

Item: 1.1

Bluewater Project - Post Project Review

OFFICER	[REDACTED]
GENERAL MANAGER	[REDACTED]
DIVISION	Infrastructure & Leisure Services
ATTACHMENTS	<ol style="list-style-type: none">1. BWFC Report - Post Project Review - Lambert and Rehbein [1.1.1 - 19 pages]2. BWFC Review - Background Information - Lambert and Rehbein [1.1.2 - 48 pages]
PURPOSE	To provide Council with an independent confidential report which examines Council's management of the project.

This report is being considered in Closed Session under the *Local Government Act 1989* Section 89 (2) (d) because this matter deals with contractual matters. This report is being considered in Closed Session under the *Local Government Act 1989* Section 89 (2) (f) because this matter deals with legal advice. This report is being considered in Closed Session under the *Local Government Act 1989* Section 89 (2) (h) because this matter deals with any matter which the Council or special committee considers would prejudice the Council or any person.

1. EXECUTIVE SUMMARY

The Bluewater projects is now complete. The centre is providing excellent service to the community and the legal action against [REDACTED] and [REDACTED] is complete.

A post project review was called for by the Audit Committee and carried out by an independent consultant, Lambert and Rehbein. The report was received in June 2017.

This review resulted in key findings and recommendations. Council is well progressed in relation to implementing the recommendations.

2. RECOMMENDATION

That Council note this report which sets out the key findings, learnings and recommendations from an independent Post Project Review of the Bluewater project.

3. KEY INFORMATION

An independent report was prepared for Council by a company called Lambert and Rehbein. This report was requested by Council's Audit Committee.

The report is a confidential attachment to this report.

The brief for the report could be summarised as follows:

“to provide an independent and objective account of the internal project management by Colac Otway Shire staff, and to identify lessons learned for Colac Otway Shire.”


The key findings of the report listed on page one of the report and are:

1. *The project's scope and the limitations on the level of refurbishment was driven by available lines of funding. Council did not have the freedom to respond to a considered business case or Master Plan for the site.*
2. *There was some variance in stakeholders' understanding of the purpose and scope of the project.*
3. *The decision in October 2013 to proceed with full construction despite anticipated costs exceeding the agreed budget, with the plan to save cost during construction, was not fully successful.*

5. *The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016, forecast as \$12,696,365. This is an increase in cost beyond the original project budget of \$840,505, or an over-spend of 6.6%. In comparison to other similar projects, the COS spend on the BWFC project is close to the Victorian average (noting that the stadium floor has not been delivered).*

Please note that the costs quoted in that report would have been current at the time of writing that report.

The recommendations are listed on page two of the report. These have been listed below, together with the organisation's response:

Number	Recommendation	Management Response
1	<i>Council Reviews the processes related to funding applications from State and Federal government and other donors, to ensure that projects combining multiple funding sources are based on sound initial needs assessment.</i>	Agreed.
2	<i>Council use the BWFC lessons learned to improve and formalise governance processes for construction projects. These could include formal risk management processes in relation to project cost, Project Control Group workings, and a systematic approach to decision support for variations.</i>	Agreed. Council now has an agreed Project Management System and a Contract Management System is nearing completion.
3	<i>Council takes steps to correct any perception that there has been significant mismanagement of the project.</i>	
4	<i>For projects outside Council's specific experience, the Principal Consultant or a separately appointed Project Manager acts as Superintendent or Superintendent's Representative.</i>	Agreed. Councils intention would be that the Superintendents Representative position be filled by a person with specific expertise. The Superintendent position would be filled by a Council General Manager.
5	<i>Project Managers ensure that sound advice is sought regarding substitutions or alterations to design, particularly where these are intended as cost saving measures.</i>	Agreed.

The report also sets out several lessons to be learned from the project. These are summarised on page 14 of the report.

Category of Lesson	Detail
Successful Element	<i>(Related to procurement): Application of procedures resulted in a timely, compliant, and competitive procurement process.</i>
Successful Element	<i>Continue using feasibility studies to build sound business cases.</i>
Successful Element	<i>The BWFC project maintained satisfactory records of RFIs, SIs, CANs, VQs. Future projects should at a minimum use a similar documentation system</i>
Successful Element	<i>Monthly updates to Council were useful for project governance</i>
Ways of Improving	<i>Council should clearly articulate the actual projected cost and Council contribution, to stakeholders, at the outset of a major project and ensure all costs, risks and funding strategies are outlined in the business case.</i>
Ways of Improving	<i>Do not expect savings will be made during a refurbishment project specifically when there is a likelihood of latent issues.</i>

*RFI – Request for Information

SI – Site Instruction

CAN – Consultant Advice Notice

VQ - Variation Quotation

4. COMMUNITY CONSULTATION & ENGAGEMENT

It is not proposed to consult or engage with the community on this issue.

5. ALIGNMENT TO COUNCIL PLANS, POLICIES OR STRATEGIES

Alignment to Council Plan 2017-2021:

Theme 4: Our Leadership and Management

1. Effectively manage financial resources
2. Openness and Accountability in decision making
3. Organisation development and legislative compliance

6. CONSIDERATIONS

ENVIRONMENTAL, SOCIAL & CULTURAL, & ECONOMIC

Not Applicable

LEGAL & RISK

Not Applicable

FINANCIAL & BUDGETARY

Not applicable.

7. IMPLEMENTATION STRATEGY

Not Applicable

COMMUNICATION

Not Applicable

TIMELINE

Not Applicable

8. OFFICER DIRECT OR INDIRECT INTEREST

No officer declared an interest under the *Local Government Act 1989* in the preparation of this report.



CONTACT: Projects Division – Victoria Office

**Bluewater Leisure Centre Redevelopment - Post Project Review
For Colac Otway Shire Council**

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1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

Colac Otway Shire Council appointed Lambert & Rehbein to conduct a Post Project Review of the Blue Water Fitness Centre Redevelopment Project, to provide an independent and objective account of the internal project management by Colac Otway Shire staff, and to identify lessons learned for Colac Otway Shire. Evaluation was done in 2016 and the Review Report completed.

1.2 SCOPE AND METHODOLOGY

The Post Project Review was for conduct of the project up to the end of February 2016. The basic methodology of the Review is straightforward, including interview of Council project staff and Councillors, a Review of documentation, questions and confirmation of facts with relevant staff, analysis, and formulation of the report. The report does not include the Bluewater Stadium Floor as that is currently subject to a confidential contractual and legal process.

1.3 OUTCOME AND RECOMMENDATIONS

1.3.1 KEY FINDINGS:

1. The project's scope and the limitations on the level of refurbishment was driven by available lines of funding. Council did not have the freedom to respond to a considered business case or Master Plan for the site.
2. There was some variance in stakeholders' understanding of the purpose and scope of the project.
3. The decision in October 2013 to proceed with full construction despite anticipated costs exceeding the agreed budget, with the plan to save cost during construction, was not fully successful.
4. There was inadequate design in response to certain existing conditions at the BWFC site. This meant that some instances of re-design, and variations to the construction contract were required. This redesign and variation resulted in increased project cost.
5. The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016, forecast as \$12,696,365. This is an increase in cost beyond the original project budget of \$840,505, or an over-spend of 6.6%. In comparison to other similar projects, the COS spend on the BWFC project is close to the Victorian average (noting that the stadium floor has not been delivered).

1.3.2 RECOMMENDATIONS

Following the Review, it is recommended:

- I. Council Reviews the processes related to funding applications from State and Federal government and other donors, to ensure that projects combining multiple funding sources are based on sound initial needs assessment.
- II. Council use the BWFC lessons learned to improve and formalise governance processes for construction projects. These could include formal risk management processes in relation to project cost, Project Control Group workings, and a systematic approach to decision support for variations.
- III. Council takes steps to correct any perception that there has been significant mismanagement of the project.
- IV. For projects outside Council's specific experience, the Principal Consultant or a separately appointed Project Manager acts as Superintendent or Superintendent's Representative.
- V. Project Managers ensure that sound advice is sought regarding substitutions or alterations to design, particularly where these are intended as cost saving measures.

2.0 INTRODUCTION

Lambert & Rehbein (L&R) was commissioned on 27 April 2016 to undertake a Review into the Bluewater Leisure Centre (known as the Bluewater Fitness Centre 'BWFC') Redevelopment project. The Review is to provide an independent and objective account of the internal project management by Colac Otway Shire staff, and capture project successes, while identifying key lessons for future projects.

Three main factors led to the BWFC project being identified for Review, which are the main themes of the Review, and of the lessons learned section. Firstly, the cost of the project has exceeded the planned budget. Secondly, the timeframe for delivery has been longer than originally planned. Finally, there were technical challenges during the project which will contribute to lessons learned.

2.1 SCOPE

The Post Project Review will be used to ascertain whether the project has realised the expected benefits documented, and what lessons can be learned for both current and future projects.

The Review is to cover the three phases of the project:

- development,
- procurement; and
- delivery.

The Review timeframe is from the project's beginnings circa 2008 up to the end of Feb 2016.

The Review was not briefed to look into details of the project's funding. For the purpose of the Review it will be taken that the project budget was available for use without constraint across the various elements of the project, however in reality some of the funding was 'tied' to specific deliverables.

The Review does not include an investigation into the land on which the BWFC is built, which we understand is owned by the State Department of Education; or agreements/arrangements for use with the Colac Secondary College adjacent to site.

The Review does not include the stadium floor (subject to current contract and legal process) nor an assessment of the contractor, sub-contractors or designers' performance.

The Review is focussed on COS internal project team performance, and COS decision making related to the Project.



2.2 PROJECT REVIEW METHODOLOGY

The Review is structured around an objective account of the Project, assessment of project outcomes and comment on project achievements, and 'lessons learned'.

3.0 PROJECT REVIEW - INFORMATION COLLECTION

3.1 INFORMATION AVAILABLE

Documents included in the Review include feasibility studies prepared for Council, details of the brief to designer, the designer's proposal answering the brief, construction documentation, the contractor's tender response, and project working documentation.

Interviews and debriefing was conducted with key personnel at Colac Otway Shire, including:

- Project related: General Manager, Infrastructure and Leisure Services; Manager Assets & Property Services; Public Relations Coordinator; Manager Arts and Leisure; Manager Capital and Major Projects; and the Project Delivery Coordinator.
- Procurement and finance.
- Chief Executive Officer.
- Facility Management, BWFC Centre Manager
- Previous General Manager Infrastructure and Services
- Councillor (not Shire personnel)

3.2 BACKGROUND DOCUMENTS

Documents which assisted with project background included: *Sport and Leisure Solutions* Feasibility Study of Oct 2011 on the hydrotherapy pool and a previous study on the same from 2005; and a 2008 report by [REDACTED] on the feasibility of an improvement plan for the sports stadium component of BWFC;

Council Minutes from In Committee Meetings, and ordinary Council Meetings;

Project Management records including: Requests For Information (RFIs), Variation Quotations, Notices of Delay, Superintendent Instructions, Extension of time claims and the EOT Register, and Project Reports were provided for Review;

Policy documents such as COS Procurement Policy were provided. State Government documents such as the Victorian Auditor General's report *Local Government Service Delivery: Recreational Facilities* of March 2016 were available to the Review;

In summary, adequate documentation and information from personnel involved was available for the Reviewing consultant from Lambert & Rehbein to build an adequate understanding of the project.

4.0 PROJECT REVIEW - OBJECTIVE ACCOUNT OF PROJECT

4.1 PRELIMINARY – DEVELOPMENT PHASE

The basis for the project was the identification of several areas of perceived community need within the health/fitness/sport/leisure sector, and a number of funding opportunities which had become available during the period 2008 - 2012.

Some of these needs had been highlighted in feasibility studies such as the 2011 study to advise Council on the cost-benefit and issues associated with a hydrotherapy pool, and the 2008 study 'to recommend the scope associated with the development of stadium facilities'. Other elements of the project were included because funding was available, or because funding for one element being requisite on the inclusion of others, such as was the case for the children's splash pad.

4.1.1 INITIAL FUNDING AND BUDGETING

In August 2010, Council received an election commitment of \$3,783,000 to redevelop the BWFC stadium. The premise of the funding was the 2008 feasibility study by [REDACTED] on the indoor sports stadium. This initial funding commitment was short of the \$6M understood at the time as the required amount for refurbishment of the stadium. In April 2012 the CEO's Progress Report to Council noted a visit by the State Minister for Sport and Recreation on 12 April 2012 where \$1.15M State funding was announced for the BWFC Stadium Redevelopment. At that time it was noted in the CEO Report that the project funding requirement was \$5.6M. The plan was for this funding to consist of: Federal funding \$3.78M (as mentioned above); The Department of Education and Early Childhood Development \$430,000; Council \$200,000; and the Colac Basketball association \$100,000. The April 2012 Council Minutes suggest that it was intended for design to begin in June 2012.

Funding as at April 2012 was:

Funding Source	Amount
Commonwealth Government	3,783,000
Victorian State Government	1,150,000
DET/ECD	430,000
Colac Otway Shire	200,000
Colac Basketball Association	100,000
Total	5,663,000

The May 2012, CEO's Progress Report to Council noted that on 4 May 2012 the Federal Government's Health and Hospitals Fund added \$2.8M to the project for the hydrotherapy pool.

The project had evolved, as outlined above, in response to available streams of funding, rather than from a clearly articulated statement of requirement.

The June 2012 CEO's Progress Report to Council noted that the tender "to provide architectural services for the Bluewater Fitness Centre Redevelopment Project was advertised.

