

PERFORMANCE TEST PLAN

Website Redevelopment Product Catalogue

Manchester Technology — manchestertech.ae

DEPARTMENT: WORDPRESS

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1 Scope & Objectives

This performance test plan applies to the redeveloped Manchester Technology website, www.manchestertech.ae, delivered on WordPress 6.4.x. The plan covers all public-facing templates and key user flows that support product discovery, lead generation, and online checkout. Testing will focus on the templates and page types most critical to business objectives, with priority given to revenue-generating and lead capture pages.

1.1 Templates and Page Types Under Test

The following templates and page types are included in the performance test scope: Home, Products (searchable catalogue), Individual Product Pages, Solutions, Case Studies, News & Events, Contact, and Google Ads landing pages. Each template will be tested for page load speed, mobile responsiveness, and business-critical functionality as defined in the Statement of Work.

PAGE TYPE	EXAMPLE URL	BUSINESS IMPORTANCE
Home	/	Primary entry point; brand and campaign landing
Products Catalogue	/products/	Revenue driver; product discovery and filtering
Individual Product Page	/products/epson-ecotank/	Lead capture and checkout; highest conversion priority
Solutions	/solutions/	Supports lead generation and product education
Case Studies	/case-studies/	Builds trust and supports sales process
News & Events	/news-events/	SEO and customer engagement
Contact	/contact/	Lead capture; direct customer enquiries
Google Ads Landing Page	/landing/printers-uae/	Paid campaign conversion; revenue impact

All URLs are examples and will be confirmed at go-live.

1.2 Performance Targets and Success Measures

Performance testing will validate that all key templates meet the success criteria defined in the approved Statement of Work. The primary target is a Largest Contentful Paint (LCP) of under 2.5 seconds on mobile devices for all key templates, as measured by Google PageSpeed Insights. Each page must achieve a PageSpeed Insights score of 85 or higher on both desktop and mobile.

- Home, Products Catalogue, and Individual Product Pages are prioritised for performance due to their direct impact on revenue and lead generation.
- All templates must be fully mobile responsive and meet the LCP and PageSpeed targets at go-live.

- Performance tests will be conducted on the production environment prior to launch, following migration to the new hosting provider.

1.3 Out of Scope

Templates or features not explicitly listed in the Statement of Work, including any new pages or integrations not approved through formal change control, are excluded from this performance test plan. Native mobile applications and ongoing SEO or campaign management are also out of scope.

2 Metrics & Thresholds

Performance testing for the Manchester Technology website redevelopment will use quantitative metrics to verify that the delivered site meets the speed, responsiveness, and stability requirements defined in the Statement of Work. These metrics are selected to reflect both user experience and technical performance, supporting the business objectives of improved lead generation, SEO, and paid campaign readiness.

2.1 Performance Metrics Table

Metric	What it Measures	Target	Failure Threshold
Largest Contentful Paint (LCP)	Time to render the largest visible element on the page	Under 2.5 seconds	Over 3.0 seconds
Interaction to Next Paint (INP)	Time from user interaction to next visual update	Under 200 milliseconds	Over 300 milliseconds
Cumulative Layout Shift (CLS)	Visual stability during page load (layout shifts)	Under 0.10	Over 0.25
Time to First Byte (TTFB)	Time from request to first byte received from server	Under 500 milliseconds	Over 800 milliseconds
Total Page Weight	Total size of all resources loaded for a page	Under 2.0 MB	Over 2.5 MB

All metrics apply to Home, Products, and key landing pages on both desktop and mobile.

2.2 Metric Explanations

- Largest Contentful Paint (LCP) measures how quickly the main content of a page becomes visible to the user.
- Interaction to Next Paint (INP) measures how fast the site responds visually after a user interacts with it, such as clicking a button or link.
- Cumulative Layout Shift (CLS) measures how much the page layout moves unexpectedly during load, affecting visual stability.
- Time to First Byte (TTFB) measures how quickly the server responds to a browser request, indicating backend and hosting performance.
- Total Page Weight measures the combined size of all files loaded for a page, including images, scripts, and stylesheets.

2.3 Business Rationale for Metrics

Meeting these performance targets is critical for Manchester Technology’s business goals. Fast load times and responsive interactions reduce bounce rates, improve SEO rankings, and support effective Google Ads campaigns. Stable layouts and optimized page weight ensure a professional user experience, which is essential for lead generation and conversion in a B2B context.

2.4 Applicability and Scope

Performance metrics will be measured on the Home page, Products page, and all Google Ads landing pages, on both desktop and mobile devices. Testing will use Google PageSpeed Insights and WebPageTest, with results compared against the targets and thresholds defined above.

2.5 Remediation and Retest

Any page failing to meet the target for a given metric will be remediated through code optimization, image compression, or server configuration changes. Pages exceeding the failure threshold will be considered non-compliant and must be retested after corrective action until all targets are met.

3 Performance Budgets

The Manchester Technology website redevelopment project includes specific, measurable performance budgets to ensure the new WordPress site meets business and technical objectives. These budgets are based on requirements defined in the signed Statement of Work and are enforceable at build time. All budgets apply to the production environment at go-live and will be verified using industry-standard tools and methods.

