QUALITY IN CONSTRUCTION SUMMIT

CPD CERTIFIED
The CPD Certification Service

Associations

Get It Right Initiative

British Automatic Fire Sprinkler Association bafsa

CIAT

IET The Institution of Engineering and Technology

CQI | IRCA

Media Partners

ICON

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UK CONSTRUCTION MEDIA

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UK CONSTRUCTION WEEK | 2018
9-11 OCTOBER | NEC | BIRMINGHAM

TAYLOR WOODROW

- Mike Buss
  - Head of Quality, Taylor Woodrow
  - ConSIG Competency Working Group Chair
- Construction Special Interest Group (ConSIG)
  - Quality specialists across the industry
  - Promote & improve quality

- Inspection & Test Plans
  - Common themes
  - Different perspectives
- How can we maximise positive value from ITP's?
  - Outcome achieved (i.e benefits)
  - Methodology

CQI
CONSTRUCTION SPECIAL INTEREST GROUP

- A document (plan)
  - Inspect & test the works
  - Demonstrate compliance
  - Related to a specific activity

What is the requirement?

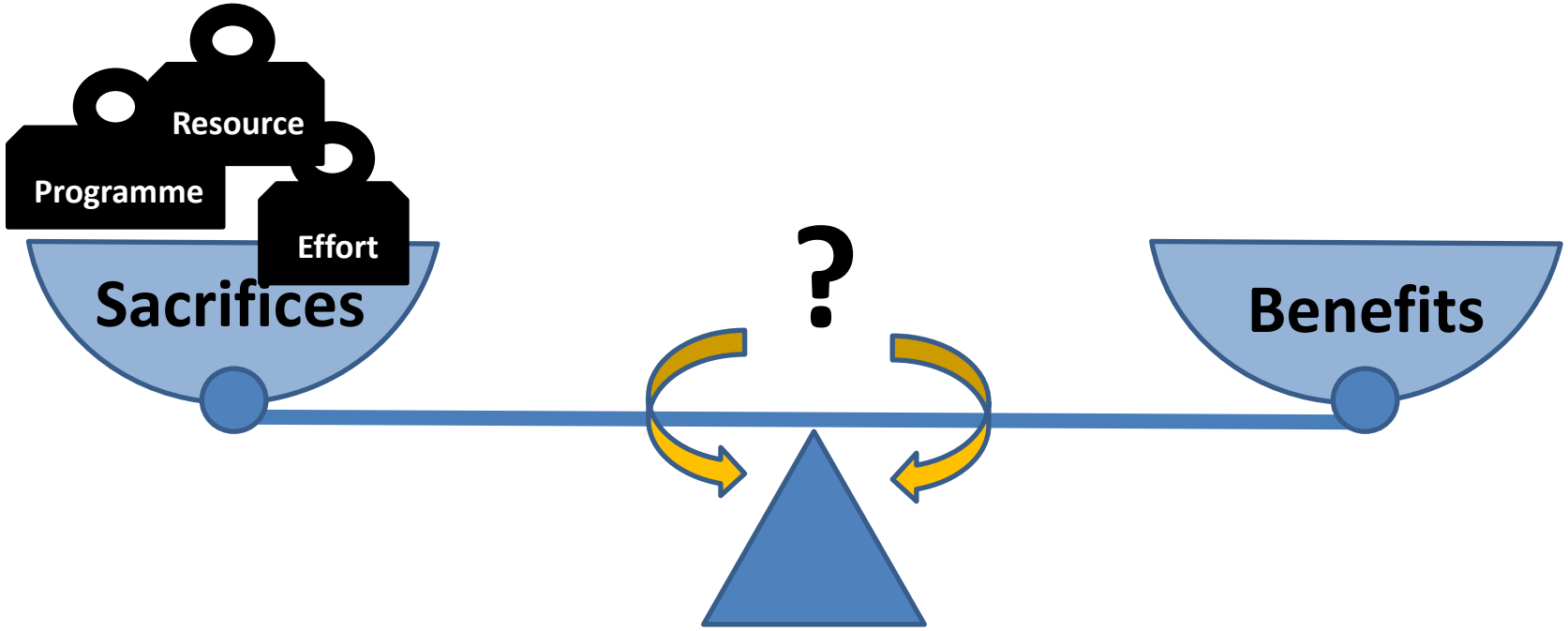
How do we get it right?

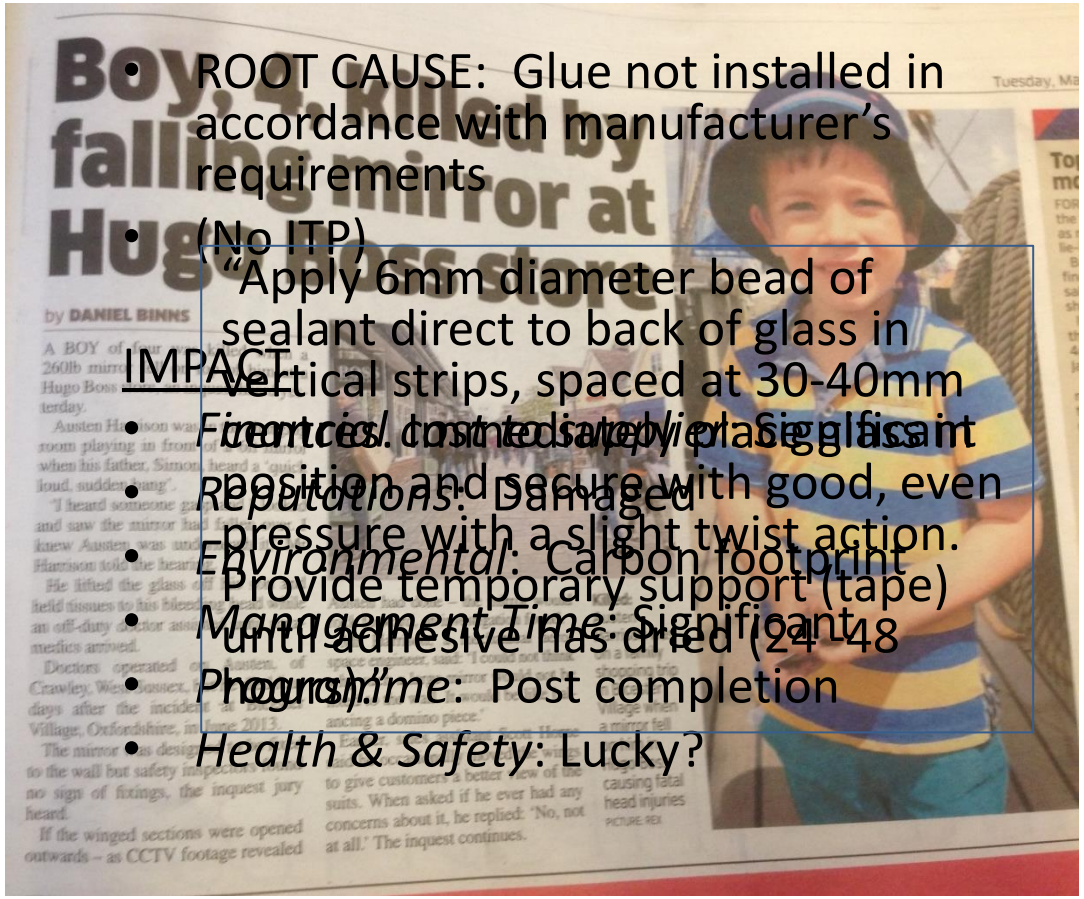
How will compliance be demonstrated?

Who is involved?

