

Contract of sale of land

Property: 18 Parkforest Walk, Craigieburn VIC 3064



Contract of sale of land

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IMPORTANT NOTICE TO PURCHASERS – COOLING-OFF

Cooling-off period (Section 31 of the *Sale of Land Act 1962*)

You may end this contract within 3 clear business days of the day that you sign the contract if none of the exceptions listed below applies to you.

You must either give the vendor or the vendor's agent **written** notice that you are ending the contract or leave the notice at the address of the vendor or the vendor's agent to end this contract within this time in accordance with this cooling-off provision.

You are entitled to a refund of all the money you paid EXCEPT for \$100 or 0.2% of the purchase price (whichever is more) if you end the contract in this way.

EXCEPTIONS: the 3-day cooling-off period does not apply if:

- you bought the property at a publicly advertised auction or on the day on which the auction was held; or
- you bought the land within 3 clear business days before a publicly advertised auction was to be held; or
- you bought the land within 3 clear business days after a publicly advertised auction was held; or
- the property is used primarily for industrial or commercial purposes; or
- the property is more than 20 hectares in size and is used primarily for farming; or
- you and the vendor previously signed a contract for the sale of the same land in substantially the same terms; or
- you are an estate agent or a corporate body.

NOTICE TO PURCHASERS OF PROPERTY OFF-THE-PLAN

Off-the-plan sales (Section 9AA(1A) of the *Sale of Land Act 1962*)

You may negotiate with the vendor about the amount of the deposit moneys payable under the contract of sale, up to 10 per cent of the purchase price.

A substantial period of time may elapse between the day on which you sign the contract of sale and the day on which you become the registered proprietor of the lot.

The value of the lot may change between the day on which you sign the contract of sale of that lot and the day on which you become the registered proprietor

Approval

This contract is approved as a standard form of contract under section 53A of the *Estate Agents Act 1980* by the Law Institute of Victoria Limited. The Law Institute of Victoria Limited is authorised to approve this form under the *Legal Profession Uniform Law Application Act 2014*.

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**WARNING TO ESTATE AGENTS
DO NOT USE THIS CONTRACT FOR SALES OF 'OFF THE PLAN' PROPERTIES
UNLESS IT HAS BEEN PREPARED BY A LEGAL PRACTITIONER**

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Contract of Sale of Land

The vendor agrees to sell and the purchaser agrees to buy the property, being the land and the goods, for the price and on the terms set out in this contract.

The terms of this contract are contained in the –

- particulars of sale; and
- special conditions, if any; and
- general conditions (which are in standard form: see general condition 6.1)

in that order of priority.

SIGNING OF THIS CONTRACT

WARNING: THIS IS A LEGALLY BINDING CONTRACT. YOU SHOULD READ THIS CONTRACT BEFORE SIGNING IT.

Purchasers should ensure that they have received a section 32 statement from the vendor before signing this contract. In this contract, “section 32 statement” means the statement required to be given by a vendor under section 32 of the *Sale of Land Act 1962*.

The authority of a person signing –

- under power of attorney; or
 - as director of a corporation; or
 - as agent authorised in writing by one of the parties –
- must be noted beneath the signature.

Any person whose signature is secured by an estate agent acknowledges being given by the agent at the time of signing a copy of the terms of this contract.

SIGNED BY THE PURCHASER:

..... on/...../2024

Print names(s) of person(s) signing:

State nature of authority, if applicable:

This offer will lapse unless accepted within [] clear business days (3 clear business days if none specified)

In this contract, “business day” has the same meaning as in section 30 of the *Sale of Land Act 1962*

SIGNED BY THE VENDOR:

..... on/...../2024

Print names(s) of person(s) signing: Veronica Anne Rowley and Anthony John Rowley

State nature of authority, if applicable:

The **DAY OF SALE** is the date by which both parties have signed this contract.

Particulars of Sale

Vendor's estate agent

Name: Stone Real Estate Whittlesea
Address: 1/75 Church Street, Whittlesea VIC 3757
Email: jenniterhaar@stonerealestate.com.au
Tel: 9716 2000 Mob: 0438 130 473 Ref: Jenni Ter Haar

Vendor

Name: Veronica Anne Rowley and Anthony John Rowley

Vendor's legal practitioner or conveyancer

Name: Complete Home Conveyancing
Address: PO Box 1125, Craigieburn VIC 3064
Email: info@completehomeconveyancing.com.au
Mob: 0488 448 297 Ref: LW:2024/1264

Purchaser

Name: _____
Address: _____
ABN/ACN: _____
Email: _____

Purchaser's legal practitioner or conveyancer

Name: _____
Address: _____
Email: _____
Tel: _____ Mob: _____ Fax: _____ Ref: _____

Land (general conditions 7 and 13)

The land is described in the table below –

Certificate of Title reference	being lot	on plan
Volume 11894 Folio 729	31829	724966S

If no title or plan references are recorded in the table, the land is as described in the section 32 statement or the register search statement and the document referred to as the diagram location in the register search statement attached to the section 32 statement

The land includes all improvements and fixtures.

Property address

The address of the land is: 18 Parkforest Walk, Craigieburn VIC 3064

Goods sold with the land (general condition 6.3(f)) (list or attach schedule)

All fixed floor coverings, electronic light fittings, window furnishings and anything of a fixed or permanent nature.

Payment

Price \$ _____
Deposit \$ _____ by _____ (of which \$ _____ has been paid)
Balance \$ _____ payable at settlement

Deposit bond

General condition 15 applies only if the box is checked

Bank guarantee

General condition 16 applies only if the box is checked

GST (general condition 19)

Subject to general condition 19.2, the price includes GST (if any), unless the next box is checked

- GST (if any) must be paid in addition to the price if the box is checked
- This sale is a sale of land on which a 'farming business' is carried on which the parties consider meets the requirements of section 38-480 of the GST Act if the box is checked
- This sale is a sale of a 'going concern' if the box is checked
- The margin scheme will be used to calculate GST if the box is checked

Settlement (general conditions 17 & 26.2)

is due on

unless the land is a lot on an unregistered plan of subdivision, in which case settlement is due on the later of:

- the above date; and
- the 14th day after the vendor gives notice in writing to the purchaser of registration of the plan of subdivision.

Lease (general condition 5.1)

At settlement the purchaser is entitled to vacant possession of the property unless the box is checked, in which case the property is sold subject to*:

(*only one of the boxes below should be checked after carefully reading any applicable lease or tenancy document)

a lease for a term ending on / /20..... with [.....] options to renew, each of [.....] years

OR

a residential tenancy for a fixed term ending on 6 / 7 /2024

OR

a periodic tenancy determinable by notice

Terms contract (general condition 30)

This contract is intended to be a terms contract within the meaning of the *Sale of Land Act 1962* if the box is checked. (Reference should be made to general condition 30 and any further applicable provisions should be added as special conditions)

Loan (general condition 20)

This contract is subject to a loan being approved and the following details apply if the box is checked:

Lender:

Loan amount: no more than Approval date:

Building report

General condition 21 applies only if the box is checked

Pest report

General condition 22 applies only if the box is checked

Special Conditions

Instructions: It is recommended that when adding special conditions:

- each special condition is numbered;
- the parties initial each page containing special conditions;
- a line is drawn through any blank space remaining on this page; and
- attach additional pages if there is not enough space and number pages accordingly (eg. 4a, 4b, 4c, etc.)

Special Condition 1 – Vendor Warranties

General condition 6.1 is deleted. The general Conditions have only been amended by way of these Special Conditions and do not differ from 1 to 35 in the form of contract of sale of land published by the Law Institute of Victoria Limited and the Real Estate Institute of Victoria Ltd.

Special Condition 2 – Deposit

General Condition 14 is replaced by the following:

14. PAYMENT

- 14.1 The Purchaser must pay the deposit:
- (a) to the vendor's licensed estate agent; or
 - (b) If there is no estate agent, to the vendor's legal practitioner or conveyancer; or
 - (c) If the vendor directs, into a special purpose account in an authorised deposit-taking institution in Victoria specified by the vendor in the joint names of the purchaser and vendor.
- 14.2 If the land sold is a lot on an unregistered plan of subdivision, the deposit:
- (a) must not exceed 10% of the price; and
 - (b) must be paid to the vendor's estate agent, legal practitioner or conveyancer and held by the estate agent, legal practitioner or conveyancer on trust for the purchaser until the registration of the plan of subdivision.
- 14.3 The purchaser must pay all money other than the deposit:
- (a) to the vendor, or the vendor's legal practitioner or conveyancer; or
 - (b) In accordance with written direction of the vendor or the vendor's legal practitioner or conveyancer.
- 14.4 Payments may be made or tendered:
- (a) up to \$1,000 in cash; or
 - (b) by cheque drawn on an authorised deposit-taking institution; or
 - (c) by electronic funds transfer to a recipient having the appropriate facilities for receipt.
- However, unless otherwise agreed:
- (d) payment may not be made by credit card, debit card or any other financial transfer system that allows for any chargeback or funds reversal other than for fraud or mistaken payment, and
 - (e) any financial transfer or similar fees or deductions from the funds transferred, other than any fees charged by the recipient's authorised deposit-taking institution, must be paid by the remitter.
- 14.5 At settlement, the purchaser must pay the fees on up to three cheques drawn on an authorised deposit-taking Institution. If the vendor requests that any additional cheque be drawn on an authorised deposit-taking Institution, the vendor must reimburse the purchaser for fees incurred.
- 14.6 Payment by electronic funds transfer is made when cleared funds are received in the recipient's bank account.
- 14.7 Before the funds are electronically transferred the Intended recipient must be notified in writing and given sufficient particulars to readily identify the relevant transaction.
- 14.8 As soon as the funds have been electronically transferred the Intended recipient must be provided with the relevant transaction number or reference details.
- 14.9 Each party must do everything reasonably necessary to assist the other party to trace and identify the recipient of any missing or mistaken payment and to recover the missing or mistaken payment.
- 14.10 For the purpose of this general condition 'authorised deposit-taking Institution' means the body corporate for which an authority under section 9(3) of the *Banking Act 1959* (Cth) is in force.
- 14.11 Where the purchaser is deemed by section 27(7) of the *Sale of Land Act 1962* to have given the deposit release authorisation referred to in section 27(1), the purchaser is also deemed to have accepted title in the absence of any prior express objection to title.

Special Condition 3 – Tax Invoice

General Condition 19.3 is deleted and replaced with the following:

- 19.3 If the vendor makes a taxable supply under this contract (that is not a margin scheme supply) and:
- (a) the price includes GST; or
 - (b) the purchaser is obliged to pay an amount for GST in addition to the price (because the price is "plus GST" or under general condition 19.1(a), (b) or (c)).
 - (c) The purchaser is not obliged to pay any GST under this contract until a tax invoice has been given to the purchaser, unless the margin scheme applies.

Special Condition 4 – Building and Pest Inspection

General Conditions 21.2 and 22.2 are amended by replacing the words “14 days” to “7 days”.

Special Condition 5 – Subject to Finance

General Condition 20 is deleted and replaced with the following:

- 20.1 If the particulars of sale specify that this contract is subject to a loan being approved, this contract is subject to the lender approving the loan on the security of the property by the approval date or any later date allowed by the vendor.
- 20.2 The purchaser may end the contract if the loan is not approved by the approval date, but only if the purchaser:
- (a) immediately applied for the loan; and
 - (b) did everything reasonably required to obtain approval of the loan; and
 - (c) serves written notice ending the contract, together with written evidence of rejection from the Lender (on the Lender's letterhead) specified in the Contract (not a mortgage broker) or non-approval of the loan, on the vendor on or prior to the approval date or any later date allowed by the vendor. The letter must include the following:
 - (i) Purchaser name;
 - (ii) The loan amount requested;
 - (iii) Date the Purchaser applied for the loan;
 - (iv) Confirmation the Purchaser did everything reasonably required to obtain approval for the loan; and
 - (v) Reason the loan approval was declined.
 - (d) is not in default under any other condition of this contract when the notice is given.

All money must be immediately refunded to the purchaser if the contract is ended and complies with the above.

Special Condition 6 - Loss or Damage Before Settlement

General Conditions 31.4, 31.5 and 31.6 are deleted.

Special Condition 7 - Whole agreement

This contract comprises the whole of the agreement between the parties and it is expressly agreed that no other covenants or promises are implied into this contract or arise between the parties pursuant to any collateral or other agreement and the purchaser shall not be entitled to rely on any representations made by the vendor or their agents except such as are made conditions of this contract.

Special Condition 8 - Waiver of breach

No waiver of any breach of this contract or any of the terms of this contract will be effective unless that waiver is in writing and is signed by the party against whom the waiver is claimed. No waiver of any breach shall operate as a waiver of any other breach or subsequent breach.

Special Condition 9 - Severability

In the event of any part of this contract being or becoming void or unenforceable or being illegal then that part shall be severed from this contract to the extent that all parts that shall not be or become void, unenforceable or illegal shall remain in full force and effect and be unaffected by such severance.

Special Condition 10 - Disclosure

The purchaser acknowledges that prior to the signing of this contract or any other document relating to this sale which is or is intended to be legally binding, they received from the vendor's agent a statement containing particulars specified in and otherwise complying with section 51 of the Estate Agents Act 1980 (Vic) (if applicable), a statement pursuant to section 32 of the Sale of Land Act 1962 (Vic) and a copy of this contract.

Special Condition 11 - Purchaser acknowledgements

The purchaser acknowledges that they are purchasing the property as a result of their own enquiries and inspection and not relying upon any representation made by the vendor or any other person on the vendor's behalf:

- a. In its present condition and state of repair;
- b. Subject to all defects latent and patent;
- c. Subject to any infestations and dilapidation;
- d. Subject to all existing water, sewerage, drainage and plumbing services and connections in respect of the property; and
- e. Subject to any non-compliance, that is disclosed herein, with the Local Government Act or any Ordinance under that Act in respect of any building on the land.

The purchaser agrees not to seek to terminate rescind or make any objection requisition or claim for compensation arising out of any of the matters covered by this clause.

Special Condition 12 - Auction clause

If the property is offered for sale by public auction, subject to the vendor's reserve price. The rules for the conduct of the auction shall be as set out in the schedules to the Sale of Land (Public Auctions) Regulations 2014 or any rules prescribed by regulation which modify or replace those rules.

Special Condition 13 – Priority of Conditions

To the extent there is any inconsistency between the Special Conditions and General Conditions then the Special Conditions prevail over the General Conditions.

Special Condition 14 – Loss and Damages

The parties acknowledge that in the event that the Purchaser fails to complete the purchase of the property on the due date under the Contract, the Vendor will suffer loss and damages. The Purchaser will in addition to interest chargeable on the balance of purchase moneys outstanding under

the Contract pay to the Vendor the following sums:

1. The cost of obtaining bridging finance to complete the Vendor's purchase of another property and interest charged on such bridging finance;
2. Interest payable by the Vendor under any existing mortgage over the property calculated from the due date of settlement;
3. Accommodation expenses necessarily incurred by the Vendor;
4. Storage cost of the Vendor's furniture and other possessions;
5. Legal costs and expenses as between solicitor and client;
6. Penalties payable by the Vendor through any delay in completion of the Vendors purchase of another property;

Special Condition 15

The purchaser buys subject to the provisions of any operative Planning Scheme and any restrictions imposed thereunder. The Purchaser buys subject to any easements covenants and encumbrances which may encumber the Property despite not being registered upon the Certificate of Title in the Particulars of Sale.

Special Condition 16

It is hereby agreed between the parties hereto that there are no conditions, warranties or other terms affecting this sale other than those embodied herein and the purchaser shall not be entitled to rely on any representations made by the vendor or her Agent except such as are made conditions of this contract.

Special Condition 17

The land and buildings (if any) as sold hereby and inspected by the purchaser is sold on the basis of existing improvements thereon and the purchaser shall not make any requisition or claim any compensation for any deficiency or defect in the said improvements or present state of the land and buildings (if any) as to their suitability for occupation or otherwise including any requisition in relation to the issue or non-issue of Building Permits and/or completion of inspections by the relevant authorities in respect of any improvements herein.

Special Condition 18

The Purchaser agrees not to seek any contribution from the Vendor for the cost of connection any service to the land and acknowledges all connections required are to be at the Purchaser's own expense.

Special Condition 19

If the settlement does not take place on the date specified in the Contract and needs to be rescheduled, the Vendor will incur additional costs of \$165 (for each rescheduled date) which will be payable by the Purchaser to the Vendor's representative in payment of additional costs associated with rescheduling the settlement.

Special Condition 20 – Chattels

The Purchaser acknowledges that any chattels sold with the property or in any way included in this transaction are those listed in the Particulars of Sale.

The Purchaser accepts that all fixed appliances as inspected may not be in normal working condition and it is not the Vendor's responsibility to convert those appliances to working condition or to maintain them in working condition at or prior to settlement.

Special Condition 21 – Condition of the Walls

If on or before the day of sale, the Vendor has affixed, applied or installed implements on the walls of the building or the property for the purpose of displaying picture or other decorative items, the Vendor will not be required or obliged to remove such implements if such items are removed, or to restore or reinstate the walls and the Purchaser buys the property subject to the condition of the walls the day of sale.

The Purchaser acknowledges that the Vendor has affixed, applied and/or installed fixtures & fittings on the walls of the property for the purposes of, but not limited to hanging pictures, shelving and/or TV brackets. The Purchaser will not call upon the Vendor to repair, rectify and/or reinstate any item or condition of the walls and doors of the dwelling.

The Purchaser acknowledges the provisions of GC 31 and will not call upon the Vendor to clean, maintain, repair or replace any fixtures, fittings or any item included in the sale of this property.

Special Condition 22 – No Land Tax Adjustment

Where the Day of Sale is 1/1/2024 or later, and the Sale Price of the Property is less than \$10,000,000.00, General Condition 23 is hereby varied to the extent that there shall be no adjustment of any Land Tax for the Property, and the Purchaser shall not be required to make any payment or contribution to the Vendor's Land Tax at Settlement or otherwise.

Special Condition 23 – Windfall Gains Tax (WGT)

Where the Day of Sale is 1/1/2024 or later, then this Special Condition shall apply and in this condition:-

- 23.1 "WGT Act" means *The Windfall Gains Tax and State Taxation and Other Acts Further Amendment Act, 2021*; and
- 23.2 "WGT" means Windfall Gains Tax under the WGT Act, and includes penalty and interest and interest.

For the purposes of this Special Condition and under the WGT Act, a WGT event occurs when the rezoning that constitutes the WGT event takes effect under *the Planning and Environment Act, 1987*, occurring on or after 1st of July 2023.

- 23.3 The Purchaser acknowledges that the Property may be, or become in the future, subject to WGT.
- 23.4 Where WGT has not already been assessed, or is assessed after the Day of Sale but before Settlement, the Vendor, at its

absolute discretion, may elect to defer part or whole of the payment in accordance with section 31 of the WGT Act.

- 23.5 The Vendor and Purchaser acknowledge the Valuer General for the State of Victoria will be responsible for determining the value of the Property before and after a rezoning and agree the valuation in force immediately before the WGT event will be the most recent valuation as prepared by the Valuer General for Council Rating purposes as at the 1st of January each year.
- 23.6 Where WGT has not already been assessed as at the Day of Sale, the Vendor and Purchaser agree the Vendor is not liable for any WGT applicable to the Property as Acquired Land. The Purchaser acknowledges and agrees that it is responsible for payment of any WGT assessment on the Property, at settlement of this Contract.
- 23.7 The Vendor and Purchaser agree and acknowledge that where the Purchaser is or becomes liable to pay WGT for the Property, the Purchaser is entitled to any whole or partial credits or refunds applicable of WGT after payment of the WGT.

SCHEDULE 1

GENERAL RULES FOR THE CONDUCT OF PUBLIC AUCTION

1. The auctioneer may make one or more bids on behalf of the vendor of the land at any time during the auction.
2. The auctioneer may refuse any bid.
3. The auctioneer may determine the amount by which the bidding is to be advanced.
4. The auctioneer may withdraw the property from sale at any time.
5. The auctioneer may refer a bid to the vendor at any time before conclusion of the auction.
6. In the event of a dispute concerning a bid, the auctioneer may re-submit the property for sale at the last undisputed bid or start the bidding again.
7. The auctioneer must not accept any bid or offer for a property that is made after the property has been knocked down to the successful bidder, unless the Vendor or successful bidder at the Auction refuses to sign the Contract of Sale following the Auction.
8. If a reserve price has been set for the property and the property is passed in below the reserved price, the vendor will first negotiate with the highest bidder for the purchase of the property.

Guarantee for Corporate Purchaser

In consideration of the vendor contracting with the corporate purchaser (the guarantors), as is evidenced by the guarantors' execution hereof, guarantee the performance by the purchaser of all of the purchaser's obligations under the contract and indemnify the vendor against any cost or loss whatsoever arising as a result of the default by the purchaser in performing its obligations under this contract for whatever reason. The vendor may seek to recover any loss from the guarantor before seeking recovery from the purchaser and any settlement or compromise with the purchaser will not release the guarantor from the obligation to pay any balance that may be owing to the vendor. This guarantee is binding on the guarantors, their executors, administrators and assigns and the benefit of the guarantee is available to any assignee of the benefit of this contract by the vendor.

SIGNED by _____)
the guarantors in the presence of: _____)

Signature

Signature of Witness

Print Name of Witness

DATED / /

General conditions

Contract signing

1. ELECTRONIC SIGNATURE

- 1.1 In this general condition “electronic signature” means a digital signature or a visual representation of a person’s handwritten signature or mark which is placed on a physical or electronic copy of this contract by electronic or mechanical means, and “electronically signed” has a corresponding meaning.
- 1.2 The parties’ consent to this contract being signed by or on behalf of a party by an electronic signature.
- 1.3 Where this contract is electronically signed by or on behalf of a party, the party warrants and agrees that the electronic signature has been used to identify the person signing and to indicate that the party intends to be bound by the electronic signature.
- 1.4 This contract may be electronically signed in any number of counterparts which together will constitute the one document.
- 1.5 Each party consents to the exchange of counterparts of this contract by delivery by email or such other electronic means as may be agreed in writing.
- 1.6 Each party must upon request promptly deliver a physical counterpart of this contract with the handwritten signature or signatures of the party and all written evidence of the authority of a person signing on their behalf, but a failure to comply with the request does not affect the validity of this contract.

2. LIABILITY OF SIGNATORY

Any signatory for a proprietary limited company purchaser is personally liable for the due performance of the purchaser’s obligations as if the signatory were the purchaser in the case of a default by a proprietary limited company purchaser.

3. GUARANTEE

The vendor may require one or more directors of the purchaser to guarantee the purchaser’s performance of this contract if the purchaser is a proprietary limited company.

4. NOMINEE

The purchaser may no later than 14 days before the due date for settlement nominate a substitute or additional person to take a transfer of the land, but the named purchaser remains personally liable for the due performance of all the purchaser’s obligations under this contract.

Title

5. ENCUMBRANCES

- 5.1 The purchaser buys the property subject to:
 - (a) any encumbrance shown in the section 32 statement other than mortgages or caveats; and
 - (b) any reservations, exceptions and conditions in the crown grant; and
 - (c) any lease or tenancy referred to in the particulars of sale.
- 5.2 The purchaser indemnifies the vendor against all obligations under any lease or tenancy that are to be performed by the landlord after settlement.

6. VENDOR WARRANTIES

- 6.1 The vendor warrants that these general conditions 1 to 35 are identical to the general conditions 1 to 35 in the form of contract of sale of land published by the Law Institute of Victoria Limited and the Real Estate Institute of Victoria Ltd in the month and year set out at the foot of this page.
- 6.2 The warranties in general conditions 6.3 and 6.4 replace the purchaser’s right to make requisitions and inquiries.
- 6.3 The vendor warrants that the vendor:
 - (a) has, or by the due date for settlement will have, the right to sell the land; and
 - (b) is under no legal disability; and
 - (c) is in possession of the land, either personally or through a tenant; and
 - (d) has not previously sold or granted any option to purchase, agreed to a lease or granted a pre-emptive right which is current over the land and which gives another party rights which have priority over the interest of the purchaser; and
 - (e) will at settlement be the holder of an unencumbered estate in fee simple in the land; and
 - (f) will at settlement be the unencumbered owner of any improvements, fixtures, fittings and goods sold with the land.

- 6.4 The vendor further warrants that the vendor has no knowledge of any of the following:
- (a) public rights of way over the land;
 - (b) easements over the land;
 - (c) lease or other possessory agreement affecting the land;
 - (d) notice or order directly and currently affecting the land which will not be dealt with at settlement, other than the usual rate notices and any land tax notices;
 - (e) legal proceedings which would render the sale of the land void or voidable or capable of being set aside.
- 6.5 The warranties in general conditions 6.3 and 6.4 are subject to any contrary provisions in this contract and disclosures in the section 32 statement.
- 6.6 If sections 137B and 137C of the *Building Act* 1993 apply to this contract, the vendor warrants that:
- (a) all domestic building work carried out in relation to the construction by or on behalf of the vendor of the home was carried out in a proper and workmanlike manner; and
 - (b) all materials used in that domestic building work were good and suitable for the purpose for which they were used and that, unless otherwise stated in the contract, those materials were new; and
 - (c) domestic building work was carried out in accordance with all laws and legal requirements, including, without limiting the generality of this warranty, the *Building Act* 1993 and regulations made under the *Building Act* 1993.
- 6.7 Words and phrases used in general condition 6.6 which are defined in the *Building Act* 1993 have the same meaning in general condition 6.6.

7. IDENTITY OF THE LAND

- 7.1 An omission or mistake in the description of the property or any deficiency in the area, description or measurements of the land does not invalidate the sale.
- 7.2 The purchaser may not:
- (a) make any objection or claim for compensation for any alleged misdescription of the property or any deficiency in its area or measurements; or
 - (b) require the vendor to amend title or pay any cost of amending title.

8. SERVICES

- 8.1 The vendor does not represent that the services are adequate for the purchaser's proposed use of the property and the vendor advises the purchaser to make appropriate inquiries. The condition of the services may change between the day of sale and settlement and the vendor does not promise that the services will be in the same condition at settlement as they were on the day of sale.
- 8.2 The purchaser is responsible for the connection of all services to the property after settlement and the payment of any associated cost.

9. CONSENTS

The vendor must obtain any necessary consent or licence required for the vendor to sell the property. The contract will be at an end and all money paid must be refunded if any necessary consent or licence is not obtained by settlement.

10. TRANSFER & DUTY

- 10.1 The purchaser must prepare and deliver to the vendor at least 7 days before the due date for settlement any paper transfer of land document which is necessary for this transaction. The delivery of the transfer of land document is not acceptance of title.
- 10.2 The vendor must promptly initiate the Duties on Line or other form required by the State Revenue Office in respect of this transaction, and both parties must co-operate to complete it as soon as practicable.

11. RELEASE OF SECURITY INTEREST

- 11.1 This general condition applies if any part of the property is subject to a security interest to which the *Personal Property Securities Act* 2009 (Cth) applies.
- 11.2 For the purposes of enabling the purchaser to search the Personal Property Securities Register for any security interests affecting any personal property for which the purchaser may be entitled to a release, statement, approval or correction in accordance with general condition 11.4, the purchaser may request the vendor to provide the vendor's date of birth to the purchaser. The vendor must comply with a request made by the purchaser under this condition if the purchaser makes the request at least 21 days before the due date for settlement.
- 11.3 If the purchaser is given the details of the vendor's date of birth under general condition 11.2, the purchaser must
- (a) only use the vendor's date of birth for the purposes specified in general condition 11.2; and
 - (b) keep the date of birth of the vendor secure and confidential.

- 11.4 The vendor must ensure that at or before settlement, the purchaser receives—
- (a) a release from the secured party releasing the property from the security interest; or
 - (b) a statement in writing in accordance with section 275(1)(b) of the *Personal Property Securities Act 2009* (Cth) setting out that the amount or obligation that is secured is nil at settlement; or
 - (c) a written approval or correction in accordance with section 275(1)(c) of the *Personal Property Securities Act 2009* (Cth) indicating that, on settlement, the personal property included in the contract is not or will not be property in which the security interest is granted.
- 11.5 Subject to general condition 11.6, the vendor is not obliged to ensure that the purchaser receives a release, statement, approval or correction in respect of personal property—
- (a) that—
 - (i) the purchaser intends to use predominantly for personal, domestic or household purposes; and
 - (ii) has a market value of not more than \$5000 or, if a greater amount has been prescribed for the purposes of section 47(1) of the *Personal Property Securities Act 2009* (Cth), not more than that prescribed amount; or
 - (b) that is sold in the ordinary course of the vendor's business of selling personal property of that kind.
- 11.6 The vendor is obliged to ensure that the purchaser receives a release, statement, approval or correction in respect of personal property described in general condition 11.5 if—
- (a) the personal property is of a kind that may or must be described by serial number in the Personal Property Securities Register; or
 - (b) the purchaser has actual or constructive knowledge that the sale constitutes a breach of the security agreement that provides for the security interest.
- 11.7 A release for the purposes of general condition 11.4(a) must be in writing.
- 11.8 A release for the purposes of general condition 11.4(a) must be effective in releasing the goods from the security interest and be in a form which allows the purchaser to take title to the goods free of that security interest.
- 11.9 If the purchaser receives a release under general condition 11.4(a) the purchaser must provide the vendor with a copy of the release at or as soon as practicable after settlement.
- 11.10 In addition to ensuring that a release is received under general condition 11.4(a), the vendor must ensure that at or before settlement the purchaser receives a written undertaking from a secured party to register a financing change statement to reflect that release if the property being released includes goods of a kind that are described by serial number in the Personal Property Securities Register.
- 11.11 The purchaser must advise the vendor of any security interest that is registered on or before the day of sale on the Personal Property Securities Register, which the purchaser reasonably requires to be released, at least 21 days before the due date for settlement.
- 11.12 The vendor may delay settlement until 21 days after the purchaser advises the vendor of the security interests that the purchaser reasonably requires to be released if the purchaser does not provide an advice under general condition 11.11.
- 11.13 If settlement is delayed under general condition 11.12 the purchaser must pay the vendor—
- (a) interest from the due date for settlement until the date on which settlement occurs or 21 days after the vendor receives the advice, whichever is the earlier; and
 - (b) any reasonable costs incurred by the vendor as a result of the delay—
as though the purchaser was in default.
- 11.14 The vendor is not required to ensure that the purchaser receives a release in respect of the land. This general condition 11.14 applies despite general condition 11.1.
- 11.15 Words and phrases which are defined in the *Personal Property Securities Act 2009* (Cth) have the same meaning in general condition 11 unless the context requires otherwise.

12. BUILDER WARRANTY INSURANCE

The vendor warrants that the vendor will provide at settlement details of any current builder warranty insurance in the vendor's possession relating to the property if requested in writing to do so at least 21 days before settlement.

13. GENERAL LAW LAND

- 13.1 The vendor must complete a conversion of title in accordance with section 14 of the *Transfer of Land Act 1958* before settlement if the land is the subject of a provisional folio under section 23 of that Act.
- 13.2 The remaining provisions of this general condition 13 only apply if any part of the land is not under the operation of the *Transfer of Land Act 1958*.

- 13.3 The vendor is taken to be the holder of an unencumbered estate in fee simple in the land if there is an unbroken chain of title starting at least 30 years before the day of sale proving on the face of the documents the ownership of the entire legal and equitable estate without the aid of other evidence.
- 13.4 The purchaser is entitled to inspect the vendor's chain of title on request at such place in Victoria as the vendor nominates.
- 13.5 The purchaser is taken to have accepted the vendor's title if:
- (a) 21 days have elapsed since the day of sale; and
 - (b) the purchaser has not reasonably objected to the title or reasonably required the vendor to remedy a defect in the title.
- 13.6 The contract will be at an end if:
- (a) the vendor gives the purchaser a notice that the vendor is unable or unwilling to satisfy the purchaser's objection or requirement and that the contract will end if the objection or requirement is not withdrawn within 14 days of the giving of the notice; and
 - (b) the objection or requirement is not withdrawn in that time.
- 13.7 If the contract ends in accordance with general condition 13.6, the deposit must be returned to the purchaser and neither party has a claim against the other in damages.
- 13.8 General condition 17.1 [settlement] should be read as if the reference to 'registered proprietor' is a reference to 'owner' in respect of that part of the land which is not under the operation of the *Transfer of Land Act 1958*.
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Money

14. DEPOSIT

- 14.1 The purchaser must pay the deposit:
- (a) to the vendor's licensed estate agent; or
 - (b) if there is no estate agent, to the vendor's legal practitioner or conveyancer; or
 - (c) if the vendor directs, into a special purpose account in an authorised deposit-taking institution in Victoria specified by the vendor in the joint names of the purchaser and the vendor.
- 14.2 If the land sold is a lot on an unregistered plan of subdivision, the deposit:
- (a) must not exceed 10% of the price; and
 - (b) must be paid to the vendor's estate agent, legal practitioner or conveyancer and held by the estate agent, legal practitioner or conveyancer on trust for the purchaser until the registration of the plan of subdivision.
- 14.3 The deposit must be released to the vendor if:
- (a) the vendor provides particulars, to the satisfaction of the purchaser, that either:
 - (i) there are no debts secured against the property; or
 - (ii) if there are any debts, the total amount of those debts together with any amounts to be withheld in accordance with general conditions 24 and 25 does not exceed 80% of the sale price; and
 - (b) at least 28 days have elapsed since the particulars were given to the purchaser under paragraph (a); and
 - (c) all conditions of section 27 of the *Sale of Land Act 1962* have been satisfied.
- 14.4 The stakeholder must pay the deposit and any interest to the party entitled when the deposit is released, the contract is settled, or the contract is ended.
- 14.5 The stakeholder may pay the deposit and any interest into court if it is reasonable to do so.
- 14.6 Where the purchaser is deemed by section 27(7) of the *Sale of Land Act 1962* to have given the deposit release authorisation referred to in section 27(1), the purchaser is also deemed to have accepted title in the absence of any prior express objection to title.
- 14.7 Payment of the deposit may be made or tendered:
- (a) in cash up to \$1,000 or 0.2% of the price, whichever is greater; or
 - (b) by cheque drawn on an authorised deposit-taking institution; or
 - (c) by electronic funds transfer to a recipient having the appropriate facilities for receipt.
- However, unless otherwise agreed:

- (d) payment may not be made by credit card, debit card or any other financial transfer system that allows for any chargeback or funds reversal other than for fraud or mistaken payment, and
 - (e) any financial transfer or similar fees or deductions from the funds transferred, other than any fees charged by the recipient's authorised deposit-taking institution, must be paid by the remitter.
- 14.8 Payment by electronic funds transfer is made when cleared funds are received in the recipient's bank account.
- 14.9 Before the funds are electronically transferred the intended recipient must be notified in writing and given sufficient particulars to readily identify the relevant transaction.
- 14.10 As soon as the funds have been electronically transferred the intended recipient must be provided with the relevant transaction number or reference details.
- 14.11 For the purpose of this general condition 'authorised deposit-taking institution' means a body corporate for which an authority under section 9(3) of the *Banking Act 1959* (Cth) is in force.

15. DEPOSIT BOND

- 15.1 This general condition only applies if the applicable box in the particulars of sale is checked.
- 15.2 In this general condition "deposit bond" means an irrevocable undertaking to pay on demand an amount equal to the deposit or any unpaid part of the deposit. The issuer and the form of the deposit bond must be satisfactory to the vendor. The deposit bond must have an expiry date at least 45 days after the due date for settlement.
- 15.3 The purchaser may deliver a deposit bond to the vendor's estate agent, legal practitioner or conveyancer within 7 days after the day of sale.
- 15.4 The purchaser may at least 45 days before a current deposit bond expires deliver a replacement deposit bond on the same terms and conditions.
- 15.5 Where a deposit bond is delivered, the purchaser must pay the deposit to the vendor's legal practitioner or conveyancer on the first to occur of:
- (a) settlement;
 - (b) the date that is 45 days before the deposit bond or any replacement deposit bond expires;
 - (c) the date on which this contract ends in accordance with general condition 35.2 [default not remedied] following breach by the purchaser; and
 - (d) the date on which the vendor ends this contract by accepting repudiation of it by the purchaser.
- 15.6 The vendor may claim on the deposit bond without prior notice if the purchaser defaults under this contract or repudiates this contract and the contract is ended. The amount paid by the issuer satisfies the obligations of the purchaser under general condition 15.5 to the extent of the payment.
- 15.7 Nothing in this general condition limits the rights of the vendor if the purchaser defaults under this contract or repudiates this contract, except as provided in general condition 15.6.
- 15.8 This general condition is subject to general condition 14.2 [deposit].

16. BANK GUARANTEE

- 16.1 This general condition only applies if the applicable box in the particulars of sale is checked.
- 16.2 In this general condition:
- (a) "bank guarantee" means an unconditional and irrevocable guarantee or undertaking by a bank in a form satisfactory to the vendor to pay on demand any amount under this contract agreed in writing, and
 - (b) "bank" means an authorised deposit-taking institution under the *Banking Act 1959* (Cth).
- 16.3 The purchaser may deliver a bank guarantee to the vendor's legal practitioner or conveyancer.
- 16.4 The purchaser must pay the amount secured by the bank guarantee to the vendor's legal practitioner or conveyancer on the first to occur of:
- (a) settlement;
 - (b) the date that is 45 days before the bank guarantee expires;
 - (c) the date on which this contract ends in accordance with general condition 35.2 [default not remedied] following breach by the purchaser; and
 - (d) the date on which the vendor ends this contract by accepting repudiation of it by the purchaser.
- 16.5 The vendor must return the bank guarantee document to the purchaser when the purchaser pays the amount secured by the bank guarantee in accordance with general condition 16.4.
- 16.6 The vendor may claim on the bank guarantee without prior notice if the purchaser defaults under this contract or repudiates this contract and the contract is ended. The amount paid by the bank satisfies the obligations of the purchaser under general condition 16.4 to the extent of the payment.

- 16.7 Nothing in this general condition limits the rights of the vendor if the purchaser defaults under this contract or repudiates this contract except as provided in general condition 16.6.
- 16.8 This general condition is subject to general condition 14.2 [deposit].

17. SETTLEMENT

- 17.1 At settlement:
- (a) the purchaser must pay the balance; and
 - (b) the vendor must:
 - (i) do all things necessary to enable the purchaser to become the registered proprietor of the land; and
 - (ii) give either vacant possession or receipt of rents and profits in accordance with the particulars of sale.
- 17.2 Settlement must be conducted between the hours of 10.00 am and 4.00 pm unless the parties agree otherwise.
- 17.3 The purchaser must pay all money other than the deposit in accordance with a written direction of the vendor or the vendor's legal practitioner or conveyancer.

18. ELECTRONIC SETTLEMENT

- 18.1 Settlement and lodgement of the instruments necessary to record the purchaser as registered proprietor of the land will be conducted electronically in accordance with the Electronic Conveyancing National Law. This general condition 18 has priority over any other provision of this contract to the extent of any inconsistency.
- 18.2 A party must immediately give written notice if that party reasonably believes that settlement and lodgement can no longer be conducted electronically. General condition 18 ceases to apply from when such a notice is given.
- 18.3 Each party must:
- (a) be, or engage a representative who is, a subscriber for the purposes of the Electronic Conveyancing National Law,
 - (b) ensure that all other persons for whom that party is responsible and who are associated with this transaction are, or engage, a subscriber for the purposes of the Electronic Conveyancing National Law, and
 - (c) conduct the transaction in accordance with the Electronic Conveyancing National Law.
- 18.4 The vendor must open the electronic workspace ("workspace") as soon as reasonably practicable and nominate a date and time for settlement. The inclusion of a specific date and time for settlement in a workspace is not of itself a promise to settle on that date or at that time. The workspace is an electronic address for the service of notices and for written communications for the purposes of any electronic transactions legislation.
- 18.5 This general condition 18.5 applies if there is more than one electronic lodgement network operator in respect of the transaction. In this general condition 18.5 "the transaction" means this sale and purchase and any associated transaction involving any of the same subscribers.
- To the extent that any interoperability rules governing the relationship between electronic lodgement network operators do not provide otherwise:
- (a) the electronic lodgement network operator to conduct all the financial and lodgement aspects of the transaction after the workspace locks must be one which is willing and able to conduct such aspects of the transaction in accordance with the instructions of all the subscribers in the workspaces of all the electronic lodgement network operators after the workspace locks;
 - (b) if two or more electronic lodgement network operators meet that description, one may be selected by purchaser's incoming mortgagee having the highest priority but if there is no mortgagee of the purchaser, the vendor must make the selection.
- 18.6 Settlement occurs when the workspace records that:
- (a) there has been an exchange of funds or value between the exchange settlement account or accounts in the Reserve Bank of Australia of the relevant financial institutions or their financial settlement agents in accordance with the instructions of the parties; or
 - (b) if there is no exchange of funds or value, the documents necessary to enable the purchaser to become registered proprietor of the land have been accepted for electronic lodgement.
- 18.7 The parties must do everything reasonably necessary to effect settlement:
- (a) electronically on the next business day, or
 - (b) at the option of either party, otherwise than electronically as soon as possible –
- if, after the locking of the workspace at the nominated settlement time, settlement in accordance with general condition 18.6 has not occurred by 4.00 pm, or 6.00 pm if the nominated time for settlement is after 4.00 pm.
- 18.8 Each party must do everything reasonably necessary to assist the other party to trace and identify the recipient of any missing or mistaken payment and to recover the missing or mistaken payment.
- 18.9 The vendor must before settlement:
- (a) deliver any keys, security devices and codes ("keys") to the estate agent named in the contract,
 - (b) direct the estate agent to give the keys to the purchaser or the purchaser's nominee on notification of settlement by the vendor, the vendor's subscriber or the electronic lodgement network operator;

- (c) deliver all other physical documents and items (other than the goods sold by the contract) to which the purchaser is entitled at settlement, and any keys if not delivered to the estate agent, to the vendor's subscriber or, if there is no vendor's subscriber, confirm in writing to the purchaser that the vendor holds those documents, items and keys at the vendor's address set out in the contract, and

give, or direct its subscriber to give, all those documents and items and any such keys to the purchaser or the purchaser's nominee on notification by the electronic lodgement network operator of settlement.

19. GST

- 19.1 The purchaser does not have to pay the vendor any amount in respect of GST in addition to the price if the particulars of sale specify that the price includes GST (if any).
- 19.2 The purchaser must pay to the vendor any GST payable by the vendor in respect of a taxable supply made under this contract in addition to the price if:
 - (a) the particulars of sale specify that GST (if any) must be paid in addition to the price; or
 - (b) GST is payable solely as a result of any action taken or intended to be taken by the purchaser after the day of sale, including a change of use; or
 - (c) the particulars of sale specify that the supply made under this contract is of land on which a 'farming business' is carried on and the supply (or part of it) does not satisfy the requirements of section 38-480 of the GST Act; or
 - (d) the particulars of sale specify that the supply made under this contract is of a going concern and the supply (or a part of it) does not satisfy the requirements of section 38-325 of the GST Act.
- 19.3 The purchaser is not obliged to pay any GST under this contract until a tax invoice has been given to the purchaser, unless the margin scheme applies.
- 19.4 If the particulars of sale specify that the supply made under this contract is of land on which a 'farming business' is carried on:
 - (a) the vendor warrants that the property is land on which a farming business has been carried on for the period of 5 years preceding the date of supply; and
 - (b) the purchaser warrants that the purchaser intends that a farming business will be carried on after settlement on the property.
- 19.5 If the particulars of sale specify that the supply made under this contract is a 'going concern':
 - (a) the parties agree that this contract is for the supply of a going concern; and
 - (b) the purchaser warrants that the purchaser is, or prior to settlement will be, registered for GST; and
 - (c) the vendor warrants that the vendor will carry on the going concern until the date of supply.
- 19.6 If the particulars of sale specify that the supply made under this contract is a 'margin scheme' supply, the parties agree that the margin scheme applies to this contract.
- 19.7 In this general condition:
 - (a) 'GST Act' means *A New Tax System (Goods and Services Tax) Act 1999 (Cth)*; and
 - (b) 'GST' includes penalties and interest.

20. LOAN

- 20.1 If the particulars of sale specify that this contract is subject to a loan being approved, this contract is subject to the lender approving the loan on the security of the property by the approval date or any later date allowed by the vendor.
- 20.2 The purchaser may end the contract if the loan is not approved by the approval date, but only if the purchaser:
 - (a) immediately applied for the loan; and
 - (b) did everything reasonably required to obtain approval of the loan; and
 - (c) serves written notice ending the contract, together with written evidence of rejection or non-approval of the loan, on the vendor within 2 clear business days after the approval date or any later date allowed by the vendor; and
 - (d) is not in default under any other condition of this contract when the notice is given.
- 20.3 All money must be immediately refunded to the purchaser if the contract is ended.

21. BUILDING REPORT

- 21.1 This general condition only applies if the applicable box in the particulars of sale is checked.
- 21.2 The purchaser may end this contract within 14 days from the day of sale if the purchaser:
 - (a) obtains a written report from a registered building practitioner or architect which discloses a current defect in a structure on the land and designates it as a major building defect;
 - (b) gives the vendor a copy of the report and a written notice ending this contract; and
 - (c) is not then in default.
- 21.3 All money paid must be immediately refunded to the purchaser if the contract ends in accordance with this general condition.

- 21.4 A notice under this general condition may be served on the vendor's legal practitioner, conveyancer or estate agent even if the estate agent's authority has formally expired at the time of service.
- 21.5 The registered building practitioner may inspect the property at any reasonable time for the purpose of preparing the report.

22. PEST REPORT

- 22.1 This general condition only applies if the applicable box in the particulars of sale is checked.
- 22.2 The purchaser may end this contract within 14 days from the day of sale if the purchaser:
- (a) obtains a written report from a pest control operator licensed under Victorian law which discloses a current pest infestation on the land and designates it as a major infestation affecting the structure of a building on the land;
 - (b) gives the vendor a copy of the report and a written notice ending this contract; and
 - (c) is not then in default.
- 22.3 All money paid must be immediately refunded to the purchaser if the contract ends in accordance with this general condition.
- 22.4 A notice under this general condition may be served on the vendor's legal practitioner, conveyancer or estate agent even if the estate agent's authority has formally expired at the time of service.
- 22.5 The pest control operator may inspect the property at any reasonable time for the purpose of preparing the report.

23. ADJUSTMENTS

- 23.1 All periodic outgoings payable by the vendor, and any rent and other income received in respect of the property must be apportioned between the parties on the settlement date and any adjustments paid and received as appropriate.
- 23.2 The periodic outgoings and rent and other income must be apportioned on the following basis:
- (a) the vendor is liable for the periodic outgoings and entitled to the rent and other income up to and including the day of settlement; and
 - (b) the land is treated as the only land of which the vendor is owner (as defined in the *Land Tax Act 2005*); and
 - (c) the vendor is taken to own the land as a resident Australian beneficial owner; and
 - (d) any personal statutory benefit available to each party is disregarded in calculating apportionment.
- 23.3 The purchaser must provide copies of all certificates and other information used to calculate the adjustments under general condition 23, if requested by the vendor.

24. FOREIGN RESIDENT CAPITAL GAINS WITHHOLDING

- 24.1 Words defined or used in Subdivision 14-D of Schedule 1 to the *Taxation Administration Act 1953* (Cth) have the same meaning in this general condition unless the context requires otherwise.
- 24.2 Every vendor under this contract is a foreign resident for the purposes of this general condition unless the vendor gives the purchaser a clearance certificate issued by the Commissioner under section 14-220 (1) of Schedule 1 to the *Taxation Administration Act 1953* (Cth). The specified period in the clearance certificate must include the actual date of settlement.
- 24.3 The remaining provisions of this general condition 24 only apply if the purchaser is required to pay the Commissioner an amount in accordance with section 14-200(3) or section 14-235 of Schedule 1 to the *Taxation Administration Act 1953* (Cth) ("the amount") because one or more of the vendors is a foreign resident, the property has or will have a market value not less than the amount set out in section 14-215 of the legislation just after the transaction, and the transaction is not excluded under section 14-215(1) of the legislation.
- 24.4 The amount is to be deducted from the vendor's entitlement to the contract consideration. The vendor must pay to the purchaser at settlement such part of the amount as is represented by non-monetary consideration.
- 24.5 The purchaser must:
- (a) engage a legal practitioner or conveyancer ("representative") to conduct all the legal aspects of settlement, including the performance of the purchaser's obligations under the legislation and this general condition; and
 - (b) ensure that the representative does so.
- 24.6 The terms of the representative's engagement are taken to include instructions to have regard to the vendor's interests and instructions that the representative must:
- (a) pay, or ensure payment of, the amount to the Commissioner in the manner required by the Commissioner and as soon as reasonably and practicably possible, from moneys under the control or direction of the representative in accordance with this general condition if the sale of the property settles;
 - (b) promptly provide the vendor with proof of payment; and
 - (c) otherwise comply, or ensure compliance, with this general condition;
- despite:
- (d) any contrary instructions, other than from both the purchaser and the vendor; and
 - (e) any other provision in this contract to the contrary.
- 24.7 The representative is taken to have complied with the requirements of general condition 24.6 if:
- (a) the settlement is conducted through an electronic lodgement network; and

- (b) the amount is included in the settlement statement requiring payment to the Commissioner in respect of this transaction.
- 24.8 Any clearance certificate or document evidencing variation of the amount in accordance with section 14-235(2) of Schedule 1 to the *Taxation Administration Act 1953* (Cth) must be given to the purchaser at least 5 business days before the due date for settlement.
- 24.9 The vendor must provide the purchaser with such information as the purchaser requires to comply with the purchaser's obligation to pay the amount in accordance with section 14-200 of Schedule 1 to the *Taxation Administration Act 1953* (Cth). The information must be provided within 5 business days of request by the purchaser. The vendor warrants that the information the vendor provides is true and correct.
- 24.10 The purchaser is responsible for any penalties or interest payable to the Commissioner on account of late payment of the amount.

25. GST WITHHOLDING

- 25.1 Words and expressions defined or used in Subdivision 14-E of Schedule 1 to the *Taxation Administration Act 1953* (Cth) or in *A New Tax System (Goods and Services Tax) Act 1999* (Cth) have the same meaning in this general condition unless the context requires otherwise. Words and expressions first used in this general condition and shown in italics and marked with an asterisk are defined or described in at least one of those Acts.
- 25.2 The purchaser must notify the vendor in writing of the name of the recipient of the *supply for the purposes of section 14-255 of Schedule 1 to the *Taxation Administration Act 1953* (Cth) at least 21 days before the due date for settlement unless the recipient is the purchaser named in the contract.
- 25.3 The vendor must at least 14 days before the due date for settlement provide the purchaser and any person nominated by the purchaser under general condition 4 with a GST withholding notice in accordance with section 14-255 of Schedule 1 to the *Taxation Administration Act 1953* (Cth), and must provide all information required by the purchaser or any person so nominated to confirm the accuracy of the notice.
- 25.4 The remaining provisions of this general condition 25 apply if the purchaser is or may be required to pay the Commissioner an *amount in accordance with section 14-250 of Schedule 1 to the *Taxation Administration Act 1953* (Cth) because the property is *new residential premises or *potential residential land in either case falling within the parameters of that section, and also if the sale attracts the operation of section 14-255 of the legislation. Nothing in this general condition 25 is to be taken as relieving the vendor from compliance with section 14-255.
- 25.5 The amount is to be deducted from the vendor's entitlement to the contract *consideration and is then taken to be paid to the vendor, whether or not the vendor provides the purchaser with a GST withholding notice in accordance with section 14-255 of Schedule 1 to the *Taxation Administration Act 1953* (Cth). The vendor must pay to the purchaser at settlement such part of the amount as is represented by non-monetary consideration.
- 25.6 The purchaser must:
 - (a) engage a legal practitioner or conveyancer ("representative") to conduct all the legal aspects of settlement, including the performance of the purchaser's obligations under the legislation and this general condition; and
 - (b) ensure that the representative does so.
- 25.7 The terms of the representative's engagement are taken to include instructions to have regard to the vendor's interests relating to the payment of the amount to the Commissioner and instructions that the representative must:
 - (a) pay, or ensure payment of, the amount to the Commissioner in the manner required by the Commissioner and as soon as reasonably and practicably possible, from moneys under the control or direction of the representative in accordance with this general condition on settlement of the sale of the property;
 - (b) promptly provide the vendor with evidence of payment, including any notification or other document provided by the purchaser to the Commissioner relating to payment; and
 - (c) otherwise comply, or ensure compliance, with this general condition;
 despite:
 - (d) any contrary instructions, other than from both the purchaser and the vendor; and
 - (e) any other provision in this contract to the contrary.
- 25.8 The representative is taken to have complied with the requirements of general condition 25.7 if:
 - (a) settlement is conducted through an electronic lodgement network; and
 - (b) the amount is included in the settlement statement requiring payment to the Commissioner in respect of this transaction.
- 25.9 The purchaser may at settlement give the vendor a bank cheque for the amount in accordance with section 16-30 (3) of Schedule 1 to the *Taxation Administration Act 1953* (Cth), but only if:
 - (a) so agreed by the vendor in writing; and
 - (b) the settlement is not conducted through an electronic lodgement network.
 However, if the purchaser gives the bank cheque in accordance with this general condition 25.9, the vendor must:
 - (c) immediately after settlement provide the bank cheque to the Commissioner to pay the amount in relation to the supply; and

- (d) give the purchaser a receipt for the bank cheque which identifies the transaction and includes particulars of the bank cheque, at the same time the purchaser gives the vendor the bank cheque.
- 25.10 A party must provide the other party with such information as the other party requires to:
- (a) decide if an amount is required to be paid or the quantum of it, or
 - (b) comply with the purchaser's obligation to pay the amount,
- in accordance with section 14-250 of Schedule 1 to the *Taxation Administration Act 1953* (Cth). The information must be provided within 5 business days of a written request. The party providing the information warrants that it is true and correct.
- 25.11 The vendor warrants that:
- (a) at settlement, the property is not new residential premises or potential residential land in either case falling within the parameters of section 14-250 of Schedule 1 to the *Taxation Administration Act 1953* (Cth) if the vendor gives the purchaser a written notice under section 14-255 to the effect that the purchaser will not be required to make a payment under section 14-250 in respect of the supply, or fails to give a written notice as required by and within the time specified in section 14-255; and
 - (b) the amount described in a written notice given by the vendor to the purchaser under section 14-255 of Schedule 1 to the *Taxation Administration Act 1953* (Cth) is the correct amount required to be paid under section 14-250 of the legislation.
- 25.12 The purchaser is responsible for any penalties or interest payable to the Commissioner on account of non-payment or late payment of the amount, except to the extent that:
- (a) the penalties or interest arise from any failure on the part of the vendor, including breach of a warranty in general condition 25.11; or
 - (b) the purchaser has a reasonable belief that the property is neither new residential premises nor potential residential land requiring the purchaser to pay an amount to the Commissioner in accordance with section 14-250 (1) of Schedule 1 to the *Taxation Administration Act 1953* (Cth).
- The vendor is responsible for any penalties or interest payable to the Commissioner on account of non-payment or late payment of the amount if either exception applies.

Transactional

26. TIME & CO OPERATION

- 26.1 Time is of the essence of this contract.
- 26.2 Time is extended until the next business day if the time for performing any action falls on a day which is not a business day.
- 26.3 Each party must do all things reasonably necessary to enable this contract to proceed to settlement, and must act in a prompt and efficient manner.
- 26.4 Any unfulfilled obligation will not merge on settlement.

27. SERVICE

- 27.1 Any document required to be served by or on any party may be served by or on the legal practitioner or conveyancer for that party.
- 27.2 A cooling off notice under section 31 of the *Sale of Land Act 1962* or a notice under general condition 20 [loan approval], 21 [building report] or 22 [pest report] may be served on the vendor's legal practitioner, conveyancer or estate agent even if the estate agent's authority has formally expired at the time of service.
- 27.3 A document is sufficiently served:
- (a) personally, or
 - (b) by pre-paid post, or
 - (c) in any manner authorized by law or by the Supreme Court for service of documents, including any manner authorised for service on or by a legal practitioner, whether or not the person serving or receiving the document is a legal practitioner, or
 - (d) by email.
- 27.4 Any document properly sent by:
- (a) express post is taken to have been served on the next business day after posting, unless proved otherwise;
 - (b) priority post is taken to have been served on the fourth business day after posting, unless proved otherwise;
 - (c) regular post is taken to have been served on the sixth business day after posting, unless proved otherwise;
 - (d) email is taken to have been served at the time of receipt within the meaning of section 13A of the *Electronic Transactions (Victoria) Act 2000*.
- 27.5 In this contract 'document' includes 'demand' and 'notice', 'serve' includes 'give', and 'served' and 'service' have corresponding meanings.

28. NOTICES

- 28.1 The vendor is responsible for any notice, order, demand or levy imposing liability on the property that is issued or made before the day of sale, and does not relate to periodic outgoings.
- 28.2 The purchaser is responsible for any notice, order, demand or levy imposing liability on the property that is issued or made on or after the day of sale, and does not relate to periodic outgoings.
- 28.3 The purchaser may enter the property to comply with that responsibility where action is required before settlement.

29. INSPECTION

The purchaser and/or another person authorised by the purchaser may inspect the property at any reasonable time during the 7 days preceding and including the settlement day.

30. TERMS CONTRACT

30.1 If this is a 'terms contract' as defined in the *Sale of Land Act 1962*:

- (a) any mortgage affecting the land sold must be discharged as to that land before the purchaser becomes entitled to possession or to the receipt of rents and profits unless the vendor satisfies section 29M of the *Sale of Land Act 1962*; and
- (b) the deposit and all other money payable under the contract (other than any money payable in excess of the amount required to so discharge the mortgage) must be paid to a legal practitioner or conveyancer or a licensed estate agent to be applied in or towards discharging the mortgage.

30.2 While any money remains owing each of the following applies:

- (a) the purchaser must maintain full damage and destruction insurance of the property and public risk insurance noting all parties having an insurable interest with an insurer approved in writing by the vendor;
- (b) the purchaser must deliver copies of the signed insurance application forms, the policies and the insurance receipts to the vendor not less than 10 days before taking possession of the property or becoming entitled to receipt of the rents and profits;
- (c) the purchaser must deliver copies of any amendments to the policies and the insurance receipts on each amendment or renewal as evidence of the status of the policies from time to time;
- (d) the vendor may pay any renewal premiums or take out the insurance if the purchaser fails to meet these obligations;
- (e) insurance costs paid by the vendor under paragraph (d) must be refunded by the purchaser on demand without affecting the vendor's other rights under this contract;
- (f) the purchaser must maintain and operate the property in good repair (fair wear and tear excepted) and keep the property safe, lawful, structurally sound, weatherproof and free from contaminations and dangerous substances;
- (g) the property must not be altered in any way without the written consent of the vendor which must not be unreasonably refused or delayed;
- (h) the purchaser must observe all obligations that affect owners or occupiers of land;
- (i) the vendor and/or other person authorised by the vendor may enter the property at any reasonable time to inspect it on giving 7 days written notice, but not more than twice in a year.

31. LOSS OR DAMAGE BEFORE SETTLEMENT

- 31.1 The vendor carries the risk of loss or damage to the property until settlement.
- 31.2 The vendor must deliver the property to the purchaser at settlement in the same condition it was in on the day of sale, except for fair wear and tear.
- 31.3 The purchaser must not delay settlement because one or more of the goods is not in the condition required by general condition 31.2, but may claim compensation from the vendor after settlement.
- 31.4 The purchaser may nominate an amount not exceeding \$5,000 to be held by a stakeholder to be appointed by the parties if the property is not in the condition required by general condition 31.2 at settlement.
- 31.5 The nominated amount may be deducted from the amount due to the vendor at settlement and paid to the stakeholder, but only if the purchaser also pays an amount equal to the nominated amount to the stakeholder.
- 31.6 The stakeholder must pay the amounts referred to in general condition 31.5 in accordance with the determination of the dispute, including any order for payment of the costs of the resolution of the dispute.

32. BREACH

A party who breaches this contract must pay to the other party on demand:

- (a) compensation for any reasonably foreseeable loss to the other party resulting from the breach; and
- (b) any interest due under this contract as a result of the breach.

Default

33. INTEREST

Interest at a rate of 2% per annum plus the rate for the time being fixed by section 2 of the *Penalty Interest Rates Act 1983* is payable at settlement on any money owing under the contract during the period of default, without affecting any other rights of the offended party.

34. DEFAULT NOTICE

34.1 A party is not entitled to exercise any rights arising from the other party's default, other than the right to receive interest and the right to sue for money owing, until the other party is given and fails to comply with a written default notice.

34.2 The default notice must:

- (a) specify the particulars of the default; and
- (b) state that it is the offended party's intention to exercise the rights arising from the default unless, within 14 days of the notice being given -
 - (i) the default is remedied; and
 - (ii) the reasonable costs incurred as a result of the default and any interest payable are paid.

35. DEFAULT NOT REMEDIED

35.1 All unpaid money under the contract becomes immediately payable to the vendor if the default has been made by the purchaser and is not remedied and the costs and interest are not paid.

35.2 The contract immediately ends if:

- (a) the default notice also states that unless the default is remedied and the reasonable costs and interest are paid, the contract will be ended in accordance with this general condition; and
- (b) the default is not remedied and the reasonable costs and interest are not paid by the end of the period of the default notice.

35.3 If the contract ends by a default notice given by the purchaser:

- (a) the purchaser must be repaid any money paid under the contract and be paid any interest and reasonable costs payable under the contract; and
- (b) all those amounts are a charge on the land until payment; and
- (c) the purchaser may also recover any loss otherwise recoverable.

35.4 If the contract ends by a default notice given by the vendor:

- (a) the deposit up to 10% of the price is forfeited to the vendor as the vendor's absolute property, whether the deposit has been paid or not; and
- (b) the vendor is entitled to possession of the property; and
- (c) in addition to any other remedy, the vendor may within one year of the contract ending either:
 - (i) retain the property and sue for damages for breach of contract; or
 - (ii) resell the property in any manner and recover any deficiency in the price on the resale and any resulting expenses by way of liquidated damages; and
- (d) the vendor may retain any part of the price paid until the vendor's damages have been determined and may apply that money towards those damages; and
- (e) any determination of the vendor's damages must take into account the amount forfeited to the vendor.

35.5 The ending of the contract does not affect the rights of the offended party as a consequence of the default.

GST RESIDENTIAL WITHHOLDING NOTIFICATION

Pursuant to Section 14-255 of the Taxation Administration Act in relation to the sale of
the property.

To: The Purchaser
Property: 18 Parkforest Walk, Craigieburn VIC 3064
Vendor: Veronica Anne Rowley and Anthony John Rowley

The Purchaser **is not** required to make a payment under section 14-250 of the
Act in relation to the sale of property.

