

New delivery model: Integrated Project Insurance Trial project: Derby Silk Mill - Museum of Making: Case Study 1

Key specific objectives

- **Completion in the spring of 2020 at a cost which is at or below the agreed target cost**
- **An exceptional and inspiring visitor experience in a high-quality environment**
- **Exhibition display and interpretation that create 100% access to collections**
- **Exhibition displays that can evolve and be remade on-site to create new visitor experiences and stay relevant**
- **Flood mitigation successfully implemented**
- **High quality of design and materials in keeping with conservation requirements**

Stage at which first report will be published:	Kick off meeting	Brief / Team Engagement	Decision to Build	Build and Occupy
Cost saving basis:	Investment Target	Challenging cost target	Agreed Target Cost	Outturn cost

Daniel Defoe's 'A Tour thro' the Whole Island of Great Britain' (1724-27) records:

"This engine contains 26,586 Wheels, and 96,746 Movements, which work 73,726 yards of Silk-thread, every time the Waterwheel goes round, which it does three times in one Minute."



Derby Museums:

How might we use the making of the Museum of Making, to engage people's heads, hearts and hands - empowering them to be the creators, innovators and makers of the future?

Key facts

Project title	Derby Silk Mill – Museum of Making
Client	Derby Museums
Investment Target	£15.830m
Initial Target Cost	£13.325m
Form of project	Heritage extension and refurbishment
Independent facilitation and risk assurance	IPInitiatives Technical: BLP Financial: Artelia
Alliance Members	Derby Museums Bauman Lyons, architects Preston Barber, engineering GCA (UK) [replaced Adept], structural Speller Metcalfe, constructor Derry, building services Leach Colour [became The Creative Core Group], exhibitions
IPI Brokers	Griffiths & Armour
Other Key Suppliers	Garvey: demolition and asbestos removal Roger Bullivant: piling Adstone Construction: steel frame Façade & Glazing Solutions: curtain walling and glazing Swift Roofing Services, new roofing NRA Roofing: existing roof works Concrete Renovations: pillar restoration Independent Scaffold Services: scaffolding MSW Steel Decking UK: metal deck and concrete J&P Carpentry: carpentry MG Olympic: architectural metalwork

Executive summary

Derby Museums commissioned exhibition specialist Leach and architects Bauman Lyons with a design team to develop their vision for the Silk Mill as a “museum of making” for the 21st Century. Heritage Lottery and Arts Council funding was eventually secured, supplemented by funds from Derby City and local communities. Inevitably the brief for the extension and refurbishment project had developed into many various “success criteria”, and Bauman Lyons and Derby Museums decided that these could only be met by a fully collaborative “alliance” of designers, constructors and specialist contractors (including exhibition/digital specialists) appointed under the Integrated Project Insurance model. The necessary arrangements were made to secure the acceptance of this transition by the existing consultants; the new partners were selected; and the alliance was formed. Because the Silk Mill is located in the flood plain the insurers who had underwritten the first IPI policy for Dudley College Advance II were not prepared to be involved, and therefore a “hybrid” alliance contract was agreed which maintained the essential “no blame/no claim” undertakings and gain/pain-share mechanisms, but changed the IPI policy into an “owner-controlled” policy under which IPI’s cost overrun cover beyond the excess was replaced by professional indemnity insurance protection in case the client exercised its right to claim for such costs.

