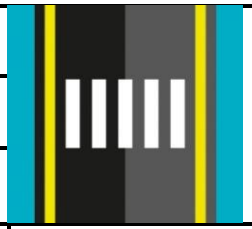
Downer Relationships creating success	**SURFACING RENEWALS INSPECTION AND TEST PLAN – Thin Asphalt Paving**						Doc No:	670586 ITP v1.1		
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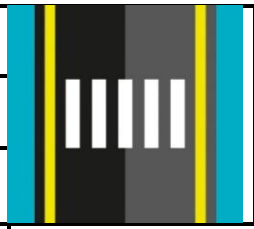
						Type	Assessor	Description		
1	**Preliminary and General**									
1.1	Construction Programme Completion	Confirmation	Best Practice Contract Specific MMP	Before work commences	Construction Completion will be the lesser of the completion date according to the pavement classificaiton risk profile (documented in the contract specific MMP) or the contract completion date.	W			Renewals Manager	
1.2	Approved RQP	Confirmation	Contract Specification	Before work commences	Principal Acceptance according to guidelines in appendix 6.3	H		Hold point - No physical work is to be commenced on site until notification has been sent no later than 24 hours of establishing on site. NZTA to approve	Renewals Manager	
1.3	Traffic Management TMP	Visual check	CoPTTM	Before traffic management set up	TMP checked and approved Plans approved Current EED (if applicable)	H		Hold point - No traffic management is to be set up until TMP has been checked and approved	Paving Supervisor	
1.4	Mix Design Verification for all mixes Check Laydown Trials are complete and compliant	Confirmation	NZTA M/10, P/11, P23	Before planning commences	Mix Design compliant, current and relevant. Batching plant production capability is confirmed	H		Hold point - No planning of on-site works shall commenced until the mix design is verified.	Paving Supervisor	
1.5	Notification of intention to start work	Notification		Before work commences	Letter drop to local residents. Greater consultation where required	H		Hold point - No physical work is to be commenced on site until notification has been sent no later than 24 hours of establishing on site.	Paving Supervisor	
1.6	Works Extents	Confirmation	Site Visit	Before work commences	Renewals Manager and/or Client to agree extents of project	H		Hold point - Walk over site with Renewals Engineer and/or Renewals Manager and/or NZTA	Paving Supervisor	
1.7	Pavement Marking Records	Measurment Data	Site Measure or Video Viewer	Before work commences	Measure existing markings to aid reinstatement	H		Hold point - No physical work is to be commenced on site until notification has been sent no later than 24 hours of establishing on site.	Paving Supervisor	

