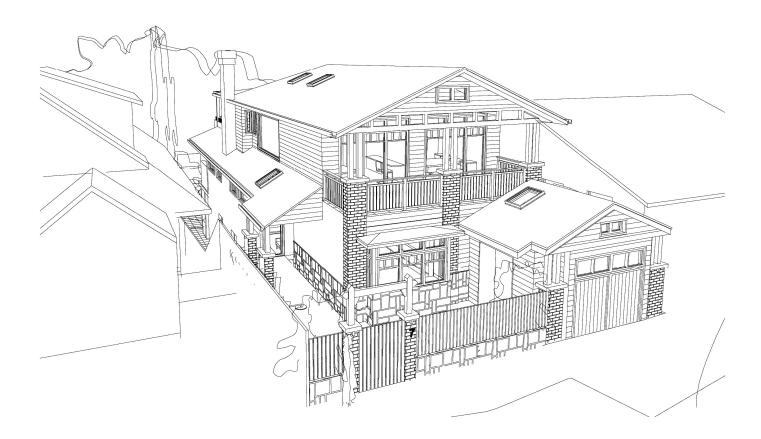
DU PLESSIS - DU PLESSIS ARCHITECTS

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> NSW REGISTERED ARCHITECT: #7435

NOMINATED ARCHITECT: Eugene du Plessis



DA WASTE MANAGEMENT PLAN

Address: No. 7 Clifford Avenue, Fairlight NSW 2093 Project: Alterations to an existing residential dwelling Applicants & Owners: George & Tatiana Opadchy Prepared by: Du Plessis + DuPlessis Architects Date: March 2019 Issue: NBC Council Development Application

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1.0 Management Statement

The Applicant recognizes the need to protect the environment and the advantages that can be achieved by waste reduction, recycling and a corresponding reduction in landfill.

The ability to plan waste management may be restrictive under some circumstances due to physical site storage capacity, nature of the waste, ability to be recycled, or economic collection, however it is envisaged that project goals can be achieved by co-operation of all parties associated with the project.

The Contractor shall prepare a detailed CC Construction Waste & Construction Management Plan prior to demolition and the commencement of works as per Council 'Waste Minimisation and Managemant Plan + Checklist'

2.0 Statement of Responsibilities

Details below are the responsibilities of the participants who will be encompassed in the waste management plan for this project:

2.01 Project Manager

The Architect foresees the need to instigate waste management on the project and the client is aware of financial implications that may benefit or otherwise impact the project viability.

The Project Manager will instigate the Waste Management Plan and will ensure all site personnel; material suppliers and subcontractors are aware of the project goals and are committed to those goals.

2.02 Site Supervisor

The Site Supervisor is responsible for the on-site management of waste control, collection and sorting of specific recyclable materials and of other waste. The Site Supervisor will enforce the waste management procedure.

2.03 Subcontractors

All Subcontractors will be required to comply with waste control, collection and sorting be instigated on the project. Specific material that may not be collected on site will be removed from site by the subcontractor responsible for its generation and where possible recycled.

2.04 Material Suppliers

Material suppliers will be instructed to restrict packaging to reduce excessive packaging and the extent of waste delivered to site.

2.05 <u>Waste Collection Agency</u>

Waste collection agencies are responsible for provision of appropriate collection bins, signage of specific collection bins, removal and transport of the specific waste to the point of recycling or to the appropriate disposal area.

2.06 Recycling Agencies

Recycling agencies are those organizations able to receive specifically sorted waste and recycle that material into new products.

3.0 Waste Management Procedure

The Demolition Stage is the stage with the greatest potential for waste minimization. Through careful onsite sorting, storage and by staging work programs it is possible to re-use many materials, either on-site or off-site.

With this project we are seeking to move from the attitude of straight demolition to a process of selected deconstruction, ie total reuse and recycling both off-site and on-site seeking to:

- re-use of excavated material on-site and disposal of any excess to an approved site;

- green waste mulched and re-used in landscaping either on-site or off-site;
- bricks, tiles and concrete re-used on-site as appropriate, or recycled off-site;
- plasterboard returned to supplier for recycling;
- framing timber re-used on-site or recycled elsewhere;
- windows, doors and joinery recycled off-site;
- plumbing, fittings and metal elements recycled off-site;

- all asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with Work Cover Authority and EPA requirements;

- locations of on-site storage facilities for material to be reused on-site, or separated for recycling off-site.