Project summary

Project timeline

- 2012: Derby Museums established as an independent charity to manage sites and collections on behalf of Derby City, following closure of the Derby Industrial Museum
- 2013: creation of a prototype museum on the ground floor to test concept through an innovative “Re-make the Museum” process under public and stakeholder programme
- July 2014: Derby Museums awarded Arts Council England Major Partner Museums status
- May 2015: Heritage Lottery Fund Stage 1 approval for £9.4m
- January 2016: Arts Council England Capital funding Stage 1 approval for 2.58m, enabling 18-month development stage to begin
- March 2016: Appointment of core design team, including Leach exhibition specialists and Bauman Lyons architects who assisted Derby Museums with potential solutions which were sufficiently loosely defined to enable a fair OJEU process to follow
- May 2017: Planning submission with Conservation Plan; **decision that the IPI model is to be used for this project and IPI initiatives engaged**; OJEU Notice; Prequalification Questionnaire issued to applicant constructors and specialist contractors
- June 2017: RIBA Stage 3 Report: Design & Access Statement and Heritage Impact Statement; Stage 2 bid to Heritage Lottery Fund; Industry Day for bidders
- July 2017: Issue of Invitation to Tender to selected constructors and specialist contractors
- September 2017: Stage 2 Heritage Lottery Fund approval
- October 2017: Full alliance team appointed
- November 2017: Planning approval
- December 2017: Commercial alignment of alliance partners completed
- January 2018: Phase 1 design by alliance begins
- June 2018: Alliance contract (hybrid) agreed and signed
- July 2018: target completion for Phase 1
- October 2018: Inception of Owner Controlled Insurance policy for commencement of Phase 2, design development and construction
- December 2018: Late resolution of 25-year lease agreement with Derby City Council and wayleave agreement with Western Power
- May 2019: admission as a trial project under the Cabinet Office/Constructing Excellence Trial Projects Delivery Programme
- May 2020: target completion
- September 2020: final completion

Client objectives and vision

“There is a growing awareness in the construction sector that to improve performance key parties need to be brought together much earlier and relationships need to be significantly more collaborative. For the Museum of Making with our focus on co-operative working this is an essential transition and an innovative and new method of alliancing will suit our thinking. It is proposed therefore to use the Integrated Project Insurance (IPI) Model to deliver the project because it aligns the team’s interests and incentivises them to focus on outcomes which maximise the benefit for all stakeholders. This enables the whole team to work collaboratively under a single contract and insurance. The team form a Board under a new Alliance Contract and are incentivised to work together with all parties having a share in gain/pain that is linked to common not individual performance.”

*Bauman Lyons, RIBA Stage 3 Report
Rev1, June 2017*

Vision

The aim was to create the Museum as a flexible, creative and inspirational hub with technology and tools to build people’s skills, confidence and creative talent and to inspire the young creators and makers of tomorrow. The Arts & Heritage programme is to offer opportunities for audiences to participate in and enjoy contemporary art and design to creatively re-interpret the past, tell its many stories and respond to the sound of diverse voices.

Strategic Brief

The strategic brief was to create an inspirational new museum, revealing the whole building for the first time and re-introducing manufacturing to the site. It will celebrate Derby’s heritage of makers through the internationally, regionally and locally significant collections. It will create new co-working, maker and workshop spaces, with facilities for use by the makers of today and tomorrow. The project’s overarching themes are STEAM-Powered (Science, Technology, Engineering, Arts and Maths), driven by the significance of the site, the building and the collections it contains; combined with the context of Derby and needs and motivations of local people, communities, businesses, organisations.

Success Criteria

“We have chosen the IPI model to reflect our values. Co-production and human-centred approaches are integral to the success of this project:

- *Staged completion of building zones including workshop spaces at an early stage to support the build of fit out and exhibition*
- *Active involvement of volunteers and stakeholders in co-producing the Museum of Making*
- *Advocacy for new and diverse audiences*
- *Integrated programme of commissions for artists and makers*
- *Co-production and human-centred ethos, including openness to prototyping and the ability to respond proactively to change of circumstances and needs.”*

Derby Museums

The specific success criteria are numerous, falling under these headings:

Building and Exhibition: 24 No.

Funders’ requirements:

- Heritage and Exhibition: 21 No.
- People Skills: 14 No.
- Local community: 23 No.