DATED the 30th day of May 2024

Lee Warren

Complete Home Conveyancing
Conveyancers for the Vendor



Vendor Statement

The vendor makes this statement in respect of the land in accordance with section 32 of the *Sale of Land Act 1962*.

This statement must be signed by the vendor and given to the purchaser before the purchaser signs the contract.
The vendor may sign by electronic signature.

The purchaser acknowledges being given this statement signed by the vendor with the attached documents before the purchaser signed any contract.

Land	18 PARKFOREST WALK, CRAIGIEBURN VIC 3064
-------------	--

Vendor's name	Veronica Anne Rowley	Date
Vendor's signature		13/11/2024
Vendor's name	Anthony John Rowley	Date
Vendor's signature		08/11/2024

Purchaser's name		Date
Purchaser's signature		/ /
Purchaser's name		Date
Purchaser's signature		/ /

1. FINANCIAL MATTERS

1.1 Particulars of any Rates, Taxes, Charges or Other Similar Outgoings (and any interest on them)

(a) Are contained in the attached certificate/s.

1.2 Particulars of any Charge (whether registered or not) imposed by or under any Act to secure an amount due under that Act, including the amount owing under the charge

Not Applicable

1.3 Terms Contract

This section 1.3 only applies if this vendor statement is in respect of a terms contract where the purchaser is obliged to make 2 or more payments (other than a deposit or final payment) to the vendor after the execution of the contract and before the purchaser is entitled to a conveyance or transfer of the land.

Not Applicable

1.4 Sale Subject to Mortgage

This section 1.4 only applies if this vendor statement is in respect of a contract which provides that any mortgage (whether registered or unregistered), is NOT to be discharged before the purchaser becomes entitled to possession or receipts of rents and profits.

Not Applicable

2. INSURANCE

2.1 Damage and Destruction

This section 2.1 only applies if this vendor statement is in respect of a contract which does NOT provide for the land to remain at the risk of the vendor until the purchaser becomes entitled to possession or receipt of rents and profits.

Not Applicable

2.2 Owner Builder

This section 2.2 only applies where there is a residence on the land that was constructed by an owner-builder within the preceding 6 years and section 137B of the Building Act 1993 applies to the residence.

Not Applicable

3. LAND USE

3.1 Easements, Covenants or Other Similar Restrictions

(a) A description of any easement, covenant or other similar restriction affecting the land (whether registered or unregistered):

Is in the attached copies of title document/s

(b) Particulars of any existing failure to comply with that easement, covenant or other similar restriction are:

To the best of the Vendor's knowledge there is no existing failure to comply with the terms of any easements, covenants or other similar restriction.

3.2 Road Access

There is NO access to the property by road if the square box is marked with an 'X'

3.3 Designated Bushfire Prone Area

The land is in a designated bushfire prone area within the meaning of section 192A of the *Building Act* 1993 if the square box is marked with an 'X'

3.4 Planning Scheme

Attached is a certificate with the required specified information.

4. NOTICES

4.1 Notice, Order, Declaration, Report or Recommendation

Particulars of any notice, order, declaration, report or recommendation of a public authority or government department or approved proposal directly and currently affecting the land, being a notice, order, declaration, report, recommendation or approved proposal of which the vendor might reasonably be expected to have knowledge:

- Are as follows
None to the best of the Vendor's knowledge.

4.2 Agricultural Chemicals

There are NO notices, property management plans, reports or orders in respect of the land issued by a government department or public authority in relation to livestock disease or contamination by agricultural chemicals affecting the ongoing use of the land for agricultural purposes. However, if this is not the case, the details of any such notices, property management plans, reports or orders, are as follows:

NIL

4.3 Compulsory Acquisition

The particulars of any notices of intention to acquire that have been served under section 6 of the *Land Acquisition and Compensation Act* 1986 are as follows:

NIL

5. BUILDING PERMITS

Particulars of any building permit issued under the *Building Act* 1993 in the preceding 7 years (required only where there is a residence on the land):

- Are contained in the attached certificate

6. OWNERS CORPORATION

This section 6 only applies if the land is affected by an owners corporation within the meaning of the *Owners Corporations Act* 2006.

Not Applicable

7. GROWTH AREAS INFRASTRUCTURE CONTRIBUTION (“GAIC”)

Words and expressions in this section 7 have the same meaning as in Part 9B of the *Planning and Environment Act* 1987.

Not Applicable

8. SERVICES

The services which are marked with an 'X' in the accompanying square box are NOT connected to the land:

Electricity supply <input type="checkbox"/>	Gas supply <input type="checkbox"/>	Water supply <input type="checkbox"/>	Sewerage <input type="checkbox"/>	Telephone services <input type="checkbox"/>
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9. TITLE

Attached are copies of the following documents:

- 9.1 (a) Registered Title

A Register Search Statement and the document, or part of a document, referred to as the 'diagram location' in that statement which identifies the land and its location.

10. SUBDIVISION

10.1 Unregistered Subdivision

This section 10.1 only applies if the land is subject to a subdivision which is not registered.

Not Applicable

10.2 Staged Subdivision

This section 10.2 only applies if the land is part of a staged subdivision within the meaning of section 37 of the *Subdivision Act 1988*.

- (a) Attached is a copy of the plan for the first stage if the land is in the second or subsequent stage.
- (b) The requirements in a statement of compliance relating to the stage in which the land is included that have Not been complied With are As follows:

NIL

- (c) The proposals relating to subsequent stages that are known to the vendor are as follows:

NIL

- (d) The contents of any permit under the Planning and Environment Act 1987 authorising the staged subdivision are:

NIL

10.3 Further Plan of Subdivision

This section 10.3 only applies if the land is subject to a subdivision in respect of which a further plan within the meaning of the *Subdivision Act 1988* is proposed.

Not Applicable

11. DISCLOSURE OF ENERGY INFORMATION

(Disclosure of this information is not required under section 32 of the Sale of Land Act 1962 but may be included in this vendor statement for convenience.)

Details of any energy efficiency information required to be disclosed regarding a disclosure affected building or disclosure area affected area of a building as defined by the *Building Energy Efficiency Disclosure Act 2010* (Cth)

- (a) to be a building or part of a building used or capable of being used as an office for administrative, clerical, professional or similar based activities including any support facilities; and
- (b) which has a net lettable area of at least 1000m²; (but does not include a building under a strata title system or if an occupancy permit was issued less than 2 years before the relevant date):

Not Applicable

12. DUE DILIGENCE CHECKLIST

(The Sale of Land Act 1962 provides that the vendor or the vendor's licensed estate agent must make a prescribed due diligence checklist available to purchasers before offering land for sale that is vacant residential land or land on which there is a residence. The due diligence checklist is NOT required to be provided with, or attached to, this vendor statement but the checklist may be attached as a matter of convenience.)

Is attached

Due diligence checklist

What you need to know before buying a residential property

Before you buy a home, you should be aware of a range of issues that may affect that property and impose restrictions or obligations on you, if you buy it. This checklist aims to help you identify whether any of these issues will affect you. The questions are a starting point only and you may need to seek professional advice to answer some of them. You can find links to organisations and web pages that can help you learn more, by visiting the [Due diligence checklist page on the Consumer Affairs Victoria website](http://consumer.vic.gov.au/duediligencechecklist) (consumer.vic.gov.au/duediligencechecklist).

Urban living

Moving to the inner city?

High density areas are attractive for their entertainment and service areas, but these activities create increased traffic as well as noise and odours from businesses and people. Familiarising yourself with the character of the area will give you a balanced understanding of what to expect.

Is the property subject to an owners corporation?

If the property is part of a subdivision with common property such as driveways or grounds, it may be subject to an owners corporation. You may be required to pay fees and follow rules that restrict what you can do on your property, such as a ban on pet ownership.

Growth areas

Are you moving to a growth area?

You should investigate whether you will be required to pay a growth areas infrastructure contribution.

Flood and fire risk

Does this property experience flooding or bushfire?

Properties are sometimes subject to the risk of fire and flooding due to their location. You should properly investigate these risks and consider their implications for land management, buildings and insurance premiums.

Rural properties

Moving to the country?

If you are looking at property in a rural zone, consider:

- Is the surrounding land use compatible with your lifestyle expectations? Farming can create noise or odour that may be at odds with your expectations of a rural lifestyle.
- Are you considering removing native vegetation? There are regulations which affect your ability to remove native vegetation on private property.
- Do you understand your obligations to manage weeds and pest animals?

Can you build new dwellings?

Does the property adjoin crown land, have a water frontage, contain a disused government road, or are there any crown licences associated with the land?

Is there any earth resource activity such as mining in the area?

You may wish to find out more about exploration, mining and quarrying activity on or near the property and consider the issue of petroleum, geothermal and greenhouse gas sequestration permits, leases and licences, extractive industry authorisations and mineral licences.

Soil and groundwater contamination

Has previous land use affected the soil or groundwater?

You should consider whether past activities, including the use of adjacent land, may have caused contamination at the site and whether this may prevent you from doing certain things to or on the land in the future.

(04/10/2016)

Land boundaries

Do you know the exact boundary of the property?

You should compare the measurements shown on the title document with actual fences and buildings on the property, to make sure the boundaries match. If you have concerns about this, you can speak to your lawyer or conveyancer, or commission a site survey to establish property boundaries.

Planning controls

Can you change how the property is used, or the buildings on it?

All land is subject to a planning scheme, run by the local council. How the property is zoned and any overlays that may apply, will determine how the land can be used. This may restrict such things as whether you can build on vacant land or how you can alter or develop the land and its buildings over time.

The local council can give you advice about the planning scheme, as well as details of any other restrictions that may apply, such as design guidelines or bushfire safety design. There may also be restrictions – known as encumbrances – on the property's title, which prevent you from developing the property. You can find out about encumbrances by looking at the section 32 statement.

Are there any proposed or granted planning permits?

The local council can advise you if there are any proposed or issued planning permits for any properties close by. Significant developments in your area may change the local 'character' (predominant style of the area) and may increase noise or traffic near the property.

Safety

Is the building safe to live in?

Building laws are in place to ensure building safety. Professional building inspections can help you assess the property for electrical safety, possible illegal building work, adequate pool or spa fencing and the presence of asbestos, termites, or other potential hazards.

Building permits

Have any buildings or retaining walls on the property been altered, or do you plan to alter them?

There are laws and regulations about how buildings and retaining walls are constructed, which you may wish to investigate to ensure any completed or proposed building work is approved. The local council may be able to give you information about any building permits issued for recent building works done to the property, and what you must do to plan new work. You can also commission a private building surveyor's assessment.

Are any recent building or renovation works covered by insurance?

Ask the vendor if there is any owner-builder insurance or builder's warranty to cover defects in the work done to the property.

Utilities and essential services

Does the property have working connections for water, sewerage, electricity, gas, telephone and internet?

Unconnected services may not be available, or may incur a fee to connect. You may also need to choose from a range of suppliers for these services. This may be particularly important in rural areas where some services are not available.

Buyers' rights

Do you know your rights when buying a property?

The contract of sale and section 32 statement contain important information about the property, so you should request to see these and read them thoroughly. Many people engage a lawyer or conveyancer to help them understand the contracts and ensure the sale goes through correctly. If you intend to hire a professional, you should consider speaking to them before you commit to the sale. There are also important rules about the way private sales and auctions are conducted. These may include a cooling-off period and specific rights associated with 'off the plan' sales. The important thing to remember is that, as the buyer, you have rights.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 11894 FOLIO 729

Security no : 124115366778G
Produced 29/05/2024 10:58 AM

LAND DESCRIPTION

Lot 31829 on Plan of Subdivision 724966S.
PARENT TITLE Volume 11590 Folio 501
Created by instrument PS724966S 29/06/2017

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
ANTHONY JOHN ROWLEY of 100 CHARTERIS DRIVE CRAIGIEBURN VIC 3064
VERONICA ANNE ROWLEY of /16/ CHARTERIS DRIVE CRAIGIEBURN VIC 3064
AQ258995V 18/09/2017

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AV772972W 23/06/2022
SUNCORP-METWAY LTD

COVENANT PS724966S 29/06/2017

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987
AH377517X 21/07/2010

DIAGRAM LOCATION

SEE PS724966S FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 18 PARKFOREST WALK CRAIGIEBURN VIC 3064

ADMINISTRATIVE NOTICES

NIL

eCT Control 18478R FIRST LEGAL
Effective from 23/06/2022

DOCUMENT END



Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Secure Electronic Registries Victoria.

Document Type	Plan
Document Identification	PS724966S
Number of Pages (excluding this cover sheet)	5
Document Assembled	29/05/2024 10:58

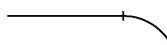
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PLAN OF SUBDIVISION	LV use only EDITION 1	Plan Number PS 724966S
<p>Location of Land</p> <p>PARISH: MICKLEHAM</p> <p>TOWNSHIP: -</p> <p>SECTION: -</p> <p>CROWN ALLOTMENT: -</p> <p>CROWN PORTION: 1 (PART)</p> <p>Title Reference: VOL 11590 FOL 501</p> <p>Last Plan Reference: LOT A ON PS728811C</p> <p>Postal Address: NORTHFIELD DRIVE (at time of subdivision) CRAIGIEBURN 3064</p> <p>MGA 94 Co-ordinates E 316 400 Zone: 55 (of approx. centre of land in plan) N 5 840 050</p>	<p>Council Name: HUME CITY COUNCIL</p> <p>Council Ref:</p>	


Vesting of Roads and/or Reserves	Notations	
Identifier	Council/Body/Person	<p>Staging This is/ is not a staged subdivision Planning Permit No. P15021</p>

ROAD R1 RESERVE No.1	HUME CITY COUNCIL HUME CITY COUNCIL	<p>Depth Limitation DOES NOT APPLY</p> <p>LOTS 1 TO 31800 (BOTH INCLUSIVE) HAVE BEEN OMITTED FROM THIS PLAN.</p> <p>AREA OF LAND SUBDIVIDED IS 1.954ha.</p> <p>TANGENT POINTS ARE SHOWN THUS: </p>
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Easement Information

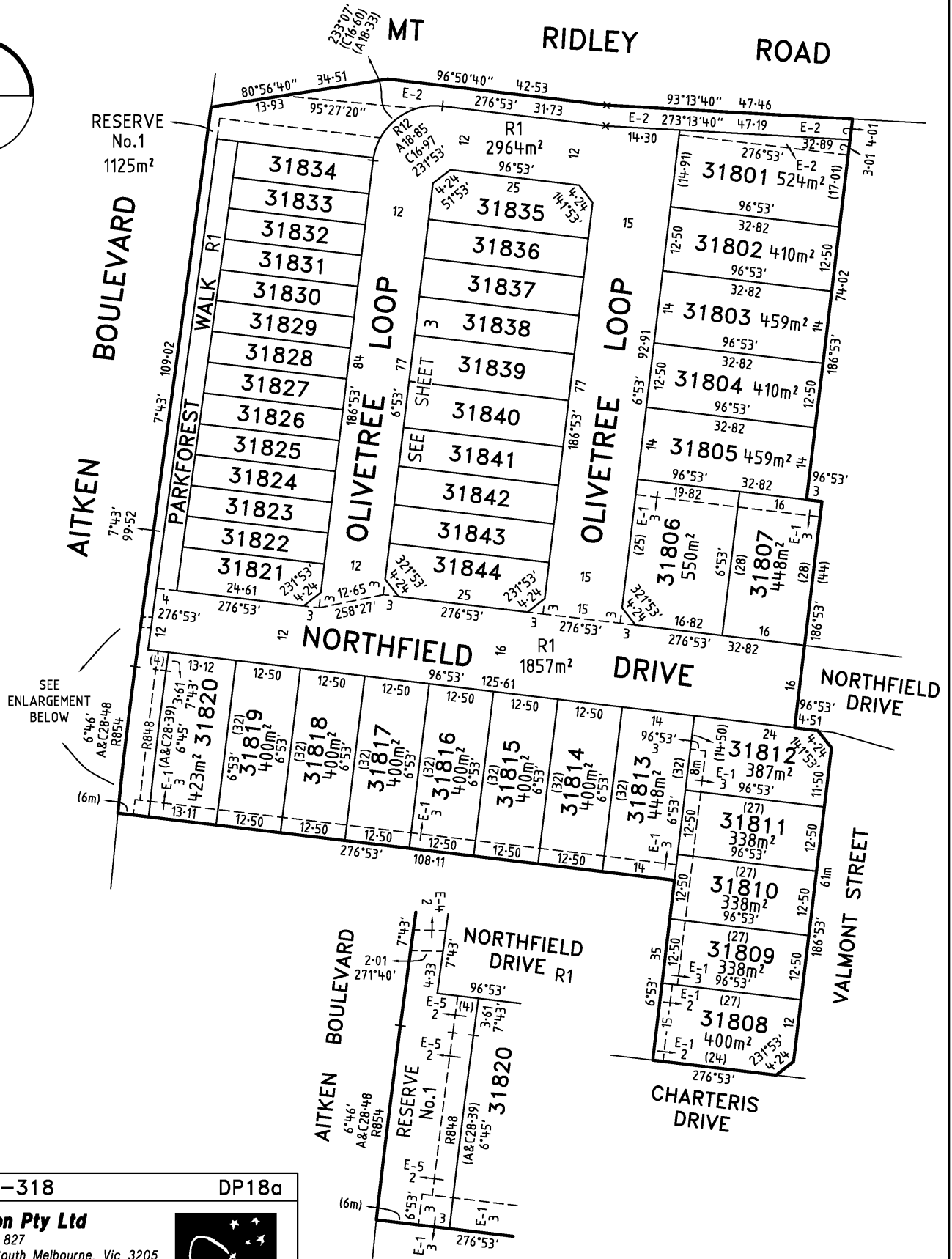
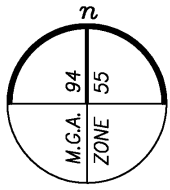
Legend: E - Encumbering Easement, Condition in Crown Grant in the Nature of an Easement or Other Encumbrance A - Appurtenant Easement
R - Encumbering Easement (Road)

Subject Land	Purpose	Width (metres)	Origin	Land Benefited/In Favour Of
E-1	DRAINAGE	SEE DIAG	THIS PLAN	HUME CITY COUNCIL
E-1	SEWERAGE	SEE DIAG	THIS PLAN	YARRA VALLEY WATER CORPORATION
E-2	SUPPLY OF WATER THROUGH UNDERGROUND PIPES	SEE DIAG	THIS PLAN	YARRA VALLEY WATER CORPORATION
E-3	SUPPLY OF WATER THROUGH UNDERGROUND PIPES	SEE DIAG	THIS PLAN	YARRA VALLEY WATER CORPORATION
E-3	SIGNALS BY UNDERGROUND CABLE	SEE DIAG	THIS PLAN	LOTS ON THIS PLAN
E-3	POWERLINE	SEE DIAG	THIS PLAN - SEC 88 ELECTRICITY INDUSTRY ACT 2000	JEMENA ELECTRICITY NETWORKS (VIC) LTD
E-4	DRAINAGE	SEE DIAG	THIS PLAN	HUME CITY COUNCIL
E-5	SEWERAGE	SEE DIAG	THIS PLAN	YARRA VALLEY WATER CORPORATION

<p>HIGHLANDS-318 DP18a</p> <p>44 LOTS</p> <p>Bosco Jonson Pty Ltd A.B.N 15 169 138 827 P.O. Box 5075, South Melbourne, Vic 3205 16 Eastern Road South Melbourne Vic 3205 Australia Tel 03) 9699 1400 Fax 03) 9699 5992</p> 	<p>LICENSED SURVEYOR (PRINT) GEOFFREY JAMES TURNER</p> <p>SIGNATURE DIGITALLY SIGNED DATE / /</p> <p>REF 29623183 18/04/16 VERSION F</p> <p>DWG 2962318AF</p>	<p>Sheet 1 of 4 sheets</p> <p>Original sheet size A3</p> <p>PLAN REGISTERED</p> <p>TIME: 3:38</p> <p>DATE: 29/6/17</p> <p>Randall McDonald Assistant Registrar of Titles</p>
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PLAN OF SUBDIVISION

Plan Number
PS 724966S



HIGHLANDS-318

DP18a

Bosco Jonson Pty Ltd

A.B.N 15 169 138 827
P.O. Box 5075, South Melbourne, Vic 3205
16 Eastern Road South Melbourne
Vic 3205 Australia
Tel 03) 9699 1400 Fax 03) 9699 5992

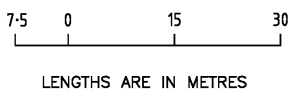


ENLARGEMENT
NOT TO SCALE

ORIGINAL

SCALE

SCALE SHEET SIZE
1:750 A3



LICENSED SURVEYOR (PRINT) GEOFFREY JAMES TURNER

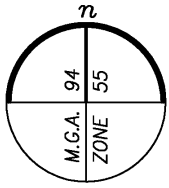
SIGNATURE DATE / /

REF 29623183 18/04/16 VERSION F
DWG 2962318AF

Sheet 2

PLAN OF SUBDIVISION

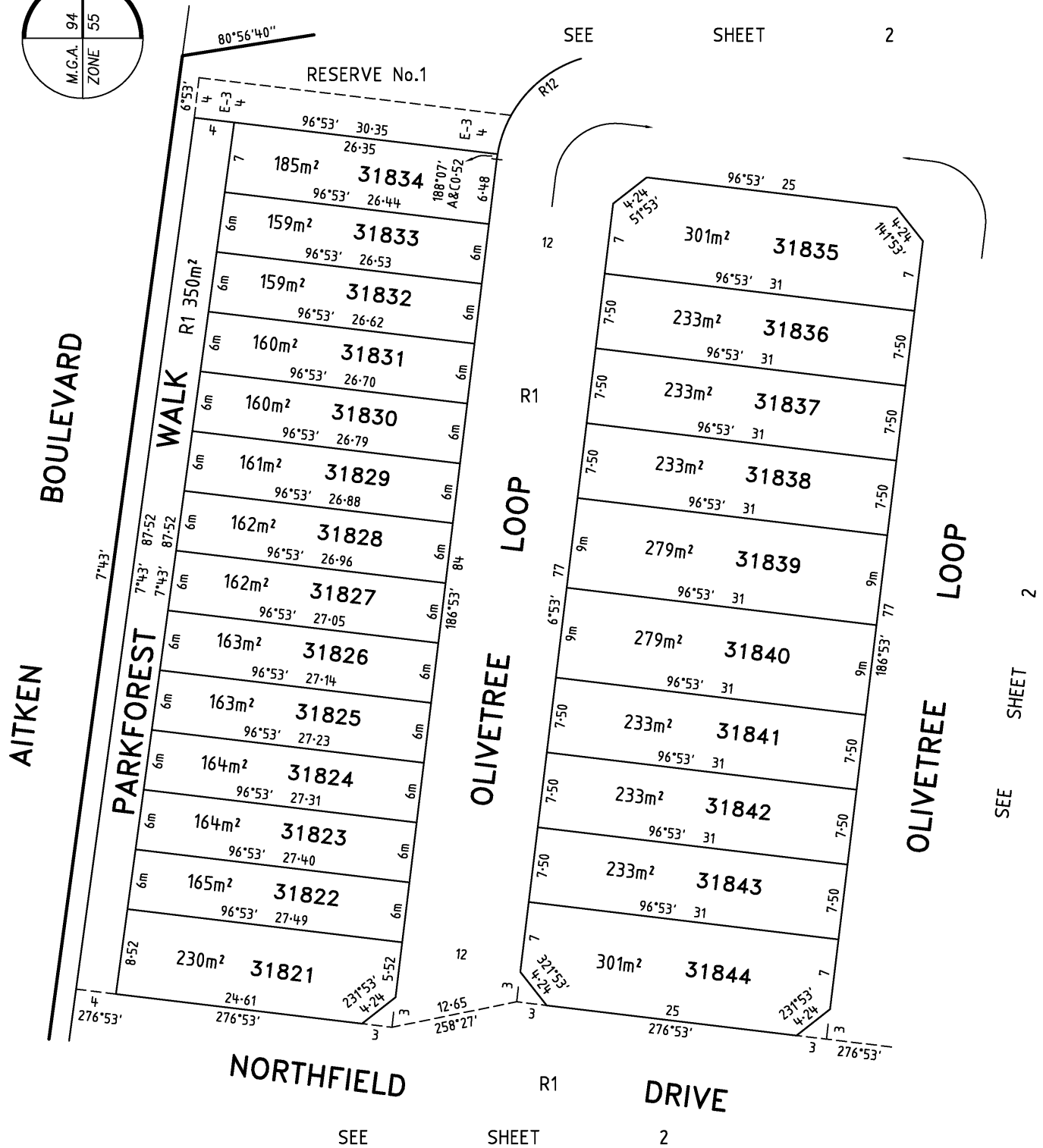
Plan Number
PS 724966S



MT RIDLEY ROAD

SEE SHEET 2

RESERVE No.1

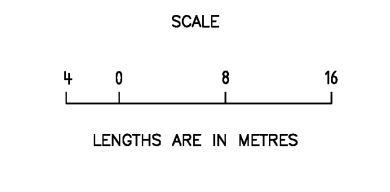


HIGHLANDS-318 DP18a

Bosco Jonson Pty Ltd
 A.B.N 15 169 138 827
 P.O. Box 5075, South Melbourne, Vic 3205
 16 Eastern Road South Melbourne
 Vic 3205 Australia
 Tel 03) 9699 1400 Fax 03) 9699 5992



ORIGINAL SCALE
 SCALE SHEET SIZE
 1:400 A3



LICENSED SURVEYOR (PRINT) GEOFFREY JAMES TURNER
 SIGNATURE DIGITALLY SIGNED DATE / /
 REF 29623183 18/04/16 VERSION F
 DWG 2962318AF

Sheet 3

PLAN OF SUBDIVISION

Plan Number
PS 724966S

CREATION OF RESTRICTION

UPON REGISTRATION OF THIS PLAN THE FOLLOWING RESTRICTION IS CREATED

DESCRIPTION OF RESTRICTION

THE LAND IS BURDENED AND BENEFITED IN ACCORDANCE WITH THE TABLE OF BURDENED AND BENEFITED LAND

TABLE OF BURDENED AND BENEFITED LAND

BURDENED LOT No.	BENEFITING LOTS ON THIS PLAN
31801	31802
31802	31801, 31803
31803	31802, 31804
31804	31803, 31805
31805	31804, 31806, 31807
31806	31805, 31807
31807	31805, 31806
31808	31809
31809	31808, 31810
31810	31809, 31811, 31813
31811	31810, 31812, 31813
31812	31811, 31813
31813	31810, 31811, 31812, 31814
31814	31813, 31815
31815	31814, 31816
31816	31815, 31817
31817	31816, 31818
31818	31817, 31819
31819	31818, 31820
31820	31819
31821	31822
31822	31821, 31823

BURDENED LOT No.	BENEFITING LOTS ON THIS PLAN
31823	31822, 31824
31824	31823, 31825
31825	31824, 31826
31826	31825, 31827
31827	31826, 31828
31828	31827, 31829
31829	31828, 31830
31830	31829, 31831
31831	31830, 31832
31832	31831, 31833
31833	31832, 31834
31834	31833
31835	31836
31836	31835, 31837
31837	31836, 31838
31838	31837, 31839
31839	31838, 31840
31840	31839, 31841
31841	31840, 31842
31842	31841, 31843
31843	31842, 31844
31844	31843

THE REGISTERED PROPRIETOR OR PROPRIETORS FOR THE TIME BEING OF ANY BURDENED LOT ON THIS PLAN

- SHALL NOT BUILD OR PERMIT TO BE BUILT OR REMAIN ON THE LOT ANY BUILDING OTHER THAN A BUILDING THAT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE ENDORSED MEMORANDUM OF COMMON PROVISIONS (MCP) REGISTERED IN DEALING NO. AA3253.
- SHALL NOT MAKE AN APPLICATION TO AMEND A BUILDING ENVELOPE UNLESS THE AMENDMENT IS TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY AND ANY CRITERIA OR MATTERS THAT MUST BE CONSIDERED BY THE RESPONSIBLE AUTHORITY IN DECIDING ON AN AMENDMENT TO A BUILDING ENVELOPE.
- THE BUILDING ENVELOPES SHALL CEASE TO HAVE EFFECT ON THE LOT CONTAINING THE ENVELOPE TEN YEARS AFTER AN OCCUPANCY PERMIT UNDER THE BUILDING ACT 1993 IS ISSUED FOR THE WHOLE OF THE DWELLING ON THE LOT CONTAINING THE BUILDING ENVELOPE.
- SHALL NOT ERECT ANY BUILDINGS ON THE LOT UNLESS THE PLANS FOR SUCH BUILDINGS ARE ENDORSED BY STOCKLAND DEVELOPMENT PTY LTD PRIOR TO THE ISSUE OF THE BUILDING PERMIT.
- THE REQUIREMENT FOR SUCH ENDORSEMENT SHALL CEASE TO HAVE EFFECT ON THE LOT ONE YEAR AFTER AN OCCUPANCY PERMIT UNDER THE BUILDING ACT 1993 IS ISSUED FOR THE WHOLE OF THE DWELLING ON THAT LOT.

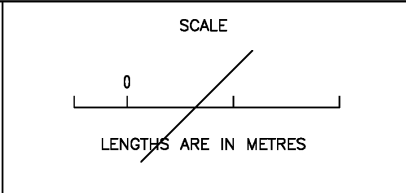
HIGHLANDS-318

DP18a

Bosco Jonson Pty Ltd
 A.B.N 15 169 138 827
 P.O. Box 5075, South Melbourne, Vic 3205
 16 Eastern Road South Melbourne
 Vic 3205 Australia
 Tel 03) 9699 1400 Fax 03) 9699 5992



ORIGINAL
SCALE
SCALE SHEET SIZE
A3



LICENSED SURVEYOR (PRINT) GEOFFREY JAMES TURNER
 SIGNATURE DIGITALLY SIGNED DATE / /
 REF 29623183 18/04/16 VERSION F
 DWG 2962318AF

Sheet 4



Plan of Subdivision PS724966S
Certification of plan by Council (Form 2)

SUBDIVISION (PROCEDURES) REGULATIONS 2011

SPEAR Reference Number: S050458A
Plan Number: PS724966S
Responsible Authority Name: Hume City Council
Responsible Authority Reference Number 1: S007183
Surveyor's Plan Version: F

Certification

This plan is certified under section 6 of the Subdivision Act 1988

Public Open Space

A requirement for public open space under section 18 of the Subdivision Act 1988

has been made and the requirement has not been satisfied at Certification

has been made and the requirement has been satisfied for: this plan at Statement of Compliance (Document updated 06/06/2017)

Digitally signed by Council Delegate: Tony Magazzu
Organisation: Hume City Council
Date: 26/07/2016



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**Application by a
Responsible Authority
for recording of an
agreement**

Section 181(1) Planning and
Environment Act 1987

Lodged by: DLA Phillips Fox
Name: Karina Shpigel
Phone: 9274 5557
Address: 140 William Street Melbourne
Ref: 0490763/001
Customer Code: 1390B

The Responsible Authority, having made an agreement requires a recording to be made in the Register for the land.

Land: Please see attached Annexure 1

Authority or council: Hume City Council, 1079 Pascoe Vale Road, Broadmeadows, Victoria 3047

Section and Act under which agreement is made: section 173 Planning & Environment Act 1987

A copy of this agreement is attached to this application.

Date: 23/6/10

Signed: *K Birtwistle*

.....
Full name: KERRIE BIRTWISTLE

Office held: MANAGER STATUTORY PLANNING



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Application by a Responsible Authority for Recording of an Agreement

Annexure 1

Land:

The following Certificates of Title:

	Volume	Folio
1	11040	205
2	11170	029
3	11215	878
4	11215	879
5	11215	880
6	11215	881
7	11215	882
8	11215	883
9	11215	884
10	11215	885
11	11215	886
12	11215	887
13	11215	888
14	11215	889
15	11215	890
16	11215	891
17	11215	892
18	11215	893
19	11215	894
20	11215	895
21	11215	896



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22	11215	897
23	11215	898
24	11215	890
25	11215	891
26	11215	892
27	11215	893
28	11215	894
29	11215	895
30	11215	896
31	11215	897
32	11215	898
33	11215	899
34	11215	900
35	11215	901
36	11104	-094
37	11104	095
38	11130	-311
39	11130	312
40	11140	619
41	11170	-246
42	11170	-247
43	11170	-248
44	11170	-250
45	11175	-026
46	11175	-027
47	11159	312

Number repeated

being lot D on unregistered Plan of Subdivision 622428R



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48	11215	817
49	11215	818
50	11215	819
51	11215	820
52	11215	821
53	11215	822
54	11215	823
55	11215	824
56	11215	825
57	11215	826
58	11215	827
59	11215	828
60	11215	829
61	11215	830
62	11215	831
63	11215	832
64	11215	833
65	11215	834
66	11215	835
67	11215	836
68	11215	837
69	11215	838
70	11215	839
71	11215	840
72	11204	943
73	11204	944
74	11205	135



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75	11207	440✓
76	11207	441
77	11207	442
78	11207	443
79	11207	445
80	11201	967
81	11206	838
82	11205	971
83	11206	804
84	11206	805
85	11206	806
86	11206	807
87	11206	808
88	11206	809
89	11134	984
90	11175	213

CLAYTON UTZ



Section 173 Agreement

Stockland Highlands Pty Limited
ACN 097 352 200

Owner

Hume City Council

Council

Land: Highlands at Craigieburn

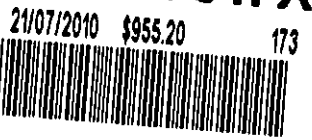
The Clayton Utz contact for this document is
Don Mazzone on +61 3 9286 6000122

Clayton Utz
Lawyers
Level 18 333 Collins Street Melbourne VIC 3000 Australia
DX 38451 333 Collins VIC
T +61 3 9286 6000 F +61 3 9629 8488

www.claytonutz.com

Our reference 14709/80077867

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This Agreement made on

18th May

2010

Parties

Stockland Highlands Pty Limited ACN 097 352 200 of Level 7, 452 Flinders Street, Melbourne

("Owner")

Hume City Council of 1079 Pascoe Vale Road, Broadmeadows

("Council")

Background

- A. The Owner is registered as the proprietor of the Land and is developing the Land as part of the Highlands Estate.
- B. The Owner was previously the registered proprietor of the Central Aitken Creek Reserve, which is now owned by VicUrban.
- C. The Council is the responsible authority under the Act for the administration and enforcement of the Scheme which applies to the Land.
- D. The Council has issued the Planning Permit which allows, amongst other matters, the removal of Native Vegetation on the Land. The Land includes remnant patches of Plains Grassland and Creepline Grassy Woodland.
- E. Condition 8 of the Planning Permit requires the Owner to enter into this Agreement. Condition 8 states:

Prior to the issue of a statement of compliance for the first stage of the subdivision, the owner of the subject land must, at no cost to the Responsible Authority, enter in to and execute (in a form satisfactory to the Responsible Authority) a legal agreement with the Responsible Authority, which details:

(a) All objectives and management actions outlined in the Conservation Management Plan - Highlands Craigieburn (final Draft 25/7/08) are adhered to in order to ensure the management and conservation of threatened species and the achievement of a Net Gain in native vegetation of a total of 0.8hha - 0.1hha of Creepline Grassy Woodland and 0.71hha of Plains Grassland.

(b) All future actions on the areas covered by the Conservation Management Plan - Highlands Craigieburn (final Draft 25/7/08) are to be in accordance with the objectives and actions outlined in this document. This includes all works relating to recreation provision, public open space, drainage and other works.

- F. The purpose of this Agreement is to set out the Owner's obligation to implement the CMP on the Land and the Central Aitken Creek Reserve, which includes a net gain offset management plan.
- G. The Owner will use its best endeavours to procure VicUrban's consent to implement the CMP on the Central Aitken Creek Reserve.

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- H. The Council and the Owner have agreed to enter into this Agreement to give effect to the requirements of condition 8 of the Planning Permit.
- I. The Land is not encumbered by any mortgage.
- J. The Council and the Owner have agreed that without limiting or restricting their respective powers to enter into this Agreement and in so far as it can be so treated, this Agreement is made pursuant to Section 173 of the Act.

Operative provisions

1. Definitions and interpretations

1.1 Definitions

In this Agreement unless expressed or implied to the contrary:

"Act" means the Planning and Environment Act 1987.

"Agreement" means this agreement and any agreement executed by the parties expressed to be supplemental to this agreement.

"Business Day" means any day other than a Saturday, Sunday or bank or public holiday in Melbourne.

"Central Aitken Creek Reserve" means Reserve No 2 on proposed Plan of Subdivision 622440C, to be created from Certificate of Title Volume 5378 Folio 559 and which is identified in the CMP as part of the Aitken Creek North Conservation Reserve and Regional Open Space.

"CMP" means the Conservation Management Plan - Highlands, Craigieburn dated 17 January 2010 prepared by Ecology Australia Pty Ltd as approved by and amended from time to time with the written approval of Council, the Department of Sustainability and Environment (Victoria) and the Department of Environment Water Heritage and the Arts (Commonwealth). A current copy of the CMP which was approved on 17 January 2010 is attached to this Agreement as Annexure A.

"Commencement Date" means the date on which this Agreement is executed by the Owner and the Council.

"Conservation Reserves" means the four conversation reserves identified in the CMP as Malcolm Creek Corridor, Aitken Creek North (which includes the Central Aitken Creek Reserve), Aitken Creek South and Mt Aitken and referred to in Condition 27 of the Planning Permit as "public open space/landscape areas".

"Land" means Lot SS on Plan of Subdivision No. PS 616068F and Lots B and CC on Plan of Subdivision No. PS610982F.

"Owner" means the person or persons from time to time registered or entitled to be registered as the proprietor of an estate in fee simple in the Land or any part of it.

"Plan of Subdivision" has the same meaning as in the *Subdivision Act 1988* (Vic) and includes a proposed or registered plan of subdivision.

"Planning Permit" means planning permit number P12540 issued by the Council on 12 May 2009.

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"Residential Lot" means a lot shown on a plan of subdivision for the Land that is intended to be developed for residential purposes.

"Scheme" means the Hume Planning Scheme.

"Termination Date" means the date upon which this Agreement ends as set out in clause 10 of this Agreement.

"VicUrban" means the Victorian Urban Development Authority of 710 Collins Street, Melbourne.

1.2 Interpretation

In this Agreement, unless expressed or implied to the contrary:

- (a) undefined terms or words have the meanings given to them in the Act or the Scheme;
- (b) the singular includes the plural and vice versa;
- (c) a gender includes the other gender;
- (d) a reference to a person includes a reference to a firm, corporation or other corporate body;
- (e) if a party consists of more than one person this Agreement binds them jointly and each of them severally;
- (f) a reference to a 'planning scheme' or 'the Scheme' includes any amendment, consolidation, or replacement of such scheme and any document incorporated by reference into such scheme;
- (g) a reference to a statute includes any statutes amending, consolidating or replacing those statutes and any regulations made under the statutes;
- (h) where, in this Agreement, the Council may exercise any power, duty or function, that power may be exercised on behalf of the Council by an authorised or delegated officer;
- (i) all headings are for ease of reference only and do not affect the interpretation of this Agreement;
- (j) the recitals to this Agreement form part of this Agreement;
- (k) no word, words or provision shall operate to limit or in any way prejudice the effect of any other word, words or provision unless it is expressly provided otherwise;
- (l) a reference to "writing" or "written" and any words of similar import include printing, typing, lithography and any other means of reproducing characters in tangible and visible form, including any communication effected through any electronic medium if such communication is subsequently capable of reproduction in tangible or visible form;
- (m) if the day or last day for doing anything or on which an entitlement is due to arise is not a Business Day, the day or last day for doing the thing or date on which the entitlement arises shall for the purposes of this Deed be the next Business Day;



- (n) where a word or phrase is defined, its other grammatical forms have a corresponding meaning;
- (o) a reference to an agreement or a document is to that agreement or document as amended, novated, supplemented, varied or replaced from time to time except to the extent prohibited by this Agreement;
- (p) a reference to any thing includes the whole and each part of it;
- (q) "include" (in any form) when introducing a list of items does not limit the meaning of the words to which the list relates to those items or to items of a similar kind;
- (r) a reference to "\$" or "dollar" is to Australian currency;
- (s) where a party covenants, promises, undertakes or agrees to:
 - (i) perform; or
 - (ii) refrain from doing or carrying out, some act or thing that party must:
 - (iii) procure that their respective contractors, employees and agents perform such act or thing; or
 - (iv) refrain from so doing or carrying out such act or thing;
- (t) a provision must not be interpreted to the disadvantage of a party because that party (or its representative) drafted that provision.
- (u) if a reference is made to any person, body or Authority and that person, body or Authority has ceased to exist, then the reference is deemed to be a reference to the person, body or Authority that then serves substantially the same objects as the person, body or Authority that has ceased to exist; and
- (v) a reference to the President of a person, body or Authority shall, in the absence of a President, be read as a reference to the senior officer for the time being of the person, body or Authority or such other person fulfilling the duties of President.

2. Agreement under section 173 of the Act

The Council and the Owner agree that this Agreement is made pursuant to Section 173 of the Act.

3. Commencing and effect of agreement

3.1 Commencement of agreement

This Agreement commences on the Commencement Date.

3.2 Covenants

The Owner's obligations under this Agreement will take effect as separate and several covenants which will be annexed to and run at law and equity with the Land.

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4. CMP Obligations

4.1 Implementation of the CMP

The Owner must, at its own cost, properly implement the CMP, which includes the net gain offset management plan, on the Land and the Central Aitken Creek Reserve to the satisfaction of Council and the Department of Sustainability and Environment for a period of 10 years from the date on which the Owner commences development of the Land.

4.2 Implementation of the CMP on the Central Aitken Creek Reserve

The Owner agrees that it will use its best endeavours to have VicUrban:

- (a) consent to the Owner entering upon the Central Aitken Creek Reserve in order to comply with its obligation in Clause 4.1;
- (b) vest the Central Aitken Creek Reserve to Council as required by Clause 5.2; and
- (c) grant the Council and the Department of Sustainability of Environment a non-exclusive licence to enter the Central Aitken Creek Reserve for the purposes set out in Clause 6.

5. Conservation Reserves

5.1 Vesting of Conservation Reserves

The Owner must at its own cost prepare a plan of subdivision vesting the Conservation Reserves which it owns and use its best endeavours to procure VicUrban to vest the Central Aitken Creek Reserve to Council:

- (a) at the expiry of 10 years of satisfactory management under the CMP by the Owner as determined by Council; or
- (b) at an earlier date if required or agreed to by Council in writing.

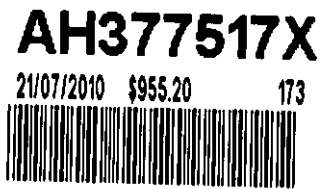
5.2 Payment to Council for management of Conservation Reserves

If Council has required or agreed to the earlier vesting of the Conservation Reserves under Clause 5.1(b), the Owner must:

- (a) pay the Council an annual fee that is to Council's satisfaction for the cost of implementing the CMP on the Conservation Reserves that it transferred to Council and procure VicUrban to do likewise for the Central Aitken Creek Reserve for the number of years that remain at the date of vesting of the ten year management period; and
- (b) provide Council with a bank guarantee for a sum that is to Council's satisfaction to secure the Owner's obligation in clause 5.2(a) above.

6. Ongoing Licence to the Council and the Department of Sustainability of Environment

The Owner grants to the Council and the Department of Sustainability and Environment, and their officers, employees, representatives, agents and invitees, a non-exclusive licence to enter the Land, at any time to assess the compliance of the Owner with its obligations under this Agreement.



7. Owner's Warranties

Without limiting the operation or effect of this Agreement, the Owner warrants that apart from the Owner and any other person who has consented to this Agreement, no other person has any interest either legal or equitable in the Land which may be affected by this Agreement.

8. Registration

8.1 Registration

The Owner:

- (a) consents to the Council making application to the Registrar of Titles to make a recording of this Agreement in the Register on the folio of the Register which relates to the Land in accordance with Section 181 of the Act; and
- (b) will do all things necessary to enable the Council to do so including signing any further agreement, acknowledgment or document or procuring the consent to this Agreement of any mortgagee or caveator to enable the recording to be made in the Register under that section.

8.2 Notice

The Owner agrees to bring this Agreement to the attention of all prospective purchasers, mortgagees, transferees and assigns of the Land.

9. General

9.1 Further acts

Each party must promptly sign any documents and do anything else reasonably necessary to give effect to this Agreement.

9.2 Counterparts

This Agreement may be executed in any number of counterparts and by the parties on separate counterparts. Each counterpart constitutes an original of this Agreement, and all together constitute one agreement.

9.3 Successors in title

Without limiting the operation or effect of this Agreement, the Owner must ensure that, until this Agreement is recorded on the folio of the register which relates to the Land, the Owner's successors in title will be required to:

- (a) give effect to, do all acts and sign all documents requiring those successors to give effect to this Agreement; and
- (b) execute a deed agreeing to be bound by this Agreement.

9.4 No fettering of the Responsible Authority's powers

It is acknowledged and agreed that this Agreement does not fetter or restrict the power or discretion of the Council to make any decision or impose any requirements or conditions in

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connection with the granting of any planning approval or certification of any plans of subdivision applicable to the Land or relating to any use or development of the Land.

9.5 Council's costs to be paid

The Owner covenants to immediately pay to the Council the Council's reasonable costs and expenses of and incidental to the preparation, registration and enforcement of this Agreement which are and until paid will remain a debt due to Council by the Owner.

9.6 Governing law

This Agreement is governed by and must be construed according to the law applying in Victoria.

9.7 Jurisdiction

Each party irrevocably:

- (a) submits to the non exclusive jurisdiction of the courts of Victoria, and the courts competent to determine appeals from those courts, with respect to any proceedings that may be brought at any time relating to this Agreement; and
- (b) waives any objection it may now or in the future have to the venue of any proceedings, and any claim it may now or in the future have that any proceedings have been brought in an inconvenient forum.

9.8 Amendments

This Agreement may only be varied by the written agreement of both parties and generally in accordance with section 178 of the Act.

9.9 Notices

Each communication (including each notice, consent, approval, request and demand) under or in connection with this Agreement:

- (a) must be in writing, be in English and dated;
- (b) must be addressed as follows (or as otherwise notified by that party to each other party from time to time):

Council

Name: Hume City Council
Address: 1079 Pascoe Vale Road
Broadmeadows, Victoria 3047

Fax: (03) 9309 0109 -
For the attention of: Manager - Statutory Planning

Owner

Name: Stockland Highlands Pty Limited
Address: Level 7, 452 Flinders Street
Melbourne, Victoria 3000

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Fax: (03) 8684 5000
For the attention of: Ben Cantwell
Project Director

- (c) must be signed by the party making it or (on that party's behalf) by the solicitor for, or any attorney, director, secretary or authorised agent of, that party;
- (d) must be delivered by hand or posted by prepaid post to the address, or sent by fax to the number, of the addressee, in accordance with clause 9.7(b); and
- (e) is taken to be received by the addressee:
 - (i) (in the case of prepaid post sent to an address in the same country) on the third day after the date of posting;
 - (ii) (in the case of prepaid post sent to an address in another country) on the fifth day after the date of posting by airmail;
 - (iii) (in the case of fax) at the time in the place to which it is sent equivalent to the time shown on the transmission confirmation report produced by the fax machine from which it was sent; and
 - (iv) (in the case of delivery by hand) on delivery,

but if the communication is taken to be received on a day that is not a Business Day or after 5.00 pm, it is taken to be received at 9.00 am on the next Business Day.

10. Ending of Agreement

10.1 Termination Date

This Agreement ends:

- (a) when the Owner has complied with all of its obligations contained in this Agreement to the satisfaction of the Council; or
- (b) insofar as it relates to the Central Aitken Creek Reserve, when VicUrban enters into an agreement in a form acceptable to the Council in relation to the Central Aitken Creek Reserve substantially in the form or to the effect of this agreement;
- (c) otherwise by agreement between the parties in accordance with Section 177(2) of the Act.

10.2 Cancelling of Recording

- (a) As soon as reasonably practicable after the Termination Date, the Council will at the request and at the cost of the Owner make application to the Registrar of Titles under Section 183(2) of the Act to cancel the recording of this Agreement on the register.
- (b) The Owner may make more than one request of the Council to do so as the Owner's obligations are progressively satisfied.
- (c) If this Agreement relates to more than one lot after the subdivision of the Land, the Owner of that lot may request the Council to end this Agreement in relation to that lot if the Owner of that lot has complied with its obligations in relation to that lot.

[Handwritten signature]
" REPEATED " *pl.*

10.2 Cancelling of Recording

- (a) As soon as reasonably practicable after the Termination Date, the Council will at the request and at the cost of the Owner make application to the Registrar of Titles under Section 183(2) of the Act to cancel the recording of this Agreement on the register.
- (b) The Owner may make more than one request of the Council to do so as the Owner's obligations are progressively satisfied.
- (c) If this Agreement relates to more than one lot after the subdivision of the Land, the Owner of that lot may request the Council to end this Agreement in relation to that lot if the Owner of that lot has complied with its obligations in relation to that lot.

10.3 Removal of Residential Lots from Application of Agreement

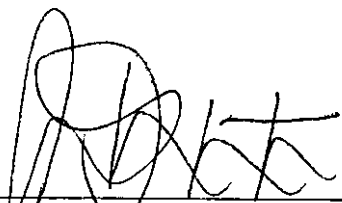
- (a) Notwithstanding that the Owner may still be in the course of complying with its obligations in this Agreement, the Council may at the request of the Owner, consent to removing particular Residential Lots from the application of this Agreement pursuant to Section 183 of the Act.
- (b) The Council will only provide its consent under this clause where it has issued a statement of compliance for a plan of subdivision for the Land that shows the Residential Lots.
- (c) If the Council provides its agreement under this clause, the Owner will at its own cost lodge an application in the prescribed form with the Registrar of Titles for the removal of those Residential Lots from the application of this Agreement.
- (d) For the avoidance of any doubt, the effect of Council's consent under this clause is that any Residential Lot created by the plan of subdivision to which Council's approval applies will not be affected by this Agreement.

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Signed as an agreement

Executed on behalf of **Stockland Highlands Pty Limited ACN 097 352 200** by *Andrew Whitson* under a Power of Attorney dated *25th April, 2009* who declares that he has no notice of revocation of the said Power of Attorney, in the presence of:



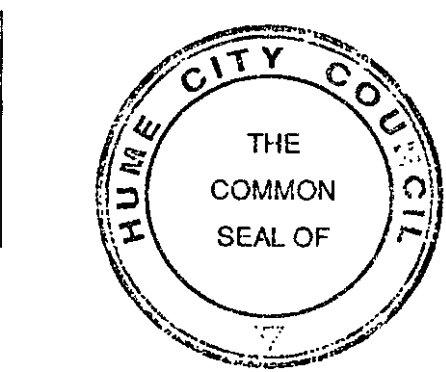
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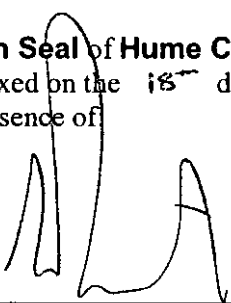


Signature of Witness


PENNY PHILO
Name of Witness in full

The Common Seal of **Hume City Council** was hereto affixed on the *18th* day of *May* 2010 in the presence of





Councillor



Chief Executive Officer

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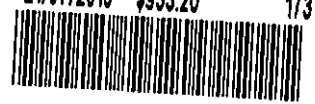


Annexure A

Conservation Management Plan - Highlands Craigieburn dated 17 January 2010 prepared by Ecology Australia Pty Ltd

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Conservation Management Plan - Highlands, Craigieburn

Project: 06-69

Prepared for:

Stockland



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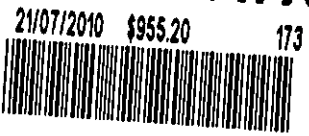
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Conservation Management Plan - Highlands, Craigieburn

Summary

Ecology Australia was commissioned by Stockland Pty Ltd to prepare a Conservation Management Plan (CMP) for Conservation Reserves within areas of Regional Open Space (ROS) along Aitken and Malcolm Creek at Highlands, Craigieburn. The key issues for management within these areas include:

- Matted Flax-lily (*Dianella amoena*) – listed as Endangered under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act);
- River Swamp Wallaby-grass (*Amphibromus fluitans*) - listed as Vulnerable under the EPBC Act;
- Golden Sun Moth (*Synemon plana*) - listed as Critically Endangered under the EPBC Act and threatened under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act);
- Growling Grass Frog (*Litoria raniformis*) - listed as Vulnerable under the EPBC Act, threatened under the FFG Act and Endangered in Victoria (DSE 2007). This species has not been recorded on the site, however, measures for habitat improvement within water treatment wetlands, creeks and monitoring protocols are outlined in the CMP in the event the species colonises newly created wetlands;
- Protection of remnant vegetation - Plains Grassland, listed as threatened under the FFG Act and Creekline Grassy Woodland, Endangered in the Victorian Volcanic Plain Bioregion, remnant trees; and
- Net Gain habitat hectare offsets.

The objective of the CMP is to outline management actions and pre-construction protocols required for the long term protection of Matted Flax-lily, River Swamp Wallaby-grass, Golden Sun Moth, potential Growling Grass Frog habitat and remnant vegetation in areas designated for conservation reserves. It also provides a Net Gain offset management plan for the loss of remnant patches.

This document also forms part of the Preliminary Documentation which supports an EPBC referral submitted to the Department of Environment, Water, Heritage and Arts (DEWHA) on 15 April 2008 (EPBC referral 2008/4161).

The Highlands residential development is located at Craigieburn, c. 25 km north of Melbourne. The developable area comprises 743.6 ha, 107.3 ha of which is ROS and includes c. 48.5 ha of Conservation Reserves. These reserves consist of:

- 8 ha of remnant Plains Grassland and Creekline Grassy Woodland, of which 4.59 ha is required to achieve the Net Gain habitat hectare offset target for the Highlands development; and
- an additional 40.5 ha of habitat for the threatened species.

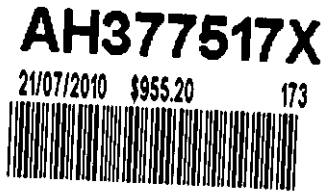
Conservation Management Plan - Highlands, Craigieburn



Regional Open Space and Conservation Reserves

There are four ROS areas:

- Malcolm Creek
- Aitken Creek North
- Aitken Creek South
- Mt Aitken



The Conservation Reserves within ROS will be secured and managed specifically for the values (e.g. threatened species) they support by implementing the following: weed and biomass management, perimeter fencing with appropriate signage; no playgrounds or recreational facilities; and strategically placed plantings. Regional Open Space between the Conservation Reserves will be managed quite similarly to co-inside with the requirements of Golden Sun Moth, River Swamp Wallaby-grass as well as remnant vegetation (e.g. biomass control and weed control) to potentially increase the area of habitat and maintain connectivity between Conservation Reserves.

Matted Flax-lily

One plant of Matted Flax-lily has been recorded at Highlands. This plant is located within the Conservation Reserve in Aitken Creek South. Management issues addressed for this species includes weed and biomass control, protection from indirect impacts, monitoring and augmentation.

River Swamp Wallaby-grass

Scattered populations of River Swamp Wallaby-grass have been recorded at Highlands within Aitken and Malcolm Creeks. The majority of these populations will be retained within Conservation Reserves. Three populations will be salvaged, propagated offsite and translocated into the wetlands of Aitken Creek.

This plan addresses the management of the translocated plants and also those populations that will remain *in situ*, which includes: protection of translocated plants from waterfowl, protection of retained populations from indirect impacts, weed control, and monitoring.

Golden Sun Moth

Within Highlands, a total of 44 ha of core Golden Sun Moth habitat will be conserved and actively managed within Conservation Reserves.

Currently, there is little information regarding the potential impacts of grassland management on Golden Sun Moth. Therefore, some techniques outlined in the CMP are considered to be experimental (i.e. ecological burning), and would be used in combination with other techniques and monitored carefully to gain the best conservation outcome for the species.

The following management actions are described in relation to Golden Sun Moth and are also provided as detailed prescriptions in regards to managing vegetation:

- Biomass reduction: slashing and controlled burning
- Sediment controls
- Weed control
- Minimal revegetation
- Monitoring

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Growling Grass Frog

Outlined in the CMP are measures to improve potential habitat for Growling Grass Frogs in the proposed water treatment wetlands within the creeks, habitat management thresholds and appropriate monitoring protocols.

Net Gain offsets

This CMP addresses Net Gain habitat hectare offsets required under Victoria's Native Vegetation Framework (DSE 2002) for the removal of remnant patches associated with the development and construction of water treatment wetlands. Offsets can be achieved onsite within selected Plains Grassland and Creekline Grassy Woodland remnants located within the Conservation Reserves of Aitken Creek.

Other management issues

The CMP addresses the control of pest animals in Conservation Reserves and ROS (i.e. rabbits and foxes); pre-construction protocols for the protection of threatened species and remnant vegetation (e.g. no-go zones during construction and contractor inductions); and user-related issues, which includes:

- Fencing
- Fire
- User enjoyment
- Trail location
- Education
- Domestic animal control.

CMP implementation

The key management activities described in this plan must be subject to regular evaluation and monitoring. The progress of all aspects of management will be addressed in a brief annual report to council following completion of management activities and/or monitoring. In addition, specific actions and reporting in relation to the three EPBC-listed species recorded at Highlands will be required from DEWHA, pending approval and permit conditions.

The management recommendations outlined in this plan have begun to be as per approval and permit conditions from DEWHA, DSE and Hume City Council.

It is noted that the onus of implementing this CMP is on the proponent (Stockland) until such time of the hand over to the relevant authorities. In the event a handover is delayed or postponed, Stockland will continue to implement the CMP until the handover is completed and to the satisfaction of state and federal regulators.

Auditing and review

As part of the Federal assessment process there may be an auditing component to ensure compliance with the EPBC Act and permit conditions from DEWHA.

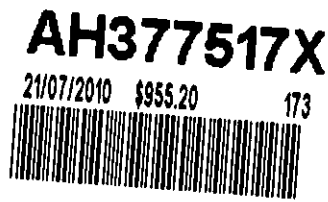
In addition, the CMP will have its own review/auditing process, as per Net Gain offset requirements. We propose a review of the management actions (i.e. adaptive management) to be undertaken after years 1, 3, 5 and 10 by Hume City Council and DSE. After the 10 year review,

Conservation Management Plan - Highlands, Craigieburn



Hume City Council will be responsible for ongoing management and security of the Conservation Reserves in perpetuity.





Conservation Management Plan - Highlands, Craigieburn

1 Introduction

Ecology Australia was commissioned by Stockland Pty Ltd to prepare a Conservation Management Plan (CMP) for the Conservation Reserves in Regional Open Space (ROS) along Aitken and Malcolm Creek at Highlands, Craigieburn. The CMP is to accompany previous documentation produced by Ecology Australia relating to the flora and fauna values of Highlands (Ecology Australia 2008) and also forms part of the Preliminary Documentation which was required in relation to the EPBC referral submitted to the Department of Environment, Water, Heritage and the Arts (DEWHA) on 15 April 2008 (EPBC referral 2008/4161).

The key issues for management within the Conservation Reserves are:

- Matted Flax-lily (*Dianella amoena*) – listed as Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- River Swamp Wallaby-grass (*Amphibromus fluitans*) - listed as Vulnerable under the EPBC Act;
- Golden Sun Moth (*Synemon plana*) - listed as Critically Endangered under the EPBC Act and threatened under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act);
- Protection of remnant vegetation (i.e. Plains Grassland, Creekline Grassy Woodland, remnant trees); and
- Net Gain offsets.

The Growling Grass Frog (*Litoria raniformis*) has not been recorded at Highlands during previous surveys. The species is listed under the EPBC Act as Vulnerable, listed as threatened under the FFG Act and classified as Endangered in Victoria (DSE 2007). Though the species does not currently occupy wetlands in the study area, it has the potential to colonise Aitken and/or Malcolm Creek, particularly following the construction of in-stream and off-stream water treatment wetlands within both creek corridors. Therefore, this species is addressed in the CMP in regards to habitat augmentation and monitoring within the proposed wetlands.

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2 Study Area

The Highlands residential development is located at Craigieburn, c. 25 km north of Melbourne. Mt Aitken forms the southern boundary, the western side is bordered by farmland, residential development abuts the east and Mt Ridley Road forms the northern boundary (Figure 1). The developable area comprises 743.6 ha, Regional Open Space (ROS) comprises 103.7 ha and within the ROS c. 48.5 ha are classified as Conservation Reserves (see Section 3).

Highlands is located within the Victorian Volcanic Plain Bioregion and historically received c. 500-600 mm of rain annually. The geology is characterised by Quaternary Newer Volcanics (Werribee Plains phase) (Geological Survey of Victoria 1974). Soils are grey loamy clays, which can form heavier cracking clays within the southern lower slopes. Basalt rocks are frequently exposed at the surface, particularly along Malcolm Creek and the northern reach of Aitken Creek.

The study area is moderately undulating, with Mt Aitken the highest peak in the south. Malcolm and Aitken Creeks, and their tributaries (i.e. drainage lines), influence local topography, forming moderately broad incisions with occasional stony rises. Malcolm and Aitken Creeks are both tributaries of Merri Creek, which is located c. 4 km to the east of the study area. Both creeks are ephemeral, but there are several large dams within reaches of both creeks. Some of these retain water during dry periods, particularly downstream of Craigieburn West Road.

The study area has undergone substantial modification from land-clearing, cattle grazing and cultivation. These past and current land uses have severely altered the indigenous vegetation. The area is now characterised by cleared, intensively grazed improved pasture. Relatively small patches of remnant vegetation remain, which are mostly associated with the creeks.

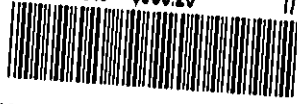
Highlands is included in a Comprehensive Development Zone under the Hume Planning Scheme. The purpose of the Zone is to recognise land suitable for urban development but requiring that such development be in accordance with an approved local structure plan and also a more detailed approved development plan.

In December 2007, a revised Highlands Local Structure Plan (HLSP) dated 3 December 2007, was approved by Hume City Council. Under the approved HLSP, Highlands is identified for predominantly residential use.

One area within Highlands, known as 'De Maria', is still zoned as Farming Zone (Schedule 1) under the Hume Planning Scheme (Figure 1). This area is within the urban growth boundary and forms part of the 'R2' precinct structure plan, which is currently being prepared. Four planning overlays also apply to Highlands: Development Plan Overlay (DPO); Design and Development Overlay (DDO1); Public Acquisition Overlay 1 and 2 (PAO1 and PAO2); and Heritage Overlay 33 (HO33).

