WILKINSON MURRAY

17 February 2017

WM Project Number: 13317
Our Ref: PP04112015_Ltr_JW
Email:jeff@deepriver.com.au

Mr Jeff Bulfin
Precise Planning
PO Box 426
NORTHBRIDGE NSW 1560

Dear Jeff

Re: 25 Martin Road Badgerys Creek - Revised Proposal - Enclosed Site.

Wilkinson Murray conducted a Noise Impact Assessment (NIA) for the proposed Resource Recovery Facility at 25 Martin Road, Badgerys Creek (Wilkinson Murray Report No. 13351 Version B). The NIA addressed the Secretary's Environmental Assessment Requirements (SEARs) for the project, and was conducted in general accordance with the NSW Industrial Noise Policy (INP).

The NSW Environment Protection Authority (EPA) requested additional information which was provided by Wilkinson Murray in a letter dated 4 November 2015.

The Joint Regional Planning Panel (JRPP) deferred the determination of the application so as to investigate enclosing the proposed operations. A revised project enclosing the site has been developed and is presented in Figure A-1.

Wilkinson Murray has been requested to revise its noise assessment considering the revised plans. Appendix A presents the revised noise assessment.

The noise assessment concluded that noise emissions from the operation of the site, with the proposed noise mitigation (3m high concrete panels on the northern and southern sides and 6m high concrete panels on the western side), complies with the noise criteria at all receivers.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully
WILKINSON MURRAY

John Wassermann
Director

APPENDIX A – REVISED NOISE CALCULATIONS

A.1 Introduction

The proposed Project is a Resource Recovery Facility to be located at 25 Martin Road, Badgerys Creek, NSW. The Project site is approximately 16 km west-northwest of Liverpool and approximately 13km south of St Marys.

Figure A-1 presents the Project location and identifies the potential surrounding noise-sensitive receptors relevant to this assessment.

Figure A-1 Site and Receiver locations.

Activities at the Project will consist of the importation (materials sourced from off-site) and processing of various materials for resource recovery. These materials will consist of the following:

- 10,000 tonnes per year of organic/green waste material, to be processed on-site; and
- 50,000 tonnes per year of building demolition waste consisting of concrete, bricks, glass, plastic, paper, wood, metal and rubber.

There would be no putrescible waste accepted for on-site for processing. The Project will operate Monday to Friday, 7.00am to 5.00pm and Saturday, 8.00am to 2.00pm.

The existing 2m and 3m high Hebel fences on the northern, southern and eastern sides of the site are proposed to remain.

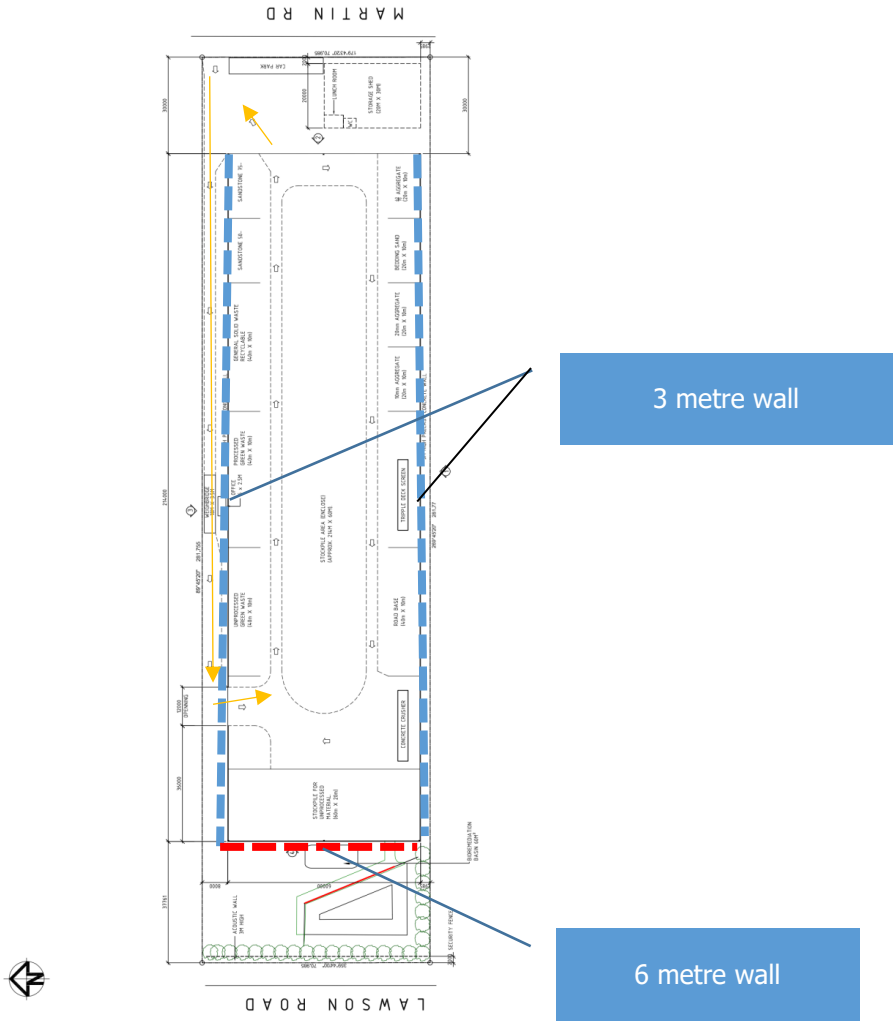
The revised site plan showing the revised building is presented in Figure A-2.