From the April 2012 CEO's Progress report to Councilⁱ, expected project funding is summarised with the below table, which shows a \$10M budget:

Funding Source	Amount
Commonwealth Government	3,783,000
Commonwealth Government HHF	2,800,000
Victorian State Government	2,780,000
Colac Warm Water Group	25,000
Colac Otway Shire (requested)	512,000
Colac Basketball Association	100,000
Total	10,000,000

4.1.2 DESIGN BRIEF AND LETTING OF CONTRACT

Objectives for the design were articulated in the design consultant's brief. The Project Budget mentioned at paragraph 11 of the Project Brief is \$7,446,000.

A requirement of the Brief was for the Architect to provide the Schematic Design Cost Plan at 95% Schematic Design, including a reconciliation against the Project Budget.ⁱⁱ Architectural and engineering design was carried out, and a Tender was issued to selected builders, which closed on 30 Sep 2013.

4.2 PROCUREMENT – CONSTRUCTION CONTRACT

A Cost Estimate was undertaken by the Architect's sub-consultant quantity surveyor. "Cost Plan No. 4" was quoted in the report to Council OM 132310-23, which presented the potential contractors' tendered prices to Council for consideration before award of the contract. The quantity surveyor had estimated "...an overall cost of \$10.46M inclusive of consultants" fees, contingencies, landscaping, car parking, disbursements, etc."ⁱⁱⁱ

This estimate, which exceeded the project budget noted in the Architect's design Brief, was however assessed by the Architect and Quantity Surveyor to be higher than what an approach to market might produce, according to the OM132310-23 Report. The Report states that the Architect and Quantity Surveyor advised Council staff that, considering the current economic

climate and the downturn in the construction industry, Council could reasonably expect a very competitive price possibly lower than the Cost Plan.^{iv}

Four builders tendered, ranging in price from approx. \$11.2 M to \$11.6 M. It is noted that these figures are in fact some \$1M above the Quantity Surveyor's Cost Estimate, rather than below it, as was hoped by the Architect and Quantity Surveyor. The total project cost including design fees was estimated at \$12.025M.

Budget shortfall was to be drawn from the 2014/15 COS budget, and the Local Government Infrastructure Program. This additional funding was for \$1,702,000; \$535,000; and \$300,000; a total of \$2,537,000. When combined with the various donor funds, this was considered adequate for the Project's budget. The budget requirement for the let contracts including a contingency of \$850,000 plus \$50,000 for blinding concrete, summarised as follows:

Category	Cost
Construction contract (██████)	\$10,955,860
Design / consultant fees	\$600,000
Project Management	\$80,000
Equipment for BWFC	\$120,000
Landscaping	\$100,000
Total Project Value:	\$11,855,860

A contract between COS and ██████████ was signed on 6 Dec 2013 for \$10,955,860, beginning the construction phase of the project.

The COS report OM162402-6 'Second quarter financial performance report 2015-2016' of Jan 2016 forecasts the overall project spend at \$12,696,365 which excludes repairs to the pool of \$200,000 (renewal spend not new funds). The official overspend figure mentioned in the COS Jan 2016 report is \$840,505.

4.3 DELIVERY – CONSTRUCTION

4.3.1 ESTABLISHMENT AND EARLY STAGE ISSUES

The project's first requests for information (RFIs) were generated in December 2013, where the contractor requested copies of CAD documentation, and information related to demolition. These RFIs were followed with a reasonably large number of issues requiring attention during the establishment phase of the project, as the contractor investigating the site and subcontractors were presented with the detail of the construction documentation.

4.3.2 ISSUES OF SIGNIFICANCE ENCOUNTERED DURING CONSTRUCTION

A selection of the main cost variations were tracked in order to give a narrative of works required which were not planned as part of the initial contract, either as a result of unknown latent conditions, or shortfalls in the design. While these design issues, latent conditions, and variations were dealt with, the main works progressed as generally expected.

4.3.3 POST MAIN CONSTRUCTION/ DEFECTS PHASE

The defects process is governed by a COS procedure published as the 'BWFC Defect Issues Flowchart'. The building contractor and the COS Project Manager have specific roles in the flowchart.

4.4 SUMMARY OF CONSTRUCTION ACHIEVEMENTS

The main pool, splash pad, hydrotherapy pool, spa and steam room, and dry programs (gym) areas were opened by mid 2016, supported by the shared services (reception, childcare, etc.) spaces. As at the report date of Feb 2016, the stadium floor required further work.

The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016. The report mentions the following which serve as the official cost figures:

- It is forecast (by Council) that the overall project spend will total \$12,696,365
- Total costs beyond the original project budget amount to \$840,505
- This represents an over-spend of 6.6%

Latent conditions and design oversights contributed much of the overspend, with items such as the alterations to the dry programs roof requiring significant contract variations. Value for money assessment is considered in section 5.1 below.

Note that the stadium floor is not completed nor included in this cost.

5.0 PROJECT REVIEW –OUTCOMES ASSESSMENT

5.1 ECONOMIC

5.1.1 PROJECT FORMULATION

The Brief to Architect was based on feasibility studies for the fitness centre elements, based on requirements of the various funding sources. There was an implied understanding that while funding was available the project should be done.

There are no obvious technical faults with the BWFC brief. The project elements are similar to facilities other councils and public bodies construct in Victoria.

5.1.2 MEETING OF SERVICE REQUIREMENTS.

Taking into account the costs and benefits of undertaking the project.

- The project has met service requirements, separate to the stadium floor resolution process. Benefits of the project are reflected by the strong reported user uptake and the reported high level of satisfaction with the facility by users (user survey 2016).
- Costs of the project are not excessive in comparison to other new facilities or similar brownfield sites. New facilities tend to cost in the vicinity of \$10 - 20M to construct. Refurbishment costs range widely, with one example noted by the report of a „pool only“ refurbishment costed at \$5M.^{vi}
- The Victorian Auditor-General’s Report of March 2016 *Local Government Service Delivery: Recreational Facilities* investigated the cost to local government authorities of operating pools and aquatic facilities. The audit found ARC development and refurbishment is reliant on government grants, with Councils generally subsidising the operational costs of facilities. In Victoria this situation is considered an accepted part of a Council’s function. The report notes “Between 2015–16 and 2018–19, Victoria’s 79 Councils have planned \$933 million in capital expenditure on recreational and community facilities. Many Councils deliver these facilities and associated services in the context of ongoing financial sustainability issues...”^{vii} Victorian Councils spend an average of approximately \$12M each on capital expenditure for facilities similar to BWFC, and therefore Colac – Otway Shire is well within the normal range of spend.

In summary the project has met its service requirements and will deliver the expected benefit to users and the community, within a normal range of cost.

5.2 DESIGN

The design project brief was clear, and the design responded adequately to the brief.

There were certain issues that were not noted in the design which were evident on site, for example it was documented to demolish the existing ceiling in the dry programs area and install a new suspended acoustic grid system. This was without the design team understanding that the existing Stramit ceiling system provides structural support to roof members. This meant that extensive redesign and cost was incurred by the client.

There were other aspects of the design where questions were raised on site that would ideally have been investigated and understood during the consultant's design period. This includes the documented demolition of roof structure for rooms 43 and 44, which was not in line with the project's intent and was prevented on site. Similarly the mech services platform in variation 41 would ideally have been known before the design was finalised, allowing the contractor's tender to take into account all required works, and the best possible project sequencing and price outcomes achieved.

5.3 ASSET PERFORMANCE

Performance of the BWFC is assessed based on a survey of users, and feedback from Centre Management (as 'client' for the project), and Council's CEO.

The Bluewater User Satisfaction Data – January to March 2016 was conducted as a survey of new members (83 surveys completed).

The returned surveys were overwhelmingly positive, with 97% of all responses received rating the overall facility 'Excellent' or 'Good' from possible ratings of Excellent/ Good/ Fair/ Poor.^{viii}

BWFC Centre management gave inputs to the Post Project Review, by way of interview with the Reviewing officer^{ix}. Significant points include:

- The general layout of the facility is quite good. The opening of the stadium will 'complete the flow', and will allow the entire operation of the facility to work cohesively.
- Access to the pool area was to be a separate set of turnstiles. These were however documented on plans as 'future' work. Management feels it would be a better outcome for pool area entry if these turnstiles are constructed.

5.4 PROJECT AND CONTRACT MANAGEMENT

5.4.1 CONTRACT ADMINISTRATION

There were administrative systems put in place to register and maintain tracking on contractor requests for information, variation quotations, superintendent instructions, and assessment of



extension of time claims. These were operated by the Project Manager. The maintenance of the defects register and advice on defects liability is also being carried out by the Superintendent Representative during the post PC (Practical Completion) phase of the project.

The project document tracking systems were generally sound, and an issue can be traced from its identification with an RFI from the contractor, through to a variation request being submitted by the contractor, and advice to either do the work or to make other modifications via a Superintendent's Instructions. According to the COS supplied register, there were 1066 SIs issued to 1 March 2016.

5.4.2 MANAGEMENT OF PROJECT TIMEFRAMES AND VARIANCES

Concerns were raised with timeframes in project reporting from when reporting began in mid-2014 until completion, however it is not clear if there were steps taken to accelerate progress, and it is not clear from the minuted records of project discussions and reports if timeframes were considered a major project issue.

There were extensions agreed to the PC date due to certain conditions and circumstances as detailed in Extension of Time (EoT) claims, and summarised in the EoT log.^x The contractor had claimed 127 days EOT, but the Superintendent had accepted only 51 of these. With the 51 day extension, the PC target date was Friday 27 March 2015. External project stakeholders expected opening during the first half of 2015.

6.0 LESSONS LEARNED

This section of the Review deals with the question “what lessons can be learned from this project for both current and future projects?” The brief (specification 4.2) asked the Review to address this topic by including:

- Successful elements, to reinforce in future processes;
- Elements where the outcomes fell short of expectations, and,
- Ways of improving the management of future projects.

6.1 PROJECT DEVELOPMENT

LESSON: (ways of improving) Before a design brief is finalised, consideration of the business case would have clarified project scope. In future this should be part of COS processes. Council should ensure that a business case is raised for a major project.

OBSERVATION: The feasibility studies used to mount an informal business case, as submitted to Council after design (including the briefing OM 132310-23 and powerpoint presentation of 9 Oct 2013) were well founded.

LESSON: (successful element) Council should continue to use feasibility studies by Council or by others, in order to contribute to overall business cases. However a formal business case to bring feasibility studies together as a unified project would benefit a project of the BWFC size.

OBSERVATION: The business case and cost plan with the architectural design did not accurately anticipate tender prices.

LESSON: (ways of improving) Council should clearly articulate the actual projected cost and Council contribution, to stakeholders, at the outset of a major project.

LESSON: (ways of improving) Council should not expect that savings will be achieved during a renovation or refurbishment project where there is a high likelihood of unknown latent conditions.

OBSERVATION: There is an ongoing perception that the project has run significantly over budget and that project outcomes do not justify the final project spend.

LESSON: Implement a communications plan, including findings of this report if appropriate, to address concerns associated with project spend and outstanding issues.

6.2 PROJECT EXECUTION

Project governance occurs mainly outside the traditional boundaries of a project. It involves the board of an organisation and the project sponsor ensuring a project's performance and managing associated risk. Several of the perceived issues with the BWFC project can be related to clear expectations and understanding of the governance structure associate with the project.

LESSON: (ways to improve) To ensure an adequate level of project Governance, a PCG should be constituted, should meet regularly, and have minuted records of decisions. The Project Manager would normally update the PCG with progress, timeline, cost, and risk issues.

6.3 SUMMARY OF LESSONS

Identified lessons learned are tabulated as follows:

Category of Lesson Detail

successful element	(Related to procurement): Application of procedures resulted in a timely, compliant, and competitive procurement process.
successful element	Continue using feasibility studies to build sound business cases.
successful element	The BWFC project maintained satisfactory records of RFIs, SIs, CANs, VQs. Future projects should at a minimum use a similar documentation system
successful element	Monthly updates to Council were useful for project governance.
ways of improving	Council should clearly articulate the actual projected cost and Council contribution, to stakeholders, at the outset of a major project and ensure all costs, risks and funding strategies are outlined in the business case.
ways of improving	Do not expect savings will be made during a refurbishment project specifically when there is a likelihood of latent issues.

7.0 CONCLUSION

7.1 SUMMARY OF PROJECT OUTCOMES

The Bluewater Fitness Centre redevelopment was an ambitious project, which Colac Otway Shire undertook in response to community need, at a time when several funding opportunities were available. Council officers involved with the project made the best of the procedures, resources and structures at hand, to progress the works towards a favourable outcome.

The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016, forecast as \$12,696,365. This is a cost beyond the original project budget by \$840,505, or an over-spend of 6.6%. In comparison to other similar projects, the COS spend on the BWFC project is close to the Victorian average.

7.2 SUMMARY OF PROJECT ISSUES

Council's approval in October 2013 to go ahead with full construction despite tenders being higher cost than was expected, instead of redesigning or reducing scope, in the hope that costs would be saved during construction, led to issues later in the project.

There was inadequate design in response to existing site conditions, which meant that redesign and variations to the construction contract were required.

7.3 RECOMMENDATIONS

Following the Review, it is recommended:

- I. Council Reviews the processes related to funding applications from State and Federal government and other donors, to ensure that projects combining multiple funding sources are based on sound initial needs assessment.
- II. Council use the BWFC lessons learned to improve and formalise governance processes for construction projects. These could include formal risk management processes in relation to project cost, Project Control Group workings, and a systematic approach to decision support for variations.
- III. Council takes steps to correct any perception that there has been significant mismanagement of the project.
- IV. For projects outside Council's specific experience, the Principal Consultant or a separately appointed Project Manager acts as Superintendent or Superintendent's Representative.



