

Our ref: P.2490.001.00_TamarLakeFloodMitigationStudy.docx

14 June 2024

Tamar Lake Inc.
The Manors of Mosman
Unit 9, 6 Hale Road
Mosman NSW 2088
Attention: Robin Frith

Dear Robin

RE: TAMAR LAKE FLOOD MODELLING AND IMPACT ASSESSMENT – FEE PROPOSAL

Thank you for inviting BMT Commercial Australia Pty Ltd (“BMT”) to provide a fee proposal for this project. We understand that a flood modelling and mitigation study is required to understand flood impacts associated with installation of a barrier as part of the Tamar Lake Concept.

BMT has a strong technical reputation built on decades of flood modelling and flood risk management expertise. Our proposed project team brings a unique mix of technical excellence, modelling expertise and proven experience in hydrologic and hydraulic analysis and flood risk management that will be necessary to meet project requirements.

BMT offers local knowledge, relevant experience, a highly qualified and experienced study team and other project benefits, as follows:

- Local Knowledge: BMT has undertaken a range of flood assessments for the North and South Esk Rivers as well as the Tamar Lake Concept. Therefore, we are familiar with the flood models developed and flooding conditions in the area.
- Relevant Experience: BMT has a proven track record of successfully delivering hydrologic and hydraulic modelling, floodplain and stormwater management, and flood impact assessments for a range of public and private clients across NSW, Australia and Internationally. Therefore, we are well placed to provide Tamar Lake Inc with a robust study of the highest quality, based on sound technical analysis and representing best practice.
- Experienced Study Team: Our key staff have significant technical knowledge and practical experience relevant to the specific requirements of this Study. This will ensure the project is successfully delivered and meets the study objectives.
- We offer a fully third-party accredited Integrated Management System which includes Quality Assurance (ISO 9001), Workplace Health and Safety (ISO 18001/4801) and Environmental Management Systems (ISO 14001). BMT prides itself on allocating senior staff to all components of the project ensuring strong Quality Assurance throughout the entire project.

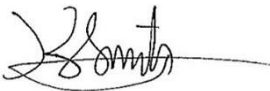
The following sections outline our understanding of the project requirements, scope of work and proposed methodology, capability, fees, and timing to undertake the study. Specifically, BMT’s proposal is presented in the following sections:

- Section 1: Our appreciation and understanding of the project requirements.

- Section 2: Our proposed scope of works and methodology.
- Section 3: Our project team, including details of key personnel, as well as a summary of our relevant experience.
- Section 4: Our proposed work program and fee.

We trust that this proposal meets your requirements. Further information or clarification regarding any aspect of this proposal can be obtained by contacting the undersigned. We look forward to the opportunity to work with you on this project.

Yours Sincerely,
BMT



Kieran Smith

Associate Principal / Team Leader Flooding – Southern States and Territories

1 Project Appreciation

1.1 General

The South and North Esk Rivers combine at Launceston to form the River Tamar, draining to Bass Strait 70km to the north at Low Head. Together the two rivers drain approximately 9,550 km² or some 14% of the state of Tasmania. The larger of the catchments is the South Esk River and significant flooding in the River Tamar is predominantly a result of rainfall events in the South Esk catchment. The Tamar River is a tidal estuary, and tidal influences are observed up to approximately St Leonard on the North Esk River and past Kings Bridge on the South Esk River. Launceston is protected from riverine flooding by a levee system set at 5.1 mAHD which offers protection for an event greater than the 1% AEP but less than the 1 in 200 (0.5%) AEP event.

Mainstream flood behaviour within the Tamar River estuary is documented in the 'River Tamar & North Esk River Flood Study Final Report' (BMT WBM, 2008) (herein the 2008 Flood Study). Flood mapping in Launceston was later updated as part of the 'North and South Esk Rivers Flood Modelling and Mapping Update Volume 1: Technical Report' (BMT, 2018) (herein the 2018 Flood Study).

The Tamar Lake Concept proposes the installation of a barrage across the Tamar River at the Eastern End of Moriarty Reach. At this location the Tamar Estuary is approximately 650 m wide, with maximum depths of 25 to 35 m. The barrage would separate the Tamar River into a tidal section on the downstream side and a freshwater lake on the upstream side, with the aims of solving the silt accumulation problem in the Upper Reaches of the Tamar River, providing a potential solution to sea level rise and providing economic benefit to the region.

1.2 Flood Constraints

Multiple feasibility studies have been undertaken for the Tamar Lake Concept inclusive of flood assessments. The 'Tamar Lake Preliminary Technical Assessment' (BMT WBM, 2008) included a preliminary analysis on the impact of barrage construction on flood levels in rare events, the potential benefits of lake drawdown on flood levels and barrage control structure requirements. Further investigations were undertaken as part of the *Lake Tamar Flood Modelling* letter assessment (BMT Reference: LM20391.002.BarrageAssessment), which investigated barrage configurations, lake drawdown times, tidal impacts of climate change and the potential impacts on flooding of a blocked or fully closed barrage.

