Atkins Highways and Transportation - This is a trial version of a CDM Design Risk Register for use on Forth Road Bridge Projects

ATKINS

Notes:
1. This Design Risk Register does not use conventional risk scoring. In its place is a requirement to determine Significant residual risk as ACOP 131-134.
2. This Risk Register should be used in conjunction with the Atkins RAG List dated November 2008.
3. The provision of the items on the Red and Amber Lists does not remove from the designer, an obligation to identify and asses hazards and risks specific to the project
4. Refer also to Guidance Worksheet

Version and date v03 27th May 2009

Project: Forth Road Bridge - Roller Shutter Joint Failsafe measures
Design Stage: Final **Revision No:** A
Completed by:
Date of this Revision: 25/06/2009

	Identification			Control			Residual Risk				
Ref.	**Structure Element and/ or Location**	**Hazardous Activity and Hazard**	**Stage Affected**	**Design Assumptions and/ or Control Measures**	**Means of Assuring Design Assumptions/ Control Measures**	**Confirmation of compliance with Means of Assurance**	**Significance of Residual Risk (as RAG List)**	**RAG List Item (R1, A6, A* etc)**	**Means of Communicating Significant Residual Risk**	**Confirmation of communication of Residual Risk**	**Commentary if required**
0	*Example - Steelwork - Box Strengthening*	*Example - working in a confined space - potential for suffocation*	*Construction*	*Example - Work inside box is necessary. But design will minimise. Box to be ventilated. Safe working procedures to be in place. Operatives to be trained.*	*Example - Design. Requirements for ventilation, procedures and training in contract.*		*Significant - Amber*	*A15*	*Example - Drg. PCI*		
1	Site - Access to carriageway required to reach joint.	Carriageway closure required	Construction	FETA have clear established procedures for installing traffic management on the bridge. Works to be undertaken during periods of low traffic flow.	Refer to FETAs own procedures			G*			
2	Site - Access to carriageway required to reach joint.	Carriageway closure required	Maintenance	FETA have clear established procedures for installing traffic management on the bridge. FETA staff will be installing traffic management and undertaking works.	Refer to FETAs own procedures			G*			
3	Site - Access required underneath deck to install measures.	Access is by existing walkways which means equipment and materials need to be carried manually.	Construction	No large / heavy equipment should be necessary underneath the bridge. Mainly drilling equipment. Materials are small light components that can be easily carried.	Small components designed. Also refer to FETAs own procedures.			G*			
4	Site - Access required underneath deck to inspect / monitor measures	Access is by existing walkways which means equipment and materials need to be carried manually.	Maintenance	No large / heavy equipment should be necessary underneath the bridge for inspection.	Refer to FETAs own procedures			G*			
5	Site - Deliveries of materials and equipment.	No space on site for storage.	Construction	Materials and equipment can be delivered to permanent site compound and transported to the bridge using FETA vehicles as required. FETA staff will be undertaking works.	Refer to FETAs own procedures			G*			
6	Site - Use of existing footway for parking site vehicles.	Risk of conflict between members of public and site vehicles.	Construction	FETA have established procedures for vehicles using the footway which should be followed. FETA staff will be undertaking works.	Refer to FETAs own procedures			G*			
7	Site - Working at height over water.	Risk of falling during installation works.	Construction	Works will be undertaken by FETA staff who are familiar with the environment. Walkways have handrails etc. Any gaps created where people could fall to be fenced.	Refer to FETAs own procedures		Not Significant	A*			
8	Site - Exposure to high winds.	Risk of personal being blown over or loss of equipment and materials.	Construction	Works will be undertaken by FETA staff who are familiar with the environment. Walkways have handrails etc. Weather forecasts to be checked before start of works and works postponed if adverse weather predicted.	Refer to FETAs own procedures			G*			
9	Site - Asbestos	Joints were manufactured in the 1960's when use of asbestos was common.	Construction	Original drawings have been checked and no asbestos likely. No asbestos encountered during past investigations and maintenance.	Designed out as far as possible.		Not Significant	R5			
10	Site - noise	Works will require drilling and will be close to live traffic lanes. Risk of hearing damage.	Construction	Monitor noise levels. Site staff to wear appropriate PPE if necessary.	Refer to FETAs own procedures			G*			
11	Site - drilling activities	Installation will necessitate site drilling. This is particularly hazardous as joint plates could move with the normal functioning of the joint.	Construction	Some site drilling unavoidable. Failsafe components fabricated off site. Site staff to be made aware of moving parts of joints (avoid trapping fingers etc). Works to be undertaken in low wind speeds.	Site procedures, design and specification.		Significant - Amber	A13	Drawings, Specification		
10	Steelwork protection	Application of protective coatings.	Construction	Components to be galvanised off site to avoid need for painting (new and maintenance). Components will have limited life (less than 10 years) so corrosion should not be a problem.	Specification details.		Not Significant	A2	Drawings, Specification		

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11	Future maintenance.	More frequent inspections required increasing risk to inspectors.	Maintenance	Procedures and risk assessments for inspections should be in place by FETA.	FETA to review existing procedures			G*			
12	Future replacement of joints	Joint programmed to be replaced in 2016. Effect of failsafe measures of removal of joint.	Demolition	Failsafe measures can be unbolted / disconnected relatively easily and size of components small enough for manual handling.	Design			G*			
13	Vibrations of bridge from wind and traffic.	Joints subject to constant vibration. Risk of bolts becoming loose / falling out.	Maintenance	Lock nuts and split pins specified to minimise risk. Joints are subject to frequent inspections.	Specification details.			G*			
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