- V. Project Managers ensure that sound advice is sought regarding substitutions or alterations to design, particularly where these are intended as cost saving measures.

End Notes

- ⁱ OM 122604-1 Colac Otway Shire CEO's Report to Council page 11.
- ⁱⁱ Colac Otway Shire Council contract 1208, page 65.
- ⁱⁱⁱ OM 132310-23 Colac Otway Shire Council Meeting, page 20.
- ^{iv} *ibid*
- ^v COS document *BWFC Defect Issues Flowchart (v2.0)* supplied by Manager, Assets and Property Service.
- ^{vi} Port Lincoln Feasibility Report, [REDACTED], May 2014.
- ^{vii} Victorian Auditor General report, *Local Government Service Delivery: Recreational Facilities*, March 2016, PP No 147 session 2014-16 page 1.
- ^{viii} Colac Otway Shire, *Bluewater User Satisfaction Data – January to March 2016 - New Member Surveys*. Summary document supplied by COS.
- ^{ix} Interview 9 May 2016, Project Reviewing Officer / BWFC Manager
COS Manager Arts and Leisure.
- ^x COS BWFC Project *EOT Log* showing upto EOT #24 of 6 Oct 2014



CONTACT: Projects Division – Victoria Office

**Bluewater Leisure Centre Redevelopment - Post Project Review Background Information
For Colac Otway Shire Council**

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END NOTES

1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

Colac Otway Shire Council appointed Lambert & Rehbein to conduct a Post Project Review of the Blue Water Fitness Centre Redevelopment Project, to provide an independent and objective account of the internal project management by Colac Otway Shire staff and to identify lessons learned for Colac Otway Shire. The Review was begun in May 2016 with stakeholder consultation and research into the background and conduct of the project, with drafting of the Review Report in June 2016. Focus of the Review is cost of project, timeframe of delivery, project management, and technical aspects of the construction.

It is noted that Colac Otway Shire (COS) did not ask the Review to interview or include feedback from either the design consultant team, or the contractor. The Review will therefore focus on COS internal project team performance, and COS decision making related to the Project only.

1.2 SCOPE AND METHODOLOGY

The Post Project Review is considering the conduct of the project up to the end of February 2016. The Review has not sought inputs from the design team or the building contractor, rather the focus of the Review has been on Council processes and decision making. Council has requested that eight functional areas be the basis for the assessment of the project: Economic impacts; Compliance issues and effectiveness of systems; Procurement delivery process; Asset performance and functional outcomes; Technical performance of consultants and contractors; Budget impacts; Project/contract management; and, Project Design, user satisfaction with the outcome, and the design of the Project from a management point of view.

The basic methodology of the Review is straightforward, including interview of Council project staff and Councillors, a Review of documentation, questions and confirmation of facts with relevant staff, analysis, and formulation of the report.

The report does not include the Bluewater Stadium Floor as that is currently subject to a confidential contractual and legal process.

1.3 SUMMARY OF FINDINGS

Key findings of the Review are summarised as follows:

1. There was not a combined business case for the project, or a Master Plan for the site, before design of the project started. The project was to some extent led by the funding available, rather than driven by identified need.
2. The absence of a business case and agreed Master Plan for the site meant that not all stakeholders were aligned in their understanding of the purpose and scope of the project.

3. Council's approval in October 2013 to proceed with full construction despite costs exceeding the agreed budget and proposing that expenditure would be reduced/costs saved during construction was problematic and led to issues later in the project.
4. There was no formal project Risk Management during the construction phase which meant that some significant risks to the project were inadequately managed.
5. There was inadequate design in response to certain existing conditions at the BWFC site. This meant that some instances of re-design, and variations to the construction contract were required. This redesign and variation resulted in increased project cost.
6. The local media view of the project is not favourable. This negative perception does not accurately represent the BWFC project's achievements.
7. As of the end of Feb 2016, the stadium floor requires further work before the stadium/ indoor sports courts will open for use. Assuming that the stadium floor issue can be resolved, the project has met service requirements.
8. The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016, forecast as \$12,696,365. This is an increase in cost beyond the original project budget of \$840,505 (set at original tender), or an over-spend of 6.6%.
9. In comparison to other similar projects, the COS spend on the BWFC project is close to the Victorian average.

1.4 RECOMMENDATIONS

Following the Review, it is recommended:

- I. Council Reviews the processes related to funding applications from State and Federal government and other donors, to ensure that projects combining multiple funding sources are based on sound initial needs assessment.
- II. Council use the BWFC lessons learned to improve and formalise governance processes for construction projects. These could include formal risk management processes in relation to project cost, Project Control Group workings, and a systematic approach to decision support for variations.



- III. Council takes steps to correct any perception that there has been significant mismanagement of the project.
- IV. For projects outside Council's specific experience, the Principal Consultant or a separately appointed Project Manager acts as Superintendent or Superintendent's Representative.
- V. Project Managers ensure that sound advice is sought regarding substitutions or alterations to design, particularly where these are intended as cost saving measures.

2.0 INTRODUCTION

Lambert & Rehbein (L&R) was commissioned on 27 April 2016 to undertake a Review into the Bluewater Leisure Centre (known as the Bluewater Fitness Centre 'BWFC') Redevelopment project. The Review is to provide an independent and objective account of the manner in which the BWFC Project was managed and delivered, and capture project successes, while identifying key lessons for future projects.

Three main factors led to the BWFC project being identified for Review, which will be the main themes of the investigation, and of the lessons learned section. Firstly, the cost of the project has exceeded the planned budget. Secondly, the timeframe for delivery has been longer than originally planned. Finally, there are technical issues which as yet remain unresolved. The period from the project's beginning to the end of February 2016 is 'within Review scope', so the final resolution to the stadium floor technical issue will not be part of the report. However, comment will be made on decisions taken by COS affecting technical aspects of the project.

2.1 SCOPE

The Post Project Review will be used to ascertain whether the project has realised the expected benefits documented, and what lessons can be learned for both current and future projects.

The Review is to cover the three phases of the project:

- development,
- procurement; and
- delivery.

The Review timeframe is from the project's beginnings circa 2008 up to the end of Feb 2016.

The Review has not been specifically briefed to look into details of the project's funding from the perspective of project inclusions or exclusions required by the fund's originator. For the purpose of the Review it will be taken that the project budget was available for use without constraint across the various elements of the project, however in reality some of the funding was 'tied' to specific deliverables.

The Review does not include an investigation into the land on which the BWFC is built, which we understand is owned by the State Department of Education; or agreements/arrangements for use with the Colac Secondary College adjacent to site.

It is noted that Colac Otway Shire (COS) did not ask the Review to interview or include feedback from either the design consultant team, or the contractor. The Review will therefore focus on COS internal project team performance, and COS decision making related to the Project only.

2.2 PROJECT REVIEW METHODOLOGY

The Review will be structured around an objective account of the Project, assessment of project outcomes and comment on project achievements, and 'lessons learned'. The latter sections will include the subjective assessment of decision making processes and individual decisions, which influenced the result of the project and from where learnings can be drawn. The Review will also take into account certain 'elements' as the basis for the assessment, judging if the project was successful across the following functional area categories:

- Economic,
- Compliance,
- Procurement delivery process,
- Asset performance,
- Technical,
- Budget,
- Project/contract management, and,
- Project Design.

The basic methodology of the Review is straightforward, including interview of Council project staff, a Review of documentation, questions and confirmation of facts with relevant staff, analysis, and formulation of the report. The Post Project Review report will be issued as a draft, the findings presented to Council by the Reviewing Consultant, and then a final report prepared for release.

3.0 PROJECT REVIEW - INFORMATION COLLECTION

3.1 INFORMATION AVAILABLE

Documents included in the Review include feasibility studies prepared for Council, details of the brief to designer, the designer's proposal answering the brief, construction documentation, the contractor's tender response, site meeting minutes, requests for information (RFIs), Superintendent Instructions (SIs), project documentation such as notices of delay, project information such as variation claims and registers, Council reports, and expert reports on issues ongoing with the project.

3.2 INTERVIEWS

Interviews and debriefing was conducted during the first and second weeks of May with the following key personnel at Colac Otway Shire:

- ██████████ General Manager, Infrastructure and Leisure Services
- ██████████ Manager Assets & Property Services
- ██████████ Public Relations Coordinator
- Project Team: ██████████ Manager Arts and Leisure; ██████████, Manager Capital and Major Projects; ██████████ Project Delivery Coordinator
- Procurement: ██████████ Manager Governance and Customer Service ██████████
██████████ Contract Governance Coordinator
- Chief Executive Officer, ██████████
- Facility Management: ██████████, Manager Arts and Leisure ██████████, BWFC Centre Manager
- Finance: ██████████.

One Councillor provided input by phone on 16 May 2016. Other Councillors were offered the same opportunity, or to meet with the Reviewing Officer in Colac, however only one Councillor participated.

The previous Infrastructure and Services General Manager offered the Reviewing Officer information by way of background, but requested that details of the conversation not be directly quoted.

3.3 BACKGROUND DOCUMENTS

Documents which assisted with situating the project background included: *Sport and Leisure Solutions* Feasibility Study of Oct 2011 on the hydrotherapy pool and a previous study on the same from 2005; and a 2008 report by ██████████ on the feasibility of an improvement plan for the sports stadium component of BWFC.



Council Minutes from In Committee Meetings were provided for various key dates, including OM132310, of which item 23 is highly relevant, at pages 16 – 26 of the Minutes.

A full set of the operational Project Management records including: Requests For Information (RFIs), Variation Quotations, Notices of Delay, Superintendent Instructions, Extension of time claims and the EOT Register, and Project Reports were provided for Review. The variation register template and an updated template was provided.

Policy documents such as COS Procurement Policy were provided. State Government documents such as the Victorian Auditor General's report *Local Government Service Delivery: Recreational Facilities* of March 2016 were available to the Review.

In summary, adequate documentation and information from personnel involved was available for the Reviewing consultant from Lambert & Rehbein to build an adequate understanding of the project.

4.0 PROJECT REVIEW - OBJECTIVE ACCOUNT OF PROJECT

4.1 PRELIMINARY – DEVELOPMENT PHASE

A specific identifiable decision by Council to consciously undertake the BWFC project has not been located by the Review. The basis for the project was rather the identification of several areas of perceived community need within the health/fitness/sport/leisure sector, and a number of funding opportunities which had become available during the period 2008 - 2012.

Some of these needs had been highlighted in feasibility studies such as the 2011 study to advise Council on the cost-benefit and issues associated with a hydrotherapy pool, and the 2008 study 'to recommend the scope associated with the development of stadium facilities'. Other elements of the project were included because funding was available, or because funding for one element being requisite on the inclusion of others, such as was the case for the children's splash pad.

There was not a combined business case for the project, or a master plan for the site, before design of the project was started. The architect's response to the brief mentions that a site appreciation was undertaken, and that the architect understands that the aquatic and stadium facilities are an integrated package. The architect's response also recommends that a facility master plan should be developed, but this appears not to have been taken forward as part of the design commission. It may not have been critical to undertake a master plan, particularly in the context of the facility's functionality being mostly 'existing', but a master planning process can serve to focus stakeholders on a project and clarify its objectives at the earliest stage.

4.1.1 INITIAL FUNDING AND BUDGETING

In August 2010, Council received an election commitment of \$3,783,000 to redevelop the BWFC stadium. Applications or preliminary requests for this funding have not been seen by the Review, but it is likely that the premise of the funding was the 2008 feasibility study by [REDACTED] on the indoor sports stadium. This initial funding commitment was short of the \$6M understood at the time as the required amount for refurbishment of the stadium. In April 2012 the CEO's Progress Report to Council noted a visit by the State Minister for Sport and Recreation on 12 April 2012 where \$1.15M State funding was announced for the BWFC Stadium Redevelopment. At that time it was noted in the CEO Report that the project funding requirement was \$5.6M. The plan was for this funding to consist of: Federal funding \$3.78M (as mentioned above); The Department of Education and Early Childhood Development \$430,000; Council \$200,000; and the Colac Basketball association \$100,000. The April 2012 Council Minutes suggest that it was intended for design to begin in June 2012.

Funding as at April 2012 was:

Funding Source	Amount
Commonwealth Government	3,783,000
Victorian State Government	1,150,000
DET/ECD	430,000
Colac Otway Shire	200,000
Colac Basketball Association	100,000
Total	5,663,000

The May 2012, CEO's Progress Report to Council noted that on 4 May 2012 the Federal Government's Health and Hospitals Fund added \$2.8M to the project for the hydrotherapy pool. This Report noted 'Construction is expected to commence early 2013.'

The project had evolved, as outlined above, in response to available strands of funding, rather than from a clearly articulated statement of requirement. This method of procurement is inherently exposing stakeholders to the risk that the eventual product will not satisfy the community need as well as it could have if it was driven by a thorough needs assessment and requirements planning processes.