Essentially the revised plan is a large shed, with:

- 3m high concrete panels on the northern and southern sides;
- 6m high concrete panels on the western side;
- the eastern side is open;
- sail cloth material which is 60% impermeable spanning between walls and the roof;
- metal decking for the roof; and
- gravel hard stand for the floor.

Trucks entering the building would be from the northern side of the building, with the trucks exiting on the eastern side of the building.

Figure A-2 Revised Site Plan



A.2 Noise Criteria

Noise criteria for the project were developed consistent with the NSW Industrial Noise Policy in the previous noise assessments. Table A-1 shows the project specific noise levels for the project based on the measured background noise levels.

Table A-1 Noise Criteria – Intrusive Noise Criteria

Location	Intrusive Noise Criteria $L_{Aeq,15min}$ (dBA)
R1	46
R2	46
R3	46
R4	46
R5	46
R6	44
R7	46
R8	46
R9	House demolished
R10	44
R11	44
R12	44
R13	House demolished
R14	44
R15	44
R16	44
R17	44
R18	46

It should be noted that R9 and R13 have been demolished and therefore will not be considered further in this assessment.

A.3 Noise Modelling

Noise predictions were calculated using the "CadnaA" noise modelling software with CONCAWE noise prediction algorithms. This software considers the following noise attenuation factors;

- distance;
- barrier effects from earth mounds and/ or site fencing;
- meteorological effects (Daytime D class);
- ground attenuation; and
- air absorption.

The sound power levels used in the noise modelling were presented in previous noise assessments.

A.3 Modelled Scenarios

The different operations within the site have been split into three scenarios for the purpose of noise modelling, namely:

A.3.1 Scenario 1 – Building Waste Delivery

This scenario considers a truck entering the site and unloading building waste adjacent to the temporary stockpile, with an excavator loading the crusher (See Figure A-3). It was assumed that all plant used in the noise model had a source level of 1.5m.

A.3.2 Scenario 2 – Building Waste Delivery

This scenario considers the front end loader moving material from the temporary stockpile to the storage area and truck being loaded by the excavator (See Figure A-4).

A.3.3 Scenario 3 – Green Waste Delivery

This scenario considers a truck entering the site and unloading adjacent to the green waste stockpile, with a front end loader loading green waste into a shredder (See Figure A-5).

Noise Modelling Results

The results of the noise predictions are presented in Tables A-2, A-3 and A-4 for all relevant receivers.