Compliance item

Ref.	What is the quality assurance activity?	R	What will be done to ensure compliance	How will compliance be demonstrated?	Evidence		Who has responsibility for closing out this requirement?	What resources are required?	Inspection / Test Details & Parties Involved				
		Where from			Desciption	Location			S / C	PC	PC Client	Other 1	Other 2
												BCO	Designer
1	Approval of Concrete Plant used for concrete batching	Concrete Specification AB Rev 1.0 Clause 1	Relevant UKAS certification will be obtained from the batching plant prior to first concrete order and checked to ensure it is in date and appropriate for the works.	A copy of the UKAS certificate will be made available for inspection as required.	UKAS Certification of batching plan.	Assurance Folder: Section X	Project Engineer	The project engineer will dedicate appropriate time to completing this activity.	I / H	W (100)	I (10)	n / a	
2a	Approval of Concrete Mix	Concrete Specification AB Rev 1.0 Clause 2	The mix design will be obtained from the supplier and sent to the design consultant for review and approval.	A TQ will be issued to the deisgn consultant. Subject to the mix being OK, the design consultant will confirm approval via the TQ response.	TQ issued via 4P	Refer to Viewpoint for Projects	Project Engineer	The project engineer will dedicate appropriate time to completing this activity.	SFA / H	SFA / H	SFI	n / a	I


Resource
Programme
Effort
Sacrifices
?
Benefits



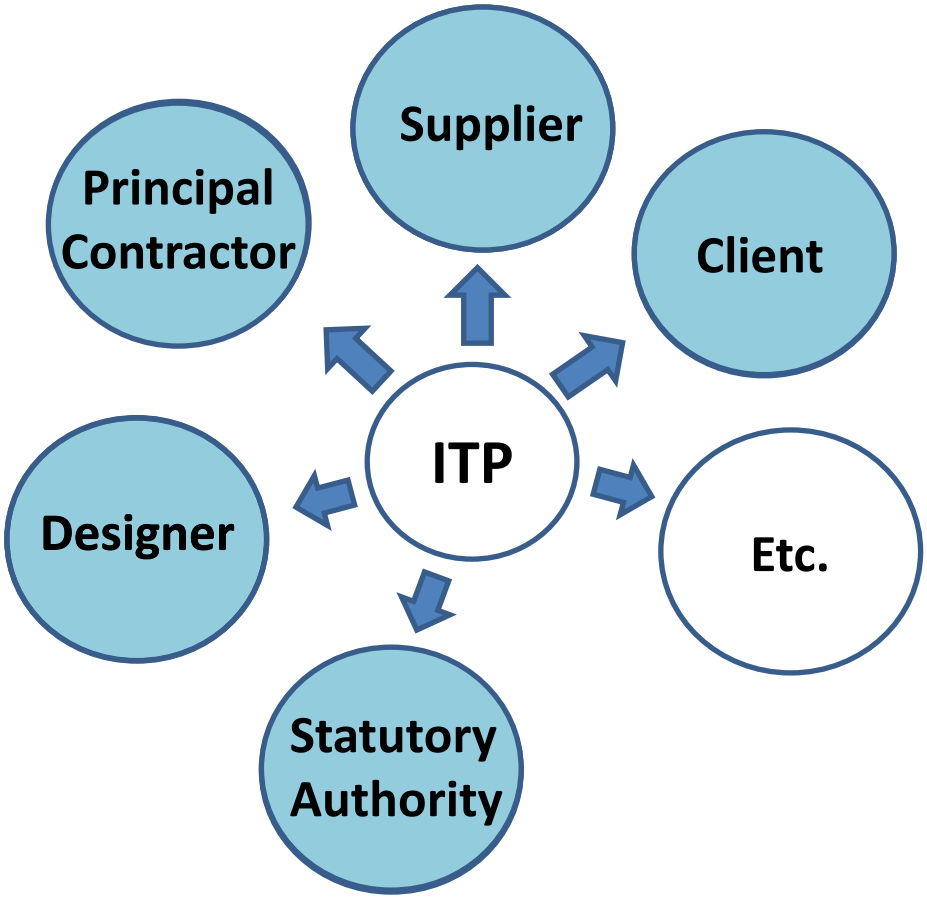
- ROOT CAUSE: Glue not installed in accordance with manufacturer's requirements
- (No ITP)

"Apply 6mm diameter bead of sealant direct to back of glass in vertical strips, spaced at 30-40mm centres. Immediately place glass in position and secure with good, even pressure with a slight twist action. Provide temporary support (tape) until adhesive has dried (24 - 48 hours)."

IMPACT

- *Financial*: Immediately: Significant
- *Reputations*: Damaged
- *Environmental*: Carbon footprint
- *Management Time*: Significant
- *Programme*: Post completion
- *Health & Safety*: Lucky?

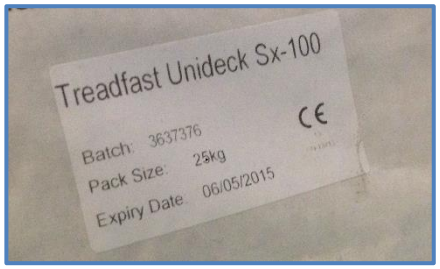
- Prevents bad things from happening
- Quality risk management tool



- Assurance:
  - Make 'sure' the works are right
  - Confidence the works are right
- Identify requirements
- Intervention Points:
  - Everything OK up to that point
- Demonstrate the requirements
- Quality control part of assurance

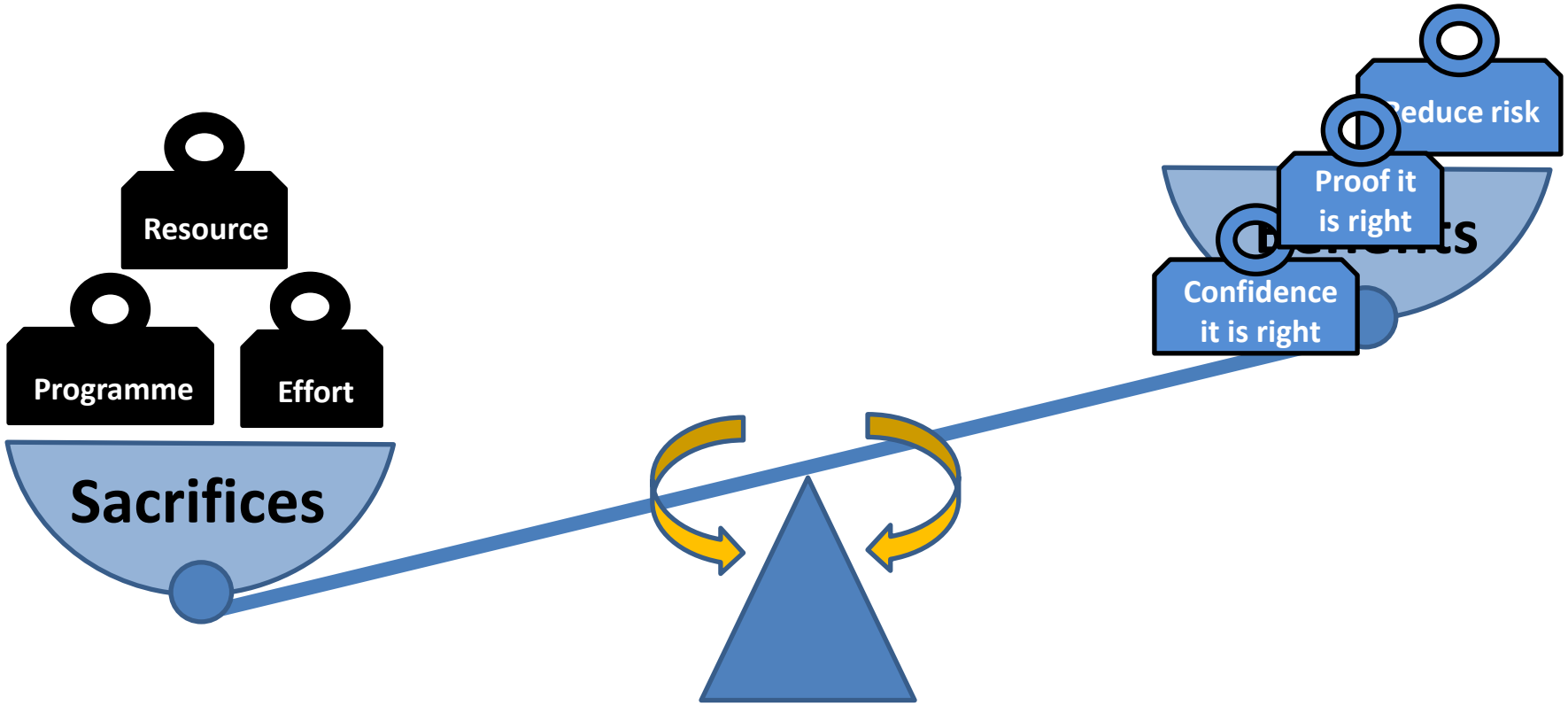
"The works have been built right"