3.1 Performance Budget Table

RESOURCE TYPE	BUDGET	CURRENT BASELINE
Mobile LCP (Largest Contentful Paint)	Under 2.5 seconds on key templates (Home, Products, Product Detail)	Not currently measured
Google PageSpeed Insights Score	85 or higher on desktop and mobile for all public pages	Below 85 on most pages
Total Page Weight (Home, Product Detail)	Under 2 MB per page, including images, scripts, and stylesheets	Exceeds 2 MB on several pages
Image Size (Individual)	No image over 300 KB; all images compressed and served in next-gen formats	Images up to 1.2 MB, not optimized
Time to Interactive (TTI)	Under 3 seconds on key templates	Not currently measured
Third-Party Scripts	No more than 2 third-party scripts loaded per page, excluding required analytics and WhatsApp	Multiple scripts loaded, not tracked
Enquiry Form Submission Time	Under 1.5 seconds from submit to confirmation	Not currently measured

Performance budgets are set for key metrics and resources. Baselines are based on the current site or are not measured where data is unavailable.

3.2 Enforceability and Verification

Performance budgets will be enforced during development using Google PageSpeed Insights, WebPageTest, and browser developer tools. Each budgeted metric will be tested on the staging and production environments prior to go-live. Any page or resource that exceeds the defined budget will be flagged for remediation before launch.

3.3 Remediation Process for Budget Exceedance

If a performance budget is exceeded, the delivery team will identify the root cause and implement corrective actions. This may include image re-compression, code optimization, plugin reduction, or removal of non-essential scripts. No page or feature will be approved for production deployment until all performance budgets are met.

3.4 Ownership and Responsibility

The KrishaWeb technical lead is responsible for monitoring and enforcing performance budgets throughout the build. The project manager will report any budget exceedance to the client and coordinate remediation activities. Final sign-off on performance compliance is required from both KrishaWeb and Manchester Technology prior to go-live.

3.5 Ongoing Monitoring Post-Launch

After launch, performance metrics will be monitored for 30 days using Google Analytics and PageSpeed Insights. Any degradation below the agreed budgets during this period will trigger a review and, if necessary, corrective action by the delivery team at no additional cost to the client.

3.6 Out-of-Scope and Assumptions

Budgets apply only to the scope and templates defined in the Statement of Work. No performance guarantees are made for third-party content, future client modifications, or hosting environments not specified at project start. Any changes to performance budgets after go-live will require a formal change request and mutual agreement.

4 Tools & Test Procedure

Performance testing for the Manchester Technology website redevelopment will use a combination of laboratory and field measurement tools to verify compliance with the SOW's speed and optimization requirements. Tests will be conducted on the production environment prior to go-live, using the latest stable versions of all tools. Both synthetic (lab) and real-user (field) data will be collected to ensure the site meets the specified targets for page load speed and user experience.

4.1 Performance Testing Tools

TOOL	PURPOSE	CONFIGURATION
Google Lighthouse	Lab-based performance audit for web pages, including LCP, TTI, and best practices.	Chrome 124, emulated Moto G4, 4G throttling, 3 test runs per page.
Google PageSpeed Insights	Lab and field data reporting for key performance metrics.	Mobile and desktop modes, 3 test runs per page, Chrome UX Report field data enabled.
WebPageTest	Detailed synthetic testing with advanced network and device emulation.	Test location: Dubai, Device: Moto G4, Network: 4G, 3 test runs, repeat view enabled.
Chrome UX Report (CrUX)	Aggregated field data from real Chrome users for LCP and other metrics.	Latest available 28-day dataset, mobile and desktop segments.

All tools will be used in their latest stable release at the time of testing.

4.2 Test Procedure

1. Select the target page (Home, Products, individual Product, and Contact) for testing.
2. Clear browser cache and ensure no background processes are running on the test device.
3. Run Google Lighthouse in Chrome 124 using emulated Moto G4 and 4G throttling. Repeat three times and record all results.
4. Run Google PageSpeed Insights for both mobile and desktop modes. Repeat three times per mode and record both lab and field data.
5. Run WebPageTest from the Dubai test location, using Moto G4 emulation and 4G network profile. Enable repeat view and run three tests per page.
6. Retrieve the latest Chrome UX Report (CrUX) data for the tested URLs, capturing both mobile and desktop segments.
7. Aggregate results for each tool, noting the median value for each metric (LCP, TTI, CLS, FCP, etc.).
8. Compare lab results (Lighthouse, WebPageTest, PageSpeed Insights lab) with field data (CrUX, PageSpeed Insights field) to identify discrepancies.
9. Document all configuration details, run counts, and observed results for traceability.

4.3 Device and Network Settings

All lab-based tests will use device emulation for Moto G4 (Android 7.0, 2GB RAM, 720p display) and a throttled 4G network profile (4 Mbps down, 1.5 Mbps up, 150 ms RTT). Desktop tests will use Chrome's default desktop

emulation with no additional throttling unless specified. These settings are chosen to reflect typical user conditions in the UAE business context.

