

**Terracotta Warriors Risk Register**

**Colour Key:**

Financial	Blue	Procurement	Cyan
Design	Red	Programme	Orange
Stakeholder	Green	Collections	Yellow
Construction	Light Green	Other	Light Yellow

**Key Personnel**  
 Sharon Granville  
 Louise Parnell  
 Fiona Philpott  
 Mark Howells  
 Ian Lindsay  
 John Fitton  
 Jon Marrow  
 Tracey McGeagh  
 Anne Fahy

Version: No. 2  
 Date: 10 August 2017

No.	Risk Description	Owner	Last Review Date	Likelihood			Impact			Controls in Place	Target Date	Contingency Plan	By When	Closed	Current Status					Notes
				High (3) 85%	Medium (2) 50%	Low (1) 15%	High (3)	Medium (2)	Low (1)						Red/ Amber/ Green	Being worked	Insured against	Avoided	Resolved	
1	Project budget inadequate for Exhibition	Louise Parnell	10/08/2017	x			x			Put in place a robust business plan and monitor expenditure through Business Planning sub-group	Nov-18	All sub-group chairs to manage budgets in their areas and report on expenditure - all to identify savings in case of cost increase in other areas								
2	Fluctuations in exchange rate lead to unplanned increase in costs	Louise Parnell	10/08/2017	x					x	Make allowances for some fluctuations in costs within budget forecasts and monitor through Business Planning sub-group	Nov-18	Firm up costs and fix prices which are subject to fluctuations in exchange rates as soon as possible. - all to identify savings in case of cost increase in other areas								
3	We are unable to meet our fundraising forecasts targets	Sharon Granville	10/08/2017	x			x			Appoint a dedicated fundraiser and agree fund raising strategy. Monitor progress through business planing sub-group	Feb-18	All internal staff to support the fundraising campaign with content and other activities required - extend duration of fundraising campaign if appropriate								
4	Our income from ticket sales is insufficient to offset expenditure	Melanie Lewis	10/08/2017	x			x			Develop ticketing business model with support from the business planning and ticketing sub groups informed by market research and visitor benchmarking.	Oct-18	Ensure ticketing solution is in place according to deadlines and monitor sales on a weekly basis - take corrective action if ticketsales are lower than predicted.								
5	Late agreement to object list	Sharon Granville	10/08/2017	x			x			Ensure ongoing dialogue and negotiation with our agent Mr Zhao and the Shaanxi Cultural Centre.	Sep-17	Share key deadlines with Mr Zhao. Try and obtain as much information as possible in advance of formal sign off - if timescales are shortened review impact on output and programme and make any adjustments.								
6	Not all key objects are approved by Chinese Government	Sharon Granville / Fiona Philpott	10/08/2017	x					x	Develop a modular approach to the design which is as flexible as possible so that late changes of a few objects can be accommodated.	Sep-17	Continue high level negotiations for key objects - build in flexibility in design to allow for adjustments.								
7	Failure to meet sign off of the design at key stages	Sharon Granville/ Fiona Philpott	10/08/2017	x			x			Regular review of the gallery design	Dec-17									
8	Failure to meet programme	Sharon Granville	10/08/2017			x	x			Close management of brief and programme with design and content team to ensure timely delivery. If required establish separate programme for provision of community content.	Feb-18	Review opening date.								
9	Object measurements are not correct and mounts are designed at wrong size	Anne Fahy	10/08/2017	x					x	Mount specialist to go out to China with courier in Jan 18	Feb-18									