Both flood assessments were undertaken using models developed as part of the 2008 Flood Study. The 2018 Flood Study included significant updates to the 2008 Flood Study model including:

- Updates to flood modelling methodology and data from Australian Rainfall and Runoff 1987 to Australian Rainfall and Runoff 2016
- Revised Flood Frequency Analysis (FFA) based on additional years of data
- Incorporation of improved datasets
- Improvements to model definition as a result of advances in computing
- Additional calibration and use of joint probability analysis
- Climate change estimation under 2050 and 2090 climate conditions.

A comparison of peak flood levels at the North Esk River Confluence is shown in Table 1.1 below. The table indicates that the peak flood levels determined as part of the 2018 Study are higher than those determined in the 2008 Study, with significant increases predicted for rarer flood events and under potential climate change conditions.

Based on the results of the 2018 Flood Study, it is estimated that over 3000 properties would be flooded in a 1 in 200 AEP event, with over 1800 properties affected by overfloor flooding. The number of properties affected would increase under future climate change conditions.

Table 1.1 Comparison of Current and Updated Peak Flood Levels at the North Esk River Confluence

AEP	Pre-2008 Study	2008 Study	Existing Conditions	2050 Condition	2090 Conditions
5%	2.8	2.8	3.1	3.5	4.1
2%	3.2	3.4	3.9	4.4	5.0
1%	3.4	3.8	4.6	5.1	5.5
1 in 200 (95% Confidence)	3.9	4.2 (4.5)	5.2	5.6	6.1
1 in 500	4.3	5.0	6.1	6.5	6.9

1.3 Objectives

The results of the 2018 Flood Study represent a significant increase in the predicted flood affectation of Launceston for which flood mitigation is required. While it is understood that Launceston City Council are currently preparing a brief for a detailed Flood Risk Management Study and Plan, Tamar Lake Inc. have independently requested an updated Flood Impact Assessment (FIA) of the Tamar Lake Concept to determine the feasibility of the design against the latest available 2018 Flood Study Results. The aim of the updated FIA is to gain an understanding of potential flood conditions with the Tamar Lake Concept in place for both existing and future climate change conditions, and the potential flood impacts associated with the Concept.

2 Scope of Works and Methodology

2.1 Overview

BMT proposes that the Tamar Lake Concept Flood Impact Assessment be completed based on the following stages of work:

- Stage 1: Data collection and review
- Stage 2: Existing Flood Behaviour
- Stage 3: Post-Development Flood Behaviour
- Stage 4: Flood Impact Assessment Report

The scope of works and methodology for each of the above project stages are outlined below. The scoping document provided by Tamar Lake Inc. '*New Barrage Concept*' has been used to inform the proposed approach.

2.2 Stage 1: Data Collection and Review

At the commencement of the project, BMT will compile and review relevant literature, policies and historical data. This will include the following reports:

- 'Tamar Lake Preliminary Technical Assessment' (BMT WBM, 2008)
- 'Lake Tamar Flood Modelling BMT REF: LM20391.002.BarrageAssessment (BMT, 2014).
- 'River Tamar & North Esk River Flood Study Final Report' (BMT WBM, 2008)
- 'North and South Esk Rivers Flood Modelling and Mapping Update Volume 1: Technical Report' (BMT, 2018).
- Tamar Lake Feasibility Report (Tamar Lake Inc., 2017).

Existing GIS and other relevant data will also be collected at this stage including:

- 'River Tamar & North Esk River Flood Study Final Report' (BMT WBM, 2008)
- 'North and South Esk Rivers' hydrology model and TUFLOW model (we note that BMT already has these models on file).
- Latest available LiDAR data (if available)
- Detailed on-site survey and design plans/terrain (where available), including design drawings for the proposed works associated with the Tamar Lake Barrier Concept Design

Any additional data required to undertake the assessment will be identified at this stage and discussed with Tamar Lake Inc.

2.3 Existing Scenario Flood Modelling

BMT propose to use the flood models developed as part of the 2018 Flood Study for this assessment. The 2018 Flood Study utilised Flood Frequency Analysis (FFA) on the North and South Esk Rivers as inflows to the TUFLOW hydraulic model developed for the study, which covers an approximately 73 km² area with a model boundary 4.5 km downstream of Tamar Island on the Tamar River. It is noted that unlike the 2008 Study, which was used to inform previous flood assessments of the Tamar Lake Concept, the 2018 Flood Study model boundary is located approximately 30 km upstream of the proposed Tamar Lake location.

Therefore, BMT proposes to extend the 2018 Flood Study model to a new downstream boundary at Low Head, matching the extent of the 2008 Flood Study in order to assess the Tamar Lake Concept. The TUFLOW model will be developed to reliably reflect existing catchment conditions as a whole and will include:

- Model elevations based on 2013 LiDAR data (in line with the 2018 Flood Study).
- Incorporation of detailed survey or bathymetry data from the 2008 Flood Study and previous Tamar Lake Concept assessments.
- Structure data from the 2008 Flood Study and previous Tamar Lake Concept assessments.
- Land use zones based on available datasets or aerial assessment, with Manning's 'n' values adopted from the 2008 Flood Study and 2018 Flood Study.