Downer Relationships creating success	**SURFACING RENEWALS INSPECTION AND TEST PLAN – Thin Asphalt Paving**		Doc No:	670586 ITP v1.1	
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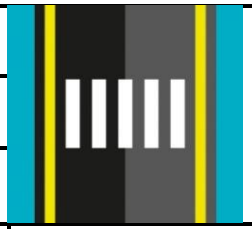
2	**Milling and Preparation**										
2.1	Services (includes Traffic Count Loops and Traffic Signal Detector Loops)		Visual plan BeforeUDig Cable locate (electronic or pothole for line & depth)	NZAUAG Guide to Working on the Road	Before work commences	Zero service strikes	H		Hold point - No excavation/milling is to be commenced until services are located and accounted for	Paving Supervisor	
2.2	Stormwater Management		Visual check	On Site	Before work commences	Mudtanks bunded or filtered to prevent mix from dropping in or runoff entering	H		Hold point - No work to be commenced until protections in place	Paving Supervisor	
2.3	Traffic Management	Setup	Visual check	Traffic Management Plan	Before work commences each day	Traffic management complies with TMP	H		Hold point - No physical works are to be commenced until necessary traffic management is in place	Site Foreperson	
2.4	Milling Depths		Measurement	On Site	Measure each side of milling machine cut	Every 10m. Depth matches target	H		Milling String Sheets or photos of depths taken and uploaded to CONQA	Site Foreperson / QA	
2.5	Service Covers Preparation		Visual	On site measurements & photos	All Covers	Hand excavation around ironwork and adjustment to desired level (if required)	H			Site Foreperson	
2.6	Additional Surfacing Preparation - Side Roads - Accesses - Driveways - Dish Channels - High Shoulders		Visual Check	Per Design	Before Membraning and Paving	Have all areas of additional surfacing on the design been prepared, membraned and marked for paving?	H		Hold Point – All areas planned for AC are prepared ready for surfacing layer	Site Foreperson	
2.7	Milling Surface inspection / walkover		Visual Check, proof roll with loaded truck to check deflections	On site measurements & photos	Prior to surfacing	Renewals Manager and NZTA invited to inspect milled surface and agree if any additional overmilling is required	H		Hold point - Inspection and agreement by NZTA	Paving Supervisor / Paving Manager	
2.8	Over-Milling		Measurement	On site measurements & photos	Prior to pre-level	Renewals Manager and NZTA invited to inspect milled surface and agree need and extent of over-milling and infill.	H			Paving Supervisor	
2.9	Pre-Level		Measurement	On site measurements & photos	Prior to surfacing	Renewals Manager and NZTA invited to inspect milled surface and agree pre-level extents	H		Hold point - Inspection and agreement by NZTA	Paving Supervisor / Paving Manager	

Downer Relationships creating success	**SURFACING RENEWALS INSPECTION AND TEST PLAN – Thin Asphalt Paving**		Doc No:	670586 ITP v1.1	
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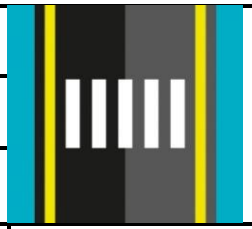
3	**Paving Wearing Course**										
3.1	Production Properties	PSD (Particle Size Distribution)	Sieve analysis of fine and coarse aggregates and material finer than 75µm by washing	ASTM C136-06 / C 117-14	1 per 200t or maximum of 3 per production lot	Job Mix Formula and NZTA M/10 Table 5.3 tolerances	W		IANZ Lab Reports. Becomes a Hold Point for future paving if there is non-comformance	Paving Supervisor	
		Binder Content	Quantitiive Extraction of Bitumen from Bituminous Paving Mixtures by Bowl Centrifuge Method	B19 Issue 6 - 2009							
		Maximum Specific Gravity	Theoretical Maximum Specific Gravity & Density of Bituminous Paving Mixtures	ASTM D2041/D2041M - 2011		Per Mix design					
3.2	Preparation		Visual	NZTA M/10	Prior to Shift	Paving plan to be completed for every shift, with dimensions	W		Paving Plan and Crew Briefing Plan completed prior	Paving Supervisor	
3.3	Joins		Visual	NZTA M/10	Prior to Shift	Joins are outside of trafficked wheel paths where possible.	W			Paving Supervisor	
3.4	Membrane Sealing		Visual	NZTA M/10	Prior to Paving	Membrane seal meets design and extent. Sealing Docket record kept	H		Hold Point - No paving until Membrane Done. Ensure correct application of chip & emulsion	Paving Supervisor	
3.5	Mix Inconsistency and Deficiency		Visual	NZTA M/10	Continuous	Visually check asphalt surface during paving for areas of segregation	H			Site Foreperson	