4.4 Run Count and Result Aggregation

Each test will be executed three times per tool and per page. The median value for each metric will be used for reporting and acceptance. Outliers will be noted but not included in the primary result set unless consistent anomalies are observed.

4.5 Lab and Field Data Distinction

Lab data (from Lighthouse, WebPageTest, and PageSpeed Insights lab) is generated in a controlled environment and may not reflect real-world user conditions. Field data (from Chrome UX Report and PageSpeed Insights field) is collected from actual users over a 28-day period and captures the impact of diverse devices, networks, and geographies. Both types of data are collected to provide a comprehensive view of site performance and to ensure compliance with the SOW's requirements for both synthetic and real-user experience.

5 Load & Backend Testing

The Manchester Technology website redevelopment project requires validation of backend and load performance to ensure the new WordPress implementation meets business and technical requirements. The following scenarios are designed to verify that the site can handle expected usage patterns, support lead generation, and maintain acceptable response times under load. No historical traffic data was provided by the client. The baseline user load and test parameters below are proposed for confirmation by Manchester Technology prior to execution.

5.1 Load Test Scenarios

SCENARIO	CONCURRENT USERS	DURATION (MINUTES)	PASS CRITERIA
Homepage load under typical business hours	10	30	Average page load time under 2.5 seconds; no errors; server CPU below 70%
Simultaneous product catalogue search and filter	8	20	Search/filter results returned in under 2 seconds; no timeouts or errors
Concurrent product enquiry form submissions	5	15	All forms submitted successfully; confirmation received within 3 seconds
Checkout/payment process for enabled products	3	10	All transactions complete without error; payment gateway responds within 4 seconds
Admin content update during peak user load	2 admins + 10 users	15	No admin errors; public site remains responsive; changes reflected within 1 minute
Bulk image upload and optimization	1 admin	10	All images processed and displayed correctly; no upload failures

All scenarios are based on a proposed baseline due to lack of client-supplied traffic data. To be confirmed by Manchester Technology.

5.2 Backend API and Integration Testing

- Verify Google Analytics and Search Console integrations (FR-IN-01, FR-IN-02) under load to ensure data is captured without loss or delay.
- Test WhatsApp click-to-chat widget (FR-IN-03) for responsiveness and uptime during simulated peak usage.
- Validate WooCommerce checkout API (if enabled) for transaction reliability and error handling (FR-EC-03).

5.3 Database Performance and Data Integrity

- Monitor database query response times during catalogue search, product page loads, and form submissions (FR-SE-01, FR-SE-03, FR-BK-01).

- Check for data consistency and integrity after concurrent admin and user operations, including product updates and lead capture (FR-CM-07, FR-CM-08).
- Review database error logs for failed queries or deadlocks during load tests.

5.4 Caching and Page Speed Validation

- Confirm full-page and object caching is effective under load (FR-CM-03).
- Measure cache hit/miss ratios and verify cache invalidation on content updates.
- Validate that image optimization plugins process uploads without delay or quality loss.

5.5 Error Handling and Recovery

- Simulate backend failures (e.g., database restart, plugin crash) and verify site recovers without data loss or prolonged downtime (FR-AD-02, FR-AD-03).
- Check that user-facing error messages are clear and do not expose sensitive information.
- Test automated backup and restore procedures during and after load scenarios.

5.6 Reporting and Acceptance

- Document all test results, including response times, error rates, and resource utilization for each scenario.
- Identify any bottlenecks or failures and retest after remediation.
- Final acceptance is subject to meeting all pass criteria and client confirmation of baseline parameters.

6 Results & Diagnosis

This section records the performance test results for the Manchester Technology website redevelopment project, manchestertech.ae. It provides a framework for documenting key page load metrics and diagnosing common performance issues identified during testing. Results will be populated after test execution and analysis.

6.1 Performance Test Results

PAGE	METRIC	RESULT	STATUS
Home	Largest Contentful Paint (LCP)		
Product Catalogue	Largest Contentful Paint (LCP)		
Individual Product Page	Largest Contentful Paint (LCP)		
News & Events	Largest Contentful Paint (LCP)		
Case Studies	Largest Contentful Paint (LCP)		
Contact	Largest Contentful Paint (LCP)		

Performance test results to be completed post-testing.

6.2 Common Performance Failures and Causes

FAILURE	USUAL CAUSE
Slow page load times	Unoptimized images, excessive plugin use, or inefficient code
High bounce rates	Poor mobile responsiveness or slow loading content
Low Google PageSpeed Insights score	Lack of caching, large uncompressed images, or render-blocking scripts
Lead capture forms not submitting	Form configuration errors or server-side validation issues
Checkout process delays	Payment gateway integration issues or server performance bottlenecks
Migration downtime exceeding limits	Incomplete data transfer or DNS propagation delays

Common performance issues and their typical causes.

Signing this document confirms that the results and diagnosis framework for performance testing has been reviewed and agreed upon by both parties.

KrishWeb — Project Manager

SIGNATURE

NAME & DATE

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**Manchester Technology —
Project Sponsor**

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