10	Inadequacy of ICT infrastructure - Poor definition of requirements	Ian Lindsay	10/08/2017	x					x	Review of existing infrastructure with Estates and IS, and preparation of co-ordinated and costed design proposal. IS included in project/content meetings.	Feb-18									
11	Failure to meet DDA requirements	Simon Brooks/Fiona Philpott	10/08/2017	x					x	Client brief to establish requirements. Engagment of access consultant to review exhibition design.	Feb-18	Early site documents, revise if necessary.								
12	Exhibition packages come in over pre tender budget	Simon Brooks/Fiona Philpott	10/08/2017	x					x	Budget reviews as design is developed with pre-tender estimate agreed within budget prior to tender issue. Value Engineering to take place if works come in higher. Regular cost reviews.	Oct-17									
13	Construction works coming in over pre-tender budget.	Mark Howells	10/08/2017	x					x	Budget reviews as design is developed with pre-tender estimate agreed within budget prior to tender issue. Value Engineering to take place if works come in higher. Regular cost reviews.	Oct-17	Review tender cost, undertake VE process, omit and revise works to bring costs back within budget. Look at different options to delivery scheme.								
14	Contractor/manufacturer goes out of business	Sharon Granville	10/08/2017	x					x	Due diligence and appropriate selection through procurement route and proactive management of contractors with regular reviews.	Feb-18									
15	Delay in construction/preliminary works commencing to gallery areas	Mark Howells	10/08/2017	x			x			Estates to review works required inline with the Design for the gallery. Review of Estates programme of works, and resources to deliver construction/preliminary works.	Oct-18									
16	Gallery infrastructure / services are inadequate to meet Loan Agreement requirements. Unable to meet Environmental conditions as per agreement.	Sharon Granville	10/08/2017	x			x			Review gallery requirements against loan agreement and confirm what system can be installed to meet condition parameters	Oct-18									
17	Impact of noise, dust and vibration during Base build/Fit-Out works	Simon Brooks/Fiona Philpott/Mark Howells	10/08/2017	x					x	Robust interface management and regular monitoring by onsite teams. Minimise impact of works through quality of contractor appointment.	Jan-18	Additional decant of collections where required.								
18	Temporary disruption to museum operations during Base Build/fit out works	Mark Howells/Fiona Philpott	10/08/2017	x					x	Venue staff to be fully briefed. Regular monitoring of onsite works	Jan-18	Regular review and additional decant of collections where required.								
19	Failure to adequately manage Health and Safety CDM	Joe Dixon/Karen Philips	10/08/2017	x			x			Include appropriate conditions relating to H&S in tender/contract documentation. Estates manage H&S CDM file.	Feb-18									
20	The programme slippage due to unforeseen issues/circumstances/contractor fails to meet programme deadline	Sharon Granville/ Fiona Philpott	10/08/2017			x	x			Each sub-groups identifies critical deadlines to feed into master programme. Realistic programme deadlines to be agreed.	Feb-18	Any slippage is identified and discussed at project team meetings - adjustments to programme may be required.								
21	Inadequate time for commissioning of AV's	Fiona Philpott	10/08/2017			x			x	Ensure programme includes adequate commissioning task line, and review requirements regularly.	Feb-18	Build in some float time to programme.								
22	Inadequate time for commissioning the ticketing	Ian Lindsay	10/08/2017			x			x	Ensure programme includes adequate commissioning task line, and review requirements regularly.	Feb-18									