If further information is required, BMT will liaise with Council to obtain relevant data. We have not made provision for any possible cost related to obtaining such data.

The refined TUFLOW model will be used to simulate:

- Existing design flood conditions for the 1%, 0.5% (1 in 200) and 0.2% (1 in 500) Annual Exceedance Probability (AEP) design events under spring tide boundary conditions.
- Design flood conditions for the 1% AEP and 0.2% AEP design events under 2090 and 2150 Climate Change Scenarios assuming sea level rise.

All simulations will be carried out over 10 tidal cycles.

This will define the pre-development (baseline) flood conditions against which flood impacts of the proposed Tamar Lake Concept will be assessed. Peak flood depths, levels and velocities will be extracted from the results and presented in A4 figures.

2.4 Post-Development Scenario Flood Modelling

The Existing Scenario TUFLOW model will be updated to incorporate the proposed development works and used to simulate the "proposed" (or post-development) flood behaviour. We assume the model updates will include:

- Representation of the proposed Tamar Lake Concept assuming:
 - Scenario 1 – An 800 m wide barrage at Point Rapid, with flood gates crest at –3 mAHD and weir crest at 2.2 mAHD assuming a drawn down of the lake to 0 mAHD prior to flood events.

- Scenario 2 – An 800 m wide barrage at Point Rapid, with flood gates crest at –3 mAHD and weir crest at 2.2 mAHD assuming a drawn down of the lake to -1 mAHD prior to flood events.
- Scenario 3 – An 800 m wide barrage at Point Rapid, with flood gates crest at –3 mAHD and weir crest at 2.2 mAHD assuming a drawn down of the lake to -1 mAHD prior to flood events.

In line with the scope provided by Tamar Lake Inc, each Scenario will be designed to cater for the 0.2% AEP flood event under 2090 Climate Change conditions. Up to 3 model iterations will be undertaken for each scenario to determine the required number of gates and the width of weir to comply with this design standard.

The modified model will then be used to simulate flood behaviour for the events listed previously. We have allowed for assessment of the three design scenarios listed above as part of this proposal. Peak flood depths, levels and velocities will be extracted from the results and presented in A4 figures.

2.5 Flood Impact Assessment Report

The study will be documented in a concise report outlining the background, methodology, modelling results, and existing flood conditions on-Site and assessment of 3 proposed lake concept options. The report will be accompanied by mapping showing flood behaviour under baseline and post-development conditions, and flood impact mapping showing the variation in flood behaviour between baseline and post-development conditions (flood level and velocity) for the 1% AEP, 0.5% AEP and 0.2% AEP events and the 1% AEP and 0.2% AEP events under 2090 and 2150 Scenarios. The report will also include a comparison of the number of properties flooded, and flooded over floor under both existing conditions and each of the three proposed scenarios.

2.6 Project Management

This task will involve the following tasks and assumptions:

- Ongoing project management and client liaison throughout the project lifecycle.
- Regular progress update by email.

2.7 Quality Assurance and Peer Review

In accordance with our third-party accredited Quality Assurance program, periodic internal quality assurance and peer review of modelling and study findings will be conducted by Technical Director Melissa Adam.

2.8 Required Inputs

The following inputs will be required for this study (if available and georeferenced to MGA coordinates where applicable):

- Hydrological Input and TUFLOW models from the River Tamar & North Esk River Flood Study Final Report and North and South Esk Rivers Flood Modelling and Mapping Update Volume 1: Technical Report.
- Concept drawings and design TINs for proposed Tamar Lake Concept in georeferenced GIS format (e.g. *.shp, *.TAB, *.mif or similar format) if available.
- Existing terrain and survey across the study area as a 3D terrain grid (e.g. *.grd, *.asc or similar format) if available.

- Existing structure details across the study area in georeferenced GIS format (e.g. *.shp, *.TAB, *.mif or similar format) if available.

2.9 Deliverables

Our scope will produce the following deliverables:

- One draft and one final report in a digital format.
- Flooding mapping (digital format) of modelling outputs as follows:
 - Peak flood depths, levels, velocities and hazard for seven (7) modelled design floods for:
 - existing conditions
 - three (3) concept designs
 - Impact mapping (peak flood level and velocity) for seven (7) modelled design floods (relative to existing baseline conditions) for:
 - three (3) concept designs

3 Project Team and Experience

3.1 About BMT

BMT is a leading engineering, science and technology consultancy offering a broad range of services in the water and environment sectors. With approximately 150 staff, BMT is large enough to provide depth and breadth of expertise across Australia, but remains small enough to deliver a very client-focused service across a range of niche market sectors.



The Water and Environment Group of BMT is recognised as one of Australia’s premier environmental consultants. Operating in Australia for nearly 50 years, our people include engineers, environmental scientists, ecologists, environmental planners, GIS technicians and other specialist support staff. The ongoing success of the company is founded on its dedication to scientific and engineering innovation and excellence, cost-effective solutions and a strong customer and community focus.