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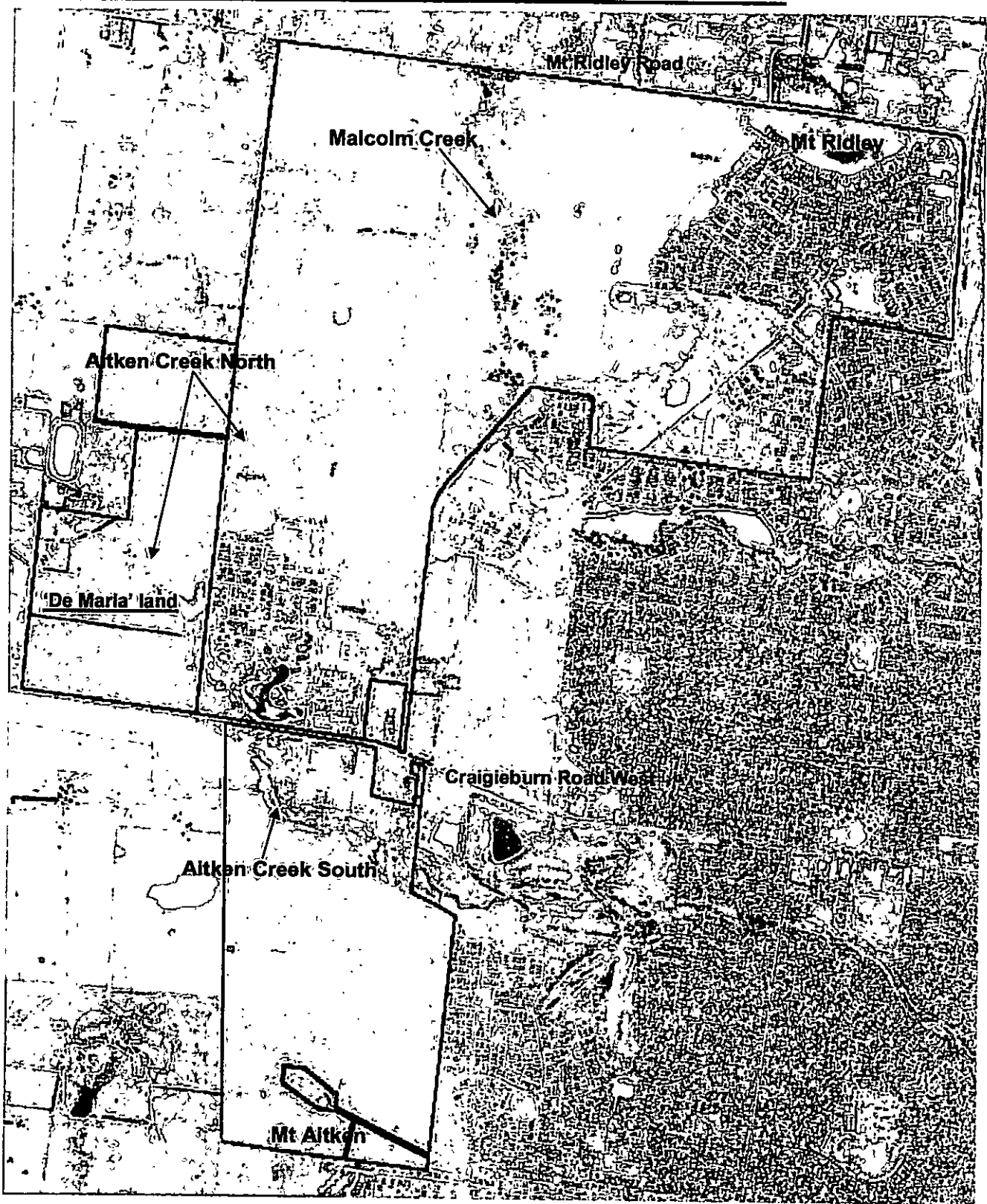


Figure 1 Highlands, Craigieburn (Aerial: Bosco Johnson Pty Ltd)



3 Conservation Reserves

The areas targeted for conservation management are within Regional Open Space (ROS) along Malcolm and Aitken Creek.

There are four ROS areas (Figure 2), these are:

- **Malcolm Creek Corridor** - extending from Mt Ridley Road in the north to the boundary of Highlands and Delfin land in the south;
- **Aitken Creek North** - extending from the boundary of Highlands and private land in the north to Craigieburn Road west in the south. This area also includes the 'De Maria' land (currently zoned Urban Growth Zone);
- **Aitken Creek South** – extending from Craigieburn Road west to the boundary of Highlands and Delfin land in the south-east; and
- **Mt Aitken** – located on the southern boundary of Highlands.

Within the ROS, there is c. 48.5 ha designated as Conservation Reserve. These Reserves support core habitat for the Golden Sun Moth, habitat for River Swamp Wallaby-grass and Matted Flax-lily and potential habitat for the Growling Grass Frog. The reserves also include 8 ha of remnant Plains Grassland and Creekline Grassy Woodland, of which 4.59 ha are required to achieve the Net Gain habitat hectare offset target for the Highlands development.

The Conservation Reserves within ROS (see Figure 5) will be secured and managed specifically for the values they support (e.g. threatened species). The following will be implemented to ensure this:

- Perimeter fencing (e.g. post and wire) with appropriate signage, identifying the Conservation Reserves;
- No playgrounds or recreational facilities will be located within the Conservation Reserves;
- Strategically placed supplementary plantings so as to not interfere with the open grassland structure of core habitat for Golden Sun Moth or overshadow wetlands and creeklines;
- Biomass and weed control.

Open space between the Conservation Reserves will be managed quite similarly to co-inside with requirements of the Golden Sun Moth, River Swamp Wallaby-grass, as well as remnant vegetation (e.g. biomass control, weed control) to potentially increase the area of habitat and maintain connectivity between Conservation Reserves.

The remaining ROS between Conservation Reserves will form part of the parkland network and will accommodate some passive recreation.



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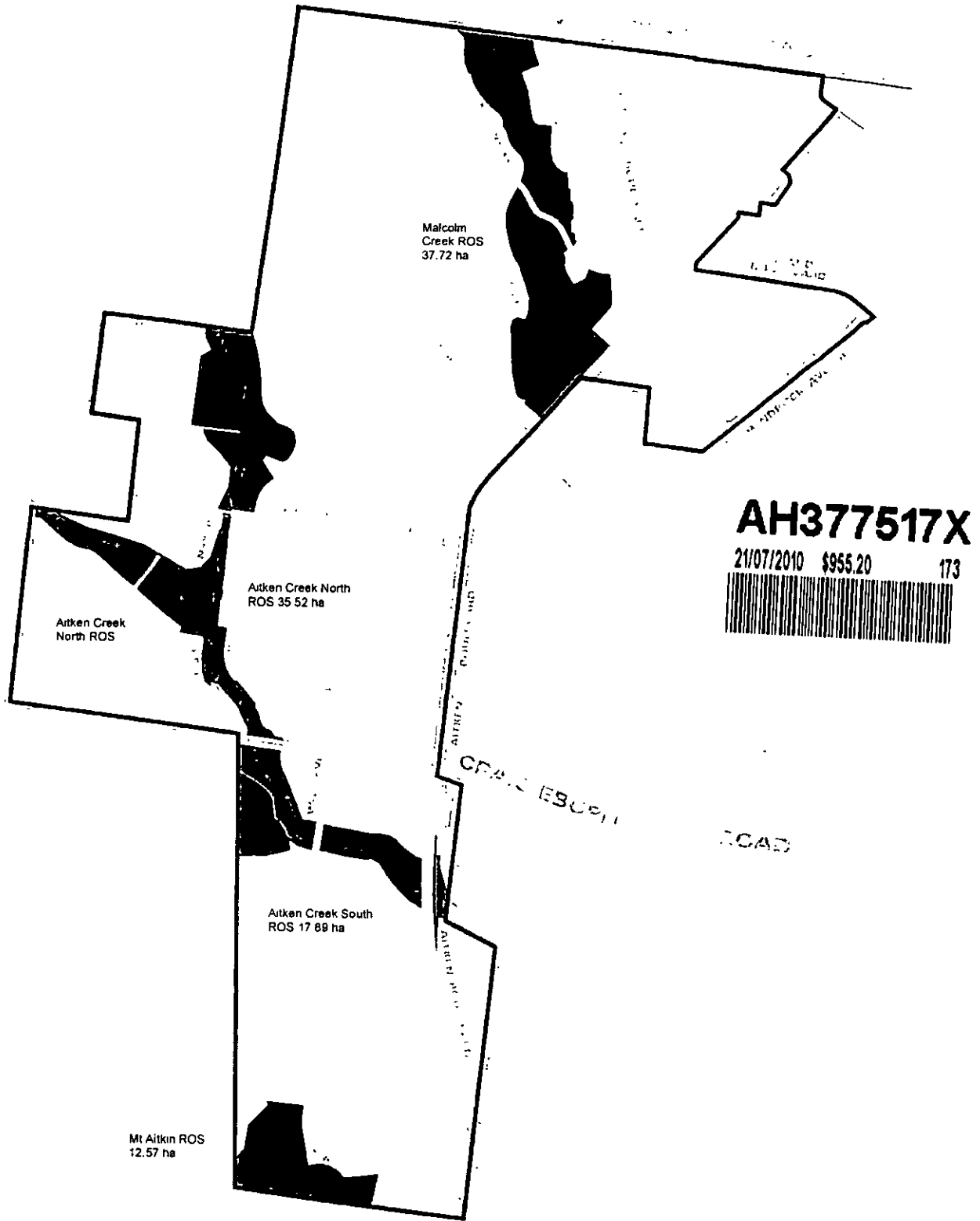


Figure 2 Regional Open Space (ROS) Highlands, Craigieburn (Bosco Johnson Pty Ltd). Conservation Reserves are within the ROS areas, see Figure 4 and 5.



4 Background

Three threatened EPBC-listed species (Matted Flax-lily, River Swamp Wallaby-grass and Golden Sun Moth) were recorded at Highlands. A detailed account of the ecology and distribution of these species are provided within the Environmental Values report (Ecology Australia 2008). The following is a summary of the key habitat features identified as being important for management for these species at Highlands. As Growling Grass Frogs have not been recorded at Highlands their ecology is not discussed here, see Ecology Australia (2008) for further detail on this species.

4.1 Matted Flax-lily (*Dianella amoena*)

One plant of Matted Flax-lily was recorded in December 2007 within Highlands (Aitken Creek South) on the boundary with a neighbouring property. It is growing amongst exotic grasses within an old dry stone wall. This plant will be protected within the Conservation Reserve.

4.2 River Swamp Wallaby-grass (*Amphibromus fluitans*)

A population of River Swamp Wallaby-grass was first recorded on the Highlands property during a flora and fauna assessment in 2003 (Ecology Australia 2003). It is located in an old quarry in the northern section (De Maria) of the study area and measures c. 0.03 ha. Subsequent surveys have recorded scattered populations of River Swamp Wallaby-grass within Aitken and Malcolm Creeks. Habitats where this species occurs within Highlands include ephemeral pools and sections of the creeks that have been grazed. Scattered plants have also been found around the perimeter of large dams located within Aitken Creek where stock has been excluded.

The results of the survey suggest that grazing has helped maintain the populations of River Swamp Wallaby-grass by reducing the cover of exotics. However, the severe pugging of soils caused by stock within the dams is unfavourable for the species.

The majority of the River Swamp Wallaby-grass populations at Highlands will be protected and incorporated within ROS. Three populations will be salvaged, propagated offsite and translocated into the water treatment wetlands of Aitken Creek once they are constructed.

Loss of genetic diversity resulting from the salvage and translocation of River Swamp Wallaby-grass is not anticipated to notably affect populations of this species within the study area or wider landscape, based on its reproductive biology and dispersal mechanisms as outlined below.

The breeding system of River Swamp Wallaby-grass is a combination of exogamy (wind pollinated flowers) and cleistogamy (self pollination within unopened flowers) (Jacobs and Lapinuro 1986, Edgar and Connor 2000, Carr pers. obs.), and therefore, many populations are likely to be extensively clonal. Also, vegetative reproduction is a major feature in the biology and ecology of River Swamp Wallaby-grass (Carr 2006) with clonal swards arising from plants (extravaginal shoots) produced along the culms. The connections (culm internodes) soon

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disintegrate leaving separate plants. It is likely that localised populations such as those occurring along Malcolm and Aitken Creeks may have substantially arisen via vegetative reproduction.

Dispersal in River Swamp Wallaby-grass is very effective and it may occur over very long distances – as evidenced by the abundant records of populations in farm dams (usually located in situations where wetlands did not previously occur) and the occurrence of the species in New Zealand (Jacobs and Lapinuro 1986). As is the case for a large suite of indigenous and exotic wetland plant species, dispersal (exozoochory) in River Swamp Wallaby-grass is assumed to be accomplished by waterfowl – which is by dispersal units adhering to the feet or feathers of birds. Dispersal of seeds is also accomplished by water, though dispersal at any great distance is expected to be a rare occurrence in either Malcolm or Aitken Creeks within the study area.

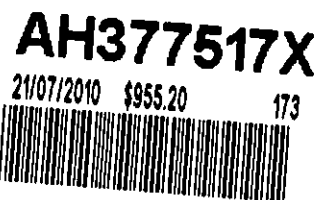
It is reasonable to infer that within a population, particularly one occurring in circumscribed habitats such as Malcolm and Aitken Creeks, little genetic diversity may be normal given the extent of clonal swards produced vegetatively, combined with the propensity for cleistogamy. Many such populations may have arisen by a single founder event or few founder events (seeds arriving via waterfowl at a site). There are no data on whether or not populations of low genetic diversity are disadvantaged by inbreeding depression.

The above considerations were taken into account when constructing the salvage and translocation strategy for River Swamp Wallaby-grass at Highlands.

4.3 Golden Sun Moth (*Synemon plana*)

Within Highlands, Golden Sun Moth abundance was generally associated with the environs of Aitken and Malcolm Creeks. The habitat features, which collectively, indicate 'core habitat' include:

- Grazed pasture/grassland with reduced biomass;
- Open grassland structure with a significant proportion of bare ground;
 - males have a distinct patrolling/searching flight pattern which aims to seek out females displaying their golden hind wings on the ground, females are thus much more visible between grass tussocks or on bare ground;
- A cover of Wallaby-grasses ranging from 5 to 50%;
- A range of topographical features and/or naturally undulating micro-topography (e.g. gilgai, stony knolls and stone walls);
- In some areas, the presence of the exotic Chilean Needle-grass (*Nassella neesiana*)
 - there has been speculation that larval Sun Moths utilise other food plants apart from Wallaby-grasses, such as Chilean Needle-grass. The recent survey work conducted by Gilmore (2007) found females ovipositing (egg-laying) on Chilean Needle-grass



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disintegrate leaving separate plants. It is likely that localised populations such as those occurring along Malcolm and Aitken Creeks may have substantially arisen via vegetative reproduction.

Dispersal in River Swamp Wallaby-grass is very effective and it may occur over very long distances – as evidenced by the abundant records of populations in farm dams (usually located in situations where wetlands did not previously occur) and the occurrence of the species in New Zealand (Jacobs and Lapinuro 1986). As is the case for a large suite of indigenous and exotic wetland plant species, dispersal (exozoochory) in River Swamp Wallaby-grass is assumed to be accomplished by waterfowl – which is by dispersal units adhering to the feet or feathers of birds. Dispersal of seeds is also accomplished by water, though dispersal at any great distance is expected to be a rare occurrence in either Malcolm or Aitken Creeks within the study area.

It is reasonable to infer that within a population, particularly one occurring in circumscribed habitats such as Malcolm and Aitken Creeks, little genetic diversity may be normal given the extent of clonal swards produced vegetatively, combined with the propensity for cleistogamy. Many such populations may have arisen by a single founder event or few founder events (seeds arriving via waterfowl at a site). There are no data on whether or not populations of low genetic diversity are disadvantaged by inbreeding depression.

The above considerations were taken into account when constructing the salvage and translocation strategy for River Swamp Wallaby-grass at Highlands.

4.3 Golden Sun Moth (*Synemon plana*)

Within Highlands, Golden Sun Moth abundance was generally associated with the environs of Aitken and Malcolm Creeks. The habitat features, which collectively, indicate 'core habitat' include:

- Grazed pasture/grassland with reduced biomass;
- Open grassland structure with a significant proportion of bare ground;
 - males have a distinct patrolling/searching flight pattern which aims to seek out females displaying their golden hind wings on the ground, females are thus much more visible between grass tussocks or on bare ground;
- A cover of Wallaby-grasses ranging from 5 to 50%;
- A range of topographical features and/or naturally undulating micro-topography (e.g. gilgai, stony knolls and stone walls);
- In some areas, the presence of the exotic Chilean Needle-grass (*Nassella neesiana*)
 - there has been speculation that larval Sun Moths utilise other food plants apart from Wallaby-grasses, such as Chilean Needle-grass. The recent survey work conducted by Gilmore (2007) found females ovipositing (egg-laying) on Chilean Needle-grass

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and found cast pupa cases amongst swards of Needle-grass (further experimental work is required in this area).

A total of 74.79 ha of core habitat for the Golden Sun Moth has been identified at Highlands. The proposed strategy for conservation of Golden Sun Moth at Highlands is to retain and manage 44 ha of core habitat. The loss of 30.79 ha will be addressed through offsite habitat offsets, which is addressed in a separate document.





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5.1 Objectives

The purpose of the CMP is to outline management actions and pre-construction/construction protocols required for the long term protection of Matted Flax-lily, River Swamp Wallaby-grass, Golden Sun Moth and their habitats (including remnant vegetation) and potential Growling Grass Frog habitat in Conservation Reserves. It also provides a Net Gain offset management plan for the loss of remnant patches.

5.2 Management and conservation of threatened species

5.2.1 Matted Flax-lily (*Dianella amonea*)

One plant of Matted Flax-lily has been recorded at Highlands. This plant is located within the Conservation Reserve in Aitken Creek South (Figures 3 and 4). Other flora values within this area include remnants of Plains Grassland and Creekline Grassy Woodland.

This section sets out management actions required to protect the Matted Flax-lily plant and addresses:

- weed and biomass control;
- monitoring; and
- augmentation.

The Matted Flax-lily plant is located at the base of a dry stone wall on the western boundary of the Conservation Reserve, this wall is being retained.

Weed and biomass control

Weed control, particularly of Canary Grass (*Phalaris aquatica*), is a critical management issue for the Matted Flax-lily. Table 1 lists weed species for control or elimination that occur within the Aitken Creek South Conservation Reserve and are a potential threat to Matted Flax-lily. This list should not be seen as exhaustive. Annual monitoring should allow for the identification of new weed species and their incorporation into the management program as appropriate. The recommended timing and method of weed control is outlined in Section 5.4.2

To control biomass levels, the Plains Grassland and surrounding exotic grassland will be slashed (refer Section 5.4.1). No slashing will occur within the vicinity of the Matted Flax-lily plant between its leaf emergence – fruiting period (typically Spring – February).



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Table 1 Highlands CMP: Weed species of Aitken Creek south that are potential threat to Matted Flax-lily.

Species	Common name	Control/Eliminate
<i>Cirsium vulgare</i>	Spears Thistle	Control
<i>Cynara cardunculus</i>	Spanish Artichoke	Eliminate
<i>Dactylis glomerata</i>	Cocksfoot	Control
<i>Holcus lanatus</i>	Yorkshire Fog	Control
<i>Moraea miniata</i>	Two-leaf Cape-tulip	Eliminate
<i>Nassella neesiana</i>	Chilean Needle-grass	Control
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	Control
<i>Rosa rubiginosa</i>	Sweet Briar	Eliminate
<i>Rubus anglocandicans</i>	Blackberry	Eliminate
<i>Silybum marianum</i>	Variegated Thistle	Control



Walking trails

There will be no non-sealed walking trail within the Aitken Creek South Conservation Reserve.

Monitoring

Monitoring is required to follow the survival of the Matted Flax-lily plant and determine the effectiveness of the management regimes (particularly weed control). It will also allow the identification of any additional management issues.

Monitoring of the Matted Flax-lily will be undertaken each year between December and February. Extent of spread, flowering and fruiting will be documented. The success of weed control will be monitored as part of the weed management requirements for the Conservation Reserve (refer Section 5.4.2). However, additional weed management issues may also be identified during the site visits and will be documented.

Annual reports outlining the results of the monitoring will be required for the ten year life of the plan, and thereafter following the 10 year review (refer Section 11.1). Any new management issue should be discussed with a botanical consultant that has extensive experience working with Matted Flax-lily (e.g. Geoff Carr, Ecology Australia and Damien Cook, Australian Ecosystems).

Augmentation

Planting of a local provenance (Merri Creek Catchment) stock of Matted Flax-lily is recommended to establish a more robust population. Plantings could occur in the surrounding Aitken Creek south

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Plains Grassland, and also within the greater Conservation Reserve. Sites for the Matted Flax-lily will be chosen carefully, avoiding areas of high weed cover and pronounced Gilgai terrain.

Discovery of new Matted Flax-lily plants

In the event that any new plants of Matted Flax-lily are recorded, retention will be the highest priority. The most likely areas that this species may be found are within Plains Grassland remnants which the majority are within Conservation Reserves. In the unlikely event that Matted Flax-lily plants are found within the development zone a salvage and translocation plan has been developed as a precaution. This is detailed in the Environmental Values Report, Section 7.2 (Ecology Australia 2008).

If any new plants of Matted Flax-lily are discovered, DEWHA will be informed within five working days of the discovery.

If salvage/translocation is considered necessary, this will be assessed and in consultation with the Federal Government the best course of action will be determined.





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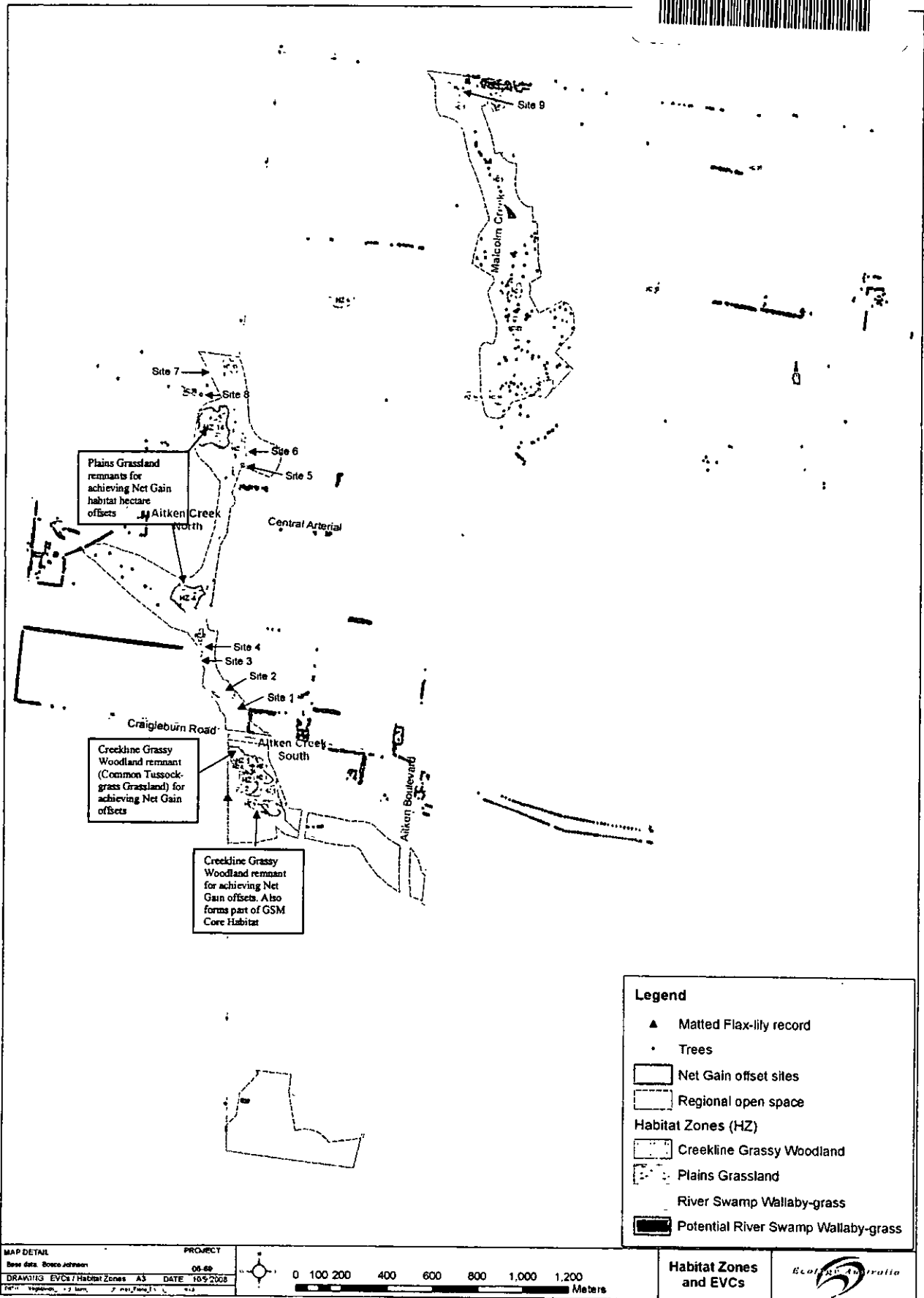


Figure 3 Location of River Swamp Wallaby-grass populations (Sites 1 – 9), Matted Flax-lily plant, trees (remnant and non-remnant), remnant patches of vegetation and Net Gain Habitat Zones (HZ), Highlands, Craigieburn.

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5.2.2 River Swamp Wallaby-grass (*Amphibromus fluitans*)

Scattered populations of River Swamp Wallaby-grass have been recorded at Highlands within Aitken and Malcolm Creeks (Ecology Australia 2008). The majority of these populations will be retained within Conservation Reserves (Figure 4). Three populations will be salvaged, propagated offsite and translocated into newly constructed wetlands on Aitken Creek. This plan addresses the management of the translocated plants and also those populations that will remain *in situ*.

Translocated plants

Plants from the three populations will be salvaged by a qualified contractor prior to the wetlands being constructed, or before the area supporting the old quarry (c. 0.03 ha) undergoes residential development. The majority of the plants (i.e. > 80%) from Sites 1, 2 and 8 will be salvaged. Genetic diversity of the populations is discussed in Section 4.2.

Salvaging involves digging or lifting plants from the mud placing the material in sealed plastic bags for transport to the nursery, and then dividing the material, potting the divisions into a suitable substrate and maintaining the pots/tubes in shallow water.

River Swamp Wallaby-grass is very easily propagated vegetatively at any time of the year by division of the small clumps or by separating the shoots (tillers) at the nodes of the culms. Growth is rapid, but is least active in February and March, when it is assumed summer drought often precludes growth. These divisions (tillers) are potted as separate plants (in a conventional soil medium) and grown in moist or saturated conditions; that is, standing in shallow water or frequently irrigated (Carr 2006). The rapid growth of plants (ideally exposed to full sun) ensures that stock of an adequate size to be planted out can be produced within about three months.

Around 2000 plants will be propagated in a nursery from the collected material and translocated into the shallow marsh (0 – 0.25 m below natural water level (NTWL)) and deep water marsh zones (0.25 – 0.5 m below NTWL) of the Aitken Creek Wetlands, once the wetlands have been constructed (Ecology Australia 2008). All of the water treatment wetlands will be revegetated with indigenous plant species and managed for weed species. The species selected for the plantings will be compatible with the survival of River Swamp Wallaby-grass, and all naturally occur within wild populations of River Swamp Wallaby-grass (refer Appendix 4).

Suitable sites for the propagated River Swamp Wallaby-grass plants include:

- Water treatment wetlands of Aitken Creek South (Craigieburn Road – Aitken Boulevard) which are currently under construction. These wetlands include 3,301 m² of Shallow Marsh and 18,126 m² of Deep Marsh (TBLD Plans 2008).
- Water treatment wetlands of Aitken Creek North (De Maria pondage – Craigieburn Road). Shallow and Deep Water Marsh comprise approximately 3,000 m² of the De Maria

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pondage (Craigie and Condina 2006b). The smaller pools, south of the dam, will also support zones suitable for the planting of River Swamp Wallaby-grass.

A water treatment wetland will also be constructed at the proposed crossing of the Central Arterial roadway. This wetland is currently in the design phase, but is likely to have suitable areas for planting of River Swamp Wallaby-grass. The suitability of this wetland to receive the propagated plants will be confirmed by a qualified consultant prior to any revegetation works.

To minimise disturbance and reduce competition from weeds, the translocation of the River Swamp Wallaby-grass plants will be undertaken in conjunction with the wetland revegetation works. Ideally, this would occur after the autumn break; however it is acknowledged that works to construct the wetlands may take longer than expected and therefore the best timing for planting (i.e. sufficient water levels) would be determined by a qualified botanical consultant.

The wetlands of Aitken Creek South have been constructed. Propagated River Swamp Wallaby-grass salvaged from this area will be translocated back into these wetlands (refer Ecology Australia 2008, see below for current status of these plants). Additional plants salvaged from Aitken Creek South and/or the quarry could be also translocated into Aitken Creek South after the wetlands have been constructed as long as the revegetated areas are not disturbed.

The River Swamp Wallaby-grass will be planted at a relatively high density (c. 5 plants / m²) within the Shallow Marsh and Deep Marsh zones to ensure a high cover is quickly established to reduce competition from weeds. Groups of plantings will be undertaken across these zones which will allow River Swamp Wallaby-grass to find its optimum ecological niche within the wetlands.

The following management actions are required for the translocated River Swamp Wallaby-grass:

1. Weed control before and after planting; and
2. Erection of waterfowl exclosures to protect River Swamp Wallaby-grass tubestock.

Waterfowl control

It is essential to erect exclosures made of plastic mesh to protect planted River Swamp Wallaby-grass from waterfowl. These are routine measures employed for the revegetation of constructed and natural wetlands. The exclosures would remain for up to about nine months (if left longer they cannot easily be removed without harming the vegetation).

Site preparation, plant supply, erection of waterfowl exclosures and monitoring is part of the one contract held by Australian Ecosystems.

Weed control

Weed control will be required as part of the initial site preparation and on an ongoing basis. This will involve controlling (or eliminating if feasible) populations of seriously invasive wetland weeds present within the Highlands property (Table 2). These selected weed species will require treatment with herbicide – e.g. Roundup Biactive® permitted for use near water.

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Additional weed species that may require control in the future will need to be assessed on a site-by-site basis.

It is anticipated that weed control would be required initially, post-planting (c. 3 – 9 months after), and then on an annual basis as outlined in Section 5.4.2.

Table 2 Highlands CMP: Weed species currently threatening populations or habitat of River Swamp Wallaby-grass.

Species	Common name	Control/Eliminate
<i>Cyperus eragrostis</i>	Drain-flat Sedge	Control
<i>Elytrigia repens</i>	English Couch	Control
<i>Dactylis glomerata</i>	Cocksfoot	Control
<i>Holcus lanatus</i>	Yorkshire Fog	Control
<i>Paspalum dilatatum</i>	Paspalum	Control
<i>Paspalum distichum</i>	Water Couch	Control
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	Control
<i>Rosa rubiginosa</i>	Sweet Briar	Eliminate
<i>Rubus anglocandicans</i>	Blackberry	Eliminate
<i>Salix X sepulcralis</i> var. <i>sepulcralis</i>	Weeping Willow	Eliminate
<i>Xanthium spinosum</i>	Bathurst Burr	Eliminate

Monitoring

The maintenance of the River Swamp Wallaby-grass and other wetland plantings will be maintained by the contractor – Australian Ecosystems for two years, after which time a new contract for management of the wetlands will be negotiated between Stockland and Melbourne Water. This information will be fed back into the annual monitoring reports, as outlined below.

During the monitoring of planted River Swamp Wallaby-grass, it is essential to:

- Follow the survival and performance of the plants and to make good plant losses if significant mortality occurs (which is not expected). Percentage cover, flowering and fruiting would be documented. Animal and plant interactions, particularly grazing by waterfowl, would also be monitored and recorded;
- Identify management issues in order to formulate appropriate and timely responses (weed management is the most significant issue);
- Determine when to remove the exclosures protecting River Swamp Wallaby-grass from waterfowl;

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- Record the location of populations using a hand-held GPS (initial planting locations will be recorded by Australian Ecosystems); and
- Photograph River Swamp Wallaby-grass and associated vegetation.

Annual reports outlining the results of the monitoring will be required for the ten year life of the plan, and thereafter following the 10 year review (refer Section 11.1). The report will need to address all the points outlined above. Any new management issue should be discussed with a botanical consultant that has extensive experience working with River Swamp Wallaby-grass (e.g. Geoff Carr, Ecology Australia and Damien Cook, Australian Ecosystems).

Monitoring according to the following schedule is recommended:

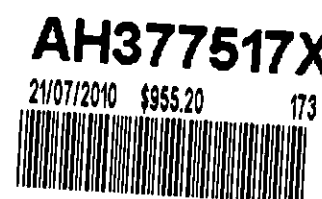
Monitoring 1 – 4 weeks after planting

Monitoring 2 – 6 months after planting

Monitoring 3 – one year after planting

Monitoring 4 – 18 months after planting

Monitoring 5 – 24 months after planting – on-going. After 24 months, the translocated plants will be monitored in conjunction with monitoring for the *in situ* populations at Highlands (see below).



***In situ* populations**

Six of the nine populations of River Swamp Wallaby-grass at Highlands will be retained and protected within Conservation Reserves. There is also an additional seven sites which are likely to support River Swamp Wallaby-grass within Conservation Reserves but the identity of the *Amphibromus* species present could not be confirmed due to lack of flowering material (Figure 3). The management of all these populations (including potential populations) are addressed below. The key management and protection issues for these plants are:

- weed control;
- protection during construction; and
- monitoring.

Weed control

Weed control is the most important issue for the long-term protection of River Swamp Wallaby-grass at Highlands. Grazing has been beneficial for these populations by reducing the cover of exotic grasses and herbs. The creeklines outside of the water treatment wetlands should continue as long as possible before construction begins. Slashing and chemical weed control will need to be employed in areas once grazing has ceased. Weed species that require control are listed above in Table 2. The timing of the biomass/weed control works is addressed in Sections 5.4.1 and 5.4.2 and is summarised below:



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- Grazing Aitken Creek North between Craigieburn Road and De Maria pondage until the construction of the wetlands. After which Sites 3 and 4 will need to be slashed (refer Section 5.4.1) and weeds outlined in Table 2 spot sprayed with herbicide.
- Grazing Aitken Creek North (north of De Maria pondage) prior to development as outlined in Section 5.4.1. Slashing will need to be employed once grazing is removed and spot spraying of weeds with herbicide.
- Slashing within Malcolm Creek (refer Section 5.4.1) and spot spraying of herbicide for weed species outlined in Table 2.

Protection during construction

Sites supporting, or likely to support, plants of River Swamp Wallaby-grass as shown in Figure 3 will be fenced off before the construction of water treatment wetlands, walking trails and residential development in adjoining areas. This would include:

- Fencing off the River Swamp Wallaby-grass populations at Sites 3 and 4 (Figure 3) prior to the construction of the water treatment wetlands that adjoin these populations. Sediment traps will also be provided so that soil from upslope does not impact on the populations;
- Fencing off and installation of sediment traps along Aitken Creek North (north of the De Maria pondage) prior to the construction of walking tracks and the development of DP5 B and De Maria.
- Fencing off and installation of sediment traps around the low-lying area likely to support River Swamp Wallaby-grass on Malcolm Creek before the development of the water treatment wetland adjoining the site; and
- Fencing off and installation of sediment traps along Malcolm Creek prior to the construction of walking trails and the development of DP7 and DP11.

All fences will be inspected by a botanist before works commence.

Monitoring

Monitoring of the River Swamp Wallaby-grass populations will be undertaken during November – January each year. The following information will be recorded: presence/absence; the percentage cover within the creekline or pool; weed species requiring control; and any other management recommendations. New populations if encountered will be recorded with a GPS, mapped and added to the monitoring program.

As per the monitoring requirements for the translocated plants, annual reports outlining the results of the monitoring will be required for the ten year life of the plan, and thereafter following the 10 year review (refer Section 11.1). Any new management issue should be discussed with a botanical consultant that has extensive experience working with River Swamp Wallaby-grass (e.g. Geoff Carr, Ecology Australia and Damien Cook, Australian Ecosystems).

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Status of River Swamp Wallaby-grass plants salvaged from Aitken Creek South (October 2009)

Prior to the construction of wetlands in Aitken Creek South (i.e. prior to the submission of the EPBC referral 2008/4161), a population of River Swamp Wallaby-grass present within the creek was salvaged (see Ecology Australia 2008). Australian Ecosystems Pty Ltd (AE) undertook the salvage in June 2007 and has since propagated 2000 base units. These have been grown in three inch containers (slightly larger than forestry tubes).

The plant material is currently held in the Australian Ecosystem nursery (Plate 1). Due to delays on the project (i.e. lack of water due to low rainfall) the base stock has been re-propagated twice to ensure it remains viable and to adjust the timing for the plants to be site ready. Australian Ecosystems has tracked the original batch of plant material within their internal systems with a unique code. This information can be seen on the plant label (Plate 1). This way Australian Ecosystems can document the movement of the material and prove delivery to the site.

The current stock holding remains at 2000 base units which are healthy and viable. AE is preparing this material to align with a planting program set for late October/early November 2009 with the River Swamp Wallaby-grass installation to be undertaken in conjunction with the bulk wetland plantings. This strategy was judged most beneficial for the establishment of the plants, as the plantings around the River Swamp Wallaby-grass would protect them, changes in the site conditions were less likely to change such as water level due to possible civil requirements and maintenance, and monitoring would be more attentive once the entire landscape plantings had been delivered.

The AE Consulting Team and specifically Ana Backstrom are managing the process in regards to this material, having coordinated the liaison with DSE and other authorities and lead the collection. Ana has also supervised the propagation and care of the stock with the AE Nursery Manager, Brian Mole. Ana will be overseeing the eventual installation, including, GPS tracking and other monitoring and reporting functions as required. Once installed, the AE Northern Maintenance crew will contribute to managing the site for two years (see indicative works schedule below).

An on-site meeting was conducted on 7 October 2009 to induct the revegetation contractors on the importance of Golden Sun Moth habitat (adjoining the wetlands) and also to discuss the planned location of the River Swamp Wallaby-grass. Participants at this meeting were Ecology Australia, Australian Ecosystems (revegetation contractors), Thompson Berril Landscape Design, Melbourne Water, Breet Pitt & Dixon and Stockland representatives. The key outcomes of this meeting were:

- All River Swamp Wallaby-grass will be planted within the upper wetlands cell (closets to Craigieburn Road, Figure 4) as this is where the highest water level can be maintained;
- River Swamp Wallaby-grass will be netted to provide protection from waterfowl;
- Plants will be planted in colonies, not individually;
- The location of plants will be roughly mapped and checked on-ground by Ecology Australia immediately prior to the planting;

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- Jute matting will be laid to prevent the spread of weeds;
- Weed control will be undertaken where required;
- Water quality testing will be undertaken prior to the planting;
- River Swamp Wallaby-grass will be planted at five plants/m²;
- All planting zones for River Swamp Wallaby-grass will be marked with a hand-held GPS and mapped and provided to Ecology Australia for monitoring surveys and annual reporting requirements;

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River Swamp Wallaby-grass indicative works schedule (Australian Ecosystems)

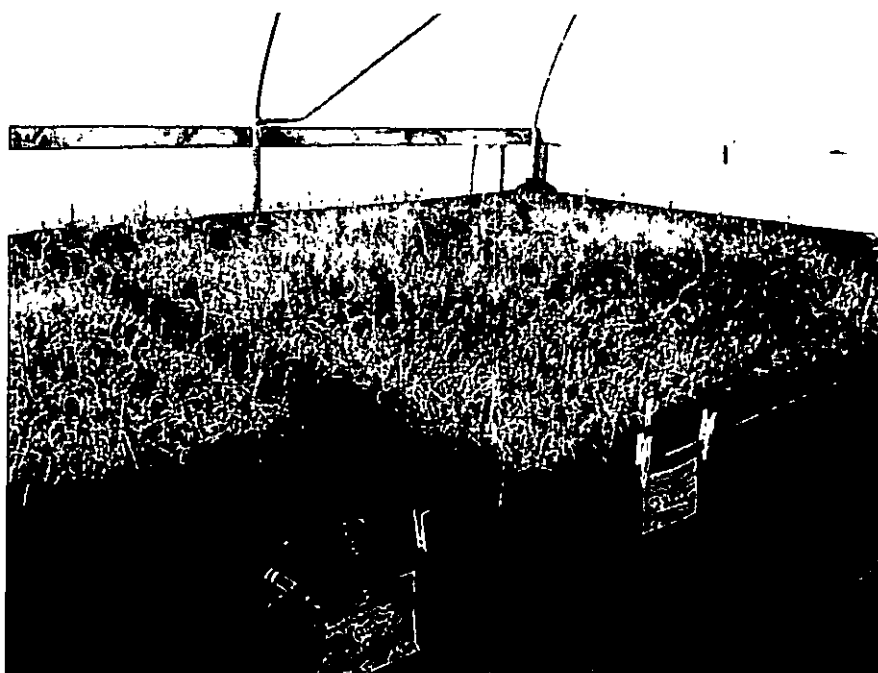
	October	November	December	2010 onwards
Juting Nth Wetland				
Juting Sth Wetland				
Mulch Sth Wetland				
Plant Installation Nth				
Plant Installation Sth				
Maintenance				

The amount of time allowed in the above works schedule is based on clear access to site with water at correct levels. Works are scheduled to commence with the Northern Wetland Juting on 20 October 2009. Please note that timing is not definite as unforeseen factors may impede progress and works may also be completed sooner than expected (Matt Gale, Project Manager, AUSTRALIAN ECOSYSTEMS).

In regards to other areas where River Swamp Wallaby-grass has been planted in constructed wetlands in Melbourne, providing the site remains suitable in regards to hydrology (water level), water quality and weeds are controlled, the species should remain healthy and viable (Ana Backstrom, Australian Ecosystems, pers comm. and Geoff Carr, Ecology Australia, pers comm.). Maintaining these elements is the primary goal for management of these populations at Highlands, these measures will also be important for managing potential Growling Grass Frog habitat (see Section 5.2.4).

Monitoring the populations following the planting of wetlands will be undertaken (see Section 10.1), management of wetlands for River Swamp Wallaby-grass is outlined in the sections above. No further salvage and translocation of other populations will be undertaken until there is an indication of translocation success and viability of the population in Aitken Creek South.

Success of translocation requires that 100% of plants survive the first three months *in situ* and at least 80% survive over the following two summer seasons *in situ*, and any deaths are replaced as observed.



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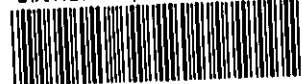


Plate 1 Highlands CMP: River Swamp Wallaby-grass *Amphibromus fluitans* tube stock at Australian Ecosystems nursery (1 September 2009).

5.2.3 Golden Sun Moth (*Synemon plana*)

Reserve design

Within Highlands, a total of 44 ha of Golden Sun Moth core habitat will be conserved and actively managed within Conservation Reserves in ROS along Aitken and Malcolm Creeks (Appendix 6) and Mt Aitken.

The following principals were considered when selecting reserve areas for Golden Sun Moth (also refer to Draft EPBC Policy Statement 3.12 Golden Sun Moth, DEWHA):

- Largest area possible;
- Where there was the highest concentration of Golden Sun Moths;
- Known locations of female moths;
- Areas which coincided with other environmental values (e.g. stony rises and Plains Grassland);
- Wide, rounded patches to reduce edge effects;
- Maintenance of connectivity through retaining areas along creeklines and incorporating areas in between core habitat patches which may be used as 'stepping stones' (retaining habitat within creek lines also provides connectivity outside of Highlands to other known and/or possible locations of Golden Sun Moth habitat).



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To reduce impacts on retained core habitat, appropriate management will be required to maintain and enhance existing values. The primary objective is to adapt management as necessary to maintain a 'natural' open structure of the grassland habitat through techniques to reduce biomass, promote recruitment of native grassland species and control weeds.

Golden Sun Moth management options

Currently, there is little information regarding the potential effects of grassland management on Golden Sun Moth. Some of the techniques outlined below are considered to be experimental (i.e. controlled ecological burning) and would be used in combination with other techniques and monitored carefully to gain the best conservation outcome for the species. Furthermore, all management actions must be programmed to take into account the flight season of the Golden Sun Moth. Golden Sun Moth adults can begin emerging in late October and are active during the warmest parts of the day from October/November through to early-January (Cook and Edwards 1993, Gibson and New 2007). Management actions will be conducted outside the peak emergence/flight season.

Biomass reduction

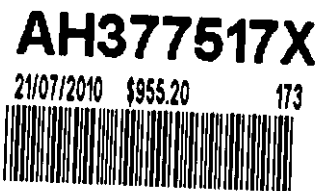
The reduction of biomass (predominantly of exotic perennial grasses) is an essential component of management for Golden Sun Moth. Golden Sun Moth utilise open grassland with low foliage, and an abundance of inter-tussock spaces (O'Dwyer 2004). Maintaining a low grassland structure by controlling tall weedy species increases the abundance of essential food plants such as the shorter growing Wallaby Grasses *Austrodanthonia* spp. and is the principle reason for management actions such as grazing, mowing and burning (Douglas 2004).

It is recommended that biomass reduction be carried out in the following order of preference: pulse grazing (prior to the construction period), slashing and burning. While pulse grazing (by sheep) is one of the best methods to reduce biomass and weed cover, as Highlands is developed and becomes increasingly urbanised, grazing is not regarded as feasible, therefore a combination of techniques or an integrated management regime is suggested. These details are outlined in Section 5.4.1 and Table 5.

Grazing

Grazing by herbivores, such as sheep, is a common technique for biomass reduction and active maintenance of Golden Sun Moth habitat (O'Dwyer 2004, Jelinek 2005, Douglas 2004). Pulse grazing by sheep during winter has been utilised within the Sun Moth Reserve in Nhill (Douglas 2004) and in spring at the Mount Piper Reserve (25 sheep/ha for 3 weeks, Jelinek 2005).

To date, the habitat for Golden Sun Moth within Highlands has been maintained through cattle grazing. Grazing will continue within Golden Sun Moth habitat (Conservation Reserves) prior to construction. Sheep grazing over Cattle grazing is preferred as their impact is less on native grasses. However, as grazing is not deemed a suitable management regime in a highly urbanised



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landscape, it will be ceased as construction begins. Other management methods will be introduced (see below and Section 5.4.1).

Controlled Burning

Ecological burning, as a regular management technique for biomass reduction in areas of Golden Sun Moth is highly debated and opinions vary as to the potential for detrimental impacts on the species (ACT Government 1998, Glenn Rudolph, Department of Sustainability and Environment, pers. comm., Cheryl O'Dwyer, The University of Melbourne, pers. comm., and Clive Crouch, Nhill Sun Moth Reserve Management Committee, pers. comm.). There is currently a lack of data on the effects of fire on Golden Sun Moth populations (Lunt and Morgan 2001). Burning, particularly during the flight season, could cause local extinctions, and impacts on the subterranean larvae that feed on underground reserves of plants are unknown (Lunt and Morgan 2001). Burning should be considered as an experimental management tool until impacts are further understood (O'Dwyer 2004).

Examples of controlled burning in Golden Sun Moth reserves

Blanket ecological burning was carried out during the flight season (December) at the Sun Moth Reserve in Nhill and resulted in the decline of Golden Sun Moth numbers over a three year period (Clive Crouch, Sun Moth Reserve Management Committee, pers. comm.). However, if carried out well outside the adult flight season (i.e. March), controlled patch burning is considered to have a low risk of impact to the species and may help reduce biomass of introduced grasses (Glenn Rudolph, Department of Sustainability and Environment pers. comm.; Douglas 2004).

Patch burning will be trialled at the Salisbury Bushland Reserve as a method of controlling weed invasion under the assumption that Golden Sun Moth can withstand their habitat being periodically burnt (Douglas 2004).

Three ecological burns (patch burns) have occurred within Craigieburn Grasslands which support a large resident Golden Sun Moth population (Tamara Karner, Parks Victoria, pers. comm.). These three burns were carried out in autumn over a ten year period and have resulted in a reduction of woody and grassy weeds with no evidence of declines in Golden Sun Moth populations. Further, Gibson (2006) recorded large numbers of male moths patrolling over recently burnt patches of Craigieburn Grassland Reserve. These moths are likely to be attracted to the bare ground rather than the burnt areas, as high numbers of males were also seen patrolling over recently mown and grazed areas.

Recommendations for controlled burning in Golden Sun Moth core habitat at Highlands

- Controlled burning should only be undertaken in early autumn, at least six weeks after the flight season ends (Gibson 2008; Glenn Rudolph, Department of Sustainability and Environment pers. comm.; Lucy Gibson, Museum of Victoria pers. comm.). Burning during and up to six weeks after the flight season will not occur as larvae may be feeding within the tillers of grass rather than underground (Gibson 2008).

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- When undertaking ecological (controlled) burns in Golden Sun Moth core habitat, a mosaic of burnt and unburnt (i.e. 'time-since-fire') patches should be created to maintain a variety of grassland structures and protect refuge areas for Golden Sun Moth and a variety of other fauna species (Fabian Douglas, private entomologist consultant, pers. comm.).
- The size of burnt patches should vary and the unburnt patches should not be more than 100 metres apart (in accordance with the greatest distance they have regularly been observed flying by Clark and O'Dwyer 2000).
- Burning should occur periodically (every 3-4 years) to maintain species diversity and inter-tussock spaces (Bainbridge et al. 2006). Other forms of biomass reduction may need to be carried out in the intervening years to ensure biomass is maintained at an optimal level for Golden Sun Moth. The City of Hume regularly performs ecological burns in other areas of grassland habitat within the Shire (Jason Summers, City Of Hume, pers comm.).

If controlled burning is an option deemed suitable, it is recommended that the two small patches of grassland habitat are used to investigate the effects of controlled burns on Golden Sun Moth. The two plots could be divided in half with an 'unburnt and burnt' area. Potential issues to address include the following:

- Size of patch burnt;
- Time of year;
- Fire intensity and frequency;
- Immediate impacts on adults/larvae; and
- Long-term impacts and population recovery.



Ecological burns may be carried out across other areas of core habitat within the Conservation Reserves once the results from these trial burns are known and in consultation with Council, Stockland, DEWHA, DSE and the contractors engaged to manage conservation reserves.

Refer to Section 5.4.1 for further discussion of burning as a biomass reduction technique and key management actions.

Slashing (mowing)

Slashing as a management technique to reduce biomass for Golden Sun Moth has been used for Nhill Sun Moth Reserve (Douglas 2004), Canberra International Airport (Canberra International Airport 2004), Derrimut Grasslands (Gibson 2008) and is proposed for Salisbury Bushland Reserve (DSE 2006a).

Slashing will be undertaken annually from late winter to mid spring (i.e. outside the peak emergence/flying period of October to January).

Heights of slashed grasslands vary from 6-8 cm at the Nhill Sun Moth Reserve (Douglas 2004) and 5-10 cm at the Canberra International Airport (Canberra International Airport 2004; Gordana Josipovic, Canberra International Airport, pers comm.). It is therefore recommended that the

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Golden Sun Moth core habitat at Highlands is slashed to a height of c. 10 cm. Refer to Section 5.4.1 for further discussion of slashing as a biomass reduction technique and key management actions.

Weed control

A major limiting factor for Golden Sun Moth in many areas is the high cover of invasive weeds (O'Dwyer 2004, DSE 2006a, Douglas and Crouch 2003). Weed control will involve controlling (or eliminating if feasible) populations of seriously invasive weeds to maximise available Golden Sun Moth habitat (O'Dwyer and Attiwill 2000) and increasing the amount of bare ground (or inter-tussock spaces) necessary for both breeding displays and recruitment of native grasses.

Care should be taken when applying herbicides in core habitat in Conservation Reserves as it is unknown whether the larvae or pupae of Golden Sun Moth in the soil are directly affected by herbicides (O'Dwyer 2004). Refer to Section 5.4.2 for further information regarding herbicides recommended for use and key management actions for weed control.

Revegetation

Supplementary planting of indigenous species will not compromise Golden Sun Moth habitat. The Golden Sun Moth requires an 'open' grassland structure with patches of bare ground (see Section 4.3). Therefore, to maintain these requirements, no trees will be planted in Golden Sun Moth habitat. Trees have the potential to shade out the existing open grassland structure and also provide additional perching substrate for predatory bird species, such as Willie Wagtails and the exotic *Common Starling (refer to EPBC Draft Policy Statement 3.12 for the Golden Sun Moth, DEWHA). In addition, many of the core habitat areas are rocky, which is not conducive to tree plantings. Shrub plantings will be restricted to replacing the exotic shrubs (e.g. *Sweet Briar). No additional areas of shrubs will be planted within Golden Sun Moth core habitat. Consideration will be given to the revegetation of robust, perennial, indigenous ground-storey species in remnant grassland patches and Golden Sun Moth habitat (to compliment weed control activities).

It is considered that the cover of Wallaby-grasses is not a limiting factor in the landscape for Golden Sun Moth and as such no collection or planting of Wallaby-grasses will occur at this stage.

Sediment controls

Sediment control fencing will be installed around all Golden Sun Moth conservation reserves during the construction period. This is to ensure there are no detrimental impacts to habitat values or quality of the grasslands as a result of run-off from the development and associated urban zone (also see Section 8).

Water treatment wetlands

No water treatment wetlands will be constructed within Golden Sun Moth core habitat (Figure 4). Pre-construction protocols such as sediment control fencing, contractor induction, storage of

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machinery and access are outlined in Section 8. These measures are aimed to reduce potential indirect impacts on Golden Sun Moth habitat as a result of wetland construction.

Stone Walls

Dry-stone walls which occur in Conservation Reserves will be left *in situ*. It has been observed that stone walls provide shelter for moths from cooler southerly winds. Stone Walls also provide habitat for other fauna (e.g. small mammals - possibly the Fat-tailed Dunnart and reptiles).





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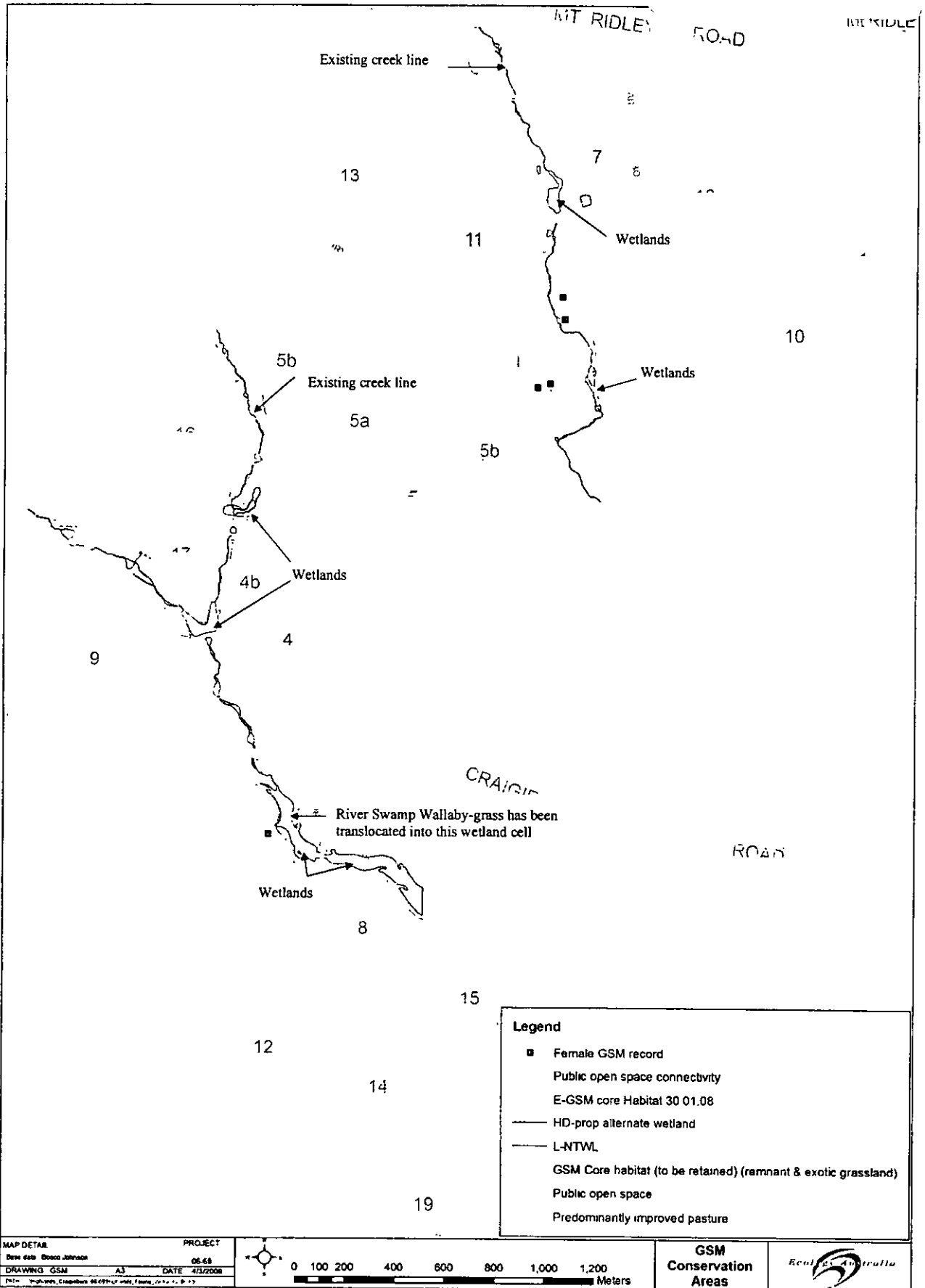


Figure 4 Highlands CMP: Golden Sun Moth core habitat, location of proposed water treatment wetlands and ROS.



5.2.4 Growling Grass Frog (*Litoria raniformis*)

According to previous survey results, the Growling Grass Frog does not currently occupy Malcolm or Aitken Creek within Highlands, or the immediate surrounds (e.g. immediately upstream in Malcolm Creek, or immediately downstream in Aitken Creek) (Heard 2007, 2009). Most dams on the property seldom hold water due to the dry conditions over the previous years and do not support important habitat features (e.g. aquatic vegetation), and are unlikely to support the species. However, if local climate conditions are suitable and habitat conditions improve as a result of the construction of water treatment wetlands in Aitken and Malcolm Creeks (Figure 4), it is possible that these Creeks could be colonised by frogs dispersing upstream from Merri Creek and into both creeks (Merri Creek is c. 4 km downstream of Highlands and supports populations of the species).

Should the creation of wetlands and habitat improvements lead to the species colonising the area, it would result in the re-expansion of the species into an area it previously inhabited (Heard 2007). However, if the wetlands do not take into consideration the habitat requirements of the species, it is likely to reduce their suitability (Heard 2007).

Considering the species may colonise wetlands on the Highlands site, sections below outline the following:

- elements of the wetlands included in the design by Craigie and Condina (2006);
- further attributes which will be implemented for protecting and enhancing habitat values for Growling Grass Frogs;
- thresholds for habitat management (i.e. if a particular habitat element is affected/degraded what the intervention measures will be); and
- protocols to ensure no impacts occur downstream to Merri Creek (also see Section 8 and Section 10.1)

Responsibility

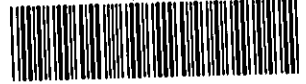
It is expected that Stockland would provide an agreed lump-sum payment to Melbourne Water to continue implementing management of the water treatment wetlands, particularly in regards to Growling Grass Frogs, if they are transferred to Melbourne Water ownership within the 10-year period (also refer to CMP Implementation Section 11).

Water treatment wetlands along Malcolm and Aitken Creeks

The wetlands planned for construction within Malcolm and Aitken Creeks (see Figure 4) have been designed by Neil Craigie of Waterway Management Consultants Pty Ltd and Pat Condina and Associates (Craigie and Condina 2006), in conjunction with Breese Pitt Dixon Pty Ltd. The following is a list of design features included in their wetland plans which are favourable for Growling Grass Frogs (also refer to Appendix 4):

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- Several wetland cells will be constructed with differing water retention times (i.e. some pools will be permanent where as others will be ephemeral);
- Physical habitat diversity will result from variation in pool shape, depth, substrate and aquatic plantings;
- The majority of the wetland edge will have slopes of 1V:8H grading to 1V:3H;
- Maximum depth of water bodies will be 2.5 metres so stratification and low dissolved oxygen conditions are unlikely to occur;
- Provision and maintenance of sediment traps; and
- Best Management Practices will be implemented through erosion and sediment control fencing during construction.

The following is a list of further attributes to augment habitat for Growling Grass Frogs:

Provision of structural diversity through a diverse planting regime:

- Wetland plantings will be designed to allow a relatively 'open' design with a diversity of indigenous macrophyte vegetation. Wetland plantings will be undertaken by Australian Ecosystems, Pty. Ltd., some of the plant species to be used are listed in previous reports (Ecology Australia 2003). An open planting regime is preferred as the Growling Grass Frog is a basking species and may avoid areas which are choked or overgrown with vegetation, or with a dense canopy cover (Heard et al. 2004). The wetland areas that will be created and which are particularly important for the species include (also see Appendix 4):
 - Ephemeral - Shallow Marsh, which support emergent and fringing vegetation (e.g. rushes and sedges) suitable for basking, shelter, perching and male calling sites;
 - Submerged Marsh – open water zones which support submergent and floating vegetation (e.g. water ribbons and pond weed) required for egg-laying sites, protection of tadpoles and prey ambush sites. For example, a high cover of pond weed has been found to be correlated with the abundance of Growling Grass Frogs in the Pakenham area (Hamer and Organ 2006a). Also see Appendix 5 (Heard 2009) for the latest results on habitat modelling which is relevant to wetland construction at Highlands;

Terrestrial habitat and over-wintering refuge:

- The species has been recorded utilising thick vegetation cover at ground level, rocks and other solid ground cover for shelter and over-wintering refuge (Gillespie and Clemann 1999, Wilson 2003).
- Terrestrial vegetation will form part of the revegetation scheme. It will also be important to maintain open grassy areas which allow frogs to forage adjoining the water body;

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- Provision of large boulders (could be sourced from basalt previously removed and stockpiled in the pasture areas of Highlands);
- Rock jumbles and logs (if available); and
- Plantings of indigenous trees will be kept quite sparse, particularly within the riparian zone, to avoid over-shading the waterbodies (see comment above regarding basking);

Water quality:

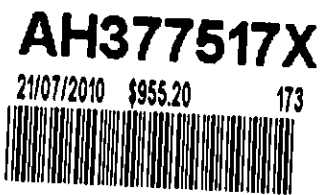
- Ensure State Environment Protection Policy Guidelines (SEPP Guidelines) are met;
- The use of fertilisers will be avoided in areas adjacent to wetlands to reduce the source of nutrient enrichment and decrease the likelihood of algal blooms (also recommended in Craigie and Condina 2006 a, b). Information will be provided in the educational material for residents regarding the use of pesticides, herbicides and fertilisers in gardens and the subsequent negative effects of polluted stormwater flowing into wetlands and creek systems;
- Provision and maintenance of sediment traps (as above);
- Best Management Practices will be implemented through erosion and sediment control fencing during construction;
- Monitoring of water quality. For example turbidity levels; it has been demonstrated that increased turbidity may exclude Growling Grass Frogs from some sites (Hamer and Organ 2006b), and chemical and sediment pollution from stormwater inflows may have caused the disappearance of Growling Grass Frogs from the lower reaches of the Merri Creek (Heard 2007).

