent a desk or workstation. These units would require toilet and refreshment area and would require additional funding.

B6 CECAS base & HUB Café

The CECAS Hub could be developed or completed by developing a Cafe and reception area, which could service the rooms available upstairs, which are accessed from an existing staircase. The existing kitchen walls could be removed to create a large open plan space. A CECAS staff member could be based there to supervise the core activities of the hub and mage the rooms upstairs. Existing toilet facilities should include a wheelchair accessible toilet.

B7-Wellness Centre

The former Chapel Hall could evolve into a wellbeing centre. Activities carried out could include mediation, counselling, yoga, and related personal therapies. The space could also provide a spiritual centre, ecumenical and inclusive in purpose.

B8 Camping

The grounds around MWH also have potential for use as a camping location. This would bring additional visitors to CECAS and establish another revenue stream. Camping could also help visitors connect with nature and the ethos of the Centre. Discreet camping infrastructure could be provided in collaboration with architectural students from CCAE. Support facilities including toilets and showers, fresh waste, and waste disposal would be required either on site or in the main building. The provisions of camping facilities will require additional input by GS in terms of management and maintenance as well as marketing.

B9 Damp/Retaining Wall

The northeast and northwest edges of the building are surrounded by a retaining wall that is the cause of various damp problems. The permanent problems created by this arrangement will need to be addressed before any major works within the property itself.

7.3 Phase C - Mid-Term

- The third phase of activities occupies the remaining parts of the existing house and makes stronger physical connections to the wider site. Holiday lets are included o the upper floors & the walled garden restored and brought back to life.
- Events are envisioned within the garden & walks identified & enabled within the estate. These events & walks can be developed to evolve the ethos of Green Skibbereen

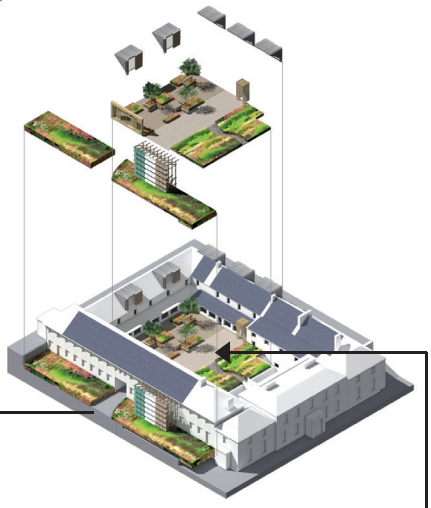

Fig. 11

Fig. 10 &11 - Illustration of Short-Term Phase

The Mid Term phase would aim to use the remainder of the property and develop a more direct connection with the overall site. Holiday lets are included in the upper floors and the walled garden restored and brought back into use. Improvements are assumed in the garden and grounds and walks brought back into use within the estate.

C1 Woodland Visits

We would aim at fuller reintegration and use of the surrounding woodland by residents and visitors. The woods not only has leisure and eco-tourism potential, but also actually promote biodiversity and conservation, particularly the SAC area included. This area is noted by the EU for the presence of the endangered Killarney Fern. A forestry strategy will be developed, for restoring the woods and making them safe for visitors. Parts of the wood could also be used for pilot sustainable construction, which can later be rented out on Airbnb. This could be carried out in conjunction with CCAE architectural students, or house building /manufacturing companies.

C2 Holiday Lets

The upper floors of the two rear buildings could be converted into spaces with independent access from around the perimeter of the house. This could be achieved by bridging over the retaining wall and creating a separate entrance in each side of the proposed rental units. These units could be one bedroom or two bedrooms.

The creation of extra rooms would involve conversion works and upgrading that could be developed using sustainable materials and technologies and provide demonstration projects with training possibilities. The expansion of the accommodation in the building will require additional input by GS in terms of management and maintenance as well as marketing.

C3 Direct link to the Garden

A direct link from the courtyard entrance (which is proposed as the main entrance) to the walled garden would allow more direct access for visitors and users to the walled gardens. It would also allow garden produce to be more readily available to the café and kitchens. The garden can have a food production role but can also be used for small building projects.

C4 Food production

The walled garden could be developed for organic farming, producing food, vegetables and flowers which could supply the kitchens of the main building and be sold to visitors. Training could be delivered to students and visitors on organic farming techniques.

C5 Event Stage

The south of the house provides an ideal site for an events area and stage that could

be occasional or developed as a programme. They could be one weekend or lasting several days and could be linked to the residential and catering services provided. The events stage design and construction would also provide an opportunity for a sustainable design and construction exercise, possibly involving architectural students.

C6 Outbuildings and workshops.