Procurement

Adaptation of terms of the incumbent design consultants to the IPI model

This project started life under traditional processes, and the design consultants were selected under traditional terms. There was therefore no initial “kick-off” meeting; instead it was at the suggestion of the architects Bauman Lyons, and for the reasons given by Derby Museums in the quotations above, that the project was transmuted from its traditional beginnings into a collaboration under the Integrated Project Insurance model. This entailed:

- explaining to the incumbent design consultants the differences of approach and the mutual benefits of alliancing, with its “no blame” culture of integrated collaborative working, and validating their suitability for this transformation; and
- selecting and appointing a replacement structural consultant, as well as the constructor and specialist contractors to complete the alliance.

Whilst the principles of alliancing were generally welcomed by the incumbent design consultants, provided that their commercial interests were not compromised, the process of harmonisation between all partners opened up misunderstandings, errors and some unrealistic expectations which had to be resolved. There were two key commercial issues for the consultants:

- How would their fee structures, established under OJEU, be accommodated within the “commercial model” of the alliance contract, with its gain/pain-share mechanisms?
- What would happen to their individual Professional Indemnity insurances in the context of the “no blame” culture, and how would they be protected?

Other intervening factors

Whereas these questions would readily have been resolved under the existing IPI policy (as was the case on the first trial project at Dudley College, Advance II), other factors relating to insurance generally intervened on the Derby Silk Museum. Two factors placed limitations on the opportunity to secure a second “pure” IPI policy from the insurers:

- Because of recent adverse impacts of flooding upon insurers in the UK and abroad, the insurer which had “led” on the unique cost overrun element of the policy was not prepared to underwrite the project risks on a site which the re-mapping now placed “at the extreme end of insurers’ flood risk”.
- After initially engaging, Insurers declined to give latent defects cover when it became clear that the reinstatement value of the retained structure and its contents (£17.76m excluding museum assets) was more than 50% of the projected value of the new works (£15.83m).

Adapting the alliance contract to fit with owner-controlled insurance

It was therefore decided to create an “hybrid” model/alliance contract which still preserved the principles of integration and collaboration, enabled by the “no blame” culture, but underpinned the risks of Derby Museums and the whole team with an “owner-controlled insurance” policy underwritten by different insurers. Under this scheme:

- The “no blame/no claim” undertakings within the alliance stand up to the point where the limit of pain-share is reached, but
- If it is exceeded, then claims/suits may be initiated by the client and consequently within the alliance, with each member being protected by its professional indemnity insurance (maintained on this project); and
- Client initiated claims/suits are permitted in respect of latent defects, again after threshold, protected by professional indemnity in the absence of Latent Defects insurance.

Procurement cont'd

It was necessary to seek the agreement of the incumbent consultants and their insurers to this hybrid arrangement, and it is notable that this process was protracted, mainly because there was no “blanket” limitation of potential liability – as is the case under pure IPI. Further, the cost estimate prepared by the quantity surveyors on a traditional basis was adapted to the structure of the IPI model. The 82 No. success criteria were actively managed through “live” documents which developed the criteria into (i) required outcomes and then (ii) interim gateways and acceptance criteria, all with dates, leads, control levels and status. Colour coding distinguished the project deliverables that the alliance could directly influence from those that could only be indirectly affected, but the task of updating as circumstances developed and monitoring achievement was challenging.

The fee structure previously agreed with the incumbent consultants had to be preserved but adapted to accommodate the gain/pain-share mechanism alongside the constructor and specialist contractors joining the alliance. With one exception this was achieved by extracting the corporate overheads and profit from the pre-agreed lump sum fees and ringfencing them alongside the corporate and overheads and profits of the new members.