Make sure the requirements are met

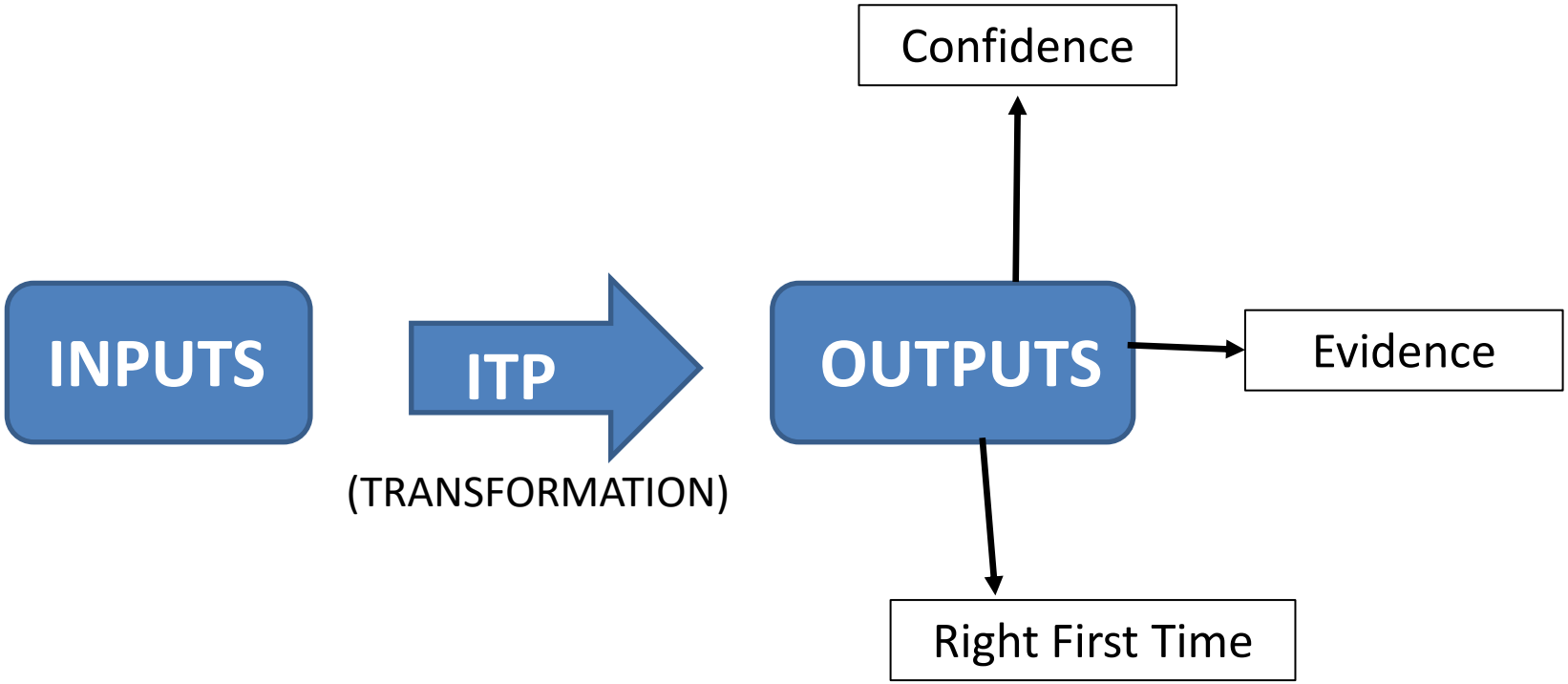


- Must be able to prove it is right
  - Especially self-certification
  - ‘What if?’ factor
- Weight of evidence

- Proactive approach:
  - Confidence processes are in place to achieve the right outcome
  - E.g. audit / surveillance


Resource
Programme
Effort
Sacrifices
Reduce risk
Proof it is right
Confidence it is right

