EPC 101

PITTWATER COUNCIL

Application for Building Certificate

Environmental Planning & Assessment Act, 1979 (as amended)
Section 149A, B, C, D

Effective from 1/7/14 till 30/6/15

Office Use – BC No: BC0077/14

Please Note: Details provided on this form and documents provided will be made public both at Councils Office and via Application Tracking on Councils website. The information will be kept by Council and will be disposed of in accordance with the Local Government Disposal Authority. You are entitled to review your personal information at any time by contacting Council.

Property Description

Number: 24 Street: NORMA.

Suburb: PALM BEACH

Lot: 392 DP: 19651

Applicant

Applicants Name: BARBARA & IAN PELLING

Postal Address: 24 NORMA RD.

Suburb: PALM BEACH. Postcode: 2108

Phone (02) 9974-5620 Daytime Contact No ( ) 0403-233167

Mobile ( ) 0403-233167 Fax (02) 9972-2888

Email: dirpelling@hotmail.com

You can apply for a building Certificate if you are:
(Please tick the appropriate box)

- ☑ I am the owner of the building
- ☐ I have the owners consent to lodge this application (see below)
- ☐ I am the purchaser under a contract for the sale of the property
- ☐ I am the owner's or purchasers solicitor or agent
- ☐ We are a public authority which has notified the owner of its intention to apply for the certificate

Signature: B. Pelling Date: 24/8/14

For access to the building please contact: Barbara Pelling.

Phone: 02-99745620. Mobile: 0403-233167. (BEST CONTACT)

ECM Document Set #: 4098359

Owners Consent

Owner/s Name/s: Barbara Pelling

Postal Address: 24 Norma Rd Palm Beach.

Suburb: Palm Beach. Postcode: 2108

Phone ( ) _____ Mobile ( ) 0403-233167

Email: drirpelling@hotmail.com

I/We consent to the lodgement of this application and permit Council authorised personnel to enter the site for the purpose of inspections:

Signature: B. Pelling

Certificate Type

☐ Whole Property

☑ Whole Building i.e: House

☐ Part Building i.e _____

☒ Pool , Fencing & Access _____

Processing Fees

Class 1 Building (together with any class 10 building on the site) or a class 10 Building		$250.00 each
Class 2 – 9 buildings Floor Area of building or part –		
(i)	Not exceeding 200 square meters	$250.00 each
(ii)	Exceeding 200 square metres but not exceeding 2000 square metres	$250.00 plus $0.50 cents per m2 over 200 m2
(iii)	Exceeding 2000 square metres	$1,165.00 plus $0.075 cents per m2 over 2000 m2
(iv)	Fee for additional inspection	$90.00
In the case of any unapproved structures or works ($250.00 certificate fee plus $500.00 inspection & assessment of unauthorised works)		$750.00

Accompanying information to be submitted with Application		
Applicant Checklist	Documents Required	Office Use Received
	A detailed survey prepared by a Registered Surveyor clearly showing the location of the structures and/or works on the site. The date of the survey is irrelevant in so far as the information contained therein is still current.	
	Where the property is identified on either Pittwater Councils Geotechnical Risk Management Map 2003 and/or Pittwater Councils Costal Hazard map 97-003 as being Bluff Management Areas A geotechnical Engineers report prepared in accordance with Councils Interim Geotechnical Risk management policy is to be provided, together with completed form 4 & 4a pursuant to that policy	
Where the Certificate Application relates to **unapproved structures or works** the following additional information is to be provided:		
	A detailed survey prepared by a Registered Surveyor clearly showing the site & location of the structures on the property and any nearby structures on adjacent properties together with floor levels, finish surface levels and the like. (A detail and contour survey as required to accompany Development Applications as outlined on Councils Development Application form will satisfy this requirement).	
	Works as constructed plans. These plans should be prepared by a suitably qualified professional e.g. Architect/Draftsman and clearly annotate the unapproved structures and/or works as to their compliance with the relevant Council Development controls.	
	Certification as to the structural and/or Geotechnical adequacy of the structures and/or works as built. All built structures will require certification as to their structural integrity by a qualified Structural Engineer, all earthworks and foundations will require certification by a qualified & experienced Geotechnical Engineer as to their adequacy.	
	Certificate by an appropriately qualified person that the structures and/or works comply with the Building Code of Australia and appropriate Australian Standards.	
	Council may require additional information to enable appropriate assessment and determination of the Building Certificate.	

