



BUILDING PRODUCT QUALITY PLAN

HYDROPAVER® Range of Permeable Pavers.

Covers CodeMark(s) BCS #1788

Jagas Paving Limited

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HOWICK Auckland NZ
www.jagas.co.nz

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ON SITE CHECKLIST for JAGAS PAVING LIMITED APPLICATORS

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Policy

Jagas Paving Limited manufacture the finest quality materials / products for the New Zealand market ensuring quality of these products are suited to their intended use.

Jagas Paving Limited will provide materials / product to our distributors & installers under this Building Product Quality Plan.

Introduction

Jagas Paving Limited was formed in March, 2005 and began distributing the HYDROPAVER™ product in 2015 when an opportunity was seen to meet the demand for an alternative solution to permeability problems on building and open spaces projects; and for a product that which when viewed from a lifetime cost perspective would be competitively priced.

In 2015 we decided that the HYDROPAVER™ product needed to have an appraisal from a suitably experienced testing house and we asked the Building Element Assessment Laboratory (BEAL) to carry out an appraisal of our products. The appraisal would demonstrate to councils, clients and our distributors that the materials / products covered by the appraisal when installed according to our technical manual, would comply with the relevant clauses of the New Zealand Building Code.

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Reference Documents

1. Building Act 2004 and amendments
2. Building Regulations & Building Code
3. Compliance documents supplied by the Ministry of Building Innovation and Employment
4. BEAL's Standard for a Building Product Quality Plan
5. Suppliers' Technical Literature or documents
6. Technical information supplied by Jagas Paving Limited
7. Trade literature supplied by Jagas Paving Limited
8. Jagas Paving Limited's Products Installer Training Manual(s)
9. BEAL Appraisal document: BTS1565

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PRODUCTS covered by this BPQP

	Product Name	Scope of Use
1	JAGSTONE™ Ceramic Permeable Paving stones	Suited for both residential and commercial paving applications, and open space projects, where the unique properties of HYDROPAVER™ are required or desirable. Widely used for footpaths where the so many of the physical and environmental attributes can be employed.
2		