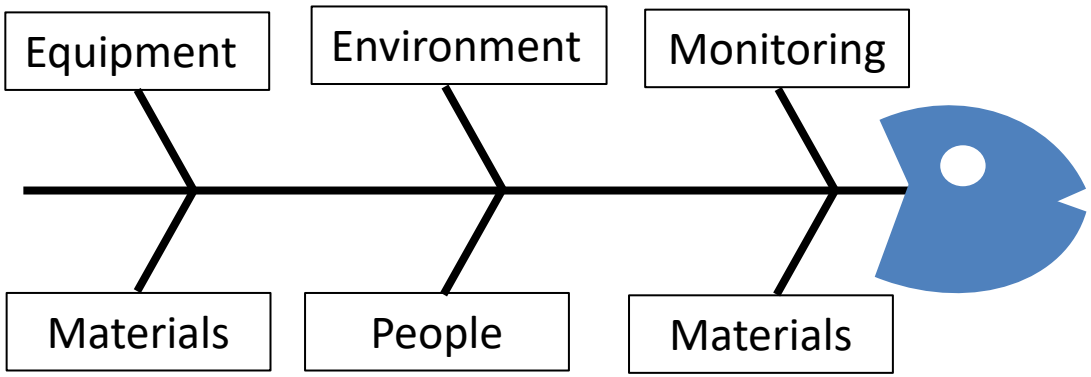
- **ITP as a process**



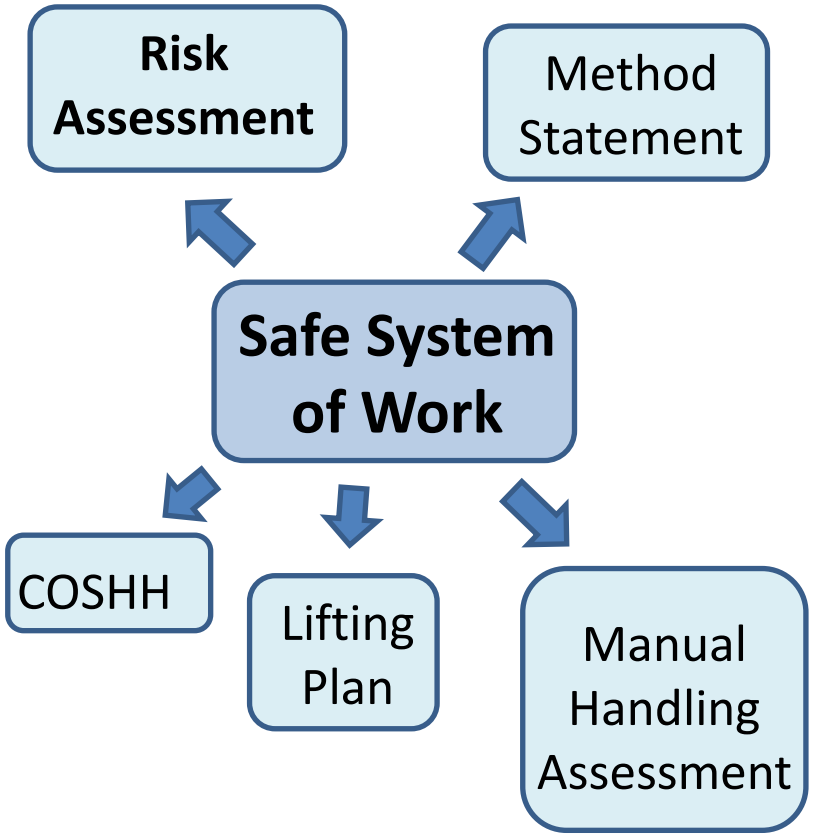
- **Inputs to the ITP**

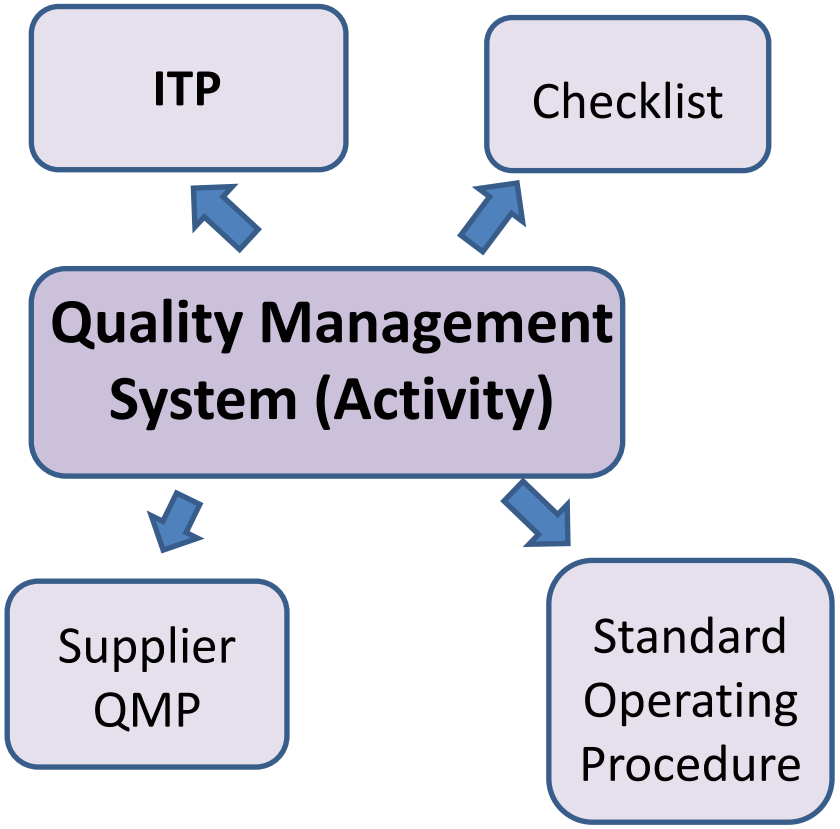
- Customer requirements
- Information
- Materials
- Method
- Environment
- Equipment
- Timeline
- Expertise
- Monitoring
- Lessons Learnt

- **Inputs to the ITP**

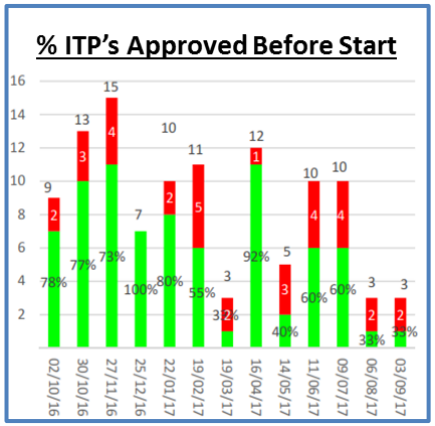


- Workshop
  - Experts
  - Brainstorm
- ‘Reverse Fishbone’
- What would I do if I wanted to make sure this went wrong?


Risk Assessment
Method Statement
Safe System of Work
COSHH
Lifting Plan
Manual Handling Assessment


ITP
Checklist
Quality Management System (Activity)
Supplier QMP
Standard Operating Procedure

Step 1: The ITP Tracker



- Tracker
  - Lists ITP's
  - Production timeline
  - Ownership
  - Monitoring / Reporting

PAF No.	Package	Subbie	ITP Ref.	Rev	ITP Title	ITP Owner	QA Department Reviewer Champion	ITP with QA For Review t-2wks	ITP Status	Accepted Status A / B / C - Date			Use Status
										A	B	C	
XXX	Pre-Construction	PLO	Not required	1.0	Survey & Setting Out	n/a	n / a	n/a	Not Required	n/a	n/a	n/a	Pre-Constr.
XXX	Pre-Construction	BAC	Q234-VIN-C-ITP-CR074-00003	1.0	Piling Mat	Bob Jones	n / a		A: 24-Nov-14	24-Nov-14	n/a	n/a	Pre-Constr.
XXX	Pre-Construction	SQU	Q234-SQU-C-ITP-CR074-00001	1.0	ITP for General Demolition of Pullman Sheds (& Asbestos)	Ed Smith	n / a		A: 04-Sep-14	4-Sep-14	n/a	n/a	Pre-Constr.
001	OMC Piling	BAC	Q234-VIN-C-ITP-CR074-00004	3.0	Installation of OMC Load Bearing Piles (Incl. Testing Broken down Piles)	Bob Jones	Mike Buss	18-Mar-15	A: 31-Mar-15	31-Mar-15	n/a	n/a	Current
001	OMC Piling	BAC	Q234-VIN-C-ITP-CR074-00004	2.0	Installation of OMC Load Bearing Piles	Ed Smith	Mike Buss	18-Mar-15	A: 13-Feb-15	13-Feb-15	n/a	n/a	Superseded
001	OMC Piling	BAC	Q234-VIN-C-ITP-CR074-00004	1.0	Installation of OMC Load Bearing Piles	Ed Smith	Mike Buss	18-Mar-15	A: 16-Jan-15	16-Jan-15	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-VIN-C-ITP-CR074-00005	4.0	Construction of Pile Caps / Capping Beams	Sarah Peters	Tom Jones	17-Jul-15	A: 30-Jul-15	30-Jul-15	n/a	n/a	Current
002	OMC Substructure	GAL	Q234-VIN-C-ITP-CR074-00005	3.0	Construction of Pile Caps / Capping Beams	Sarash Peters	Mike Buss	17-Jul-15	A: 10-Jul-15	10-Jul-15	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-VIN-C-ITP-CR074-00005	2.0	Construction of Pile Caps / Capping Beams	Sarash Peters	Mike Buss	17-Jul-15	A: 26-Mar-16	26-Mar-16	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-VIN-C-ITP-CR074-00005	1.0	Construction of Pile Caps / Capping Beams	Sarah Peters	Mike Buss	17-Jul-15	A: 11-Mar-15	11-Mar-15	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00010	2.0	Installation of Retaining Walls	Kate Hodgson	John James	25-Jul-15	A: 07-Aug-16	7-Aug-16	n/a	n/a	Current
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00010	1.0	Installation of Retaining Walls	Kate Hodgson	John James	25-Jul-15	A: 08-Aug-15	8-Aug-15	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00021	3.0	OMC Slab Construction (Incl. GIE Pressure Tests Results & Joint Sealing)	Bert Lambert	Bart Simpson	17-Nov-15	A: 15-Aug-16	15-Aug-16	n/a	n/a	Current
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00021	2.0	OMC Slab Construction	Bert Lambert	Bart Simpons	17-Nov-15	A: 04-Dec-15	4-Dec-15	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00021	1.0	OMC Slab Construction	Bert Lambert	Bart Simpson	17-Nov-15	A: 25-Sep-16	25-Sep-16	n/a	n/a	Superseded
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00045	2.0	Bogie Drop and Wheel Lathe RC Works	John Dale	Del Boy	17-Jun-16	A: 20-Jun-16	20-Jun-16	n/a	n/a	Current
002	OMC Substructure	GAL	Q234-GAL-C-ITP-CR074-00045	1.0	Bogie Drop and Wheel Lathe RC Works	John Dale	Del Boy	17-Jun-16	A: 21-Jan-16	21-Jan-16	n/a	n/a	Superseded
033	Duct Pit Covers, Duct Lining & Resin Injection	GAL	Q234-GAL-C-ITP-CR074-00051	2.0	MC Chemicals Resin Injection & Duct Lining - Wheel Lathe & Bogie Drop Repairs	n/a	n/a	n/a	A: 10-May-17	10-May-17	n/a	n/a	Current
033	Duct Pit Covers, Duct Lining & Resin Injection	GAL	Q234-GAL-C-ITP-CR074-00051	1.0	MC Chemicals Resin Injection & Duct Lining - Wheel Lathe & Bogie Drop Repairs	Alex Lobson	Del Boy	6-Feb-17	A: 17-Feb-17	17-Feb-17	n/a	n/a	Superseded
033	Duct Pit Covers, Duct Lining & Resin Injection	VIN	Q234-VIN-C-ITP-CR074-00037	1.0	Installation of Duct Pit Covers	Peter Jones	Del Boy	24-Jul-17	A: 14-Aug-17	14-Aug-17	n/a	n/a	Current