Through our role as principal model developer of the TUFLOW hydraulic modelling software, and decades of flood modelling expertise, BMT is at the forefront of flood model development

and application in a range of catchment and flooding environments.

3.2 Project Team

BMT has a large team of experienced flooding experts and extensive experience undertaking flood modelling, flood risk and impact assessment, flood studies, floodplain risk management and provision of flood advice across Australia and internationally. We are also trusted peer-reviewers for a number of government and non-government clients.

By working with BMT for this project, Tamar Lake Inc. will gain access to a team of professionals with specialist knowledge, technical expertise and practical experience undertaking similar studies, together with the necessary project management skills efficiently and successfully deliver the project. Our proposed study team, and the roles and responsibilities of each nominated project team member are listed in Table 3.1. CVs for principal team members can be provided upon request.

Table 3.1 Nominated Project Roles and Responsibilities

Staff Name	Role	Responsibility in the Project
Melissa Adam	Technical Director	Undertake peer review and oversight of technical/modelling deliverables.
Kieran Smith	Project Manager and Technical Lead	Technical lead and responsible for day-to-day management of project and technical tasks including client liaison
Richard Wang	Lead Modeller	Undertake flood modelling and preparation of reports and mapping

Staff Name	Role	Responsibility in the Project
Lorena Woortmann	Project Engineer	Assist the study team with technical tasks, mapping and reporting.

3.3 Relevant Experience

BMT has a proven track record of delivering flood investigations, flood studies and floodplain risk management studies incorporating detailed hydrologic and hydraulic modelling of mainstream, overland, rural, coastal and urban catchments. This includes:

- Hydrologic and hydraulic assessments to inform the planning, design (options assessment through to detailed design) and assessment of infrastructure projects, including road upgrades, new roadways, railway upgrades, electricity transmission networks, solar and wind farms, pipelines and stormwater upgrades.
- Site-specific flood risk and flood impact assessments ranging from small scale single lot residential developments to large scale residential subdivisions and masterplans, commercial precincts and industrial developments.
- Catchment-wide and/or detailed flood studies for local Councils in NSW and Australia. BMT has completed more than 50 flood studies and floodplain risk management studies for multiple local Councils over the last 10-15 years. Our repeat clients for projects of this nature are a testament to our project performance.

BMT has also undertaken a range of flood assessments along the North and South Esk River and the Tamar Estuary and a range of flooding and hydrodynamic studies for the Tamar Lake Concept. Therefore, BMT is familiar with flooding and stormwater conditions in the study area, and can offer a highly experienced study team that has the necessary local experience and knowledge of flood conditions within the area, technical expertise and capacity to successfully complete this study based on sound technical analysis and interpretation representing current best practice.

4 Work Program and Fee Estimate

The following sections outline the work program, fee estimate and pay schedule.

4.1 Work Program

The study will be carried out in accordance with the below work program. The following factors have been considered in preparing the work program:

- Inception meeting in July (we have assumed 15 July).
- A 5-month study timeframe, with anticipated delivery of the draft report at the end of 4-months.

Key dates for milestones are summarised in Table 4.1.

Our project timeline reflects the time required to develop a flood model for use in detailed flood assessment works. Our project timeline guarantees:

- Sufficient project resources have been allocated to the study to ensure completion in accordance with the outline in Table 4.1. The work program will be constantly reviewed to ensure that we are achieving progressive study deadlines.
- Our Quality Assurance system requires the Project Manager to keep track of project tasks and resource allocation to ensure deadlines are met and the client is kept up to date with progress.

Table 4.1 Key Study Dates

Study Component	Estimated Completion Date
Assume Inception Meeting	15 July 2024
Assumed Supply of Documents and Input Data to be Reviewed	19 July 2024
Complete Model Expansion	30 August 2024
Existing Scenario Flood Modelling	27 September
Post-Development Flood Assessment	18 October 2024
Delivery of Draft Report	8 November 2024
Meeting to Discuss Draft Report/Project Outcomes	11 November 2024
Review of Draft Report	18 November 2024
Delivery of Final Report	6 December 2024

4.2 Fee

We propose to undertake the study (as defined by the scope and limitations in this proposal) for a lump sum fee of \$59,925 excluding GST. A breakdown of this fee is shown in Table 4.2. Any increase in the scope of works or extension of the work program may incur additional costs and would be agreed with Tamar Lake Inc.