Downer Relationships creating success	**SURFACING RENEWALS INSPECTION AND TEST PLAN – Thin Asphalt Paving**		Doc No:	670586 ITP v1.1	
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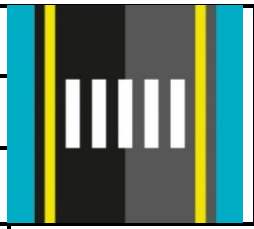
3.6	Load Locate	Measurement		Every Load	Each load can be indentified to a location using a diagram. Record includes: - Truck ID/Rego/Driver - Depart Plant Time - Arrive Site Time - AC Temp on Arrival - Ground Temp on Arrival - Tonnage - Run Width - Estimated Run Length - Calculated Area - Calculated Average Depth	W		Per standard practice	Quality Assurance Technician.	
3.7	Laying Temperature	Confirmation	NZTA M/10	Every Load	Based on Mix design	H		Hold point - Reject mix for non-compliant temperatures.	Quality Assurance Technician	
3.8	Compaction	PQI Non-Nuclear Gauge/Cores. Or Non Distrctive Method Testing.	NZTA M/10	As per Agreed on Contract.	Mat: Air voids JMF +3,-2 Join: Air voids JMF +5,-2	W		PQI / Core recorded with RP, lane, offset, date, air voids. Core results received within 2 weeks.	Quality Assurance Technician / Paving Manager	
3.9	Roughness	Visual	On Site	Post Construction	Agreement with WK as per M10	H		Site walkover with client to determine ability to comply with straight edge measurement outlined in M10	Paving Supervisor	

Downer Relationships creating success	**SURFACING RENEWALS INSPECTION AND TEST PLAN – Thin Asphalt Paving**						Doc No:	670586 ITP v1.1		
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4	**Site Reinstatement / Clearance**										
4.1	Shoulder Reinstatement (where no K&C)		Measurement/Visual	On Site	All low shoulder created by paving edge	Shoulders reinstated to between 1:4 and 1:6	H		Low shoulder created by rural paving is corrected using AP20/40 or DG Mix. Not relevant in kerb and channel scenario. Hold Point - Site TTM/TSL should not be removed until these hazards possible are attended to.	Paving Supervisor	
4.2	Post-seal Area Check		Measurement	On Site tape-measure	After Surfacing	Check sealed area meets design	W		Notify Renewals Engineer or Renewals Manager	Paving Supervisor	
4.3	Service Covers		Measurement/Visual	On Site	After Surfacing	All service covers are checked and adjusted (if necessary) to finished level (+10mm, -0mm)	W			Paving Supervisor	
4.4	Joint Sealing		Visual	On Site	After Surfacing	Check cold joints are bandage sealed	W			Paving Supervisor	
4.5	Road Marking		MOTSAM	Visual inspection	All markings	Replaced in same position, or per design	H		Hold point – Site TTM cannot be removed until markings reinstated	Paving Supervisor	
4.6	Other Traffic Services	Marker pegs/ Signs/Markings/RRPMs Replaced	TNZ C/20: 2003	Visual inspection	All signs/markers	Replaced in same position, height etc	H		Hold point – Site TTM cannot be removed until marker pegs, signs, markings and RRPMs reinstated	Paving Supervisor	
4.7	Stormwater Management Controls removed		Visual check		All installed measures	Installed controls are removed	H			Paving Supervisor	
4.8	Traffic Management Removed		Visual check		When safe, after all physical works completed	All traffic management removed from site safely	W			Paving Supervisor	
4.9	Site left clean & tidy		Visual check		After vacating site	• Stockpiles removed • Plant removed • Litter cleared from site	W		Invite NZTA to carry out joint site inspection to inspect site.	Paving Supervisor	
5	**As Built Records**										
5.1	Collect asset data		SHDOM (SM050)		During construction	All relevant as built information collected.	W			Paving Supervisor	

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5.2	Enter asset data into RAMM and/or register(s)	SHDOM (SM050)	RAMM	At completion of work.	All data entered into RAMM and/or register(s). Design Report & Drawings attached to RAMM site record as a media file.	W		Data entered by 20th of follow month after month of completion	Asset Information Manager	
5.3	Construction Completion Report	Confirmation	Contract Specification	At completion of work.	Checked and approved	W		Completed within two months after Paving Wearing Course	Renewals Engineer/ Renewals Manager	

Quality Assurance Close Out by: _____ Date: _____
(name)

_____
(signature)

This record to contract file.