The June 2012 CEO's Progress Report to Council noted that the tender "to provide architectural services for the Bluewater Fitness Centre Redevelopment Project was advertised in June and closes mid-July. An appropriate contractor will be engaged to undertake detailed design and prepare tender documentation for the project which includes a complete redevelopment of the stadium and development of a new hydrotherapy/ warm water pool and associated amenities."ⁱ

From the April 2012 CEO's Progress report to Councilⁱⁱ, expected project funding is summarised with the below table, which shows a \$10M budget:

Funding Source	Amount
Commonwealth Government	3,783,000
Commonwealth Government HHF	2,800,000
Victorian State Government	2,780,000
Colac Warm Water Group	25,000
Colac Otway Shire (requested)	512,000
Colac Basketball Association	100,000
Total	10,000,000

4.1.2 DESIGN BRIEF AND LETTING OF DESIGN CONTRACT

Objectives for the design were articulated in the design consultant's brief, Contract 1208, Section D – Project Brief for Architectural Services. This document is attached in Appendix A. The release of Contract 1208 was 19 June 2012, with responding submissions requested by 18 July. The CEO Report from August 2012 mentions that the BWFC Architectural Services tender #1208 was opened, and mentions in the 'Project Development and Planning' paragraph that the BWFC Redevelopment Project would be one of the significant projects of 2012/13.

████████████████████ were awarded the design contract. A project inception meeting was held on 11 Oct 2012. The design contract was signed on 15 Oct 2012 for a sum of \$513,664 ex GST for Council by the CEO, and accompanied by a letter dated 20 September from ██████████, GM Infrastructure and Services. The Project Budget mentioned at paragraph 11 of the Project Brief is \$7,446,000.

A Risk Assessment has not been located by the Reviewing Officer from this stage of the Project. An acceptance of the planned Project budget by Council is not specifically noted in the documents accessed by the Review, however the release of a design brief and the subsequent award of a commission to design works in line with a brief, is taken as confirmation of Council's intent to execute the project.

COMMENT: Proceeding with the design as per the Architect's brief would imply that Council was clear in its intent to redevelop the BWFC according to the available funding, and with the noted Council contribution. It is not clear if the risk of a funding over-spend was considered. END COMMENT.

A requirement of the Brief was for the Architect to provide the Schematic Design Cost Plan at 95% Schematic Design, including a reconciliation against the Project Budget.ⁱⁱⁱ Architectural and engineering design was carried out, and a Tender was issued to selected builders, which closed on 30 Sep 2013.

4.2 PROCUREMENT – ACCEPTANCE OF DESIGN, LETTING, AND AWARD OF CONSTRUCTION CONTRACT

A Cost Estimate was undertaken by the Architect's sub-consultant quantity surveyor. "Cost Plan No. 4" was quoted in the report to Council OM 132310-23, which presented the potential contractors' tendered prices to Council for consideration before award of the contract. The quantity surveyor had estimated "...an overall cost of \$10.46M inclusive of consultants' fees, contingencies, landscaping, car parking, disbursements, etc."^{iv}

This estimate, well above the project budget noted in the Architect's design Brief, was however assessed by the Architect and Quantity Surveyor to be in excess of what an approach to market

might produce, according to the OM132310-23 Report. The Report states that the Architect and Quantity Surveyor advised Council staff that 'considering the current economic climate and the downturn in the construction industry, Council could reasonably expect a very competitive price possibly lower than the Cost Plan.'

Compliant pricing for the build contract was received from four tendering builders, and ranged in price from approx. \$11.2 M to \$11.6 M. It is noted that these figures are in fact some \$1M above the Quantity Surveyor's Cost Estimate, rather than below the estimate as was suggested by the Architect and Quantity Surveyor. The total project cost including consultant's fees and project management was estimated in the OM 132310-23 Report to be \$12.025M.

The Report OM 132310-23 provided to Councillors by Colac Otway Shire Infrastructure & Services staff on 9 Oct 2013, gave a summary of tender pricing, and proposed three options. These were:

- (1) "Complete full works as specified. Cost \$12.025M"
- (2) "Complete project with cost savings [of \$400,000] within scope. Cost \$11.625M"
- (3) "Project redesign to match available budget".

Option (2) was recommended by the Report, and after some amendment, a Motion was carried 4:3 to award the contract to [REDACTED] for \$10.95M, which included the optional additions of a splash pad \$156,800 and joinery \$85,500. Brief analysis of the proposed options, and the Council decision process which led to selection of *option (2)*, is below in Section 5 of this report.

It was resolved in the Motion dealing with the OM 132310-23 Report, that the funding required to make up the budget shortfall was to be drawn from the 2014/15 budget, and the Local Government Infrastructure Program. This additional funding was for \$1,702,000; \$535,000; and \$300,000; a total of \$2,537,000. This is understood as Council's planned contribution to the project. When combined with the various donor funds, this was considered adequate for the Project's budget. The budget requirement for the let contracts including a construction contingency of \$850,000 plus \$50,000 for blinding concrete, and is summarised as follows:

Category	Cost
Construction contract ([REDACTED])	\$10,955,860
Design / consultant fees	\$600,000
Project Management	\$80,000
Equipment for BWFC	\$120,000
Landscaping	\$100,000

Total Project Value:	\$11,855,860
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A contract between COS and [REDACTED] was signed on 6 Dec 2013 for \$10,955,860, beginning the construction phase of the project.

The COS report OM162402-6 'Second quarter financial performance report 2015-2016' of Jan 2016 forecasts the overall project spend at \$12,696,365 which excludes repairs to the pool of \$200,000. The official overspend figure mentioned in the COS Jan 2016 report is \$840,505.

4.3 DELIVERY – CONSTRUCTION PHASE

4.3.1 ESTABLISHMENT AND EARLY STAGE ISSUES

The project's first requests for information (RFIs) were generated in December 2013, where the contractor requested copies of CAD documentation, and information related to demolition. These RFIs were followed with a reasonably large number of issues requiring attention during the establishment phase of the project, as the contractor investigating the site and subcontractors were presented with the detail of the construction documentation.

RFI 10 on 18 Dec 2013 is instructive as to early design issues being raised by the building contractor. This RFI highlights documentation requiring new ceiling install, without demolition plans showing removal of the existing ceiling. Through January 2014 there were numerous additional RFIs raised, including RFI 19 concerning missing structural detail, and RFI 22 on various structural steel questions.

COMMENT: this indicates a level of attention to detail in the design which would become problematic with several other existing conditions and proposed works having buildability problems during the build. END COMMENT.

COMMENT: A relatively inexperienced client side project management team may have felt under pressure virtually from site start, by the quantity and complexity of information being requested, particularly if they had not previously dealt with a project with structural, mechanical, electrical, hydraulic, and civil issues. The project's ambition to reduce build costs below the originally approved contract was at the same time becoming increasingly difficult for the project team, through unforeseen site conditions or items excluded from the construction documentation. In the absence of a Colac Otway Shire risk management plan there is no evidence that the risk of the project team capacity being exceeded was identified, or understood as a risk, or was addressed. END COMMENT.

The first monthly report OM 250613-10 serving to update Council on project progress covers the period 1 to 31 May 2014. The report mentions a revised project budget of \$11.86M and that the

project was being “managed within budget tolerances”^{vi}. There is no report to Council covering the period from site start in Dec 2013 to the end of Apr 2014.

COMMENT: By the end of May 2014 there had been in excess of 160 formal RFIs and approx. 30 contract variations applied for or approved, to a value of \$55,841. The stadium floor was known to have major issues and a \$30,000 variation for its demolition had been approved during May 2014, with further major cost likely for its rebuild, but this is not mentioned as a significant issue. The report tends to underplay the level of uncertainty being encountered by the contractor.

4.3.2 ISSUES OF SIGNIFICANCE ENCOUNTERED DURING CONSTRUCTION

A selection of the main cost variations were tracked in order to give a narrative of works required which were not planned as part of the initial contract, either as a result of unknown latent conditions, or shortfalls in the design. While these design issues, latent conditions, and variations were being dealt with, the main work of the project continued at the generally expected pace, and reasonable progress was made.

COMMENT: This progress demonstrates that the client side project team was functioning at a reasonable level, and that the contractor was taking all reasonable steps to progress the work. END COMMENT.

- Variation 4, related to RFI 19, and Consultant Advice Notice (CAN) 006, delivered by Superintendent Instruction 15 on 20 Jan 2014. Cost \$13,797. This variation was required because no footing detail had been included in the documentation. Information is not available to show if discussion between Council’s Project Manager (as client), the contractor, or the design team took place.

COMMENT: There would normally be some discussion on a variation of this size. The builder might be expected to have allowed some cost for the footing which was documented but not detailed. Similarly the consultant would be expected to have picked up this oversight in a design coordination Review. A client would ultimately be liable to pay for the works, however there would normally be room for understanding on the above to be reached. It is also not documented if approval of this size of variation was the responsibility of the Superintendent Representative, the Council appointed Project Manager, or higher authority within the client organisation. As this is the first variation of over \$10,000 it may have served to establish the pattern for how issues of significance would be dealt with for the remainder of the project. END COMMENT.

- Variation 41, approved by Superintendent Instruction 237 on 20 June 2014, and followed by a new RFI 210 on August 2014 and again approved by Superintendent Instruction 470 on 26 Nov 2014. Cost \$18,910.50. This variation was for a platform to support mechanical plant on the facility roof. An existing steel framework was originally planned to be retained, but the

contractor highlighted some rust degradation and requested confirmation that it was fit for purpose. There was additional confusion and repeated RFIs and SIs based on size of the intended mechanical unit.

COMMENT: This type of unexpected expense, and the project management time to deal with redesign and re-documentation and Review of shop drawings, in addition to the actual cost of the works, imposed considerable expenditure in resources of the project team and building contractor. The documents suggest the (adverse) state of the platform had not been noted during site investigations. There was however an option offered by the structural engineer to re-use the existing platform, which would have required an assessment of its capacity, and rust remediation works to be undertaken, in [REDACTED] CAN 018 of 12 February 2014. The decision making process related to the suitability of this suggestion is not clear with possibly the architect, or the project management team using their own judgement and deciding not to investigate the structural strength and therefore the suitability of the existing platform. It is normal for decisions of this nature, requiring a significant level of resource spend, to be approached with some degree of formality and for the decision process to be recorded, but it is unclear how the process was approached in this case. END COMMENT.

- Variation 84, concerning the dry area roof, was approved for \$166,821 by SI 403 on 10 October 2014. It is noted that the Superintendent, General Manager Infrastructure and Services, signed this Superintendent Instruction, rather than the Superintendent's Representative who had signed most other approvals. The issues related to roof/ ceiling design in this area caused delay, financial cost, and required significant amounts of project management resource from the client. The contractor's letter of 8 August 2014 Notice of Potential Delay, details background and information related to the variation. It was particularly noted that this issue was first raised on 18 December 2013 in RFI 10.

By the status report of 9 October 2014, the *Overall Project Status* was 'caution' (the middle of the three rankings 'controlled', 'caution', and 'critical'). *Timeline* was at 'caution' with a note commenting that potential delays may affect the forecast completion date. *Scope* was at 'caution' with a note commenting "scope reduction on non-essential items was being investigated to reduce pressure on project budget". However, the note on Budget said "project within current budget tolerances" while indicating budget was at 'caution'. There is a figure in the summary area of the report indicating that 'credits and construction contingencies' is \$850,000; and that there is \$838,024 remaining. This figure neglects the \$160,000 variation that was to be approved on 10 October 2014, and associated delays that the roof/ ceiling in the dry programs area was likely to cause. The figure also neglects other variation costs such as the \$30,000 floor demolition from May 2014, and it is possible that the calculations that gave this figure are

incorrect, or at best have not been accurately updated to show a committed dollar cost – even though it may technically show monies that Council had not paid out at that date.

By the start of October 2014 there had been 93 variation quotations, of which 64 had been approved; 231 RFIs with 52 unresolved; and a growing list of concerns about site conditions which had not been identified during the design.

- Progress reporting during early 2015 indicated that RFI response times were identified as a risk, with 54 RFIs outstanding at the end of January, and the risk status at 'caution'^{vii}. May 2015 had 14 RFIs outstanding and the risk level still at 'caution'.

By June 2015 the RFI outstanding number had reduced to 5, and the risk status for RFI response times was 'controlled'^{viii}. The June report shows Superintendent responsibility handed over to the COS Manager, Capital and Major Projects [REDACTED]. It was commented in interview that this change in Superintendent to an officer with a high level of specialist engineering project management expertise saw various improvements in the management of the project. The June report listed *progress since last report* including "sports stadium floor sanded and sealed" and *upcoming tasks* including 'polishing and line marking of stadium floor'.

COMMENT: At that stage (June/ July 2015) the project was running within the construction contingency for variations, and though the initial PC date had been passed, the prospect of opening the whole facility in reasonable time was still considered good. END COMMENT

- The July monthly report has scheduling risk at 'caution' rather than 'critical'. 'Critical' - according to the legend on the report- would have indicated that the "issue or risk (is) likely to significantly impact on schedule and project cost". 'Caution' is a lesser concern. This rating shows that the project's management was optimistic that works were being completed generally according to plan, and that the facility's opening would not be unduly delayed, with mention of the dry areas opening target date of 17 August 2015. There were still outstanding works being completed in the pool/ splash pad area which saw main construction ongoing throughout August. The dry programs area did open on 17 August 2015.
- The budget status reporting went from 'caution' in August to 'critical' in September 2015 when the project budget had exceeded contingency by over \$100k.
- Issues were worked through regarding the pool systems, mechanical and electrical, and fire systems commissioning, and the pool area opened on 30 October 2015. A narrative account of the sports floor issues is at para 5.8.3 below.

4.4 DELIVERY - POST MAIN CONSTRUCTION/ DEFECTS PHASE

At the end of Feb 2016 the defects phase was still underway. A Master List had been established to administer the defects as they are raised, assessed, and works carried out to rectify. The list supplied to the Reviewing Officer is 61 pages of approximately 6 defects per page, therefore around 300 identified issues, however there is no overall numbering system on the master list, so whilst a detailed description and photograph makes identification of the defects reasonably easy, the overall management of similar issues and numbers of issues on the list is not straightforward.