Table 4.2 Lump Sum Fee Breakdown

Item	Cost (ex. GST)
Stage 1 Data Collection and Review	
Data Collection and Review for Suitability	\$1,050
Stage 2: Existing Scenario Design Flood Behaviour – Hydraulic Modelling	
Model Updates and Expansion	\$7,220
Existing Scenario Flood Modelling	\$7,625
Stage 3: Post-development Design Flood Behaviour and Potential Flood Impacts	
Post-Development Flood Modelling and Review of Post Development Conditions	\$16,420
Stage 4: Prepare Flood Impact Assessment Report	
Draft Report	\$11,195
Final Report	\$3,500
Mapping	\$5,580
Project Management and Client Liaison	\$5,940
2 x Meetings	\$1,395
TOTAL COST (EX GST)	\$59,925
<i>Optional items not included in the Total Cost (ex GST)</i>	
Mitigation Assessment (Modelling and Mapping)	\$TBC
Additional Meeting	\$700

The fee proposal includes the following assumptions and limitations (in addition to any other assumptions/limitations noted herein this proposal):

- It is assumed Tamar Lake Inc. will provide the required inputs in a timely manner and suitable electronic format that will not require any additional conversion (including projection conversion).
- We have assumed that Launceston City Council will grant permission for the use of the flood models developed as part of the River Tamar & North Esk River Flood Study Final Report and North and South Esk Rivers Flood Modelling and Mapping Update Volume 1: Technical Report in this assessment and at no cost. If Council charge a fee for procurement or use of the models, Tamar Lake Inc would be responsible for payment. Furthermore, if these models are not available for use in this study and BMT is required to build new hydrologic and hydraulic models to determine flooding, additional fees will apply.
- Design flood behaviour for the Study Area under existing flood conditions will be modelled and assessed for the 1% AEP, 0.5% AEP and 0.2% AEP events as well as the 1% AEP and 0.2% AEP events under 2090 and 2150 climate change conditions (at total of 7 design events). Additional AEP

events or climate change scenarios can be modelled and assessed, if required, for an additional cost.

- Design flood behaviour for the three (3) Tamar Lake Concept Scenarios, will be modelled and assessed for the 1% AEP, 0.5% AEP and 0.2% AEP events as well as the 1% AEP and 0.2% AEP events under 2090 and 2150 climate change conditions (at total of 7 design events). Additional AEP events or climate change scenarios can be modelled and assessed, if required, for an additional cost.
- We have allowed for up to 3 model iterations to determine the size of the weir and the number of gates required for each of the 3 scenarios (i.e. up to 9 model iterations). Additional model iterations can be modelled and assessed, if required, for an additional cost.
- Assessment of flood conditions will be undertaken based on the North and South Esk River flow estimates determined in the North and South Esk Rivers Flood Modelling and Mapping Update. No allowance for assessment of local catchment inflows (including areas downstream of Tamar Island) is included.
- As part of the recommendations of the Tamar Lake Concept, BMT has assumed that the design is conceptual only. BMT has not allowed for any costings, cost benefit analysis (including flood damages assessment) and concept/detailed design as part of the proposed scope herein. Nor have we included any scour analysis associated with the works.
- BMT has allowed for provision of a single, digital draft report, as well as incorporation of one set of consolidated comments when preparing the report. One digital final report has been included in the scope. Should additional reports be required, additional fees will be necessary.
- We have allowed for two (2) meetings as part of this fee proposal, assuming attendance by phone or video conference for up to 1 hour each meeting and attendance by two (2) members of the project team. We are happy to attend any necessary additional meetings assuming the above arrangement and for the additional meeting fee listed in Table 4.2.
- No allowance for site visits.
- Fees are based on the current known scope of works and expected duration of the project. Any increase in the scope of works or extension of the work program for reasons beyond the control of BMT, may incur additional costs. Project re-start costs may be sought if the project is put on hold with no work for a period of 90 days or more. Should any additional fees (variations to the scope of works) be required, these will be discussed and agreed prior to BMT proceeding with additional works.
- Our fee estimate does not include addressing any additional comments from other parties, stakeholders or from Government agencies should any of the deliverable documents be circulated to these other parties. Revisiting previously completed and issued work may attract additional fees depending on the extent. All comments received must be consolidated.
- Post submission support is not included in our fee but can be undertaken on a time and expenses basis.
- No allowance has been made for updates to the hydrological inputs.
- No allowance has been made for model handover at completion of the project.

- This fee proposal is valid for 30 days.

4.3 Payment Schedule

BMT proposes to issue invoices on a monthly basis for tasks completed.

4.4 Terms and Conditions

We assume that the engagement will be undertaken using BMT's Standard Consultancy Agreement. If an alternate contract is to be used, BMT reserve the right to negotiate on the alternate terms and conditions.

Acceptance

Tamar Lake Inc. has reviewed the proposal submitted by BMT and accepts the scope, pricing, and terms and conditions proposed.

Executed and delivered on behalf of Tamar Lake Inc.:

- As a contract;
- Pursuant to Section 126 of the Corporations Act 2001 (Cth):

Signature of Authorised Representative

Full Name

Witness Signature

Witness Full Name

1. Definitions

In this Agreement (unless the context otherwise requires):

Agreement means the agreement between BMT and the Client for the provision of Services to the Client, which incorporates these Terms, the Proposal, and where applicable, the Purchase Order.

Background IP means any IP of a party (or licenced to a party) which is: (a) in existence at the date of this Agreement; or (b) comes into existence after the date of this Agreement otherwise than in connection with this Agreement.

BMT means BMT Commercial Australia Pty Ltd (ABN 54 010 830 421).

Business Methods means all business processes and business methods developed by BMT and used during the provision of the Services under the Agreement.