Tender process for the other members of the team

Procurement of the replacement structural engineer (necessary because Adept volunteered that they were not in a position to commit the necessary time to this project) together with the constructor and specialist contractors proceeded generally in accordance with the principles and processes applied on the first pilot project at Dudley. These are documented in the corresponding Case Study and the Prospectus at <http://constructingexcellence.org.uk/wp-content/uploads/2018/04/201803-Prospectus-rev-1-Mar-2018-002.pdf>. Details of numbers of Expressions of Interest, Pre-qualifications and Tenders received are below:

Category/ Lot	EOIs	Pre-qualifications	Tenders
Structural Engineers	3	3	3
Constructor	22	5	3
Specialist Mechanical & Electrical services	2	1	1
Specialist Exhibition/ digital services	10	2	2
Suppliers (not fitting any of the LOTS)	5		

After the review and scoring of the ITT submissions shortlisted firms were required to field the staff they would designate to the project at interviews, and subsequently those employed by the firms shortlisted to form the alliance (first choice and second choice) were asked to join behavioural workshops to test their collaborative culture. The opportunity was taken to introduce the project staff of the incumbent design consultants into these workshops, as collaboration was required across the entire alliance.

The following key suppliers were also engaged in readiness for participation in Phase 1:

Trade	Company name
Demolition and asbestos removal	Garvey Demolition
Piling	Roger Bullivant
Steel frame	Adstone Construction
Curtain walling and glazing	Façade & Glazing Solutions

Procurement cont'd

They were appointed under the Supplier Alliance Subcontract that was developed and tested on the first pilot project, Dudley College Advance II. This form is designed to signal closest possible inclusiveness of suppliers within the culture and terms of the alliance, and provides various options depending upon:

- the extent of design input/advice required,
- any direct linkage between the performance of the items supplied and the project outcome/performance,
- whether installation and/or commissioning are required,
- the justification for their being “named” for inclusion in the project bank account process, and
- the facility to make payment for early activities

Commercial alignment (post-procurement)

Commercial alignment followed appointment of the alliance members and was conducted as described in the Prospectus, with the alliance principles being agreed by the alliance members on terms consistent with the vision, ethos and culture of Derby Museums:

- **Supportive**
- **Teamwork**
- **Ethical**
- **Accountable**
- **Makers**

It is perhaps significant that, when constituted, the alliance board chose to have an independent alliance manager in the person of Louise Lado-Byrnes of IPInitiatives.



Guidance on the IPI Model

Guidance on the IPI Model is complementary to this case study, and is accessible at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283331/IPI_Guidance.pdf

Of particular interest will be Section 9 which identifies the benefits the IPI Model is expected to bring for:

- The Client Group
- Lead Constructor/Project Manager/Design Consultants
- Specialist Contractors
- Other supply chain members
- Insurers
- Funders
- The Local Community

For change to take off and become “Business as Usual”, there must be seen to be benefits for all parties involved. The outcomes in this context will be reported at the end of the project.

Miscellaneous

Authors

This case study has been developed for Constructing Excellence by Martin Davis, as IPI Mentor, with invaluable assistance from his IPInitiatives colleagues Kevin Thomas (the Independent Facilitator) and Louise Lado-Byrnes (the Alliance Manager), and the members of the Alliance.

Background: Trial Projects programme

The Government Construction Strategy aims to change the relationship between clients and the entire supply chain within the industry. The trial projects perform a central role in delivering the Strategy’s sustainable reduction in costs and have been testing three new procurement models (Cost-Led Procurement; Integrated Project Insurance; Two Stage Open Book) that were proposed by industry and developed by a joint task group. Case study reports are therefore an output of monitoring the progress and outcomes of the trial projects. They are produced at four stages: Kick-off Meeting; Brief/Term Engagement; Decision to Build; Build and Occupy. Other case study reports can be found at:

<http://constructingexcellence.org.uk/cabinet-office-trial-projects/>

Project contacts

For further information on Insurance Backed Alliancing under the IPI model or to introduce a potential trial project, please contact Martin Davis, IPI Mentor for the Cabinet Office, at martin.davis@ipinitatives.com or Kevin Thomas at kevin.thomas@ipinitatives.com or Louise Lado-Byrnes at louise.lado-byrnes@ipinitatives.com

Successful applicants who are accepted onto the Cabinet Office’s Trial Projects Delivery Programme will then have access to the latest versions of the Procurement documentation and system, Alliance Contract, Supplier Alliance Subcontract and IPI Policy.

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Get involved

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