Step 2: Produce the ITP

a) Introductory Information

Inspection & Test Plan

ITP Title:	
ITP Ref:	
ITP Rev:	

ITP Scope Description
This ITP relates to the installation of a concrete slab. The ITP does not include details of the installation for the substrate (refer to ITP Ref. XYZ)

Abbreviations
PC: Principal Contractor; BCO: Building Control Officer: S / C Subcontractor; QMP: Quality Management Plan WQF: Works Quality File

ITP Input Information		
Source / Document	Reference	Revision
Lessons learned		
Drawings		
Specifications		
Manufacturer's requirements		
Contract requirements		
Project Management Plan		
Design Managmeent Plan		

	Name	Role	Date	Signature
ITP Produced by:				
ITP Produced by:				
ITP Reviewed by:				
ITP Reviewed by:				
ITP Authorised for use by:				

Inspection / Test Key						
	SFA: Submit for Approval	H: Hold Point	AU: Audit	I (100): Inspection 100%	S (100): Surveillance 100%	W (100): Witness 100%
	SFI: Submit for Information	A: Archive	n / a: Not Applicable	I (10): Inspection 10%	S (10): Surveillance 10%	W (10): Witness 10%
	DC: Daily Check	WC: Weekly check				

	Name	Role	Date	Signature
ITP Produced by:				
ITP Produced by:				
ITP Reviewed by:				
ITP Reviewed by:				
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Abbreviations
PC: Principal Contractor; BCO: Building Control Officer: S / C Subcontractor; QMP: Quality Management Plan WQF: Works Quality File

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	DC: Daily Check	WC: Weekly check				

Step 2: Produce the ITP

b) Delivery Stages

- Pre Construction
- Material Conformity
- Off Site Manufacture
- Site Construction
- Testing & Commissioning
- Post Construction

Step 2: Produce the ITP

c) Main body

- Input to achieve the right outputs
- Unique identity each line item
- Specific (eg exact clause)
- Documented requirements + other

STAGE	Ref.	What is the quality assurance activity?	Requirement		What will be done to ensure compliance (method)?	How will compliance be demonstrated?	Evidence		Who has responsibility for closing out this requirement?	What resources are required?	Inspection / Test Details & Parties Involved				
			Where from?	What is the requirement?			Desciption	Location			S / C	PC	PC Client	Other 1	Other 2
														BCO	Designer
Pre Construction	1.1	Due to the repetitive nature of the activity, a Standard Operating Procedure is appropriate.	N / A	Good practice	A SOP will be produced by the Product Manager and approved by the Project Manager.	The SOP will be signed by both the Product Manager and Project Manager	Signed Standard Operating Procedure	The SOP will be available at the workface.	Product Manager & Project Manager	The Product Manager & Project Manager are to allocate time to produce the SOP.	H	SFI	n / a	n / a	n / a
	1.2	Competence of installers	Competence Procedure Rev 3.0 Section 1.2	All installers must have the relevant knowledge & skill to complete the task to the required standard.	A briefing will be given to operatives to communicate requirements. The will include a review of the SOP.	A briefing record will be produced and signed by those in attendance.	Briefing record	Briefing record to be issued to L & D who will retain for record purposes	Product Manager	The Product Manager and operatives are to arrange a briefing session; Time to be allocated.	H	SFI	n / a	n / a	n / a
Material Conformity	2.1	Glass is in accordance with design requirements.	Specification B; Clause 1.4	Glass is to be 7mm thickness compliant to BS 7449:1991	The certification for the glass will be obtained from supplier prior to order by purchasing. The Project Manager will review and sign the purchase order to verify acceptance.	The purchase order will be signed by the Project Manager prior to ordering the material.	Purchase order signed by project manager	Purchasing Department System Section B.1	Purchasing department & Project Manager	The purchase department & project manager will allocate time to meet to review.	H	W (100)	SFI	SFI	n / a
	2.2	Glue is approved for use & fit for purpose	Materials Procedure Rev 2.0 Section 3.2	All materials to be approved by the lead designer to verify fit for purpose.	As per procedure, materials to be submitted via Materials Acceptance Request (MAR) to lead designer.	The lead designer will sign off the relevant MAR.	MAR	Compliance Evidence Folder A Section 2	Project Manager	The Project Manager and lead designer are to allocate time.	H	SFI	n / a	SFI	I (100)
	2.3	Correct glue is used	N / A	Lesson learnt that materials can be mixed up on factory floor.	Operative to check that the material is the right glue prior installation.	The checklist will be used to verify that a check of the material has been carried out.	Checklist C/6/4.1 will be signed by operatives	Compliance Evidence Folder A Section 2	Operatives	Operatives to allocate time to check prior to installation.	I (100) / H	n / a	n / a	n / a	n / a
Off Site Manufacture	3.1	Glass: Manufactured OK	PC Project Audit Schedule	The audit schedule requires that an audit of the glass manufacture is carried out.	An audit will be arranged to be led by the PC hosted by the supplier with the S / C and PC Client in attenance.	An audit report will be produced an issued to relevant parties. This will be signed by the supplier, S/C, and PC Client to evidence acceptance of any findings.	PC Audit Report	Copy to be included in Compliance Evidence Folder A Section 3.1	Principal Contractor	Glass supplier to host the audit; PC to provide a competent auditor to lead the audit; Relevant persons to attend from other parties.	W	AU	W	n / a	W
Construction	4.1	Application of glue	Produce X; Version 3-3/4/15 Print Date 9/9/15;	6mm bead spaced 30-50mm centres; glass immediately placed, secured, good pressure with slight twist action	A checklist will be used as an aide memoire for the installation requirements.	Works will be inspected by relevant parties. The project manager will undertake surveillances to verify the works are OK. For future reference, photos (annotated with date / panel ref.) will be taken of each pane showing the glue bead prior to application of the glass (HP). Other relevant parties will also inspect the works.	Checklist C/6/4.1 will be signed by parties inspecting the works.; Surveillance form B/7/3.2 to be used as surveillance record. Photo records to be kept.	Compliance Evidence Folder A Section 4.1	Operatives will inspect works & take photos; The Factory Supervisor will check all works; The Project Manager will undertake surveillances; Other parties are to inspect as applicable.	Checklist to be made available to operatives; Time to be allocated for checks and surveillances as appropriate.	I (100) / H; S (10)	I(50)	W(5)	n / a	I (5)
	4.2	Application of tape	Produce X; Version 3-3/4/15 Print Date 9/9/15;	Temporary support (Tape) must be in place for 24-48 hours	The tape will be applied and time recorded (HP); The tape will be removed only after 24 - 48 hours. The date / time of removal will be recorded.	Operatives will record the date / time on the checklist when the tape was applied and removed. The project manager will undertake surveillances to verify the works are OK.	Checklist C/6/4.1 will be signed by parties inspecting the works.; Surveillance form B/7/3.2 to be used as surveillance record. Photo records to be kept.	Compliance Evidence Folder A Section 4.1	Operatives are to check the date and time; The Project Manager will undertake surveillances. Other parties are to inspect as applicable.	Checklist to be made available to operatives; Time to be allocated for checks and surveillances as appropriate.	I (100) / H; S (10)	I(50)	W(5)	n / a	I (5)
	4.2	Application temperature	Produce X; Version 3-3/4/15 Print Date 9/9/15;	Glue to be applied in temperature -5 to +30 degrees Centigrade	A check will be carried out twice a day to verify the ambient temperature is OK via a calibrated (certificated) thermometer.	A schedule will be maintained to record the temperature readings. The calibration certificate will be checked and confirmed OK once per week. Details to be included on the schedule.	Template Doc. A/5/3; Thermometer calibration certificate	Completed schedules to be located in Compliance Evidence Folder A Section 4.2	Supervisor	Calibrated thermometer; Factory supervisor to allocate time twice per day to check and record temperature	I (100) / H	W (5)	n / a	n / a	n / a
Post Construction	5.1	Final check of panels prior to loading lorry.	Quality Control Procedure Rev 2.0 Section 5	All goods are to be inspected prior to protection and loading for delivery	A final inspection will be carried out by the supervisor	The checklist will be signed by the supervisor authorising the product to be protected and made ready for delivery.	Checklist C/6/4.1 will be signed by the Project Manager	Compliance Evidence Folder A Section 4.1	Supervisor	Supervisor to allocate time to undertaken final check of panels.	I (100) / H	W (10)	n / a	n / a	n / a
	5.2	Protection applied	Quality Control Procedure Rev 2.0 Section 6	Bubblewrap protection to be applied + corner guards for glass products.	The Delivery Manager will inspect to ensure the material is adequately protected.	The Delivery Authorisation Notice will be signed by the Delivery Manager.	Delivery Authorisation Notice D/7/3.2	Delivery Department System Section A.2	Delivery Manager	Delivery Manager to allocated time to undertake check	I (100) / H	W (10)	n / a	n / a	n / a