A defects risk register has been established to assist with the management of defects and ensure that those which may pose a safety risk to the public, or a risk of degradation or damage to the facility. A version of the register has been supplied to the Project Review.

The defects process is governed by a COS procedure published as the 'BWFC Defect Issues Flowchart'^{ix}. The building contractor and the COS Project Manager have specific roles in the flowchart.

COMMENT: BWFC centre management (as 'client') does not have a specific role in the documented defects rectification process. The Architect and consultant team do not have a designated role mentioned either. Recommendations will be made for improvements to the flowchart and defects register management process, which might assist with the remainder of the Post Construction Phase. END COMMENT.

4.5 SUMMARY OF CONSTRUCTION ACHIEVEMENTS

The main pool, splash pad, hydrotherapy pool, spa and steam room, and dry programs (gym) areas are all currently open and fully operational, supported by the shared services (reception, childcare, etc.) spaces which are functioning. As at the end of Feb 2016, the stadium floor requires further work before the stadium/ indoor sports courts will open for use.

The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016. The report mentions the following which serve as the official cost figures:

- It is forecast (by Council) that the overall project spend will total \$12,696,365
- Total costs beyond the original project budget amount to \$840,505
- This represents an over-spend of 6.6%
- Costs identified as delay costs claims by the contractor (\$212,554) and costs incurred by Council due to extended construction (\$97,884), total \$310,438 make up 37% of the overspend.



Latent conditions and design oversights contributed much of the overspend, with items such as the alterations to the dry programs roof requiring significant contract variations, and unexpected significant expenditure, as detailed in section 4.3.2 above. Value for money assessment is considered in section 5.1 below.

5.0 PROJECT REVIEW – ASSESSMENT OF OUTCOMES

Council identified several areas under which Project outcomes are to be assessed. The issues will be dealt with individually in the Report sections below.

Element	Issues
1. Economic	<ul style="list-style-type: none"> ▪ Project formulation, including business case and the process for developing the brief. ▪ Evidence that the project has met economic and/or service requirements. This takes into account the costs and benefits of undertaking the project.
2. Compliance	<ul style="list-style-type: none"> ▪ Risk management. ▪ Project compliance and alignment of the project outcomes with the original business case and user requirements. ▪ Effectiveness of project governance arrangements including project approval; contract award; and allocation of budget.
3. Procurement delivery process	<ul style="list-style-type: none"> ▪ Effectiveness of the procurement processes. ▪ Delivery of the project in accordance with original timeframes and variances including costs. ▪ Level of resources required to deliver the project.
4. Asset performance	<ul style="list-style-type: none"> ▪ Assets meet functional requirements. ▪ Effectiveness of environmentally sustainable design elements included within the project. ▪ Effectiveness of physical asset performance (space, ease of maintenance).
5. Technical	<ul style="list-style-type: none"> ▪ Performance of project consultants and design team. ▪ Performance of construction contractor. ▪ Identification of operational issues (performance of systems, records management, etc.)
6. Budget	<ul style="list-style-type: none"> ▪ Assessment of actual budgetary impacts against those identified in the business case. ▪ Process for managing budget and cost pressures/over expenditure.
7. Project/contract management	<ul style="list-style-type: none"> ▪ Contract administration matters including; latent conditions; variations; and defects liability. ▪ Management of project timeframes and variances. ▪ Stakeholder management, including, community relations and liaison with key users groups.
8. Project Design	<ul style="list-style-type: none"> ▪ Building design including; site condition assumptions and structural requirements. ▪ Project management matters including; construction oversight; scope management; and schedule control. ▪ Management of issues relating to the stadium sports floor. ▪ User satisfaction with delivered solution.

5.1 ECONOMIC

5.1.1 PROJECT FORMULATION, INCLUDING BUSINESS CASE AND THE PROCESS FOR DEVELOPING THE BRIEF

Formulation of the project was not structured around a business case or Masterplan. The Brief to Architect was instead based on individual feasibility studies for the fitness centre elements, with the connecting elements based on requirements of the various funding sources. There was an implied understanding that while funding was available the project should be done.

There are no obvious technical faults with the BWFC brief. The project elements are similar to facilities other councils and public bodies construct in Victoria. Development of the Brief therefore could be said to have been based on the types of facility others have constructed, which is assessed as not unusual.

Outcomes related to economic requirements is taken to be the requirement to deliver the project within budget. Council resolved to allocate required funding for the project at acceptance of contract, which was a total project cost of \$11.85M. It is important to note that this was the baseline budget for the project build that was authorised by Council, rather than the originally envisaged construction budget of \$7.44M (excluding architect and project management fees) which was part of the Brief to Architect^x. Evidence shows that despite the agreement to accept the construction tender for \$10.75M^{xi} and with known costs for optional additions and consultant fees/ relocation/ equipment and project management (which brought the total project budget to \$11.85M), the Project Management team was expected to save costs during the build. Note the contract was signed on 6 December 2013 for a sum of \$10,955,860^{xii}. This expectation by Council influenced decision making during the project and led either directly or indirectly to a number of issues (including the decision to substitute the stadium floor for an alternative material). This expectation to save costs is also part of the reason for a perception that the project has run significantly over budget.

The project budget was inadequate from the start. A lesson is identified regarding setting realistic expectations before and during a project's formulation, and in communicating these to stakeholders - including COS ratepayers.

5.1.2 EVIDENCE THAT THE PROJECT HAS MET ECONOMIC AND/OR SERVICE REQUIREMENTS.

Taking into account the costs and benefits of undertaking the project.

- The project has met service requirements, separate to the stadium floor resolution process. Benefits of the project are reflected by the strong reported user uptake and the reported high level of satisfaction with the facility by users (user survey 2016).

- Costs of the project are not excessive in comparison to other new facilities or similar brownfield sites. New facilities tend to cost in the vicinity of \$10 - 20M to construct. Refurbishment costs range widely, with one example noted by the report of a 'pool only' refurbishment costing at \$5M.^{xiii}
- The Victorian Auditor-General's Report of March 2016 *Local Government Service Delivery: Recreational Facilities* investigated the cost to local government authorities of operating pools and aquatic facilities. The audit found ARC development and refurbishment is reliant on government grants, with Councils generally subsidising the operational costs of facilities. In Victoria this situation is considered an accepted part of a Council's function. The report notes "Between 2015–16 and 2018–19, Victoria's 79 Councils have planned \$933 million in capital expenditure on recreational and community facilities. Many Councils deliver these facilities and associated services in the context of ongoing financial sustainability issues, including uncertainty around future grant allocations and rates-based revenue, and mixed community capacity to absorb higher fees."^{xiv} By a simple averaging of expenditure, this reporting shows Victorian Councils spending in the vicinity of \$12M each on capital expenditure for facilities similar to BWFC, over only four years. Colac – Otway Shire is well within the normal range of spend on this category of facility.
- Benefits of such a facility for Colac and the region could be quantified in terms of health benefits from the hydrotherapy facility (for instance it may accelerate rehabilitation and return to work by X% which could be quantified economically) Work could also be done to economically quantify the benefits of fitness to the Colac population, the value of recreational opportunities offered for families and increased social inclusion for young people involved with team sport etc. However, the quantifying in dollar terms of all user benefits requires a level of economic modelling beyond the scope of the Post Project Review. It is therefore essentially a subjective judgement, supported by the Federal and State funding bodies (from where almost three quarters of the project's funding was sourced) that facilities like BWFC bring an important level of benefit to a community, and are a justifiable investment of public monies.

In summary the project has met its service requirements and will deliver the expected benefit to users and the community, within a normal range of cost.

5.2 COMPLIANCE

5.2.1 RISK MANAGEMENT

Risk management, being the risk of the project running over budget, over time, or failing to meet the expectations of the brief and the design, was not a prominent feature of the project in either the planning or execution phases. It is understood that an informal risk management process may have

taken place during the pre-design phase of the project where Council were formulating the Brief to Architect, to ensure that the facility would meet the requirements of donors, and that it would meet user and community requirements. As noted earlier the Project Review found no compliance issues with the design brief or the tendering of the design contract.

Formal investigation of the architect's risk management approach during design is outside the scope of this Project Review. No comment is therefore made on internal risk management by the design team.

There are no observed issues with compliance to known regulations with the tendering or award of the construction contract. This was however achieved without formal risk management being documented, other than the tender evaluation process which might be considered a form of risk management in that it assessed tenderers on their experience, demonstrated qualifications, and understanding of the brief, and those presenting too great a risk would be disqualified by the process.

Risk management during the construction phase did not follow a formalised process. Had a risk management system been followed, it is likely that the organisation would have been more informed about latent conditions and design issues which had a high risk of causing delay and adding cost to the project.

Progress reports do however identify latent conditions and weather as possible causes of delay, which indicates that there was informal risk management taking place within the project team. While an informal approach may be considered appropriate for the scale of normal Colac Otway Shire projects, the BWFC Redevelopment was one of the Shire's larger undertakings in recent years, and would have warranted a formal approach to the management of project risk. The lesson to be learned is regarding project team experience and decision support processes, not in relation to physical building construction, or to administering a Council works contract, but with regard to the experience and knowledge or process frameworks required to manage risk, and to mitigate identified risks, during a relatively complex and high value project.

Monthly reporting such as that submitted for July 2014 OM 20142708-4, show that "Key Risks that may affect the Project" were identified, in this case there are four risks at 'caution' level, and two 'issues' at 'critical' level, but this did not prompt the project management organisation to formalise the management of these risks or issues.

By December 2014 the monthly report in document OM 20150128 still shows only four project risks, two of which are 'controlled' (*'constructability – design issues'*, and *'redesign of steel structure foyer'*) and two at 'caution' (*'RFI response time'*, and *'Project schedule impacted by redesign re-documentation delivery'*). At the same time the report shows project budget was lagging in planned spend rate, indicating that project timeline delays were occurring. A formal risk management process to address the causes of this delay and put in place steps to rectify processes which may have contributed to future delay was not undertaken.

Risk assessment associated with individual decisions (which had potential cost and timeline implications) is not evident. There was no documented risk management or decision management system for approval of variations which added or removed cost from the project.

In December 2015, a risk schedule was established highlighting no less than 10 risks for immediate action and resolution.

5.2.2 PROJECT COMPLIANCE AND ALIGNMENT OF THE PROJECT OUTCOMES WITH THE ORIGINAL BUSINESS CASE AND USER REQUIREMENTS.

In the absence of an original business case, the Project Brief to Architect is taken as the original outline of project objectives and user requirements.

The project's compliance with the original objectives is satisfactory, with all General Description items listed at para 4 of Part D of the contract brief being satisfied, with the exception of the requirement for 'cogeneration systems for water heating' which was replaced by other more cost effective / efficient environmental initiatives, thereby satisfying the intent of the project requirement. The facilities delivered are in accordance with project brief (notwithstanding defect repairs currently underway), and user requirements have been met.

5.2.3 EFFECTIVENESS OF PROJECT GOVERNANCE ARRANGEMENTS INCLUDING PROJECT APPROVAL, CONTRACT AWARD, AND ALLOCATION OF BUDGET.

It is noted that there was not a formally adopted business case. The following observations are made:

- Endorsement by Councillors of the design, or Review of the cost plan prior to the construction contract going to tender, has not been found. However a record of the [REDACTED] tender recommendation has been provided, and the Review is satisfied that a compliant procurement and tender evaluation process took place and that the appointment of [REDACTED] was not incorrect.
- The first noted agreement by Councillors was after the project brief of 9 October 2013, where the contract #1322 was awarded to [REDACTED] for \$10.75M plus inclusions of \$156,800 and \$85,500 (total \$10,992,300).

Governance regarding project approval was not strong at COS at the time the BWFC project was started. The point above, regarding approval to engage a contractor at a 'higher than expected' cost, led to an emphasis on reducing cost within the project. This ambition (to contain cost) was not supported by matching governance mechanisms. More stringent governance could have included formal risk management processes being adopted in relation to project cost, more frequent reporting of Project Control Group meetings as related to project cost and progress, and a formal structure of

decision support for large variations with cost implications to the project. No evidence of any of these governance measures has been seen by the Post Project Review.

5.3 PROCUREMENT DELIVERY PROCESS

5.3.1 EFFECTIVENESS OF THE PROCUREMENT PROCESS

Procurement processes were effective. A probity audit of the procurement was carried out by [REDACTED] with a report released in October 2013. There were no issues or irregularities identified.

The first procurement process, for the BWFC design, led to the appointment of an architect and consultant team with appropriate qualifications and experience for the project. The [REDACTED] submission was assessed by the COS evaluation process as the best overall bid.

The second procurement process involved award of the construction contract, after the design team's quantity surveyor had completed a cost estimate showing that the works should be achievable within the allocated budget. Tenders were higher in cost than anticipated. This is not identified as a weakness in the procurement system.

5.3.2 DELIVERY OF PROJECT IN ACCORDANCE WITH ORIGINAL COST ESTIMATES

The project was not awarded within its original cost estimate, and it follows that the chance of delivery within the original cost estimate was low. Prior to award of the construction contract, in October 2013, Council had the option of reducing scope of requiring redesign to bring the project back to within the planned budget, but this option was not taken. Further observations regarding the project's strategic cost management are at para 5.6 below.

