

		Inspection and Test Plan - Template - AU			Doc ID: FH-927-QU-ITP006	
					Rev: 0	
Client: Australia Pacific Airports Melbourne			Contract No: CP1024		Prepared By: J.Kremers	
Project: Runway 09/27 Overlay				Reviewed By:		Date:
Construction Process: Asphalt Production				Approved By:		Date:
Specifications: Standard Specification for Airside Works (Rev0.1)						
Structure / Component: Pavements						

Lot No:	Lot Details:	Lot size/Quantity:	Date:
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		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			Client	Fulton Hogan	GHD	Date
1	Paving Plant, Tools and Equipment											
1.1	Minimum Requirements	Each Lot	The plant must be calibrated by the Contractor prior to the commencement of production trials in accordance with Clause 5112(i) and the calibration checked and reliably maintained throughout the entire production for the Works.	Volume 1: Clause 5112 (a)	Verify	This ITP signed by Contractor	IP	Construction Manager				
1.2	Bitumen Usage	Each Lot	Submission of results of verification testing of asphalt mixing plant devices against direct measuring of bitumen tank with mix/trial mix test results	Volume 1: HP 5112-1	Submission	Bitumen Usage Record	HP	Quality Engineer				
2	Storage and Handling of Aggregates, Added Filler and Bituminous materials											
2.1	Storage and Handling of Aggregates	Each Lot	Aggregates must be tested for compliance and compliance confirmed before delivery on site. The aggregates must be stockpiled separately at the quarry or mixing plant, stored to prevent contamination and segregation. Each size should be stored with at least 6	Volume 1: Clause 5114 (a), 5131 (a)(i)	Verify	This ITP signed by Contractor	IP	Plant Operator				

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			m of space between them or a wall to avoid mixing. Aggregates up to 10 mm must stay in free-draining stockpiles for at least 72 hours before use, with waterproof covers used during wet weather when the plant isn't operating.									
2.2	Storage of Added Filler	Each Lot	Added filler must be stored in weatherproof storage bins or silos to prevent moisture absorption and the formation of lumps.	Volume 1: Clause 5114	Verify	This ITP signed by Contractor	IP	Plant operator				
2.3	Storage and Handling of Bitumen	Each Lot	Bitumen must be stored in clean tanks and not reheated above specified temperatures or stored longer than showed in Table 5114-1. The Contractor should keep records of heating and storage; if there are not records, bitumen must be used within 24 hours of delivery. Contaminated bitumen cannot be used for asphalt.	Volume 1: Clause 5114 (c) and Table 5114-1	Verify	This ITP signed by Contractor	IP	Plant Operator				
3.0	Mix Production Requirements											

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3.1	Moisture Content of Aggregate	Each Lot	Moisture content must be determined in accordance with the requirements of Clause 5129(c).	Volume 1: Clause 5116 (b)	Verify	Moisture Test Report	TP	Quality Engineer				
3.2	Particle Size Distribution Tolerance	Each Lot	Individual samples of aggregate from stockpiles, deliveries, cold bins, or feeders must maintain consistent particle size distribution. This ensures that the overall particle size distribution of asphalt remains within specified limits defined by job requirements and production tolerances outlined in tables for coarse and fine aggregates.	Volume 1: Clause 5116 (c)	Verify	PSD Test Report	TP	Quality Engineer				
3.3	Commencement of production of asphalt in each working period	Not less than 48 hours prior to the commencement of a work period	Submission of production plan which must demonstrate that the hot storage capacity and the production capacity of the mixing plant is capable of supplying asphalt to complete the work proposed to be undertaken within that work period on time and to make the runway suitable for aircraft operation in the event of an asphalt plant breakdown	Volume 1: HP 5116-1	Submission	Production Plan	HP	Quality Engineer				

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3.4	Mixing Temperature Requirements	Each Lot	Tolerances of bitumen temperature, temperature of aggregates and Asphalt temperature when introduced into the mix are shown in Clause 5116 (f)	Volume 1: Clause 5116 (f)	Verify	Asphalt Production Records	IP	Quality Engineer				
3.5	Mixing Efficiency	Each Lot	For asphalt production, hot aggregate, filler, and bitumen must be mixed until particles are at least 97% coated, ensuring a homogeneous mixture per ASTM D2489.	Volume 1: Clause 5116 (g)	Verify	This ITP Signed	IP	Plant Operator				
3.6	Mixing Times	Each Lot	Mixing time for asphalt should balance efficiency and prevent bitumen hardening. Dry mixing must last at least 10 seconds, while wet mixing should include bitumen addition (max 10 seconds) and ensure complete coating of all particles.	Volume 1: Clause 5116 (h)	Verify	This ITP Signed	IP	Plant Operator				
3.7	Production Tolerances	Each Lot	All asphalt produced in accordance with the 'job mix' must comply with the properties specified in Tables 5116-4, 5116-5, 5116-6, & 5116-7	Volume 1: Clause 5116 (j)	Verify	Asphalt Mix Test Report	TP	Quality Engineer				