3.01 Recycling Bins

The waste management will call upon Waste Collection Agencies to provide collection bins for the accumulation of sorted select waste materials and the removal and transportation of those bins to recycling agencies.

The bins will be located where directed on site by the Site Supervisor and will be adequately sign posted as to the specific material to be deposited in that bin. At appropriate times, the bins will be removed, replaced and transported to the point of recycling or disposal.

All site personnel shall be responsible to deposit the appropriate material in the allocated bin. Incorrectly the party responsible shall sort deposited material.

Individual bins shall be provided for the following materials on an as need basis:

• Light Loads Category 1

This incorporates light building materials such as timber, gyprock, plasterboard, plastics, metals, etc and domestic rubbish. Any recyclable material from the above will be sorted, sieved and recycled at the bin/skip provider's premises.

Heavy Loads Category 2

This incorporates heavy building materials/demolition materials, including bricks, tiles, concrete, soil etc.

Any recyclable material from the above will be sorted, sieved and recycled at the bin/skip provider's premises.

Bricks, Concrete and Tiles

This incorporates any combination of the above with the inclusion of no other rubbish. All recyclable material from the above will be sorted, sieved and recycled at the bin/skip provider's premises.

3.02 Excessive Packaging

For all material to be brought onto the site the subcontractor or material supplier shall restrict packaging to the minimum necessary to protect the article from damage during transport and installation. The material supplier or the subcontractor shall remove excessive packaging from the site. Disposal method shall be confirmed to the Site Supervisor prior to removal.

3.03 Surplus Soils, Rock, Excess and Spoil

Minimize site disturbance by limiting unnecessary excavation. Surplus soil/rock and spoil shall be directed to landfills wherever possible. Method of disposal shall be confirmed to the Site Supervisor prior to removal.

Limit quantities of Waste by careful planning. Quantify materials for the project and use margin normally allowed in ordering. When estimating waste the following percentages are building "rule of thumb" for material waste as a Percentage of the Total material ordered:

Timber 5-7% Plasterboard 5-20% Concrete 3-5% Bricks 5-10% Tiles 2-5%

3.04 Contractual Responsibility

Consistent with the requirement of the Contract, all subcontractors will contain a waste management clause that will enable the project goals to be achieved.

Co-ordination and sequencing of various trades crucial to implementing plan for minimizing waste.

3.05 Site Restrictions

Existing pedestrian & vehicular access exists on the street (high side). Demolition & deliveries only possible from the existing vehicular driveway crossing on the Clifford Avenue road side with appropriate pedestrian/traffic control if and as required. Access to the rear (low side) of the lot restricted by the existing house proximity to side boundaries. Limited street parking available for sub-contractors. Site establishment will include the site contractor's offices, site amenities, vehicle access for loading and unloading, establishment and maintenance of on-site work zone areas. Exclusion zones, including fenced exclusion zones to protect trees, heritage building components, etc will be established if applicable.

The Contractor will ensure the security of all active work areas and adjacent buildings to ensure the safety of the public and protection of the works.

4.0 On-going Waste Management

The proposed redevelopment of the site is for alterations & additions to an existing family residence and the on-going waste management unchanged for a single dwelling.

The Garbage Bins located beside the house in the same as before with neighbour amenity noise & odour minimized.

Council regulations apply and garbage collection and recycling services the same as per the existing arrangement.

The collection vehicles are able to service the development efficiently and effectively from kerb as is currently the case.

General waste & recycling collected weekly and green waste alternate fortnights.