These measures are also aimed to minimise potential impacts occurring downstream on existing populations of the species as a result of the construction and operation of wetland treatment sites (monitoring will also be undertaken to assess the efficacy of the above measures, refer to Table 3 and Section 10.1)

Connectivity and buffers:

To enable Growling Grass Frogs the opportunity to colonise the wetlands, it is essential to maintain connectivity and a suitable passage for movement of frogs between Merri Creek and Aitken and Malcolm Creeks as well as areas along these creeks immediately outside of the study area (e.g. Malcolm Creek north of Mt Ridley Road). It must be noted that a large proportion of both creeks fall outside the Highlands development area, and as such is more likely to be a local council and/or Melbourne Water matter. To maintain connectivity the following will be important to consider:

- **Malcolm Creek:** there is currently a newly created wetland downstream of Highlands in a Delfin residential development. This may act as a 'stepping stone' to wetlands which will be created in Malcolm Creek at Highlands. Further downstream there are three existing road crossings (potential barriers) over Malcolm Creek; one of them is a major Road – Sydney Road (old Hume Highway) and a Railway line.



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- **Aitken Creek:** the construction of the E14 (Aitken Boulevard) could create a potential barrier for frogs moving upstream from Merri Creek, however there are large open culverts (similar to other road crossings further downstream) which may allow the movement of frogs. There are three other existing road crossings outside of Highlands further downstream, the largest being Sydney Road.
- It is essential to keep any passages under roads (generally open culverts) on the Highlands site and beyond free of debris, rubbish, sediments and vegetation to allow the potential movement of frogs (and possibly other fauna).

It is important to maintain a suitable buffer around creeks and wetlands to protect habitat from over use by residents, edge effects and deterioration of habitat. The optimal buffer around wetlands where Growling Grass Frogs occur is 200 m (DEWHA 2009). However at Highlands as some areas had previously been developed, the areas below represent the greatest amount of land available for buffers.

- The buffer width varies for both creeks at Highlands, on average the Malcolm Creek buffer is c. 108 m either side of the creek line (range: 60 m to 175 m). For Aitken Creek north, the average buffer width is c. 91 m either side of the creek line (range: 30 m to 145 m); and for Aitken Creek south, the average buffer width is c. 109 m either side of the creek line (range: 55 m to 145 m).

The majority of the area within these buffers is Conservation Reserve (see Figure 4) and will be managed for grassland values which is compatible with terrestrial frog habitat (see Section 5.4). Some passive recreational facilities will be incorporated in the ROS outside the Conservation Reserves (see Section 9.1).

Predatory fish:

- Fish species, such as Mosquito fish, European Carp and Trout are all potential predators of the eggs and tadpoles of the Growling Grass Frog (Anstis 2002, DEWHA 2009). Mosquito fish in particular have been implicated in the decline of this species (Robertson 2003). However, there is some evidence that the frog can co-exist with native fish species such as Common Galaxid and Flat-headed Gudgeon (Heard et al. 2004).
- Stocking of exotic or non-indigenous fish will be prohibited, residents will be briefed about this in the education material they receive about the ROS and environmental values;
- Signage will also be installed to illustrate the risks of introducing exotic fish into waterways (see Section 9.2)
- Where practical, if exotic fish are found within the wetlands, individual cells could be drained in autumn/winter to remove exotic fish. This should be investigated in consultation with Melbourne Water, DSE and a qualified zoologist or ichthyologist (fish specialist), also see Table 3.



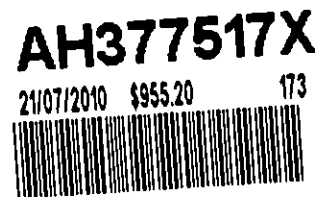
Management thresholds for the Growling Grass Frog

This section outlines the actions which will be undertaken if certain habitat management ‘thresholds’ are reached in relation to the Growling Grass Frog (see Table 3). The thresholds are based on significant impact thresholds developed as part of the EPBC Act Policy Statement 3.14 for Growling Grass Frogs (DEWHA 2009). These thresholds have been reviewed by Geoffrey W. Heard (PhD student studying Growling Grass Frogs in Merri Creek corridor from La Trobe University, Heard 2009). Suggestions and comments from Mr. Heard have been incorporated into Table 3.

A monitoring program will be implemented to identify whether Growling Grass Frogs have colonised the wetlands. Timing, methods and frequency of monitoring to be employed for surveying is addressed in Section 10.1. In addition, a vegetation/habitat monitoring program (see Section 10.1) will be initiated once wetlands are established.

Timeframes for implementation and arrangements for handing over management and ongoing monitoring of wetlands to relevant agencies is outlined in Section 11.

If Growling Grass Frogs are found to have colonised the wetlands within Highlands, this plan will require review and updating as appropriate.





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Table 3 Highlands CMP: Thresholds for wetland habitat management in relation to the Growing Grass Frog

The following habitat management thresholds and measures to be implemented are applicable to maintaining habitat suitability for the potential colonisation of Growing Grass Frogs.

Habitat element	Threshold -	Habitat element affected/degraded	Management measures to be implemented	Phases	Location
Hydrology	<ul style="list-style-type: none"> Any alteration to wetland hydrological regime which leads to wetlands drying-out completely 	<ul style="list-style-type: none"> Increase in nutrients, toxins, chemicals, sediment loads or an algal bloom which reduces water quality below acceptable State Environment Protection Policy Guidelines (SEPP guidelines) and/or reduces habitat suitability for frogs (e.g. high turbidity) 	<ul style="list-style-type: none"> Suitably qualified ecologist to monitor site (bi-annually during the spring/summer seasons, also see Section 10.1) to gauge habitat quality and suitability for Growing Grass Frogs If required, re-water site to maintain water levels, particularly in summer, this would also benefit River Swamp Wallaby-grass 	<ul style="list-style-type: none"> Post-construction 	<ul style="list-style-type: none"> Assess hydrological regime at all wetland treatment areas
			<ul style="list-style-type: none"> Establish quantitative guidelines for water quality according to SEPP Guidelines (also see foot note on page 33) Conduct water quality monitoring monthly during construction and every three months post-construction Install sediment control fencing; see Section 8 for No-go zones and habitat protection protocols during construction 	<ul style="list-style-type: none"> During and post-construction 	<ul style="list-style-type: none"> For Aitken and Malcolm Creek: <ul style="list-style-type: none"> 1 site located upstream of wetland construction areas 1 site located within Highlands near wetland construction areas 2 sites located downstream of wetland construction areas All wetland treatment areas
Aquatic vegetation diversity	<ul style="list-style-type: none"> Alteration of aquatic vegetation such that it drops below 60% cover (where aquatic vegetation cover is calculated as the sum of the cover of emergent, submergent and floating macrophytes, divided by 3, see Heard 2009) Recreational pressures are reducing habitat quality (e.g. vegetation trampling) 	<ul style="list-style-type: none"> Rejuvenation of aquatic vegetation through (also see 5.2.2): <ul style="list-style-type: none"> re-planting with indigenous plant species (also suitable for River Swamp Wallaby-grass); netting to reduce damage by waterfowl; thinning of dominant emergent species (i.e. which may be choking other vegetation); and reducing sedimentation No new walking trails/paths will be created adjoining wetland habitat 	<ul style="list-style-type: none"> Suitably qualified ecologist to monitor site (bi-annually during the spring/summer seasons, also see Section 10.1) to gauge habitat quality and suitability for Growing Grass Frogs Rejuvenation of aquatic vegetation through (also see 5.2.2): <ul style="list-style-type: none"> re-planting with indigenous plant species (also suitable for River Swamp Wallaby-grass); netting to reduce damage by waterfowl; thinning of dominant emergent species (i.e. which may be choking other vegetation); and reducing sedimentation No new walking trails/paths will be created adjoining wetland habitat 	<ul style="list-style-type: none"> Post-construction 	<ul style="list-style-type: none"> All wetland treatment areas
Terrestrial habitat	<ul style="list-style-type: none"> Any removal or degradation of terrestrial habitat within the adjoining Conservation Reserves (e.g. within 100-200 m of waterbodies) Rocks, logs other cover is removed or modified 	<ul style="list-style-type: none"> Maintain a relatively open grassland structure for foraging (as per Golden Sun Moth habitat requirements, see Section 5.2.3) Also maintain some areas of dense tussock forming grassland areas for over-wintering and shelter (e.g. Creakline Grassy Woodland area, part of the Aitken Creek Conservation Reserve, south of Craigieburn Road west, Figure 3) Re-iterate terrestrial habitat for shelter and over-wintering (e.g. logs/rocks), where needed Maintain existing buffers surrounding wetlands (i.e. Golden Sun Moth core habitat/ Conservation Reserves) Where Growing Grass Frogs have colonised, manage weeds manually where practicable (see Section 5.4.2). Note that the effect of herbicides and other biocides on the species is not well understood (Clemann and Gillespie 2004) Any weed removal will be followed up with revegetation using suitable indigenous aquatic or terrestrial species Weed removal in and/or in proximity to wetlands will be staged and replaced by indigenous vegetation (See Section 5.4.2) Conservation Reserves will be fenced with no new walking trails created (see Section 9.1) and only used for passive recreation 	<ul style="list-style-type: none"> Suitably qualified ecologist to monitor site (bi-annually during the spring/summer seasons, also see Section 10.1) to gauge habitat quality and suitability for Growing Grass Frogs Maintain a relatively open grassland structure for foraging (as per Golden Sun Moth habitat requirements, see Section 5.2.3) Also maintain some areas of dense tussock forming grassland areas for over-wintering and shelter (e.g. Creakline Grassy Woodland area, part of the Aitken Creek Conservation Reserve, south of Craigieburn Road west, Figure 3) Re-iterate terrestrial habitat for shelter and over-wintering (e.g. logs/rocks), where needed Maintain existing buffers surrounding wetlands (i.e. Golden Sun Moth core habitat/ Conservation Reserves) Where Growing Grass Frogs have colonised, manage weeds manually where practicable (see Section 5.4.2). Note that the effect of herbicides and other biocides on the species is not well understood (Clemann and Gillespie 2004) Any weed removal will be followed up with revegetation using suitable indigenous aquatic or terrestrial species Weed removal in and/or in proximity to wetlands will be staged and replaced by indigenous vegetation (See Section 5.4.2) Conservation Reserves will be fenced with no new walking trails created (see Section 9.1) and only used for passive recreation 	<ul style="list-style-type: none"> Post-construction 	<ul style="list-style-type: none"> All wetland treatment areas
Introduction of predators	<ul style="list-style-type: none"> Introduction of exotic fish (e.g. Macquisto fish) which have the potential to prey on frogs eggs and tadpoles 	<ul style="list-style-type: none"> Signage/public education as to detrimental effects of releasing introduced fish into waterways (see Section 9) May need to drain wetland or individual ponds to remove exotic fish, this must be done in consultation with a qualified ecologist, DSE, Melbourne Water and DEWHA 	<ul style="list-style-type: none"> Monitor wetlands to assess the presence of predatory fish (bi-annually during the spring/summer seasons, also see Section 10.1) Signage/public education as to detrimental effects of releasing introduced fish into waterways (see Section 9) May need to drain wetland or individual ponds to remove exotic fish, this must be done in consultation with a qualified ecologist, DSE, Melbourne Water and DEWHA 	<ul style="list-style-type: none"> During and post-construction 	<ul style="list-style-type: none"> All wetland treatment areas

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Habitat element	Threshold - Habitat element affected/degraded	Management measures to be implemented	Phases	Location
Connectivity	<ul style="list-style-type: none"> Potential movement of frogs through the creek systems is compromised/habitat link is severed 	<ul style="list-style-type: none"> Suitably qualified ecologist to monitor culverts (bi-annually during the spring/summer seasons or after heavy rain events, also see Section 10.1) and other under road crossings within Highlands Keep culverts and other under road crossings free of debris to ensure a clear passage for potential movement of Growing Grass Frogs No new walking trails/paths will be created adjoining the wetland habitat in Conservation Reserves 	<ul style="list-style-type: none"> During and post-construction 	<ul style="list-style-type: none"> Culverts and under road crossings in creek corridors and areas adjoining creeks in Conservation Reserves
Habitat downstream in Merri Creek	<ul style="list-style-type: none"> Significant or noticeable increase in nutrients, (oxins, chemicals, sediment loads or an algal bloom from increased storm water runoff which reduces water quality below acceptable SEPP guidelines resulting in reduced habitat suitability for frogs (e.g. high turbidity) in areas downstream from the Highlands site, i.e. Merri Creek where there are existing populations of Growing Grass Frogs 	<ul style="list-style-type: none"> Establish quantitative guidelines for water quality according to SEPP Guidelines (also see foot note below) Conduct water quality monitoring monthly during construction and every three months post-construction Install sediment control fencing; see Section 8 for No-go zones and habitat protection protocols during construction 	<ul style="list-style-type: none"> During and post-construction 	<ul style="list-style-type: none"> For Aitken and Malcolm Creek: <ul style="list-style-type: none"> 1 site located upstream of wetland construction areas 1 site located within Highlands near wetland construction areas 2 sites located downstream of wetland construction areas

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¹ Note all new developments at Craigieburn, including Highlands, are required to comply with Best Practice Stormwater Quality Treatment standards before water reaches Merri Creek. That standard is currently 80% removal of Total Suspended Solids and 45% removal of Total Phosphorus and Total Nitrogen. The intent is to maintain rural water quality discharge conditions (Neil Craigie, Waterway Management Consultants, pers comm).

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5.3 Protection of remnant trees

Highlands supports numerous old remnant trees, particularly along Malcolm Creek and Aitken Creek (north). They are also widely scattered across the site. These species include River Red-gum (*Eucalyptus camaldulensis*), Swamp Gum (*E. ovata* var. *ovata*), Grey Box (*E. microcarpa*) and Blackwood (*Acacia melanoxylon*). Many of the trees are of a very old age class (greater than 400 years) and also provide hollows for avifauna and arboreal mammals (Ecological Horticulture 1991).

The majority of the remnant trees within Highlands have been incorporated into the Conservation Reserves and/or ROS. Some scattered trees also occur within the paddocks. It is imperative that all remnant trees are retained and protected (see also Section 6.2). Unless otherwise agreed to by Council, all trees are to be protected by fencing at a distance of double the tree canopy. These fences are to be erected before any works commence.

Arborist reports have been completed for sections of the Highlands site (e.g. Tree Logic 2003, Stephen Fitzgerald Arboriculture 2007 and 2008 a, b). All current and future reports will be submitted to Council for approval. No works affecting any tree (remnant or non-remnant) will be undertaken until Council has received and assessed the relevant maps and reports.

5.4 Management of vegetation within Conservation Reserves and ROS

5.4.1 Biomass reduction

Biomass reduction (predominantly of perennial grasses) will be essential in maintaining indigenous flora and fauna values throughout the Conservation Reserves and ROS, as well as providing asset protection (e.g. through fuel reduction), addressing public safety concerns (e.g. long grass providing harbour for snakes) and enhancing aesthetic and recreational values.

Biomass reduction integrating a range of techniques is integral in developing a management regime that is practical, economical, and capable of maintaining (and where feasible enhancing) the biological values of the site. A range of factors (local topography, proximity to assets, stage of development, Golden Sun Moth life-cycle, etc.) will dictate what techniques are suitable in a given location at a given point in time.

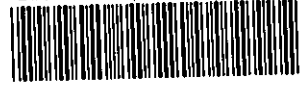
Grazing regimes will continue within the Conservation Reserves until construction begins, after which time it is not considered feasible in a highly urbanised landscape. Three other biomass reduction techniques will be variously employed within the Conservation Reserves, each of which is discussed below.

Controlled Burning

Burning is an efficient and cost-effective technique for reducing biomass in grassy ecosystems such as those that occur within the Conservation Reserves. Importantly, burning (c.f. slashing)

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allows greater access for weed control, increased natural regeneration of indigenous plant species and potentially enhancing habitat values for Golden Sun Moths (note: there is a paucity of data relating to the effects of fire on Golden Sun Moth populations, so large-scale burning within Golden Sun Moth core habitat is not recommended).

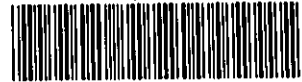
The importance of burning to ecosystem-health in temperate Australian grassland and grassy woodland communities has been well documented; however, the ecological benefits of burning in highly-disturbed, long-grazed grassland remnants such as those that occur within the Conservation Reserves will be somewhat limited. While burning may enhance germination of a small range of indigenous species, it can also be expected to promote certain exotic species (e.g. *Nassella neesiana*), and as such post-burning weed-control will be vital in maintaining remnant vegetation.

If burning is determined to be non-harmful to Golden Sun Moth populations (see Section 5.2.3), it is recommended to be undertaken in selected remnant patches of Plains Grassland. It may also be utilised in areas that are unsuitable for slashing (e.g. too rocky or steep). The following prescriptions and key management actions will be implemented.

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Key actions

- *Burning must not be conducted within Conservation Reserves during the Golden Sun Moth flight season (October to January).*
- *Burning will occur at least six weeks after the end of the flight season.*
- *Burning will be determined by fuel loads, moisture content and weather conditions.*
- *To create a mosaic effect, patches (e.g. remnant vegetation) will be burnt every three years, ensuring that areas of vegetation within the patch are left unburnt (to provide refuge for fauna). It will therefore be necessary to:*
 - *split remnant patches into defined 'burn-zones', with each zone being burnt only once every three years;*
 - *some areas/patches will be defined by fire-breaks and proximity to houses and assets;*
 - *maintain records of when and where burns have been conducted.*
- *Vegetation within Conservation Reserves will inevitably be burnt accidentally or by vandals. Burn plans will therefore be flexible enough to incorporate these 'accidental' burns into the three-yearly cycle. It is preferable that vegetation is burnt less often than more often.*
- *Ensure adequate weed-control can be undertaken post-burn. Follow-up weed-control is essential within patches of remnant vegetation, and no burning will be undertaken until adequate time and budget for weed-control has been allocated.*
- *Ensure natural recruitment and revegetation of woody species, as well as assets are not damaged as a result of prescribed burning.*

Mechanical control

Mechanical control techniques will include slashing, brush-cutting and (to a lesser degree) hand-mowing; and these will variously applied to the different management areas within the Conservation Reserves (refer to Table 5 and Figure 5). There is however several drawbacks associated with mechanical control in the Conservation Reserves:

- Unlike burning or grazing, mechanical control does not generally remove the cut plant material from the site (which often forms very dense mats). This can be problematic in areas where the purpose of biomass reduction is to retain open areas and bare ground for Golden Sun Moths and/or indigenous plant recruitment. As such, it will be necessary to devise slashing regimes that reduce the amount of cut plant material within Golden Sun Moth core habitat areas (Figure 5).

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- There is a tendency for machinery (particularly slashers) to disperse weed propagules (e.g. seed) from one location to another. It is of utmost importance that adequate hygiene practices are followed to prevent the spread of exotic species across the site, particularly Chilean needle-grass (**Nassella neesiana*) and Two-leaf Cape Tulip (**Moraea miniata*).
- Tractors may cause significant plant and soil disturbance (e.g. rutting and compaction) particularly in wet weather.

Mechanical control is recommended to be undertaken throughout the Conservation Reserves and ROS. Due to the prevalence of rocky and uneven terrain within sections of the Conservation Reserves, large areas will require brush-cutting or hand-mowing (c.f. slashing). The following prescriptions and key management actions will be implemented.

Key actions

- *Slashing must not be conducted within the ROS during the Golden Sun Moth flight season (late October to mid January).*
- *Slashing will be avoided during wet weather when soils are susceptible to rutting.*
- *Slashing regimes must be developed that reduce the amount of cut plant material (post-slashing) left in Golden Sun Moth core habitat areas (Figure 5). This may involve multiple slashing runs between late winter – spring (to increase rates of biodegradation) and/or collection of cut material (if practicable).*
- *Care must be taken to avoid damage to indigenous woody vegetation (including natural recruitment and revegetation).*
- *Vegetation will be slashed to a height of around 10 cm within Golden Sun Moth core habitat zones. Care will also be taken to avoid soil disturbance.*
- *Care will be taken not to transport weed propagules from areas of heavy to low infestation, notably those of Chilean needle-grass and Two-leaf Cape Tulip.*
- *All machinery (tractors, slashers, brush-cutters, etc.) entering the site should be free of weed propagules. Similarly all machinery leaving the site will be cleaned of weed propagules. This will require the creation of a weed 'wash-down' site.*
- *Slashing regimes will be flexible to cater for variability in growing seasons. Some years will require more control than others.*

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Herbicide application

The ongoing chemical control of several robust, exotic, perennial grass species (*Phalaris*, *Phalaris aquatica*; Chilean Needle-grass, *Nassella neesiana* and Cocksfoot, *Dactylis glomerata*) in favour of generally less-robust indigenous grass species should ultimately reduce biomass throughout the Conservation Reserves and ROS.

See below for prescriptive weed control measures.

5.4.2 Weed management

The weed flora of the study area comprises 16 noxious weed species (as listed under the *Catchment and Land Protection Act 1994* [CaLP Act] for the Port Phillip and Westernport CMA region), five Weeds of National Significance (WONS) and numerous other environmental weed species. The weed flora is dominated by ubiquitous annual and perennial herbaceous weeds, with woody weeds (particularly Blackberry **Rubus anglocandicans* and Briar Rose **Rosa rubiginosa*) scattered throughout.

Table 4 lists 28 weed species identified for elimination or control within the Conservation Reserves and ROS. These are a small proportion of the weed flora, but have been identified as species/populations that should be managed throughout the Conservation Reserves and ROS because of their seriousness as invaders, and/or are required to be managed under the CaLP Act. Other species will require management in certain circumstances (e.g. to allow for revegetation), but full-scale management would be untenable.

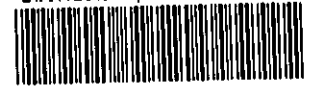
While a number of weed species have been recorded within Highlands, the weed flora is not static; new weed species are likely to appear within the Conservation Reserves, dispersed there by a wide range of natural agents (e.g. wind and animals). The weeds listed for control here should not be seen as exhaustive. Annual monitoring will allow for the identification of new weed species and their incorporation into the management program as appropriate.

Within patches of remnant vegetation in Conservation Reserves, higher-intensity weed-control is expected than for the remaining areas of ROS. While infestations of seriously invasive exotic species such as Canary Grass and Cocksfoot may be left in sections of the Malcolm and Aitken Creek ROS corridors, these species require control (and their cover reduced) within the conservation reserves, including the patches of remnant Plains Grassland and Creekline Grassy Woodland. Similarly, a range of species not listed in Table 4 will require control within and adjacent to remnant vegetation where they threaten indigenous flora values.

Chilean Needle-grass (*Nassella neesiana*) is one of Australia's worst weeds of native grasslands and pastures and is classified as a Weed of National Significance (DPI 2007). This species is present within the Conservation Reserves and ROS, the majority of which supports a low cover (i.e. <1% - 5%) of this species. The most severe infestations are along Malcolm Creek (cover up to c. 50%), particularly in the northern and southern sections. These areas have been identified as Chilean Needle-grass containment areas (Figure 5), where strict controls must be implemented to limit its spread into adjoining areas (see also Section 5.4). It is unrealistic to expect to eradicate the

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weed in areas where Chilean Needle-grass is established and/or widespread (DPI 2007), therefore the target within the areas supporting a higher cover of the species is to limit its impact and spread, and to decrease the infestation size.

The Golden Sun Moth has previously been recorded breeding in Chilean needle-grass in other areas of its range in Melbourne and Canberra. Therefore, if Golden Sun Moth is recorded breeding in patches of Chilean Needle-grass during the monitoring surveys, a staged plan of eradication/reduction of the weed species will be required, in consultation with DEWHA.

Ultimately, as eradication of this weed species is very difficult, the aim will be, as a minimum, to contain the infestations so they do not encroach into other Conservation Reserves and habitat remains suitable for the Golden Sun Moth.

The following management targets for Chilean Needle-grass are expected to be staged, and thus achieved within the 10-year management period:

Current cover of Chilean Needle-grass	Objective	Target cover of Chilean Needle-grass within 10-years
0 – 1%	prevent - eradicate	0 - <1%
1 – 15%	eradicate - reduce	0 - <5%
15% - 50%	reduce	10 – 15%

These targets are in-line with the National Best Practice Management Manual for Chilean Needle-grass (DPI 2007).

The following weed management strategy is proposed:

1. Methods to treat individual species (Table 4) include herbicide application to foliage, herbicide application via cut and paint or drill and fill, and physical removal by hand.
2. The primary weed management program targeting woody weeds will extend over a five-year period. This would be followed up by maintenance weed control which will be an ongoing requirement.
3. Weed monitoring will be ongoing in order to identify weed populations and respond with control as appropriate.
4. Damage to indigenous vegetation (by herbicide or machinery and to soils) must be avoided at all times.

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5. Weed management operators must be suitably qualified and appropriately certified and possess the requisite weed and indigenous plant identification skills. All health and safety, and environmental regulations, must be observed.
6. All aspects of the control program need to be appropriately documented (to an agreed standard) to enable the tracking and evaluation of control methods/activities, and to allow for refinement of procedures, as well as to inform future weed management activities.

Herbicide use

All herbicide usage within the Conservation Reserves and ROS will be in accordance with the following:

- The use of herbicides in and adjacent to water-bodies (including riparian zones and seasonally dry ephemeral wetlands) will be avoided where practicable, particularly if the Growling Grass Frog has colonised wetlands (see Table 3). If unavoidable, herbicides only legally certified for use in such situations (as specified on the product label) will be used. Application methods resulting in low levels of off-target damage (e.g. cut/paint, and drill/fill) will be favoured over spray application.
- All use of herbicides (and associated additives) will be in accordance with the product label. Off-label use of herbicides may be permitted where approval has been granted from a state government department (e.g. Department of Sustainability and Environment or Department of Primary Industries).
- Site-specific herbicide planning (application methods, chemicals used, weather conditions, plant phenology, etc.) will be employed to reduce off-target herbicide damage. Off-target herbicide damage is the detrimental application of herbicide to plant species that have not been targeted for control. While this generally applies to plants in and around the point of herbicide application, it may also refer to organisms (flora and fauna) some distance away.
- With the exception of cut/paint and drill/fill techniques used to control woody weeds, herbicide will not be used during the flight season of the Golden Sun Moth (i.e. between late October and early January). This is to avoid detrimental impacts to emerging adults and/or egg-laying females.

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Table 4 Highlands CMP: Weed species identified for elimination or control within Conservation Reserves

Life form (mostly after Carr et al. 1992)

T	tree	A	annual	Pt	perennial herb (tufted or tussock forming)	B	biennial	Gc	cornous geophyte
Ea	emergent aquatic	Ls	large shrub	Pr	perennial herb (rhizomatous or stoloniferous)	S	shrub		

Noxious weed/WONS

C – listed as a Controlled weed species under the Catchment and Land Protection Act 1994 for the Port Phillip and Westport Catchment Management Authority region
 R – listed as a Restricted weed species under the Catchment and Land Protection Act 1994 for the Port Phillip and Westport Catchment Management Authority region
 W – Weed of National Significance (www.weeds.org.au)

Control method(s)

A Herbicide treatments

- 1 Herbicide applied to foliage with spray, wick applicator, etc.; annuals must be sprayed well before seed ripening.
- 2 Cut down and concentrated herbicide immediately applied to stump or stems, or bark “frilled” and herbicide applied.
- 3 Stem drilled and injected with concentrated herbicide.

B Physical treatments

- 4 Physical removal – most plants can be physically removed by hand-weeding or with tools when small and/or isolated but soil disturbance is kept to a minimum.
- 5 Cut off at ground level (species that will not resprout from basal buds).
- 6 Cut leaves and flowering stems below water to starve rhizome of oxygen (*Typha* spp.).
- 7 Cut off near ground level then spray vigorous regrowth with herbicide
- 8 Ringbarking

Control/eliminate

E –	eliminate all populations	Sp	spring	W	winter	(f)	when in flower
C –	control weed populations	S	summer	All	Year round	(bi)	before leaves discolour
C'm –	contain weed populations	A	autumn	(bf)	before flowering		

Timing (preferred timing only, many species may be successfully controlled at other times)

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Species	Common Name	Life form	Family	Control Methods	Timing	Control/eliminate
<i>Acacia baileyana</i>	Cootamundra Wattle	T	Mimosaceae	5,8 (mature plants), 2 (young plants)	All	E
<i>Carthamus lanatus</i> C	Saffron Thistle	A	Asteraceae	1	Sp (bf)	C
<i>Chamaecytisus palmensis</i>	Tree Lucerne	Ls/T	Fabaceae	2,4, 1 (young plants)	All	E
<i>Cirsium vulgare</i> C	Spear Thistle	B	Asteraceae	1,4	Sp (bf)	C
<i>Crataegus monogyna</i> C	Hawthorn	Ls/T	Rosaceae	2	Sp - Su	E
<i>Cynara cardunculus</i> C	Spanish Artichoke	Pt	Asteraceae	1	Sp (bf)	E
<i>Cyperus eragrostis</i>	Drain Flat-sedge	Pt	Cyperaceae	1,4	All	C
<i>Dactylis glomerata</i>	Cocksfoot	Pt	Poaceae	1	W - Sp	C
<i>Echium plantagineum</i> C	Paterson's Curse	A	Boraginaceae	1,4	Sp (bf)	C
<i>Elytrigia repens</i>	English Couch	Pr	Poaceae	1	All	C
<i>Festuca arundinacea</i>	Tall Fescue	Pt	Poaceae	1	All	E
<i>Foeniculum vulgare</i> R	Fennel	Pt	Apiaceae	1,2	W - Sp (bf)	E
<i>Genista linifolia</i> C	Flax-leaved Broom	S	Fabaceae	1,2,4	All	E
<i>Holcus lanatus</i>	Yorkshire Fog-grass	Pt	Poaceae	1	All	C
<i>Lycium ferocissimum</i> C	African Box-thorn	Ls	Solanaceae	2	All	E
<i>Mentha pulegium</i>	Pennyroyal	Pr	Lamiaceae	1,4	All	C
<i>Moraea miniata</i> C	Two-leaf Cape Tulip	Gc	Iridaceae	1	W - Sp (bf)	E

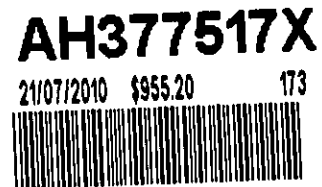
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Species	Common Name	Life form	Family	Control Methods	Timing	Control/eliminate
<i>Nassella neesiana</i> R, W	Chilean Needle-grass	Pt	Poaceae	1	A - W	C-E/Ctn
<i>Nassella trichotoma</i> C, W	Serrated Tussock	Pt	Poaceae	1	S (bf)	E
<i>Paspalum dilatatum</i>	Paspalum	Pr	Poaceae	1	Sp - S	C
<i>Paspalum distichum</i>	Water Couch	Ea(Pr)	Poaceae	1	All	C
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	Pt	Poaceae	1	W - Sp	C
<i>Rosa rubiginosa</i> C	Sweet Briar	Ls	Rosaceae	1,2	Sp - S (bf)	E
<i>Rubus anglocandicans</i> C, W	Blackberry	Ls	Rosaceae	1,2	Sp - S (f)	E
<i>Salix X sepulcralis</i> var. <i>sepulcralis</i> W	Weeping Willow	T	Salicaceae	3 (mature plants), 2 (saplings)	A (bl)	E
<i>Silybum marianum</i> C	Variegated Thistle	A(B)	Asteraceae	1	All	C
<i>Ulex europaeus</i> C, W	Gorse	Ls	Fabaceae	1,2	All	E
<i>Xanthium spinosum</i> C	Bathurst Burr	A	Asteraceae	1	All (bf)	E



5.5 Revegetation

Revegetation activities dealt with in this CMP will be limited to the augmentation of the scattered tree and large-shrub layers throughout the Conservation Reserves and ROS, with higher density plantings along drainage lines. These plantings will replace vegetation in areas where weed control has been undertaken, provide additional fauna habitat and enhance landscape amenity. Refer to Section 5.2.3 for habitat requirements of the Golden Sun Moth in relation to revegetation and Section 5.2.4 for Growling Grass Frog habitat requirements. In summary, no trees will be planted in Golden Sun Moth core habitat and shrub plantings will be restricted to replacing the exotic shrubs (e.g. *Sweet Briar) to maintain existing conditions. A high density of large trees or shrubs will not be planted around wetlands to ensure they do not become over-shaded (see Section 5.2.4). Consideration will also be given to the revegetation of robust, perennial, indigenous ground-storey species in remnant grassland patches and Golden Sun Moth habitat (to compliment weed control activities). However, the scope for these works will be limited due to the high coverage of invasive weed species.

Plant species selection and placement has been determined with reference to both existing and pre-European site conditions. While the majority of remnant vegetation on the site is considered to be Plains Grassland, the pre-European vegetation of the Conservation Reserves and ROS was likely a mosaic of Plains Grassland, Plains Grassy Woodland and Creekline Grassy Woodland. As such, the scattered planting of woodland species is considered ecologically appropriate.

A range of current and proposed revegetation activities dealing with wetland rehabilitation and management along Aitken and Malcolm Creeks will not be dealt within this CMP. For information pertaining to water treatment wetland construction and associated revegetation throughout the ROS see the E14 Wetland Planting plans (TBLD 2008), Functional Wetland Design reports (Craigie and Condina 2006 a, b), and the Aitken and Malcolm Creeks Masterplans. The management of River Swamp Wallaby-grass within these wetlands is addressed in Section 5.2.2 (this report) and Ecology Australia 2008.

Supplementary planting will be required to achieve Net Gain offsets within Creekline Grassy Woodland sites and is addressed in Section 6.4 (Offset Management Plan).

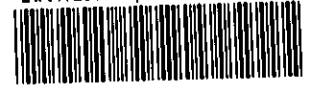
5.5.1 Revegetation methods

Three methods are generally used in revegetation exercises:

1. Direct seeding;
2. Planting of tubestock propagated from seeds (usually), cuttings, or divisions; and
3. Facilitation of natural recruitment from naturally dispersed *in situ* or off-site sources of propagules (mostly seeds) onto a suitable seed-bed.

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Depending on the extent of regeneration of River Red-gums once grazing is removed, there may be a need to thin the juvenile River Red-gum cohort in the future. This will entail the removal of some trees to allow the remaining trees to grow faster and ultimately larger. Trees adopted for retention will be identified according to health, form, dominance and location. Ecological thinning practises are aimed at maximising habitat and biodiversity values. Thinning will need to be assessed on a case by case basis. Should thinning be required, approval must be sought from the relevant Council Environmental Department.

Within the Conservation Reserves and ROS, planting of tubestock is considered the most viable option because of massive competition from weeds in direct seeding or natural recruitment. Direct seeding (via hand casting) of Wallaby Grasses could be used in the conservation reserves (e.g. Golden Sun Moth core habitat) or other rehabilitated areas, where these species have not recolonised following weed control.

Revegetation strategy

The process of successful revegetation requires planning, documentation, implementation, monitoring and maintenance;

1. **Site selection:** should include consideration of the following issues:
 - Existing indigenous flora – ensure revegetation activities do not negatively impact existing indigenous vegetation.
 - Weed flora – ensure sufficient weed control has been undertaken pre-planting.
 - Access – plant trees/shrubs in areas or groupings that will not disrupt biomass reduction works (e.g. slashing).
2. **Site preparation:** will be variously required throughout the study area and will include:
 - Weed control.
 - Tree-guarding and fencing (only recommended if grazing pressures are found to significantly increase mortality of plants).
 - Staking (to allow relocation of young plants for maintenance purposes, and so slashing contractors will be able to avoid plantings).
 - Jute matting.
3. **Species selection:** plantings must make ecological sense, i.e. species ‘belong’ in particular environments and plant species associations.
4. **Sources of propagating material:** all revegetation will utilise indigenous species propagated from material (seeds, cuttings, divisions) which must be obtained from the nearest natural populations locally or from the Merri Creek corridor, with the appropriate DSE permits and protocols to avoid harm to the source populations by overexploitation. All sources of material will be recorded by the contractor(s) or other parties involved in

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revegetation. Planted populations are unfortunately often unreliable as sources of material because much non-indigenous material is used in some sectors of the revegetation industry. All plants and propagation material must be correctly identified and named before being utilised in revegetation.

5. **Propagation of production plants:** must be undertaken with sufficient lead time to achieve good growth by the time of planting. This will require that the contractor has been allocated sufficient time to undertake collection and growing-on of the tubestock before the projected planting time. Conversely, over-grown or root-bound tubestock (depending upon the species involved) should be rejected.
6. **Documentation:** by documenting the various components of a revegetation program (e.g. locations and dates of seed collection, provenance of revegetated plants used at a particular site, weed control, monitoring, etc.) the success rates of future revegetation can be increased as a greater understanding of 'what works' is achieved and communicated to future practitioners.
7. **Planting:** autumn planting is recommended for the study area, allowing for optimal growing conditions (moisture availability and adequate soil temperature). Plants should be watered at the time of planting (to reduce air pockets around the root zone), though follow-up watering should not be necessary, although this would be at the discretion of the contractor.
 - A staged revegetation process is recommended throughout the bulk of the ROS. Enhancement of the scattered shrub-layer will begin immediately to provide habitat lost as a result of woody-weed control (note: the initial stage of revegetation will be planned so as not to interfere with ongoing weed-control).
 - Average planting densities **outside Golden Sun Moth habitat** are provided below. As a principle, the plantings will be consistent with the diversity and structure outlined in the relevant EVC benchmark.
8. **Monitoring:** is of utmost importance that all revegetation be monitored. Effectively timed monitoring will allow various degradation processes (weeds, grazing) to be managed before they adversely affect the plantings.
9. **Maintenance:** timing will coincide with ecological timelines (e.g. undertake weed control before seed-set) and always seek to optimise the health of the plants used in the revegetation. All plant losses will be replaced unless mortality has been the result of unmanageable site conditions (e.g. prolonged drought).

Plant species suitable for revegetation

A list of plant species suitable for use in revegetation is given in Table 5. It should be noted that the manner in which these species are utilised (placement, groupings, numbers) will define the success of the revegetation. Effective revegetation must seek to reflect the environmental

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variability of a given site. No trees will be planted in Golden Sun Moth core habitat, and shrub plantings will be restricted to replacing the existing exotic shrubs in core habitat areas.

Table 5 Highlands CMP: Plant species suitable for revegetation within Conservation Reserves and Regional Open Space.

Species name	Common name	EVC
Canopy trees		
<i>Eucalyptus camaldulensis</i>	River Red-Gum	PGW, CGW
<i>Eucalyptus microcarpa</i>	Grey Box	PGW
<i>Eucalyptus ovata</i> var. <i>ovata</i>	Swamp Gum	PGW, CGW
Understorey trees		
<i>Acacia implexa</i>	Lightwood	PGW
<i>Acacia mearnsii</i>	Black Wattle	PGW, CGW
<i>Acacia melanoxylon</i>	Blackwood	PGW, CGW
<i>Acacia pycnantha</i>	Golden Wattle	PGW
<i>Allocasuarina verticillata</i>	Drooping Sheoak	PGW
<i>Banksia marginata</i> (tree form)	Silver Banksia	PGW
Shrubs		
<i>Acacia paradoxa</i>	Hedge Wattle	PG [§] , PGW, CGW
<i>Bursaria spinosa</i> ssp. <i>spinosa</i>	Sweet Bursaria	PG [§] , PGW, CGW
<i>Correa glabra</i>	Rock Correa	PG [§] , PGW
<i>Grevillea rosmarinifolia</i> (Volcanic plains form)	Rosemary Grevillea	PGW
<i>Melicytus dentatus</i>	Tree Violet	PG [§] , PGW, CGW
Climbers		
<i>Clematis microphylla</i> var. <i>microphylla</i>	Small-Leaved Clematis	PGW
Robust perennial herbs		
<i>Austrodanthonia</i> spp.	Wallaby Grasses	PG, PGW, CGW
<i>Lomandra longifolia</i> var. <i>longifolia</i>	Spiny-headed Mat-rush	PG [§]
<i>Poa labillardierei</i> var. <i>labillardierei</i>	Common Tussock-grass	PG, PGW, CGW
<i>Themeda triandra</i>	Kangaroo Grass	PG, PGW, CGW
<i>Dianella amoena</i>	Matted Flax-lily*	PG [§] , PGW

Key: PG = Plains Grassland, PGW = Plains Grassy Woodland, CGW = Creekline Grassy Woodland, [§]not on heavy clays, *refer Section 5.2.1

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Recommended (average) planting densities for areas designated for revegetation **outside of Golden Sun Moth core habitat** include:

Lifeform	Former EVC	Average planting density
Canopy Trees*	CGW, PGW	50 per hectare
Understorey Trees	CGW	100 per hectare
	PGW	50 – 100 per hectare
Shrubs	CGW, PGW	400 per hectare
	PG	Localised clump plantings – widely scattered plantings
Climbers (selected areas)	CGW	1 plant per 25 m ²
	PGW	1 plant per 100 m ²
Robust Perennial Herbs (selected areas)	CGW, PGW, PG	Clumped plantings - 9 plants/m ² (tubestock)

*where canopy trees absent or below EVC benchmark

5.6 Summary of management actions

A summary of the key management actions outlined above is provided in Table 6 and Figure 5.



Table 6 Highlands CMP: Summary of key management actions and timing for Conservation Reserves and Regional Open Space, see corresponding Figure 5.

Conservation Reserve	Spring			Summer			Autumn			Winter		
	September	October	November	December	January	February	March	April	May	June	July	August
Malcolm Creek												
• Biomass control - mechanical control												
Weed control												
Revegetation												
Monitoring - Golden Sun Moth												
Monitoring - River Swamp Wallaby-grass												
*Monitoring - Growing Grass Frog												
Aitken Creek North ^a												
Biomass control - grazing - prior to construction												
Biomass control - mechanical control												
Weed control												
Revegetation												
Monitoring - Golden Sun Moth												
Monitoring - Matted Flax-lily												
Monitoring - River Swamp Wallaby-grass												
*Monitoring - Growing Grass Frog												
Aitken Creek South												
Biomass control - grazing - prior to construction												
Biomass control - mechanical control												
Biomass control - mechanical control												
Weed control												
Revegetation												
Monitoring - Golden Sun Moth												
Monitoring - Matted Flax-lily												
Monitoring - River Swamp Wallaby-grass												
*Monitoring - Growing Grass Frog												
Mount Aitken												
Biomass control - grazing - prior to construction												
Biomass control - mechanical control												
Weed control												
Revegetation												
Monitoring - Golden Sun Moth												

Years 1-3
Years 3 >10
All Years

- The southern portion (immediately north of Craigieburn Road west, adjacent to Aitken Lake) will not be grazed, but will be mechanically controlled from the start.
- † Grazing will only be undertaken in the southwest corner
- Biomass control refers to Golden Sun Moth, core habitat and Plains Grassland remnants
- * Once the wetlands have become established in Aitken and Malcolm Creeks a monitoring program will be implemented to investigate whether Growing Grass Frogs have colonized, assess suitability of habitat and address thresholds in Section 5.2.4, Table 3 (also see Section 10.1)

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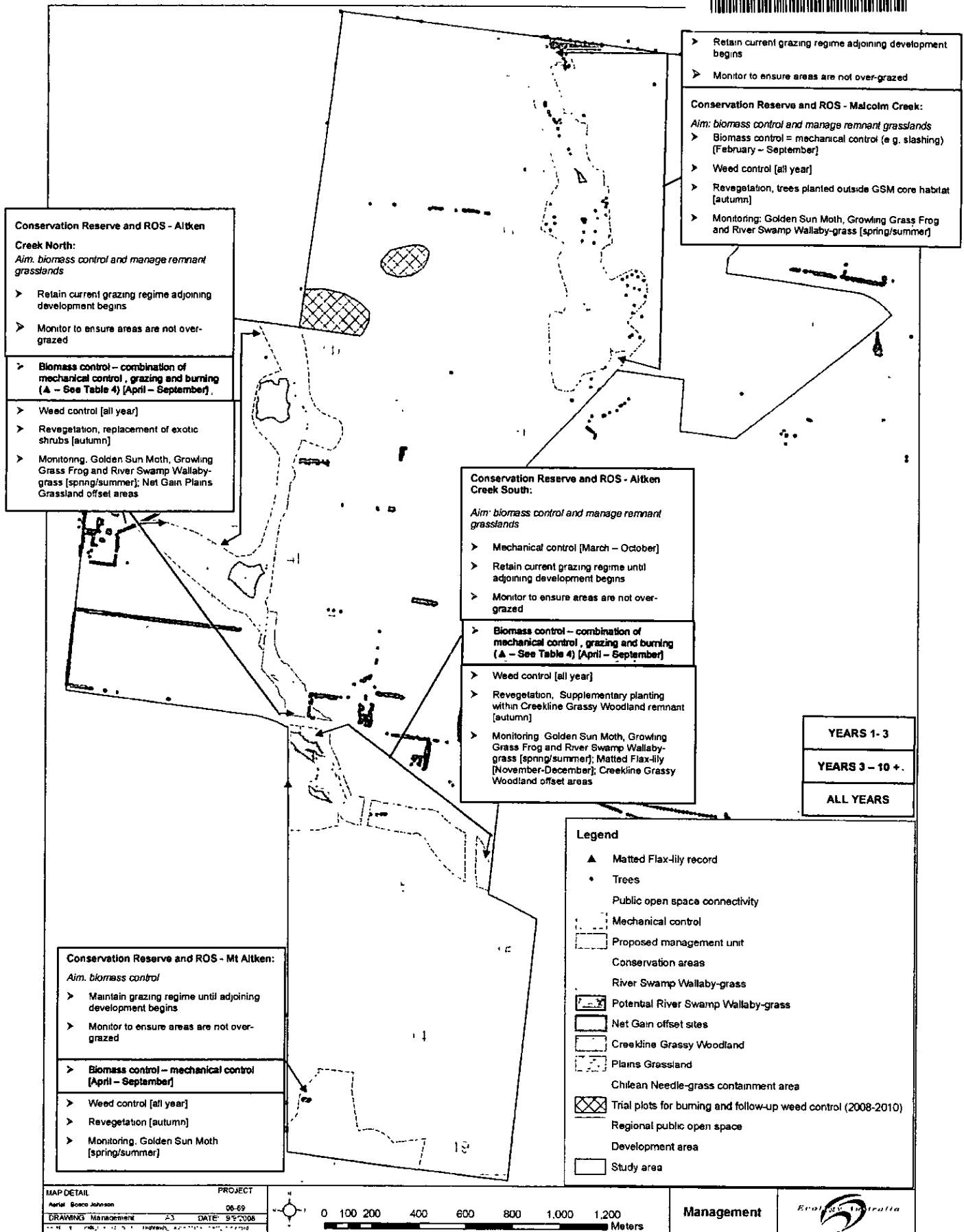


Figure 5 Highlands CMP: conservation management regimes for Conservation Reserves within ROS at Highlands, Craigieburn

6 Net Gain – Offset Management Plan



6.1 Introduction

This section responds to offsets required under Victoria's Native Vegetation Framework (DSE 2002) for the removal of remnant vegetation associated with the construction of the Highlands residential development. The offsets would be undertaken onsite within the Plains Grassland and Creekline Grassy Woodland remnants within Conservation Reserves of Aitken Creek.

Management of the Net Gain offset areas will not compromise Golden Sun Moth core habitat. As such, no supplementary plantings will occur within the core habitat areas, and the management of Plains Grassland offset sites will be consistent with the management recommendations for the Golden Sun Moth.

Scoring gains for a Net Gain habitat hectare offset requires that the current vegetation quality of the site is assessed, and the score for the various habitat components then used as the basis by which gains are estimated depending on the land manager commitments (DSE 2006b). The assessment of the vegetation quality of the EVCs involved the completion of DSEs Vegetation Quality Field Assessment Sheets (Version 1.3, October 2004). These assessments followed DSE (2004). Remnants of the same EVC scoring similar vegetation quality scores were allocated to the same habitat zone and the potential gains for each zone were determined using DSE's Vegetation Gain Approach (2006).

This section presents the offset plan for habitat hectare losses associated with the Highlands Development and outlines:

- The Net Gain targets;
- The vegetation of the proposed offset areas;
- The gains achievable based on the vegetation quality; and
- The proposed 10-year management plan.

6.2 Summary of Net Gain targets

Remnant patches of Plains Grassland (c. 8.3 ha) and Creekline Grassy Woodland (c. 1.8 ha) have been recorded within the Highlands property and the majority are associated with the creek environs. These patches are mapped in Figure 3 and a summary of the habitat condition scores are provided in Appendix 1 (see also Ecology Australia 2008).

The majority of remnant patches will be protected within Conservation Reserves, however, some vegetation loss will be required as a result of residential development, the construction of water treatment wetlands within Aitken Creek and the construction of Malcolm Creek Bridge (part of Aitken Boulevard).



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Table 7 summaries the Net Gain habitat hectare (hha) targets (also see Ecology Australia 2008). A total of 0.06 hha of Creekline Grassy Woodland and 0.36 hha of Plains Grassland will be removed (Figure 3). The Net Gain target to offset the loss of remnant vegetation as a result of the proposed development and wetland construction includes 0.81 hha, of which 0.1 hha is Creekline Grassy Woodland and 0.71 hha is Plains Grassland. The removal of this vegetation will be subject to Council/DSE approval. In the case of the removal of very high conservation significance vegetation (Plains Grassland), the Framework states that approval is also required from the Victorian Minister for Environment and Conservation (DSE 2002; refer also Ecology Australia 2008).

Table 7 Highlands CMP: Net Gain habitat hectare targets.

Location	Aitken Creek South	Aitken Creek North	DP 11	DP 13	DP 18	De Maria	Malcolm Creek
EVC	CGW	CGW	PG	PG	PG	PG	PG
EVC cons. status	End.	End.	End	End.	End.	End	End.
HCS	12%	9%	30%	22%	15%	24%	28%
Loss - Area (ha)	0.44	0.11	0.25	0.72	0.30	0.15	0.15
Loss hha – (Area x HCS)	0.05	0.01	0.075	0.16	0.045	0.036	0.042
Cons. sign.	High	High	V. High ²	V. High ¹	V. High ¹	V. High ¹	V. High ¹
Cons. multiplier	1.5	1.5	2	2	2	2	2
Target hha – (hha x cons. multiplier)	0.08	0.02	0.15	0.32	0.09	0.07	0.08

Key: CGW = Creekline Grassy Woodland, PG = Plains Grassland; HCS = Habitat condition score; EVC cons. status = Ecological Vegetation Class conservation status; Aitken Creek South refers to south of Craigieburn West Rd; Aitken Creek North applies to north of Craigieburn West Rd.; Cons. sign = conservation significance; V. High = Very High.

To date, no remnant tree has been removed. The retention of remnant trees is imperative (see also Section 5.3) and all remnant trees within future development plans will be protected.

When offsetting the loss of remnant vegetation of high and very high conservation significance, 75% and 90% of the offsets must be through the protection and management of the same vegetation/habitat type (or vegetation of higher conservation significance), and of similar quality to that being removed (DSE 2002). Revegetation is therefore limited to 10% (very high conservation significance) and 25% (high conservation significance) of the offset.

All areas where gains are proposed must be secure for the long term.

² Due to habitat for Golden Sun Moth

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6.3 Strategy of achieving gains

Net Gain offset sites

The Net Gain target of 0.1 ha of Creekline Grassy Woodland and 0.71 hha of Plains Grassland can be achieved on-site through the management and protection of remnant vegetation within Conservation Reserves associated with Aitken Creek. The means to achieve these offsets are outlined below.

Plains Grassland offset sites

The Plains Grassland remnant patches proposed to achieve the 0.71 hha Plains Grassland target include:

- Habitat Zones 4 – 1.29 ha; Habitat Condition Score 23%; very high conservation significance³
- Habitat Zone 14 – 2.1 ha; HCS 31%; very high conservation significance² (Figure 3).

These are the largest Plains Grassland remnants at Highlands. The patches support the following indigenous species: Wallaby-grasses (*Austrodanthonia* spp.), Knead Spear-grass (*Austrostipa bigeniculata*), Weeping Grass (*Microlaena stipoides* var. *stipoides*), Kangaroo Grass (*Themeda triandra*), Common Wheat Grass (*Elymus scaber* var. *scaber*), Finger Rush (*Juncus subsecundus*), Plains Wood-sorrel (*Oxalis perennans*), Sheep's Burr (*Acaena echinata*) and Blue Devil (*Eryngium ovinum*). They also have a moderate to high cover of weed species, particularly annual and perennial exotic grasses, but also scattered woody weeds such as Blackberry (**Rubus anglocandicans*) and Sweet Briar (**Rosa rubignosa*).

The Plains Grassland remnants fulfil the 0.71 hha Net Gain offset target because:

- They are the same EVC, conservation significance, and at least 90% of the quality, as that being removed (like for like);
- They are located on-site within the Highlands property (same Bioregion);
- They will be incorporated into Conservation Reserves and secured;
- A total gain of 0.77 hha can be achieved through gains for improved security, maintenance and undertaking management within the remnants. A breakdown of the gains is provided below.

Creekline Grassy Woodland offset sites

Two patches of Creekline Grassy Woodland remnant located in Aitken Creek South will be used to offset the 0.1 hha target (Figure 3).

³ Due to habitat for Golden Sun Moth

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The first remnant is c. 0.8 ha and located just south of Craigieburn West Road (Figure 3). This patch has also been referred to as the Common Tussock-grass Grassland as the majority of the patch is dominated by Common Tussock-grass (*Poa labillardieri* var. *labillardieri*) (Ecology Australia 2003 and 2008). Other indigenous grasses are present (e.g. Common Wallaby-grass *Austrodanthonia caespitosa*, Kneed Spear-grass, Common Wheat-grass, Weeping Grass and Kangaroo Grass) and become more prevalent in the south-eastern section where two drainagelines enter Aitken Creek. Poong'ort (*Carex tereticaulis*), Plains Rush (*Juncus semisolidus*) and Green Rush (*Juncus gregiflorus*) fringe the creek and drainageline. Scattered dicot herbs (e.g. Grassland Wood-sorrel *Oxalis perennans*, Sheep's Burr *Acacia echinata*, and Crane's Bill *Geranium* sp.) are also present throughout.

The second Creekline Grassy Woodland patch is dominated by Wallaby Grasses (predominately Common Wallaby-grass) and supports scattered plants of Kangaroo Grass, Weeping Grass, Common Wheat-grass, Kneed Spear-grass, Common Tussock-grass, Plains Rush and Grassland Wood-sorrel. This area (0.3 ha) is adjoining the new water treatment wetlands and located just south of a small tributary that enters Aitken Creek from the west (Figure 3). It is also forms part of the core habitat for the Golden Sun Moth (Figures 3 and 4).

The Creekline Grassy Woodland remnants fulfil the Net Gain offset requirements for Aitken Creek South as:

- They are of the same quality and EVC as that being removed (like for like);
- They are located on-site within the Highlands property (same Bioregion);
- They will be incorporated into Conservation Reserves and secured;
- A gain of 0.12 hha can be achieved through gains for improved security, maintenance and undertaking management within the remnant (Table 8).



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Table 8 Highlands CMP: Areas where remnant vegetation will be removed and the corresponding areas where gains will be achieved.

Loss							Gain						
Location	Habitat zone	HCS	Cons. sign.	Area (ha)	Target	Location	Habitat zone	HCS	Cons. sign.	Total area (ha) [§]	Gain (%)	Area required for offset*	
<i>Plains Grassland</i>													
Malcolm Creek	12	28%	Very High	0.15	0.08	De Maria	14	31%	Very High	2.13	24%	0.33 ha	
DP 11	16	30%	Very High	0.25	0.15	De Maria	14	31%	Very High	2.13	24%	0.63 ha	
DP 13	6	22%	Very High	0.72	0.32	De Maria	14	31%	Very High	2.13	24%	1.14 ha	
						Aitken Creek dam	4	23%	Very High	1.29	21%	0.23 ha	
DP 18	13	15%	Very High	0.30	0.09	Aitken Creek dam	4	23%	Very High	1.29	21%	0.43 ha ⁴	
De Maria	15	24%	Very High	0.15	0.07	Aitken Creek dam	4	23%	Very High	1.29	21%	0.33 ha	
<i>Creeklane Grassy Woodland</i>													
Aitken Creek south	1	12%	High	0.44	0.08	Aitken Creek south	1	12%	High	1.17	10%	0.8 ha	
Aitken Creek north	3	12%	High	0.11	0.02	Aitken Creek south	1	12%	High	1.17	10%	0.2 ha	

[§] Total area of patch to be managed for gains; *Area required to offset loss = offset target / % gain

⁴ This is broadly consistent with the permit requirements for DP18.

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Gains achievable

Plains Grassland

A gain of 21% and 24% can be achieved through the security, maintenance and management of the two Plains Grassland remnants (Table 9). These gains can be achieved via the following:

- securing the area for conservation – 20% of the current habitat score. The offsets are within Conservation Reserves and will be transferred to Council ownership which has a purpose consistent with a secure municipal conservation reserve;
- maintaining the area – e.g. retaining rocks and litter, not disturbing the soil, not sowing exotic species and not supplementary-feeding stock in the area;
- periodic biomass control (which is also required to maintain Golden Sun Moth habitat); and
- eliminating high threat woody weed species (< 1% cover) and ensuring the cover of other high threat weeds do not increase beyond current levels.
- control pest animals – refer Section 7

Table 9 Highlands CMP: Potential gains for Plains Grassland offset sites.

Location		De Maria dam			De Maria			
Offset Identifier		HZ 4			HZ 14			
EVC Name (Initials)		PG			PG			
EVC Number		132			132			
Current Score and Conservation sign.:		23%, very high			31%, very high			
		Max Score	Current Score	Maintenance	Improvement	Current Score	Maintenance	Improvement
Site Condition	Large Old Trees	10	-	-	-	-	-	-
	Canopy Cover	5	-	-	-	-	-	-
	Understorey	25	10	5	1.25	10	5	1.25
	Lack of Weeds	15	0		1	4		1
	Recruitment	10	3	1.5	1	3	1.5	1
	Organic Matter	5	3	1.5	1	4	2	1
	Logs	5	-	-	-	-	-	-
Habitat gain		##		8	4.25		8.5	4.25
Gain (Improvement + maintenance)			12.25			12.75		
Adjustment for missing site components			75/55			75/55		
Adjusted site condition components			16.7			17.4		
Improved Security Gain		##	4.6			6.2		
Prior management		##	0			0		

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Total Gain in Habitat Score / ha	##	21.3		23.6	
Total Gain in Habitat Score / ha (/100)	0.##	0.21		0.24	
Area of the proposed offset	##	1.29		2.13	
Net Gain (hha)	##	0.27		0.50	
Net Gain Multiplier		1		1	
Contribution (hha) to Net Gain Target	##	0.27		0.50	
Large Old Trees present to be protected	#	NA		NA	

Creeklime Grassy Woodland

A gain of 10% per hectare can be achieved through the security and management of the Creeklime Grassy Woodland remnants (Table 10). This would include:

- Foregoing the right to graze the area;
- Undertaking supplementary plantings including indigenous eucalypt species within the Common Tussock-grass Grassland (Figure 3);
- Eliminating high threat woody weeds and ensuring the cover of other high threat weeds do not increase beyond current levels;
- Securing the area for conservation – 20% of the current habitat score, as outlined above; and
- control pest animals – refer Section 7.

Table 10 Highlands CMP: Potential gains achievable within Creeklime Grassy Woodland remnants, Aitken Creek south.

Offset Identifier		Creeklime Grassy Woodland remnants (OZ1)			
EVC Name (Initials)		CGW			
EVC Number		68			
Current Score and Conservation sign:		12%, high			
		Max Score	Current Score	Maintenance	Improvement
Site Condition	Large Old Trees	10	0	0	
	Canopy Cover	5	0	0	0.6
	Understorey	25	5	0.5	2.5
	Lack of Weeds	15	4		2
	Recruitment	10	0	0	0
	Organic Matter	5	2	0.2	2
	Logs	5	0	0	0

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Habitat gain	##	0.7	7.1
Gain (Improvement + management)		7.8	
Adjustment for missing site components		-	
Adjusted site condition components		-	
Improved Security Gain	##	2.4	
Prior management	##	0	
Total Gain in Habitat Score / ha	##	10.2	
Total Gain in Habitat Score / ha (/100)	0.##	0.10	
Area of the proposed offset	#. #	1.17	
Net Gain (hha)	#. #	0.12	
Net Gain Multiplier		1	
Contribution (hha) to Net Gain Target	#. #	0.12	
Large Old Trees present to be protected	#	NA	

Key:
 OZ = Offset Zone
 CGW = Creekline Grassy Woodland
 Hha = habitat hectares



6.4 Offset Management Plan

The offset management plan is outlined below. Management gains will focus on eliminating high threat woody weeds and controlling other high threat species within the offset areas, as well as undertaking biomass control in the Plains Grassland and supplementary plantings within the Creekline Grassy Woodland remnants. The 10-year management plan to achieve the offsets is outlined in Table 14.

Security

The offsets are within Conservation Reserves and will eventually be transferred to Council ownership which has a purpose consistent with a secure municipal conservation reserve. If requested by Council, a Section 173 agreement between Stockland and Council could be drawn-up to ensure the offsets are implemented as outlined in this plan. The s.173 agreement would apply to the years of the offset plan that Stockland manage the Conservation Reserve of Aitken Creek, prior to handover to Council.

Fencing

A temporary fence around the sites identified for the offsets will be required when works are being undertaken in the area (refer also Section 8). For the various offset sites this would include fencing prior to and during:

- construction of water treatment wetlands and walking trails in Aitken Creek South and Aitken Creek North; and
- development of De Maria.



