



## **Tasmanian Planning Commission Draft Guidelines: Macquarie Point Multipurpose Stadium**

### **Submission from Circular Economy Huon**

Circular Economy Huon (CEH) is a community group in the Huon Valley that works together with the community, business and government to make better use of our resources, minimise waste to create a happier, stronger, more sustainable economy. We contend that the criteria of reducing harmful emissions, making the best use of resources and minimising waste must be central to the assessment process for the proposed, Macquarie Point Multipurpose Stadium (MPMS).

These sustainability criteria, in addition to the criteria prepared by the Tasmanian Planning Commission, (TPC) need to address how the stadium will impact the aim of the State Government to become:

*Net zero emissions, or lower, from 2030 – the most ambitious legislated emissions target in Australia.*<sup>1</sup>

The comments and questions in this submission draw attention to the inadequacy of the following sections of the Draft Guidelines. This includes:

#### **Sections 2.2 – Government Policy and Strategy**

There is no mention of the role of RECFIT and government commitments for a net zero Tasmania.

#### **Section 3.2 – Economic Impact Assessment**

This section makes no mention of examining best practice stadium and arenas and the impact of climate conscious stadium development has on the financial viability of the project.

#### **Section 6.0 – Movement**

There is inadequate mention of the importance of developing an integrated transport strategy beyond the immediate grounds of the project and Hobart, and no mention of how

the carbon footprint from the use of ICE vehicles and patrons attending from outside of the state can/will be reduced.

### 8.8 Climate Change

This section mentions the potential impacts of climate change on the stadium but completely ignores the impact that the development and operation of the facility is likely to have in contributing emissions to exacerbate the global catastrophe. This is a serious omission.

In assessing the MPMS the TPC needs to look at stadium and sporting code sustainability developments around the world over the past 15 or so years to assess how it would, or would not, measure up with best practice in the future. The assessment process needs to look at:

1. The macro factors impacting the stadium
2. The construction profile of the stadium
3. Alternative construction components for a more sustainable stadium
4. Proposed actions to achieve efficiency and capacity for sustainability over the life of the project.
5. Two compelling sustainability case studies

In the following five sections there are a total of 39 questions about aspects of the stadium project that CEH considers need to be assessed by the TPC to decide if it should proceed. Many of the points raised are about environmental and climate sustainability, but equally, many points raised will also have bearing on the financial feasibility of the project.

## 1. The macro factors impacting the stadium

### 1.1 Auspicing body

The major push to build a new stadium is from the Australian Football League, (AFL). (It is recognised that there are also ambitions for other events to be held at the MPMS.) It is important to assess whether the AFL understands and practices sustainability measures and what their plans are for the future.

There is a group called *AFL Players For Climate Action* with several hundred members, but according to a report in the Guardian<sup>2</sup> in 2021 the AFL said:

*.....it “fully supports” the initiative, but initially there will be no official involvement from the league or its clubs.*

In the US there is a Green Sporting Alliance.<sup>3</sup> This Alliance aims to increase the implementation of greening initiatives and projects in many sports. Their programs include addressing - energy, , procurement, transportation, venue, waste and water, and food consumption in the stadium.

#### **Q 1 What is the AFL doing now and planning for the future to achieve similar goals to the Green Sporting Alliance?**

The United Nations has also released guidelines for sports to take action on climate change<sup>4</sup>. This includes the reduction of emissions from sport by 50% by 2030 at the latest, with a 2019 baseline and zero GHG emissions by 2040.

#### **Q 2 What are the goals of the AFL for reducing their GHG footprint by 2030 and 2040?**

#### **Q 3 How realistic are these plans, and what are the details? What are the implications for the MPMS?**

### **1.2 The importance of taking a life cycle assessment (LCA) of emissions**

One study of LCA emissions for a stadium in Australia found that the construction impact, in terms of GHG emissions was 24.7%<sup>5</sup>, about a quarter of the GHG impact over the lifetime of the stadium. This shows the importance of assessing the development over the whole life of the project. This is a complex process that needs to consider operational issues over at least the next 30 years. (Suggestions about this analysis is included in Section 4 below.)

#### **Q 4 What is the forecast emissions for the MPMS over the life of the entire project?**

#### **Q 5 What % of emissions are likely to incur in the construction stage?**

#### **Q 6 What is the annual expected GHG emissions breakdown and what will this be in 2030, 2040 and 2050?**

## **2. The construction of the stadium**

Most modern large constructions rely heavily on concrete and steel. However these are both heavy emitters of GHG, with concrete being responsible for 5% of total world CO<sup>2</sup> emissions and steel 8%. Every cubic metre of concrete embodies around 3,500kg of carbon dioxide.