Standard bin dimensions used/considered:

240L Bin:

Normal volume: 240 litre Net weight: approx 12.3 kg Maximum load: 96 kg Permitted total weight: 110 kg Height 1060mm Width 585mm Depth 730mm

4 x 240L Bins to be provided:

1 x 240L bin for general waste (red) 1 x 240L bin for paper recycling (blue) 1 x 240L bin for glass recycling (yellow) 1 x 240L bin for gardening (green)

Kind Regards,

ARCHITECT EUGENE DU PLESSIS B.Arch Stud [1996] + B.Arch [1997] NSW REGISTERED ARCHITECT #7435 NOMINATED ARCHITECT: Eugene du Plessis

NORTHERN BEACHES COUNCIL

Waste Management Plan

(For development in the area of WLEP 2011 and WLEP 2000)

This plan is to be completed

in accordance with Council's

Waste Management Guidelines

(For development in the area of WLEP 2011 and WLEP 2000)

Effective Date: 25 October 2016

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Purpose of the Waste Management Plan

This *Waste Management Plan (WMP*) will detail the arrangements for waste management during all stages of development and occupation.

The WMP must be completed in accordance with the Waste Management Guidelines (Guidelines).

A completed WMP is a mandatory requirement for any Development Application (DA) submitted under WLEP 2011 or WLEP 2000. DAs that are submitted without a completed WMP will be rejected or refused by Council.

Structure of the Waste Management Plan

All applicants are required to complete the 'Applicant and Project Details' part of the WMP and include it with the relevant Sections that apply to their proposed development.

The WMP is divided into Sections and applicants are only required to complete the relevant Sections in accordance with the Guidelines. The table below identifies which Sections are relevant to which development types.

For example, if the proposed development was to include demolition of an existing structure and construction of a single dwelling, the relevant Sections would be Sections 1, 2 and 3.

Section	Development Type^
Section 1 – Demolition	All
Section 2 – Construction	All
Section 3 - On-going waste management for one or two	One or two dwelling developments
dwellings	Mixed-use developments containing
	one or two dwellings
Section 4 – On-going waste management for three or	Three or more dwelling developments
more dwellings	Mixed-use developments containing
	three or more dwellings
Section 5 – On-going waste management for non-	Commercial developments
residential and mixed use developments	Industrial developments
	Mixed-use developments
Section 6 – Private roadway developments	Private roadways

*Note: the definitions of the development types are provided in Section vi of the Introduction to the Guidelines

Applicant and Project Details

Complete this page and the relevant Sections that apply to your proposed development.

Applicants' Details

Name: (must be the same as the DA form)	GEORGE OPADOMY
Address: (must be the same as the DA form)	7 CUPFORD AVENUE, FAIRUIGHT
Phone Number:	0414 234 441
Email Address:	george@theconstructionsite.com.au

Property Details

Lot No:	8
Deposited Plan (DP) No:	D.P. 315261
or Strata Plan (SP) No:	
Unit No:	
House No:	7
Street:	CUPFORD ANDNIE
Suburb:	CLIPFORD ANDNIE FRIKLIGHT 2094
Postcode:	2094

Project Details

Description of proposed development:	ALTERATIONS of ADDITIONS to THE EXISTING DUELLING INCLUDING NEW GORAGE AND POOL.
Structures to be demolished:	PART BRISTING HOUSE DEMOLITION INCLUDING CARPORT of FRONT DENCE.

Applicant Declaration

I declare that:

- 1. This plan has been completed in accordance with the Waste Management Guidelines
- 2. To the best of my knowledge, the details on this form are accurate and correct

I understand that:

- 1. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as Council, NSW Environment Protection Authority or WorkCover NSW.
- 2. A bond in accordance with Council's fees and charges may apply to this development and must be paid to Council prior to any works commencing.
- 3. The bond will only be refunded when Council is satisfied that all waste outlined in this plan has been managed as per the plan, and evidence such as photos, receipts and statutory declarations must be supplied where appropriate.