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Once the works have been completed, the Conservation Reserve boundaries will be defined by a low-level fence (e.g. post and wire or post and rail). Signs will also be erected to define the Conservation Reserves (see Section 9.2).

Weed management

An overall weed management plan for the Conservation Reserves and ROS of Highlands is addressed in Section 5.4.2. A landscape approach to weed control will be most effective in the long-term as weeds will disperse into the offset sites from neighbouring areas. This section of the offset management plan identifies the weed species that currently require control within these sites. The methodology and timing of control will follow those outlined in Section 5.4.2. Weed species identified for elimination may differ to those in Table 11. This is because elimination could be achievable for some species within the offset areas, where it may not be achievable within the entire ROS network. The monitoring program will identify any other weed species that may require management in the future.

The weed management program will commence as soon as practicable. For the Creekline Grassy Woodland remnants weed control will need to be in conjunction with revegetation, as discussed below. Contractors will refine the control methods appropriate for each species, but herbicides, some slashing and hand removal are likely to be involved.

Table 11 Highlands CMP: Weed species requiring control or elimination within the offset areas.

Species	Common name	Control/Eliminate	Offset area (Habitat zone)
<i>Cirsium vulgare</i>	Spear Thistle	Control	1, 4, 14
<i>Cynara cardunculus</i>	Spanish Artichoke	Eliminate	1, 4, 14
<i>Dactylis glomerata</i>	Cocksfoot	Control	1, 4, 14
<i>Holcus lanatus</i>	Yorkshire Fog	Control	1, 14
<i>Moraea miniata</i>	Two-leaf Cape-tulip	Eliminate	1
<i>Nassella neesiana</i>	Chilean Needle-grass	Eliminate	1
<i>Nassella trichotoma</i>	Serrated Tussock	Eliminate	1
<i>Paspalum distachium</i>	Water Couch	Eliminate	1
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	Control	1, 4, 14
<i>Rosa rubiginosa</i>	Sweet Briar	Eliminate	1, 4, 14
<i>Rubus anglocandicans</i>	Blackberry	Eliminate	1, 4, 14
<i>Ulex europaeus</i>	Gorse	Eliminate	14



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Supplementary planting within the Creekline Grassy Woodland remnant

Supplementary planting within the Common Tussock-grass Grassland (Creekline Grassy Woodland remnant) will be undertaken to increase the diversity and cover of indigenous flora species, replace vegetation in areas where weed control has been undertaken, provide additional fauna habitat, enhance landscape amenity and meet Net Gain offset requirements. No supplementary plantings are to occur within the other Creekline Grassy Woodland remnant offset site because it supports Golden Sun Moth core habitat (Figures 3 and 4).

The aim of the plantings will be to restore a tree and shrub layer and reintroduce, or encourage the recruitment of robust ground layer species. Table 12 provides a list of species suitable for supplementary planting. The species have been selected as they would have been present in the original flora (based on the floristics of the remnant vegetation on the site). They have also been selected for technical reasons; that is they are capable of surviving in the face of competition from herbaceous weed species, mostly perennial grasses. After five years, an 80% survival rate of all the plantings is expected.

Establishment techniques

Revegetation may be established using plants propagated from cuttings, division or seed. Source material should be local, in some cases from within the Highlands property, or at least from within the Victorian Volcanic Plain bioregion. Contractors need to specify in their tendering the provenance of material they propose using.

For scattered plantings, seedlings will be protected by tree guards and localised weed control undertaken for at least the first two years to assist establishment.

Contractors

To succinctly coordinate weed management and revegetation the use of one contractor to undertake both of these CMP Elements is advocated.

To ensure that work undertaken by contractors is of a satisfactory standard, a list of potential contractors has been included (Table 11). This list is not exhaustive, but any contractor considered should meet the standards of those contractors listed.

Table 12 Highlands CMP: Recommended weed control/indigenous planting contractors

Contractor	Details
Australian Ecosystems Nursery and Consulting	Ph: (03) 9775 0612 Mob: 0402 127 933; 0416 221 200
Enviro Techniques	Ph: (03) 9439 9599 Mob: 0412 277 515
Indigenous Design	Ph: (03) 9844 3494

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Contractor	Details
Nature Links	Ph: (03) 9619 6155 Mob: 0412 865 027

The following activities will need to be undertaken for the supplementary plantings:

- Tube stock of selected plant species (Table 13) must be contract-grown and propagated from material collected on-site or from the Merri Creek corridor. Alan Webster (Department of Sustainability and Environment) has requested that seed from Swamp Gum be collected from the Highlands property; seed/plant divisions from all the species listed in Table 12 could potentially be collected from Highlands.
- A contractor will be appointed and seed collection and propagation should begin within the first six months to one year as appropriate for individual species (for seed collection this is typically between spring and summer). The contractor will need to have the required permits.
- Weed control within the Creekline Grassy Woodland (Common Tussock-grass) remnant will be undertaken prior to initial planting and will be maintained, particularly during the early establishment of revegetated species. Areas of bare ground exposed after weed control will be revegetated with appropriate indigenous species.
- Plantings will be carried out in autumn or early winter within the first three years (or as appropriate following weed eradication) to allow establishment before the dry summer season.
- Additional supplementary planting may be undertaken in later years to increase the vegetation cover as required.
- Once planting has been undertaken, the plants will be monitored on a yearly basis to assess the success of seedlings, the affect of weeds and the need for supplementary plantings or replacement of dead plants. Existing indigenous vegetation of the site will also be monitored to identify any threats and/or opportunities (e.g. for recruitment) requiring specific management.

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Table 13 Highlands CMP: Indigenous species for supplementary planting within the Common Tussock-grass Grassland (HZ 1), Aitken Creek south⁵.

Botanical name	Common name	Propagation method	Potential source(s) of propagating material	Plant numbers required
Trees				
<i>Acacia melanoxylon</i>	Blackwood	S	1	10
<i>Eucalyptus camaldulensis</i>	Red Gum	S	1,3	10
<i>Eucalyptus ovata</i> var. <i>ovata</i>	Swamp Gum	S	1,3	10
Shrubs				
<i>Meliccytus dentata</i> (formerly called <i>Hymenanthera dentata</i>)	Tree Violet	S,(C)	1	80
Robust perennial herbs				
<i>Carex tereticaulis</i>	Poong'ort	S,D	2	As many plants are required, at a density of 5 plants/m ² .
<i>Poa labillardierei</i> var. <i>labillardierei</i>	Common Tussock-grass	S,D	2	As many as required, at a density of 9 plants/m ² . These plants will be used to revegetate the areas where weed control has exposed bare ground.

Propagation method
 C – cuttings
 D – division
 S – seed

Potential sources of propagating material
 1 Aitken Creek north, Highlands
 2 Aitken Creek south, Highlands
 3 Malcolm Creek, Highlands

⁵ No plantings are to occur within the other Creeklane Grassy Woodland offset area as it forms part of the Golden Sun Moth Core habitat

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Maintenance commitments and biomass control

To achieve maintenance gains within the Creekline Grassy Woodland remnants, the land manager must forego the right to graze the area. The designated Creekline Grassy Woodland offset areas are not currently being grazed and stock will continue to be excluded from the area. Some biomass reduction as outlined in Section 5.4.1 could be required within the Creekline Grassy Woodland remnant that supports Golden Sun Moth core habitat (Figures 3 and 4).

The absence of grazing, or other means of biomass control, in areas supporting Plains Grassland can lead to a decline in the overall vegetation quality. Further, biomass reduction is favourable for the Golden Sun Moth. The frequency and timing of biomass control for the grassland areas is outlined in Section 5.4.1

Further requirements for achieving maintenance gains in Plains Grassland include:

- Retaining all rocks;
- No fertiliser application;
- No soil disturbance with machinery;
- No sowing of introduced species; and
- No supplementary-feeding of stock in offset areas.

Control of pest animals

Pest animal control is addressed in Section 7.

Ten year management plan

Table 14 outlines the management requirements over a ten year period. The majority of the offset works will occur within these first few years and include fencing, plant propagation, supplementary planting and weed control. On-going works will include biomass control in Plains Grassland, monitoring the success of weed control and supplementary plantings, undertaking further weed control as required and replacing dead plantings. It is expected that Stockland would provide an agreed lump-sum payment to Hume Council to continue the offset plan if the offset areas are transferred to Council ownership within the 10-year period.



Table 14 Highlands CMP: Ten year management plan for the Net Gain offset areas.

Year No.	Action No.	Location	Requesting action?	Activity Description	Timing of activity - (months)	Quantity	Unit	Who is responsible for this action?	Standard to be achieved
0		HZ 1		A temporary fence to be erected around the Conservation Reserve that includes the Creekline Grassy Woodland and Plains Grassland remnants before construction of walking tracks and adjoining residential development (Figure 4)	Before works in vicinity commences	c 5.7	ha	Stockland	Cyclone fencing erected before works commence (refer Section 9.1)
0		HZ 4		A temporary fence to be erected around the Conservation Reserve supporting the Aitken Creek Dam Plains Grassland remnant before the construction of walking tracks and residential development (Figure 4).	Before works in vicinity commences	c 10	ha	Stockland	Cyclone fencing erected before works commence (refer Section 9.1)
0		HZ14		A temporary fence to be erected around the Conservation Reserve supporting the De Marinis Plains Grassland remnant before works associated with the walking track or the residential development begins (Figure 4)	Before works in vicinity commences	c 10.9	ha	Stockland	Cyclone fencing erected before works commence (refer Section 9.1)
1	1.1	HZ 1		Section 173 Agreement between Stockland and Council (if required by Council).	When offset plan is initiated			Stockland	
1	1.2	HZ 1		Contract staff and commence seed collection and tube stock propagation for the Creekline Grassy Woodland remnant.	Typically spring - summer			Stockland	Provenance of the material must be documented (refer Section 6.4) 110 tubestock as per Table 12 to be ready for planting in Year 2
1	1.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
1	1.4	HZ 1, 4 & 14		Undertake control and elimination of targeted weed species. Prevent targeted species from seeding (Table 10).	Table 3	4.6	ha	Stockland	Weeds identified for control should not increase beyond current levels Cover of woody weeds must be reduced so that effective elimination (i.e. <1% cover) is achieved in five years Other weed species identified for elimination (Table 10) to be reduced by 50% in first year. Target is to effectively eliminate these species (to <1% cover) within three years
1-2	1.5	HZ 1, 4 & 14		A low-level post and wire or post and rail fence will be erected around the boundaries of the Conservation Reserves	Any time in first year after wetland construction / residential development	c.27	ha	Stockland	Fence must delineate Conservation Reserves and exclude vehicle access (refer Section 9.1)
2	2.1	HZ 1	Actions 1.2 and 1.4	Undertake supplementary plantings within Creekline Grassy Woodland remnant (Common Tussock-grass Grassland only)	Autumn - early winter	0.83	ha	Stockland	110 trees and shrubs as per Table 12 to be planted and protected by tree guards
2	2.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 1. Identify any 'new' weeds that may also require control	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2).
2	2.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
2	2.4	HZ 1		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Weeds identified for control should not increase beyond current levels Cover of woody weeds must be reduced so that effective elimination (i.e. <1% cover) is achieved in five years Other weed species identified for elimination (Table 10) to be further reduced by at least 50%. Target is to effectively eliminate these species (to <1% cover) within three years
2	2.5	HZ 1		Monitor supplementary plantings; undertake maintenance work as required.	Summer	0.83	ha	Stockland	Document health and survival of plantings
3	3.1	HZ 1		Review existing supplementary plantings and undertake additional plantings of large grasshoids within areas where weed control has exposed bare ground and replace any plants that have not survived.	Autumn	0.83	ha	Stockland	9 plants per m ² of Common Tussock-grass to be planted in areas of bare ground. Replace dead plantings
3	3.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 2. Identify any 'new' weeds that may also require control	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2).

* Timing will be dependent on when the Aitken Creek ROS is transferred to Council management

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Year No.	Action No.	Location	Required preceding actions?	Activity Description	Timing of activity - month(s)	Quantity	Unit	Who is responsible for this action?	Standards to be achieved
3	3.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
3	3.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Weeds identified for control should not increase beyond current levels Cover of woody weeds must be reduced so that effective elimination (<1% cover) is achieved in five years Other weed species identified for elimination (Table 10) to be reduced to a cover of < 1%.
3	3.5	N/A		Report to Council on offset achievements during years 1 - 3	December			Stockland	Report to outline activities undertaken and success of management actions. Discuss any management problems and how they might be resolved.
4	4.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Document survival and health of plantings. Replace dead plantings Plant Common Tussock-grass in areas where weed control has exposed bare ground.
4	4.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 3 Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2).
4	4.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
4	4.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Weeds identified for control should not increase beyond current levels Cover of woody weeds must be reduced so that effective elimination (<1% cover) is achieved in five years Other weed species identified for elimination (Table 10) to be maintained at a cover of < 1%.
5	5.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Document survival and health of plantings. Replace dead plantings.
5	5.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 4 Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2).
5	5.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
5	5.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Weeds identified for control (Table 10) should not increase beyond current levels Cover of woody weeds should be reduced to a cover of <1% Other weed species identified for elimination (Table 10) to be maintained at a cover of < 1%.
5	5.5	N/A		Report to Council on offset achievements during years 3 - 5	December			Stockland	Report to outline activities undertaken and success of management actions. Discuss any management problems and how they might be resolved.
6	6.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Document survival and health of plantings. At least 80% survival of plantings is expected.
6	6.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 5. Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2).
6	6.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
6	6.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results.	Table 3	4.6	ha	Stockland	Weeds identified for control (Table 10) should not increase beyond current levels. Maintain weed species identified for elimination (Table 10) below a cover of 1%.
7	7.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Document survival and health of plantings. At least 80% survival of plantings is expected.



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Year No.	Action No.	Location	Required preceding action?	Activity Description	Timing of activity - month(s)	Quantity	Unit	Who is responsible for this action?	Standard to be achieved
7	7.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 6. Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2)
7	7.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Standards outlined in Section 5.4.1
7	7.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Weeds identified for control (Table 10) should not increase beyond current levels
8	8.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Maintain weed species identified for elimination (Table 10) at a cover of < 1%
8	8.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 7. Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Document survival and health of plantings. At least 80% survival of plantings is expected
8	8.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2)
8	8.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Standards outlined in Section 5.4.1
9	9.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required.	Autumn	0.83	ha	Stockland	Weeds identified for control (Table 10) should not increase beyond current levels
9	9.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 8. Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Maintain weed species identified for elimination (Table 10) below a cover of 1%.
9	9.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Document survival and health of plantings. At least 80% survival of plantings is expected
9	9.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results	Table 3	4.6	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2)
10	10.1	HZ 1		Monitor supplementary plantings and undertake maintenance as required	Autumn	0.83	ha	Stockland	Standards outlined in Section 5.4.1
10	10.2	HZ 1, 4 & 14		Monitor weed levels and determine the success of the control efforts from Year 9. Identify any 'new' weeds that may also require control.	Autumn	4.6	ha	Stockland	Weeds identified for control (Table 10) should not increase beyond current levels
10	10.3	HZ 4 & 14		Biomass reduction as per Section 5.4.1	Table 5	3.4	ha	Stockland	Document effectiveness of control methods and new weed species requiring control (refer also Section 5.4.2)
10	10.4	HZ 1, 4 & 14		Undertake weed control within offset areas (Table 10) based on monitoring results.	Table 3	4.6	ha	Stockland	Standards outlined in Section 5.4.1
10	10.5	N/A		Report to Council on offset achievements during years 5 - 10, and on the overall success of the 10-year offset plan.	December			Stockland	Weeds identified for control (Table 10) should not increase beyond current levels

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Summary of standards to be achieved

To fulfil the minimum gains requirements outlined in DSE 2006b, high threat woody weeds identified in Table 11 are to be eliminated (i.e. < 1 % cover) from all offset sites. The remaining high-threat weeds should not increase beyond current levels. Further, pest animal levels should also not increase. These levels will need to be determined during the first year.

To achieve elimination of the high threat weeds identified in Table 10 an intensive weed control program is required during the first 3 – 5 years of the offset plan. It is recommended that woody weeds are targeted during the first few years and maintained below a cover of 1% by year 5, and for other weeds identified for elimination, they are recommended to be reduced to <1% cover within the first three years.

After five years, an 80% survival of the supplementary plantings within the Creekline Grassy Woodland remnant is expected.

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7 Pest animal control

The objective of Pest Animal Control is to maintain at low numbers pest animal species which occur, or may occur in the Conservation Reserves and ROS, following construction works in the development zone. The main concern is with rabbits and foxes, which are discussed below.

Rabbits (*Oryctolagus cuniculus*)

In general, the main damage caused by rabbits is from diggings and/or grazing of a broad range of native plant species (rabbits selectively graze the seedlings of many native tree and shrub species). Even low densities of rabbits can impede efforts to revegetate particular sites.

Evidence of an active rabbit population at Highlands was noted through observation of scats and diggings located throughout the site. Boulder piles and exotic shrubs are likely to be used as shelter by rabbits. No warrens were recorded on site. A moderate population density of rabbits is likely to be present within the site. However, under favourable conditions rabbit numbers can expand rapidly.

A rabbit-proof fence is not recommended for Conservation Reserves or ROS, as it is a relatively expensive exercise and would deter or trap native fauna within the Conservation Reserves and ROS such as Eastern Grey Kangaroo (*Macropus giganteus*) and potentially Short-beaked Echidna (*Tachyglossus aculeatus*). A post and wire fence that allows movement of fauna will be used as a perimeter fence around the Conservation Reserves (see Section 9.1).

Baiting for rabbits should also not occur within the Conservation Reserves or ROS due to potential impacts on native and domestic animals. The removal of exotic shrubs and boulder piles in the development zone should limit suitable habitat for rabbits. If warrens are observed within the Conservation Reserves or ROS, they will be destroyed as appropriate.

Foxes (*Vulpes vulpes*)

Native fauna species potentially preyed upon by foxes, include the Common Ringtail *Pseudocheirus peregrinus* and Brushtail Possum *Trichosurus vulpecula*. Fox predation is outlined as a Threatening Process in the Action Statement produced under the FFG Act (Mansergh and Markes 1993), it is also a threatening process under the EPBC Act.

As the fox is a highly mobile animal, and would occur in surrounding areas, any control action on foxes would be potentially futile unless surrounding land managers and owners also took similar action in a co-ordinated community-based scheme over a large area (Saunders et al. 1995, Morton et al. 1999). However, any den sites located in the Conservation Reserves or ROS will be destroyed.

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Fox control should be considered only if harmful predation of native species is suspected. Discussion of a possible poisoning campaign should then involve the Department of Sustainability and Environment (DSE) and the Department of Primary Industries (DPI), professional baiters and local residents. Additionally, residents will be notified that leaving food waste and rubbish in open space areas may encourage foxes and other pest animals, such as rodents (see Section 9.2).

Aim: *To maintain or lower pest animal populations with Conservation Reserves and ROS*

Key Actions

- Destruction of warrens.
- If practical, coordinate a community wide effort to control foxes.
- Remove all food waste from ROS to discourage pest animals

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8 Pre-construction: habitat protection and contractor induction

To reduce impacts on Conservation Reserves and also important areas downstream (e.g. Merri Creek) during the construction period, protection measures will be implemented (also see Table 15). These measures include:

1. Timing of major earth works in close proximity to Conservation Reserves will be timed to avoid the Sun Moth flight period between late October and mid January;
2. Construction areas adjacent to Conservation Reserves (i.e. Golden Sun Moth core habitat, River Swamp Wallaby-grass populations, wetlands and potential Growling Grass Frog habitat, the Matted Flax-lily and remnant vegetation including trees) will be fenced off from all works associated with the development.
 - The fenced off areas (i.e. Conservation Reserves) will display clear signage showing that these areas are NO-GO ZONES for contractors, machinery, overburden, waste, storage materials and personnel.
 - Sediment control fencing and best management practice will be implemented along Malcolm and Aitken Creeks, this is particularly important during the construction of wetlands.
3. The key personnel from the contracting companies will take part in a site induction. This will involve an on-site meeting with a qualified zoologist consultant to relay information regarding the Golden Sun Moth, their habitat requirements, where the habitat exists and the importance of protecting these areas as well as the importance of wetland habitats for Growling Grass Frogs. If any new staffs are brought onto the site during the construction phase, they must be inducted by the site foreman.
4. Access to the works area must avoid areas supporting Golden Sun Moth core habitat, wetland areas and potential Growling Grass Frog habitat, River Swamp Wallaby-grass, Matted Flax-lily and remnant vegetation (including trees).
5. An area for storage of equipment and machinery or any other work materials must be designated outside and away from the NO-GO ZONES.
6. An area for re-fuelling of machinery must be designated outside and away from the NO-GO ZONES.
7. No storage of top soil, spoil, waste or construction materials within the NO-GO ZONES.
8. An auditing component must be implemented for regular on-ground monitoring. This will involve daily inspections (and maintenance if required) by the site foreman of the fences, and regular inspections by a qualified biologist to ensure fences and protection measures are working effectively.



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Table 15 Highlands CMP: Summary of pre-construction protocols for protection of Conservation Reser

Location and works	Sensitive areas/items requiring protection	Pre-construction protocols
<p>Aitken Creek South Conservation Reserve and ROS</p> <ol style="list-style-type: none"> 1. Wetland construction and revegetation 2. Track construction 3. Landscaping 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • Plains Grassland • Creekline Grassy Woodland • Matted Flax-lily • Potential Growling Grass Frog habitat 	<ul style="list-style-type: none"> • Fence off Golden Sun Moth habitat and remnant vegetation (completed mid-2007); and separately fence off the area supporting Matted Flax-lily during the track construction • Install sediment fences (completed mid 2007) • Induct all contractors working in the area (completed late-2007 for wetland construction contractors) • Areas for storing machinery and soil must be away from the creek, remnant vegetation and Golden Sun Moth core habitat • Access the wetland area from DP6 • Peg alignment of tracks. Alignment to be checked by botanist and zoologist before construction commences
<p>DP8</p> <ol style="list-style-type: none"> 1. Residential development 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat 	<ul style="list-style-type: none"> • Fence off southern boundary of Golden Sun Moth habitat within Aitken Creek south POS • Install sediment fences • Induct all contractors working in the area • Areas for storing machinery and soil must be away from the creek and Golden Sun Moth core habitat • Access the area from the south-east
<p>DPs12 & 19</p>	<ul style="list-style-type: none"> • Golden Sun Moth core habitat 	<ul style="list-style-type: none"> • Fence off Mt Aitken Conservation Reserve and ROS • Induct all contractors working in the area • Areas for storing machinery and soil must be away Golden Sun Moth core habitat • Access the area from the north
<p>Aitken Creek North Conservation Reserve and ROS</p> <ol style="list-style-type: none"> 1. Wetland construction and revegetation 2. Track construction 3. Landscaping 4. Central Arterial crossing over Aitken Creek 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Remnant trees • Potential Growling Grass Frog habitat 	<ul style="list-style-type: none"> • Fence off Golden Sun Moth habitat, populations of River Swamp Wallaby-grass (Sites 3 - 7), remnant trees and Plains Grassland remnants • Install sediment fences • Salvage two populations of River Swamp Wallaby-grass (Sites 1 & 2) before any disturbance in area • Induct all contractors working in the area • Areas for storing machinery and soil must be away from the creek, remnant vegetation and Golden Sun Moth core habitat • Site access must be outside of GSM core habitat and Plains Grassland • Peg alignment of tracks. Alignment to be checked by botanist and zoologist before construction commences
<p>De Maria</p> <ol style="list-style-type: none"> 1. Residential development 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Remnant trees 	<ul style="list-style-type: none"> • Fence off Aitken Creek north Conservation Reserve and remnant trees • Install sediment fences along creeklines • Induct all contractors • Access the site from outside of the ROS (e.g. from the west) • Salvage population of River Swamp Wallaby-grass within the quarry (Site 8) before any works in the area
<p>DP5 A-C</p> <ol style="list-style-type: none"> 1. Residential development 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Remnant trees 	<ul style="list-style-type: none"> • Fence off Aitken Creek and Malcolm Creek Conservation Reserves and remnant trees • Install sediment fences along creeklines • Induct all contractors • Access the site from outside the ROS
<p>DP11 & 13</p> <ol style="list-style-type: none"> 1. Residential development 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Creekline Grassy Woodland • Remnant trees 	<ul style="list-style-type: none"> • Fence off Malcolm Creek Conservation Reserve and remnant trees • Install sediment fences along creeklines • Induct all contractors • Access the site from outside the ROS
<p>Malcolm Creek crossing</p> <ol style="list-style-type: none"> 1. Aitken Boulevard Bridge construction 2. Realignment of the creek 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • Plains Grassland • Remnant trees • Potential Growling Grass Frog habitat 	<ul style="list-style-type: none"> • Fence off construction area – no works is to occur outside of this area • Install sediment fences • Induct all contractors working in the area • Areas for storing machinery and soil must be away from the creek, remnant vegetation (including trees) and Golden Sun Moth core habitat • Access the site from the south
<p>Malcolm Creek Conservation Reserve and ROS</p> <ol style="list-style-type: none"> 1. Wetland construction 2. Track construction 3. Play ground construction 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Creekline Grassy Woodland • Remnant trees • Potential Growling Grass Frog habitat 	<ul style="list-style-type: none"> • Fence off Golden Sun Moth habitat, remnant vegetation and area likely to support River Swamp Wallaby-grass • Install sediment fences • Induct all contractors working in the area • Areas for storing machinery and soil must be away from the creek, remnant vegetation and Golden Sun Moth core habitat • Access the area for the proposed water treatment wetlands from DP7 • Peg alignment of tracks. Alignment to be checked by botanist and zoologist before construction commences
<p>DP7</p> <ol style="list-style-type: none"> 1. Residential development 	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Creekline Grassy Woodland • Remnant trees 	<ul style="list-style-type: none"> • Fence off Malcolm Creek Conservation Reserve and remnant trees • Install sediment fences along creeklines • Induct all contractors • Access the site from outside of the ROS
<p>All wetland construction works</p>	<ul style="list-style-type: none"> • Golden Sun Moth core habitat • River Swamp Wallaby-grass • Plains Grassland • Creekline Grassy Woodland • Remnant trees • Potential Growling Grass Frog habitat 	<ul style="list-style-type: none"> • Implement all measures as outlined above • Implement water quality monitoring to ensure wetland habitat remains suitable for the Growling Grass Frog and there are no impacts downstream to Merri Creek



9 User- related Issues

9.1 Passive recreation

Management of the ROS within Highlands will need to accommodate Conservation Reserves as well as providing space for passive recreation and facilities for public use. This will incorporate the following components.

Fencing

- Cyclone fencing with sediment control will be required around the Conservation Reserves and ROS, and scattered remnant trees outside these areas, for protection during construction activities (see Section 8).
- Fencing (e.g. post and wire), will be erected around the Conservation Reserves and potentially around the perimeter of the ROS areas to define and exclude access to vehicles and trail bikes.
- For safety and aesthetic reasons it is recommended any existing barbed wire and electric internal fences be removed from the Conservation Reserves and ROS.
- Revegetation zones will be temporarily fenced with appropriate signage, e.g. “vegetation rehabilitation zone”
- Fence burning trial plots (e.g. metal star pickets and wire to exclude stock and prevent fence from burning).

Trails

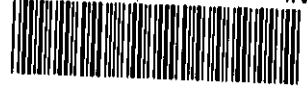
Thompson Berril Landscape Design (TBLD) has prepared strategic plans illustrating the location of trails and recreational facilities within ROS (see Appendix 6 for an example for Malcolm Creek). The following describes community access into Conservation Reserves and ROS (prepared by TBLD).

Some access is proposed into Conservation Reserves to allow for community understanding and engagement, whilst acknowledging and interpreting their important conservation values. There are a range of methods by which this community engagement and access will be provided. These include:

- Informal recreational use of the flat open slashed sections within the Conservation Reserves and ROS;
- No paths will be created within the Conservation Reserves;

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- Interpretive signage (also see Section 9.2) and information provided at the regional visitor entry points into the ROS and Conservation Reserves incorporating thematic use of the Golden Sun Moth in the regional playground and picnic area design in Malcolm Creek, located adjacent to the Golden Sun Moth core habitat areas.

Informal recreational use of open slashed areas

The flat open slashed sections within the ROS and Conservation Reserves can potentially be used for informal access including informal ball games, kite flying and frisby throwing. The levels and timing of use will be monitored to assess any impacts on conservation values (e.g. Golden Sun Moth core habitat, areas surrounding the wetlands), and modified if required.

Sealed shared trail access and low elevated boardwalks

For the ROS along both Aitken and Malcolm Creeks, provision of a sealed shared trail, a minimum of 2.5 metres wide is required on one side of the waterway. All new sealed shared trails are located outside the Conservation Reserves. There is one existing haul road which is located through the Conservation Reserve which will be formalised. Some seats are proposed adjacent to the paths for resting.

In some specific locations closer to higher visitation areas in ROS, low elevated steel mesh boardwalks may be included. The steel mesh allow light penetration through the walkway minimising the area of disturbance and elevating people above the surface level which strengthens the conservation message and provides opportunities to integrate interpretive signage into the sites. In all locations, specific construction techniques will be developed to minimise the footprint of ground disturbance during construction

Trails within the ROS have been located to:

- Avoid River Red-gums;
- Avoid further removal of core Golden Sun Moth habitat by locating trails around the perimeter of Reserves;
- Avoid being in close proximity to wetlands;
- Avoid stony rises;
- To follow existing roads (where practical); and
- Avoid remnants of Plains Grassland, Creekline Grassy Woodland and threatened flora.

Fire

The CFA will need to be consulted to ensure fire safety requirements are being met at Highlands. The following are some considerations for fire management:

- Fire hydrants should be installed to CFA satisfaction;
- A slashed fire break of at least 10 m wide where houses adjoin ROS;

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- Roads can act as sufficient fire breaks where they adjoin ROS;
- Vegetation in ROS will be managed during the 'Fire Danger Period'. This will also be carried out as part of biomass reduction to maintain Golden Sun Moth habitat; and
- Sections 5.2.3 and 5.4.1 address proposed ecological burning in Conservation Reserves.

Use of ROS

- Public facilities (e.g. BBQ's and playgrounds) are situated outside Conservation Reserves. Signage near these facilities would be helpful to explain that leaving food waste and rubbish may encourage pest animals such as foxes and rodents;
- Servicing of any bins in the estate will be under the City of Hume kerbside waste and recycling services.
- Aesthetic values within the ROS will be enhanced through low level planting in Conservation Reserves (where appropriate) and medium level planting in other areas of ROS e.g. riparian zones along creeks.
- Storm water management can also play a role in fauna habitat and user enjoyment if designed and vegetated appropriately.
- Signage for ecological interpretation to inform users of the conservation purposes of the ROS. See education section below.
- Fallen limbs from trees will be removed from paths and re-distributed in open space zones to augment fauna habitat.
- Seating will be provided for user enjoyment along trails in ROS.

Restrictions in the ROS

- Prohibit vehicles, trail bikes and horse-riding.
- Prohibit removal of fallen timber, firewood and other plant material.
- No fish introductions into creeks or wetlands.
- No dumping of rubbish or litter (e.g. signs with litter fine amounts).

9.2 Education

Education packages and interpretative signs

Educational 'packages' will be prepared by Ecology Australia in collaboration with DSE, City of Hume and TBLD.

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Residents should be encouraged to join the established Friends of Malcolm Creek and renew the Friends of Aitken Creek. People and/or organisations to contact in relation to these groups and other environmental activities in the local area include:

- Anne Jessop (Delfin Community Development);
- Damien Harrison (City of Hume: Environmental and Greening Officer);
- Craigieburn Scouts; and
- Brian Bainbridge and Katrina Roberg (Merri Creek Management Committee).

These groups could participate in management activities such as:

- Planting/revegetation days;
- Flora monitoring (e.g. health of River Red-gums and monitoring River Swamp Wallaby-grass and Matted Flax-lily populations); and
- Fauna monitoring (e.g. Golden Sun Moth monitoring and frog census, particularly focusing on the re-colonisation of wetland habitat by Growling Grass Frogs).

The following is a summary of the elements to be included within an education package that will be provided to all residents:

- The importance of the ROS as a passive recreation zone and Conservation Reserves that support threatened native fauna and flora (e.g. Golden Sun Moth, Matted Flax-lily, River Swamp Wallaby-grass and potential Growling Grass Frog habitat once wetlands become established);
- Snake awareness in ROS. Snakes are a natural part of the local fauna and are protected under the *Wildlife Act 1975*;
- Information regarding the Fire Danger Period, including the risks and dangers of fire and when restrictions occur;
- Provision of a map of Highlands showing the location of reserves, off-leash areas for dogs and public facilities;
- Information regarding the prohibition of stocking creeks and wetlands with fish, as they can be predators of frogs eggs and tadpoles;
- Recommendations for garden plantings (i.e. avoidance of all environmental weeds);
- Information regarding the use of pesticides, herbicides and fertilisers in gardens and the potential negative impacts associated with pollution of stormwater flowing into creeks and wetland systems; and
- Information details on friends groups and/or environmental organisations within the local area.

The interpretative signage within ROS would include the following elements:

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- Types of threatened native fauna and flora found within Conservation Reserves (e.g. Golden Sun Moth, Matted Flax-lily and River Swamp Wallaby-grass, potential Growling Grass Frog habitat, remnant vegetation). These signs will not give the detailed location of individual plants.
- Snake awareness signs, these will be used along paths in the ROS to alert residents of the potential for snakes in the area.
- Signs prohibiting dumping of garden waste and education on the importance of controlling the invasion of environmental weeds or other exotics.

9.3 Domestic animal control

The proposed development will most likely result in an increase in density of dogs (*Canis familiaris familiaris*) and cats (*Felis catus*) within Highlands. Domestic pets are a potential nuisance and a threat to fauna in the estate. Domestic dogs may pose a threat to native wildlife, often via indirect processes rather than direct predation.

Predation of wildlife by cats is listed as a Threatening Process under Schedule 3 of the FFG Act. It is acknowledged that cats may prey on a range of native and exotic mammals, birds, reptiles and frogs and impacts on native fauna are thought to be most significant in relatively undisturbed habitat adjacent to new residential developments (Barratt 1997, 1998). Action Statement No.80 has been produced to ameliorate the adverse effects of this process (Seebeck and Clunie 1997).

It is difficult to quantify the effects of cats and dogs per se, although several conclusions are possible:

- The introduction of domestic cats (and dogs), as a result of a new residential development, can introduce a range of degrading processes impacting directly or indirectly on flora and fauna, including predation;
- Domestic cats play a contributing role in the decline of many mammal, bird and reptile taxa.
- Domestic cats appear to selectively prey upon small mammals, particularly nocturnal ground and tree-dwelling species. After mammals, birds appear to be the most preyed upon fauna (Bezuijen and McMahon 1999).
- Irresponsible exercising of dogs may cause individuals or flocks of foraging/roosting birds to take flight and may flush birds from nests during incubation and breeding.
- Nutrient enrichment or eutrophication associated with dog faeces can exacerbate weed infestation and increase pollution of storm water, as well as transmit potential diseases to humans (from faeces), especially children.

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Aim: *To reduce potential impacts of cats and dogs in ROS.*

Key Actions

- No cats or dogs allowed in the Conservation Reserves
- Encourage responsible pet ownership (e.g. picking up after dogs in all regional open space areas) to residents through information presented in education leaflets and signage.
- Dogs must be kept on a leash at all times within ROS.

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10 Monitoring

10.1 Spring - summer



Matted Flax-lily

Monitoring of the Matted Flax-lily will be undertaken each year between November and February. Extent of spread, flowering and fruiting will be documented. The success of weed control will be monitored as part of the weed management requirements for the ROS (refer Section 5.4.1). However, additional weed management issues may also be identified during the site visits and will be documented.

Annual reports outlining the results of the monitoring will be required for the ten year life of the plan and also following the 10-year review (refer Section 11.1).

River Swamp Wallaby-grass

Monitoring of the River Swamp Wallaby-grass populations will be undertaken during November – January each year. The following information will be recorded:

- Presence or absence of River Swamp Wallaby-grass;
- The percentage cover within the creekline or pool;
- Weed species requiring control; and
- Any other management recommendations.

The translocated plants will also require additional monitoring for a two year period post-planting. Refer to Section 5.2.2 for the monitoring requirements.

Annual reports outlining the results of the monitoring of the translocated and in-situ populations of River Swamp Wallaby-grass will be required for the ten year life of the plan and also following the 10-year review (refer Sections 5.2.2 and 11.1).

Golden Sun Moth

It is essential that populations of Golden Sun Moth continue to be monitored. Fragmentation of habitat and changes to management practices can lead to degradation of grassland habitat and consequently Golden Sun Moth distribution and abundance.

The impacts of management practices on Golden Sun Moth will be investigated through a program of monitoring, results interpretation/analysis and reporting. The review program will provide a mechanism for alteration and adaptation of management practices to achieve conservation goals.

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Monitoring will be carried out annually from late October to mid-January. Stockland will be responsible for monitoring of Golden Sun Moth populations in Conservation Reserves until handed over to Council (e.g. in 10 years). Annual reports outlining the results of the population monitoring will be required for the ten year life of the plan, and thereafter following the 10 year review. There is also likely to be monitoring requirements (e.g. protocols and survey period) set by DEWHA as part of approval conditions.

Survey protocols

Several researchers have defined survey techniques for the Golden Sun Moth (Clarke 1999, Gibson and New 2007, Gilmore 2007, Brian Bainbridge MCMC, pers. comm.). However, there does not appear to be any definitive technique of estimating population sizes or trends due to the difficulty in surveying the Golden Sun Moth (e.g. emergence of several cohorts in one season). Therefore, taking into consideration the above literature and advice, DSE's draft survey protocols and the outcomes of the Golden Sun Moth expert workshop in Canberra with DEWHA in April 2008, we suggest the following techniques for monitoring Golden Sun Moth population trends and habitat suitability (e.g. effectiveness of management regimes) at Highlands.

Monitoring of Golden Sun Moth to be conducted as follows:

- Only observers familiar with the identification of Golden Sun Moth will conduct surveys. Additional surveyors will be given training by experienced entomologists to ensure consistency in survey technique and identification of the species;
- Surveys to be conducted annually during the flight season from October to January;
- Survey on days favourable for detecting flying Golden Sun Moths. These conditions include, warm sunny days above 20°C, little or no wind, little or no cloud/fog, no rain and at least two days since rain;
- Surveys to be conducted (when weather permits) at weekly intervals;
- The populations will be monitored over a minimum of four site visits to each of the core habitat areas;
- Surveys to be conducted late morning to mid afternoon (e.g. commence at around 1000 hrs and finish at 1400 hrs);
- Utilise the belt transect method to record the presence, relative abundance and distribution of Golden Sun Moth;
- Transects would vary in length depending on the area of habitat that is being sampled, generally transects could be c. 100 m in length and 5-10 m wide, and c. 10-20 metres apart;

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- In larger areas of habitat several parallel transects will be required to cover the area;
- Transects will be permanently marked and mapped with a Global Positioning System unit (GPS);
- Transects will be located in different habitats (e.g. separate transects into rocky areas and improved pasture areas);
- Transects will be walked by surveyors, and each time a moth crosses the transect in front of the surveyor (within 10 m), the moth is recorded;
- This will give frequency data for each transect. This method can be repeated each season and the data analysed and compared across seasons;
- Females will be recorded opportunistically during the transect searches;
- A specimen(s) will be captured and sent to the Museum of Victoria for formal identification;
- A general search (incidental records) for Golden Sun Moth within patches of core habitat/Conservation Reserves and the remaining areas within ROS (e.g. between Conservation Reserves) will also be conducted to gain an appreciation of the distribution of Golden Sun Moth (and possible movement between core habitat patches);
- Females will be recorded at this time with a waypoint and note activity (e.g. breeding, moving, flying, laying eggs etc.) recorded for each sighting.
- Often males will need to be followed to locate females which will be most visible on bare ground or in between grass tussocks.

Other survey techniques to be employed:

- During the survey period, pupal cases will also be recorded. This can add information such as breeding locations. Pupal cases will be collected and photographed and sent to experienced entomologists (e.g. at Museum of Victoria) for formal identification.
- Following the trial burns, and outside the flying season, the trial plots (i.e. burnt and unburnt patches) could be surveyed for the subterranean larvae. This can be done by digging up a small section of soil (e.g. 25 cm long x 20 cm wide x 10 cm deep) to see if the larvae have survived the burning trials. Larvae should be photographed and photographs sent to experienced entomologists (e.g. at Museum of Victoria) for formal identification.

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Habitat monitoring:

Habitat features to be monitored along transects within core habitat areas include the following:

- Wallaby Grasses, Spear Grasses and Chilean Needle-grass;
- Other indigenous vegetation;
- Shrubs;
- Trees;
- Exotic species;
- Bare ground/inter-tussock spaces; and
- Leaf litter, woody debris.

Other features to be recorded include:

- Height of the vegetation;
- Exposure (amount of shading from trees, buildings);
- Proximity to other core habitat areas and whether habitat is suitable in-between (e.g. level of connectivity); and
- Previous, current and proposed management regime for each core habitat area.

See Appendix 2 for Golden Sun Moth Monitoring Proforma.

Reporting on Golden Sun Moth

Reports will include the following detail:

- Introduction, study area and methodology;
- Weather condition during survey (temperature recorded with a hand-held digital thermometer);
- The distribution/location of ‘hot-spots’;
- Estimation of local/relative abundance;
- A comparison of local abundance between seasons, and an evaluation of the trajectory of the population (increasing, decreasing, stable);
- Results of the habitat assessment;
- An assessment of the impact of management actions and the appropriateness for the long-term viability of the population; and
- Recommendations for corrective measures if desired conservation goals are not being achieved.



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Growling Grass Frog

Monitoring of the wetland habitat is required to determine habitat suitability for Growling Grass Frogs and to assess whether the species has colonised wetlands. This is a Stockland responsibility, but may upon agreement be handed over to Melbourne Water within the 10-year period. Monitoring would be undertaken during the breeding season (e.g. October – February) and be conducted twice monthly (e.g. for three months during the active season).

In line with a recent detectability analysis in the Merri Creek corridor (Aitken and Malcolm Creeks are both tributaries of Merri Creek) (Heard et al. 2006) and in accordance with DSE protocols, monitoring would be conducted by a qualified zoologist(s) and include:

- At least two nocturnal surveys during the main activity period of the frog, between October and February;
- Two surveyors with a total of 90 person minutes spent at each site (survey time may vary according to waterbody size and complexity);
- Survey will proceed in the following order:
 1. Call recognition to see if any male frogs are calling (call-playback may be used to initiate calling);
 2. Undertake a visual inspection of the waterbody and vegetation with a spotlight and with the aid of binoculars; and
 3. Search the perimeter of the waterbody or edge of the creek for frogs, scanning vegetation on the banks and within the water body;
- Records will include:
 1. The AMG location, time and activity of each frog encountered/heard;
 2. The microhabitat (e.g. sitting on floating pond weed in middle of wetland); and
 3. Where possible, identify the age class of individuals (e.g. snout to groin length = < 30 mm – metamorph; 30-50 mm sub-adult; and >50 mm adult);
- Creek sections to be surveyed can be divided into transects of 50 m in length;
- Measures to reduce the possible spread of infectious pathogens (e.g. 'chytrid' fungus) between the survey sites will be implemented in accordance with standards described by James Cook University (Speare et al. 2004, 2006) and the New South Wales Parks and Wildlife Service (NPWS 2001).

The methods, results and discussion of results will be presented in a report following the completion of the surveys.

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Habitat monitoring of water treatment wetlands

The above monitoring protocols will be implemented to assess whether Growling Grass Frogs have colonised the wetlands. The following points outline habitat monitoring which would be undertaken during the same time period. Thresholds to be monitored are also outlined in Table 3.

Key habitat elements to assess:

- Hydrological regime: bi-annually during the spring/summer period;
- Aquatic vegetation diversity: annually during the spring/summer period (assess structural diversity and cover of submerged, floating and emergent vegetation, assistance from a qualified botanist may be required). If the percentage cover of these three aquatic vegetation elements drops below 60%, management measures should be implemented (e.g. rejuvenation of vegetation, see Table 3);
- Terrestrial vegetation and ground cover (e.g. some areas remain open for foraging and others have suitable grass cover, assistance from a qualified botanist may also be required, and presence of logs and rocks for shelter): annually during the spring/summer period;
- Water quality: once a month during construction and once every three months for at least two years post-construction (this is also important for assessing potential impacts to River Swamp Wallaby-grass and downstream to Merri Creek);
- Culverts in creeklines within Highlands are free of debris, rubbish and vegetation: bi-annually during the spring/summer period;
- Weed infestations (also see Section 5.4.2 and above for River Swamp Wallaby-grass);
- Recreational pressure (e.g. are terrestrial habitats being trampled);
- Presence of exotic fish: bi-annually during the spring/summer period; and
- Fences surrounding reserves are maintained: sediment control fencing must be checked daily by contractors during construction.

10.2 Autumn

Weed control

Monitor weed levels and determine success of control efforts.

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11 CMP implementation

The key management activities described in this plan must be subject to regular evaluation and monitoring. The progress of all aspects of management will be addressed in a brief annual report to Stockland and/or relevant agencies following completion of management activities and monitoring. In addition, specific actions and reporting in relation to the three EPBC-listed species recorded at Highlands will be required from DEWHA to meet approval and permit conditions.

As per Net Gain requirements under the Native Vegetation Framework (DSE 2002), Stockland are likely to retain ownership of the Conservation Reserves and ROS for 10-years, after which they will be transferred to Council ownership. It is expected that Stockland would provide an agreed lump-sum payment to City of Hume to continue the management of the Conservation Reserves and ROS if any of the areas are transferred to Council ownership within the 10-year period. This also applies to the management of water treatment wetlands (which support River Swamp Wallaby-grass populations and potential Growling Grass Frog habitat) within Malcolm and Aitken Creeks which will be handed over to Melbourne Water. These wetlands will require continued management when they are handed over to Melbourne Water to ensure compliance with EPBC Act approval conditions received by Stockland on 3 September 2009 from DEWHA. City of Hume/Melbourne Water will then be responsible for ongoing management and security of the Conservation Reserves and ROS in perpetuity (see Appendix 3). The objectives and actions set out in this CMP will be reviewed and updated, where required, prior to the hand over to City of Hume/Melbourne Water.

The works required to fulfil the aim of the CMP will vary year to year and the timing of work within the first three years is important. Table 16 gives a timeline for implementation of each management regime for each Conservation Reserve and ROS area and the responsible party(s).

The management recommendations outlined in this plan have begun to be implemented as per approval and permit conditions from DEWHA, City of Hume and DSE.

It is noted that the onus of implementing this CMP is on the proponent (Stockland) until such time of the hand over to the relevant authorities. In the event a handover is delayed or postponed, Stockland will continue to implement the CMP until the handover is completed and to the satisfaction of state and federal regulators.

11.1 Auditing and review

As part of the Federal assessment process there may be an auditing component to ensure compliance with the EPBC Act and approval conditions from DEWHA.

In addition, the CMP will have its own review/auditing process, as per Net Gain offset requirements. We propose a review of the management actions (i.e. adaptive management)



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to be undertaken after years 1, 3, 5 and 10 by City of Hume and DSE. The CMP will also need to be reviewed prior to hand over to Council and/or Melbourne Water.

City of Hume and DSE will undertake a review of the CMP after 10 years. After this time the plan will be updated accordingly with current knowledge and research on grassland management and particularly with regard to Golden Sun Moth. Table 16 lists the key management elements which will need to be reviewed and carried on (if deemed appropriate) after the 10 year assessment.

11.2 Conservation Management Plan elements implemented to date (October 2009)

The following elements of this CMP have been implemented as of 8 October 2009:

- River Swamp Wallaby-grass and Golden Sun Moth monitoring 2008/2009 season (see Ecology Australia 2009);
- Cyclone-proof fencing with sediment control (silt fencing) has been installed between the interface of Development Plan Area 7 and Malcolm Creek and Golden Sun Moth conservation reserves;
- A site induction for contractors in relation to Malcolm Creek (and DP7 development area) was undertaken on 28 September 2009. Personnel present included: Paula Deuber (Environmental Planner, Hume City Council), two site foreman from Symon Bros. (contractors), Chris Wilkins (Development Manager, Residential, Stockland) and Christina Renowden and John Kershaw (Biologist from Ecology Australia).
- A meeting was also held on 7 October 2009 to assess site conditions of Aitken Creek South prior to planting of River Swamp Wallaby-grass back into the wetlands (see Section 5.2.2. Planting has been completed by Australian Ecosystems.

Monitoring of Golden Sun Moth has concluded, River Swamp Wallaby-grass population monitoring will continue this coming summer season (2009/2010).

Ecology Australia will continue working with Stockland (Greg Miller and Leigh Edsall) on a regular basis to ensure actions in this CMP are implemented.



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Table 16 Highlands CMP: Ten year management plan for Conservation Management Plan (CMP)⁷ (management will be reviewed and updated at 10 years, following this, management will be carried on as below (if unusual circumstances at our review stage))

Location	Year number	Required preceding action	Activity Description	Timing of activity - (months)	Responsible party for this action
Makoulai Creek	>10		Biomass Control: Mechanical Control	February to September, excluding peak emergence/flight period for Golden Sun Moth.	Stockland Hume City Council (HCC) post 10 years
			Weed Control: Undertake control and elimination of targeted weed species. Prevent targeted species from seeding.	Ongoing control and monitoring for life of ten year plan. Note: Spot spraying will not occur during peak emergence for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
			Revegetation: Undertake plantings within Conservation Reserves and ROS and prior to removal of woody weeds.	Autumn review and undertake supplementary plantings as required	Stockland Hume City Council (HCC) post 10 years
			Monitoring: Golden Sun Moth	Annual monitoring of GSM population within Conservation Reserve of ROS. Late spring-summer (Late October to early January).	Stockland Hume City Council (HCC) post 10 years
			Monitoring: River Swamp Wallaby-grass	Spring-summer (November to January).	Stockland Hume City Council (HCC) post 10 years
			Monitoring: Growing Grass Frog (once wetlands are established)	Spring-summer (November to January)	Stockland/Melbourne Water
			Biomass Control: Grazing (prior to the adjoining development beginning)	Retain current grazing regime until development begins. Sheep are preferred over cattle with a low stocking regime	Stockland
			Biomass Control: Combination of mechanical control and burning.	April to September, excluding peak emergence/flight period for Golden Sun Moth.	Stockland Hume City Council (HCC) post 10 years
			Weed Control: Undertake control and elimination of targeted weed species. Prevent targeted species from seeding.	Ongoing control and monitoring for life of ten year plan. Note: Spot spraying will not occur during peak emergence for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
			All Years >10		Revegetation: Undertake plantings within Conservation Reserves and ROS and prior to removal of woody weeds
All Years >10					
All Years >10					
All Years >10					

⁷ This Plan is additional to the 10-year Net Gain offset management plan outlined in Section 6.4



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Location	Year number	Required preceding action	Activity Description	Timing of activity - month(s)	Responsible party for this action
	All Years		Monitoring: Golden Sun Moth	Annual monitoring of GSM population within Conservation Reserve Late spring-summer (Late October to early January)	Stockland Hume City Council (HCC) post 10 years
	>10				
	All Years		Monitoring: River Swamp Wallaby-grass	Spring-summer (November to January)	Stockland Hume City Council (HCC) post 10 years
Aitken Creek North	>1-2 years		Monitoring: Growing Grass Frog (once wetlands are established)	Spring-summer (November to January)	Stockland/Melbourne Water
	1-3		Biomass Control: Grazing (prior to the adjoining development beginning)	Retain current grazing regime until development begins. Sheep are preferred over cattle with a low stocking regime.	Stockland
	1-3		Biomass Control: Mechanical Control	March to October, excluding peak emergence/flight period for Golden Sun Moth.	Stockland Hume City Council (HCC) post 10 years
Aitken Creek South	1-3		Biomass Control: Mechanical control and burning	April to November, excluding peak emergence/flight period for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
	3-10	Analysis of data collected from trial burn plots.			
	>10				
	All years		Weed Control: Undertake control and elimination of targeted weed species. Prevent targeted species from seeding.	Ongoing control and monitoring for life of ten year plan. Note: Spot spraying will not occur during peak emergence for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
	>10		Revegetation: Undertake plantings within Conservation Reserves and ROS and prior to removal of woody weeds	Autumn: review and undertake supplementary plantings as required.	Stockland Hume City Council (HCC) post 10 years
	All Years		Monitoring: Golden Sun Moth	Annual monitoring of GSM population within Conservation Reserves Late spring-summer (Late October to early January)	Stockland Hume City Council (HCC) post 10 years
	>10		Monitoring: River Swamp Wallaby-grass	Spring-summer (November to January).	Stockland Hume City Council (HCC) post 10 years
	All Years		Monitoring: Matted Flea-bly	Spring-summer (November and February)	Stockland Hume City Council (HCC) post 10 years
	>10		Monitoring: Growing Grass Frog (once wetlands are established)	Spring-summer (November to January).	Stockland/Melbourne Water

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Location	Year number	Required preceding action	Activity Description	Timing of activity – month(s)	Responsible party for this action
Mount Aitken	1-3		Biomass Control: Grazing (prior to the adjoining development beginning)	Retain current grazing regime until adjoining development begins. Sheep are preferred over cattle with a low stocking regime.	Stockland
	3-10		Biomass Control: Mechanical control	April to September, excluding peak emergence/flight period for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
	>10		Weed Control: Undertake control and elimination of targeted weed species. Prevent targeted species from seeding.	Ongoing control and monitoring for life of ten year plan. Note: Spot spraying will not occur during peak emergence for Golden Sun Moth	Stockland Hume City Council (HCC) post 10 years
	All Years		Revegetation: Undertake plantings within ROS and prior to removal of woody weeds.	Autumn: review and undertake supplementary plantings as required	Stockland Hume City Council (HCC) post 10 years
	All Years		Monitoring: Golden Sun Moth	Annual monitoring of GSM population within Conservation Reserve. Late spring-summer (Late October to early January)	Stockland Hume City Council (HCC) post 10 years
ALL ROS	All years >10		Pest and domestic animal control: Implement control and management actions	Review requirements and continue control program as required	Stockland Hume City Council (HCC) post 10 years



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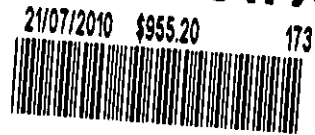
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13 Acknowledgments

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- Clive Crouch (Nhill Sun Moth Reserve Management Committee);
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- Greg Miller and Ben Cantwell (Stockland);
- Jason Summers, Karen Wilson, Helen Curtain, Elizabeth Donoghue and Yvonne Schell (City of Hume);
- Jo Thompson and Mary Taylor (Thompson Berril Landscape Design);
- Lucy Gibson (Museum of Victoria); and
- Tamara Karner (Parks Victoria, Grasslands Unit).



Appendix 1 Highlands CMP: Habitat condition scores for recent (2006/2007) Net Gain assessments.

Key: CGW = Creekline Grassy Woodland, PG = Plains Grassland, End. = Endangered, VVP = Victorian Volcanic Plain, *For non-forest or woodland vegetation or other vegetation types where some elements of the score are not relevant.

Aitken Creek – De Maria

Location	Aitken Creek south		Aitken Creek south		Aitken Creek - De Maria		Aitken Creek - De Maria dam		Aitken Creek -north		De Maria		De Maria	
	Habitat zone	EVC Name (initials)	EVC Number	Max Score	Score	Score	Score	Score	Score	Score	Score	Score	Score	Score
	1	CGW	68	10	0	0	0	0	0	0	0	0	0	0
	2	PG	132	10	0	0	0	0	0	0	0	0	0	0
	3	CGW	68	10	0	0	0	0	0	0	0	0	0	0
	4	PG	132	10	0	0	0	0	0	0	0	0	0	0
	5	PG	132	10	0	0	0	0	0	0	0	0	0	0
	14	PG	132	10	0	0	0	0	0	0	0	0	0	0
	15	PG	132	10	0	0	0	0	0	0	0	0	0	0
	10	Large Old Trees	0	5	0	0	0	0	0	0	0	0	0	0
	5	Canopy Cover	0	25	0	0	0	0	0	0	0	0	0	0
	25	Understorey	5	15	10	5	10	10	10	10	10	10	10	10
	15	Lack of Weeds	4	10	4	0	0	0	0	0	0	0	0	0
	10	Recruitment	0	5	0	0	0	0	0	0	0	0	0	0
	5	Organic Matter	2	5	3	3	3	3	3	3	3	3	3	3
	5	Logs	0	5	-	0	0	0	0	0	0	0	0	0
	75	Total Site Score	11	75	17	8	16	15	21	17	21	17	17	17
	-	Multiplier*	-	-	75/55	-	75/55	75/55	75/55	75/55	75/55	75/55	75/55	75/55
	11	Adjusted Site Score	11	11	23.2	8	21.8	20.5	28.6	23.2	28.6	23.2	23.2	23.2
	10	Patch Size	1	10	1	1	1	1	1	1	1	1	1	1
	10	Neighbourhood	0	10	0	0	0	0	0	0	0	0	0	0
	5	Distance to core	0	5	0	0	0	0	0	0	0	0	0	0
	100	Habitat Score	12	100	24.2	9	22.8	21.5	30.6	24.2	30.6	24.2	24.2	24.2
	1	Habitat Score	0.12	1	0.24	0.09	0.23	0.22	0.31	0.24	0.31	0.24	0.24	0.24
		Bioregion	VVP		VVP	VVP	VVP	VVP	VVP	VVP	VVP	VVP	VVP	VVP
		EVC Conservation Status	End.		Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.
		Number of Large Old Trees	0		0	0	0	0	0	0	0	0	0	0

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Malcolm Creek

Location	Malcolm Creek - north	Malcolm Creek - north	Malcolm Creek - middle east	Malcolm Creek - middle east	Malcolm Creek - middle east	Malcolm Creek south	
	7	8	9	10	11	12	
Habitat zone	PG	CGW	CGW	PG	PG	PG	
EVC Name (initials)	132	68	68	132	132	132	
EVC Number	Max Score	Score	Score	Score	Score	Score	
Site Condition	Large Old Trees	10	0	0	-	-	-
	Canopy Cover	5	0	0	-	-	-
	Understorey	25	10	5	10	10	10
	Lack of Weeds	15	0	4	4	0	4
	Recruitment	10	3	0	3	3	3
	Organic Matter	5	2	0	3	2	3
	Logs	5	0	0	-	-	-
	Total Site Score	75	15	9	20	15	20
	Multiplier*	75/55	-	-	75/55	75/55	75/55
	Adjusted Site Score	20.5	11	9	27.3	20.5	27.3
Landscape value	Patch Size	10	1	1	1	1	1
	Neighbourhood	10	0	0	0	0	0
	Distance to core	5	0	0	0	0	0
Habitat Score	100	21.5	12	10	28.3	21.5	28.3
Habitat Score	1	0.22	0.12	0.1	0.28	0.22	0.28
Bioregion	VVP	VVP	VVP	VVP	VVP	VVP	
EVC Conservation Status	End.	End.	End.	End.	Eng.	Eng.	
Number of Large Old Trees	0	0	0	0	0	0	

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Development Plans

Location		DP11 [‡]	DP13	DP18
Habitat zone		16	6	13
EVC Name (Initials)		PG	PG	PG
EVC Number		132	132	132
	Max Score	Score	Score	Score
	10	-	-	-
Large Old Trees	5	-	-	-
Canopy Cover	25	10	10	10
Understorey	15	4	0	0
Lack of Weeds	10	3	3	0
Recruitment	5	4	2	0
Organic Matter	5	-	0	0
Logs	75	21	15	10
Total Site Score		75/55	75/55	75/55
Multipplier*		28.6	20.5	13.6
Adjusted Site Score		10	1	1
Patch Size	10	0	0	0
Neighbourhood	5	0	0	0
Distance to core	100	29.6	21.5	14.6
Habitat Score	1	0.30	0.22	0.15
Habitat Score		VVP	VVP	VVP
Bioregion		Eng	End	End
EVC Conservation Status		0	0	0
Number of Large Old Trees				

[‡] includes a patch that will be protected within public open space of Malcolm Creek and a patch that will be lost.

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Appendix 2 Golden Sun Moth survey sheet and example habitat proform

Golden Sun Moth survey - Highlands

Date: Personnel:
Monitoring year:
Time of day: Previous rain:
Temperature: Fog:

Site visit No.:
Wind (low, moderate, high):
Cloud cover (0-8):

Site (e.g. core habitat area - Malcolm Creek south):

Transect Number: **Width of transect:**
Length of transect (maximum 300 m): **Proximity to other transects:**
AMG:- Start transect:
Finish transect:

{*Note where specimen was collected}

*Record	Number of Moths seen	AMG (waypoint number - if applicable, e.g. females)	Male[M] / Female[F]	Activity
1 (Beginning of transect)				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

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General searches outside of transects

Females (number of moths)	AMG	Activity	Habitat
Males (number of moths)	AMG	Activity	Habitat
Males (number of moths)	AMG	Activity	Habitat
Pupal cases	AMG	Habitat	
Pupal cases	AMG	Habitat	

Guide for Golden Sun Moth Habitat Monitoring

Proforma (to be implemented in 2009/2010 monitoring season)

Date: _____ **Personnel:** _____ **Habitat assessment No.:** _____

Time of day: _____

Site (e.g. Malcolm Creek south - core habitat area): _____

Transect Number: _____

Width of transect: _____

Length of transect (maximum 300 m): _____

Proximity to other transects: _____

AMG:- Start transect: _____

Finish transect: _____

General habitat description: _____

Time since fire (if applicable): _____

Landscape context:

Size of core habitat patch (m² or ha): _____

Proximity to other core habitat areas: _____

Presence of dispersal and movement links/corridors to other core habitat areas: _____

Proximity to roads/trails: _____

Vegetation type (e.g. improved pasture; Plains Grassland or Creekline Grassy Woodland): _____

Substrate (stony rise, gilgai or flat ground): _____

Record along transect

Understorey	Presence	Cover (%)	Average height (cm)	Species (if relevant)
Wallaby Grasses				
Spear Grasses				
Chilean Needle-grass				
Other indigenous vegetation				

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Bare ground				
Leaf litter/woody debris				
Exotic grasses				
Other weeds				
Mid-storey/Overstorey				
Shrubs				
Trees				

Exposure:

Aspect:

Soils:

MANAGEMENT REGIME (e.g. biomass control, weed control)
Previous:
Current:
Proposed / Recommended:

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Appendix 3 Highlands CMP: Letter from Hume City Council



1070 PASCOE VALE ROAD
BRANDONFIELD
VIC 3047

Postal Address
PO BOX 119
DALLAS 3047

Telephone: 051275 2100
Facsimile: 03 9399 0109
www.hume.vic.gov.au

Wednesday 3 September 2008

Mr Greg Miller
Regional Design and Approvals Manager
Stockland
PO Box 317
Craigieburn Vic 3064

Dear Greg

Council has considered the issues raised in your letter of 12 August 2008 with regard to on-going management of the Golden Sun Moth areas of the conservation areas associated with Malcolm and Altken Creeks, Craigieburn.