Note: Other products to be added as they are introduced to the market

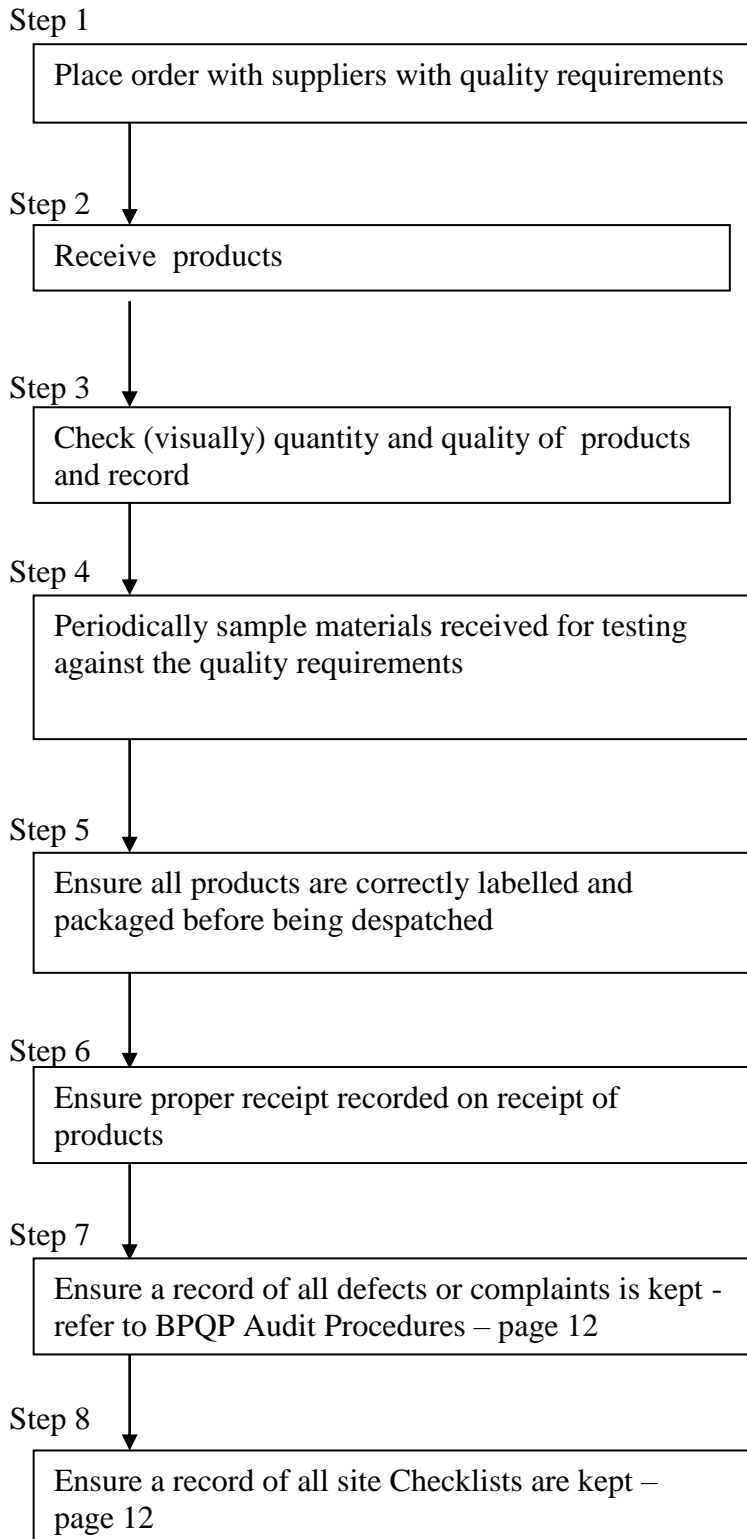
Key RISKS covered by this BPQP

Key risk issues covering supply, assembly or manufacture, distribution, and installation or application:

- Product supplied to us not meeting the relevant specification (included with our order)
- Product supplied to us not properly identified
- Product supplied to us damaged
- Our Technical Manuals not up to date and displaying the version number
- Installation drawings not up to date and displaying the version number
- Training Manual(s) not up to date and displaying the Issue number
- Check List Sheets not being properly completed / filed by the Installer
- An Internal Audit of our BPQP not being carried out on a six monthly basis
- An External Audit of our BPQP not being carried out at least once a year

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Flow Chart covering ordering to receipt to distribution to installation



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Product Components Specifications & Descriptions

Specifications of the products supplied by us:

1. For the HYDROPAVER™ permeable paver the specifications can be found in the Jagas Paving Limited HYDROPAVER™ Technical Manual;
2. The HYDROPAVER™ permeable paver is a single finished item, with no moving parts or other components, imported from the Lvdao factory in Go'An City, China.

General Description of Features and Benefits:

Jagas Paving Limited imports and distributes the HYDROPAVER™ permeable paver which is a high end, high quality, ceramic brick product available in a number of sizes and colours. Manufacture of the pavers includes the use of very high pressure (1600 tonnes) and very high temperatures (1200C). The technology employed produces a product with very useful qualities (see below).

These ceramic pavers are used both domestically and commercially, particularly where its benefits are large.

The benefits of the HYDROPAVER™ permeable paver system are;

- A proven and tried product.
- First, the ability to absorb, retain and transpire (evaporate) rainwater; and
- Secondly when the paver is saturated, the ability to transmit the rain water to the underlayment.
NOTE: Saturation point is not easily reached because of the high water retention ability of the paver.
- The ability to absorb is not confined to water. The paver also absorbs heat and sound which make it popular for footpaths.
- High strength and durability, enabling ...
- ... repeated re-use of the pavers. The pavers have an indefinitely long life and consequently a low lifetime cost
- Excellent slip resistance combined with a pleasing appearance.
- Speed of installation assists with project management.
- 15 year manufacturer's warranty.
- Low maintenance.
- Installation service available by Jagas and approved installers.

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Inspection & Testing Requirements

Inspections of Products:

Quality inspections for each shipment, is conducted on receipt from the manufacturer in China and when by the JAGAS PAVING LIMITED dispatch staff. These inspections are made against a written inspection procedure described in Appendix A.

Testing of Products:

Testing is an essential step in maintaining ongoing and continuous quality.

Samples of the products from each shipment are examined by the Production Manager. In the unlikely event of products not passing inspection, replacement product will be ordered from the supplier. Also, in this event, samples will be sent for testing by an approved laboratory.

Periodic testing of products will take place as a routine quality control measure

Random samples of the products are tested periodically by BEAL - Director to ensure compliance with the standard.

The testing is to ensure the performance requirements under our appraisal document are maintained continuously. These tests are made against a written sampling and testing procedure described in the Appendices.

Storage and Despatch / Product Recall

Storage Requirements:

- Product is stored in a the yard until truck arrives to deliver to the nominated destination.
- The dispatch freight note is filled out with customer address and products dispatched.
- A copy of the freight dispatch note goes with the product to the customer and the other copies stay in the book for end of the month charge out.
- On occasion, product will be delivered to the customer immediately following importation (bypassing the yard.) In this event the inspection (see above) will take place at the premise of the forwarding agent.

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Product Recall

Upon receiving the notice of product falling outside the specification the following action is taken:

- Place all packed product on hold, clearly marking so.
- Take samples and if possible determine why the product failed.
- Trace back with the exporter to isolate the failure.
- Ensure the exporter takes corrective action to prevent future product failure.
- Inform all staff of the action taken.
- Implement all necessary action.
- Verify that all actions taken are working.

Training of personnel:

Distributors – Distributors are to ensure all products must be installed by JAGAS PAVING LIMITED trained and approved installers if the BEAL appraisal is to apply.

Installers – All applicators are trained and approved and have completed training complying with our BPQP procedures, especially the use of the Checklists described in the Technical Manual and or in this Building Product Quality Plan.