Signature of Applicant:

Date: 12.03.2019

Section 1 – Demolition

This section must be completed in accordance with 'Chapter 1 – Demolition' of the Waste Management Guidelines

MATERIALS ON SITE	DESTINATION Evidence such as weighbridge dockets and invoices for waste disposal or recycling must be retained on site for inspection						
	REUSE	AND RECYCLING (N	DISPOSAL (LEAST FAVOURABLE)				
Types of Waste Material	Estimated Volume (m ³) or Weight (t)	 ✓ Specify now material will (RO) ⇒ reused on site 		rice) oning outlot		DISPOSAL (landfill S) (Waste ort ctor (WTC)	
			WTC	RO	WTC	LS	
Excavated Material	DM ³						
Garden Organics	3 M3			KIMBRIKI		VEOLA	
Bricks	3-5m3			kimbriki			
Tiles	7-9M3						
Concrete	4m3					E: erials must	
Timber	5-10m3				be re-used separated site and se	on or off	
Plasterboard	10m3				recycling.		
Metals	1-243		2				
Asbestos	NA						
Other waste (please specify)	MA						
Estimated Total % Recovered							

Refer to the estimation tables in 'Chapter 1 – Demolition' of the Guidelines for assistance in completing this table.

* DENO MATERIAL PATION OFF CITE - BUILDER TO MANAGE

The applicant must submit a Site Plan showing the structures to be demolished and storage areas for waste and construction materials (if the development also includes construction).

WMP Checklist

Have you included the following:	Applicant Tick
A site plan showing:	
The structures to be demolished.	
 Storage areas for waste to be reused, recycled, or disposed of. 	
 Materials storage (if the development also includes construction) 	
The table on the previous page, completed in accordance with 'Chapter 1 – Demolition' in the guidelines.	

* REFER DEMONTION PUN of AUPACINED WILP.

Section 2 - Construction

This section must be completed in accordance with 'Chapter 2 - Construction' of the Waste Management Guidelines

	MATERIALS ON SITEDESTINATION Evidence such as weighbridge dockets and invoice must be retained on site for inspection						r recycling
		REUSE	AND RECYCLING (N	IOST FAVOU	RABLE)	DISPOSAL FAVOUF	
	Types of Waste Material	Estimated Volume (m ³) or Weight (t)	ONSITE RE-USE ✓ Specify how material will be reused on site	 ✓ Specify recycling outlet (RO) 		 G OFFSITE DISPOSAL ✓ Specify landfill site (LS) ✓ Specify Waste Transport Contractor (WTC) 	
	* Please specify			WTC	RO	WTC	LS
	Excavated Material	2~3.	*	remenci			
	Garden Organics	2m3.					
	Bricks	oms					
	Tiles	ZM3					т
	Concrete	7M2				AVAILABLE These mate	
offer	Timber*	$1M^3$				be re-used of separated of site and ser	on or off
÷	Plasterboard	2M3				recycling.	
1	Metals*	lm ³					
packacing	Asbestos						
	Other waste*	5~3					
	Estimated Total % Recovered						

Refer to the estimation tables in 'Chapter 2 - Construction' of the Guidelines for assistance

in completing this table.

* DONO MATERIAL PAKEN OFF SITE - BUILDER to MANAGE

The applicant must submit a Site Plan showing the structures to be demolished and storage areas for waste and construction materials (if the development also includes construction).

WMP Checklist

Have you included the following:	Applicant Tick
A site plan showing:	
The structures to be demolished.	
• Potential storage areas for waste to be reused, recycled, or disposed of.	
Materials storage	
The table on the previous page, completed in accordance with 'Chapter 2 – Construction' in the guidelines.	V

* KEPER DEMONTION PLAN of AUTACHED MINP.

Section 3 - On-going waste management for one or two dwellings

This section is to be completed in accordance with 'Chapter 3 – On-going waste management for one or two dwellings' of the Waste Management Guidelines.

Type of development:	THOMSE	AUTERATIONS	4	Aborners
Number of dwellings:	١			

WMP Checklist

Do your architectural and landscape plans include the following:	Applicant Tick
Waste Storage Area design requirements (Chapter 3.2.)	
Waste Storage Area location requirements (Chapter 3.3.)	J