Existing maintenance stores and workshops to the south of the building could be repurposed as connected workspaces for artist or crafts persons, or event small scale makers. These could be manual crafts, food, or other maker productions. These buildings could also be useful as storage space for used furniture and equipment for other activities taking place in the building, or for goods or materials for recycle or reuse. These spaces could be the basis for the Circular Economy Hub. Enterprise initiatives such as this are likely to depend on artists, crafts persons or entrepreneurs becoming involved with CECAS, rather that CECAS attempting to set up such activities directly

C7 Re-wilding

The forest and grounds around the buildings contain a variety of terrains and eco-systems. (e.g., woodlands, estuary edges and freshwater streams, cultivated gardens and lawns). An option for some of these areas could be re-wilding, to help encourage more eco-systems and diverse wildlife. Specific sites would have to identified and set aside, where natural processes were allowed develop. The aim of this would be to repair damaged ecosystems and degraded landscapes. Re-wilding has been proven to promote and protect biodiversity.

C8 Innovative building retrofitting

The considerable retrofitting needs of the house and its annexes is both a challenge, and an opportunity. Based on addressing these challenges CECAS could identify and develop new appropriate and innovative approaches to the energy efficiency and the integration of renewable energies in existing buildings. This would have a replicator effect which could be applicable to thousands of homes that need similar retrofitting in Ireland and elsewhere

Key issues identified, such as heat loss, air tightness, dampness and mould, dependence on fossil fuels, etc. could be investigated aiming to develop and pilot low energy and carbon positive approaches to repair and retrofitting, combining active, passive and hybrid environmental strategies. (e.g., energy storage, smart meters, Trombe walls, phase changing materials, solar chimneys, etc.) These initiatives could be researched in collaboration with universities, research agencies and private companies, and funded by national or EU programmes. These activities would provide priceless opportunities for training and demonstration

C9 Environmental demonstration projects

The house and grounds at MWH provide multiple opportunities for research and demonstration projects. These could involve collaboration with universities, research agencies and businesses and may be funded or part funded by national and European research and development programme (EPA R&D funding, Horizon Europe, or Interreg Funding). Demonstrator projects could include energy efficiency, integration of renewable energy sources, circular economy, biodiversity, low impact agriculture, etc.

7.4 Phase D - Long-Term

Fig. 12

D1 Junction Improvement

With an expected increse in the volume of visitors, the road junction to the site will be improved.

D2 Car to Bicycle

Visitors wil park their cars upon entry to the site and ride to Myross Wood House on bicycles. Less ambulant visitors will be able to use electric buggies

D3 Courtyard Roof

A new roof will be added to the courtyard creating a shelterd space for live-construction

D4

A new hub will be constructed on the rear of the front building and become a focus for visitors. It will address circulation problems in the existing building to make it more accessible.

D5 Couryard

Integrated with the new courtyard roof landscape works will make the space more attractive and stable.

D6 Innovative renovations

The C8 and C9 projects will develop and evolve, improving the performance of the building, adapting it to new uses and providing an ongoing pedagogical resource for visitors who can get hands-on at each stage.

D7

A dedicated new wellness space will be constructed in the courtyard providing a focus for the wider programme which has built-over each stage.