Table A-2 Predicted Noise Levels, Scenario 1

Receiver	Predicted Noise Level, $L_{Aeq,(15min)}$	Criteria	Complies (Yes/No)
R1	38	46	Yes
R2	39	46	Yes
R3	38	46	Yes
R4	46	46	Yes
R5	46	46	Yes
R6	44	44	Yes
R7	45	46	Yes
R8	44	46	Yes
R10	39	44	Yes
R11	37	44	Yes
R12	40	44	Yes
R14	38	44	Yes
R15	32	44	Yes
R16	33	44	Yes
R17	37	44	Yes
R18	41	46	Yes

Table A-3 Predicted Noise Levels, Scenario 2

Receiver	Predicted Noise Level, $L_{Aeq,(15min)}$	Criteria	Complies (Yes/No)
R1	39	46	Yes
R2	39	46	Yes
R3	38	46	Yes
R4	40	46	Yes
R5	38	46	Yes
R6	41	44	Yes
R7	43	46	Yes
R8	43	46	Yes
R10	40	44	Yes
R11	39	44	Yes
R12	40	44	Yes
R14	38	44	Yes
R15	33	44	Yes
R16	33	44	Yes
R17	33	44	Yes
R18	42	46	Yes

Table A-4 Predicted Noise Levels, Scenario 3

Receiver	Predicted Noise Level, $L_{Aeq,(15min)}$	Criteria	Complies (Yes/No)
R1	40	46	Yes
R2	41	46	Yes
R3	45	46	Yes
R4	46	46	Yes
R5	45	46	Yes
R6	44	44	Yes
R7	44	46	Yes
R8	43	46	Yes
R10	41	44	Yes
R11	39	44	Yes
R12	41	44	Yes
R14	40	44	Yes
R15	34	44	Yes
R16	34	44	Yes
R17	36	44	Yes
R18	41	46	Yes

Noise emission from the site for the different scenarios, with the proposed noise mitigation (3m high concrete panels on the northern and southern sides and 6m high concrete panels on the western side), complies with the noise criteria at all receivers.