Office Use

Receipt No: 366373 Date: 3/9/14. Cashier Code (FHEA)

Privacy and Personal Information Protection Notice

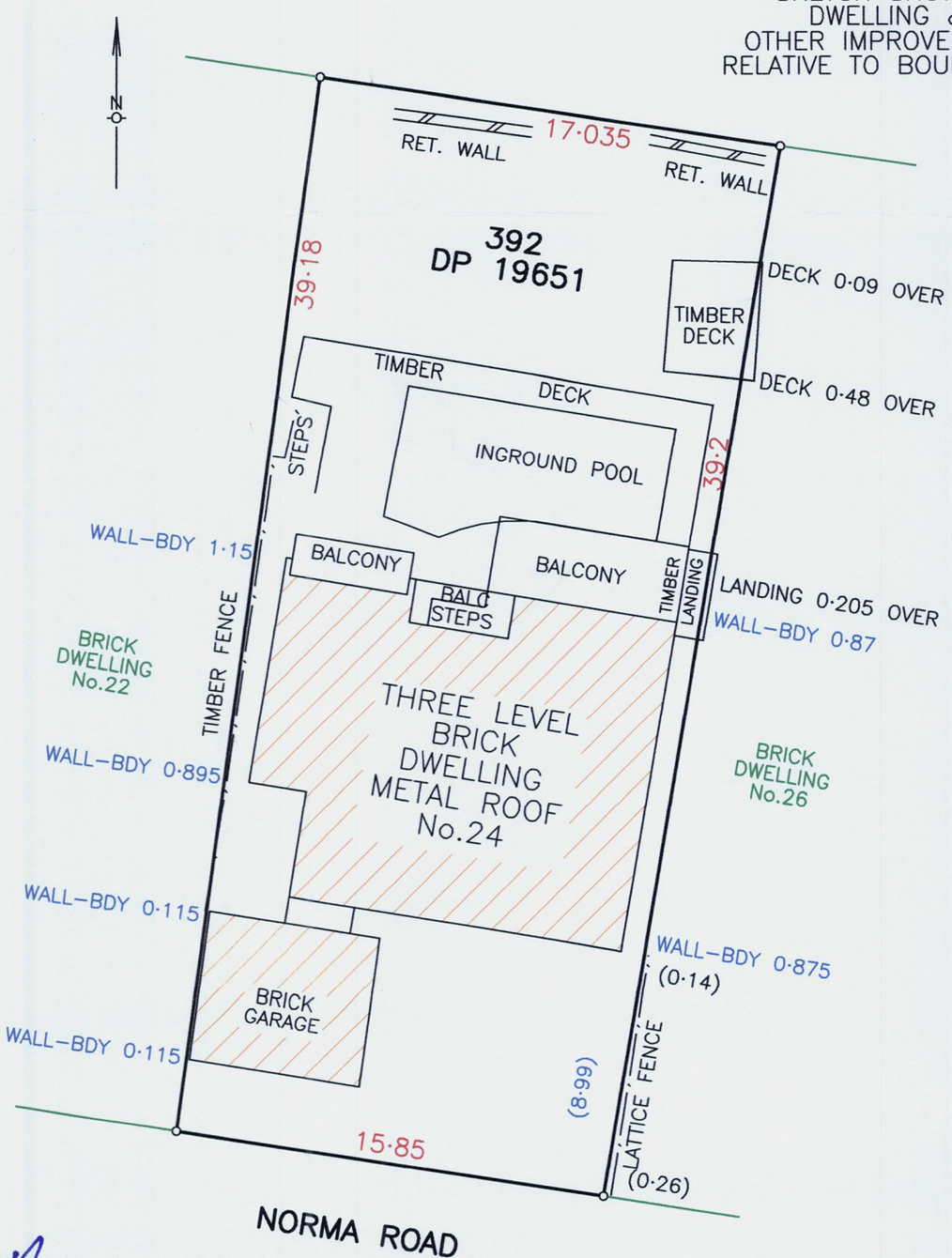
This information is provided under the Environmental Planning & Assessment Act 1979 voluntarily by the applicant and is collected for the assessment of the application. Failure to provide this information will prevent Council processing your application and may lead to your application being rejected. This information is intended only for Officers of Pittwater Council and will be stored in accordance with Pittwater Council's compliant Records Management System (ECM) and the State Records Act 1998 (NSW). This information may be accessed by Council Officers or by requests under the Government Information (Public Access) Act 2009 (NSW). You have a right to access your personal information under the Privacy and Personal Information Protection Act 1998 (NSW) by application to Pittwater Council and to have that information updated or corrected.