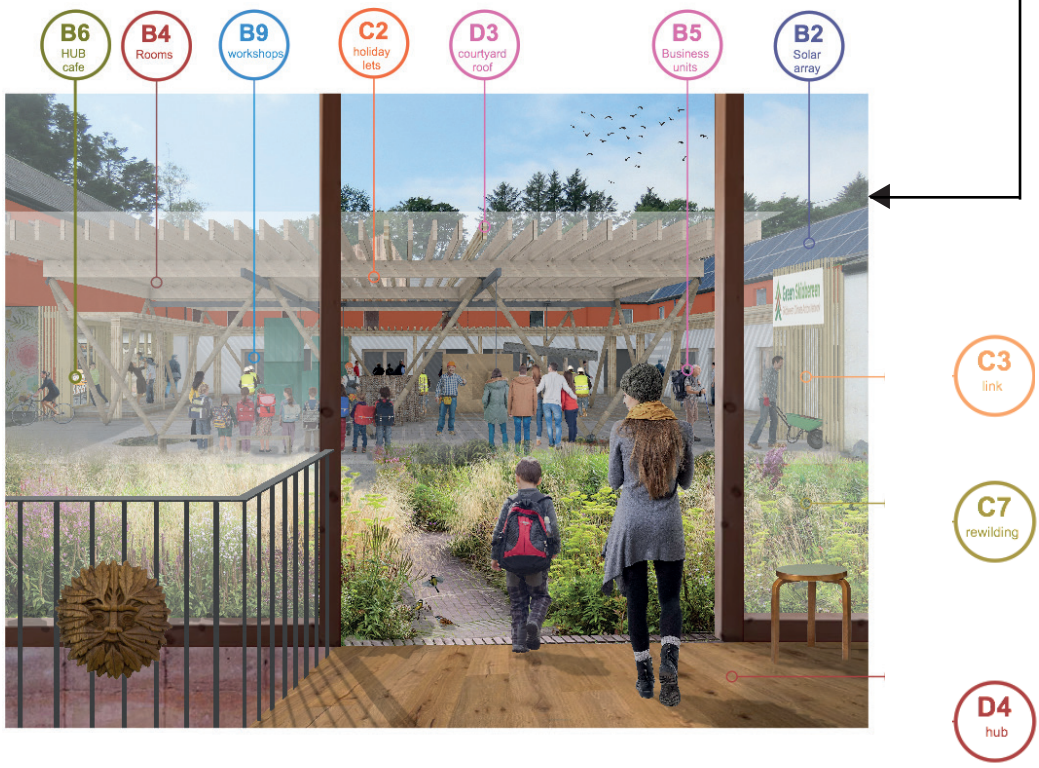

Fig. 13

Fig. 12 & 13 - Illustrations of Long-term Phase

This phase would involve more substantial interactions inside and outside the building. They would be aimed at consolidating the overall operation of the Centre and usability of the building and adjacent grounds and resolving issues around circulation and access to the courtyard. These improvements would be dependent of significant funding being secured.

D1 Junction improvement

The current vehicle entrance to the site from the main road (*N71) is awkward and dangerous, given the angle of access of the entrance in relation to oncoming traffic and poor visibility of oncoming traffic. A widening and improved geometry of the entrance gate would provide safer and more practical access and exit from the site.

A second option (not exclusive) could be to reinstate a second entrance to the west of the current entrance, which is currently unused and, in the past, provide safer and or direct access.

D2 Parking issues and car to bicycle

To reduce the impact of single vehicle access to the house and consequent parking issues around the house, one option would be provided parking facilities near the entrance to the site and ensure an alternative method of accessing the house are provided, either by walking, or bicycle, to the house. Another possibility would be the provision of an electric buggy to transfer visitors to the house. Delivery and emergency vehicles would be encouraged to use the second entrance to the site (see above)

D3 Courtyard roof and D5 - Courtyard.

By roofing the courtyard space, a more useable space would be created, which could allow activities to take place regardless of weather, season, or time of day. A fabrication and assembly, area, suitable for recycling and small-scale manufacture, could be provided. Opportunities for hands-on training or demonstration could be made available. The space could also be used for cultural and musical events, weddings, funerals, and other celebrations, as well as exhibitions and demonstration of innovative technologies.

D4 Building a new rear hub

A new hub could be built at the rear of the front house. This could provide a connecting space for the main house, allowing people to move more freely and circulate. This hub would replace the existing external basement and rear flat roof extensions and provide new facilities that might hist indoor events (served by the adjacent kitchen) and could provide additional operational space for CECAS, allowing it to service a large volume of visitors.

D5 Innovative renovation exercises

Building on the innovative technologies and approaches developed in C3 and C9 above, continued renovation work would ensure a long-term Zero Carbon future for the building. The improvement could be centrally monitored with appropriate equipment and in cooperation with research centres, making use of the new Hub. Visitors would be able to see and explore the value of innovation through minute-by-minute monitoring of their impacts.

8. Conclusions

8.1 General

The sustainable renovation and retrofitting of Myross Wood House have been promoted and supported by Energy Pathfinder and Lead Partner CCAE since 2019. Today the historic building and its grounds continue to be actively used by the local community and facilitate many events carried out by a variety of local organisations. The building also provides office and workshop space for around 20 artists, crafts persons, and entrepreneurs, and regularly accommodates up to 35 people for overnight accommodation, providing catering as required.

These activities are possible thanks to Green Skibbereen, whose voluntary board has continued to operate the building since 2020, paying any revenue secured to MSH to help meet the very high costs of heating (an outdated oil-fired central heating system) as well as electricity, insurance, internal and external maintenance, and ground maintenance, etc.

This has been achieved without any major public or private funding and fundamentally on the income produce by the activities carried out. If anything, it is a demonstration of the intrinsic value and local relevance of a historic building and its grounds, that even without public grants or private investments they can continue to provide an important community function.

The experience of master planning for MWH and the actual implementation of this plan, as far as it has been possible, has demonstrated several key lessons that are worth highlighting:

8.2 Stewardship by a community organisation

The continued use of MWH and the progress made in the exploring and compiling of masterplans for its future would not have been possible without the continued committed effort by the voluntary Board of Green Skibbereen.

8.3 Relevant social and policy objectives

In CECAS, the Board of GS propose the continued use this community hub but also to complement it with up to date and relevant objectives connected to possibly the main challenge

facing all of us today, climate change and biodiversity loss. By combining these two and aiming at community engagement in climate change and biodiversity we aim to continue providing a community resource through the building and its grounds but to add an important tool allowing the community to better face the future challenges the local community is starting to face.