* BINS AS EXISTING

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Chapter 1 - Demolition

Brick	3 to 5 m ³	10 to 15 m ³	N/A	504 m ³	158 m ³	1142 m ³
Concrete	4 m ³	4 m ³	20 to 30 m ³	739 m ³	407 m ³	6736 m ³
Timber	5 to 10 m ³	12 to 15 m ³	7 to 15 m ³	10 m ³	2 m ³	56 m ³
Metal	1 to 2 m ³	N/A	20 to 25 m ³	14 m ³	35 m ³	45 m ³
Plasterboard	N/A	10 to 15 m ³	4 to 6 m ³	15 m ³	3 m ³	83 m ³
General Waste	10 to 15 m ³	N/A	N/A	26 m ³	18 m ³	155 m ³
Roof Tiles	N/A	7 to 9 m ³	N/A	25 m ³	N/A	N/A
Asbestos	Variable m ³	N/A	N/A	N/A	N/A	N/A

1.4. Waste conversion factors

The conversion factors outlined below will act as a guide to help estimate waste quantities.

Material	Conversion Factor (Tonnes per m³)	Conversion Factor (m ³ per tonne)
Bricks	$1.3 \text{ t} = 1 \text{m}^3$	0.8 m ³ =1t
Concrete	$1.1 \text{ t} = 1 \text{m}^3$	0.9 m ³ =1t
General	1 t = 1m ³	1 m ³ =1t
Green Waste	$1 t = 1m^3$	1 m ³ =1t
Plasterboard	0.75 t = 1m ³	1.3 m ³ =1t
Steel	0.65 t = 1m ³	1.5 m ³ =1t
Tiles	$1.3 t = 1m^3$	0.8 m ³ =1t
Timber	$1.1 \text{ t} = 1 \text{m}^3$	0.9 m ³ =1t

2.2. Re-use and recycling opportunities

The table below provides guidance on re-use and recycling opportunities:

Material	Re-use and recycling opportunities			
Excavated materials	Re-use for filling or levelling			
Concrete	Re-use for filling, levelling or road base			
Bricks / Pavers	Re-use or crush for landscaping and driveways			
Roof Tiles	Re-use or crush for landscaping and driveways			
Untreated Timber	Re-use as floorboards, fencing, furniture, mulch or send to second -hand timber suppliers			
Treated Timber	Re-use as formwork, bridging, blocking and propping and send to second -hand timber suppliers			
Doors / Windows / Fittings	Send to second- hand suppliers, or recycle.			
Metals	Re-use or recycle			
Green Waste	Mulch or compost			
Plasterboard	Re-use for landscaping, recycle or return to supplier			
Carpet	Recycle or re-use in landscaping			
Plastics / Rubber	Re-use or recycle			

The closest waste and recycling facility to Northern Beaches Council is Kimbriki Resource Recovery Centre located in Terrey Hills, see website <u>http://www.kimbriki.com.au/</u>

Another comprehensive database resource is Planet Ark's Business Recycling hotline 1300 763 768 or website <u>http://businessrecycling.com.au/</u>

2.3. Estimating construction waste

The table below provides estimates of likely construction waste for several different development types.

	Estimated Construction Waste Quantities (per dwelling)			Estimated Construction Waste Quantities (per 100m ³)	
Material Reside	Residential	Residential	Multi Unit Dwellings (Five	Industrial / Factory	
	One Storey	Two Storey	to six units and less than		
	Dwelling	Dwelling	four storey's high.		

Bricks	1 to 3 m ³	2.5 to 4.5 m ³	3 to 4 m ³	1 to 2 m ³
Tiles	0.5 to 2.5 m ³	1 to 2.5 m ³		N/A
Concrete	0 to 0.5 m ³	0 to 0.5 m ³	6 to 7 m ³	2 to 3 m ³
Plasterboard	0.5 to 1.5 m ³	0.5 to 1.5 m ³	1 to 2 m ³	N/A
Timber	0.5 to 3 m ³	1 to 3 m ³	1 to 2 m ³	1 to 3 m ³
Metal	N/A	N/A	1 to 2 m ³	2 to 3 m ³
Roof	N/A	N/A	N/A	3 m ³
Sheeting				
Other Waste	0.5 to 3 m ³	1 to 3 m ³	10 to 15 m ³	10 m ³

Source: McGregor Environmental Services (2000) Predicting C&D waste quantities in the Inner Sydney Waste Board

2.4. Conversion table

The table below may assist in converting quantities estimated in table 1.4 into tonnes for disposal purposes.