Council has decided that it will assume responsibility for the ongoing management of these areas in perpetuity, after the 10 year period during which Stockland will manage them.

However, we must re-iterate that it is Council's expectation that during this time, cover of both Chilean Needle Grass and pasture grasses will be significantly reduced as per the targets outlined in the latest draft of your Conservation Management Plan.

Regarding the remnant trees to be assessed, we are agreeable to the CMP showing the trees as they are currently mapped, with the understanding that:

1. Council will in due course receive clear mapping and reporting on the size, health etc of the remnant trees as differentiated from other trees.
2. No works affecting any trees will be undertaken until Council has received and assessed such mapping and any attached relevant reports.
3. It is understood that no permit has been given to Stockland to remove or lop any remnant trees. Such a permit is unlikely to be forthcoming from Council, so we suggest that all plans, engineering plans etc assume that removal or risk of damage to any remnant tree will not be possible. The sooner such reports from Stockland are available, the less likelihood there is of plans having to be redrawn to account for them.
4. All trees will be protected for a distance of double their canopy area as is required under the vegetation framework. Given the lack of current mapping that distinguishes remnant from other trees, we must ask that this applies to all trees on the site.

We are also requesting that all proposals for bridges and crossings over the creek include designs that allow the movement of wildlife – including macropods – beneath bridges and along the creek corridor

Yours sincerely

Elizabeth Donoghue
Conservation Planner

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Appendix 4 Wetland criteria for translocated River Swamp Wallaby-grass

Listed below are the wetland criteria for River Swamp Wallaby-grass (as determined by Carr 2006) and these criteria are compared with the proposed wetland conditions for the two sections of Aitken Creek where the majority of the wetlands will be constructed (Craigie and Condina 2006 a and b). No weighting of criteria is implied by the order given below.

Wetland Criteria	Proposed Wetlands
<p>Land Tenure:</p> <ul style="list-style-type: none"> Wetlands should ideally be located on public land or land with a sympathetic management agency or structure. 	<ul style="list-style-type: none"> Wetlands are within the public open space of Aitken Creek and will be protected for the long-term. The land will eventually be handed to Council and become public land.
<p>Types of wetlands:</p> <ul style="list-style-type: none"> Natural or constructed wetlands of any size with permanent or semi-permanent water are desirable. 	<ul style="list-style-type: none"> The wetlands will include submerged marsh (0.5 – 0.9 m depth), deep marsh (0.25 – 0.5 m deep), shallow marsh (0.25 – 0), frequent marsh (0 – 0.3 high), ephemeral marsh (0.3 – 0.6 m high). The shallow marsh and deep marsh zones are the most suitable for River Swamp Wallaby-grass and these will be the zones the plants are translocated into.
<p>Hydrological regime:</p> <ul style="list-style-type: none"> A seasonally fluctuating water level with pronounced summer draw-down is the natural hydrological regime for River Swamp Wallaby-grass. Fairly static water levels are also acceptable but not ideal unless the water is shallow (< 40 cm deep). 	<ul style="list-style-type: none"> The wetlands will experience some draw-down. Zones within the wetlands will vary from frequent drying to drying during extended drought, to permanent open water zones.
<p>Edge gradients:</p> <ul style="list-style-type: none"> There is a direct correlation between the gradient at the edge of the wetland and the width of the vegetation zones. Steep gradients have narrow vegetation zones, therefore gradients should ideally be gentle (not greater than 1:5, ideally 1:8) to maximise the area that can be occupied by River Swamp Wallaby-grass. 	<ul style="list-style-type: none"> The wetlands avoid high edge slopes and grading of side slopes (most are at least 1 vertical:8 horizontal for 2.5 metres from edge grading to a maximum of 1 vertical:3 horizontal).
<p>Substrate:</p> <ul style="list-style-type: none"> Moderately fertile soils are desirable rather than eutrophic alluvial floodplains because highly fertile soils favour undesirable competition, notably from *Water Couch, *Paspalum and *Canary Grass. 	<ul style="list-style-type: none"> The cessation of stock grazing and fertiliser application, the planting of indigenous aquatic species, and the installation of sediment traps will reduce the nutrients levels within the wetlands.
<p>Water quality:</p> <ul style="list-style-type: none"> Water should be non-eutrophic and of high clarity (low turbidity). 	<ul style="list-style-type: none"> Grazing will be removed in the long-term and fertilisers will not be used in adjacent landscaped areas. Sediment traps will minimise impacts of spills and pollutants entering the creek from upstream areas. The wetlands have been designed to have a (average) detention time of water for only a matter of days which will reduce the likelihood of high algal biomass establishing. All wetlands will be planted with indigenous aquatic/amphibious species from the local/regional flora.
<p>Associated vegetation:</p> <ul style="list-style-type: none"> Plant with indigenous species, however, some species should be avoided including Common Reed (<i>Phragmites australis</i>) and Cumbungi (<i>Typha domingensis</i> and <i>T. orientalis</i>). These species can form dense monospecific stands to 3 m high and outcompete 	<ul style="list-style-type: none"> All wetlands will be planted with indigenous aquatic species. The species selected are compatible with the survival of River Swamp Wallaby-grass, and all naturally occur with wild populations of River Swamp Wallaby-grass

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Wetland Criteria	Proposed Wetlands
River Swamp Wallaby-grass.	
Grazing regime: <ul style="list-style-type: none">Wetlands should be protected from excessive stock grazing. However the negative impacts of grazing are likely to have been overestimated (see Carr 2006) and wetlands that are grazed do not necessarily need to be discounted as potential translocation sites.	<ul style="list-style-type: none">Stock grazing will be removed in the long-term.



Appendix 5 ADDENDUM 22/12/2009

The following items are submitted as an addendum to the Highlands Conservation Management Plan, as per comments received from the Department of Environment, Water, Heritage and the Arts (DEWHA) – (Francis Knight DEWHA pers. comm., email dated 22 December 2009). Please note the following amendments to the plan:

Section 5.2.4 Growling Grass Frog

Management Thresholds for the Growling Grass Frog

‘If Growling Grass Frogs are found to have colonised the wetlands within Highlands, DEWHA will be contacted within five (5) days of identification and the plan will be reviewed and updated in consultation with DEWHA and other relevant experts.’

Section 5.4.1

Mechanical Control - Key Actions

‘Vegetation will be slashed to a height no less than 10 cm high within Golden Sun Moth core habitat zones’.

Section 9.1 Passive Recreation

Trails

‘The haul road passing through the Malcolm Creek South Conservation Reserve was constructed four years ago and has not been used since the identification of Golden Sun Moth (GSM) in the area. The section of road passing within the conservation reserve will be rehabilitated to become GSM habitat.’

Table 16 Highlands CMP: Ten year management plan

Aitken Creek North

All years

>10 Monitoring Growling Grass Frog (once wetlands are established)

Aitken Creek South

All years

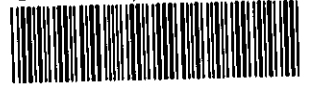
>10 Monitoring Growling Grass Frog (once wetlands are established)

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ROADS PROPERTY CERTIFICATE

The search results are as follows:

Complete Home Conveyancing C/- Triconvey (Reseller)
77 Castlereagh Street
SYDNEY 2000
AUSTRALIA

Client Reference: 619665

NO PROPOSALS. As at the 29th May 2024, VicRoads has no approved proposals requiring any part of the property described in your application. You are advised to check your local Council planning scheme regarding land use zoning of the property and surrounding area.

This certificate was prepared solely on the basis of the Applicant-supplied address described below, and electronically delivered by LANDATA®.

18 PARKFOREST WALK, CRAIGIEBURN 3064
CITY OF HUME

This certificate is issued in respect of a property identified above. VicRoads expressly disclaim liability for any loss or damage incurred by any person as a result of the Applicant incorrectly identifying the property concerned.

Date of issue: 29th May 2024

Telephone enquiries regarding content of certificate: 13 11 71

PROPERTY DETAILS

Address: **18 PARKFOREST WALK CRAIGIEBURN 3064**

Lot and Plan Number: **Lot 31829 PS724966**

Standard Parcel Identifier (SPI): **31829\PS724966**

Local Government Area (Council): **HUME**

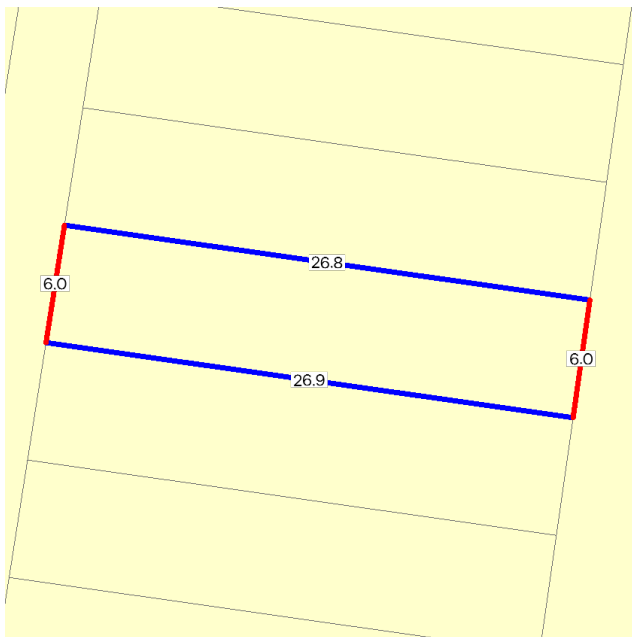
Council Property Number: **714542**

Directory Reference: **Melway 386 H1**

www.hume.vic.gov.au

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Area: 161 sq. m

Perimeter: 66 m

For this property:

— Site boundaries

— Road frontages

Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get copy of plan at [Title and Property Certificates](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**

Melbourne Water Retailer: **Yarra Valley Water**

Melbourne Water: **Inside drainage boundary**

Power Distributor: **JEMENA**

STATE ELECTORATES

Legislative Council: **NORTHERN METROPOLITAN**

Legislative Assembly: **KALKALLO**

PLANNING INFORMATION

Property Planning details have been removed from the Property Reports to avoid duplication with the Planning Property Reports from the Department of Transport and Planning which are the authoritative source for all Property Planning information.

The Planning Property Report for this property can found here - [Planning Property Report](#)

Planning Property Reports can be found via these two links

Vicplan <https://mapshare.vic.gov.au/vicplan/>

Property and parcel search <https://www.land.vic.gov.au/property-and-parcel-search>

Area Map



Selected Property

From www.planning.vic.gov.au at 27 May 2024 10:49 PM

PROPERTY DETAILS

Address: **18 PARKFOREST WALK CRAIGIEBURN 3064**
 Lot and Plan Number: **Lot 31829 PS724966**
 Standard Parcel Identifier (SPI): **31829\PS724966**
 Local Government Area (Council): **HUME**
 Council Property Number: **714542**
 Planning Scheme: **Hume**
 Directory Reference: **Melway 386 H1**

www.hume.vic.gov.au

[Planning Scheme - Hume](#)

UTILITIES

Rural Water Corporation: **Southern Rural Water**
 Melbourne Water Retailer: **Yarra Valley Water**
 Melbourne Water: **Inside drainage boundary**
 Power Distributor: **JEMENA**

STATE ELECTORATES

Legislative Council: **NORTHERN METROPOLITAN**
 Legislative Assembly: **KALKALLO**

OTHER

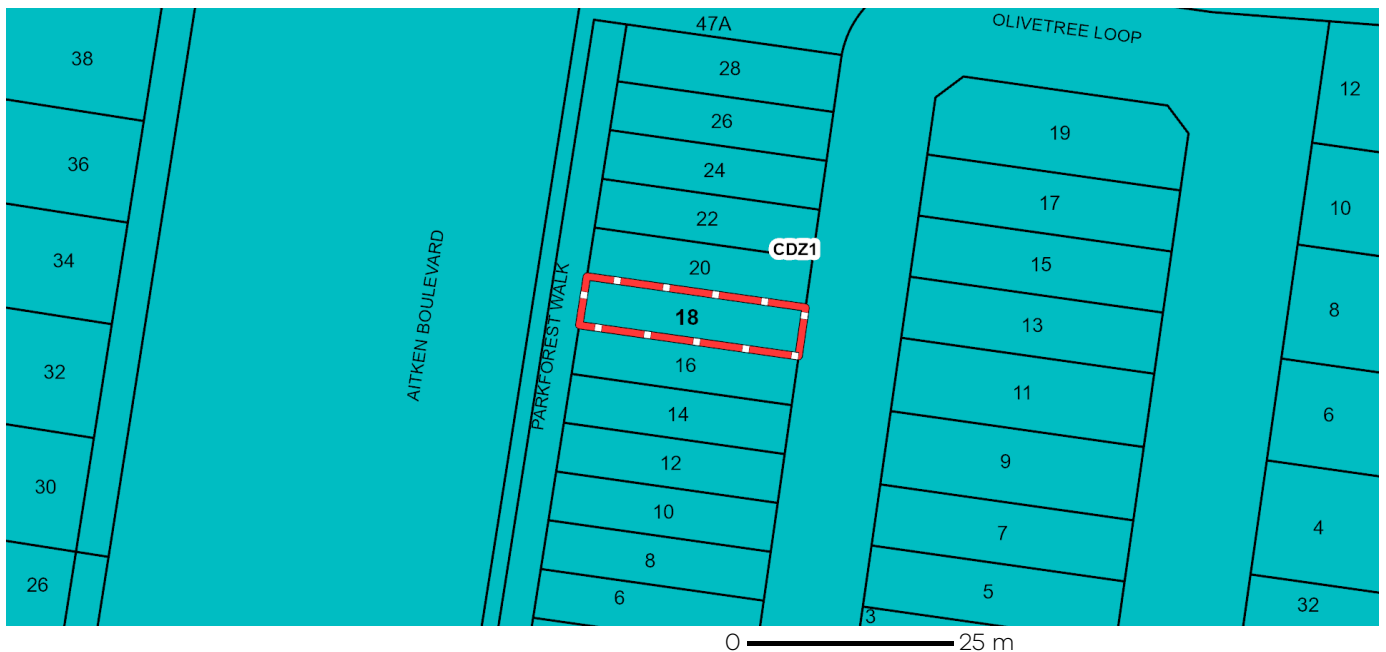
Registered Aboriginal Party: **Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation**

[View location in VicPlan](#)

Planning Zones

[COMPREHENSIVE DEVELOPMENT ZONE \(CDZ\)](#)

[COMPREHENSIVE DEVELOPMENT ZONE - SCHEDULE 1 \(CDZ1\)](#)



CDZ - Comprehensive Development

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 7 \(DPO7\)](#)



 DPO - Development Plan Overlay

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

Further Planning Information

Planning scheme data last updated on 22 May 2024.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the **Planning and Environment Act 1987**.

It does not include information about exhibited planning scheme amendments, or zonings that may affect the land.

To obtain a Planning Certificate go to Titles and Property Certificates at Landata - <https://www.landata.vic.gov.au>

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit

<https://mapshare.maps.vic.gov.au/vicplan>

For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

Designated Bushfire Prone Areas

This property is not in a designated bushfire prone area.
No special bushfire construction requirements apply. Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

Designated BPA maps can be viewed on VicPlan at <https://mapshare.vic.gov.au/vicplan/> or at the relevant local council.

Create a BPA definition plan in [VicPlan](#) to measure the BPA.

Information for lot owners building in the BPA is available at <https://www.planning.vic.gov.au>.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website <https://www.vba.vic.gov.au>. Copies of the Building Act and Building Regulations are available from <http://www.legislation.vic.gov.au>. For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>.

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see [Native Vegetation \(Clause 52.17\)](#) with local variations in [Native Vegetation \(Clause 52.17\) Schedule](#)

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system <https://nvim.delwp.vic.gov.au/> and [Native vegetation \(environment.vic.gov.au\)](https://www.environment.vic.gov.au) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit [NatureKit \(environment.vic.gov.au\)](https://www.environment.vic.gov.au)

Building Information Certificate 51(1)

Building Act 1993
Building Regulations 2018
Regulation 51(1)



1079 PASCOE VALE ROAD
BROADMEADOWS
VICTORIA 3047

Postal Address:
PO BOX 119
DALLAS 3047

Telephone: 03 9205 2200
Facsimile: 03 9309 0109
www.hume.vic.gov.au

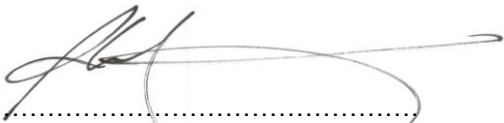
SECURE ELECTRONIC REGISTRIES VICTORIA (SERV)
TWO MELBOURNE QUARTER
LEVEL 13/697 COLLINS ST
DOCKLANDS VIC 3008

Our Reference: **WBPI036893**
Your Reference: **619665**
Property Details: **18 PARKFOREST WALK
CRAIGIEBURN VIC 3064
LOT 31829 PS 724966S VOL 11894 FOL 729**
Property Number: **714542**
Municipal District: **HUME CITY COUNCIL**
Registered Owner: **ANTHONY JOHN ROWLEY & VERONICA ANNE MAREEE
ROWLEY**

Building Approval and permit number	Our Ref No	Description of Work	Date Issued	RBS Name	RBS No	Occupancy Permit/Final certificate Number	Occupancy Permit/Final certificate Date
2748420173698/0	eBPS01620	Double Storey Dwelling and Garage HPE APP01	22/09/2017	David Madeira	BS-U 27484	2748420173698/0	30/11/2018

Current certificates, notices or reports made under the Building Control Act 1981 / Building Act 1993			
Notice Date	Notice Type	RBS Name	RBS No

Please note
Permit, certificate, notice, order and report dates are accurate to the extent of Council's computer database information. If you wish to confirm actual issue dates you will be required to make application for copies of documents.
In relation to land liable to flooding or designated land, the applicant is advised that Melbourne Water became responsible for waterway management, floodplain management and regional drainage on 18 th November 2005. Melbourne Water is undertaking an ongoing process of investigation within this area, which may provide additional information applicable to this property. For information on flood levels please visit the Landata or SAI Global websites. Where Yarra Valley Water or City West Water is the relevant water authority this information can be obtained by purchasing a property information statement. The applicant is also advised to make reference to the Hume Planning Scheme.
For the purpose of regulation 810, Bushfire Prone Area maps are available at www.land.vic.gov.au
New Swimming Pool & Spa registration laws commenced 1 December 2019. Pool Owners must register their Swimming Pools & Spas with Council by 1 June 2020. www.hume.vic.gov.au for more information and registrations.
Pursuant to sec 24(5) - Building Act 1993 Community Infrastructure Levy payable in respect of this land. Bal Payable :\$ 0.00 For inquiries regarding Community Infrastructure Levy please call Council's Strategic Planning Department.
This advice is based on the most current information in Council's records.


.....
PETER JOLLY
MUNICIPAL BUILDING SURVEYOR
HUME CITY COUNCIL

Date: 29 May 2024

The information on this certificate is the property of the Hume City Council. Hume City Council does not consent to the application or use of the information on this certificate for purposes or properties other than the property to which the information is applicable. Use of this certificate for purposes other than that which Council allows is strictly prohibited.

BUILDING PERMIT No: 2748420173698/0BUILDING ACT 1993, INTERIM BUILDING REGULATIONS 2017
REGULATION 313

FORM

2

**GROUP FOUR**
BUILDING SURVEYORS
SINCE 1999**GROUP FOUR BUILDING SURVEYORS**

1st Floor, 12 Hardner Road

Mount Waverley VIC 3149

ABN 96 158 953 425

P: (03) 9544 0544 E: reception@groupfour.com.au

F: (03) 9544 0244 www.groupfour.com.au

ISSUED TO

NAME : Homebuyers Centre

POSTAL ADDRESS : 81 Lorimer Street DOCKLANDS 3008 VIC,

CONTACT PERSON : Elaine O'Reilly

ADDRESS FOR SERVING DOCUMENTS : 81 Lorimer Street DOCKLANDS 3008 VIC,

TEL: (03) 9674-4500

EMAIL : eoreilly@homebuyers.com.au

OWNERSHIP

NAME : Miss. V & Mr. A Rowley

POSTAL ADDRESS : 100 Charteris Drive, Craigieburn 3064 VIC

CONTACT PERSON : Veronica

TEL: 0438533689

EMAIL : vrowls13@hotmail.com

PROPERTY DETAILS

NUMBER : 18

STREET : Parkforest Walk

SUBURB : Craigieburn

LOT : 31829

LP/PS : PS 724966

VOLUME : 11894

FOLIO : 729

CROWN ALLOTMENT :

SECTION :

PARISH :

COUNTY :

MUNICIPAL DISTRICT : City of Hume

PROPOSED WORKS : Double Storey Dwelling and Garage

BUILDER

NAME : Homebuyers Centre

POSTAL ADDRESS : 81 Lorimer Street DOCKLANDS 3008 VIC,

EMAIL :

TEL: (03) 9674-4500

BUILDING PRACTITIONERS AND/OR ARCHITECTS

(a) to be engaged in the building work (with a continual involvement in the building work)

Dale Andrew Alcock - DB-U 31655

(b) who were engaged to prepare documents forming part of the application for this permit (with no further involvement in the building work)

Mr Robert W Van Heusden - EC 1096

Geoffrey Leigh Bird - EC 1052

DOMESTIC BUILDING WORK INSURANCE

INSURANCE PROVIDER : HIA Insurance Services Pty Ltd

INSURANCE NUMBER : 313402

INSURANCE ISSUED ON : 31-Aug-2017

DETAILS OF RELEVANT PLANNING PERMIT

Planning Permit No. : P15021

Date of grant of planning permit : 10-Dec-2014

NATURE OF BUILDING WORK

NATURE OF BUILDING WORKS: New Building

STAGE OF BUILDING WORK PERMITTED:

TOTAL FLOOR AREA: 173

COST OF BUILDING WORK: \$260,605

RISE IN STORIES: 2

BUILDING CLASSIFICATION

V.H.C. ENGINEERS

GROUP
STRUCTURAL
CIVIL &
CONCRETEWORKERS

Phone (03) 9754 1111
Fax (03) 9754 1222
email design@vhc.com.au

20 JUNE 2017

PROJECT No.: 17V6107-31829

BUILDING PERMIT

Number: 2748420173698/0
Issued by David Madeira on 22/09/2017

PROJECT : LOT 31829 PARKFOREST WALK., CRAIGIEBURN

CLIENT : ABN Group (VIC), 81 Lorimer St., DOCKLANDS 3008

COMMISSION:

Conduct a foundation investigation in order to classify the above mentioned site in accordance with A.S.2870 and to make footing recommendations.

BUILDING AND SITE DESCRIPTION:

The proposed development is the construction of a brick veneer residence.
The proposed construction site is on the west side of the street and is virtually flat. Site drainage is poor.
The natural soil types are mainly Clay, the local Geology being mainly Quaternary Basalts.

TESTING PROGRAMME:

The soil profile was tested at 2 locations as shown in the attached log sheet. Disturbed samples were collected and hand classified. When necessary, soil strengths of cohesive soils were measured using a Vane Shear Apparatus and non-cohesive soils using a Dynamic Cone Penetrometer.


FINDINGS:

The soil profiles and insitu test results are shown in our log sheets.

IMPORTANT NOTATIONS:

- (1) Due to soil layer variations, this report provides a description of the RECOMMENDED FOUNDATION MATERIAL as a guide as to the correct FOUNDATION DEPTHS outside our test sites. These depths will change if the site is cut and/or filled.
- (2) In all cases the foundation soil chosen should have a similar consistency and strength to that recommended but need not be of the same type. If any significant variation in Foundation Depth is noted during footing construction, i.e. 200 mm or more, V.H.C. must be consulted. Some allowance should be made for the removal of organic matter, roots etc. which may be found in small localised areas in the footing trenches.
- (3) The owner's attention is drawn to Appendix B of A.S. 2870 "Performance Requirements and Foundation Maintenance", and the attached "Report Addendum".
- (4) The owner's attention is drawn to the attached document "Home Owner's Responsibility".

CONCLUSIONS AND RECOMMENDATIONS:

 <p>GROUP FOUR BUILDING SURVEYORS</p>	FOR A SLAB ON GROUND (Conventional Stiffened Raft) :
	BUILDING PERMIT
<small>Number 1 271042047889818 Issued by David Madeira on 22/09/2017</small>	

1) **The site is classified as "H2+"** (per A.S. 2870). It is recommended to use a **"H2+"** type slab, specified and constructed in accordance with A.S. 2870 .

At our test sites the recommended foundation depths for load bearing beams are as follows:

TEST SITE NO.	FOUND. DEPTH (mm)*	RECOMMENDED FOUNDATION MATERIAL	ALLOWABLE BEARING PRESSURE
1	300	Clay	60kPa
2	200	Clay	60kPa

* Note that these depths are measured from the surface at the time of our testing.
* The actual depth of concrete in the beams, beam spacing & slab reo. may vary as per A.S. 2870

(2) THE SLAB AND STIFFENING BEAMS can be founded on the surface or deeper after the soil with significant organic matter has been removed.

(3) During site cut/fill operations an additional 600mm (max total fill) of track rolled sandy fill or 300mm (max total fill) of track rolled clayey fill may be placed under the slab panel and stiffening beams. The placement of such additional fill should be closely supervised and placed/rolled in two to three equal layers. If the amount of fill used under the slab exceeds these limits (or the limits in A.S. 2870), the classification may change to "P" and will therefore require an Engineer designed slab.

(4) SUPPORTING ISOLATED LOADS outside the main structure perimeter is recommended to be achieved by extending the slab perimeter. The use of isolated pads is not recommended.

FOR A WAFFLE RAFT SLAB SYSTEM :

GROUP

(1) **Old site is classified as "P"** per A.S. 2870 for waffle raft slab **on shallow fill** construction.

If the existing fill is not controlled fill (as per A.S. 3798), then the condition and level of disturbance of this fill must be assessed to be at least moderately compacted and approved just prior to commencing the construction of the waffle raft slab.

Number : 2748420173698/0

Issued by David Madala on 22/09/2017

This site has a shallow fill, some of which has been assessed to be poorly/variably compacted fill.

It is recommended that this site be track rolled (as per AS2870 cl6.4.2.b) to ensure a good base for the waffle raft slab is obtained. It is expected that only the top 300mm of the base will significantly benefit from this track rolling. Poorly compacted fill deeper than 300mm below the final benched height may require to be stock piled and then replaced and track rolled in layers (as per AS2870).

Track rolling should take the form of using a minimum 12 tonne track excavator to make a minimum of 8No. half-track width passes along and across the final benched surface. Any soft areas found over a site will require replacing and re-compacting.

(2) The slab should be designed by an Engineer familiar with the performance of residential slabs-on-fill and with reference to the relevant requirements of A.S. 2870.

The Rigid Slab design parameters are as follows:

Design for a "structural spanning capacity" over an area of **1500mm** in diameter at any location under the slab.

Design for a **high (H2+)** soil profile reactivity.

Design for a minimum total surface movement of **60-75mm**.

Design for a Safe Bearing Capacity of 50kPa on the existing fill (subject to site confirmation and possible track rolling requirements).

Perimeter beam requires strengthening due to the presence of deep and/or reactive Clays.

(3) The slab panels and stiffening beams can be founded on the surface after the soil with significant organic matter has been removed. The overall concrete depth of the stiffening beams shall be dependent on the minimum design requirements.

(4) During site cut/fill operations an additional 600mm (max new fill) of track rolled sandy fill or 300mm (max new fill) of track rolled clayey fill may be placed under the slab panel and stiffening beams. The placement of such additional fill should be closely supervised and placed/rolled in two to three equal layers.

(5) Use flexible plumbing joints to allow for the design movements.

(6) Use either full height openings or articulation joints in the brick walls at a maximum spacing of approximately 6 metres or to the designing engineer's specifications.

(7) SUPPORTING ISOLATED LOADS outside the main structure perimeter is recommended to be achieved by extending the slab perimeter. The use of isolated pads is not recommended.

(8) If the specified track rolling (refer note-1 above) is not considered to have been successful then it maybe required to deepen the load bearing and perimeter beams to natural ground or use bored piers.

Bored piers, if required, are to be founded a minimum of 600mm into natural stiff Clay or dense Sand or similar strength material with an Allowable Bearing Capacity of 250kPa.

SPECIAL COMMENTS AND RECOMMENDATIONS:

GROUP
FOUR CLAY SITES
BUILDING SURVEYORS
BUILDING PERMIT
 Number : 2748420173698/0
 Issued by David Madelin on 22/09/2017

(1) **FOUR CLAY SITES** such as this site, further recommend either full height openings or articulation joints (as in the Cement and Concrete Association note TN61) in the brick walls at a maximum spacing of approximately 6 metre along a wall and atleast within 3-4 metre on both sides of all major wall corners or to the designing engineer's specifications.

(2) **DURING WET CONDITIONS** site and footing excavations will prove difficult on this block. During these conditions footing excavation collapses will be common resulting in the overuse of concrete. Some "Soft Spots" may develop which may need to be locally excavated deeper. For best results footing excavations should be cleaned-out immediately before the concrete is poured.

(3) **Nearby small immature trees may be a possible future problem if allowed to grow to in excess of 4m in height. Recommend the owner monitors the remaining nearby small trees over coming years and either restrict their height to 4m or install a tree root barrier appropriate for the situation at the time. It is recommended that an Arborist is consulted as to the requirements and extent of that tree root barrier.**

This Report is conditional upon the following particularly important factors :

- a) the site may have to be re-classified if the site is cut by more than 500mm or filled by more than 400mm
- b) confirmation that the encountered ground conditions during construction are as described in the testing in this Report
- c) any nearby trees which may adversely affect the performance of the footing system (removal of trees or the use of vertical root barriers may be required)
- d) possible pipes in easements or any nearby deep excavations
- e) controlled site drainage with the ground graded away from all footings at a minimum slope of 1:20 and that soil drains be constructed, where necessary, to prevent soil moisture from accumulating near footings.
All surface/sub-surface water is to be controlled (by means of paving sloping away from the footing and/or effective drains). This water must be drained permanently away from the building area.
- f) drains, downpipes, guttering and service piping must be installed and maintained to ensure no leakages occur
- g) on concrete floors, the installation of brittle floor tiles should be delayed as long as possible after the slab has been poured and flexible adhesive should be used .

This report has been written for the proposed construction of brick-veneer residences up to two storeys only
 No responsibility will be taken for this Report if it is altered in any way or is not reproduced in full (including the Report Addendum).



V.H.C. ENGINEERS

R.W.van Heusden MIEAust, CPEng, EC-1096

(VHC - "H2+" or Type 4-2+ slab) conv

(VHC - "P(H2+)1.5" or Type 6 -2+ slab) for waffle raft slab on shallow fill construction

Perimeter beam requires strengthening due to the presence of deep and/or reactive Clays.

BUILDING SURVEYORS

WIND CLASSIFICATION

N2

Number: 2748420173698/0

Issued by David Madeira on 22/09/2017

This Wind Classification is made in the light that this site will either retain the present shielding or possibly gain full shielding (by means of at least 10 other houses, structures or large trees within a 100m radius of the proposed building site) within the next five years (as per AS 4055).

BUSHFIRE ATTACK LEVEL ASSESSMENT :

As per Australian Standard AS3959-2009 the BAL shall be classified as BAL-LOW where the vegetation is one or a combination of any of the following –

- (a) *vegetation of any type that is more than 100m from the site*
- (b) *single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified*
- (c) *multiple areas of vegetation less than 0.25ha in area and not within 20m of the site or each other*
- (d) *strip of vegetation less than 20m in width regardless of length and not within 20m of the site, each other or other areas of vegetation being classified*
- (e) *non-vegetated area, including waterways, road, footpaths, buildings and rocky outcrops*
- (f) *low threat vegetation, including managed grasslands, maintained lawns, golf courses, maintained public reserves and parklands, botanical gardens, vineyards, orchards, cultivated ornamental gardens, commercial nurseries, nature strips and wind breaks.*

The site is in a recent estate setting and the BAL has been specifically assessed to be **BAL-LOW** under AS3959-2009.

Government and/or local Council may have planning overlays impacting this site that necessitate the adoption of a greater base BAL value (generally **BAL-12.5** instead of **BAL-LOW**). The need to adopt such a greater base BAL must be determined by the Builder.

The **greater** of the site specific assessed BAL and the planning overlay BAL must be adopted.

LOG SHEET

LOT 31829 PARKFOREST WALK., CRAIGIEBURN

GROUP
FOUR

BUILDING SURVEY location 5m fFb centre line

BUILDING PERMIT

Number 42013698/0

Issued by David Madeira on 22/06/2017

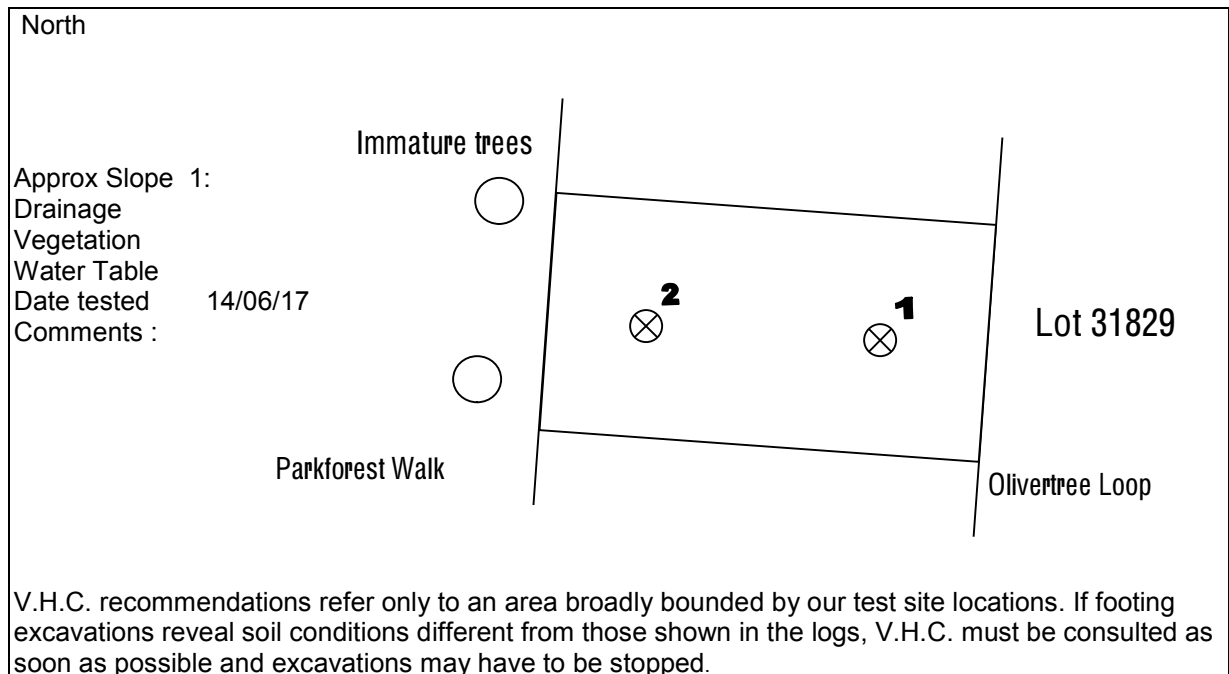
300-1600 utp

Depth(mm)	Description	vsr/dcp -	Comments
	FILL – Clay/Occ Gravel mix, moist/v. moist, var comp		
300-1600 utp	CLAY – grey/brown, v. moist/moist, stiff unable to penetrate - possible floater	(Tending to Lt. Grey/Yellow)	

TEST SITE No.2 location 5m fREARFb centre line

Depth(mm)	Description	vsr/dcp -	Comments
GL-200	FILL – Clay/Occ Gravel mix, moist/v. moist, var comp		
200-1100 utp	CLAY – grey/brown, v. moist/moist, stiff unable to penetrate - possible floater	(Tending to Lt. Grey/Yellow)	

TEST SITE LOCATION SKETCH :



BUILDING SURVEYORS

BUILDING PERMIT

Number : 2748420173698/0

Issued by David Madeira on 22/09/2017



REPORT ADDENDUM

LIMITS OF INVESTIGATION:	GROUP
	FOULON:
1.	BUILDING SURVEILLANCE
	BUILDING PERMIT
	Number: 2748420173698/0
	Issued by: David Madeira on 23/09/2017

1. The recommendations made in this report are based on the assumption that the test results are representative of the overall subsurface conditions. The client should also be aware that our recommendations based only on the results of our test site locations at the time of testing. It is the responsibility of the owner/builder to confirm that the location of our test sites has broadly covered the site area for the FINAL proposed construction.
- While the test sites may represent the general subsurface conditions, variations between test sites should not be discounted:

If footing excavations reveal soil conditions significantly different from those shown in our attached LOG SECTION sheet , V.H.C. must be consulted as soon as possible and excavations may have to be stopped .

2. The recommendations in this report are based on the following :
- (a) The information gained from our investigation. (b) The present "state of the art" in testing and design (c) The building type and site treatment conveyed to us by the client. Should the client or his agent have omitted to supply us with the correct relevant information, or make significant changes to the building type and/or building envelope, our report may be made irrelevant and/or inappropriate. In such cases, we do not take responsibility for any consequences and we reserve the right to make an additional charge if more testing is necessary.
3. Notwithstanding the recommendations made in this report, we also recommend that wherever footings are close to any excavations or easements, that part of the footings should be deepened so that the projection from the underside of the footings and the bottom of the excavation makes an angle not exceeding 30 deg. in sandy soils and 45 deg. in clayey soils. (This angle is measured from the horizontal). We do not recommend a steeper angle unless sufficient testing is carried out to indicate otherwise or unless the footings are founded on solid rock.
4. Unless otherwise stated in our commission, any dimensions or slope direction and magnitude should not be used for any building costing calculations and/or positioning. Any sketch supplied should be considered as only an approximate pictorial evidence of our work.
5. Care has been taken to identify any filling on this site. A check should be made with all relevant authorities to obtain any records of filling. If any doubt exists on site at the time of construction, then V.H.C. should be contacted immediately for further advice.

GENERAL BUILDING AND MAINTENANCE RECOMMENDATIONS:

The maintenance of the building and the site is the responsibility of the owner. The owner should be familiar with the document – "Foundation Maintenance and Footing Performance: A Homeowners Guide" which is available from the CSIRO .

6. **SITE DRAINAGE:** good site drainage is one of the most important design feature of any footing. **The ground should be graded away from all footings at a minimum slope of 1:20 and every effort made not to allow ponding of water against the footings.** Unless the soil slopes well away from the footings at all times, excessive soil moisture may accumulate and cause wall and/or floor movements. Roof water should be diverted away from the building as soon as the roof is constructed by using temporary pipes. Soil drains should be constructed well before footing construction.
7. **SITE CLEARING:** if the removal of a pre-existing structure or vegetation disturbs the foundation soil, then we recommend the local deepening of the footings to a depth of at least 200mm below the disturbed level. If construction is to commence in late summer or autumn and large trees are to be removed, the moisture conditions should be stabilized by steady soaking the dry areas around the removed tree (V.H.C. should be consulted for further advice).
8. **IN CLAY SITES** (Classification "M", "H", "E") minor wall, floor and footing movements are inevitable, therefore, on such sites, we make the following additional construction recommendations to minimise their effects:
- (a) V.H.C. is of the opinion that BRICKWORK ARTICULATION joints or full height wall openings improve the performance of footings on clay sites. The builder should consider their use in long wall lengths and as specified in A.S.2870 or as specified by the designing Engineer.
- (b) Do NOT construct large archways, wing walls, and narrow isolated wall panels near corners. Brick work over doors and windows should be avoided in single storey construction; in two storey construction, brick work construction joints should be used. Do not use of brickwork over doors and windows without taking special structural precautions. Consult V.H.C. for advice in this matter if there is any doubt .
- (c) Any extension to an earlier structure should be tied with extra wall ties and not by interlocking brickwork.
- (d) Avoid excavations close to footings.
- (e) Service pipes should be detailed to tolerate footing movement. Plastic piping should be used wherever possible.
9. In HIGHLY or EXTREMELY EXPANSIVE sites (Class "H", "E"), hard tiles should be laid on an appropriate sheeting material using a rubber based adhesive and grout, alternatively, they can be laid directly on the concrete six months or more after construction.
10. **LIMITATIONS ON GARDENS :** the development of the gardens should not upset the drainage requirements nor the sub-floor ventilation and weephole drainage systems. Garden beds adjacent to the house should be avoided. Care should be taken to avoid overwatering of gardens.
11. **RESTRICTIONS ON LARGE TREES:** in clayey sites, trees (including trees on neighbouring sites) should be kept a distance away from the house of approximately the eventual mature height of the tree. For groups of trees it is recommended that the distance away from the house be increased to one and a half times the eventual mature height of the tree. These distances should be increased further if the clays in the area are considered to be very reactive.
If trees are to remain, then special footing design or root barrier may be required.
12. **LEAKS** in plumbing, including stormwater and sewerage and drainage should be repaired promptly.
13. **SHRINKAGE CRACKING** can be expected in concrete floors in the first 3 to 9 months in any site. This type of cracking does not require any special attention unless there is some vertical movement in the cracks or if the crack width exceeds 3mm.

V.H.C. (Aust.) Pty.Ltd. acn 062 784 909

Phone (03) 9754 1111

last rev.

Fax (03) 9754 1222

HOME OWNER'S RESPONSIBILITY

May 2013

 <p>VHC GROUP FOUR BUILDING SURVEYORS</p>
<p>BUILDING PERMIT</p>
<p>1. Number : 2748420173686/0</p>
<p>2. Issued by David Madeira on 22/09/2017</p>
<p>3.</p>

In order to protect the house and its footing from unwanted distress in the future, the owner is responsible for and must always provide the following around the perimeter of the house:

1. proper landscaping
2. proper maintenance
3. safe gardens

The objective of this proper landscaping, proper maintenance and having “safe” gardens is to minimize the variation in soil moisture levels around the footings that could lead to excessive soil movement and possible distress of the house and its footing.

It is assumed that the owner will always provide ongoing attention and, if required, quick remedial response to the above mentioned requirements. This assumption has formed part of the final Engineering Design and construction of the house and its footing.

In order to keep the construction of the footing affordable it is considered reasonable to detail and construct a footing that with the proper landscaping and maintenance requirements will perform adequately.

1. PROPER LANDSCAPING

The 2m strip of land around the full perimeter of the house is the crucial area that must be properly landscaped. This area must slope away from the house and its footings. Further requirements to this area include :

- for each 1m of strip there must be at least 50mm of fall away from the house
- this area must have a solid base that will drain water away from the house
- preferably paved (with paving also sloping away from the house)
- no garden beds present up against the house and its footings
- water from all outdoor taps, rain water tank overflows, hot water service overflows and air conditioner drip lines must all be drained into a suitable pit

With the area around the perimeter sloping away from the house it will be necessary to provide open spoon drains and/or pits to take the water from the sloped area to a legal point of discharge on the property. These drains are to be more than 1.5m away from the house.

All rain water hitting the ground/paving must be controlled and kept away from the footing.

Where the perimeter around the house is restricted by boundaries then special care must be taken. Consult with the neighbour and the Builder for advice to make sure that proper landscaping takes place.

2. PROPER MAINTENANCE

Leaking downpipes, sewers, gutters, water pipes and drains can adversely impact the site around the house. Unwanted water is a threat to the long term performance of the house and its footing. Blocked drains, gutters, downpipes and drainage pits can also prevent or hinder the drainage of storm water away from the house.

Regular inspections and ongoing maintenance must be carried out to repair pipes and drains and/or prevent any blockages.

3. “SAFE” GARDENS

Safe gardens avoid having garden beds within 1.5m of the house or its footings.

Safe garden watering must be controlled and not excessive.

Safe gardens don't contain trees that could possibly threaten the house or its footing.

Generally trees that potentially grow taller than the distance the trees are away from the house should be avoided or removed. Consult an Arborist if there is any doubt as to whether the existing tree(s) will have any impact on the house or its footings. The Arborist may recommend the use of a tree root barrier to protect the house from the impact of the tree(s).

After the construction of the house is completed by the builder, the house is then passed over into the care of the owner. From that time on it will be the responsibility of the owner to keep the property in a serviceable condition by following the above mentioned requirements.

Important Reading and further reference:

- The Geotechnical Report, Footing Design and Builder's Drawings for the house.
- CSIRO: Foundation Maintenance & Footing Performance: A Homeowner's Guide (BTF 18)

Please contact VHC Engineers to discuss any questions concerning the home owner's responsibilities.

GROUP FOUR
BUILDING SURVEYORS
BUILDING ENGINEERS
Number: 274842017369870
Issued by David Madeira on 22/09/2017

division of V.H.C.(Aust.) P.L.

acn 062 784 909

P.O.Box 7021
UPPER FERNTREE GULLY 3156

PH. (03) 9754 1111
FAX (03) 9754 1222

PROJECT : PROPOSED RESIDENCE

ADDRESS : LOT 31829 PARKFOREST WALK., CRAIGIEBURN

CLIENT : ABN Group (VIC), 81 Lorimer St., DOCKLANDS 3008

REF. NO.: 17V6107-31829 **DATE :** 13-Sep-17

Building Act 1993
BUILDING INTERIM REGULATIONS 2017
Regulation 1507
CERTIFICATE OF COMPLIANCE - DESIGN

To the Relevant Building Surveyor :

From : R.W.van Heusden (postal address as above)
Building Practitioner Registration No. EC-1096

Design documents for the above described project :-

Drawing(s) Ref. Nos. :	17V6107-31829 F1-F3 SDSM E1-E3 AJ1 G1	13/09/2017
Engineering Spec.Ref.Nos.:		/ /
Computations Ref. Nos. :	SS1	/ /
Site Investigation Ref.No.:	17V6107-31829	20/06/2017

I certify that the part of the design described above was prepared by V.H.C.Engineers and complies with the provisions of the BCA (parts 3.2 & 3.11)and relevant standards.

(AS2870, AS1170, AS4100(AS1250 as text), AS1684, AS3600)

Where applicable, slab details in footing design that over-write various Clauses in Section 5 AS2870 are based on Engineering Principles

Signed by R.W.van Heusden (Registration No. EC-1096)
For and on behalf of V.H.C. Engineers



date 13-Sep-17

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enc:

page 0/

USING WAFFLE POD TYPE SLAB

Soil Report reference : **17V6107-31829** **1.5**
P(H2+)1.5
SLAB DESIGN - structural spanning capacity (mm) = 1500

EXTERNAL CORNER OF SLAB (EXTERNAL BEAMS)

INTERNAL BEAMS

structural cant. 1.06

LOADING: 1st level 2nd level

	Metre	x kPa	Metre	x kPa
Roof :	0	0	3	0.9
Wall :	2.7	2.6	2.4	2.6
Floor :	0.5	2	2	0.4

Live Load width (m) x (kPa) 2.5 1.5
R.C.Beam s/w (kN/m) = 4.8

Applied U.D.L. (working) D.L.+L.L. = 21.5 kN/m
Factored U.D.L.(1.25xDL+1.5xLL) = 33.8 kN/m

Direct Applied Bearing per m. run = 47 kPa 50% LL
(including base + 110mm cross rib)

Md (Nmm) 18.99 Calculating Ast required
Vd (kN) = 21.43 with no shear reinforcement

Overall Depth = 500 mm cover = 50 mm
Overall Width = 400 mm bar d.= 16 mm
f sy = 450 MPa
f c = 20 MPa
bd = 170400 mm²
Tension Bars = 3 No. Ast = 603 mm²

M* (cap)= 88.14 (kNm) Ku < 0.4 required Ku = 0.14411
V* < 0.7 (0.5 Vuc) & D < 750mm
V* < 27.14 (kN)
then no shear reinforcement reqd.

Ast > 1.4 bd / f sy (mm²) = 530 Min. Ast Req.
> 0.8 bd / f sy (mm²) = 302 Min. Ast Slab Ftg

structural span 1.5

LOADING: 1st level 2nd level

	Metre	x kPa	Metre	x kPa
Roof :	0	0	0	0
Wall :	2.7	0.4	2.4	0.4
Floor :	1.5	2	4	0.4

Live Load width (m) x (kPa) 5.5 1.5
R.C.Beam s/w (kN/m) = 1

Applied U.D.L. (working) D.L.+L.L. = 14.9 kN/m
Factored U.D.L.(1.25xDL+1.5xLL) = 21.9 kN/m

Direct Applied Bearing per m. run = 53 kPa
(including base + 110mm cross rib) 50% LL

Md (Nmm) 6.16 Calculating Ast required
Vd (kN) = 9.61 with no shear reinforcement

Overall Depth = 385 mm cover = 50 mm
Overall Width = 110 mm bar d.= 16 mm
f sy = 450 MPa
f c = 20 MPa
bd = 34210 mm²
Tension Bars = 1 No. Ast = 201 mm²

M* (cap)= 20.75 (kNm) Ku < 0.4 required Ku = 0.23927
V* < 0.7 (0.5 Vuc) & D < 750mm
V* < 6.45 (kN)
then no shear reinforcement reqd.

Ast > 1.4 bd / f sy (mm²) = 106 Min. Ast Req.
> 0.8 bd / f sy (mm²) = 60 Min. Ast Slab Ftg

--ADOPT- 500 mm Deep 400 mm Wide O/A BEAM DIMEN.
T.REO. 3 No. Bars 16 mm Dia. f sy = 450

--ADOPT- 385 mm Deep 110 mm Wide O/A BEAM DIMEN.
T.REO. 1 No. Bars 16 mm Dia. f sy = 450

Comments : extra 2/N16 top 4/N16 or 4/L16TM bottom

Comments : stiffening ribs as per H2+ type slab

SLAB PANEL : 85 mm o/a depth
30 mm top cover

kPa

Roof : 0 (1.25xDL+1.5xLL) = 5.74 kN/m
Wall : 0.5
Floor : 0.25 -ve *M = 0.41 kN/m applied

bar dia.= 9 -M (ult)= 4.27 kNm/m capacity
spacing = 200

ADOPT -- 9 2 FABRIC MESH

The safe ABP (kPa) as noted in the Soil Report shall used in the design to determine the minimum width of a group of slab elements.
nom ABP 40 kPa
found at 0 mm into the existing fill or natural ground.

Soil Report requires a slab designed for a Yst = 60-75mm
AS 2870 96 & Supp 1, Section 4 allows for the use of a modified standard slab for the classification of H2

This design has been checked by a full grid analysis complying with the criteria of the references quoted in A.S.2870 & Supp.1

ALL FILL (INCLUDING EXISTING) MUST BE TRACK-ROLLED WITH 12T MACHINE (MIN.)
 - PROVIDE AT LEAST 8 PASSES AT 1/2 TRACK INTERVALS, THEN SAME AGAIN AT 90° TO 1ST PASSES.
 - WET OR WATER LOGGED SITES MAY NOT BE SUITABLE FOR TRACK-ROLLING - CONTACT ENGINEER.
 - REFER SOIL REPORT #17V6107-31829 FOR SITE SPECIFIC TRACK-ROLLING REQUIREMENTS.

CONTACT ENGINEER FOR FURTHER ADVICE IF SPECIFIED TRACK-ROLLING IS NOT SUCCESSFUL

REFER DRAWING SDSM FOR GENERAL SITE DRAINAGE AND SITE MAINTENANCE REQUIREMENTS

NEARBY SMALL IMMATURE TREES MAY BE FUTURE PROBLEM IF ALLOWED TO GROW IN EXCESS OF 4 METERS IN HEIGHT.
 REFER TO VHC SOIL REPORT #17V6107-31829 FOR FURTHER INFORMATION - IF UNSURE CONTACT VHC FOR CLARIFICATION.

SLAB ON GROUND TO A.S.2870

SITE CLASSIFICATION : 'P'

1. Refer SOIL REPORT # 17V6107-31829

- Slab PLAN DIMENSIONS and details (eg floor step downs, recesses etc.) to be verified prior to construction by the builder checking the architectural drawings. All dimensions are in millimetres.
- SLAB ON GROUND - All details are to comply with the relevant sections of A.S.2870.
- SITE PREPARATION - The slab subgrade shall be scraped clear of grass, vegetation and organic matter.

TREATMENT AND SUPERVISION OF PLACEMENT OF FILL AFTER SOIL REPORT WAS CARRIED OUT MUST COMPLY WITH SOIL REPORT REQUIREMENTS

- The area within 2000mm of the edge of the slab shall be GRADED so that WATER WILL NOT POND against the slab.
- MOISTURE BARRIER - 0.2mm polyethylene moisture barrier to be well lapped and taped at joints. Care must be taken during construction to prevent puncture of the membrane.
- REINFORCEMENT - Slab fabric shall be placed with a top cover of 25mm (UNO) and lapped at least 225mm. Beam reinforcement shall have 50mm cover top and bottom, and lapped not less than 500mm. All reinforcement shall be supported on bar chairs at 1200mm maximum spacing.
- CONCRETE - Concrete shall be 20mPa grade (UNO) and 100mm slump.

THOROUGH CONCRETE COMPACTION USING NEEDLE VIBRATOR IN ALL BEAMS IS ESSENTIAL

- The concrete should be cured prior to placing any brickwork of major loads.
- All RE-ENTRANT CORNERS to have placed and tied to the underside of the recommended slab mesh one layer of 3/L11 TM or similar - 2000mm long.
 - This design assumes that no service pipes exist at depths greater than the lateral distance from the footing (UNO).

THE OWNER'S ATTENTION IS DRAWN TO APPENDIX 'B' OF A.S.2870 "PERFORMANCE REQUIREMENTS AND FOUNDATION MAINTENANCE".

No responsibility shall be taken for this design unless the work is inspected and approved during construction.

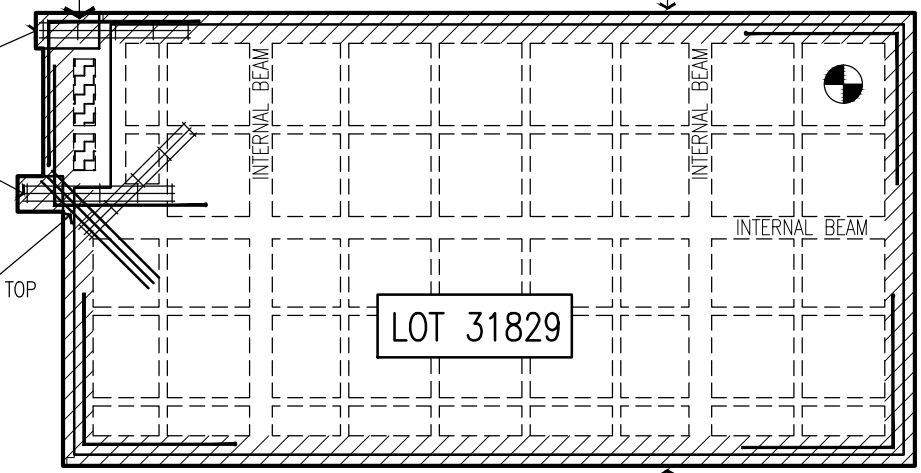
USE FLEXIBLE PLUMBING JOINTS TO ALLOW FOR THE DESIGN MOVEMENTS

FOUND BEAM TO THIS SIDE OF SLAB TO SAME DEPTH AS ADJACENT BEAM (LOT 31830).
 CARE MUST BE TAKEN DURING EXCAVATION - DO NOT UNDERMINE ADJACENT FOOTING.
 REFER SHEET F3 FOR DETAILS ON INDIVIDUAL CONSTRUCTION OF ROW HOUSES IN CONTACT

2/N12 L-BARS 2000mm EACH DIRECTION TO TOP AT EXTERNAL CORNERS

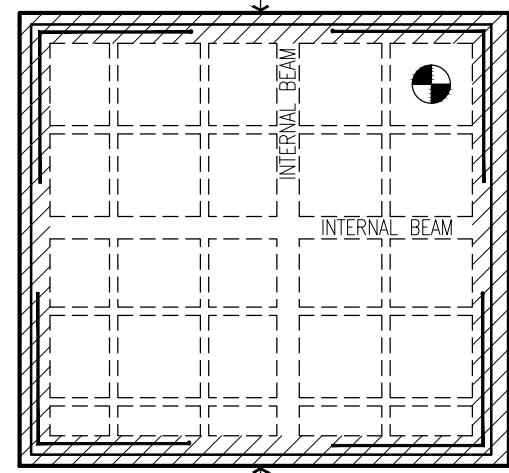
TRENCH MESH TOP & BOTTOM TO SLAB PROJECTIONS 2M LONG. TOP TRENCH MESH 50 BELOW REBATE

3/N12 Z-BARS TOP OF SLAB 2000L (BENT TO SUIT)



DEEPEN BEAM TO THIS SIDE OF SLAB TO SAME DEPTH AS ADJACENT BEAM (LOT 31828).
 CARE MUST BE TAKEN DURING EXCAVATION - DO NOT UNDERMINE ADJACENT FOOTING.
 REFER SHEET F3 FOR DETAILS ON INDIVIDUAL CONSTRUCTION OF ROW HOUSES IN CONTACT

NOTE: GARAGE FFL 86mm STEP DOWN FROM HOUSE FFL
 CONFIRM GARAGE REBATE REQUIREMENTS WITH BUILDER



NOTE: REBATE/S TO BE DEEPENED AS REQUIRED
 -REFER ARCHITECTURAL DRAWINGS FOR LOCATIONS & EXTENT
 -MAX. 400mm DEEPENING (WITHOUT ADDITIONAL REINFORCING)
 -REFER SHEET F3 FOR DETAIL FOR >400mm DEEPENING

NOTE: PERIMETER BEAMS DEEPENED TO 500mm O/A DEPTH

- SITE MUST BE SCRAPED CLEAR OF ANY SOIL CONTAINING ORGANIC MATTER INCLUDING GRASS AND TREE ROOTS.
- PREPARE A LEVEL BENCH BY CUTTING OR CUT/FILLING.
- ANY FILL SHOULD BE PROPERLY COMPACTED AS PER CL 6.4.2(b) AS2870, MAX FILL DEPTH 300mm SO AS TO BE ABLE TO SUPPORT THE SLAB (ABP=50kPa) or THE FILL MUST BE SUSPENDED OVER.
- SOFT AREAS IN THE BENCH MUST BE RECTIFIED IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTION.
- SITE MUST BE WELL DRAINED. IT IS RECOMMENDED THAT AGRICULTURAL DRAIN OR SIMILAR IS PROVIDED AROUND THE UP-HILL SIDES OF THE BUILDING PRIOR TO CONSTRUCTION OF SLAB AND DISCHARGED VIA LPD.

WAFFLE DETAILS	
Waffle Height:	300mm
Slab Thickness:	85mm
Internal Rib Width:	110mm
External Beam Width:	400mm
Stem Width min:	250mm
Total Slab Depth:	UNO 385mm
REINFORCEMENT DETAILS	
Slab Fabric:	SL92
Internal Rib:	1-N16 (BOT)
External Beam:	4-L16 TM (BOT)
	EXTRA 2-N16 (TOP)

LEGEND	
	DENOTES START POINT FOR POD SETOUT
	DENOTES POD SET DOWN (86mm) **
	DENOTES POD SET DOWN (172mm) **
	DENOTES POD EXTENSION (300 MAX.)
	REMOVE SECTION OF POD BENEATH S4-S6 LOAD POINT. REFER BEAM LAYOUT
**	ALL STEPDOWNS TO BE CONFIRMED ON ARCHITECTURALS (HEIGHT & LOCATION)

FOOTING RUNNING ALONG BOUNDARY
 IN LIEU OF PROVIDING A DRAIN UNDER or AT THE FOOTING ALONG THE BOUNDARY TO DEAL WITH POTENTIAL LOCALIZED SURFACE DRAINAGE PROBLEMS IN THE ADJACENT PROPERTY, IT IS REQUIRED TO STRENGTHEN THE SLAB FOOTING AS INDICATED :
 ADOPT ADDITIONAL INTERNAL SLAB BEAMS WHERE MARKED ON SLAB LAYOUT, REINFORCEMENT AND BEAM WIDTH AS PER DETAIL ON SHEET F2.
 DO NOT INSTALL ANY DRAINAGE PIPES AT THE BOUNDARY/FOOTING INTERFACE.
 THE OWNER MUST PERFORM ONGOING MONITORING AS TO THE STATE OF THE DRAINAGE ON THE ADJACENT PROPERTY IN THE FUTURE. IF THERE IS ANY DOUBT, THE OWNER IS TO CONTACT V.H.C. FOR CLARIFICATION AND/OR GUIDANCE.

REFER SHEET F3 FOR SITE SPECIFIC DAMP-PROOF MEMBRANE REQUIREMENT

REFER SHEET F2/F3 FOR DETAILS

REFER ARCHITECTURAL PLANS FOR FINAL DIMENSIONS & STEPDOWN/REBATE DETAILS
 DETAILS ON THESE ENGINEERING DRAWINGS ARE FOR GUIDANCE ONLY AND MAY VARY FROM THOSE ADOPTED ON SITE

OBTAIN 50mm OVER 1000mm FALL AWAY FROM FOOTINGS

V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222	V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909	ISSUE DATE 13/09/17 DRAWN AG	EC-1096 R.W.van Heusden M.I.E.Aust.	PROPOSED FOOTING LAYOUT FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN PROJECT / DRAWING No. 17V6107-31829 F1
	SCALE 1:100	THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT DATED / / SIGNED BY THE OWNERS SIGNED BY THE BUILDER		

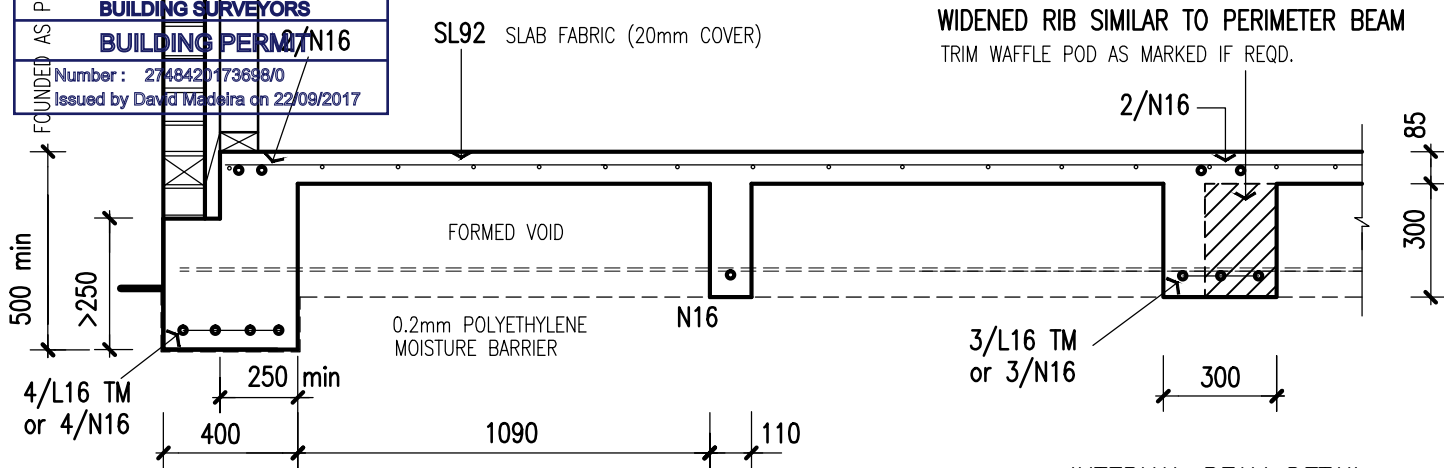
USE FLEXIBLE PLUMBING JOINTS TO ALLOW FOR THE DESIGN MOVEMENTS

NEARBY SMALL IMMATURE TREES MAY BE FUTURE PROBLEM IF ALLOWED TO GROW IN EXCESS OF 4 METERS IN HEIGHT. REFER TO VHC SOIL REPORT #17V6107-31829 FOR FURTHER INFORMATION - IF UNSURE CONTACT VHC FOR CLARIFICATION.