8.4 Tenure Requirements and limitations

For a user group to be able to properly develop and implement master planning for a historic building, it must have sufficient legal interest, of at least 15 years but ideally longer. This is the only basis on which significant funding or investment for essential repairs and retrofitting will be secured.

8.5 Operating costs

There are high costs associated with existing historic buildings, related to the need for investment in essential repairs and maintenance and the costs of a fossil fuel based, outdated heating system that is very costly to run as well as environmentally damaging. To resolve these problems substantial initial investment is needed but such investment is hard to secure especially if the legal interest available is limited (see 8.2 above)

8.6 Baseline fabric repairs analysis

Prior to any feasibility proposals, a current analysis of context is needed (baseline). This means researching the history and background of the building and site, its importance for the community, the needs of the community and stakeholders, the policy and funding framework within which the project is proposed. Also essential are thorough surveys and costing of required and proposed works on the building. This baseline analysis will provide the basis of any proposal made.

8.7 Dividing the building into functional sections.

BMA carried out a very logical architectural analysis of the building, which concluded in the dividing up of the buildings into different sections, which would then provide the basis for the proposal of different phases and the segmentation into different activities and hubs. This analysis of the building seems to us a pre-requirement of an undertaking of phased development and funding of the Masterplan.

8.8 Phased implementation.

Following from the above, the legal limitations, the financial limitations and the sectioning of the building will also predetermine a logical phasing of the proposed work. This sequential phasing allows work to start immediately and not wait until significant resources have been secured, and for resources to be built up as work progresses. In the absence of public or private sector commitment to this process., it is likely this process will have to be followed by many owners and users of historic buildings.

8.9 Financial viability

Master planning can be initiated, but it can never finish. The proposal made will have to be tested in the short, medium, and long term to see if they are workable and viable. The aim must be to continually monitor and improve this process aiming for more certainty in the Masterplan as the project progresses. A Masterplan is ultimately a tool, not an aim.

At present, master planning for CECAS at MWH is entering its second phase. This development has been largely left in the hands of the voluntary board of Green Skibbereen. We are now entering a crucial stage in negotiation with the owners of the building, which will probably determine the future sustainability of the Project.

We are confident that the project will be successful in the long run. Whether it is or not, the experience to date, with the support of the Energy Pathfinder Project, has provided invaluable lessons for us, and for other owners and users aiming to develop long-term energy, social and financial, sustainability of historic buildings.

José Ospina

11.09.22

Appendix A - Source documents

BMA Architectural Masterplan

A1. BMA 513 Preliminary Feasibility Report v1 26.11.20:

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-2_BMA-513-Preliminary-Feasibility-Report-v1-26.11.20.pdf

A2, Brady-Mallalieu-Architects-Report-CECAS-A-Framework-for-Action-2021:

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-1_Brady-Mallalieu-Architects-Report-CECAS-A-Framework-for-Action-2021.pdf

A3. A Brady presentation to RIBA 2020 (zoom):

https://youtu.be/05evTocuK4U

Exodeo Business Feasibility

A4. Exodea_ CECAS Feasibility Study Final (optimized):

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-5_f846-CECAS-Feasibility-Study-Final-optimized.pdf

A5. Exodea_CECAS Draft Promotional Strategy:

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-6-846-CECAS-Draft-Promotional-Strategy-r1.pdf

A6. Exode CECAS_ Consultation with ERI (UCC) Consultation Outcome. :

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1.-8_846-ERI-Consultation-Outcome-1.pdf

A7. Exodea_Policvy Framework for CECAS:

https://www.energypathfinder.eu/wp-content/uploads/2022/07/ST2.3.1-7-846-Green-Skibbereen-Policy-Document.pdf

Rector's House Raahe Architectural Feasibility

A8. *The New Artist Residence Presentation* by Julia Heinonen, OUAS:

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-9_The-New-Artist-Residence.pdf

A9. *Master plan for New Artists Residence at the Rectors House in Raahe*, Julia Heinonen, OUAS 2022(Google translate)

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-10_-2022-Heinonen-Google-Translate-Main-Text-2.pdf

A10 T*hermal Imaging Report for New Artists Residence at the Rectors House in Raahe* by Julia Heinonen, OUAS (Google Translate):

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-11_2022-Thermal-Imaging-Report-Google-Translate.pdf

A11. *Appendices for New Artists Residence at the Rectors House in Raahe* by Julia Heinonen,OUAS (Google Translate):

https://www.energypathfinder.eu/wp-content/uploads/2022/07/DT2.3.1-12-2022-Heinonen-Google-Translate-Appendices.pdf