ECM Document Set #: 4098359

SKETCH

24 NORMA ROAD PALM BEACH

SKETCH SHOWING DWELLING & OTHER IMPROVEMENTS RELATIVE TO BOUNDARIES



J. MCCLURE
87 ELANORA ROAD
ELANORA HEIGHTS
99139525
jsurveyor@live.com.au

DATE: 27/08/2014

Surveyor registered under
The Surveying and
Spatial Information Act, 2002

Jack Hodgson Consultants Pty Limited
CONSULTING CIVIL, GEOTECHNICAL AND STRUCTURAL ENGINEERS
ABN: 94 053 405 011

RISK ANALYSIS & MANAGEMENT FOR BUILDING CERTIFICATE AT 24 NORMA ROAD PALM BEACH

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GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER - 2009
FORM NO. 4 (As per Pittwater Council's Geotechnical Risk Management Policy) – To be submitted with Application for a Building Certificate/Response to an Order

Building Certificate Application
for _____
Name of Applicant

Address of Site **24 NORMA ROAD PALM BEACH**

Order No. N/A

Declaration made by geotechnical engineer in relation to the submission of an application for a Building Certificate

I, PETER THOMPSON (Insert Name) on behalf of JACK HODGSON CONSULTANTS PTY LTD (Trading or Company Name)

on this the 26/08/2014 (Date)

certify that I am a geotechnical engineer as defined by the Geotechnical Risk Management Policy for Pittwater 2009. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least $2million.

☒ I have inspected the site and the existing development and am satisfied that both the site and the development achieves at least the "Tolerable Risk Management" requirement of the Geotechnical Risk Management Policy for Pittwater - 2009. The attached report provides details of the assessment in accordance with the Geotechnical Risk Management Policy for Pittwater – 2009. The report also contains recommendations as to any reasonable and practical measures that can be undertaken to remove foreseeable risk. I am aware the Council will rely on this certification as the basis for ensuring that the geotechnical risk management aspects of the site and the development have been adequately addressed to achieve at least a "Tolerable Risk Management" level for the life of the structure taken as 100 years unless otherwise stated and justified in the Report.*

or

☐ I have inspected the site of the existing development. The attached report details the remedial actions required to be undertaken prior to me being prepared to certify that the site and the development achieves at least the "Tolerable Risk Management" criteria required in accordance with the Policy.

Geotechnical Report Details:

Report Title: RISK ANALYSIS & MANAGEMENT FOR BUILDING CERTIFICATE AT 24 NORMA ROAD PALM BEACH

Report Date: 25/08/2014

Author : PETER THOMPSON

Signature Peter Thompson

Name PETER THOMPSON

Chartered Professional Status MIE Aust CPEng

Membership No. 146800

Company Jack Hodgson Consultants Pty Ltd

* Note: If life of structure taken as less than 100 years, please indicate ..... years

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RISK ANALYSIS & MANAGEMENT FOR BUILDING CERTIFICATE AT 24 NORMA ROAD PALM BEACH

1. INTRODUCTION.

1.1 The definitions and methods used in this Assessment are based on those described in Landslide Risk Management March 2007, published by the Australian Geomechanics Society and as modified by the Geotechnical Risk Management Policy for Pittwater, 2009.

1.2 The experience of Jack Hodgson Consultants spans a time period over 40 years in the Pittwater area and Greater Sydney Region.

2. EXISTING DEVELOPMENT.

2.1 The site was inspected on the 22nd August, 2014, and previously by this firm 17th June 2007 and in July 1985 in relation to a Development Applications (DA) for alterations and additions.

2.2 This property is located on the low side of the road and has a northerly aspect. From the road the original land surface sloped to the north at angles of 10 degrees before dropping away steeply at a sandstone outcrop. The slope continues below the outcrop at angles of some 30 degrees to the rear boundary.

2.3 From the road frontage a short paved driveway enters the western side of the block to a double garage that is constructed above the ground level and supported on stable rendered masonry walls (Photos 1 & 2). Access to the main entrance of the house is from a short bridge that joins the garage with the house (Photo 2). Steps and a path provide access from the eastern side of the garage to level platform and the secondary entrance on the uphill side of the house (Photo 3). Access to the rear of the house is by a concrete path down the western side (Photo 4). A concrete pool and decking extend from downhill side of the house (Photo 5). The pool structure is supported on stable concrete piers supported on the outcropping sandstone (Photo 6).
The slope below the outcrop has been landscaped in a series of terraces (Photo 7). These are supported by a series of low stack rock, timber crib and stone block walls. This section of the site has not been maintained and the garden is over grown with native and exotic shrubs and trees. An open dish drain enters the road frontage and runs down the eastern side of the property (Photos 8 & 9). It was raining heavily on the day of our inspection and the dish drain was effectively draining large amounts of

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water away from the area. A small timber deck is situated below the pool (Photo 10). The deck is partially supported on a concrete block wall that is significantly cracked (Photo 11). The wall, though badly cracked, appears to be stable in its current condition. The condition of the wall has not deteriorated significantly since our firms previous inspection in 2007. We recommend the area be monitored periodically and should further movement be identified then the wall be demolished and replaced with an engineered wall. No evidence of significant slope instability was identified at the time of our inspection.