Client means the party purchasing the Services from BMT in this Agreement as may be specified in BMT's quotation or proposal, the Purchase Order or BMT's invoices.

Client Information means all information, documents, data, materials or other content supplied, or required to be supplied, to BMT by or on behalf of the Client (regardless of its material form) for the purposes of this Agreement.

Customised Software means all third-party proprietary software, which BMT has amended, modified or otherwise altered for use in the Services.

Deliverables means the documents, materials or information which BMT is required to develop, prepare and/or provide to the Client in performance of the BMT's obligations under this Agreement, as further described in the Services.

Fee means BMT's fee to perform the Services as specified in the Proposal or the Purchase Order, or as otherwise calculated in accordance with these Terms and as varied in accordance with the Agreement.

GST means goods and services tax levied under the GST Act.

GST Act means *A New System (Goods and Services Tax) Act 1999* (Cth).

IP means all intellectual and industrial property rights, including patents, copyright, trademarks, designs, design rights, specifications, processes, methods of working, know-how, technical data, databases, formulae, inventions, improvements, logos, rights of confidential information, and other similar intellectual and industrial property rights.

Project IP means all IP created, discovered or coming into existence for the purpose of this Agreement including IP developed by BMT in performing this Agreement and any IP rights in the Deliverables.

Proposal means BMT's quotation or proposal submitted to the Client containing its offer to provide the Services.

Purchase Order means the purchase order(s) that may be issued by the Client to BMT for the performance of the Services.

Services means the services, as set out in BMT's Proposal and/or the Purchase Order, or as agreed, that BMT must perform for the Client in accordance with this Agreement (and includes the Deliverables).

Terms means these terms and conditions.

2. Commencement and Term

2.1. The Agreement is formed (and these Terms will apply) on the earlier of: (a) the date in which the Client issues a Purchase Order to BMT; (b) the date in which the Client instructs BMT to perform the Services or otherwise accepts the Proposal; or (c) the date in which BMT starts to deliver the Services, and shall continue until all the Services have been provided or the Agreement is terminated pursuant to its provisions. The parties agree that any reference to the Client's terms on the Purchase Order or any other document will not apply unless the parties have expressly agreed so in writing.

2.2. In the event of any inconsistency between the terms and documents of this Agreement, the inconsistency shall be resolved in accordance with the following descending order of precedence: (a) these Terms; (b) the Proposal; (c) the Purchase Order; and (d) all other attachments to the Purchase Order and Agreement. If the inconsistency remains incapable of resolution by reading down, the inconsistent provisions will be severed from the Agreement without otherwise diminishing the enforceability of the remaining provisions of the Agreement.

2.3. Unless agreed otherwise in writing, BMT will not be bound by any flow down conditions of any head contract between the Client and its client or otherwise.

3. Standard of Services

3.1. BMT must: (a) perform the Services in accordance with this Agreement and to the standard of professional care, skill, judgment, and diligence expected of a professional consultant experienced in providing the same or similar services as the Services; and (b) ensure the Services are appropriately performed by personnel that are experienced, skilled and trained to undertake the Services.

4. Payment

4.1. The Client must pay BMT the Fee for the Services and reimburse BMT for any out-of-pocket expenses it incurs in the performance of the Services on a cost-plus basis.

4.2. BMT's invoices are issued monthly or as otherwise set out in the Proposal. BMT shall be entitled to issue invoices based on progress, irrespective of whether BMT has issued any of the Deliverables to the Client yet or not.

4.3. Where the Fee is a lump sum, the amount payable in relation to each invoice will be calculated by applying the proportion of Services performed during the payment period to the Fee.

4.4. Where the Fee is based on an estimate, the Fee is an indicative estimate only and may be subject to change. BMT reserve the right to issue invoices for any actual quantities relevant to the provision of the Services.

4.5. Unless other payment terms are agreed in writing, the Client must pay the amounts claimed by BMT, in cleared funds and without set-off, within 14 days from receipt of BMT's invoices.

4.6. The Client is not entitled to demand or withhold any form of security, including retention monies, from BMT.

4.7. Payment of BMT's invoices is the sole and exclusive obligation of the Client and BMT will not enter into any "pay when paid" or "pay if paid" arrangements whereby payment to BMT is contingent on the Client receiving funds from its client or a third party.

4.8. If any of BMT's invoices become overdue then interest will be payable on such invoices at the rate of 12% per annum for each day the invoice is overdue and BMT shall have the right to suspend performance of the Services without liability to the Client until all overdue invoices and interest are paid in full.

5. GST

5.1. Subject to context, a reference in this clause 5 to a term that is defined or used in the GST Act has, when used in this clause, the meaning given to that term in the GST Act.

5.2. Any amount referred to in the Agreement which is relevant in determining a payment to be made by the Client to BMT is exclusive of any GST, unless expressly stated otherwise.

5.3. If the whole or any part of any amounts payable by the Client to BMT under the Agreement is the consideration of a taxable supply, the Client must also pay to BMT an additional amount equal to the GST liability. BMT will set out the GST liability payable by the Client in its tax invoices. The Client must pay any GST liabilities at the same time as all other amounts due under each tax invoice.