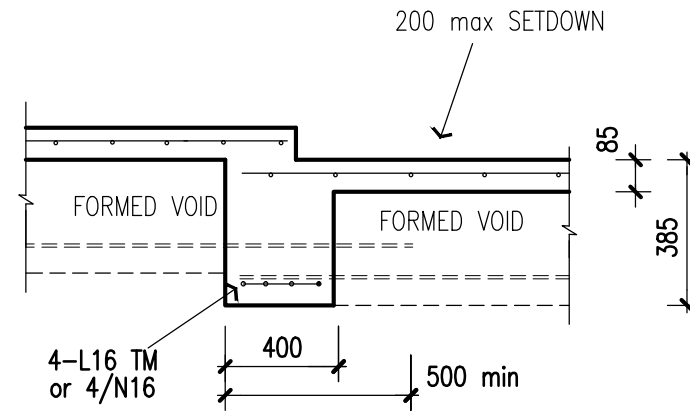
SLAB ON GROUND TO A.S.2870
 SITE CLASSIFICATION : 'P'
 1. Refer SOIL REPORT # 17V6107-31829

GROUP FOUR
 BUILDING SURVEYORS
 BUILDING PERMIT N16
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017

2/N12 L-BARS 2000mm EACH DIRECTION TO TOP AT EXTERNAL CORNERS



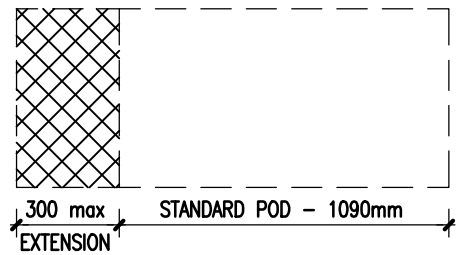
INTERNAL BEAM DETAIL



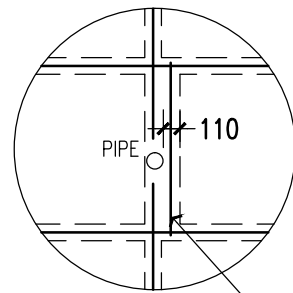
SETDOWN DETAIL - BEAM

RIGID SLAB ON GROUND DETAIL P(H2+)1.5 - 2 storey (TYPE 6-2+)

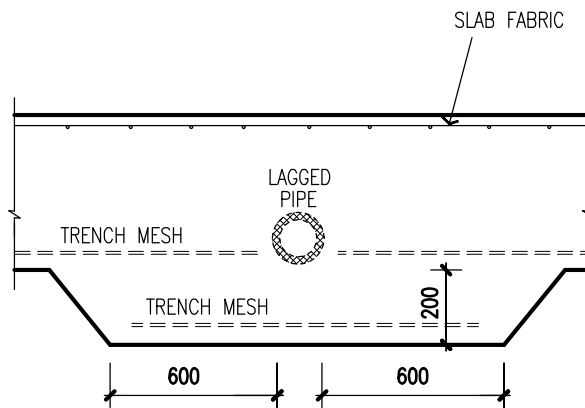
CONTINUOUSLY DEEPEN PERIMETER BEAM TO ACHIEVE 500 O/A BEAM DEPTH



Waffle pod extension detail
 REFER PLAN FOR LOCATIONS



DETAIL FOR PLUMBING PENETRATION IN BEAM

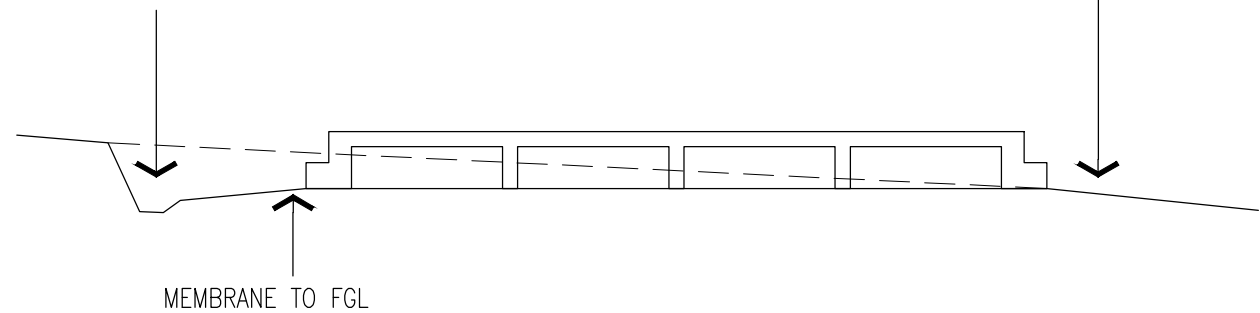


PIPE THROUGH PERIMETER BEAM
 MINIMUM 40mm LAGGING - ENSURE NO GAPS

TYPICAL SECTION THROUGH WAFFLE RAFT SLAB

PROVIDE SITE DRAINAGE PRIOR TO CONSTRUCTION (ESPECIALLY AT BASE OF ANY SITE CUT)

50mm FALL OVER 1000mm AWAY FROM FOOTING (typ)



WAFFLE RAFT SLABS SHALL BE FOUNDED ON NATURAL GROUND or ON FOUNDING MATERIAL AS NOTED IN SOIL REPORT. PROVIDE BLINDING CONCRETE OR BORED CONCRETE PIERS AS REQUIRED.

A MAXIMUM OF 300mm OF TRACK ROLLED FILL (EXCLUDES EXISTING FILL) MAY BE PLACED UNDER THE WAFFLE RAFT SLAB

IF MORE THAN 300mm OF TRACK ROLLED FILL THEN PIERS SHALL BE REQUIRED AND VHC CONTACTED FOR PIER DESIGN.

REFER SHEET F1 FOR LAYOUT & NOTES

REFER ARCHITECTURAL PLANS FOR FINAL DIMENSIONS & STEPDOWN/REBATE DETAILS
 DETAILS ON THESE ENGINEERING DRAWINGS ARE FOR GUIDANCE ONLY AND MAY VARY FROM THOSE ADOPTED ON SITE

V.H.C. ENGINEERS
 STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS

P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111
 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222

V.H.C.(Aust.) Pty Ltd trading as
 ACN 062 784 909

ISSUE DATE 13/09/17 DRAWN AG

SCALE NTS

REVISIONS No. DATE DESCRIPTION

EC-1096 R.W.van Heusden M.I.E.Aust.

THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT

DATED / /

SIGNED BY THE OWNERS

SIGNED BY THE BUILDER

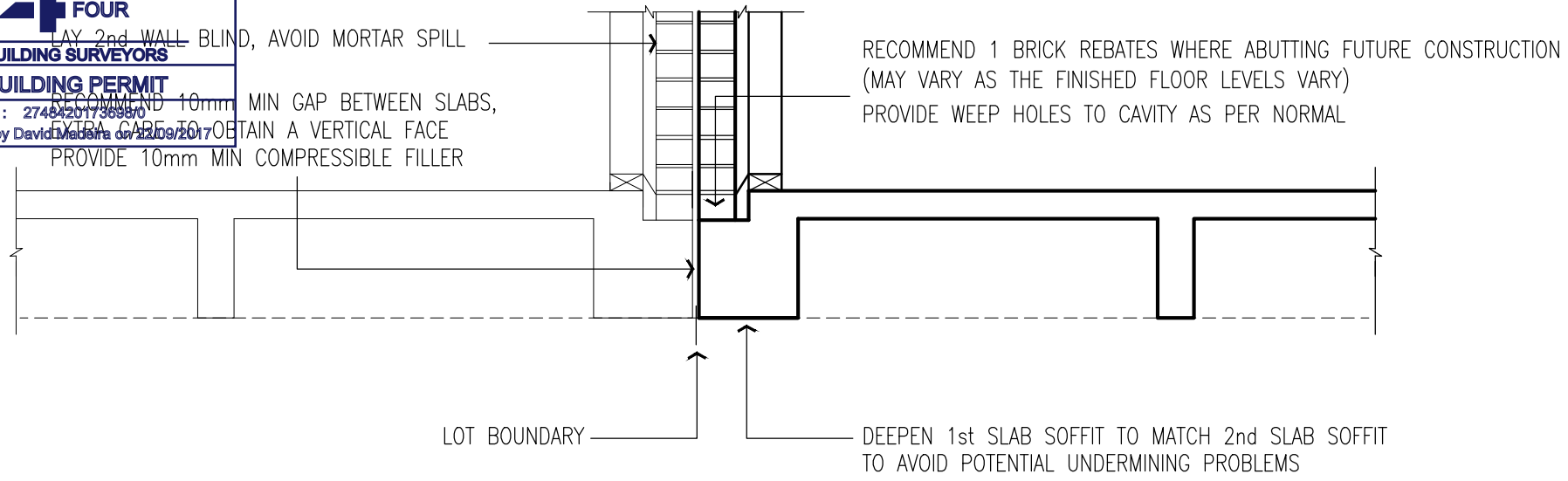
PROPOSED FOOTING DETAILS

FOR: ABN Group (VIC)
 SITE: LOT 31829 PARKFOREST WALK
 CRAGIEBURN

PROJECT / DRAWING No. 17V6107-31829 F2

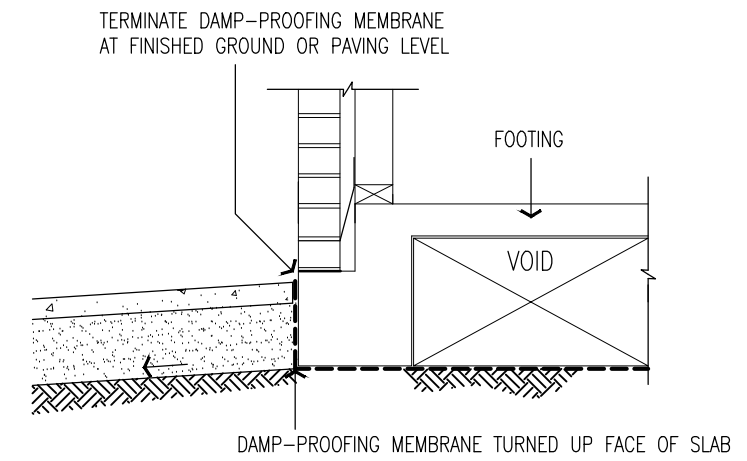
GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number: 27484201736950
 Issued by David Madara on 12/09/2017

SLAB ON GROUND	TO A.S.2870
SITE CLASSIFICATION : 'P'	
1. Refer SOIL REPORT # 17V6107-31829	



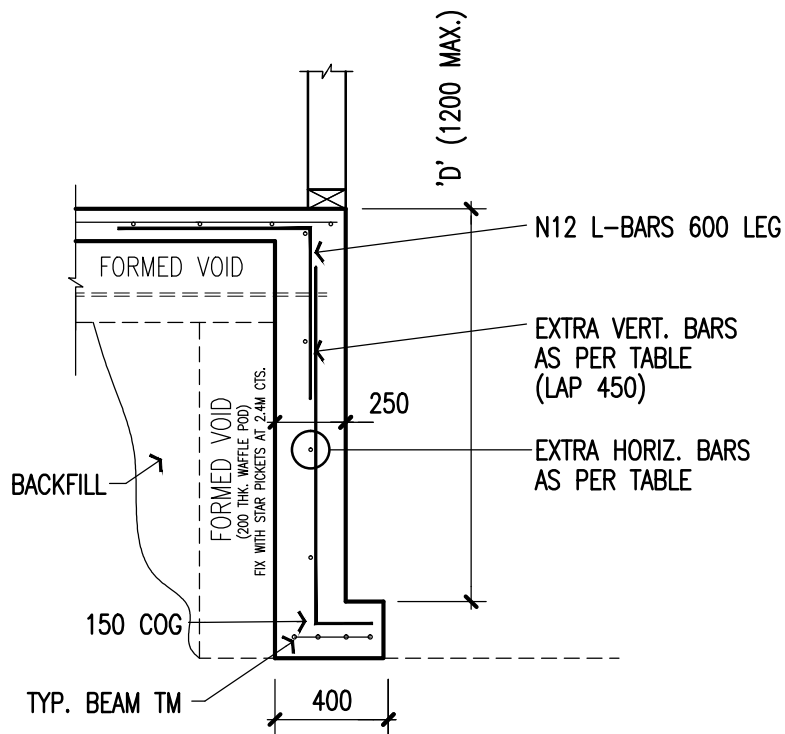
INDIVIDUAL CONSTRUCTION OF ROW HOUSES IN CONTACT

DETAIL IS INDICATIVE. BEAMS MAY REQUIRE DEEPENING, THE INTENTION IS FOR BOTH BEAMS TO BE THE SAME DEPTH
 CONFIRM REQUIREMENTS WITH ABN SUPERVISOR PRIOR TO CONSTRUCTION - CONTACT VHC IF UNSURE



USE OF DAMP-PROOFING MEMBRANE FOR SLAB PROTECTION
 -IF MEMBRANE IS DAMAGED, REFER AS2870 5.5.2(b) or (c) FOR ALTERNATIVE DETAIL
 -REFER SDSM SHEET FOR SITE LANDSCAPING AND DRAINAGE REQUIREMENTS

NEARBY SMALL IMMATURE TREES MAY BE FUTURE PROBLEM IF ALLOWED TO GROW IN EXCESS OF 4 METERS IN HEIGHT.
 REFER TO VHC SOIL REPORT #17V6107-31829 FOR FURTHER INFORMATION - IF UNSURE CONTACT VHC FOR CLARIFICATION.



DEEPENED REBATE
 MAX. 1200 REBATE

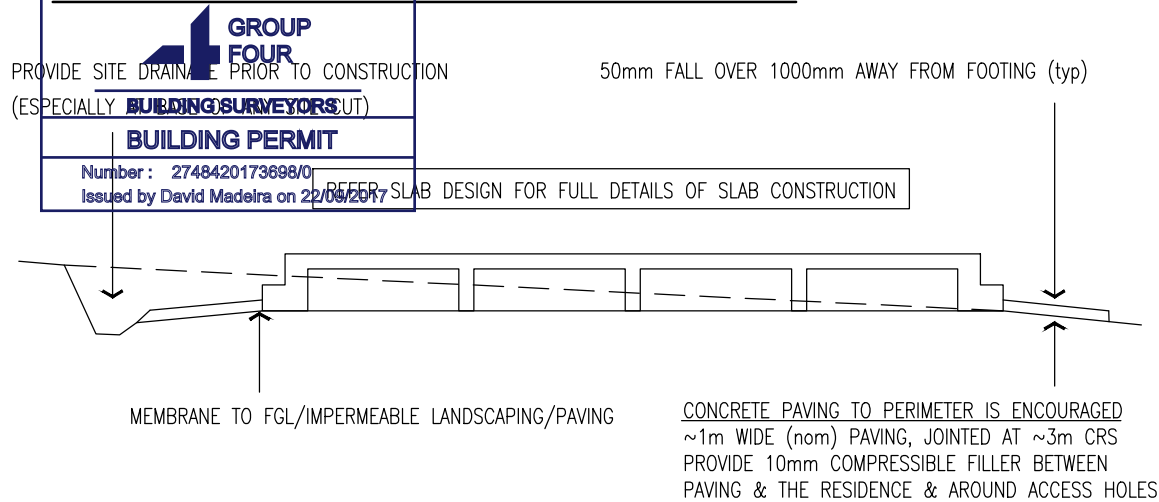
EXTRA REINFORCEMENT TO DEEP REBATE/STEP		
DEPTH 'D'	EXTRA VERTICAL REINFORCEMENT	EXTRA HORIZONTAL REINFORCEMENT
'D' IS LESS THAN 400	NONE	NONE
'D' IS BETWEEN 401 & 900	N12-400	N12-400
'D' IS BETWEEN 901 & 1200	N12-300	N12-300

REFER SHEET F1 FOR LAYOUT & NOTES

REFER ARCHITECTURAL PLANS FOR FINAL DIMENSIONS & STEPDOWN/REBATE DETAILS
 DETAILS ON THESE ENGINEERING DRAWINGS ARE FOR GUIDANCE ONLY AND MAY VARY FROM THOSE ADOPTED ON SITE

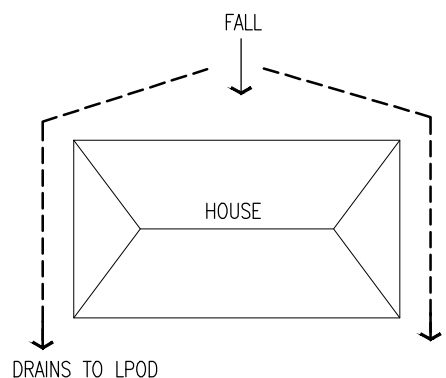
V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222	V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909	ISSUE DATE 13/09/17 DRAWN AG	EC-1096 R.W.van Heusden M.I.E.Aust.	PROPOSED FOOTING DETAILS FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN PROJECT / DRAWING No. 17V6107-31829 F3
	SCALE NTS	THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT DATED / /	SIGNED BY THE OWNERS SIGNED BY THE BUILDER	
	REVISIONS No. DATE DESCRIPTION			

TYPICAL SECTION THROUGH SLAB & BUILDING PLATFORM

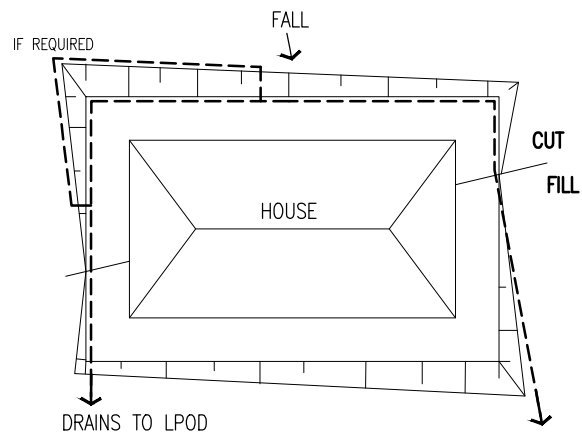


SCHEMATIC SITE PLANS SUB-SURFACE DRAINAGE

(A) SITES WITH SLIGHT TO NO FALL

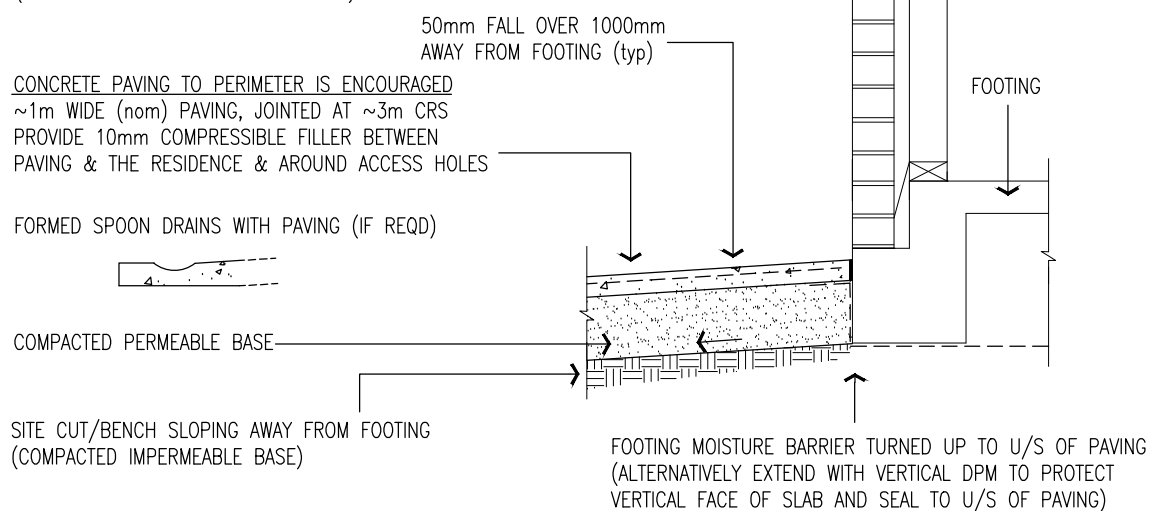


(B) SITES WITH FALL 1:10 (>400mm CUT)



TYPICAL SECTION THROUGH FOOTING EDGE

(REFER AS2870'11 FOR ALTERNATIVES)



SITE DRAINAGE REQUIREMENTS – CONSTRUCTION STAGE

The Geotechnical Report has recommended the use of a certain Footing that is appropriate for this site. While making this recommendation it has been assumed that certain site drainage requirements (as per AS2870'11 & BCA) have been met. During the construction of the footing the following site drainage requirements are listed as being part of the Final Footing Design by VHC Engineers.

- MUST PREVENT WATER PONDING** AGAINST OR NEAR THE FOOTING
- The ground in the immediate vicinity of the perimeter footing shall be graded to a **FALL OF 50mm (min) AWAY FROM THE FOOTING OVER A DISTANCE OF 1000mm (1:20)** and shaped to prevent ponding of water (this includes the ground uphill from the footing on a cut/fill site). If 1000mm is not possible due to the site boundary the 50mm min fall away from the footing is to be maintained over the available distance.
 - where filling is placed adjacent to the building, the filling shall be compacted and graded to ensure drainage of water away from the building
- ALL COLLECTED STORMWATER MUST BE DISCHARGED TO A LPOD.**
- SURFACE DRAINAGE** of the site shall be controlled from the start of the site preparation and construction; surface drainage includes surface water run-off and building water (roof/floor/concrete) run-off
 - all water run-off shall be controlled at all times
 - use temporary downpipes to collect water from the roofed building frame
 - when silt pits are used to gather surface water from areas adjacent to the footings, these silt pits are to be at least 1000mm away from the footing and connected to the stormwater system with solid pipe
 - stormwater drains shall be at least 90mm and have a minimum fall of 1:100 and 100mm cover under the soil and/or paved areas
 - Inspection Openings should be provided at each pipe connection point and at a nominal spacing of 10m
 - avoid undermining the footing with any trenches or pipes or pits
- SUB-SURFACE DRAINAGE** is required to remove any unwanted ground water by means ~90mm slotted pipe in a 300mm wide trench (min fall of 1:100), base of the trench is filled with 10mm crushed rock or similar covering the slotted pipe.
 - AG drains must NOT be installed within 1500mm from any footing.
 - AG drains must be installed at the base of all site cuts that exceed 400mm in height, along the high side of a sloping site and possibly along the low side of a sloping site along the boundary. To be connected to stormwater system via a silt pit.
 - AG drains to be laid approx. 200mm into undisturbed Clay or compacted Clay.
- AC condensers, HWS overflow, water tanks and adjoining properties are all potential sources of **UNWANTED WATER**. This water must be controlled and directed to the LPOD. Possible water impacting the site from an adjoining property, especially if there is a footing on or near a boundary must be addressed. Localised footing strengthening is to be considered during construction ILO drainage that may jeopardise the footings.
- GRATED DRAINS** may be utilised in a paved area (eg driveway/garage interface) where the paving necessarily slopes towards the house or garage. Spoon drains may also be used in conjunction with a paved surface.
- The ground beneath a **TIMBER DECK** must be graded so that the area beneath the deck is above the adjacent finished ground level to prevent ponding.
- ALL TRENCHES** must be dug at a similar grade as the pipes the trenches house.
 - trenches must generally slope away from the footings
 - trenches must be "clay plugged" or concreted when passing perpendicularly under any part of the footing and on any slotted pipe side of a connection pit
 - all trenches within 1500mm of any footing must be effectively sealed from surface water, with at least the top 300mm of the trench filled with local Clay compacted to an impermeable top layer. Approved moisture barrier use with trenches is an option.
 - concrete paving is advised over any trenches within 1000mm of any footing.
- FLEXIBLE PLUMBING JOINTS** are required for H1/H2/P sites to allow for expected vertical ground movements (refer Geotechnical Report). The joints must be set at the midway point when installed & must also incorporate swivel joints in the system
 - drains emerging from under the footing require the flexible joint to be within 1m of the outside of the perimeter footing
 - installation, location and number of joints to comply with manufacturer's specs
- PLUMBING PENETRATING THE FOOTING** must be avoided where practicable. If unavoidable then the pipe must pass through the middle third of the footing depth and lagging to the pipe provided (40mm thick H2/E sites).

HOME OWNER'S RESPONSIBILITY

In order to protect the house and its footing from unwanted distress in the future, the owner is responsible for and must always provide the following around the perimeter of the house:

- proper landscaping
- proper maintenance
- "safe" gardens

The objective of this proper landscaping, proper maintenance and having "safe" gardens is to minimize the variation in soil moisture levels around the footings that could lead to excessive soil movement and possible distress of the house and its footing.

It is assumed that the owner will always provide ongoing attention and, if required, quick remedial response to the above mentioned requirements. This assumption has formed part of the final Engineering Design and construction of the house and its footing.

In order to keep the construction of the footing affordable it is considered reasonable to detail and construct a footing that with the proper landscaping and maintenance requirements will perform adequately.

1. PROPER LANDSCAPING

The 2m strip of land around the full perimeter of the house is the crucial area that must be properly landscaped. This area must slope away from the house and its footings. Further requirements to this area include :

- for each 1m of strip there must be at least 50mm of fall away from the house
- this area must have a solid base that will drain water away from the house
- preferably paved (with paving also sloping away from the house)
- no garden beds present up against the house and its footings
- water from all outdoor taps, rain water tank overflows, hot water service overflows and air conditioner drip lines must all be drained into a suitable pit.

With the area around the perimeter sloping away from the house it will be necessary to provide open spoon drains and/or pits to take the water from the sloped area to a legal point of discharge on the property. These drains are to be more than 1.5m away from the house. All rain water hitting the ground/paving must be controlled and kept away from the footing.

Where the perimeter around the house is restricted by boundaries then special care must be taken. Consult with the neighbour and the Builder for advice to make sure that proper landscaping takes place.

2. PROPER MAINTENANCE

Leaking downpipes, sewers, gutters, water pipes and drains can adversely impact the site around the house. Unwanted water is a threat to the long term performance of the house and its footing. Blocked drains, gutters, downpipes and drainage pits can also prevent or hinder the drainage of storm water away from the house.

Regular inspections and ongoing maintenance must be carried out to repair pipes and drains and/or prevent any blockages.

3. "SAFE" GARDENS

Safe gardens avoid having garden beds within 1.5m of the house or its footings.

Safe garden watering must be controlled and not excessive.

Safe gardens don't contain trees that could possibly threaten the house or its footing.

Generally trees that potentially grow taller than the distance the trees are away from the house should be avoided or removed. Consult an Arborist if there is any doubt as to whether the existing tree(s) will have any impact on the house or its footings. The Arborist may recommend the use of a tree root barrier to protect the house from the impact of the tree(s).

After the construction of the house is completed by the builder, the house is then passed over into the care of the owner. From that time on it will be the responsibility of the owner to keep the property in a serviceable condition by following the above mentioned requirements.

Important Reading and further reference:
 - The Geotechnical Report, Footing Design and Builder's Drawings for the house.
 - CSIRO: Foundation Maintenance & Footing Performance: A Homeowner's Guide (BTF 18)
 Please contact VHC Engineers to discuss any questions concerning the home owner's responsibilities.

V.H.C. ENGINEERS
 STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS

P.O. Box 7021 UPPER FERNTREE GULLY 3156
 (18/69 ACACIA ROAD FERNTREE GULLY)

PH: (03) 9754 1111
 FAX: (03) 9754 1222

V.H.C.(Aust.) Pty Ltd trading as
 ACN 062 784 909

ISSUE DATE 13/09/17

DRAWN AG

SCALE NTS

STANDARD NOV 2014

THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT

DATED / /

SIGNED BY THE OWNERS

SIGNED BY THE BUILDER

REFER GEOTECHNICAL REPORT 17V6107-31829

REFER FINAL FOOTING DESIGN 17V6107-31829 F1

IF THERE IS ANY DOUBT AS TO ANY OF THE LISTED REQUIREMENTS or IF DETAILS CONFLICT BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS; THEN THE ENGINEER MUST BE IMMEDIATELY CONTACTED.
 DO NOT PROCEED WITH CONSTRUCTION UNTIL CLARIFICATION/APPROVAL IS OBTAINED FROM ENGINEER.

FINAL DRAINAGE REQUIREMENTS MUST BE CONFIRMED AFTER SITE PREPARATION

SITE DRAINAGE AND SITE MAINTENANCE

FOR: ABN Group (VIC)
SITE: LOT 31829 PARKFOREST WALK
 CRAGIEBURN

PROJECT / DRAWING No. 17V6107-31829 SDSM

REFER SHEET E2/E3 FOR DETAILS

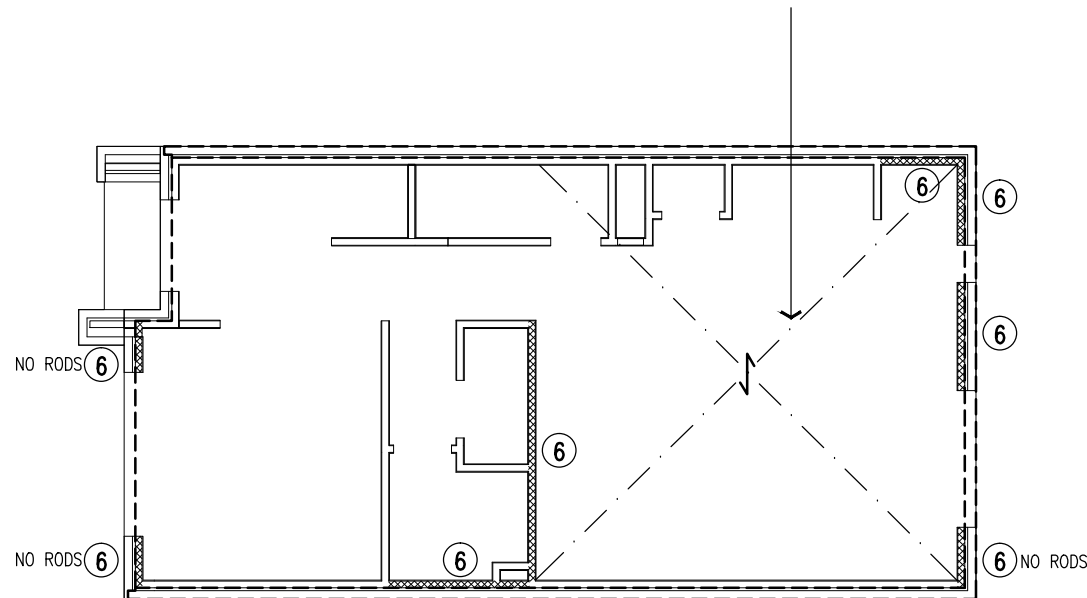
GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017

DS - ⑥
 DOUBLE SIDED BRACING (MARKED "DS")
 & 6kN/m BRACING (MARKED HATCHED)
 REFER SHEET E3 FOR DETAILS

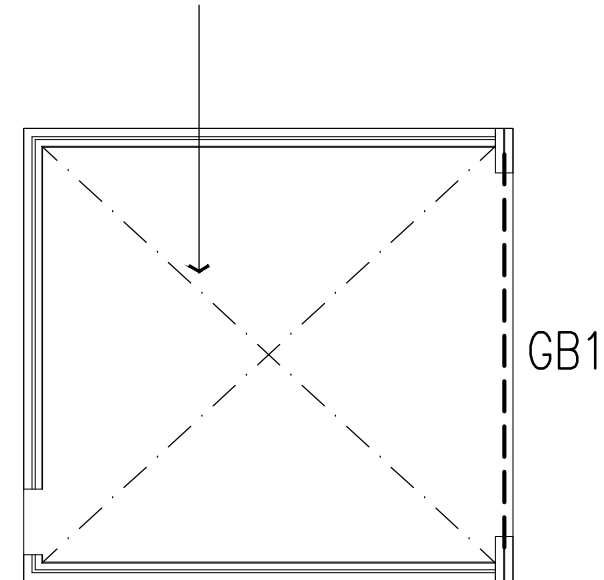
BEAM SCHEDULE

GB1 INVERTED 'T' LINTEL
 250x12 VER, 200x10 HOR PLs
 (4.8m SPAN LINTEL OVER GARAGE DOOR)

PROVIDE DIAGONAL HOOP-IRON BRACE AS SHOWN (typ)
 TO UNDERSIDE OF FLOOR JOISTS, SECURE TO EACH JOIST
 AND TIE-OFF/SECURE TO BRACED WALLS



ROOF BRACING TO TRUSS MANUFACTURER SPECS



NOTES FOR RESIDENTIAL CONSTRUCTION

- R1. ALL WORKS ARE TO COMPLY WITH AS1684, AS1720, AS3600, AS3700, AS1250 (ILO AS4100) AND THE B.C.A.
- R2. TIE-DOWN, LATERAL RESTRAINT AND FIXING TO COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- R3. ALL WALL AND ROOF BRACING TO COMPLY WITH AS1684 (UNO)
- R4. WALL, ROOF & FLOOR FRAMING TO COMPLY WITH AS1684 (UNO)
- R5. REFER STRUCTURAL STEELWORK NOTES ON SHEET E2.
- R6. IF IN DOUBT - ASK

GENERAL NOTES

- G1. THESE DRAWINGS SHALL BE READ WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS.
- G2. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES.
- G3. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
- G4. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.
- G5. SUBSTITUTES WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.
- G6. DURING THE CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.

TYPICAL SUPPORTS : USE AS REQUIRED

- P1 89x89x5.0 SHS or equiv
- P2 89x89x3.5 SHS or equiv
- P3 75x75x3.5 SHS or equiv
- S3 3/90x35 F5 common studs
- S4 4/90x35 F5 common studs
- S5 5/90x35 F5 common studs
- (3/90x45 wide studs = 4/90x35 wide studs)
- S2-F17 2/90x35 F17 studs (shw or LVL)*
- S3-F17 3/90x35 F17 studs (shw or LVL)*
- * F17 wall plates reqd.
- F17 3/90x35 F17 = 6/90x35 F5 studs
- 2/90x35 F17 = 4/90x35 F5 studs
- MGP10 2/90x45 MGP10 = 4/90x35 F5 studs
- 2/90x35 MGP10 = 3/90x35 F5 studs

FULL BRACING IS TO BE PROVIDED AS PER AS1684.2'10 FOR THE NOMINATED WIND CATEGORY, USE 6kN/m & DS BRACING WHERE NOMINATED ON SHEET E1 AS PART OF THE FINAL BRACING. BUILDING SURVEYOR TO INSPECT & APPROVE WALL & FLOOR BRACING PRIOR TO PLASTER.

IF THERE IS ANY DOUBT AS TO WHAT TO DO or IF ENGINEERING DETAILS ARE CONFLICTING WITH THE ARCHITECTURAL DETAILS; THEN THE ENGINEER MUST BE IMMEDIATELY CONTACTED FOR CLARIFICATION. DO NOT PROCEED UNTIL CLARIFICATION AND APPROVAL FROM THE ENGINEER HAS BEEN OBTAINED.

<p>V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222</p>	V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909	ISSUE DATE 13/09/17 DRAWN AG	EC-1096 R.W.van Heusden M.I.E.Aust.	PROPOSED BEAM LAYOUT					
	SCALE 1:100		THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">REVISIONS No.</th> <th style="width: 10%;">DATE</th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS No.	DATE	DESCRIPTION				DATED / / SIGNED BY THE OWNERS SIGNED BY THE BUILDER
REVISIONS No.	DATE	DESCRIPTION							
FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN		PROJECT / DRAWING No. 17V6107-31829 E1							

(A) PFC ON POST
 10mm TOP PLATE (90x270 nom)
 6cfw TO SHS
 2-M16 8.8/S TO BEAM

TOP VIEW

BUILDING SURVEYORS
BUILDING PERMIT
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017

(B) UB/UC ON POST
 10mm TOP PLATE (180x180 nom)
 6cfw TO SHS
 2-M16 8.8/S TO BEAM

TOP VIEW

(C) BEAM CLEATED TO POST*
 10mm CLEAT (100x200 nom)
 6cfw TO SHS
 2-M20 8.8/S TO BEAM

SECTION SIDE VIEW

6mm END CAP

CLEAT OPTIONS (TOP VIEWS)

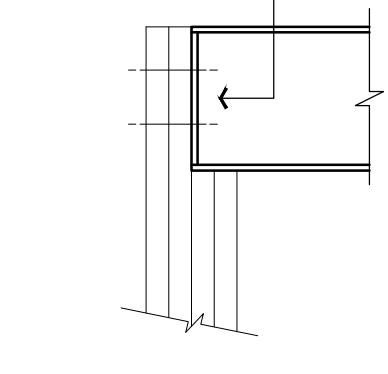
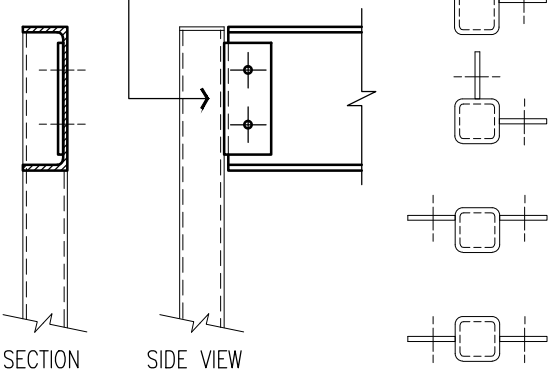
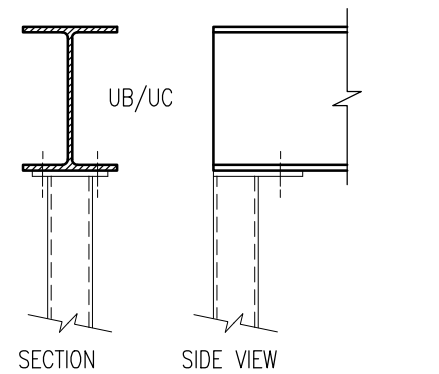
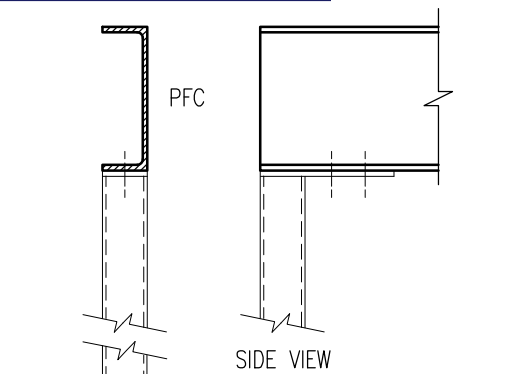
(D) BEAM ON STUD CLUSTER
 10mm BEAM END PLATE
 6cfw TO BEAM
 2-M16 BOLTS THROUGH STUDS

SECTION

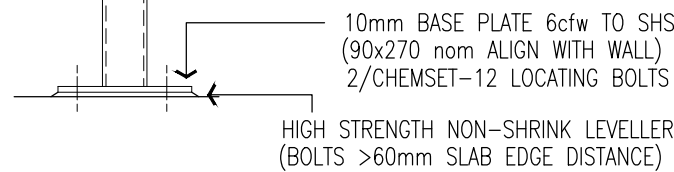
PFC

STRUCTURAL STEELWORK NOTES

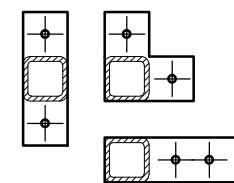
- S1 - ALL WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS1250 AND/OR AS4100.
- S2 - STEEL MEMBERS TO BE GRADE 300plus U.N.O. ALL MEMBERS ARE TO HAVE AN APPROPRIATE PROTECTIVE COATING.
- S3 - BOLT SPACING $5 \times \text{BOLT}\phi$; EDGE DIST $2.5 \times \text{BOLT}\phi$. HOLES FOR BOLTS IN THE BEAMS MAY BE SLOTTED ONLY IN THE HORIZ DIRECTION AND RESTRICTED TO $2.5 \times \text{BOLT}\phi$ IN LENGTH. NO SLOTTED HOLES IN CLEATS. NO SLOTTED HOLES AGAINST SLOTTED HOLES.
- S4 - FULLY SITE WELD (6cfw UNO) ALL CLEAT TO BEAM CONNECTIONS AFTER FINAL POSITIONING OF MEMBERS. FULL SITE WELDING MAY REPLACE M16 BOLTS. WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS1554.
- S5 - ALL MEMBERS SUPPORTING BRICKWORK TO BE PROPPED AT MIDSPAN UNTIL THE BRICKWORK IS AT LEAST 5 DAYS OLD.
- S6 - DURING THE CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES.



(A)(B)(C) COMMON BASE PL DETAILS



BASE PL TOP VIEWS



PROVIDE FULL SITE WELDS TO ALL CLEAT TO BEAM CONNECTIONS

*USE DETAIL (C) ONLY WHERE CLEAT NOTED ON LAYOUT DRAWING

NOTES FOR POST TO BEAM DETAILS :

1. POSITION BEAMS >40mm VERTICALLY CLEAR OF CEILING LINING (10mm FOR TOP PLATE & 28mm FOR BOLT HEADS BELOW).
2. Type(C) POST END CAN BE USED IN COMBINATION WITH Type(A) or Type(B) TO SHS or TO THE WEB OF THE BEAM.
3. CLEATS MAY BE WELDED TO A 10mm TOP PLATE AND EXTEND ABOVE POST TO ALLOW FOR THE BEAM TO DIRECTLY REST ON TOP OF THE STEEL POST.
4. CLEATS MAY BE WELDED TO THE SIDE OF THE POST AND EXTEND ABOVE POST, PROVIDE 300 6cfw BETWEEN CLEAT & POST.
5. FULL SITE WELD (6cfw UNO) TO ALL CLEAT TO BEAM CONNECTIONS.
6. LIMIT OF 2 CLEATS PER POST (UNO).
7. STUB COLUMN DETAILED AS PER POST.
8. IF DOUBLE STEEL POST IS NOMINATED THEN ENLARGE SINGLE POST TOP AND BASE PLATE DETAILS TO HOUSE THE 2ND POST.

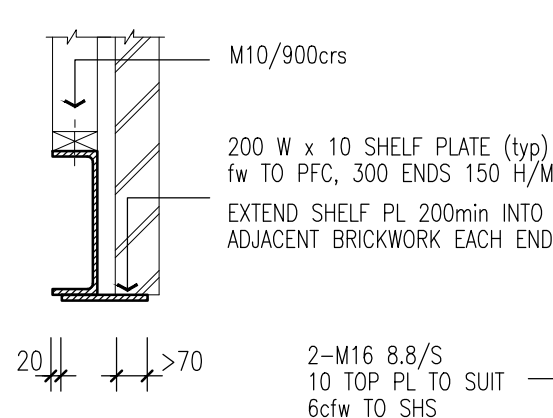
DETAILS ON THIS SHEET ARE TO BE READ INCONJUNCTION WITH THE NOTES ON THE STRUCTURAL LAYOUT (SHEET E1).

THE NOTES ON SHEET E1 MAY NOMINATE :

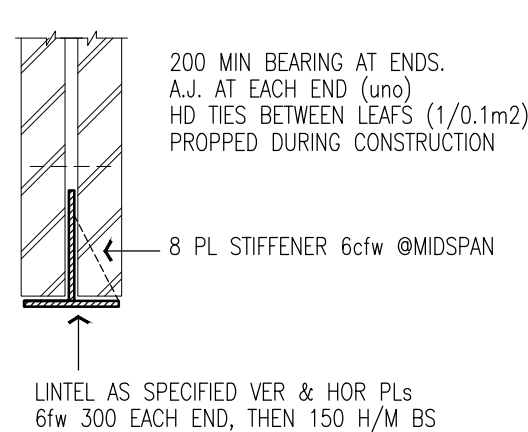
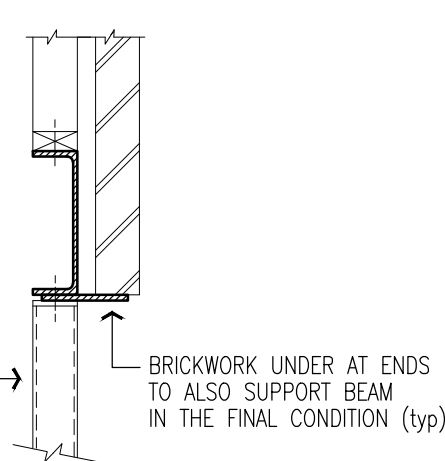
- SITE WELDING REQUIREMENTS
- SPECIAL BOLTING, CLEATS or WEB STIFFENERS
- SPECIAL BRACING REQUIREMENTS
- SLAB AND FRAME CONNECTIONS REQUIREMENTS

TYPICAL POST TO BEAM DETAILS

TYP SECTION

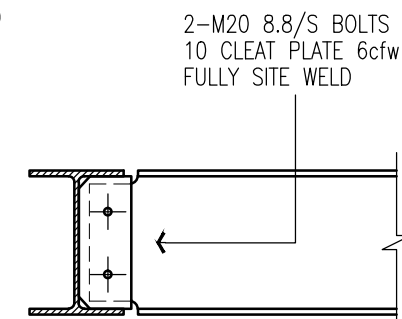


TYP SUPPORT

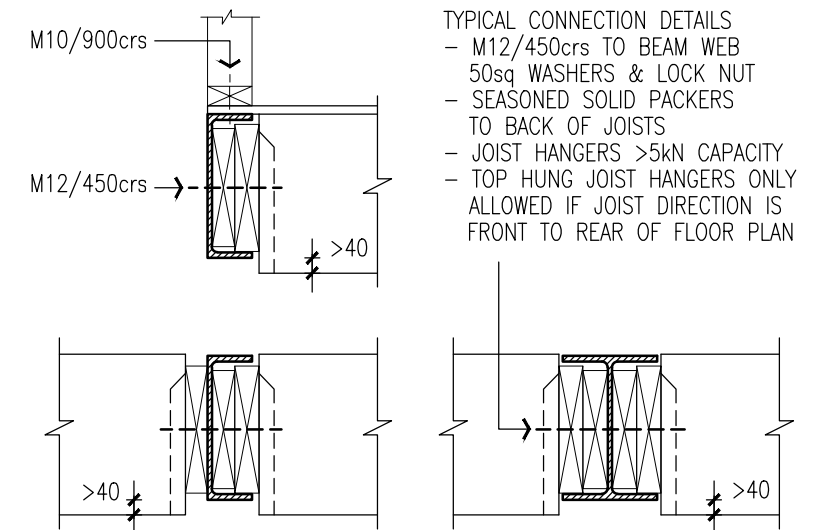


BRICKWORK / FRAME SUPPORT BEAM

INVERTED 'T' LINTEL



BEAM TO BEAM (typ)



JOIST TO STEEL DETAILS (typ)

MINIMUM REQUIREMENTS INDICATED - REFER BUILDER'S DETAILS &/OR SHOP DRAWINGS

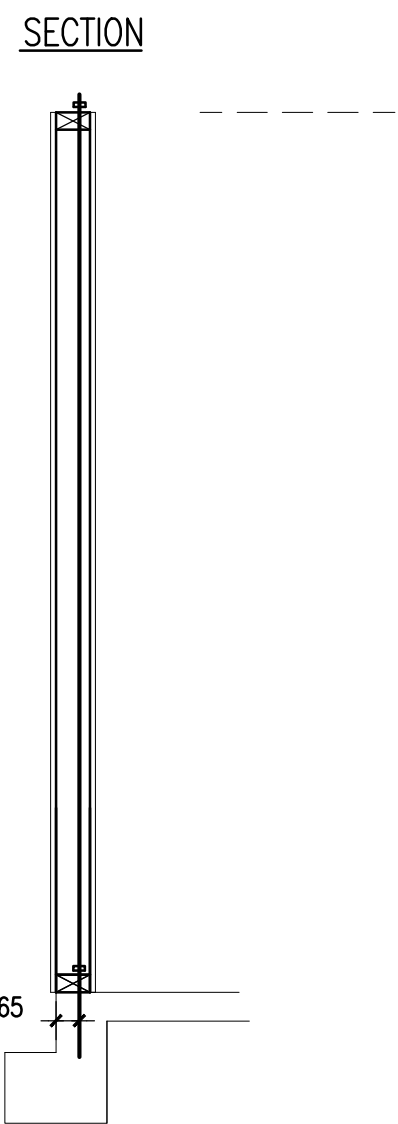
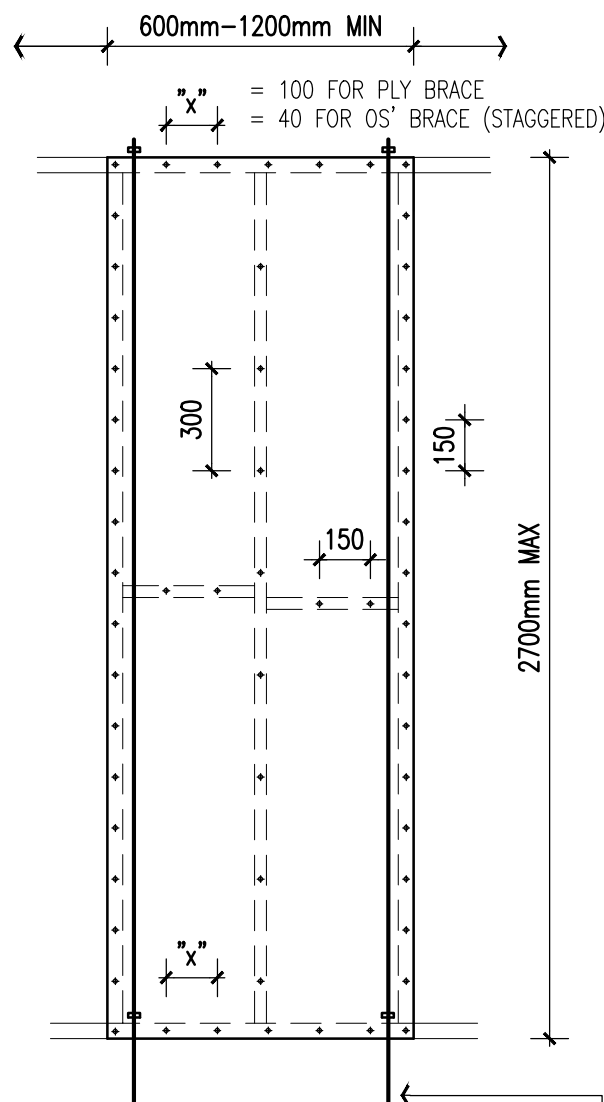
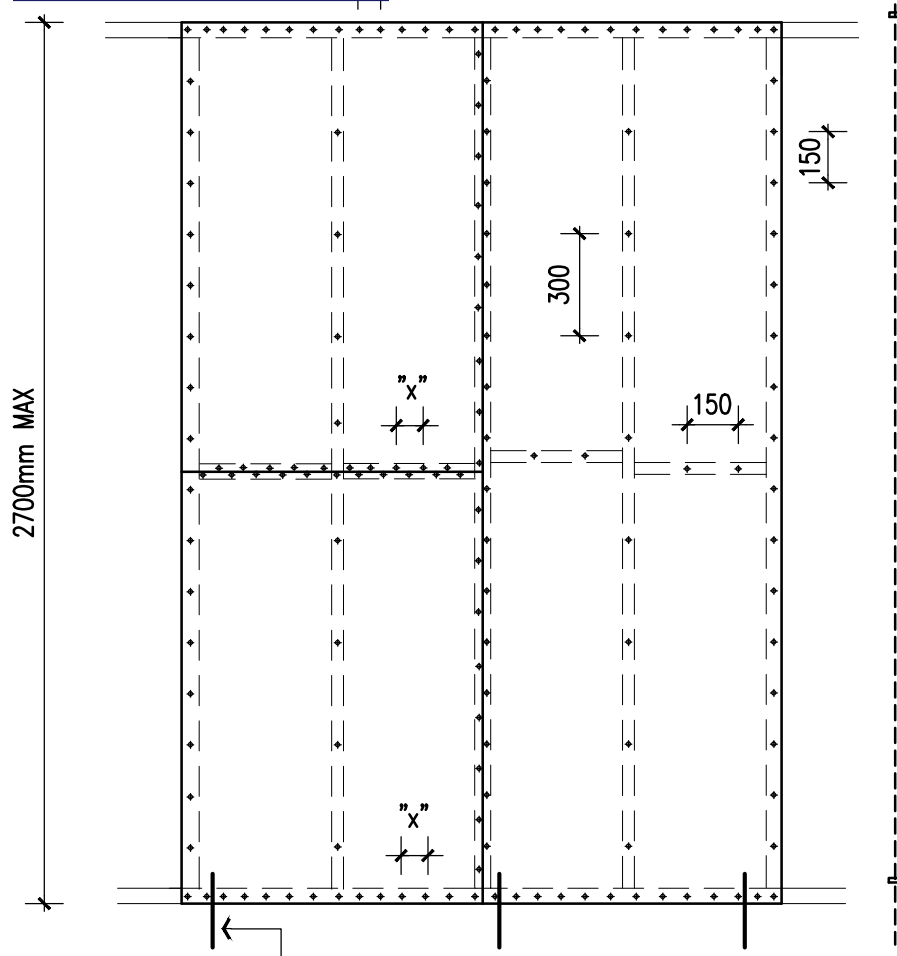
REFER SHEET E1-STRUCTURAL LAYOUT

<p>V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222</p>	<p>V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909</p>	<p>ISSUE DATE 13/09/17 DRAWN AG</p>	<p>EC-1096 R.W.van Heusden M.I.E.Aust.</p>	<p>PROPOSED STEELWORK DETAILS FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN PROJECT / DRAWING No. 17V6107-31829 E2</p>			
	<p>SCALE 1:100</p>	<p>THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT</p>					
	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	DATE		DESCRIPTION		
No.	DATE	DESCRIPTION					

6kN/m BRACING (PLYWOOD/OS'BRACE)

DOUBLE SIDED BRACING DS (IF REQUIRED)

GROUP FOUR
 FOR FURTHER AND DETAILS ALTERNATIVES REFER AS1684.2'10
 REFER STRUCTURAL LAYOUT SHEET E1
BUILDING SURVEYORS
BUILDING PERMIT
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017



FIXING OF BOTTOM PLATE TO FLOOR FRAME or SLAB
 13kN CAPACITY CONNECTION EACH END & 1.2m CRS
 M12 RODS REQUIRED EACH END OF PANELS
 FOR WALL PANELS 450mm-900mm LONG
 (SHORT WALL PANEL WITH NO RODS ~3kN/m)

6kN/m BRACING NOTES:

1. PLY SHEETING F11 7mm (min) or SIMILAR AS PER AS1684'99'10 & AS2269.
2. SUITABLE OS' BRACE ALTERNATIVES MAY BE USED (COMPLY WITH MANU SPECS).
3. NAILING: 2.8-3.15 FH, 30mm L; FASTENERS SUITABLY COATED/PROTECTED
4. FRAME/STUDS TO BE JD4 TIMBER (minimum)
5. WALL PLATES SECURED TO FLOOR/ROOF BY APPROVED RESTRAINTS (AS PER AS1684 Sec8).
6. FLOOR/CEILING TO TRANSFER LATERAL LOADS TO INTERNAL BRACED WALLS.
7. ALL CONNECTIONS MUST ALLOW TRANSFER OF LATERAL LOADS (AS PER AS1684).
8. MIN FIXING TO SLAB - UNO, USE CHEMSET M12/1200mm EMBEDDED 85mm INTO SLAB
9. INTERNAL WALL FIXING TO SLAB - UNO, 10kN CAPACITY CONNECTION EACH END & 0.6m CRS

DOUBLE SIDED BRACING NOTES:

- REFER 6kN/m BRACING NOTES/DETAILS
 - SINGLE PIECE SHEET WITH NO BUTT JOINTS
 - STAGGER NAILING BETWEEN SIDES
 - ENSURE NOT TO SPLIT STUDS (PROVIDE EXTRA or WIDER STUDS AS REQD)
- CAPACITY OF DS BRACING TAKEN AS:
 900mm WALL LENGTH = 10.8kN
 800mm WALL LENGTH = 8.6kN
 700mm WALL LENGTH = 5.9kN
 600mm WALL LENGTH = 3.6kN

M16 RODS EACH END (FOR DS BRACE)
 NUTS & 50sq 6PL WASHERS
 SECURE TO TOP & BOTTOM WALL PLs
 CHEMSET RODS INTO SLAB (800 SERIES)
 M16 - EMBED 125mm MIN
 M16 - EDGE DIST 65mm MIN

<600mm WALL LENGTH USE DOUBLE SIDED 6kN/m SPECS
 (PLATE FIXING & INCREASED SHEET NAILING AND NO RODS)

6kN/m BRACING & DOUBLE SIDED BRACING AT CRITICAL LOCATIONS NOMINATED ON SHEET E1

FULL BRACING IS TO BE PROVIDED AS PER AS1684.2'10 FOR THE NOMINATED WIND CATEGORY,
 USE 6kN/m & DS BRACING WHERE NOMINATED ON SHEET E1 AS PART OF THE FINAL BRACING.