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Stakeholder	Grey	Collections	Yellow
Construction	Green	Other	White

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23	Contractors fail to perform adequately during construction/Exhibition fit out	Sharon Granville	10/08/2017	x			x			Appropriate selection through procurement route and proactive management of contractors with regular reviews and clear contract.	Feb-18	Site meetings and monthly reports.										
24	Major exhibits are damaged whilst being transported/installed and environmental impact to the object conditions when being relocation to a non-conditioned location.	Anne Fahy	10/08/2017				x	x		Clear spec to appointed contractor. Appoint expence contractor/agent to relocate objects. Clear communication between China and agent re. packing of objects.	Nov-18	Carry out repair/conservation work if required. Couriers to go out to oversee packing of object.										
25	Inadequate time for installation of collections	Anne Fahy	10/08/2017				x	x		Review resource requirements to install collection, and review days allocated to install objective and whether longer days or weekend working can be introduced to meet the tight timescale of the object installation.	Feb-18	Build in some float time to programme.										
26	Inadequate time for snagging prior to opening	Fiona Philpott	10/08/2017	x				x		Ensure programme includes specific snagging task line. Minimise snagging requirements through regular checking of contractor works onsite.	Feb-18	Post opening fixes where necessary.										
27	Contractors claims for extension of time	Fiona Philpott	10/08/2017	x				x		Monitor progress against programme. Build in some flexibility to contracts.	Feb-18	Build in some float time to programme.										
28	Failure to manage Change Control	Sharon Granville	10/08/2017				x	x		Robust change control system communicated to project team members. Formal sign off of process by professional team. Tight control by client via regular change control meetings.	Feb-18	Put in place regular Change Control meetings.										
29	Risk of losing key project staff including external curator.	Sharon Granville	10/08/2017				x	x		Ensure key members are kept up to date with all aspects of the project and ensure project information is accessible on a shared folder.	Feb-18	Replace any lost posts as quickly as possible either internally or externally so that minimal disruption to project - share tasks amongst team members, second staff internally or outsource, subject to budget.										
30	Lack of appropriate skills and/or insufficient resourcing for operating the Exhibition during its duration.	John Fitton	10/08/2017					x	x	Training Needs Analysis for all WM VS staff to be undertaken by 30/09/17 and comprehensive training package to be devised accordingly. Recruitment of additional staff by 30/11/17. Staff training to commence 1/12/17 and will be completed by 31/1/18.	Feb-18	Robust pool of part time staff who can be called upon to undertake additional hours, enhanced staff rotas, which include full contingency for staff sickness and leave.										
31	Lack of appropriate skills and/or insufficient resourcing for project - including staff who can speak Chinese	Sharon Granville	10/08/2017				x	x		Identify requirement at outset and recruit additional staff as necessary, in line with budget projections and programme. Ensure we have access to Chinese speaking staff at key times.	Oct-17	Ensure RTEs are raised and approved in line with programme deadlines - share tasks amongst team members, second staff internally or outsource, subject to budget.										
32	Risk of not signing Export license	Sharon Granville	10/08/2017					x	x		Oct-17											
33	Insufficient time for soft opening/ staff training	Sharon Granville	10/08/2017	x				x		Ensure programme includes specific training task line.	Feb-18											
34	The photography in China to produce the lead image does not meet expectations	Tracey McGeagh	10/08/2017				x	x		A detailed photography brief supplied to team in China. MAC/Exhibitions team to liase closely with Mr Zhao during briefing	Aug-17											
35	Insufficient design resource to produce assets for the marketing campaign because of the delays in finalising a lead image, impacting on marketing budget and timeline.	Tracey McGeagh	10/08/2017	x				x		MAC team to source quotes for external design.	Aug-18											
36	Risk of delay in signing contract & Export license, impact on committing to media buying/expenditure.	Tracey McGeagh	10/08/2017	x			x			MAC team to work with Louise Parnell to ensure financial contractual clauses are included in any contract and bookings.	Aug-18											
37	We receive negative press about working with China.	Tracey McGeagh	10/08/2017	x			x			MAC team to draft reactive statemnets and FAQs to be used as responses to criticism.	Sep-18	Schedule meeting of relelevant parties - a range of options are available.										
38	We are overwhelmed by external enquiries	Tracey McGeagh	10/08/2017	x				x		Centralise enquiries email to be put in place to manage and monitor enquiries. FAQ put in place to standardised responses.	Oct-18	Liase with contacts in May - research alternative performers.										
39	Once the exhibition launches, we are overwhelmed by social media comments and enquiries and are unable to respond in a swift manner.	Tracey McGeagh	10/08/2017	x				x		MAC team to review workloads and put plan in place for managing Facebook and Twitter accounts duing exhibition run.	Oct-18	Report potential shortfalls quickly to PTM - scale down programme/secure extra funds										
40	The National Museums Liverpool website crashes when the tickets are available to purchase due to demand.	Tracey McGeagh	10/08/2017	x				x		Technical team to introduce load bouncing with prior testing to measure capacity.	Sep-18											
41	Failure to manage 'interface' between school and adults in exhibition disappointing customers. Inadequate spaces for delivering schools programme.	Jon Marrow/ Sharon Granville	10/08/2017	x				x		Liase with key people and develop plan	Oct-18											
42	There are insufficient staff and fund to resource to deliver, the school and community programme	Jon Marrow /John Fitton	10/08/2017				x	x		Close monitoring of budget and staff recourse	Oct-18											
43	Failure to open on time	Sharon Granville	10/08/2017	x				x		Controls are master programme, project procurement strategy, regular progress reviews.	Oct-18											
44	Ticketing system fails during exhibition.	Stacey Hammond/Ian Lindsay	10/08/2017				x	x		Ticketing solution will be tested with members pre-sale offer in terms of system processes. Tender includes support from provider with particular support for go live - JS to ensure robust	Oct-18											
45	Customer experience of ticketing system is poor.	Stacey Hammond/Karen O'Connor/John	10/08/2017				x	x		Ticketing solution will be tested with a members pre-sale. In terms of system processes. Operational processes to be defined and training given for front and back of house teams. Customer	Oct-18											
46	Significantly more free and discounted tickets are issued than expected – reduced income as a result.	Stacey Hammond/Karen O'Connor/John	10/08/2017				x	x		Verification processes to be implemented as required to ensure customers purchase the correct ticket. Agree free ticket quantities to be allocated as part of the pricing strategy. Issuing of free	Oct-18											