6. Client Information

6.1. The Client must provide the Client Information to BMT within the timeframes agreed upon by the parties, or where no time frames have been agreed, within a reasonable time and manner that allows BMT to promptly proceed with the performance of the Services without delay. BMT shall not be liable for any delay or failure to perform the Services if such delay or failure is caused by the Client's failure to provide the required Client Information within the specified timeframe or within a reasonable timeframe.

6.2. The Client is responsible for the completeness and accuracy of the Client Information. BMT may rely on the Client Information to perform the Services and is not obligated to verify it in any way except to the extent that BMT has expressly agreed to do so as part of the Services.

6.3. Where the Services require BMT to utilise or interpret the Client Information to perform its Services, such Client Information must be provided in a complete, clear and accurate state and in a manner that sufficiently enables BMT to efficiently perform the Services. BMT shall not be liable or responsible for any losses, damages, claims, costs or damages to the extent that it is caused by or attributable to Client Information that is inaccurate, incomplete or erroneous.

6.4. Where required, BMT may request from the Client clarification or interpretation of the requirements of any Client Information. These requests will be submitted as 'Requests for Information' ('RFIs'). The Client shall ensure RFIs are responded to promptly and satisfactorily. If the quantity of RFIs required to be raised by BMT becomes excessive due to incomplete, conflicting and/or unclear Client Information, then BMT shall be entitled to compensation for BMT's time spent in preparing and submitting such RFIs.

7. Variations

7.1. Where: (a) any services are required which are not specified as part of the Services but which are related to or supplement the Services; or (b) any change, addition, revision, omission or amendment is required or directed to the scope of the Services, these changes or additional services will be treated as a variation to the Services ('Variation') and undertaken by BMT at the Variation rates specified in the Proposal. If no Variation rates are specified, then the Variation will be undertaken at reasonable rates as determined by BMT or as otherwise agreed between the parties.

7.2. If a Variation consists of a reduction in the scope of Services, BMT's fees will be reduced by a reasonable amount as determined by BMT taking into consideration factors including loss of efficiency, economies of scale and costs incurred to date.

7.3. BMT is not obligated to carry out any Variation until its scope and value have been agreed in writing between BMT and the Client.

8. Time

8.1. BMT will use all reasonable efforts to perform the Services and provide the Deliverables within the time frame agreed upon by the parties, or where no time frames have been agreed, within a reasonable time.

8.2. BMT will not be liable for any failure of or delay in performance of its obligations under this Agreement to the extent such failure or delay is caused by: (a) any act, omission or default of the Client or its employees, agents or contractors; or (b) any other circumstance beyond BMT's reasonable control including but not limited to performance of Variations, delayed receipt of Client Information, delayed receipt

of responses to RFIs, delayed approval of Variations, and receipt of Client Information that is incomplete, inaccurate or unclear.

- 8.3. To the extent that BMT's Services are delayed due to any of the factors described in clause 8.2, BMT shall be entitled to a reasonable extension of time to any date or timeframe for performance of its Services and all reasonable, direct and unavoidable costs or losses arising out of such delays.

9. Limitation of Liability

- 9.1. To the full extent permitted by law, BMT's total aggregate liability for any costs, losses, damages, fees, claims, actions or other form of liability, whether under or in connection with the Agreement, statute, in tort (including negligence), equity, restitution or otherwise, is limited to the value of the Fee.
- 9.2. BMT will in no event be liable to the Client for any consequential or indirect financial loss, damage or expense including loss of revenue, loss of profit, loss of use, loss of data, loss of financial opportunity or economic loss whether arising out of a breach by BMT of this Agreement, in tort (including negligence), at law, under any statute or in equity.

10. Intellectual Property

- 10.1. Each party acknowledges and agrees that each party retains ownership of that party's Background IP.
- 10.2. Subject to the Client's payment for the Services, all Project IP is vested in the Client as and when created and BMT hereby assigns all rights, title and interest in and to the Project IP to the Client.
- 10.3. To the extent that BMT needs to use any of the Client's Background IP or Project IP for the purposes of performing its obligations under this Agreement, the Client grants to BMT a non-exclusive, royalty free, non-transferable licence to use and develop (and sub-license its agents to use and develop) the Client's Background IP and the Project IP for the purpose of carrying out BMT's obligations under the Agreement. The Client warrants that it has the right to grant the licence under this clause 10.3 to BMT.
- 10.4. BMT grants the Client a perpetual, non-exclusive, royalty free, non-transferable licence to use (and sub-license third parties to use) BMT's Background IP to the extent that it is incorporated in or relates to the Project IP.
- 10.5. Each party must ensure that no IP rights or moral rights of third parties are infringed in the performance of this Agreement and each party indemnifies the other against all losses, liabilities and legal costs arising from any such infringement.

