



# Legislative Council Environment and Planning Committee

**Hearing Date:** 6 December 2023

**Question[s] taken on notice**

**Directed to:** GHD, Chris French

**Received Date:** 21 December 2023

## 1. **Samantha RATNAM, page 68**

### **Question Asked:**

Would you all consider providing us with more information, even for those non-major projects? I am happy for you to take that on notice if that is inappropriate.

**Chris FRENCH:** I would take on notice the consideration of whether we could provide it. Obviously that information would be commercial-in-confidence –.

### **Response:**

As stated in GHD's opening statement in the public hearing of 6th December 2023, Melbourne Water is a long standing client of GHD.

Over the years, GHD has been appointed on a range of Melbourne Water panel agreements where in general the majority of GHD's engagements are procured under such arrangements. In addition to these panel arrangements, from time to time, GHD is also engaged by Melbourne Water outside of the Melbourne Water panel agreements.

GHD's two current Panel agreements with Melbourne Water are listed below:

- (a) Specific Technical Services Framework Agreement Dam and Headworks Panel with Melbourne Water Corporation dated 4 August 2022 (Dam and Headworks Panel), as varied and extended by letter dated 21 December 2022. The Dam and Headworks Panel is due to expire on 31 December 2023; and
- (b) Specialist Services Agreement with Melbourne Water Corporation dated 13 July 2020 (Specialist Services Agreement), as extended by letter dated 2 June 2023. The Specialist Services Agreement is due to expire on 12 July 2024.

Under the Dam and Headworks Panel, GHD provides a range of services to Melbourne Water including relating to dam engineering, including (but not limited to) risk assessments, consequence assessments, flood hydrology, design and construction supervision of dams, spillways and outlet works, dam operations, maintenance and safety and asset management.

Under the Specialist Services Agreement, GHD provides a range of services to Melbourne Water including (but not limited to) coastal erosion assessment, hydraulic modelling, flood and drainage planning, land management, waterways and environmental and water supply catchments strategies and services.

2. **Samantha RATNAM , page 74**

**Question Asked:**

Many members of the community believe that the flood wall must have had an impact on the flooding, because if you look at the photos, the racecourse is such a large area, yet your modelling showed that it was likely to have very little impact. To help people who are not engineers understand this, is the modelling saying that the volume of water which would have been sitting across the racecourse is small relative to the volume of water passing down the river in a flood? Is that why you all maintain that it would have had little impact or has little impact?

**Response:**

We refer to the GHD report dated May 2003 titled “Flemington Racecourse Flood Protection: Investigation of the Maribyrnong River Flood Protection Final Report” (GHD Report) that was included in the Victorian Racing Club (VRC) submission number 689 to the parliamentary inquiry.

As stated in GHD's opening statement in the public hearing of 6th December 2023, the Flemington floodwall was modelled and designed incorporating mitigation works that were specifically implemented to offset flood level impacts the floodwall may otherwise have had.

Part 5 of GHD's Report discusses the mitigation works associated with the floodwall, where Figure 5.4 compares the “afflux” or put another way, the effect on flood levels (whether positive or negative) of:

- (a) the floodwall (without mitigation works),
- (b) the floodwall with Footscray Road bridge mitigation works (without the Northern Railway culverts mitigation);
- (c) the floodwall together with both mitigation works.

As you can see from Figure 5.4 of the GHD Report, the effect of the floodwall together with both mitigation works does not increase flood levels in the Maribyrnong River between Footscray Road and Maribyrnong Village. Put simply, Figure 5.4 of the GHD Report demonstrates that as modelled the constructed mitigation works more than offset for the effects of the floodwall.

As stated in Part 6 of the GHD Report, 7<sup>th</sup> bullet point:

“If both the Footscray Road Bridge and Northern Rail Bridge mitigation works are implemented, zero or negative afflux would be achieved along the entire reach of the Maribyrnong River under consideration.”

Consideration of the flood modelling results, the characteristics of the floodwall, the floodplain and the proposed mitigation works demonstrated that the effects of the floodwall would be adequately compensated for by the proposed mitigation works. The effect of the floodwall and the mitigation works is not simply defined as a function of the “volume of water” sitting in the racecourse relative to the river flow, or the area of the racecourse, or the cross sectional area of the mitigation works. Although these are of some relevance, they are only part of the picture. Flood modelling is a specialist field requiring the consideration of a range of real world processes from rainfall through to fluid hydraulics using specialist knowledge and understanding as well as a range of software and techniques. As mentioned by GHD and other witnesses before the inquiry, flood modelling is a complex and nuanced field which provides a valuable input to flood plain management. We hope that this explanation provides greater insight and clarity regarding how the effects of the floodwall and related mitigation works were assessed in the GHD Report.

### 3. **Samantha RATNAM, page 76**

#### **Question Asked:**

I promise it is not even a question; it is just a point of clarification. I have just got some advice about the question I asked earlier about whether it was possible to provide on notice the list of work that you have been commissioned by Melbourne Water to do. My understanding is that we can make that request of you and then in terms of assessing commercial-in-confidence that is something that the committee can assess at a later stage. But I would like to reinstate that question asking on notice whether we can have a list of the work that Melbourne Water has commissioned you to do?

#### **Response:**

GHD refers to the answer above to Question 1.