**Q 7            What volume of concrete is scheduled to be used in the MPMS and how many tons of carbon emissions would be produced?**

**Q 8            What is the tonnage of steel projected to be used in the MPMS and what will be the emissions profile from this?**

There will be many other materials used in the construction of the stadium and the associated facilities including electrical installation, plumbing, drainage, terracing, roadways, seating and so on.

**Q 9            What will be the emissions profile of these components?**

There is an increasing awareness of the importance of applying circular economy methodology to the building industry to enable the reuse of materials. While it is hard to comprehend on the front end of a project, but at some time, the stadium will no longer be either fit for purpose, or necessary and so a circular approach is essential.

**Q 10          What is procurement process and criteria for buying stadium components in terms of sustainability?**

**Q 11          What percentage of the materials proposed for the project can be reprocessed and reused?**

Due to the shortage of trades people in Tasmania now and over the next few years, many workers will have to be brought from mainland Australia and overseas. This will have an impact on rental accommodation in Hobart – which is already in extremely short supply, and the travel for the workforce will incur considerable GHG emissions.

**Q 12          How many personnel will be required from outside Tasmania and from where is it expected they will come?**

**Q 13          What are the forecast requirements for residential housing for the MPMS workforce and how will that be met?**

**Q 14          What is the quantum of emissions expected from bringing the workforce from outside Tasmania and during their time in the state?**

## **3. Alternative construction for a more sustainable stadium**

As mentioned above, stadium construction and the awareness of sports organisation to becoming more sustainable around the world has changed considerably over the last 15 or more years. Below are a number of examples that could be applied to the MPMS.

### **3.1 Low CO2 concrete**

In San Francisco, the 49ers chose to use a specialized concrete with a low CO2 formula for their new stadium located in nearby Santa Clara. This is estimated to have reduce the carbon footprint of the stadium by 23 million pounds of CO2. <sup>6</sup>

**Q 15 Can the usage of specialised low carbon concrete be stipulated for the MPMS? What is the CO2 footprint of this material?**

### **3.2 Timber construction and timber products**

Westhills Stadium in Canada was constructed using 4,060 cubic metres of wood products, avoiding 1,370 metric tons of carbon dioxide emissions that would have otherwise been released into the atmosphere through the specification of less sustainable materials.<sup>7</sup> While the Westhills Stadium is comparatively small, the construction team were able to modularise the building for most construction to take place offsite which reduced on site waste and the time taken for the actual erection of the facility

**Q 16 How can Tasmanian timber, other than that from old growth forests, be used extensively in the construction and fit out of the stadium to reduce the emissions intensity of other building products?**

### **3.3 Self-powered**

As a mark of sustainability and to reduce running costs many stadiums now are equipped with solar panels over their large roof areas. This will be important for the MPMS as the amount of 'spare' power in the state is limited. ArenaA, home to the Ajax Football Club in Amsterdam, has more than 4,200 solar panels, wind turbines and a number of other energy saving features.<sup>8</sup>

**Q 17 What energy provisions have been made for the MPMS and what features should be included to comply with current government objectives for the future?**

**Q 18 Is it intended to have storage batteries to provide power for evening events?**

### **3.4 Water collection and saving**

The Mercedes-Benz Stadium<sup>9</sup> in America has been designed to collect and store 2 million gallons of water making less demand on the public reticulated water supply. In New York's MetLife Stadium<sup>10</sup> they installed waterless urinals and low flush toilets and were able to save over 11 million gallons of water per year.

**Q 19 What provision is planned for collecting and storing water from the MPMS?**

**Q 20 What water saving measures will be utilised in the Hobart stadium complex?**

## **4. Proposed actions to achieve efficiency and capacity for sustainability over the life of the project.**

### **4.1 Spectators transport**

It is to be expected that one of the major causes of high GHG emissions in the life of the MPMS project will be from attendees going to and from the venue. Interstate and overseas attendees will have a particularly high emissions profile.

- Q 21 What are the anticipated numbers of attendees and their place of domicile on an annual basis?**
- Q 22 Based on the answers to the question above what will be the emissions from transport to and from the stadium annually?**
- Q 23 What strategies are currently proposed to reduce the annual footprint from transport?**

There has been discussion that the MPMS will have public transport services to reduce individual private car usage. Given governmental lack of action on proposed transport initiatives over the last 15+ years it is important that any 'ideas' are clearly specified, realistic, appropriate to cater for low carbon transport and deliverable.