11. Confidentiality

- 11.1. The parties agree that any information disclosed during the course of this Agreement which is marked as confidential or which ought reasonably be considered confidential ('**Confidential Information**') shall not be disclosed to any third party without the prior written consent of the other party, except that each party may disclose Confidential Information to its employees, officers, agents, delegates, contractors, service providers and its Affiliates who have a need to know such information for the purpose of carrying out the obligations or exercising the relevant rights under this Agreement provided that such persons acknowledge and agree to maintain the confidentiality of such information.
- 11.2. The obligations of confidence in clause 11.1 do not apply to Confidential Information which is: (a) in or becomes part of the public domain, or is received from a third party, other than through a breach of a party's obligations under this Agreement; (b) required to be disclosed by law or a government authority; or (c) disclosed to legal advisers or auditors who are under a duty of confidence.
- 11.3. Each party must take all steps and do all such things as may be necessary, prudent or desirable in order to safeguard the confidentiality of the Confidential Information of the other party.
- 11.4. Without limiting the generality of the above clauses, the Client acknowledges that the Customised Software, Business Methods and documentation and information associated with the Customised Software and Business Methods ('**BMT's Confidential Property Information**') is strictly confidential property of BMT and that its disclosure would cause considerable commercial and financial detriment to BMT such that an award of damages or an account of profits may not adequately compensate BMT if this clause is breached.
- 11.5. Each party acknowledges that, without in any way compromising its right to seek damages or any other form of relief in the event of a breach of this clause 11, a party may seek and obtain an interlocutory or final injunction to prohibit or restrain the other party or its advisers from any breach or threatened breach of this clause.

12. Termination

- 12.1. Either party may immediately terminate this Agreement by written notice to the other party if that other party: (a) breaches a material term of this Agreement, where that breach is not capable of remedy; (b) breaches a material term of this Agreement which is capable of remedy and has not been remedied within 30 days' written notice to do so by the first party; or (c) commits an act of insolvency or bankruptcy, comes under any form of insolvency administration, ceases or resolves to cease to carry on business, or is unable to pay its debts when due.
- 12.2. The Client may terminate this Agreement for its convenience after giving 14 days' written notice to BMT. If this Agreement is terminated under this clause 12.2, the Client must pay BMT for the Services (including any Variations) performed up to and including the date of termination plus all reasonable direct and unavoidable costs arising from termination of the Services.

- 12.3. Termination under this clause 12 shall not affect any claim for loss or damage available to the terminating party or for costs or fees accrued up to the date of termination.

13. Dispute Resolution

- 13.1. If any dispute, difference or controversy between the parties arises out of or in connection with this Agreement ('**Dispute**'), then any party may give the other party a written notice of dispute adequately identifying and providing details of the Dispute.
- 13.2. On receipt of a notification under clause 13.1 the parties must arrange for their respective representatives to meet within 14 days to attempt to resolve the Dispute in good faith. The respective representatives must have the authority to bind each party.
- 13.3. If the Dispute is not resolved within 30 days of receipt of the notification under clause 13.1, either party may initiate legal proceedings in relation to the Dispute.
- 13.4. Nothing in this clause shall prejudice the right of a party to seek injunctive or urgent declaratory relief.

14. Force Majeure

- 14.1. Neither party will be liable to the other party for any delay or failure to fulfil obligations to the extent that such delay or failure arises from any significant and unforeseen events or circumstances that are beyond the first-mentioned party's control including fire, floods, terrorism, strikes, lock out, war, riot, epidemic, pandemic, or any governmental act or regulation, except that such event or circumstance does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the Client's obligation to pay any money under this Agreement in a timely manner.

15. General

- 15.1. This Agreement is governed by the laws of Queensland, Australia and the parties submit to the exclusive jurisdiction of the courts of Queensland. A dispute or legal proceeding in relation to the Agreement must be held in Brisbane, Queensland.
- 15.2. No failure to exercise, or any delay in exercising, any right, power or remedy by BMT operates as a waiver.
- 15.3. The Client may not assign any of the Client's rights or obligations under this Agreement without the written permission of BMT.
- 15.4. BMT is an independent contractor and not an employee or agent of the Client. Neither BMT, nor any employee, contractor, representative or agent of BMT will by virtue of this Agreement be deemed to be an employee of the Client.
- 15.5. No variation or amendment of this Agreement will be effective unless it is made in writing and signed by an authorised representative of each party.
- 15.6. The Client is responsible for complying with all applicable law including any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in the relevant jurisdiction(s) where BMT provides the Services.
- 15.7. BMT may subcontract its performance of any part of the Services and the Client hereby consents to such subcontracting.
- 15.8. This Agreement is the entire agreement and understanding between the parties on everything connected with the subject matter of the Agreement and supersedes any prior agreement, representation, promise or understanding of the same.
- 15.9. The clauses that by their nature should remain in force on expiry or termination of this Agreement do so, including clauses 1, 4, 5, 9, 10, 11, 12.2, 12.3, 13 and clause 15.
- 15.10. Should any clause or part of any clause of this Agreement be held as void, unlawful or otherwise unenforceable for any reason, then this Agreement shall be read and enforced as if such clause or part of such clause has been deleted and the remaining clauses shall continue in full force and effect.