- A Training Manual describes the training and application of these BPQP procedures.
- A record of each trained and approved applicator will be kept in the BPQP

All staff members are trained in the following areas.

1. Safe work practices
2. Product Training
3. Application of these BPQP procedures and all Checklists.

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BPQP Management & Audit Responsibilities

Management:

- The overall responsibility for ensuring that this BPQP is implemented is the Managing Director (Robert Sweet).
- The person responsible for carrying out periodic internal audits of this BPQP document and attachments is Robert Sweet
- Each ‘JAGAS PAVING LIMITED HYDROPAVER™ Approved Installer’ shall be responsible for the on-site application of this BPQP as it applies to their work and shall be responsible for having periodic reviews of their documentation and diary notes that are related to the BPQP. In addition each such installer will complete for each installation the ‘JAGAS PAVING LIMITED HYDROPAVER™ Checklist and provide photos of the various stages of the install.

Audit Requirements

- This BPQP will be reviewed **every six months** at head office by the management;
- The BPQP of each ‘JAGAS PAVING LIMITED HYDROPAVER™ Approved Installer’ will be audited at least every year by JAGAS PAVING LIMITED.
- Use will be made of the checklist at the back of the BEAL Auditing Services Ltd. Standard document.
- Records of each audit completed will be filed in the BPQP file (folder) under the tab entitled ‘JAGAS PAVING LIMITED HYDROPAVER™ AUDIT BPQP’.
- A copy of each audit record shall be forwarded to the Managing Director as soon as practical.
- Where there is a non-conformance found, a note for the reason shall be written into the checklist.
- Where the non-conformance is seen to be important (such as for a high or medium risk material) then a meeting with the relevant management people shall be held as soon as practical to:
 - a) determine the importance of the non-conformance;
 - b) determine who shall be responsible for correcting the non-conformance;
 - c) determine whether or not there needs to be a correction or addition to the BPQP documents;

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- d) write up a record of when the non-conformance was dealt with and the names of any other parties that may have been involved in achieving the corrective action. These notes should be filed in a manner that enables them to be easily found in the event that there is a repeat of the non-conformance.

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Certificate Holder Notification Responsibilities

- (a) the certificate holder notifies the product certification body in writing of any intended change to any of the following particulars:
 - (i) the name, address, or contact details of the certificate holder:
 - (ii) any address of a location where a certified product is produced or manufactured:
- (b) the certificate holder notifies the product certification body in writing of any intended change, modification, or alteration to any of the following:
 - (i) the certified building method or product:
 - (ii) the method of its production or manufacture:
 - (iii) the product quality plan prepared in respect of the certified building method or product:
 - (iv) the application or installation instructions for the certified building method or product:
 - (v) any documentation relating to the use and maintenance of the certified building method or product:
- (c) if the certificate holder has any reason to suspect that the certified building method or product does not comply with the Building Code, the certificate holder notifies the product certification body in writing of the reason for that suspicion:
- (d) if the certificate holder or the product certification body finds that a certified building method or product that has been released on the market does not comply with the Building Code, the certificate holder discloses that fact in disclosure statements published in a form that is acceptable to the product certification body and to the chief executive:
- (e) if the certificate is suspended or revoked, the certificate holder—
 - (i) notifies all customers to whom building work has been carried out.
 - (ii) immediately ceases using the certificate, the mark of conformity, and any reference to the number of the certificate.

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APPENDIX A – Checklist / Testing for HYDROPAVER™ shipments into Jagas yard or Freight Agent's yard

1. Check that shipment is in accordance with the commercial invoice for quantities, size and colour
2. Check for any visual damage to product
3. Visually check colour and general appearance against a previously passed batch of product
4. Physically test check dimensions,
5. Record check results in book
6. Samples of the pavers are tested at least once a year to ensure compliance.

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ON SITE CHECKLIST for JAGAS PAVING LIMITED APPLICATORS

DATE: _____

CONSENT # _____ (If known)

OWNER/APPLICANT: _____

ARCHITECT/DESIGNER/ENGINEER: _____

SITE/CONSENT ADDRESS: _____

NAME OF ON-SITE INSTALLER: _____

1. Soil test to determine CBR (for choice of subbase) as per JAGAS PAVING LIMITED Technical Manual YES / NO
2. Excavation to depth as per JAGAS PAVING LIMITED Technical Manual YES / NO
3. Under base selected and laid as per JAGAS PAVING LIMITED Technical Manual YES / NO
4. In ground drain installed or found unnecessary as per JAGAS PAVING LIMITED Technical Manual YES / NO
5. Correct choice and depth of bedding layer installed as per JAGAS PAVING LIMITED Technical Manual YES / NO
6. JAGSTONE™ pavers laid and levelled as per JAGAS PAVING LIMITED Technical Manual YES / NO

SIGNATURE OF ON-SITE PAVING INSTALLER: _____

SIGNATURE OF PROJECT SUPERVISOR (If Applicable): _____

COMMENTS: _____

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