2.4 The part three storey rendered brick house is in excellent condition. It is supported on brick walls and piers that show no evidence of significant ground movement.

3. DESCRIPTION OF SURROUNDING AREA.

The Pittwater Council Geotechnical Risk Map indicates that the subject property and those surrounding are considered H1 hazard areas. Our observations indicate the surrounding properties contain no geotechnical hazards likely to adversely affect the subject property.

4. GEOLOGY OF THE SITE.

4.1 The site is underlain by massively bedded, widely jointed sandstones. These are exposed at numerous locations on the block and our records indicate the house and pool have been founded on these rocks. Towards the rear of the block there is a soil cover which, along the line of the rear boundary, is at least 1.5 metres deep near the western side. There are some displaced joint blocks lodged in the slope at the rear of the property. These were stable at the time of inspection.

4.2 The slope materials are colluvial at the surface and residual at depth. They consist of sandy loam topsoil over sandy clays with rock fragments and some floaters throughout the profile. The sandy clays merge into the weathered zone of the under lying rocks at depths expected to be in the range of 0.7 to 1.5 metres.

5. SUBSURFACE INVESTIGATION.

For purposes of this assessment, observation of the surface features as described in this Report is considered to be sufficient information to prepare the building certificate; therefore no subsurface investigation was undertaken.

6. DRAINAGE OF THE SITE.

6.1 ON THE SITE.

The site appears to be well drained. A functional open dish drain runs down the eastern boundary of the block.

6.2 SURROUNDING AREA.

Excess stormwater runoff will flow overland down the site particularly during intense rainfall events.

7. GEOTECHNICAL HAZARDS.

7.1 The slope that falls across the block is a potential hazard **(HAZARD ONE)**.

8. RISK ASSESSMENT.

8.1 HAZARD ONE Qualitative Risk Assessment on Property

From the road frontage the slope drops moderately at average angles of some 20 degrees. The house and pool are founded directly on competent sandstone bedrock. No evidence of significant slope instability was observed at the time of our inspection. The likelihood of the slope failing and impacting the house is assessed as 'Unlikely' (10^{-4}). The consequences to property of such a failure are assessed as 'Minor' (5%). The risk to property is 'Low' (5×10^{-6}).

8.2 HAZARD ONE Quantitative Risk Assessment on Life

For loss of life risk can be calculated as follows:
$\mathbf{R_{(LoI)} = P_{(H)} \times P_{(SH)} \times P_{(TS)} \times V_{(DT)}}$ (See Appendix for full explanation of terms)

8.2.1 Annual Probability

No significant evidence of movement was observed at the time of our inspection.
$\mathbf{P_{(H)}} = 0.0001$/annum

8.2.2 Probability of Spatial Impact

The house is situated near the top of the slope.
$\mathbf{P_{(SH)}} = 0.1$

8.2.3 Possibility of the Location Being Occupied During Failure

The average household is taken to be occupied by 4 people. It is estimated that 1 person is in the house for 20 hours a day, 7 days a week. It is estimated 3 people are in the house 12hrs a day, 5 days a week.
For the person most at risk:

$$\frac{20}{24} x \frac{7}{7} = 0.83$$

$\mathbf{P_{(TS)}} = 0.83$

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8.2.4 Probability of Loss of Life on Impact of Failure

Based on the volume of land subsiding, it is estimated that the vulnerability of a person being killed in the house when subsidence occurs is 0.1

$V_{(DT)} = 0.1$

8.2.5 Risk Estimation

$R_{(LoI)} = 0.0001 \times 0.1 \times 0.83 \times 0.1$

$= 0.00000083$

$R_{(LoI)} = 8.3 \times 10^{-7}$/annum **NOTE:** This level of risk is **'ACCEPTABLE'**.

9. REMEDIAL/REQUIRED WORKS.

It is recommended that the failed concrete block wall that partially supports the small timber deck situated below the pool should be monitored periodically for signs of further movement. Should this be identified the wall is to be demolished and an engineered replacement constructed.

10. RISK ASSESSMENT SUMMARY.

HAZARDS	Hazard One
TYPE	The slope that falls across the block is a potential hazard
LIKELIHOOD	'Unlikely' (10^{-4})
CONSEQUENCES TO PROPERTY	'Minor' (5%)
RISK TO PROPERTY	'Low' (5×10^{-6})
RISK TO LIFE	8.3×10^{-7}/annum
COMMENTS	This level of risk is **'ACCEPTABLE'**

11. CONCLUSION.

The house and land achieves an '**Acceptable Risk Level**' in accordance with the 2009 Geotechnical Risk Management Policy for Pittwater.

JACK HODGSON CONSULTANTS PTY. LIMITED.

Peter Thompson

Peter Thompson MIE Aust CPEng
Member No. 146800
Civil/Geotechnical Engineer

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

Photo 11