- Q 24 Has the proposed MPMS made specific plans about the number of buses, form of propulsion, the operator, the area required for public transport and electrical charging provisions?**
- Q 25 What provision is being made to ensure that all modes of transport including all types of active, community, public and ferry transport will be cohesively operated into one integrated system?**

### **4.2 Transport for players**

There are examples from elsewhere in the world where low emissions transport is provided for players.<sup>11, 12</sup> This can be in a number of forms but is likely to include using electric buses, and the rescheduling of games, venues and rosters so that teams travel less, particularly by air. In America the National Basketball Association, Hockey League, Baseball and Football League reduced their GHG footprint from air travel by 22% in 2020

- Q 26 What provisions are being made to reduce the carbon footprint of the Hobart AFL team both within the state and travelling interstate?**
- Q 27 What plans has the AFL in place for rostering fixtures to reduce air travel for both the Tasmanian team travelling to other venues and vice-versa?**

### **4.3 Waste provision**

It is to be expected that a venue for over 20,000 people will be responsible for large volumes of waste. The policy for reducing waste at the Taste of Tasmania this year is encouraging and could become the beginnings of a model for the MPMS.

- Q 28 Who is responsible for establishing effective waste management systems for the MPMS and what are the systems?**
- Q 29 What products and packaging will the venue permit to be bought and brought in?**
- Q 30 How can the discarded packaging and debris at the venue be best disposed and recycled?**
- Q 31 What measures will be taken to minimise the waste, particularly plastic, stemming from the collateral associated with the promotion of events and the team?**

It is to be expected that there will be waste and debris arising from the construction of the stadium.

- Q 33 What are the plans to reuse and adapt construction waste?**

#### **4.4 Food and drink at the stadium**

It is well known that different foods are responsible for greater or lesser emissions. Some sports and venues are stipulating only certain products can be sold. Forest Green Rovers in the UK have decided that the food on the menu at their ground will be vegan.<sup>13</sup> With the high standard of food and beverage produced in Tasmania there is an opportunity to provide local refreshments with a low LCA emissions profile.

- Q 34 What decisions have already been made about the type of food and beverages that could be sold at the stadium?**
- Q 35 What is the emissions profile of these foods and what would be the total emissions from refreshments annually?**

#### **4.5 Effective communication and education**

The development of a facility and the considerable number of Tasmanians who may follow an AFL team has a great capacity to become a positive force for the environment. This can be around the specific behaviours and practices acceptable at the stadium and more generally in day to day living. The Philadelphia Eagles are developing an education program to encourage fans to take public transport.<sup>14</sup> They have worked with a citizens group to develop a full scale campaign they call "Go Green". This also includes advice about recycling and not trashing both in the ground and beyond.

- Q 36 What plans has the MPMS for devising communications and education campaigns for fans to take action to reduce emissions ?**
- Q 37 What more broadly based plans are in place for driving lower emissions across the community?**

## **5. Two compelling sustainability case study – Forest Green Rovers, UK and the Climate Pledge Arena, Seattle.**

Just as the world is now changing as it is impacted by climate change, so the design and operation of sporting facilities in many countries have been modified and redesigned to comply with achieving a low or zero emissions sporting stadiums. Below are examples of two very different case studies of how this has been implemented elsewhere. CEH is not suggesting that either of these case studies is the model for Tasmania, but rather to illustrate what other progressive jurisdictions are doing to better equip sporting facilities now and into the future.

### **a. Forest Green Rovers, Gloucestershire, UK<sup>15</sup>**

In 2010 this football (soccer) club was about to fold but a green energy entrepreneur, Dale Vince, became chairman and transformed the club. He brought his environmental principles to all aspects of how the club operates. This includes:

- The team now play on organic turf
- Players travel by electric bus and have fleet of electric vehicles
- Only vegan food is provided on the ground
- Spectator numbers have increased greatly following the green credentialing
- The club has solar panels on the roof
- Players kit is made from coffee grounds and recycled plastic
- Single use plastics are banned at the ground
- Electric vehicles charging points have been installed

They are running an international competition for redeveloping their facilities and are hoping there will be a new timber stadium with the lowest carbon footprint in the world!

### **b. Climate Pledge Arena, Seattle<sup>16</sup>**

This is a facility which is planned to cater for diverse sports including ice hockey and basketball, and is a venue for performing artists, music performances etc.. It was redeveloped from a venue built for the 1962 Seattle World Fair and named The Climate Pledge Arena to clearly indicate the intention to be fit for purpose in this changing climate.

It will be the first arena in the world to achieve the International *Living Future Institute Zero Carbon Certification* because it is addressing both operational and embodied carbon emissions. All aspects of the build and operation are electric, powered by on and off-site renewable energy, many aspects of the building are recycled and it has monitored both the arena's and all Scope 1, 2, and 3 emissions. Additionally it deals with its own 'waste', collects and stores water from the roof and offers free public transport to games and ticketed events.

**Q 38 How does the MPMS measure up in terms of sustainability now and in the future against the two case studies?**

**Q 39 How can the MPMS be developed so that it fulfils the aspirations set out in Tasmania's Climate Change Action Plan 2023-25?**



## References

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