Material	Conversion Factor	Conversion Factor
	(Tonnes per m³)	(m ³ per tonne)
Bricks	1.3 t = 1m ³	0.8 m ³ =1t
Concrete	$1.1 \text{ t} = 1 \text{m}^3$	0.9 m ³ =1t
General	1 t = 1m ³	1 m ³ =1t
Green Waste	1 t = 1m ³	1 m ³ =1t
Plasterboard	0.75 t = 1m ³	1.3 m ³ =1t
Steel	0.65 t = 1m ³	1.5 m ³ =1t
Tiles	1.3 t = 1m ³	0.8 m ³ =1t
Timber	1.1 t = 1m ³	0.9 m ³ =1t

Source: The Hills Council's Waste Management Plan



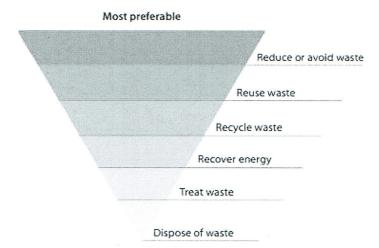
Demolition is the development stage with the greatest potential for waste minimisation. To maximise re-use and recycling of waste materials resulting from the demolition works, Council is seeking a change from a straight demolition to a process of selected deconstruction. For example, instead of putting all the waste into the same bin, the materials can be separated into different bins for re-use and recycling. This process can save the applicant money on the overall cost of the project.

Applicants must complete 'Section 1 – Demolition' of the Waste Management Plan in accordance with this Chapter. Applicants must be able to demonstrate evidence of compliance if audited.

1.1. Requirements

Applicants must demonstrate project management that seeks to:

a) Incorporate the waste hierarchy principle of avoidance, resource recovery and disposal.



Least preferable

- b) Minimise the waste sent for disposal.
- c) Minimise the impact and disturbance on surrounding amenity, public safety, roadways and natural and built environment.
- d) Adhere to any relevant legislation not limited to hazardous waste, storage and transportation regulations.
- e) Send waste materials to a suitably licensed facility.
- f) Identify suitable locations on the site for sorting and storing of materials for re-use, recycling and disposal. Factors to consider include slopes, drainage and personnel and vehicular access.
- g) Maintain valid tipping dockets and receipts on site for inspection.

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1.2. Re-use and recycling opportunities

The table below provides guidance on re-use and recycling opportunities:

Material	Re-use and recycling opportunities			
Excavated materials	Re-use for filling or levelling			
Concrete	Re-use for filling, levelling or road base			
Bricks / Pavers	Re-use or crush for landscaping and driveways			
Roof Tiles	Re-use or crush for landscaping and driveways			
Untreated Timber	Re-use as floorboards, fencing, furniture, mulch or send to second -hand timber suppliers			
Treated Timber	Re-use as formwork, bridging, blocking and propping and send to second -hand timber suppliers			
Doors / Windows / Fittings	Send to second- hand suppliers, or recycle.			
Metals	Re-use or recycle			
Green Waste	Mulch or compost			
Plasterboard	Re-use for landscaping, recycle or return to supplier			
Carpet	Recycle or re-use in landscaping			
Plastics / Rubber	Re-use or recycle			

The closest waste and recycling facility to Northern Beaches Council is Kimbriki Resource Recovery Centre located in Terrey Hills, see website <u>http://www.kimbriki.com.au/</u>

Another comprehensive database resource is Planet Ark's Business Recycling hotline 1300 763 768 or website <u>http://businessrecycling.com.au/</u>

1.3. Estimating demolition waste

The table below provides estimates of likely construction waste for several different development types.

	Estimated Demolition Waste Quantities (per dwelling)			Estimated Demolition Waste Quantities (per 1000m ³)		
Material	One Bedroom Brick and Fibre board House	Three Bedroom Brick House	Three Bedroom Weatherboard House	Residential Flats	Industrial Factory	Office Block

NORTHERN BEACHES COUNCIL Waste Management Guidelines Effective Date: 25 October 2016 Page 3 of 4