During the project several variations (both increasing and decreasing cost) to the construction contract were required, for a variety of reasons including design oversight, latent conditions, and initiatives to save cost suggested by the builder. These were assessed by the Council officers responsible for management of the project, or by more senior executive staff, as appropriate according to delegation. Internal deliberations on these variation applications was not documented, and hence quality of decisions - as related to procurement processes - is not able to be assessed by the Review. The approved contract variations, including extensions of time with their associated cost, saw \$840,505 more cost expended than had originally been estimated.^{xv}

5.3.3 DELIVERY OF THE PROJECT IN ACCORDANCE WITH ORIGINAL TIMEFRAME

A timeframe for the project was estimated by [REDACTED] in their tender response with design commencing in October 2012 (the design contract was in fact awarded in Oct 2012), and a planned construction period from June 2013 to October 2014 (17 months construction). This programmed

timeframe had slipped by the time [REDACTED] contract was signed on 6 Dec 2013, with effective site possession in Jan 2014

There are a number of Gantt charts showing planned construction duration. The [REDACTED] Project timeline of 9 April 2014 at Appendix B, indicates a 'construction start' date of 6 Dec 2013 with a duration of 273 days. This [REDACTED] program has a target completion date of 20 March 2015 (15 months construction). This is the working timeline that is understood to have been used by the on-site team.

The file *V-326_Bluewater Fitness Centre – Tender Programme* at Appendix C is considered the tender copy of the planned timeline, and has the construction period at 220 days. This is approximately two months shorter than the architect's estimate, which is understandable with the contractor's benefit of having the design in detail at tender in order to make estimates. The [REDACTED] on-site timeline at Appendix B is however is different to that set out by the construction contract, which is the V-326 document. SI 108 has a useful summary, setting out that the original **contract dates** were:

- Site Possession 13 Jan 2014;
- Practical Completion (PC) original target 14 Jan 2015.

This reflects a 12 month construction period, consistent with the [REDACTED] tender submission of 222 days of work, but inconsistent with the [REDACTED] *construction program*, requiring 273 days. It is also marginally inconsistent with the V_326 document which has a PC date of 16 Jan. SI 108 is ruling on an extension of time claim which extended the PC date to 3 Feb 2015^{xvi}, but it is clear that achieving the contract timeframe was likely to pose problems from the outset if the contract conditions did not match the site based estimates for completion of the work.

Several site conditions such as the gas meter relocation, dry programs roof, and issues with the build such as those associated with the stadium floor, contributed to further delays, documented by extension of time submissions from the contractor^{xvii}.

COMMENT: It is possible that the technical and financial aspects of the project were given more prominence during the March – August 2015 period, and that timeframe for completion was not pushed as a critical issue. This comment is based on the level of attention given to timelines in the monthly reports. END COMMENT.

The project was divided into separable portions with the dry programs area opening on 17 August 2015 and the pool on 30 October 2015. These delays were not as a result of the procurement process.

5.3.4 LEVEL OF RESOURCES REQUIRED TO DELIVER THE PROJECT

The level of financial resource needed from Council to deliver the project is within a normal range of expectations, in comparison to similar projects undertaken by other Councils recently in Victoria, according to the State Auditor General's report previously cited^{xviii}.

The level of involvement from Council personnel is assessed as being higher than normally would have been the case, mainly due to the COS decision to manage the project in-house. This saw a relatively inexperienced team tasked with a key role in the project. It was mentioned in interview that for the COS staff involved, the project's management was in addition to existing routine duties, during initial stages of the project. This may have initially been seen as a resource saving for Council, but the failure to establish thorough project governance in the early stages meant that risk reporting and management was less than ideal.

5.4 ASSET PERFORMANCE

The contracted building works have been completed. The gym and dry programs area opened on 17 August 2015 and the aquatic facility on 30 October 2015. Stadium construction has been completed, but issues with the playing surface floor has resulted in the floor not being fit for purpose and has yet to be handed over to Council at the time of preparing this report. Several defects are in the process of resolution.

5.4.1 FUNCTIONAL PERFORMANCE AND EFFECTIVENESS OF THE PHYSICAL ASSET

Performance of the BWFC is assessed based on a survey of users, and feedback from Centre Management (as 'client' for the project), and Council's CEO.

The Bluewater User Satisfaction Data – January to March 2016 was conducted as a survey of new members. The survey report supplied by COS states:

“As part of Bluewater's member retention strategy, all new members who sign up receive a welcome letter in the mail with a survey attached to gather information regarding their initial experience using the Centre. Members can return their survey in exchange for a café voucher. This also give customer service staff a chance to discuss the members' initial experience with Bluewater when they return their survey.

There were a total of 53 new member surveys returned in the quarter. The survey is modified to suit each membership category to ensure that the survey is relevant to their experience.”

The returned surveys were overwhelmingly positive, with 97.29% of all responses received rating the overall facility 'Excellent' or 'Good' from possible ratings of Excellent/ Good/ Fair/ Poor.^{xix}

BWFC Centre management gave inputs to the Post Project Review, by way of interview with the Reviewing officer^{xx}. Significant points include:

- The general layout of the facility is quite good. The opening of the stadium will 'complete the flow', and will allow the entire operation of the facility to work cohesively.
- Access to the pool area was to be a separate set of turnstiles. These were however documented on plans as 'future' work. Management feels it would be a better outcome for pool area entry if these turnstiles had been constructed.
- Initially there were tight timelines to achieve centre opening, which meant staff recruitment and training was compressed, as was the establishment of procedures and processes for running the facility. This included teaching/ learning required on some of the technical systems.

COMMENT: A structured and planned handover of the asset will mitigate operational and resourcing challenges and should be built into all construction projects. END COMMENT.

- There were a number of relatively minor issues either from defects or commissioning that took a number of months to rectify and have required GM level intervention to ensure completion. Facility staff have reported to managers interviewed that 'they feel unsupported at times'^{xxi}. It was further mentioned that a defects management system has now been put in place which will expedite the resolution of faults and defects.

5.4.2 EFFECTIVENESS OF ESD ELEMENTS

The Architect Brief put in place a set of aims regarding sustainable design, such as efficient use of energy including consideration of cogeneration for the aquatic centre. During the project it was identified that a cogeneration system would be less beneficial than a number of other design features, such as double glazing of parts of the pool hall. The cogeneration system was therefore not constructed. This is in accordance with recent technical studies which show that cogeneration systems have longer payback timeframes and attract more risk than high efficiency boilers and solar PV systems for pool heating.^{xxii} If budget became available Council could install a solar PV system which will increase the effectiveness of building ESD performance.

5.5 TECHNICAL

5.5.1 PERFORMANCE OF DESIGN TEAM

The major technical issues arose from several cases of the design team not identifying or not being able to identify latent conditions, and design modifications being required as a result. The major issues included:

- Omissions in project design documentation due to oversight resulting in variation costs and project delays,
- A lack of familiarisation with existing site conditions resulting in delays and variation costs.

The design team's contribution commenced by failing to meet the target cost budget. This Review is unable to interview the design team.

There were numerous issues where design oversight or failure to coordinate led to COS becoming liable for cost beyond what had been expected. An example is RFI 33, for basketball backboard power supply. The equipment specified requires 3 phase power, but the documentation only detailed a single phase 15 Amp supply. Variation cost to Council was in the vicinity of \$4,000^{xxiii}. This type of cost, in excess of the intended budget, makes it difficult for the project team to maintain contingency funds, regardless of sound project management being applied to the works. However, costs of this type would have made the initial estimate and quoted sum higher, hence the original budget would have had to be higher. No nett additional cost to COS have been incurred (in the backboard power case), and so normally a client would accept that there would be a moderate number of this type of occurrence over the course of a major project.

A detailed critique of the design philosophy and architectural design of the facility is beyond the scope of this Review, besides the observation that code compliance has been achieved, as evidenced by the certificates of occupancy issued by building surveyors; and that user satisfaction with the functionality of the design is good.

5.5.2 IDENTIFICATION OF OPERATIONAL ISSUES – PERFORMANCE OF SYSTEMS, RECORDS MANAGEMENT, ETC.

For the most part, the project was managed in line with established systems and there are good records available to track progress, requests for information, variations, and superintendent's instructions. There have been a number of issues identified with the project's operational systems, particularly associated with risk management and the absence of the assembling of a Project Control Group (PCG).

Although there was a project manager appointed and several key project positions working closely together and meeting regularly, the vigour of a PCG would have enhanced the performance of the project.

Operational technical performance is further discussed in section 6.4, 6.5 and 6.6 below.

5.6 BUDGET

5.6.1 ASSESSMENT OF ACTUAL BUDGETARY IMPACTS AGAINST THOSE IDENTIFIED IN THE BUSINESS CASE.

As noted previously, a business case was not raised for the project. A submission was made to Councillors outlining general justification for the project in October 2013. The project budget as briefed to the architect was originally intended to be \$7.44M, excluding consultant and project management fees. The selected tenderer [REDACTED] were awarded the works contract #1322 of 6 Dec 2013, for the sum of \$10.95M. The overall COS project budget was \$11.85M.

The point where this budget change could have been effectively managed with the involvement of all stakeholders, was prior to the award of the construction tender to [REDACTED]. However at the 9 Oct 2013 briefing, in order to avoid paying further consultant fees, Council was advised to increase the budget and build the works 'as designed' rather than reconsidering the scope of works.

Actual expenditure exceeded the originally planned budget by 6.6% as described in para 4.5 above, one third approximately of which was made up of delay costs. This is assessed as a reasonable result for a refurbishment project where latent conditions such as those at BWFC were encountered.

5.6.2 PROCESS FOR MANAGING BUDGET AND COST PRESSURES / OVER EXPENDITURE.

The process for 'managing cost pressure' was not a clearly awarded responsibility within the project team, though it had been implied by Council that costs should be saved during the execution of the project. The Project Governance Structure document shows that during Stage One - Design and Documentation, the manager for Arts and Leisure would be Project Manager. The chart shows that during Stage Two – Construction, the Project Delivery Co-ordinator would assume the PM role. The governance structure document shows Project Manager with the role of 'managing budget'^{xxiv}, but for the purpose of the role the project budget would be the agreed construction budget of \$10.95M agreed in October 2013. The Superintendent is charged with assessment of all claims including progress payments and variations. The Project Sponsor is shown as Council's GM Corporate and Community Services, and the Superintendent is the GM Infrastructure and Services. A manager with direct accountability for cost and meeting cost-down targets (if these were intended) through the duration of the project, was not explicitly appointed.

COMMENT: If a project has the requirement for a particular type of cost control, then a specific role within the project management or governance structure should be appointed to manage the cost, with appropriate authority. END COMMENT.

The period in a modern commercial construction project where cost can be matched to available budget is generally during the design phase, or by modifying the scope during contract negotiations with a prospective contractor. After contracts are signed, particularly with a project involving

refurbishment of an existing facility, it is highly unlikely that costs will reduce to below that of the awarded tender. Therefore, expecting the Project Manager to save cost during construction was unrealistic, particularly for a project team that was not being led by the principal consultant, and a team which was not particularly experienced in projects of this complexity. A complication was that the acceptance of the 'higher than budget' tender was at the exact point that staff would have been handing over to other officers, and so responsibility to manage budget at that critical point was in a state of flux.

A specific process for managing budget pressure and expenditure related to these types of cost has not been located. This is an area where the project management team would most likely have benefited from more support.

5.7 PROJECT/CONTRACT MANAGEMENT

5.7.1 CONTRACT ADMINISTRATION MATTERS INCLUDING LATENT CONDITIONS; VARIATIONS; AND DEFECTS LIABILITY

Contract administration was designated as part of the role for the BWFC Redevelopment – Project Manager approved on 29 November 2013^{xxv}. It is normal that certain contract administration would be carried out by the Project Manager. Certain other parts of contract administration such as the assessment of claims, approval of variations, award of extensions of time or delay costs, and administration associated with retention bonds, are the responsibility of the Superintendent. In Stage 2 – construction, when most contract administration work was required, the Project Manager was the COS Building Construction Coordinator, who also performed the role of Superintendent Representative. The Superintendent was the COS General Manager Infrastructure and Services.

There were administrative systems put in place to register and maintain tracking on contractor requests for information, variation quotations, superintendent instructions, and assessment of extension of time claims. These were operated by the Project Manager. The maintenance of the defects register and advice on defects liability is also being carried out by the Superintendent Representative during the post PC phase of the project.

The project document tracking systems have some confusing aspects, but are generally sound, and an issue can be traced from its identification with an RFI from the contractor, through to a variation request being submitted by the contractor, and advice to either do the work or to make other modifications via a Superintendent's Instructions. According to the COS supplied register, there were 1066 SIs issued to 1 March 2016.

There were a number of latent conditions identified. These would normally be investigated by the PM, and resulting variation costs from the contractor would be recommended to the Superintendent for award. The critical determining factor for a latent condition is usually if ... "physical conditions on site, including artificial things but excluding weather, which differ materially from the physical

conditions which should reasonably have been expected at time of tender.”, according to the clause in AS2124-1992 (note the contract for the BWFC was based on AS2124–1992)^{xxvi}. The Superintendent is legally required to remain impartial in their assessment of the above questions. The Project Manager would normally give technical advice to the Superintendent, after consulting with technical specialists if required. In this case, the contractor discovered a number of conditions on site which were not evident from the design documentation, which was expected to be accurate at the time of tender. Responsibility for most of these latent conditions would therefore be carried by the client or client’s design team. This situation is reflected in the numerous approved variation recommendations (VQs).