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47	Exhibition ticket sales forecast are not met.	Stacey Hammond/Tracey McGeagh	10/08/2017		x		x				Ticket sales to go live 4 months prior to exhibition opening so that sell through and promotion can be monitored and effective marketing strategies put in place. Pricing strategy to be agreed by Oct-18			x						
48	High occurrence of ticket fraud	Stacey Hammond/Ian Lindsay/John	10/08/2017		x		x				Ticketing solution tender includes requirements for measures to combat fraud. Ticket scanners at entrance to verify tickets are valid. Benchmarking with V&A and BM to understand their fraud Oct-18									
49	Demand cannot be smoothed across the week/exhibition leading to periods operating below capacity.	Stacey Hammond/Tracey McGeagh	10/08/2017	x			x				Online sales will be promoted so customers can see availability and plan in advance. Group travel, schools and community groups will be pushed towards off-peak periods. Peak and off peak charges may be applied. Marketing to highlight off-peak periods to drive off peak capacity. Oct-18									
50	Queues are too large, reducing sales opportunities	Stacey Hammond/Karen O'Connor/John Fitton	10/08/2017	x			x				Promotion of advance online ticket sales will be a key part of the marketing plan. Regular sales reporting will enable in venue planning. Clear signage and staff communication to be implemented as part of the operational plan. Management of queues to ensure fast processing of advance ticket sales customers. Use of goods lift to move visitors straight to temp ex and into exhibition during peak days. Pop up ticket sales and cross venue ticket sales opportunities to be explored to push advance ticket sales ahead of in venue sales. Oct-18									
51	Shop capacity is insufficient – leads to missed sales opportunities.	Karen O'Connor	10/08/2017	x			x				Pop up shop on gallery at exhibition exit in addition to main WML shop. Promotion of online shop as alternative sales route. Oct-18									
52	Delay to key decisions means losing group travel trade opportunities.	Stacey Hammond/ET/Tracey McGeagh	10/08/2017	x			x				Agree sales strategy/timeline with ET and ensure contracts for group travel are in place prior to ticket sales going live to the general public. Register all groups of 10 or more on Priava database to enable us to contact direct as soon as tickets are released to groups.Ensure a groups media pack is ready for go live to groups and a marketing plan to target groups is in place. Oct-18									
53	Room does not have sufficient capacity to support c.450-500k visitors. E.g. dwell time is higher than forecast.	John Fitton/Mary Kenny	10/08/2017	x			x				Extended opening times to be included in the exhibition plan to ensure capacity is easily met and planned for. HR processes in place for agreeing how extended hours will be resourced. Oct-18									
54	Museum shuts temporarily requiring refunds and rescheduling of visits for customers	John Fitton/ Stacey Hammond/Karen O'Connor/Tracey McGeagh	10/08/2017		x		x				Operational plan in place for handling large volume of customer complaints/enquiries. Marketing plan in place for mass communication. Oct-18									