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3.8	Non-Conformed Production of Asphalt	As required	If during the progress of the Works asphalt produced, with an aggregate particle size distribution and bitumen content within the tolerances specified in Table 5116-7, a non-conformance report and proposed disposition must be recorded and submitted	Volume 1: HP 5116-2 and Table 5116-7	Notification	NCR	HP	Quality Engineer				
3.9	Non-Conforming Material	As required	Asphalt that is overheated, inadequately mixed, contains moisture, or does not meet specifications is deemed nonconforming and must be removed from the site.	Volume 1: Clause 5116 (k)	Verify	This ITP signed by Contractor	TP	Quality Engineer				
4.0	Quality Assurance – Production											
4.1	Sampling and Testing – Coarse Aggregates and Fine Aggregates	Not less than 5 days prior the use of the aggregate in production of asphalt	<p>The minimum frequency of sampling and testing for each coarse aggregate fraction must comply with the requirements of Table 5131-1.</p> <p>The minimum frequency of sampling and testing for each fine aggregate fraction must comply with the requirements of Table 5131-2.</p>	Volume 1: HP 5131-1	Submission	Aggregate Test Reports	HP/ TP	Quality Engineer				

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4.2	Added Filler	Not later than 24 hours after each delivery	A test certificate confirming that the hydrated lime meets 5106 must be included with each delivery to the asphalt mixing plant. This certificate, along with the delivery docket, must be submitted to the Contract Administrator	Volume 1: Clause 5131 (b)	Submission	Added filler Certificate and docket	IP	Quality Engineer				
4.3	Bitumen Test Certificates	Not later than 24 hours after each delivery.	Each delivery of bitumen to the asphalt mixing plant must include a test certificate verifying compliance with specifications and corresponding to the delivered lot. The delivery docket, detailing quantity and delivery time, must be submitted to the Contract Administrator, along with a testing certificate for each new batch.	Volume 1: Clause 5131 (e)(i)	Submission	Bitumen Certificate and docket	IP	Quality Engineer				
4.4	Sampling of bitumen from delivery vehicle at mixing plant	24 hours prior	<p>Notice (24 hours prior) of time of bitumen delivery to mixing plant and taking of bitumen samples.</p> <p>Samples must be at least two (2) litres in sealed, 6ubmitte airtight steel cans with removable tops. They should be traceable to supplier records and handed to the Contract</p>	Volume 1: WP 5131-1 and Clause 5131 (e)(ii)	Notificatio	This ITP signed by Contractor	WP	Quality Engineer				

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			Administrator immediately after sampling.									
4.5	Non-Conforming Bitumen	As required	If the test results indicate that the bitumen in the tank does not comply with the requirements of the Specification, the bitumen represented by the sample tested must be deemed to be non-conforming and must not be used to manufacture asphalt for the Works. A non-conformance report must be recorded and submitted immediately	Volume 1: HP 5131-3	Submission	NCR / This ITP signed by Contract Administrator	HP	Quality Engineer				
4.6	Bitumen Emulsion and propriety products – Test Certificates	Not later than 24 hours after each delivery	Each bitumen emulsion delivery must include a compliance test certificate and a delivery docket detailing the quantity, time, and date, both submitted to the Contract Administrator.	Volume 1: Clause 5131 (d)(i)	Submission	Bitumen Emulsion Certificate and docket	IP	Quality Engineer				
4.7	Asphalt Production – Sampling & Testing	Each Lot	The number of samples and sets of tests on each nominal size of asphalt produced in the work period must not be less than that specified in Table 5131-4	Volume 1: Clause 5131 (e) (ii)	Verify	Test Report	TP	Quality Engineer				

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4.8	Daily Bitumen Usage	Each Lot	During each work period, the quantity of bitumen used in each production run for each nominal size of asphalt mix must be accurately recorded by dipping the bitumen storage tank or by recording the plant digital read-outs before and after each production run. The recorder bitumen usage must be included in the lot submission.	Volume 1: Clause 5131 (e)(iii)	Verify	Asphalt Production Records	IP	Quality Engineer				
4.9	Mass of Asphalt	Each Lot	The mass of each nominal size of asphalt mix produced in each work period must be determined, recorded and included in the lot submissions.	Volume 1: Clause 5131 (e)(iv)	Verify	Asphalt Production Records	IP	Quality Engineer				
4.10	Supplementary Bitumen Content Determination	Each Lot	Calculate and report the average bitumen content for each nominal size of asphalt based on the total bitumen used and asphalt mass produced, and include it in the lot submissions.	Volume 1: Clause 5131 (e)(v)	Verify	Asphalt Production Records	IP	Quality Engineer				
4.11	Bitumen Temperature Recording	Each Lot	The temperature of the bitumen in the storage tank must be recorded at the time of taking every bitumen volumetric reading and at intervals of not less than once every work period.	Volume 1: Clause 5131 (e)(vi)	Verify	This ITP Signed	IP	Quality Engineer				


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4.12	Asphalt moisture content	Each Lot	Asphalt moisture content must be determined at least once per lot when approximately 50% of the asphalt for the planned shift has been manufactured.	Volume 1: Clause 5131 (e)(vii)	Verify	Asphalt Production Records	IP	Quality Engineer				

Final Inspection The signature below verifies that this ITP has been completed in accordance with the Fulton Hogan's Quality system Procedures and verifies lot compliance with specifications.			
Print Name:	Position:	Signature:	Date: / /
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Legend:

HP	Hold Point	Work shall not proceed past the HP until released by the Superintendent	IP	Inspection point	Formal Inspection to be done and recorded
HP*	Fulton Hogan Hold Point	Work shall not proceed past the HP* until released by Fulton Hogan	TP	Test Point	Product compliance test to be undertaken and recorded/reported
WP	Witness Point	An inspection which must be witnessed by the Superintendent	SCP	Survey conformance point	A qualified surveyor to check product/section/structure and report

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AP	Approval Point	Written or verbal approval given by the Superintendent	
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Notes	
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