Defects. A subjective yet technically informed and impartial assessment by the Superintendent normally determines if the quality of work is adequate. Liability for defects is based on Clause 30.3 of AS 2124 which states that the Superintendent may direct the contractor to “... reconstruct, replace or correct the material or work...”^{xxvii} At the time of raising this Post Project Review Report, the identified defects were being addressed. The Stadium floor is a major defect and work was still underway (at the time of this report) to determine the best and most cost effective means of rectification.

5.7.2 MANAGEMENT OF PROJECT TIMEFRAMES AND VARIANCES

The works period in the contract was 220 working days^{xxviii}, and the original PC date was 14 Jan 2015. According to the contractor’s submitted project schedule however [REDACTED] only planned to complete construction on 20 March 2015^{xxix}, an eight week planned over-run of the agreed PC date.

COMMENT: This is an issue which should have been raised and managed by a PCG level meeting if one had been established. END COMMENT.

The project’s management raised concerns with timeframes in project reporting from when reporting began in mid-2014 until completion, however it is not clear if there were steps taken to accelerate progress, and it is not clear from the minuted records of project discussions and reports if timeframes were considered a major project issue.

There were extensions agreed to the PC date due to certain conditions and circumstances as detailed in Extension of Time (EoT) claims, and summarised in the EoT log.^{xxx} The contractor had claimed 127 days EOT, but the Superintendent had accepted only 51 of these. With the 51 day extension, the PC target date was Friday 27 March 2015. External project stakeholders expected opening during the first half of 2015.

COMMENT: This situation is not unusual for a project team which may not have a lot of experience in construction delays towards the end of a project. END COMMENT.

In interview, the COS Public Relations Officer mentioned that there was a community perception that timelines were not well managed from the beginning of the project, because work was *not seen by*

the public or facility users to start until some 6-8 weeks after the contractor took possession of the site (although it is noted that a number of pieces of work were underway during that time which benefited the overall project). The situation had been caused by an issue with gas meter relocation and delays with the service authority, but the public were not aware of this, and some in the community concluded that timeline management was not being attended to diligently. As the project progressed there were efforts to facilitate visits of local media to site, to view progress and be briefed on project issues.

COMMENT: Besides additional financial cost in time delay payments to the contractor, the other issue with time delays is that the user groups are unable to enjoy the facilities being provided. There would ideally be a strategy to try and manage public/ user expectations and to inform where appropriate. END COMMENT.

5.7.3 STAKEHOLDER MANAGEMENT INCLUDING COMMUNITY RELATIONS AND LIAISON WITH KEY USER GROUPS

There was a significant number of media releases (43), website, facebook and radio interviews undertaken. Numerous user-group meetings were also held.

There were a number of stories published in the [REDACTED] concerning the BWFC, many of them describing perceived issues with the management of time and cost. Stories were also published via the 'Colac Otways Connect' hub concerning the selection of the Helsinki floor, progress on the hydrotherapy pool, and recruiting for lifeguard staff, but the frequency of these stories and their nature would not qualify as strong community engagement (the C-O Connect stories are not dated). The News and Media page of Council's new website only has stories from 2016 onwards.

In summary, there was only a measured amount of information made available to the community and stakeholders about the project during the construction phase. In interview, the COS PR Coordinator mentioned that external media's view on the project was overwhelmingly negative, but was of the personal opinion that community acceptance of the facility was high, and that stakeholders would come to understand the value of the facility in time.

5.8 PROJECT DESIGN

5.8.1 BUILDING DESIGN INCLUDING: SITE CONDITION ASSUMPTIONS AND STRUCTURAL REQUIREMENTS

The design project brief was clear, and the design responded adequately to the brief.

There were certain issues that were not noted in the design which were evident on site, for example it was documented to demolish the existing ceiling in the dry programs area and install a new

suspended acoustic grid system. This was without the design team understanding that the existing Stramit ceiling system provides structural support to roof members. This meant that extensive redesign and cost was incurred by the client.

COMMENT: The failure to note this existing condition is considered a weakness in the design team's contribution. END COMMENT.

There were other aspects of the design where questions were raised on site that would ideally have been investigated and understood during the consultant's design period. This includes the documented demolition of roof structure for rooms 43 and 44, which was not in line with the project's intent and was prevented on site. Similarly the mech services platform in variation 41 would ideally have been known before the design was finalised, allowing the contractor's tender to take into account all required works, and the best possible project sequencing and price outcomes achieved.

5.8.2 PROJECT MANAGEMENT MATTERS INCLUDING: CONSTRUCTION OVERSIGHT; SCOPE MANAGEMENT; AND SCHEDULE CONTROL.

Interview with BWFC management made a point that there were three different Council GMs in charge, and four Superintendents during the project. It was mentioned that COS had a position at the time of not hiring new staff, which was apparently in place for some of the project period. [This position has not been verified, but the comment is included for completeness]. The BWFC management interview further commented with regards to staff, that at the beginning of the project the COS staff holding key positions on the project management team were still serving their other established roles and responsibilities, and the BWFC project was additional

COMMENT: A more ideal situation would see a dedicated Superintendent Rep / Project Manager appointed, if COS decided to use internal resources to project manage a similar undertaking again. END COMMENT.

OBSERVATION: Schedule control was not as rigorous as would be expected on a project of this scale and complexity. Establishment of a Project Control Group to meet regularly to oversee the schedule, cost, and scope is highly recommended.

5.8.3 USER SATISFACTION WITH THE DELIVERED SOLUTION.

A survey of BWFC users has shown that a majority of those who use the dry programs area and the pools area are satisfied with the solution that has been delivered.

The Colac Basketball Association was not contacted for comment, but the courts which they used up to November 2013 have now not been available for two and a half years, which is likely to be

unsatisfactory to that stakeholder group, particularly considering the financial contribution made by the Association to the project.

In interview the COS 'client' officer representing the Shire's Arts & Leisure Department, and particularly BWFC management and staff, indicated that they are basically satisfied with the delivered solution. The representatives did express some frustration with defects management, and ongoing issues with a number of defects.

COMMENT: Besides the stadium floor, the number and nature of defects under rectification at BWFC would not be considered excessive in a project of this nature. END COMMENT.

6.0 PROJECT REVIEW – LESSONS LEARNED

This section of the Review deals with the question “what lessons can be learned from this project for both current and future projects?” The brief (specification 4.2) asked the Review to address this topic by including:

- Successful elements, to reinforce in future processes;
- Elements where the outcomes fell short of expectations;
- Aspects of the current project requiring amendment;
- Ways of improving the management of future projects; and,
- Identification of any unresolved issues (eg stakeholder concerns).

This process will identify lessons learned and potential improvements to operational processes relating to: 1. Business Case Development; 2. Project Development; 3. Procurement; 4. Project Management; 5. Contract Administration; 6. Governance; and 7. Benefit Realisation. (all from Review Specification para 4.2). In addition, Project Organisation will be discussed as point 8 - looking into lessons from the decision for Council to act as Project Manager while being the client.

6.1 BUSINESS CASE DEVELOPMENT

OBSERVATION: The BWFC project was not based on a comprehensive business case, and from the outset the scope of the project did not enjoy support from all key stakeholders. The project did however have a generally well understood and basic business case, based on several funding opportunities available at the time. The funding opportunities have been successfully taken advantage of by COS via the project.

LESSON. (ways of improving) Before a design brief is sent to tender, consideration of the business case would have clarified the scope and ambitions of the project. In future this should be part of COS processes. Council should ensure that a business case is raised for a major project.

OBSERVATION. The feasibility studies used to mount an informal business case, as submitted to Council after design (including the briefing OM 132310-23 and powerpoint presentation of 9 Oct 2013) were well founded.

LESSON. (successful element) Council should continue to use feasibility studies by Council or by others, in order to contribute to overall business cases. However a formal business case to bring feasibility studies together as a unified project would benefit a project of the BWFC size.

OBSERVATION. The business case and cost plan with the architectural design did not accurately anticipate tender prices.

LESSON. (ways of improving) Council should clearly articulate the actual projected cost and Council contribution, to stakeholders, at the outset of a major project.

LESSON. (ways of improving) Council should not expect that savings will be achieved during a renovation or refurbishment project where there is a high likelihood of unknown latent conditions.

OBSERVATION. There is an ongoing perception that the project has run significantly over budget and that project outcomes do not justify the final project spend.

LESSON: Implement a communications plan, including findings of this report if appropriate, to address concerns associated with project spend and outstanding issues.

6.2 PROJECT DEVELOPMENT

Project development is the modification made to an original project plan, as issues are identified during the course of a project. A Project Development Plan may include triggers for revisiting the project sponsor for guidance on issues before a certain level of decision is taken (in terms of impacting the scope or outcomes of the project, the timeline, or the cost).

OBSERVATION: Important steps in the development of the BWFC project included the decision to proceed with the full scope of the design, despite construction contractor tender prices being higher than anticipated (by the quantity surveyor) and higher than COS had originally budgeted. This decision shaped the financial climate under which the remainder of the project operated.

LESSON. (ways to improve) An agreed formal project development framework may have given space for the decision to go ahead with the full scope of the project to be Reviewed after construction tenders were received. A project development framework based on a valid business case would have offered options for elements of the project that could have been deferred until additional funding was available, or prompted a strenuous value management process to reduce project cost. NOTE: a formal project development framework is not the only way of prompting a decision Review in these circumstances, a thorough risk management process could achieve the same.

LESSON. In simple terms, it is not normal for a project to be built under-budget, particularly a renovation to an existing facility where unknown site conditions are a high probability.

LESSON. (ways to improve) Architectural redesign, even where it requires additional design fees, always has a better chance of achieving a project within budget than taking the chance that savings can be achieved during a build.

6.3 PROCUREMENT

OBSERVATION: From the information available to the Review, it is understood that the COS procurement policy was followed and all relevant procedures followed.

LESSON. Successful application of procedures resulted in a timely, compliant and competitive procurement process.

6.4 PROJECT MANAGEMENT

The PRINCE2 methodology identifies seven principles for the successful management of projects.

COMMENT: The methodology has its heritage in the management of IT projects, and is not always fully applicable to construction projects. END COMMENT.

PRINCE2 was not adopted for use by Council until later in the project. Adherence to the principles may have been of benefit to the BWFC project, particularly in the following areas where lessons learned are also evident, and therefore several recommendations follow relating to PRINCE2:

LESSON: (ways to improve) PRINCE2 principle Continued business justification. Much of the negative information represented about the BWFC project in local media, and from some areas of Council, is based on a view that the cost of the project is in excess of budget, and that the investment by Council has not yielded good value for money. A documented "Continued business justification" confirmation at the time of construction tender award would allow the decision taken by Council to proceed with the full scope of the project to be defended and presented to the community and in the media as being a thoroughly well considered decision.

LESSON: (ways to improve) PRINCE2 principle Defined roles and responsibilities. It is understood that the project suffered from turnover of staff in key leadership positions. Responsibility for a number of decisions is not clear from documentation that has been available to the Review, and it is not clear that responsibilities were formally or effectively delegated, despite the chart depicting the project team's governance structure from October 2013. For Council to maintain positive control of a project, clear definition of roles and responsibilities and regular factual updates from the functional role areas should be implemented.

LESSON: (ways to improve) If a key objective of a project is to achieve cost-down during the construction stage, this should be appointed to an appropriate team member, and suggestions/decisions to manage cost should be subject to risk assessment. A specific process for managing budget pressure and expenditure should be implemented.

PRINCE2 also makes use of seven key Themes, including: '1. Business Case', and '5. Risk'. These two are arguably the most relevant to the BWFC project.

LESSON: (ways to improve) The BWFC would have had a greater chance of full support from all stakeholders, and a better public perception, if a clear business case had been formally articulated before the design was commissioned and again before tender award.

LESSON: (ways to improve) The outcome fell short of expectation. Future projects should have a risk management plan and a risk register where risk items are formally assessed and risk reduction measures taken where required. It is noted however that a number of factors contributed to delays in RFI response, including delays from the design consultant team. Additional staff resources were reportedly dedicated to the project at certain times in order to improve RFI responses.

Unresolved issues: It is suggested that a regular Project Control Group meeting be instituted, focussed on defects rectification and formal risk management of the outstanding project issues. A corresponding lesson is that a PCG should be established for all similar future projects, and that meetings are documented and Reviewed by the Executive or escalated accordingly if there are any unusual issues with the project or schedule/cost parameters.

6.5 CONTRACT ADMINISTRATION

Construction projects in Australia, particularly publically funded works, tend to be based on the Australian Standard format contract AS2124, and have a commonly used range of documentation supporting the contract's administration. Key project documents include:

- construction documentation (drawings and specification),
- written requests for information (RFIs), the answers for which can take the form of RFI responses, or Superintendent Instructions (SI).
- Consultant Advice Notices (CANs) are formal communications from the design team to the Superintendent or Project Manager.
- Additional works requested or works that are decided not to be required that have cost implications are approved via a contract variation, communicated on the BWFC project by a document known as a Variation Quotation (VQ).
- Additional works or delays caused by other factors where an extension of time or postponement of the agreed Practical Completion date is justified are formally requested with an Extension of Time (EOT) claim.

LESSON: (successful element) The BWFC project maintained satisfactory records of RFIs, SIs, CANs, VQs, and registers to track all of these. The numbering system can be improved, and consideration could be given to having an RFI response continuing with the RFI number, instead of doing all communication to contractor by SIs, but this is a suggestion that should be taken up as appropriate to different project circumstances. Future projects should at a minimum use a similar documentation system as did the BWFC.

Unresolved issues: All document registers, and a set of the project documents (RFIs, SIs etc) should be finalized before archiving as a thorough record of the project, which will allow future BWFC managers and Council recreation services staff to understand the background to various elements of

the design. The financial aspects of contract finalization such as return of bonds and finalisation of payments will need to be resolved in due course.