How will compliance be demonstrated?

from? **requirement?**

Application of glue

Application of tape

2.1

"Apply 6mm diameter bead of sealant direct to back of glass in vertical strips, spaced at 30-40mm centres. Immediately place glass in position and secure with good, even pressure with a slight twist action. Provide temporary support (tape) until adhesive has dried (24 -48 hours)."

Step 2: Produce the ITP

d) Main body

STAGE	Ref.	What is the quality assurance activity?	Requirement		What will be done to ensure compliance (method)?	How will compliance be demonstrated?	Evidence		Who has responsibility for closing out this requirement?	What resources are required?	Inspection / Test Details & Parties Involved				
			Where from?	What is the requirement?			Desciption	Location			S / C	PC	PC Client	Other 1	Other 2
														BCO	Designer
Pre Construction	1.1	Due to the repetitive nature of the activity, a Standard Operating Procedure is appropriate.	N / A	Good practice	A SOP will be produced by the Product Manager and approved by the Project Manager.	The SOP will be signed by both the Product Manager and Project Manager	Signed Standard Operating Procedure	The SOP will be available at the workface.	Product Manager & Project Manager	The Product Manager & Project Manager are to allocate time to produce the SOP.	H	SFI	n / a	n / a	n / a
	1.2	Competence of installers	Competence Procedure Rev 3.0 Section 1.2	All installers must have the relevant knowledge & skill to complete the task to the required standard.	A briefing will be given to operatives to communicate requirements. The will include a review of the SOP.	A briefing record will be produced and signed by those in attendance.	Briefing record	Briefing record to be issued to L & D who will retain for record purposes	Product Manager	The Product Manager and operatives are to arrange a briefing session; Time to be allocated.	H	SFI	n / a	n / a	n / a
Material Conformity	2.1	Glass is in accordance with design requirements.	Specification B; Clause 1.4	Glass is to be 7mm thickness compliant to BS 7449:1991	The certification for the glass will be obtained from supplier prior to order by purchasing. The Project Manager will review and sign the purchase order to verify acceptance.	The purchase order will be signed by the Project Manager prior to ordering the material.	Purchase order signed by project manager	Purchasing Department System Section B.1	Purchasing department & Project Manager	The purchase department & project manager will allocate time to meet to review.	H	W (100)	SFI	SFI	n / a
	2.2	Glue is approved for use & fit for purpose	Materials Procedure Rev 2.0: Section 3.2	All materials to be approved by the lead designer to verify fit for purpose.	As per procedure, materials to be submitted via Materials Acceptance Request (MAR) to lead designer.	The lead designer will sign off the relevant MAR.	MAR	Compliance Evidence Folder A Section 2	Project Manager	The Project Manager and lead designer are to allocate time.	H	SFI	n / a	SFI	I (100)
	2.3	Correct glue is used	N / A	Lesson learnt that materials can be mixed up on factory floor.	Operative to check that the material is the right glue prior installation.	The checklist will be used to verify that a check of the material has been carried out.	Checklist C/6/4.1 will be signed by operatives	Compliance Evidence Folder A Section 2	Operatives	Operatives to allocate time to check prior to installation.	I (100) / H	n / a	n / a	n / a	n / a
Off Site Manufacture	3.1	Glass: Manufactured OK	PC Project Audit Schedule	The audit schedule requires that an audit of the glass manufacure is carried out.	An audit will be arranged to be led by the PC hosted by the supplier with the S / C and PC Client in attenance.	An audit report will be produced an issued to relevant parties. This will be signed by the supplier, S/C, and PC Client to evidence acceptance of any findings.	PC Audit Report	Copy to be included in Compliance Evidence Folder A Section 3.1	Principal Contractor	Glass supplier to host the audit; PC to provide a competent auditor to lead the audit; Relevant persons to attend from other parties.	W	AU	W	n / a	W
Construction	4.1	Application of glue	Produce X; Version 3-3/4/15 Print Date 9/9/15;	6mm bead spaced 30-50mm centres; glass immediately placed, secured, good pressure with slight twist action	A checklist will be used as an aide memoire for the installation requirements.	Works will be inspected by relevant parties. The project manager will undertake surveillances to verify the works are OK. For future reference, photos (annotated with date / panel ref.) will be taken of each pane showing the glue bead prior to application of the glass (HP). Other relevant parties will also inspect the works.	Checklist C/6/4.1 will be signed by parties inspecting the works.; Surveillance form B/7/3.2 to be used as surveillance record. Photo records to be kept.	Compliance Evidence Folder A Section 4.1	Operatives will inspect works & take photos; The Factory Supervisor will check all works; The Project Manager will undertake surveillances; Other parties are to inspect as applicable.	Checklist to be made available to operatives; Time to be allocated for checks and surveillances as appropriate.	I (100) / H; S (10)	I(50)	W(5)	n / a	I (5)
	4.2	Application of tape	Produce X; Version 3-3/4/15 Print Date 9/9/15;	Temporary support (Tape) must be in place for 24-48 hours	The tape will be applied and time recorded (HP); The tape will be removed only after 24 - 48 hours. The date / time of removal will be recorded.	Operatives will record the date / time on the checklist when the tape was applied and removed. The project manager will undertake surveillances to verify the works are OK.	Checklist C/6/4.1 will be signed by parties inspecting the works.; Surveillance form B/7/3.2 to be used as surveillance record. Photo records to be kept.	Compliance Evidence Folder A Section 4.1	Operatives are to check the date and time; The Project Manager will undertake surveillances. Other parties are to inspect as applicable.	Checklist to be made available to operatives; Time to be allocated for checks and surveillances as appropriate.	I (100) / H; S (10)	I(50)	W(5)	n / a	I (5)
	4.2	Application temperature	Produce X; Version 3-3/4/15 Print Date 9/9/15;	Glue to be applied in temperature -5 to +30 degrees Centigrade	A check will be carried out twice a day to verify the ambient temperature is OK via a calibrated (certificated) thermometer.	A schedule will be maintained to record the temperature readings. The calibration certificate will be checked and confirmed OK once per week. Details to be included on the schedule.	Template Doc. A/5/3; Thermometer calibration certificate	Completed schedules to be located in Compliance Evidence Folder A Section 4.2	Supervisor	Calibrated thermometer; Factory supervisor to allocate time twice per day to check and record temperature	I (100) / H	W (5)	n / a	n / a	n / a
Post Construction	5.1	Final check of panels prior to loading lorry.	Quality Control Procedure Rev 2.0 Section 5	All goods are to be inspected prior to protection and loading for delivery	A final inspection will be carried out by the supervisor	The checklist will be signed by the supervisor authorising the product to be protected and made ready for delivery.	Checklist C/6/4.1 will be signed by the Project Manager	Compliance Evidence Folder A Section 4.1	Supervisor	Supervisor to allocate time to undertaken final check of panels.	I (100) / H	W (10)	n / a	n / a	n / a
	5.2	Protection applied	Quality Control Procedure Rev 2.0 Section 6	Bubblewrap protection to be applied + corner guards for glass products.	The Delivery Manager will inspect to ensure the material is adequately protected.	The Delivery Authorisation Notice will be signed by the Delivery Manager.	Delivery Authorisation Notice D/7/3.2	Delivery Department System Section A.2	Delivery Manager	Delivery Manager to allocated time to undertake check	I (100) / H	W (10)	n / a	n / a	n / a

