



UNIVERSITI PUTRA MALAYSIA

***PERFORMANCE OF STONE MASTIC ASPHALT MIXTURES USING
DOMESTIC WASTE BIO-OIL MODIFIED BINDERS***

SADY ABD TAYH AL-ALI

FK 2018 30



**PERFORMANCE OF STONE MASTIC ASPHALT MIXTURES USING
DOMESTIC WASTE BIO-OIL MODIFIED BINDERS**

By

SADY ABD TAYH AL-ALI

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy**

November 2017

COPYRIGHT

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright© Universiti Putra Malaysia





UNIVERSITI PUTRA MALAYSIA

STATUS CONFIRMATION FOR THESIS / PROJECT REPORT AND COPYRIGHT

ACADEMIC SESSION : _____

TITLE OF THESIS / PROJECT REPORT :

PERFORMANCE OF STONE MASTIC ASPHALT MIXTURES USING DOMESTIC WASTE
BIO-OIL MODIFIED BINDERS

NAME OF STUDENT: SADY ABD TAYH AL-ALI

I acknowledge that the copyright and other intellectual property in the thesis/project report belonged to Universiti Putra Malaysia and I agree to allow this thesis/project report to be placed at the library under the following terms:

1. This thesis/project report is the property of Universiti Putra Malaysia.
2. The library of Universiti Putra Malaysia has the right to make copies for educational purposes only.
3. The library of Universiti Putra Malaysia is allowed to make copies of this thesis for academic exchange.

I declare that this thesis is classified as :

*Please tick (✓)

☐

CONFIDENTIAL

(Contain confidential information under Official Secret Act 1972).

☐

RESTRICTED

(Contains restricted information as specified by the organization/institution where research was done).

☐

OPEN ACCESS

I agree that my thesis/project report to be published as hard copy or online open access.

This thesis is submitted for :

☐

PATENT

Embargo from _____ until _____
(date) (date)

Approved by:

(Signature of Student)
New IC No/ Passport No.:

Date :

(Signature of Chairman of Supervisory Committee)
Name:

Date :

[Note : If the thesis is CONFIDENTIAL or RESTRICTED, please attach with the letter from the organization/institution with period and reasons for confidentiality or restricted.]