LESSON: (ways to improve/ aspects of current project requiring amendment). The documented defects rectification process does not include a formal role for BWFC management as the client, or the design team. These should be included to improve defects management.

6.6 GOVERNANCE

Project governance occurs mainly outside the traditional boundaries of a project. In general terms, it involves the board of an organisation (or their delegates) and the project sponsor (an executive manager) charged with ensuring a project's performance and associated risk.

OBSERVATION: There are information gaps concerning the level of governance applied to the BWFC project. There may have been governance input which the Project Review is not aware of. This is largely due to the absence of a Project Control Group (PCG).

LESSON: (ways to improve) To ensure an adequate level of project Governance, a PCG should be constituted, should meet regularly, and have minuted records of decisions. The Project Manager would normally update the PCG with progress, timeline, cost, and risk issues. The benefit of a client's executive being made aware of all factors likely to impact on the delivery of their project, or realisation of Benefits (see below).

OBSERVATION: It is noted that the design brief included full detail on the main aspects of the project including the dry programs area, stadium, and pools. If officers at project governance level feel they were under-informed about the project scope or objectives, it would indicate a weakness in process. A more thorough system would see Councillors and the responsible executive informed when a design contract of this magnitude was let for tender, and before a design contract is signed.

LESSON: (successful element) The monthly updates to Council which began in June 2014 for the May 2014 period were useful for project governance. Similar reports should be used for designated project amounts (ie. >\$5m), and should begin when a project is formulated, prior to a design contract being awarded, and include all elements (ie. risk, engagement etc). This could also be tabled at Audit Committee meetings as well.

LESSON: (ways to improve) There is no evidence that the Officers with responsibility for project governance were formally assigned to roles, besides the position description of the Project Manager, or given information or equipped with knowledge required to ensure project governance was effective. Future major projects should ensure this is rectified. PRINCE2 type assignment of responsibilities would normally include a Responsibility Assignment Matrix - a tool used for identifying roles and responsibilities and avoiding confusion over those roles and responsibilities during a project.

6.7 BENEFITS REALISATION

Use of a Benefits Realisation Framework can help to build a business case, and focus attention on the most important benefits associated with a project. A Benefits Management Plan will normally include a list of measurable benefits, specific steps planned to achieve these, an articulation of resources required, and an area where risk management is considered and planned processes documented. Templates and guidance on benefits realisation suitable for adaptation and use by COS is available from the Australian Government Department of Finance www.finance.gov.au/publications and from various State governments.

OBSERVATION: Benefits Realisation was not formally considered as part of project planning, or tracked during the design and construction of the BWFC.

LESSON. (successful element) Benefits realisation was informally a key driver for the project, in terms of delivering the facility on time, at best cost, and with the right functionality.

LESSON. (ways of improving) Adoption of a formal Benefits Realisation Framework would have assisted the BWFC project, and it will be recommended that Benefits Realisation is included in the COS process in future.

6.8 PROJECT ORGANISATION

OBSERVATION: COS chose to let the design contract stipulating that the Principal Consultant (in this case nominated as the architect) would **not** be required to project manage the work or act as the Superintendent or Superintendent Representative. Design contracts let by local government often have the Principal Consultant acting as the Superintendent Representative, or a third party specialist Project Manager acting as, or representing, the Superintendent. In this way an experienced construction Project Manager holds the contractor to account, whilst being responsible for answering technical RFIs, and advising the client on decisions related to cost, outcome, and risk.

Further, it was noted in interview with the project team from BWFC, that at the beginning of the project assigned managers were still responsible for normal duties, allowing only limited time to for the project. Finally the question of skill sets/ competencies was not addressed in documents available to the Review. It was mentioned by several people in interview that the 'client' area within COS (Recreation Services) managed the initial project formulation and significant parts of the design brief, rather than project management or construction specialists.

LESSON: (ways of improving/ point for consideration) Other Councils when building aquatic centres have the Principal Consultant acting as Superintendent Representative and Project Manager, but Council engages the Quantity Surveyor^{xxx}. This would be the recommended project organisation, unless Council had available sufficiently experienced and skilled resources with time available to fully

undertake the project and with the expectation that officers are not required to undertake their normal duties as well as the project.

6.9 SUMMARY OF LESSONS

Identified lessons learned are tabulated as follows:

Category of Lesson Detail

successful element	Benefits realisation was informally a key driver for the project, in terms of delivering the facility on time, at best cost, and with the right functionality.
successful element	(Related to procurement): Application of procedures resulted in a timely, compliant, and competitive procurement process.
successful element	Continue using feasibility studies to build sound business cases.
successful element	The BWFC project maintained satisfactory records of RFIs, SIs, CANs, VQs. Future projects should at a minimum use a similar documentation system
successful element	Monthly updates to Council were useful for project governance.
ways of improving	Have the Principal Consultant act as Superintendent Representative and Project Manager as a dedicated resource, unless Council had available sufficiently experienced and skilled resources with time available to fully undertake the project.
ways of improving	Before a design brief is sent to tender, a business case be raised.
ways of improving	Council should clearly articulate the actual projected cost and Council contribution, to stakeholders, at the outset of a major project.
ways of improving	Do not expect savings will be made during a refurbishment project specifically when there is a likelihood of latent issues.
ways of improving	A project development framework based on a valid business case would have offered options for elements of the project that could have been deferred until additional funding was available, or prompted a strenuous value management process to reduce project cost.
ways of improving	A documented "Continued business justification" confirmation at the time of construction tender award would allow the decision taken by Council to proceed

	with the full scope of the project to be defended
ways of improving	To maintain positive control of a project, clear definition of roles and responsibilities and regular factual updates from the functional role areas should be implemented.
ways of improving	Have a risk management plan and a risk register where risk items are formally assessed and risk reduction measures taken where required.
ways of improving	A PCG should be constituted, meet regularly, and keep records of decisions.
ways of improving	Officers with responsibility for project governance be formally assigned.
ways of improving	A formal Benefits Realisation Framework would have assisted the project
outcome fell short of expectation	Officers responsible for project governance should interrogate reports, in order to ensure that reported information is fully verified.
ways of improving	The defects rectification process does not include a formal role for BWFC management as the client, or the design team. These should be included to improve defects management.

6.10 CONTROL WEAKNESSES AND IMPROVEMENT OPPORTUNITIES – PRIORITIZED LISTING

- I. Weakness existed in the publically available and COS-internal justification (business case) for the project in its full scope. Put simply, there was no consolidated comprehensive business case for the entire project either publically released or available for internal consideration by Council.
- II. Project governance was lacking at key decision points such as: the decision to use Council internal resources for project management; and in the tracking of cost, risk and timeline progress.
- III. Opportunity for improvement is identified in managing external stakeholders.
- IV. Opportunity for improvement is identified in Council's understanding and reporting of project issues during construction, particularly the earlier stages when latent conditions were uncovered which had cost and time implications for the project.

6.11 STRATEGIES FOR ADDRESSING IDENTIFIED ISSUES

- I. Establish a business case including a benefits realization plan for all future major capital works projects, prior to calling for design tenders,



- II. Establish a formal governance structure and Project Control Group for projects proceeding to design. PCG should ensure that appropriate stakeholders have input to the design, and that the project structure is suitable for the level of works.
- III. Where public money is being committed and the officers responsible for project governance see that there may be risk of controversy, instigate a public information strategy to ensure that public information is appropriate and serves the project's needs.
- IV. Ensure that during construction, Project Control Group meetings are held, and that risk management is formalised, including for decision risk. This means for instance, ensuring that advice is sourced regarding substitutions in the design, and that timelines and cost reporting is forthright, accurate, and clear.

7.0 CONCLUSION

7.1 SUMMARY OF PROJECT OUTCOMES

The Bluewater Fitness Centre redevelopment was an ambitious project, which Colac Otway Shire undertook in response to community need, at a time when several funding opportunities were available. With limited experience in projects of similar complexity, Council officers involved with the project made the best of the procedures, resources and structures at hand, to progress the works towards a favourable outcome.

The pool and dry programs areas were opened in mid to late 2015. As at the end of Feb 2016, the stadium floor requires further work before the stadium/ indoor sports courts will open for use, which is expected in the near future.

The total project cost is detailed in the COS Half Year Financial Performance Report of Jan 2016, forecast as \$12,696,365. This is a cost beyond the original project budget by \$840,505, or an overspend of 6.6%. In comparison to other similar projects, the COS spend on the BWFC project is close to the Victorian average.

7.2 SUMMARY OF PROJECT ISSUES

There was not a combined business case for the project, or a Master Plan for the site, before design of the project started. This meant that all stakeholders were not aligned in their understanding of the purpose and scope of the project. The project was to some extent led by the funding available, rather than driven by identified need.

Council's approval in October 2013 to go ahead with full construction despite tenders being higher cost than was expected, instead of redesigning or reducing scope, in the hope that costs would be saved during construction, led to issues later in the project.

There was no formal project Risk Management during the construction phase which meant that some significant risks to the project were inadequately managed.

There were gaps in the design team's understanding of site conditions, which meant that redesign and variations to the construction contract were required.

The perception of sections of the local media is not what Council would ideally want. This overall negative perception is seen as not accurately representing the BWFC project's achievements.

8.0 KEY RECOMMENDATIONS

Following the Review, it is recommended:

- I. Council Reviews the processes related to funding applications from State and Federal government and other donors, to ensure that projects combining multiple funding sources are based on sound initial needs assessment.
- II. Council use the BWFC lessons learned to improve and formalise governance processes for construction projects. These could include formal risk management processes in relation to project cost, Project Control Group workings, and a systematic approach to decision support for variations.
- III. Council takes steps to correct any perception that there has been significant mismanagement of the project.
- IV. For projects outside Council's specific experience, the Principal Consultant or a separately appointed Project Manager acts as Superintendent or Superintendent's Representative.
- V. Project Managers ensure that sound advice is sought regarding substitutions or alterations to design, particularly where these are intended as cost saving measures.

END NOTES

- ⁱ OM 122706-1 Colac Otway Shire CEO's Report to Council page 10.
- ⁱⁱ OM 122604-1 Colac Otway Shire CEO's Report to Council page 11.
- ⁱⁱⁱ Colac Otway Shire Council contract 1208, page 65.
- ^{iv} OM 132310-23 Colac Otway Shire Council Meeting, page 20.
- ^v *ibid*
- ^{vi} OM 142506-10 BWFC progress report, page 1
- ^{vii} OM 152502 Jan 2015 progress report, page 4
- ^{viii} OM 152207-8 Jun 2015 progress report, page 4
- ^{ix} COS document *BWFC Defect Issues Flowchart (v2.0)* supplied by Manager, Assets and Property Service.
- ^x BWF Stadium Contract 1208 Brief – Architectural Services, Part D, para 11.
- ^{xi} OM 132310-23 Colac Otway Shire Council Meeting, page 26.
- ^{xii} COS Contract 1322 6 Dec 2013 – Instrument of Agreement.
- ^{xiii} Port Lincoln Feasibility Report, [REDACTED], May 2014.
- ^{xiv} Victorian Auditor General report, *Local Government Service Delivery: Recreational Facilities*, March 2016, PP No 147 session 2014-16 page 1.
- ^{xv} COS *Second Quarter and Half Year Performance Report to Council* Jan 2016, Attachment 1, page 96.
- ^{xvi} COS CON 1322 - *BWFC Project*. Superintendent Instruction 108, 27 Mar 2014.
- ^{xvii} V326 BWFC Issues Programme by Zone (supplied by COS)
- ^{xviii} Victorian Auditor General report Op Cit.
- ^{xix} Colac Otway Shire, *Bluewater User Satisfaction Data – January to March 2016 - New Member Surveys*. Summary document supplied by COS.
- ^{xx} Interview 9 May 2016, Project Reviewing Officer / BWFC Manager, and COS Manager Arts and Leisure.
- ^{xxi} Interview 9 May with BWFC facility manager.
- ^{xxii} Moreland City Council and Ironbark Sustainability assessed the financial, environmental and operational performance of two main options for heating and powering indoor aquatic centres. <http://www.ironbarksustainability.com.au/resources/news/article/getting-wise-about-cogeneration-a-case-study-of-cogeneration-versus-boilers-and-solar/> accessed June 2016; High efficiency condensing boilers (as installed on a second pool at the Centre) with photovoltaic solar (PV)
- ^{xxiii} BWFC project documentation, RFI 33 and VQ 7.
- ^{xxiv} "BWFC Redevelopment Project Governance" document by COS, file created 19 Sep 2013.
- ^{xxv} COS Position Description, as supplied by project staff.
- ^{xxvi} COS Contract 1322 6 Dec 2013.
- ^{xxvii} *Contract Administration Principles: Guide to engineers*, McMullan Solicitors Jan 2011, p 77.
- ^{xxviii} COS letter CON1322 as part of contract documents document (b) 'letter of acceptance' dated 5 Dec 2013.
- ^{xxix} [REDACTED] works program. Issued as pdf Gantt chart print "BWFCR 09-04-14" (At Appendix C)
- ^{xxx} COS BWFC Project *EOT Log* showing upto EOT #24 of 6 Oct 2014
- ^{xxxi} Sunbury Aquatic Centre design tender request for EOI which states: "Hume City Council is seeking EOI from Architects to design and document this project. The architect will also be expected to be the Superintendents Representative during the construction and defect liability phases of the project." *Tenders.net 0 16 2605*, accessed 26 May 2016.