- Inspect or Witness?
  - Witness test of works / check being undertake
  - Inspect to confirm OK
- Is it a Hold Point?
  - Must not proceed until verified OK & authorisation received
- Audit
- Surveillance
- Submit for Information
- When / How much?
  - Confidence / risk

Checklist

HOLD POINT: Do not proceed until all activities up to this point

Tape applied to secure	
Time / Date tape placed:	

Tape in place for 24 - 48 hours & ready to be removed	
Time / Date tape removed:	

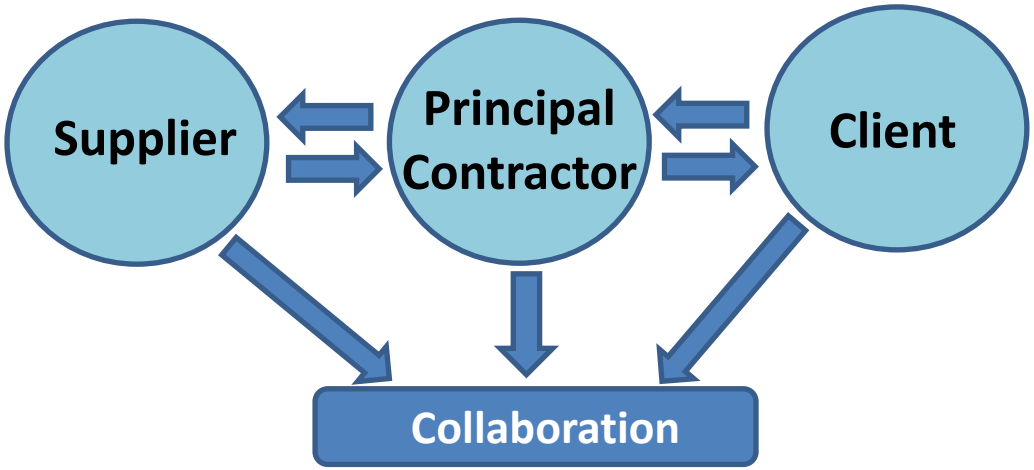
Checklist Reference:	Checklist C/6/4.1
Panel Reference:	

	Sign / Date to confirm check satisfactory						
	Installation Operative	Supervisor	Project Manager	Principal Contractor	PC Client	Designer	Other
Correct Material has been used							
HOLD POINT: Do not proceed until all activities up to this point have been completed.							
Bead is 6mm							
Bead is spaced 30-50mm centres							
Photo taken prior to placing glass							
HOLD POINT: Do not proceed until all activities up to this point have been completed.							
Glass placed and secured with good, even pressure and slight twist action							
Tape applied to secure							
Time / Date tape placed:							
HOLD POINT: Do not proceed until all activities up to this point have been completed.							
Tape in place for 24 - 48 hours & ready to be removed							
Time / Date tape removed:							
HOLD POINT: Do not proceed until all activities up to this point have been completed.							
Final Check							
I confirm that the installation has been completed as per the requirements and is ready to be prepared for delivery.							
HOLD POINT: Do not proceed until all activities up to this point have been completed.							

"Provide temporary support (tape) until adhesive has dried (24 - 48 hours)."

- Sign off facility for each party
- Include sufficient details
- Ensure hold points are clearly indicated
- Include facility to add information

Step 3: Review / Approval / Acceptance



- Checklist for ITP:
  - Aide memoire
    - Producing
    - Checking
  - Comments:
    - Formal record
    - Track closure

ITP REVIEW FORM

Project Title:		Review Form. ID:	
Type (MS, ITP, QMS etc.) and Title of Documented information:			Submitted/Originated by:
Revision Number.	QMS review reference	QMS review date	

ITP STATUS (A, B, C)						
Package manager:	A	☐	B	☐	C	☐
Quality Department:	A	☐	B	☐	C	☒
Other (specify):	A	☐	B	☐	C	☐

(A – work can proceed, B-work can proceed but comments need addressing; C – work can not proceed until comments addressed). **Lower takes precedence.**

Additional documents reviewed	
Reference	Title

Review codes: ● Sufficient ▲ Comments ✖ Inadequate ◆ Not Applicable

	Description	Review ●	▲	✖	◆
	Alternative ITP template used:				☒
	VCUK-Q-F-00005 (External ITP review) form completed:	☐	☐	☐	☐
	Input Documentation OK? (list relevant documentation on this form):				
	Plan / procedures:	☐	☐	☒	☐
	Method statements	☒	☐	☐	☐
	Specifications:	☒	☐	☐	☐
	Standards	☐	☐	☐	☒
	Drawings:	☐	☐	☒	☐
	Manufacturers requirements:	☐	☒	☐	☐
	TQ's / PMI's:	☐	☐	☒	☐
	GENERAL:				☐
	All items/activities have been included relevant to the scope of the works:	☐	☐	☒	☐
	ITP has been produced bespoke for project requirements:	☒	☐	☐	☐
	Hold Point for design acceptance prior to start of works:	☒	☐	☐	☐
	Process for handover / handback to / from TW confirmed:	☐	☐	☒	☐
	Method of works is suitably detailed:	☒	☐	☐	☐
	ITP (general)				☐
	Specific references are included (e.g. Clause X of Spec A):	☐	☒	☐	☐
	Each relevant requirement from the input documentation has been extracted and confirmation is provided it is sufficient and details how compliance will be assured:	☐	☐	☒	☐
	Suitable measures for managing interfaces:	☐	☐	☒	☐

	Description	Review ●	▲	✖	◆
	Evidence specified is adequate:	☐	☐	☒	☐
	CHECKLIST(S):				☐
	References (e.g. 4P) are correct:	☒	☐	☐	☐
	Items/activities listed correspond to ITP:	☐	☐	☒	☐
	All relevant checks are included:	☐	☐	☒	☐
	Sufficient information is detailed for checking (e.g. galvanised M8 25mm countersunk screws at 300mm centres):	☐	☒	☐	☐
	Includes sign off for all relevant parties:	☐	☒	☐	☐
	Hold Points clearly indicated with sign off by relevant persons:	☐	☒	☐	☐
	RESOURCES: Confirmation is included to verify how the following will be ensured: (if applicable):				☐
	Suitably competent people:	☐	☐	☒	☐
	Information (e.g. design info, hold points etc.) will be communicated to relevant persons (e.g. via task briefing):	☐	☐	☐	☐
	Materials:				☐
	Approval prior to start:	☒	☐	☐	☐
	Delivered OK: to spec & undamaged:	☒	☐	☐	☐
	Stored OK:	☒	☐	☐	☐
	Tested to relevant standards (e.g. testing by UKAS accredited organisation):	☐	☐	☐	☒
	Specified (by design or standard or manufacturer) tests are described	☐	☐	☒	☐
	Traceability (e.g. concrete lorry to pour to cubes to cube crush results):	☒	☐	☐	☐
	Off site compliance	☒	☐	☐	☐
	Equipment:				☐
	Suitable for task:	☐	☐	☒	☐

Form Number: Q234-VIN-A-ZFM-CR074-00134	Title: ITP Review Form	Rev: 1.0	Date of Issue: June 2015	Page 1 of 3
Project File Reference:		Distribution: BMS		

*** Documents on the Intranet are "controlled" version. Uncontrolled when printed. ***

Step 4: Communicate the ITP

- Briefings
  - Important / relevant items of the ITP
  - What is different to normal?
  - What checks are required?
- Mock ups / Benchmarks