Figure A-3 Site Plan showing Barriers & Source Locations – Scenario 1

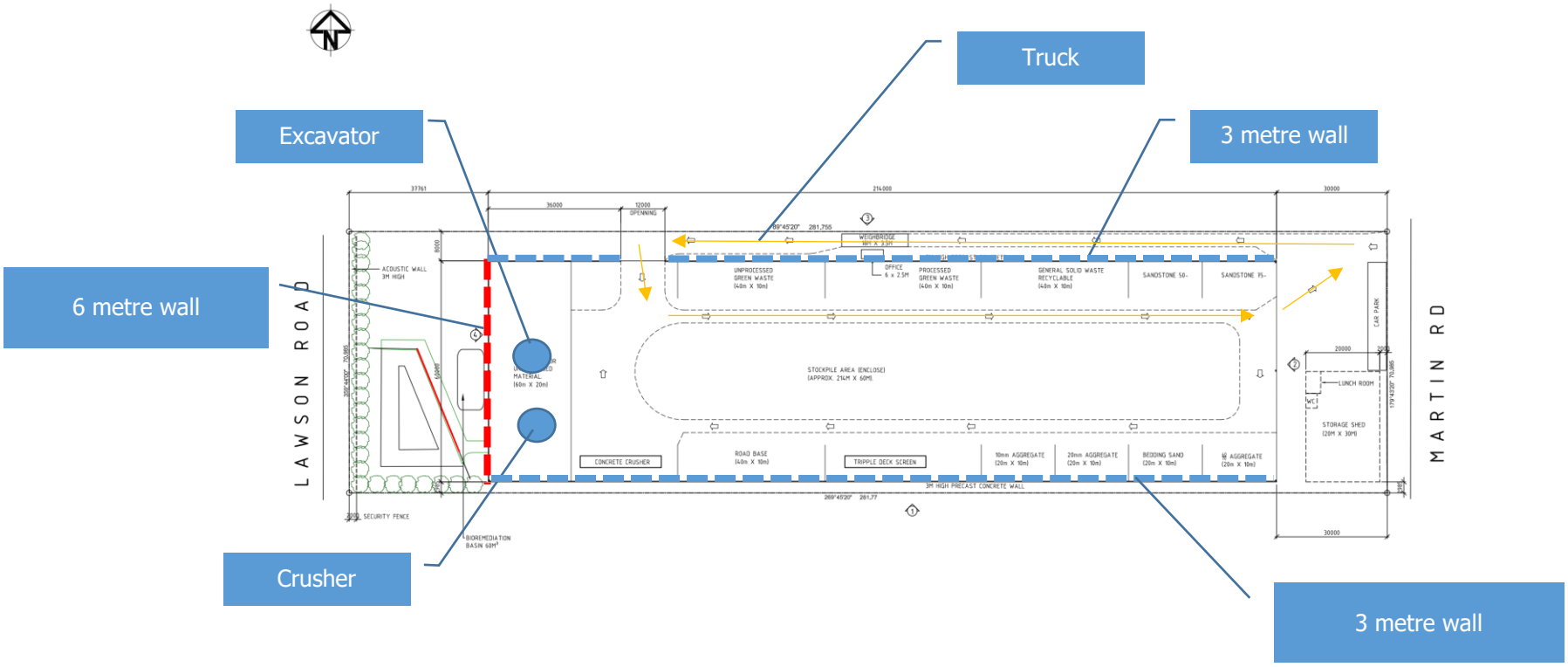


Figure A-4 Site Plan showing Barriers & Source Locations – Scenario 2

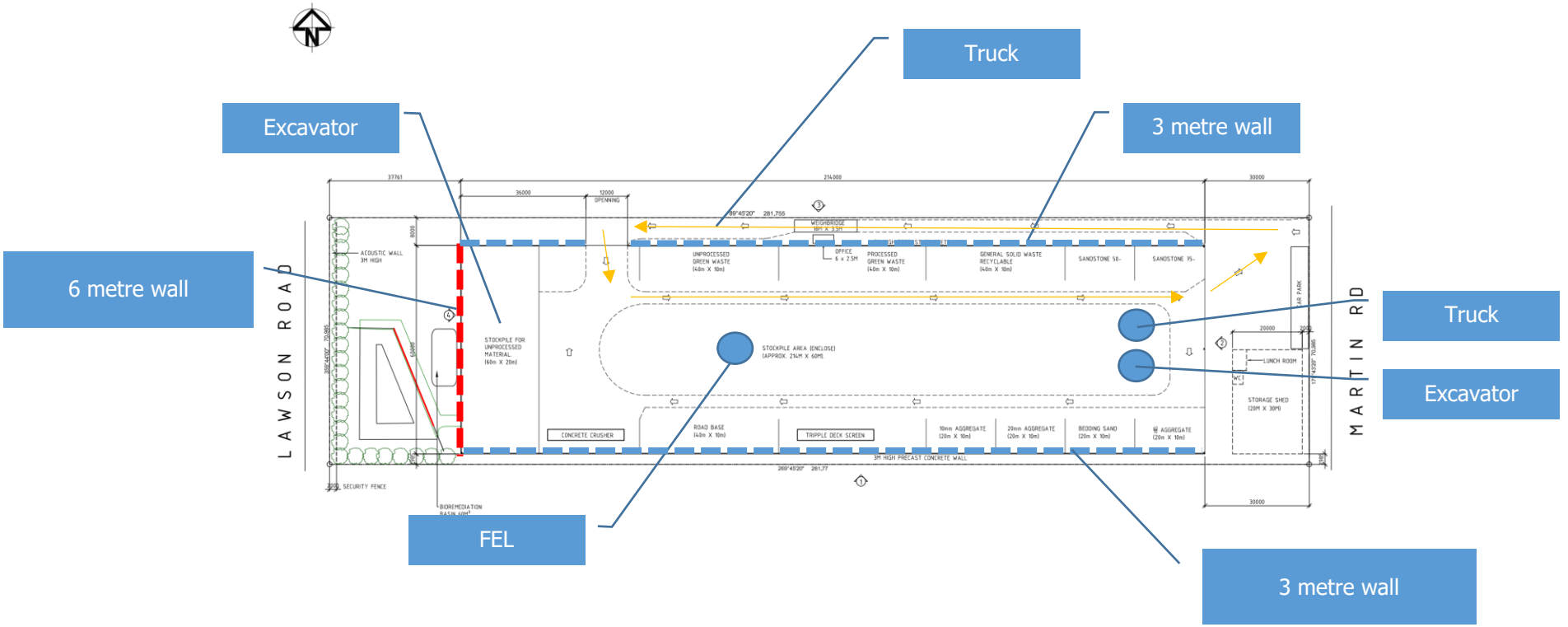


Figure A-5 Site Plan showing Barriers & Source Locations – Scenario 3