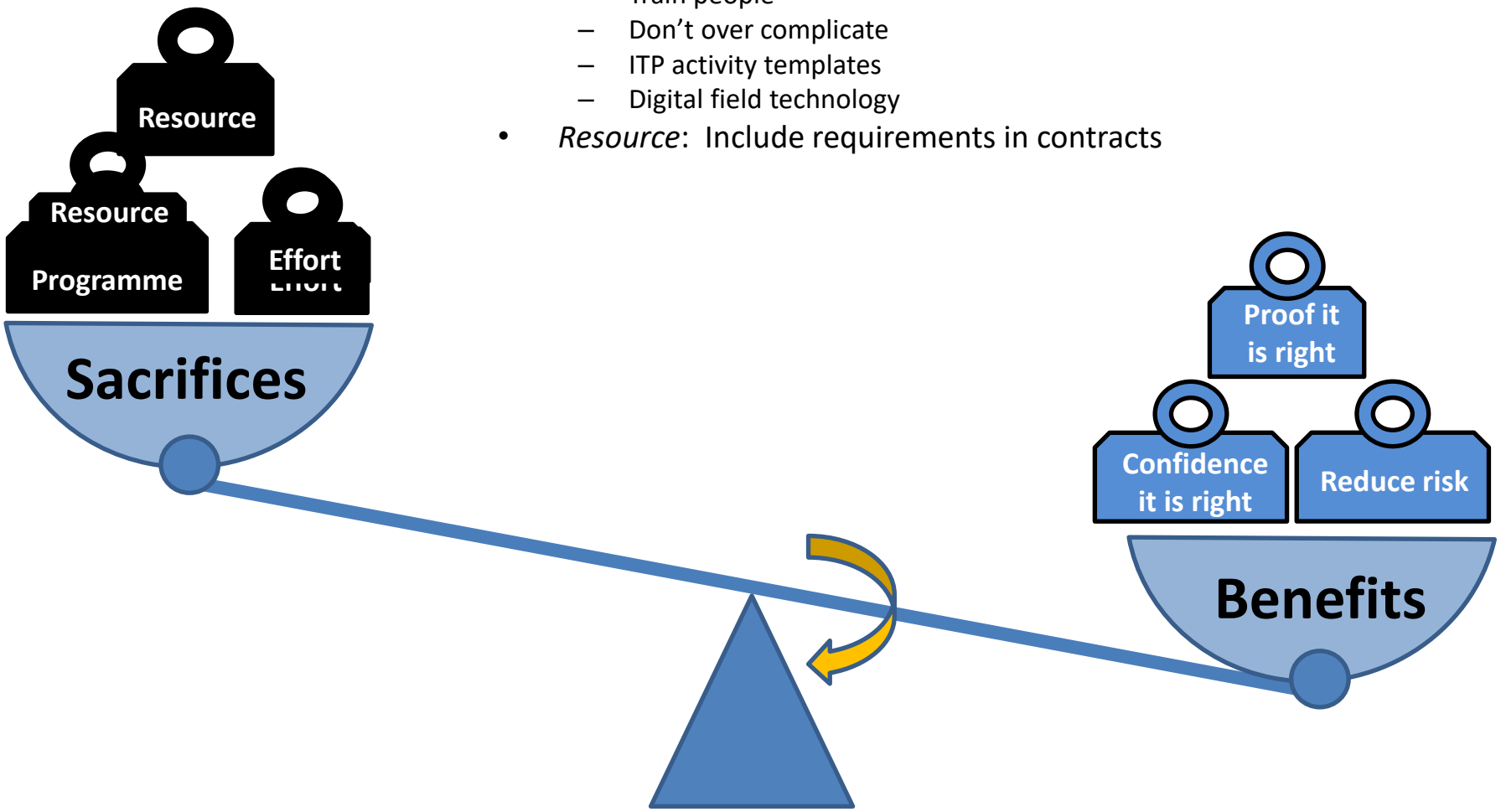
quirement		What will be done to ensure compliance (method)?	How will compliance be demonstrated?	Evidence		Who has responsibility for closing out this requirement?	What resources are required?
	What is the requirement?			Desciption	Location		
2	All installers must have the relevant knowledge & skill to complete the task to the required standard.	A briefing will be given to operatives to communicate requirements. The will include a review of the SOP.	A briefing record will be produced and signed by those in attendance.	Briefing record	Briefing record to be issued to L & D who will retain for record purposes	Product Manager	The Product Manager and operatives are to arrange a briefing session; Time to be allocated.

Step 5: Adhere, Comply, & Close Out the ITP

Supplier: Confirmation of ITP Completion			
We confirm that with respect to the stated scope of works all activities have been completed in accordance with the relevant requirements. We have maintained an adequate 'weight of evidence' to demonstrate compliance which has been made available to relevant parties.			
Name	**Role**	**Date**	**Signature**

Principal Contractor			
We confirm that with respect to the stated scope of works and to the best of our knowledge works been completed in accordance with all relevant requirements. An adequate 'weight of evidence' has been maintained to demonstrate compliance and made available to relevant parties.			
Name	Role	Date	Signature

- *Programme*: Allow enough time
- *Effort*:
  - Train people
  - Don't over complicate
  - ITP activity templates
  - Digital field technology
- *Resource*: Include requirements in contracts

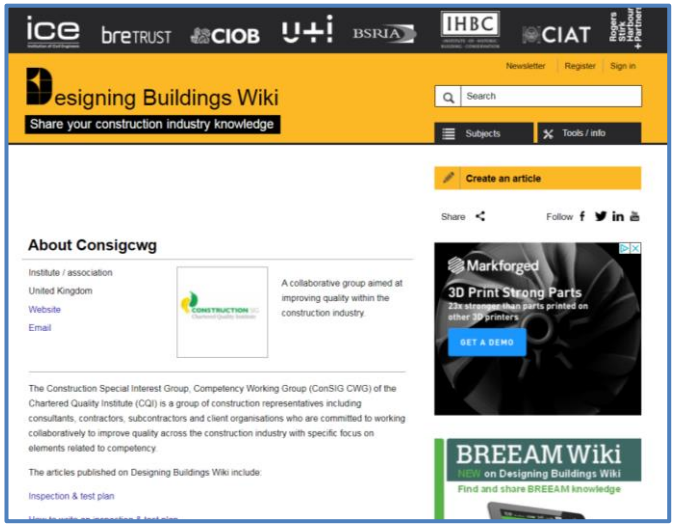


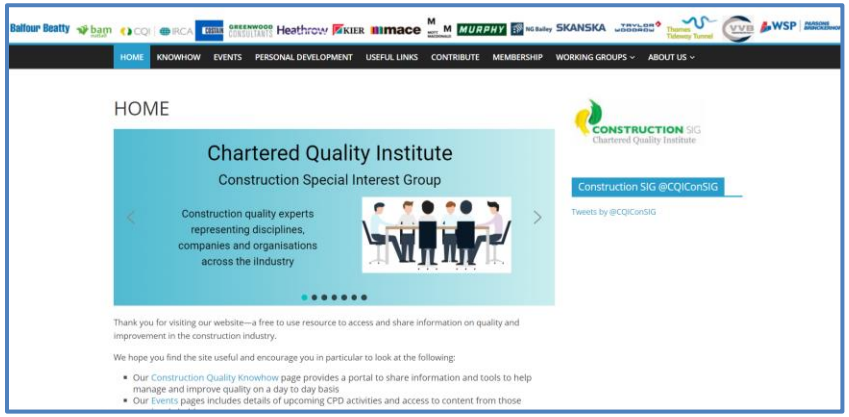
- Value of the ITP: Weigh up of Pro's & Con's

- Step 1: ITP Tracker
- Step 2: Produce
- Step 3: Review & Agree
- Step 4: Effectively communicate
- Step 5: Adhere, Comply & Close Out

- Quality is an outcome
  - Good: e.g. customer satisfaction
  - Bad: e.g. error
- Quality is about:
  - What we deliver
  - How we deliver it
- ITP is the key tool to:
  - Manage quality risk
  - Get it right first time
  - Deliver ‘confidence’
  - Ensure appropriate evidence

For more information:





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https://www.designingbuildings.co.uk/wiki/User:Consigcwg