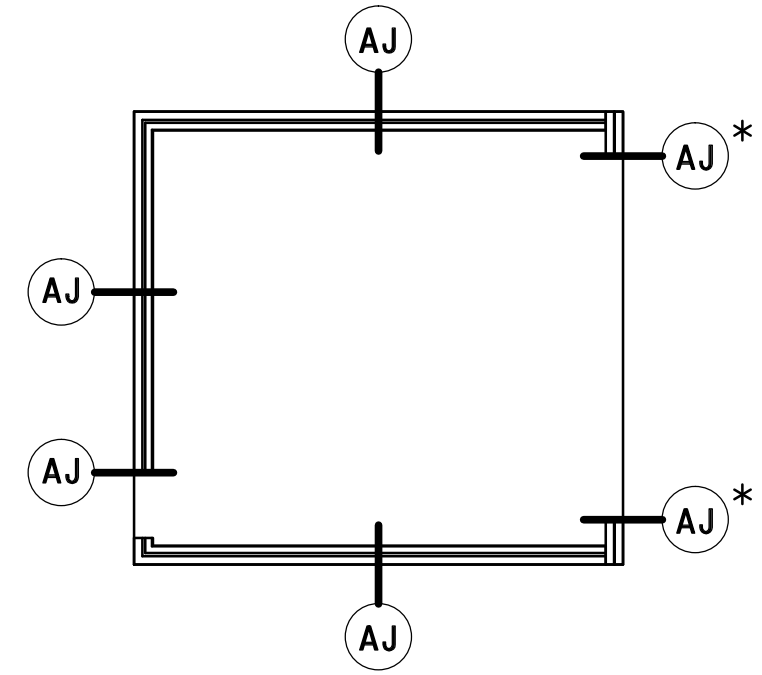
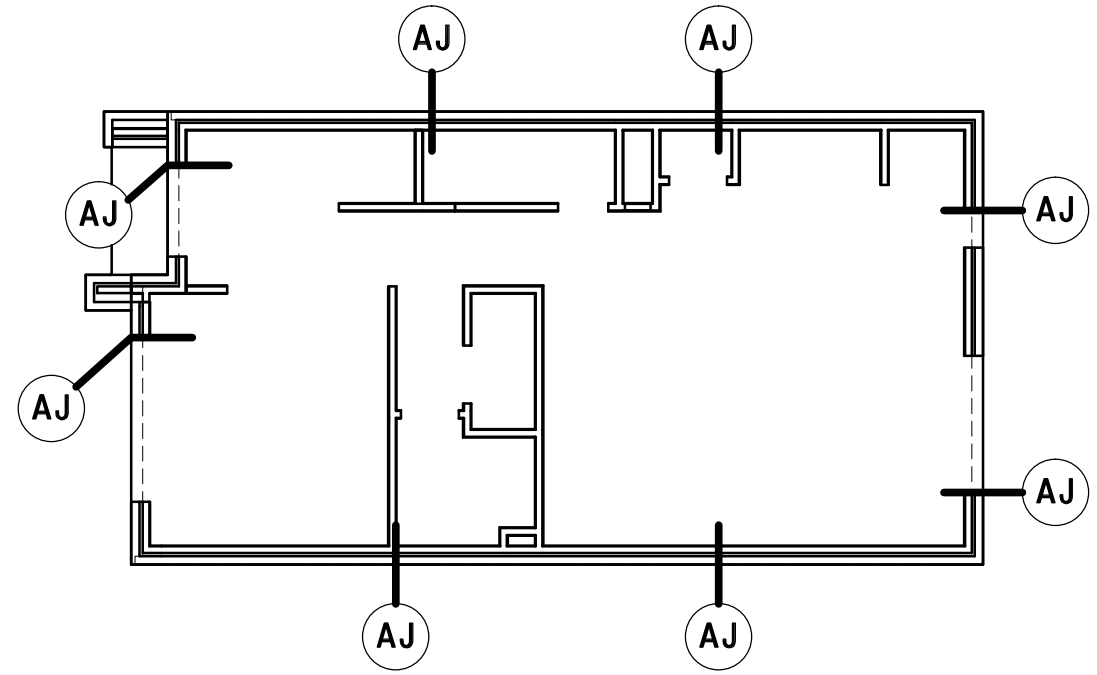
REFER SHEET E1-STRUCTURAL LAYOUT

V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222	V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909	ISSUE DATE 13/09/17 DRAWN AG	EC-1096 R.W.van Heusden M.I.E.Aust.	PROPOSED SPECIAL BRACING LAYOUT FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN PROJECT / DRAWING No. 17V6107-31829 E3
	SCALE 1:100	THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT DATED / /	SIGNED BY THE OWNERS SIGNED BY THE BUILDER	

GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017

AJ GROUND FLOOR ARTICULATION JOINT

1. INSTALLED AS PER BCA & CCAA TN61
2. ENSURE GAP TO ALLOW BRICK PANEL MOVEMENT. ENSURE ALL MORTAR IS REMOVED FROM GAP.
3. FILL GAP AS PER TN61
4. PROVIDE BRICK TIES TO FRAME BOTH SIDES OF A.J. TIES AS PER BCA.
5. EXTENDABLE ANCHORS ACROSS THE A.J. AT LOCATIONS AS NOTED IN THE BCA AND TN61 (eg. DOUBLE BRICK TO BRICK VENEER)
6. KEY A.J. LOCATIONS ARE AS FOLLOWS:
 - SINGLE TO DOUBLE STOREY CONSTRUCTION
 - DOUBLE BRICK TO BRICK VENEER
 - BOTH SIDES OF LARGE OPENINGS ~3600mm
 - BOTH SIDES OF LINTELS WITH 2 BRICK COURSES
 - AT 4m-6m CENTRES, EVENLY SPREAD
 - AT 2m-4m FROM EXTERNAL CORNERS



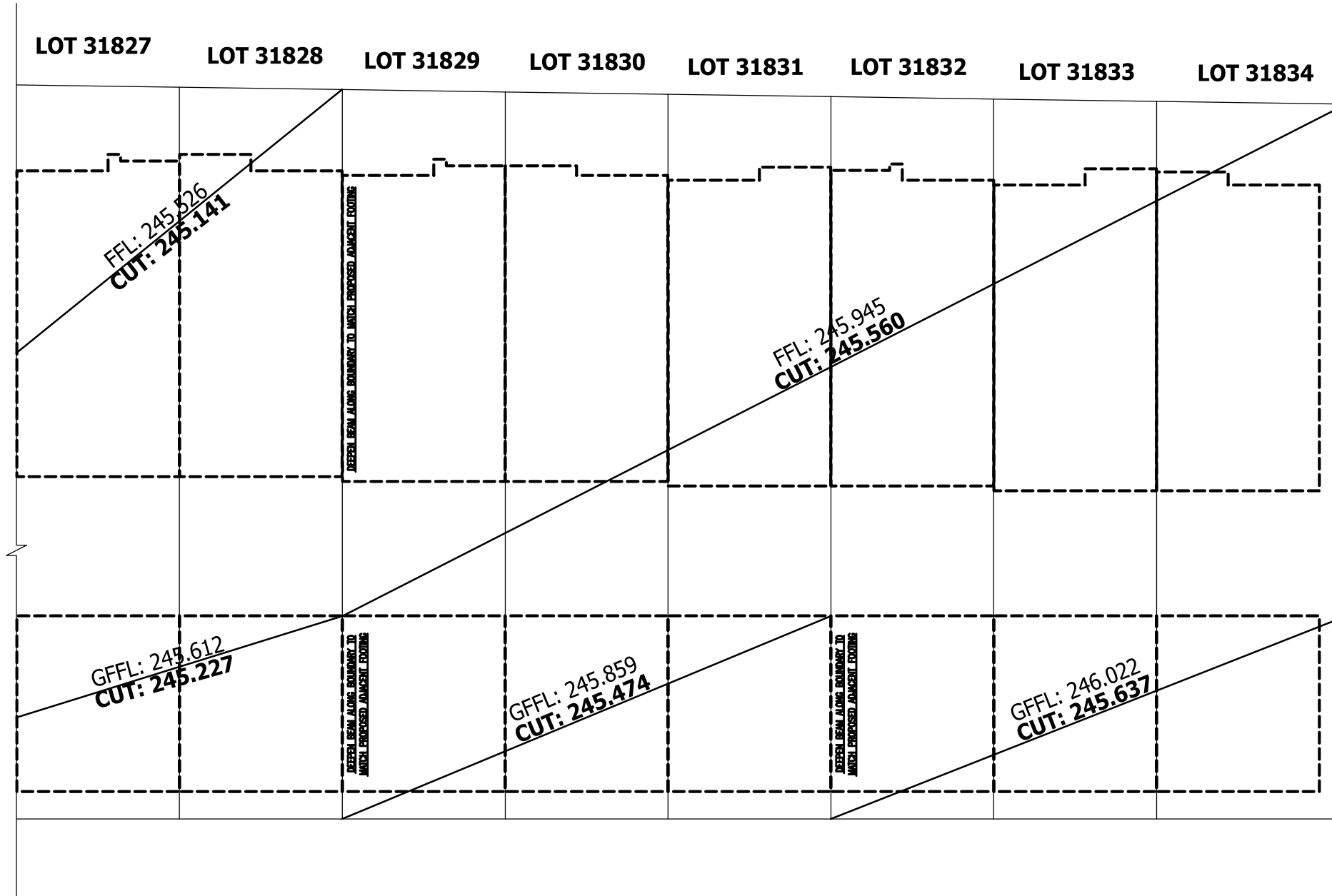
AJ* ARTICULATION JOINT OR LIGHT CLAD

FINAL LOCATIONS TO BE CONFIRMED BY ARCHITECTURAL CONSTRAINTS

*** ALL DIMENSIONS AS PER ARCHITECTURAL DRAWINGS AND TO BE VERIFIED ON SITE ***

<p>V.H.C. ENGINEERS STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS P.O. Box 7021 UPPER FERNTREE GULLY 3156 PH: (03) 9754 1111 (18/69 ACACIA ROAD FERNTREE GULLY) FAX: (03) 9754 1222</p>	V.H.C.(Aust.) Pty Ltd trading as ACN 062 784 909	ISSUE DATE 13/09/17 DRAWN AG						
	SCALE 1:100		THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT DATED / /					
	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width: 5%;">REVISIONS No.</th> <th style="width: 15%;">DATE</th> <th style="width: 80%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS No.	DATE	DESCRIPTION			
REVISIONS No.	DATE	DESCRIPTION						
<p>PROPOSED ARTICULATION JOINT LAYOUT FOR: ABN Group (VIC) SITE: LOT 31829 PARKFOREST WALK CRAGIEBURN PROJECT / DRAWING No. 17V6107-31829 AJ1</p>								

GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number: 2748420173698/0
 Issued by David Madeira on 22/09/2017



ALL INFORMATION DERIVED FROM HOMEBUYERS BENCHING PLAN REV E DATED 10/07/17

V.H.C. ENGINEERS

STRUCTURAL, CIVIL AND GEOTECHNICAL ENGINEERS

P.O. Box 7021 UPPER FERNTREE GULLY 3156
 (18/69 ACACIA ROAD FERNTREE GULLY)

PH: (03) 9754 1111
 FAX: (03) 9754 1222

V.H.C.(Aust.) Pty Ltd trading as
 ACN 062 784 909

ISSUE DATE 13/09/17 DRAWN AG

SCALE 1:200

REVISIONS No.	DATE	DESCRIPTION

THIS IS SHEET OF DRAWINGS REFERRED IN THE CONTRACT

DATED / /

SIGNED BY THE OWNERS

SIGNED BY THE BUILDER

PROPOSED OVERALL GROUP LAYOUT

FOR: ABN Group (VIC)
SITE: LOT 31829 PARKFOREST WALK
 CRAGIEBURN

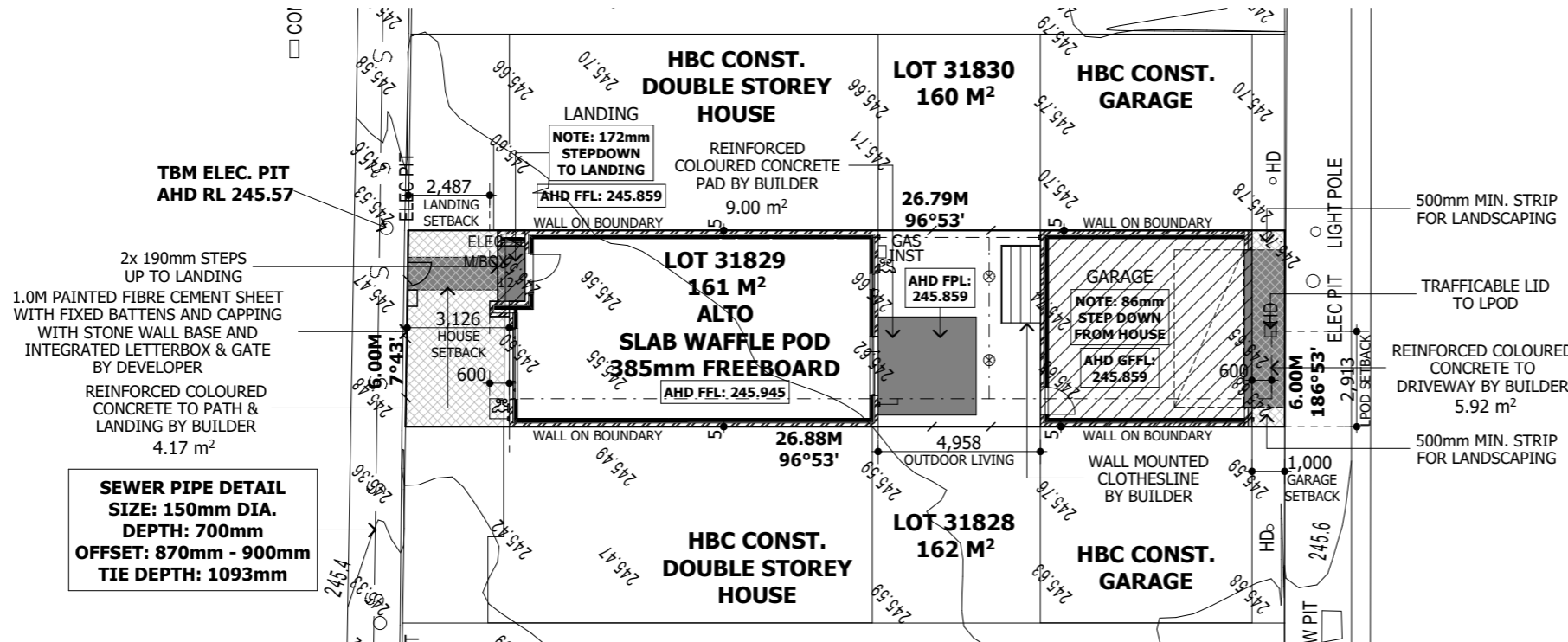
PROJECT / DRAWING No. 17V6107-31829 G1

CROSSOVER LOCATION IS PRELIMINARY. CROSSOVER TO BE ADJUSTED TO SUIT DRIVEWAY AS CONFIRMED BY STOCKLAND HIGHLANDS BUILDING SURVEYORS

HOUSE BUILDING PLATFORM
 PROVIDE SITE CUT LEVEL @ AHD RL 245.560
 NUMBER: 27484201738980
GARAGE BUILDING PLATFORM
 PROVIDE SITE CUT LEVEL @ AHD RL 245.474

PARKFOREST WALK

OLIVETREE LOOP



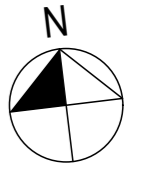
SEWER PIPE DETAIL
 SIZE: 150mm DIA.
 DEPTH: 700mm
 OFFSET: 870mm - 900mm
 TIE DEPTH: 1093mm

GENERAL NOTES:

- AGI DRAIN, STORMWATER DRAIN AND DOWN PIPE LAYOUT SHOWN IS INDICATIVE ONLY.
- IF A CONCRETE DRIVEWAY IS NOT PROVIDED IT IS THE OWNERS RESPONSIBILITY TO PROVIDE A GRATED DRAIN ACROSS GARAGE OPENINGS.

BUILD. ENVELOPE: MCP AA3253
 BUILDING ENVELOPES EXIST ON THIS LOT.

SURVEY DATE	14/06/17
CONTOUR INTERVALS	200 mm
LEVELS TO	245.57 AHD
SITE AREA	160.97 sqm
BUILDING AREA	107.32 sqm
SITE COVERAGE	66.67%
WIND SPEED	N2
SITE CLASSIFICATION	P



MELWAY REF: PAGE 386 H1

6 STAR ENERGY RATING:

DWELLING TO COMPLY W/- THE REQUIREMENTS OF 6 STAR ENERGY RATING

TERMITE PROTECTION

PROVIDE TERMITE PROTECTION IN ACCORDANCE WITH A.S.3660.1

DEVELOPERS APPROVAL:

DEVELOPERS APPROVAL RECEIVED FROM "STOCKLAND - HIGHLANDS, STAGE 318"

TOWN PLANNING:

TOWN PLANNING APPROVAL RECEIVED FOR LOT UNDER 300m2

SIDE SETBACK:

PROVIDE 5MM SETBACK FROM SIDE BOUNDARIES TO ENSURE SUFFICIENT CLEARANCE BETWEEN ADJOINING SLABS AS PER ENGINEERS SPECIFICATIONS.

LANDSCAPING:

FRONT & REAR LANDSCAPING BY BUILDER TO DEVELOPER REQUIREMENTS .

DRAINAGE NOTES:

PROVIDE MIN. 100mm DIA. U.P.V.C. STORMWATER DRAINS WITH MIN. 1:100 FALL AND MIN. 300mm COVER, CONNECTED TO LEGAL POINT OF DISCHARGE

NOTE: ALL DOWNPIPES TO BE JOINED WITH PVC SWD AT BASE OF WEEPHOLES

PROVIDE GARDEN TAP AND HWU OVERFLOW OUTLET ABOVE O.R.G. (OVERFLOW RELIEF GULLY)

PROVIDE ADDITIONAL O.R.G. TO ANY ADDITIONAL GRADEN TAPS

⊗ DENOTES: CAPPED GRATE - STORMWATER RISER TO BE CUT BACK TO FINISHED LANDSCAPING LEVEL & CAPPED WITH GRATE TO ALLOW FOR WATER DISCHARGE

STORMWATER:

STORMWATER PIPES TO BE INSTALLED 600mm FROM PERIMETER OF BUILDING AND CONNECTED TO LEGAL POINT OF DISCHARGE. A NO GO ZONE IS IN PLACE 150mm EITHER SIDE OF STORMWATER.

RECYCLED WATER:

PROVIDE PROVISIONS FOR CLASS 'A' RECYCLED WATER. INCLUDES CLASS 'A' RECYCLED WATER TAPPING, 1 No. PURPLE TAP TO HOUSE & SEPARATE PLUMBING FOR TOILETS & WASHING MACHINE. LOCATION TO BE CONFIRMED BY PLUMBER

EASEMENT NOTE:

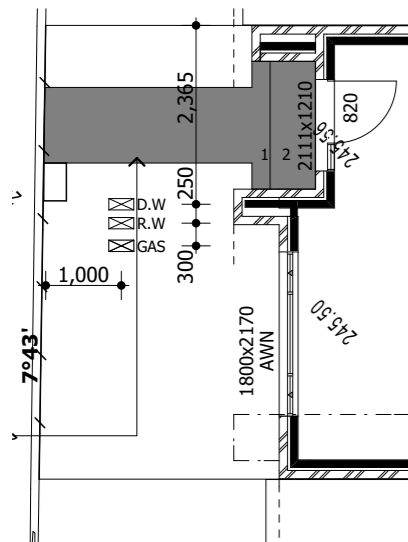
SEWER PIPE TO FRONT BOUNDARY HAS BEEN CHECKED AND THERE IS NO EFFECT TO ANGLE OF REPOSE.

FIBRE OPTIC NETWORK (NBN Co.):

BUILDER TO PROVIDE 25mm CONDUIT FROM TELECOMMUNICATIONS PIT IN STREET TO METER BOX IN ACCORDANCE WITH DEVELOPERS GUIDELINES. CLIENT TO ORGANISE CONNECTION.

PLUMBING:

PROVIDE INSTANTANEOUS GAS HOT WATER SYSTEM IN LIEU OF STANDARD SOLAR HOT WATER SYSTEM. BUILDING SURVEYOR TO PROCEED WITH PERFORMANCE ASSESSMENT REPORT.



Metring Plan (Gas/Recycled & Drinking Water)

1:100

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GENERAL NOTES:
 - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
 - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES

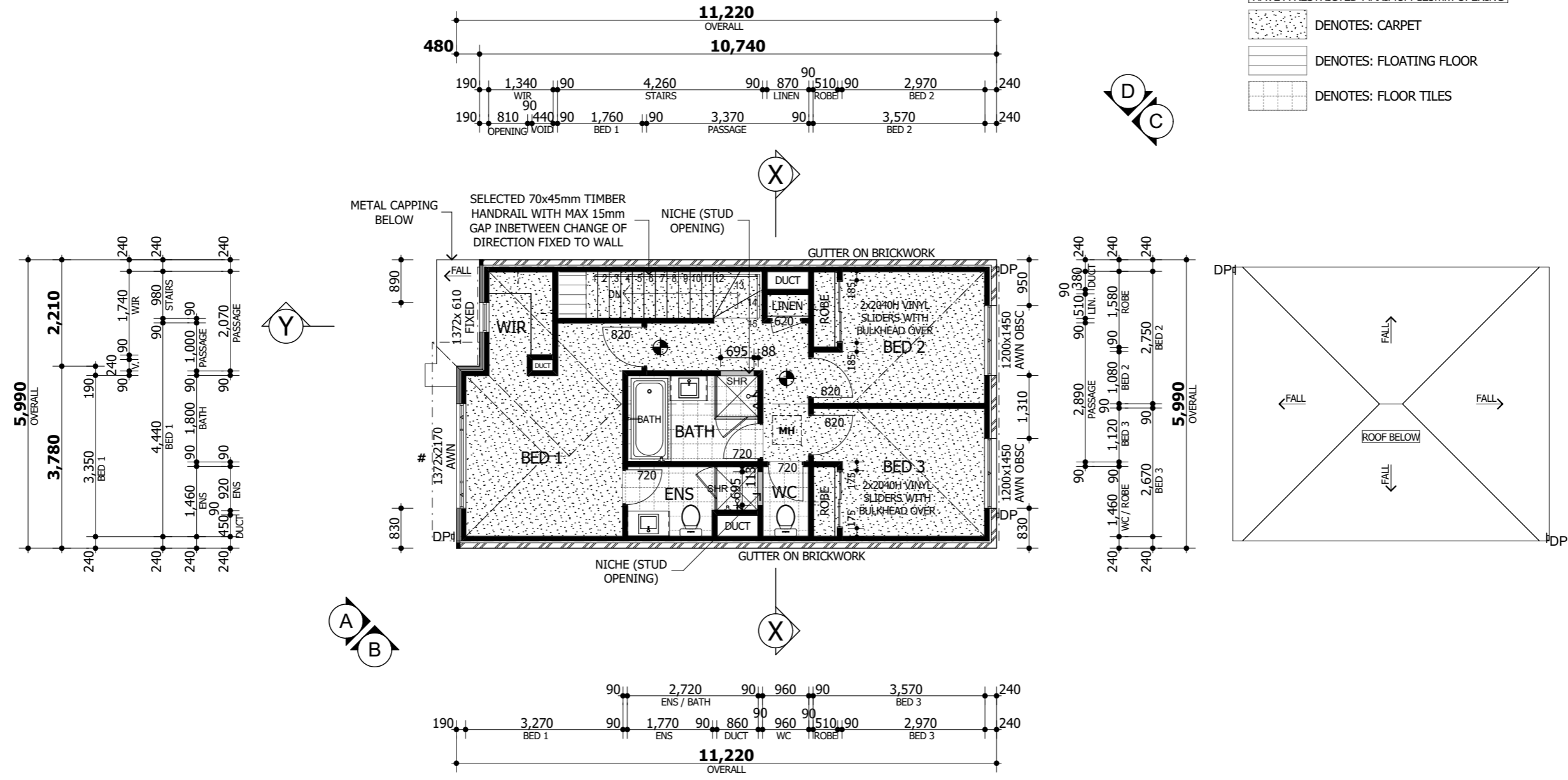
CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Site Plan		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	MASTER DRAWN
SCALE:1:200, 1:100		DRAWING No: 1 of 9


HomebuyersCentre
 First choice in first homes
 81 LORIMER STREET
 DOCKLANDS, VIC. 3008
 PH: (03) 9674 4500 FAX: (03) 9674 4501

DENOTES: WINDOWS TO UPPER LEVEL TO HAVE A RESTRICTED MAXIMUM 125mm OPENING

-  DENOTES: CARPET
-  DENOTES: FLOATING FLOOR
-  DENOTES: FLOOR TILES



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 First choice in first homes 81 LORIMER STREET DOCKLANDS, VIC. 3008 PH: (03) 9674 4500 FAX: (03) 9674 4501	REVISIONS: A DA PLANS, FINALS, VO1, VO2, PSI 23/08/17 JP B C D E F G	GENERAL NOTES: - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES	CLIENT: V. & A. ROWLEY LOT 31829 PARKFOREST WALK CRAIGIEBURN	First Floor Plan DESIGN:ALTO 19 FACADE:FACADE 4	DRAWN BY: JP	REVISION NO: REV 1	MASTER DRAWN TYP HGT: 24/24R SA	JOB No: 40284 SCALE:1:100 DRAWING No: 3 of 9
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GENERAL NOTE:

- ALL GLAZING TO COMPLY WITH AS1288 - 2006 GLASS IN BUILDINGS, & WITH AS4055 - 1992 FOR WINDLOADING.
- WINDOW HEAD HEIGHT DIMENSIONS ARE NOMINAL AND TO BE TAKEN TO THE NEXT BRICK COURSE.
- REFER ENGINEERS DRAWINGS FOR AJ LOCATIONS.
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCT. ENGINEERS DRAWINGS & COMPUTATIONS
- ALL DOWNPIPES TYPICAL BUILDING PERMITS

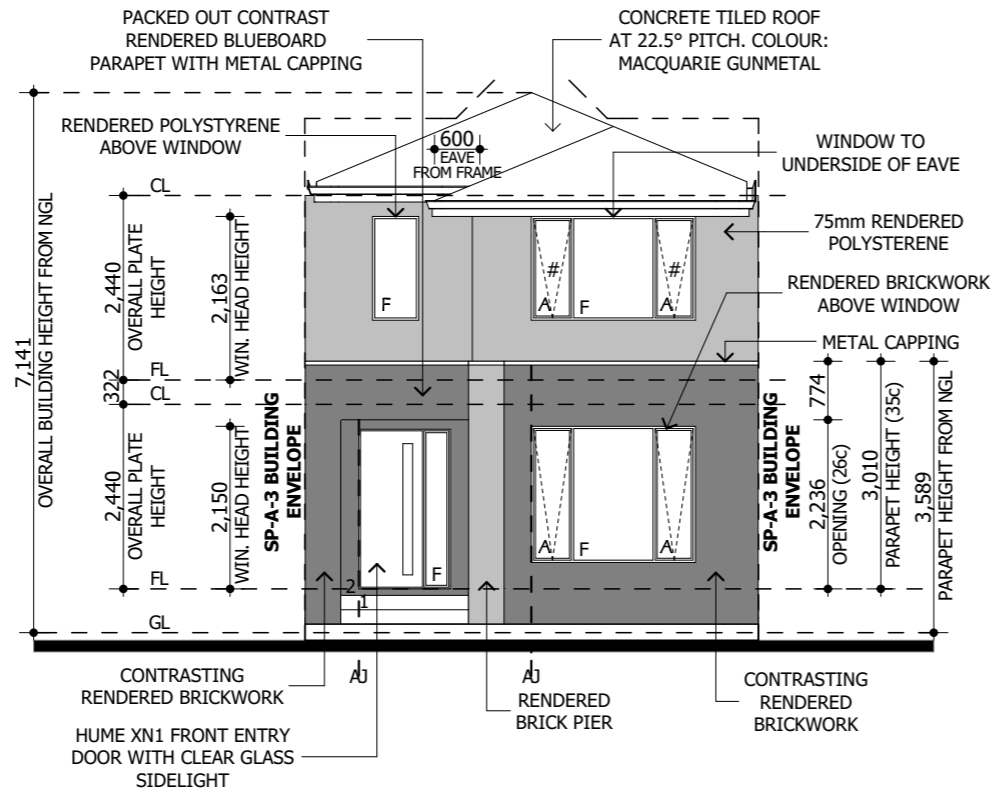
Issued by David Madala on 22/09/2017
 Number: 2448420173698/0
 PROVIDE FLYDOORS WITH BLACK NYLON MESH AND ALUMINIUM FRAME WITH CATCH (NO LOCK) TO ALUMINIUM SLIDING DOORS.

PROVIDE FLYSCREENS WITH BLACK NYLON MESH AND ALUMINIUM FRAME TO ALL OPENABLE AWNING AND SLIDING WINDOWS.

WINDOWS IN LIGHTWEIGHT CLADDING, REDUCE REVEAL TO SUIT CLADDING

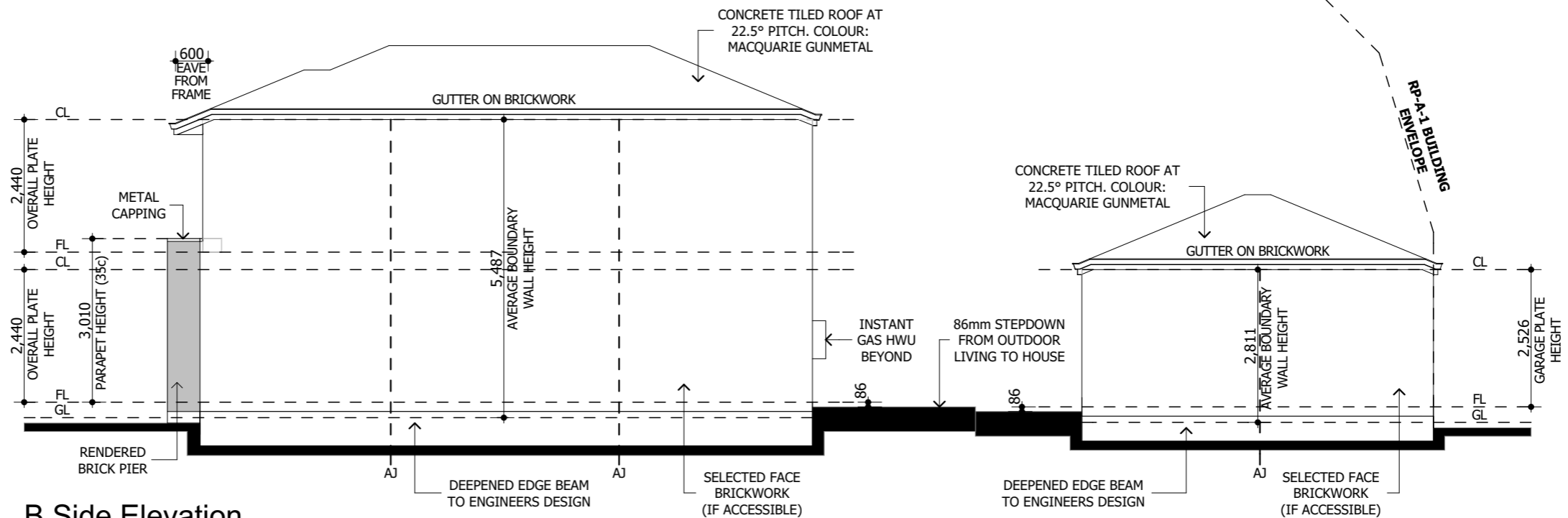
DENOTES: WINDOWS TO UPPER LEVEL TO HAVE A RESTRICTED MAXIMUM 125mm OPENING

- DENOTES: RENDER COLOUR
- DENOTES: CONTRASTING RENDER COLOUR



A Front Elevation

1:100



B Side Elevation

1:100

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CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Elevations 1		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	SCALE:1:100 DRAWING No: 4 of 9

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 PH: (03) 9674 4500 FAX: (03) 9674 4501

GENERAL NOTE:

- ALL GLAZING TO COMPLY WITH AS1288 - 2006 GLASS IN BUILDINGS, & WITH AS4075 -1992 FOR WINDLOADING.
- WINDOW HEAD HEIGHT DIMENSIONS ARE NOMINAL AND TO BE TAKEN TO THE FINISH BRICK COURSE.
- REFER ENGINEERS DRAWINGS FOR ALL LOCATIONS.
- ALL DRAWINGS TO BE IN ACCORDANCE WITH BUILDING PERMIT REGULATIONS.
- ALL DRAWINGS TO BE IN ACCORDANCE WITH STRUCT. ENGINEERS DRAWINGS & COMPUTATIONS.
- ALL DOWNPIPES TO BE JOINED TO PVC SWD AT BASE OF WEEPHOLES TYPICAL.

Number: 22/4842017/3698/0
 Issued by David Madeira on 22/09/2017

PROVIDE FLYDOORS WITH BLACK NYLON MESH AND ALUMINIUM FRAME WITH CATCH (NO LOCK) TO ALUMINIUM SLIDING DOORS.

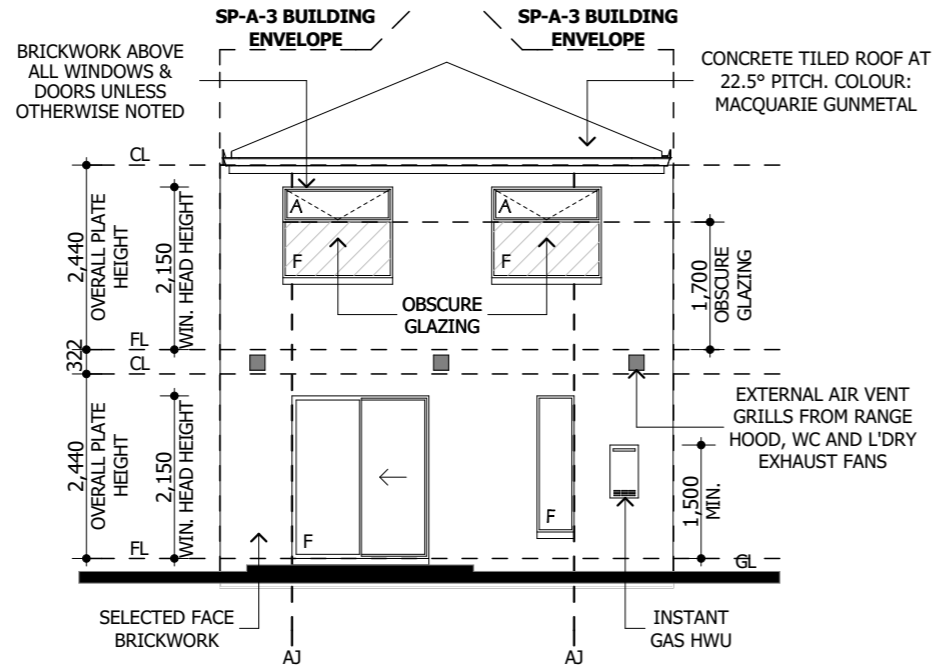
PROVIDE FLYSCREENS WITH BLACK NYLON MESH AND ALUMINIUM FRAME TO ALL OPENABLE AWNING AND SLIDING WINDOWS.

WINDOWS IN LIGHTWEIGHT CLADDING, REDUCE REVEAL TO SUIT CLADDING

DENOTES: WINDOWS TO UPPER LEVEL TO HAVE A RESTRICTED MAXIMUM 125mm OPENING

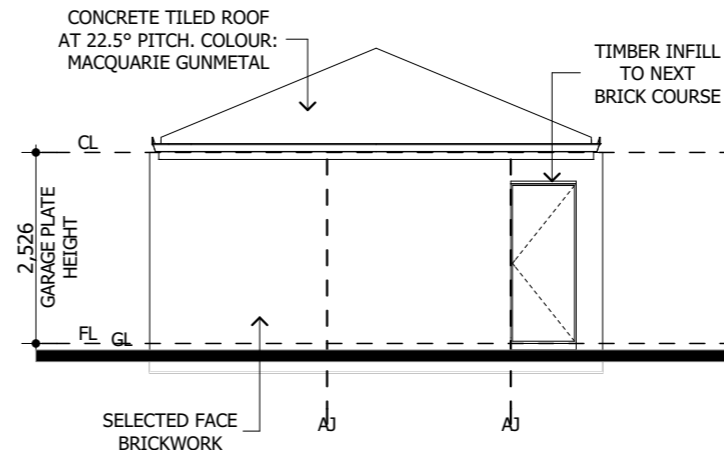
■ DENOTES: RENDER COLOUR

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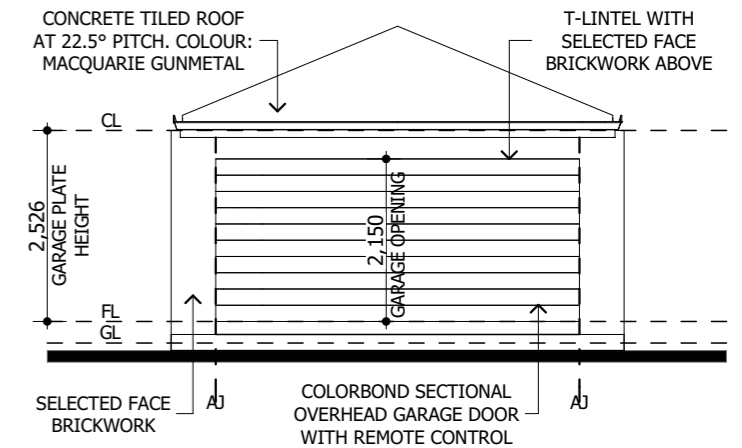
C Rear Elevation

1:100



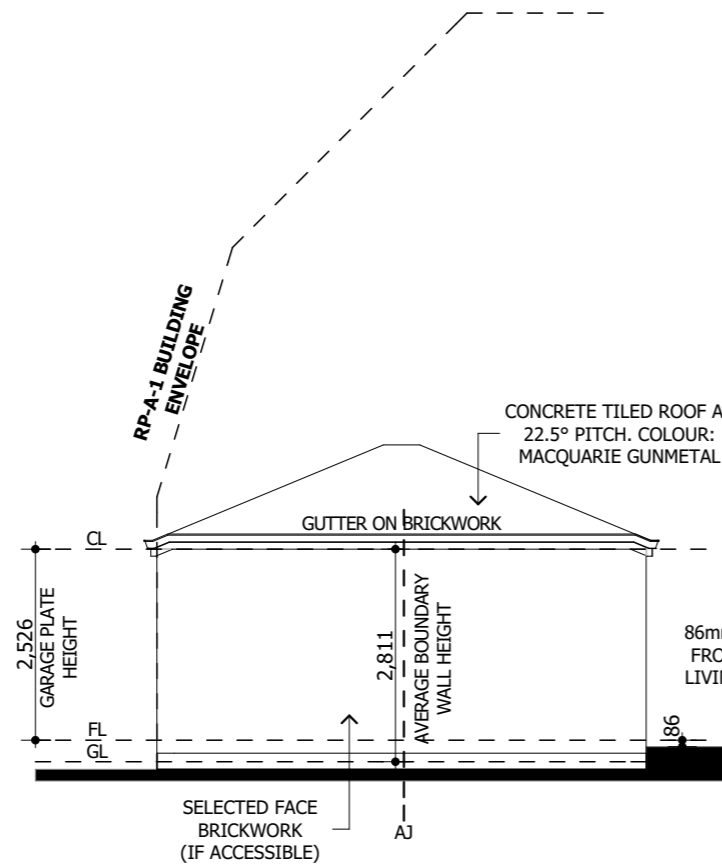
A1 Front Elevation

1:100



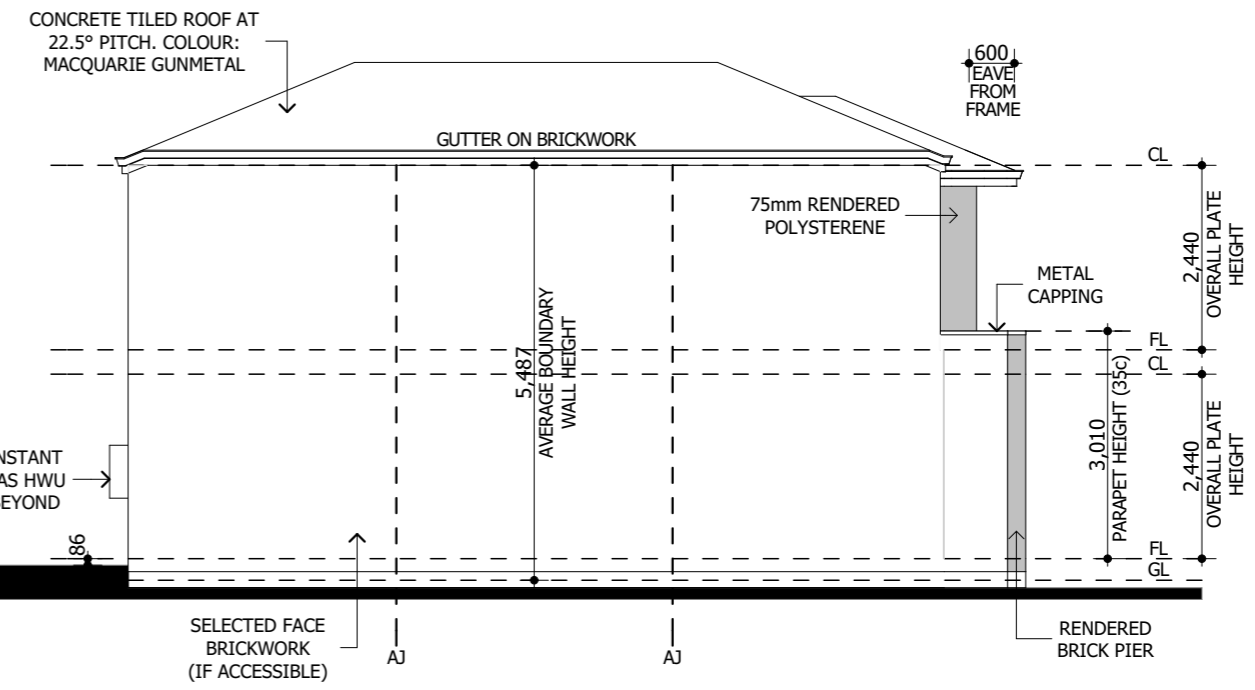
C1 Rear Elevation

1:100



D Side Elevation

1:100



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CLIENT:

V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Elevations 2

DESIGN:ALTO 19

FACADE:FACADE 4

DRAWN BY:
JP

TYP HGT: 24/24R SA

REVISION NO:
REV 1

MASTER DRAWN

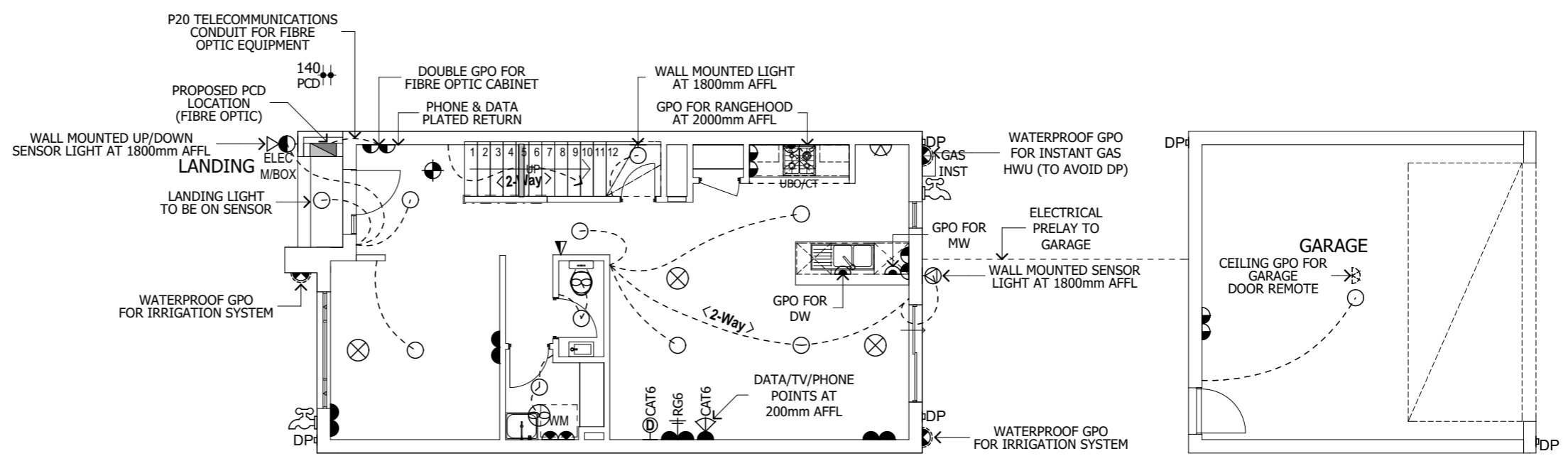
JOB No:
40284

SCALE:1:100

DRAWING No:
5 of 9

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Drafting Electrical Legend			
	Ceiling Exhaust Fan	---	2
	Ceiling Light Batten	1.00w	9
	Ceiling Light Batten With sensor	6.00w	1
	Up/Down Light With Sensor	---	1
	Wall Mounted Light With Sensor	1.00w	1
	DBL GPO @ 1450	---	4
	DBL GPO @ 1400	---	1
	DBL GPO @ 200	---	4
	SNGL CEILING MOUNTED	---	1
	SNGL GPO @ 1650	---	1
	SNGL GPO @ 200	---	1
	SNGL GPO @ 2000	---	1
	SNGL GPO @ 650	---	3
	SNGL WP GPO @ 600	---	3
	Data Point	---	1
	Smoke Alarm	---	1
	Telephone Point	---	1
	Television Point	---	1
	Two Way Switch	---	2
	Ceiling Heating Duct	---	3
	Thermostat	---	1



STRUCTURED CABLING - NBN CO FIBRE OPTIC BASIC PACK
 PROVIDE NBN CO BASIC FIBRE OPTIC SYSTEM INCLUDING:
 -25MM P20 CONDUIT AND BENDS WITH DRAWSTRING FROM NOMINATED LOCATION TO BELOW METER BOX
 -(2No) PATCH LEADS
 NOTE: STANDARD PHONE POINT IS DELETED WHEN ABOVE PACKAGE IS SELECTED
 NOTE: NO FURTHER ADDITIONAL DATA OR PHONE POINTS CAN BE ADDED TO THIS PACKAGE

RED TONGUE PLATFORM FOR HEATER IS TO BE INSTALLED DIRECTLY ON BOTTOM TRUSS CHORD- NO BEARERS UNDER PLATFORM

- STANDARD CONNECTIONS:**
- PROVIDE LIGHT POINT & SINGLE GPO IN ROOF SPACE
 - WHERE INSTALLED, PROVIDE DIRECT POWER OUTLETS TO UNDER BENCH OVEN AND COOLING UNIT
 - SUPPLY & INSTALLATION OF LIGHT FITTINGS ARE NOT INCLUDED. COSTINGS ALLOW ONLY FOR BATTEN HOLDERS UNLESS SPECIFIED OTHERWISE.

- GENERAL NOTES:**
- LOCATIONS OF FIXTURES SHOWN ON PLANS ARE INDICATIVE ONLY AND MAY VARY DUE TO LOCATION OF STRUCTURAL MEMBERS AND TRUSS LAYOUTS
 - LOCATIONS OF DUCTED HEATING AND AIR CONDITIONING POSITIONS MAY VARY ON SITE DUE TO MANUFACTURER'S SPECIFICATIONS.

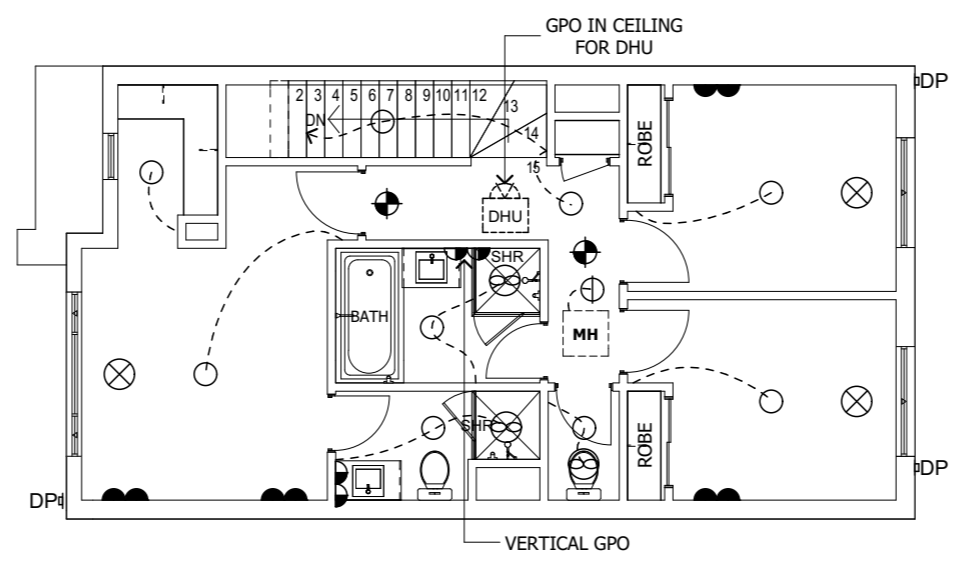
Building Class	Total Area	Total Lights	Total Wattage	Wattage Allow. M ²	Allow. Wattage
House	132.62 M ²	17	187/W	1.41 M ²	5.00 M ²
Garage	38.76 M ²	1	11/W	0.28 M ²	3.00 M ²
Outdoor	2.10 M ²	1	6/W	2.86 M ²	4.00 M ²
Average				1.18 M ²	4.00 M ²

Note: PORCH LIGHT ON DAYLIGHT SENSOR
 Perimeter lights have an average light source efficacy of not less than 40 Lumens/W
 Average Wattage Per M² = 1.18
COMPLIES

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<p>81 LORIMER STREET DOCKLANDS, VIC. 3008 PH: (03) 9674 4500 FAX: (03) 9674 4501</p>	<p>REVISIONS:</p> <table border="1"> <tr> <th>Rev</th> <th>Description</th> <th>Date</th> <th>By</th> </tr> <tr> <td>A</td> <td>DA PLANS, FINALS, VO1, VO2, PSI</td> <td>23/08/17</td> <td>JP</td> </tr> <tr> <td>B</td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D</td> <td></td> <td></td> <td></td> </tr> <tr> <td>E</td> <td></td> <td></td> <td></td> </tr> <tr> <td>F</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td></td> <td></td> <td></td> </tr> </table>	Rev	Description	Date	By	A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17	JP	B				C				D				E				F				G				<p>GENERAL NOTES:</p> <ul style="list-style-type: none"> - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES 	<p>CLIENT:</p> <p>V. & A. ROWLEY</p> <p>LOT 31829 PARKFOREST WALK CRAIGIEBURN</p>	<p>Electrical - Ground Floor</p> <p>DESIGN:ALTO 19</p> <p>FACADE:FACADE 4</p>	<p>DRAWN BY: JP</p> <p>REVISION NO: REV 1</p> <p>MASTER DRAWN</p> <p>TYP HGT: 24/24R SA</p>	<p>JOB No: 40284</p> <p>SCALE:1:100, 1:1</p> <p>DRAWING No: 6 of 9</p>
	Rev	Description	Date	By																																		
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Drafting Electrical Legend			
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	Ceiling Light Batten	11.00w	9
	Light To Roof Space	---	1
	DBL GPO @ 1150	---	2
	DBL GPO @ 1150	---	4
	SNGR CEILING MOUNTED	---	1
	Smoke Alarm	---	2
	Ceiling Heating Duct	---	3
	Heating Unit	---	1
	Man Hole	---	1



- STANDARD CONNECTIONS:**
- PROVIDE LIGHT POINT & SINGLE GPO IN ROOF SPACE
 - WHERE INSTALLED, PROVIDE DIRECT POWER OUTLETS TO UNDER BENCH OVEN AND COOLING UNIT
 - SUPPLY & INSTALLATION OF LIGHT FITTINGS ARE NOT INCLUDED. COSTINGS ALLOW ONLY FOR BATTEN HOLDERS UNLESS SPECIFIED OTHERWISE.
- GENERAL NOTES:**
- LOCATIONS OF FIXTURES SHOWN ON PLANS ARE INDICATIVE ONLY AND MAY VARY DUE TO LOCATION OF STRUCTURAL MEMBERS AND TRUSS LAYOUTS
 - LOCATIONS OF DUCTED HEATING AND AIR CONDITIONING POSITIONS MAY VARY ON SITE DUE TO MANUFACTURER'S SPECIFICATIONS.

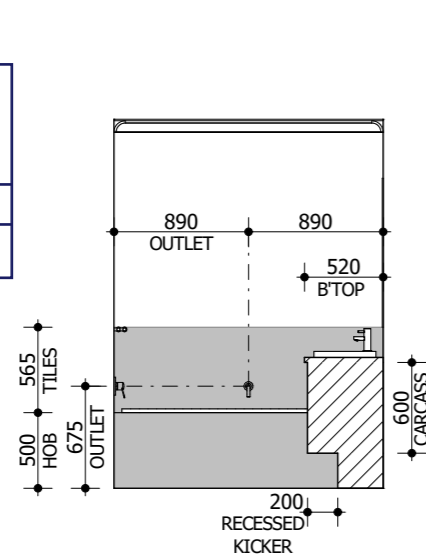
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<p>HomebuyersCentre First choice in first homes 81 LORIMER STREET DOCKLANDS, VIC. 3008 PH: (03) 9674 4500 FAX: (03) 9674 4501</p>	<p>REVISIONS:</p> <table border="1"> <tr> <td>A</td> <td>DA PLANS, FINALS, VO1, VO2, PSI</td> <td>23/08/17</td> <td>JP</td> </tr> <tr> <td>B</td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D</td> <td></td> <td></td> <td></td> </tr> <tr> <td>E</td> <td></td> <td></td> <td></td> </tr> <tr> <td>F</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td></td> <td></td> <td></td> </tr> </table>	A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17	JP	B				C				D				E				F				G				<p>GENERAL NOTES:</p> <ul style="list-style-type: none"> - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES 	<p>CLIENT:</p> <p>V. & A. ROWLEY</p> <p>LOT 31829 PARKFOREST WALK CRAIGIEBURN</p>	<p>Electrical - First Floor</p> <p>DESIGN:ALTO 19</p> <p>FACADE:FACADE 4</p>	<p>DRAWN BY: JP</p> <p>REVISION NO: REV 1</p> <p>MASTER DRAWN</p>	<p>JOB No: 40284</p> <p>SCALE:1:100, 1:1</p> <p>DRAWING No: 7 of 9</p>
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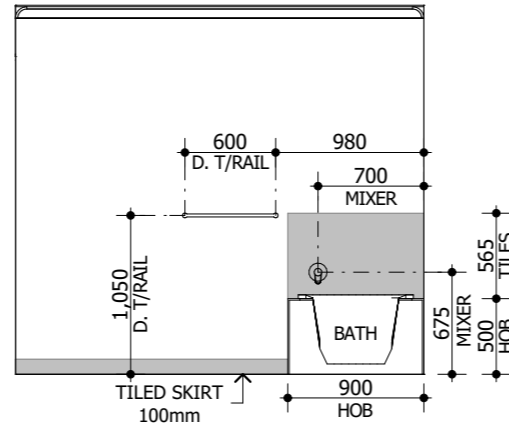
BATH PLAN

1:100



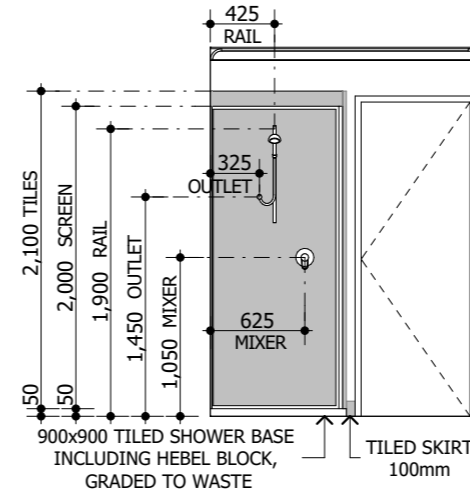
A Bath

1:50



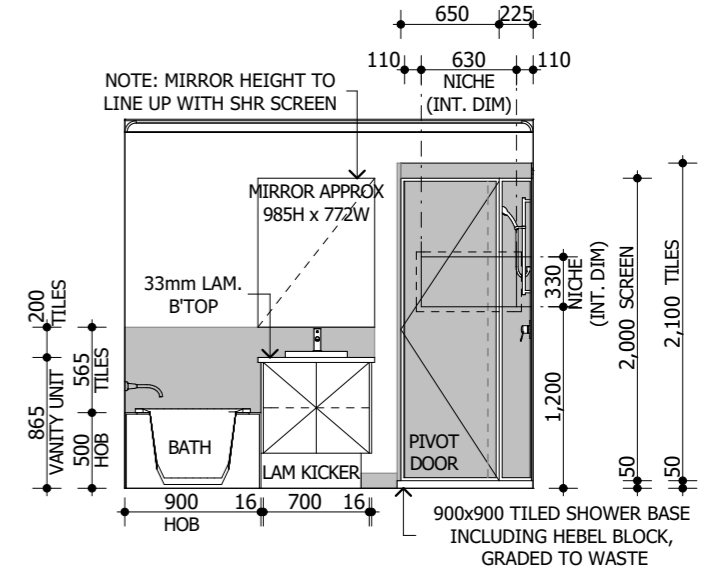
B Bath

1:50



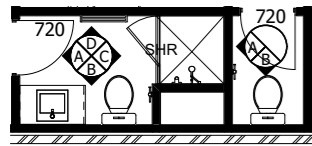
C Bath

1:50



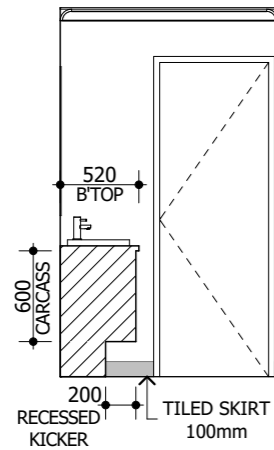
D Bath

1:50



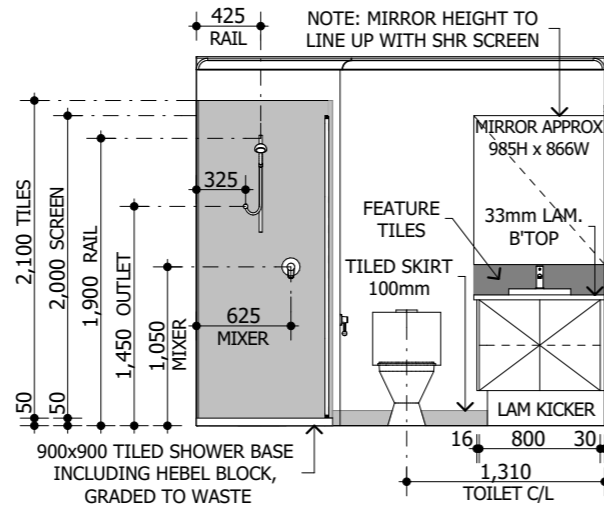
ENSUITE PLAN

1:100



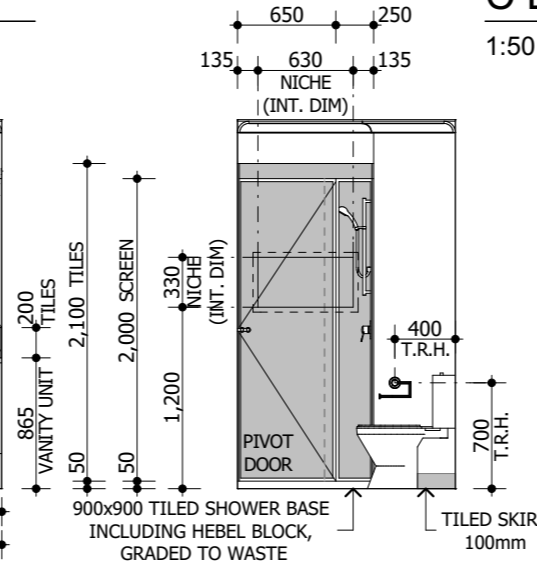
A Ensuite

1:50



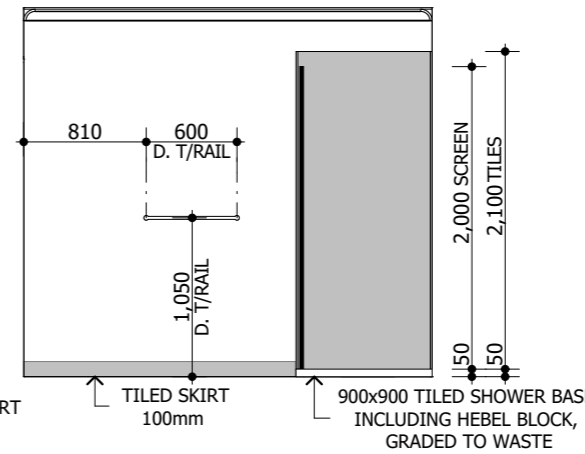
B Ensuite

1:50



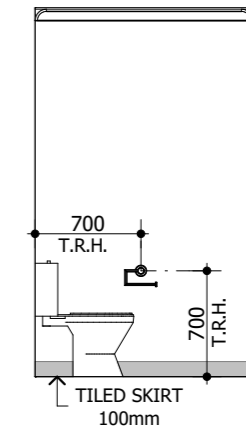
C Ensuite

1:50



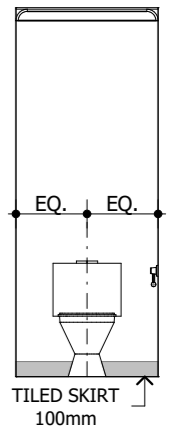
D Ensuite

1:50



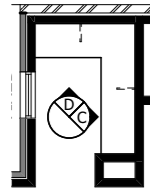
A WC

1:50



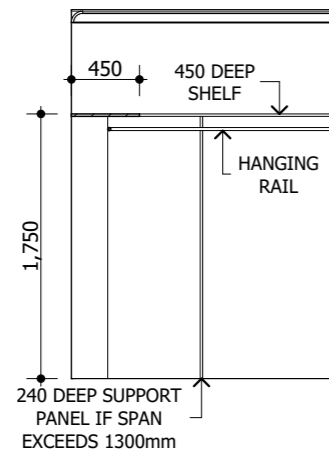
B WC

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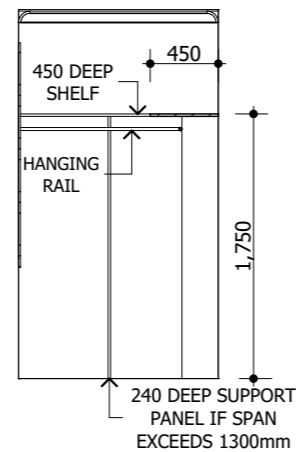
WIR PLAN

1:100



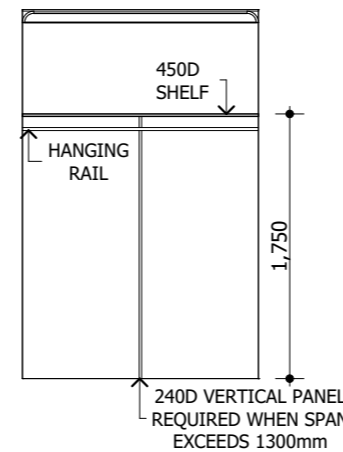
C WIR

1:50



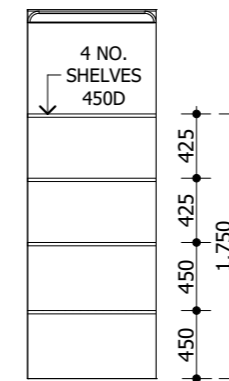
D WIR

1:50



Robe Typical

1:50



Linen Typical

1:50

GENERAL NOTE:
 • EXTENT OF TILING SHOWN ON PLANS IS INDICATIVE ONLY AND MAY VARY ACCORDING TO TILE SELECTION AND SETOUT
 • TILING DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS ONLY, TILING HEIGHTS MAY VARY DUE TO TILE SELECTION.
 • ALL WALL HUNG VANITIES TO HAVE NOGGINGS PROVIDED FOR FIXING TO WALLS ABUTTING VANITY

ALL DIMENSIONS ARE TO FINISHED PLASTER

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GENERAL NOTES:
 - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
 - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES

CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Internals 2		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	SCALE:1:100, 1:50
	MASTER DRAWN	DRAWING No: 9 of 9



GROUP FOUR

BUILDING SURVEYOR

BUILDING PERMIT

Number: 274842017369870

Issued by David Madeira on 22/09/2017

NOTE:

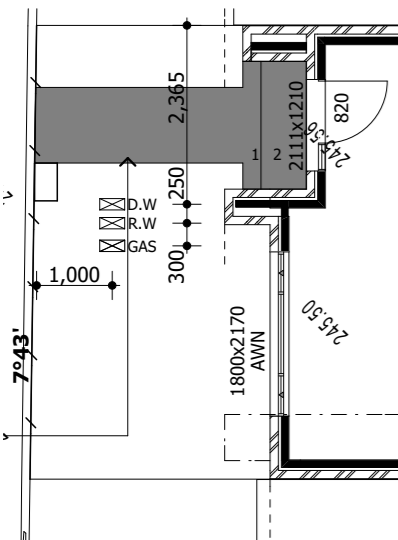
1.0M GARDEN EDGING TO BE PROVIDED BETWEEN FRONT AND LOT BOUNDARIES, MULCH AND COMPACTED GRAVEL, COMPACTED GRAVEL AND TURF.

DO NOT PROVIDE TIMBER GARDEN EDGING:

- BETWEEN MULCH/GRAVEL AND CONCRETE SLABS
- BETWEEN MULCH/GRAVEL AND CONCRETE STEPS
- BETWEEN MULCH/GRAVEL AND FENCING

PROVIDE LANDSCAPING TO FRONT & REAR GARDEN BY BUILDER TO DEVELOPERS REQUIREMENTS

LANDSCAPE LEGEND		
	NATURAL TURFGRASS	
	COMPACTED GRAVEL	
	GARDEN BED MULCH	
QTY	SPECIES	POT SIZE
8	Dr - DIANELLA REVOLUTA 'LITTLE REV'	180mm
7	Lm - LIRIOPE MUSCARI 'JUST RIGHT'	180mm
4	LIT - LOMANDRA LONGFOLIA 'TANIKA'	180mm



NOTE: ALL MULCHING MATERIALS WILL BE APPLIED AT MINIMUM DEPTH OF 100mm.

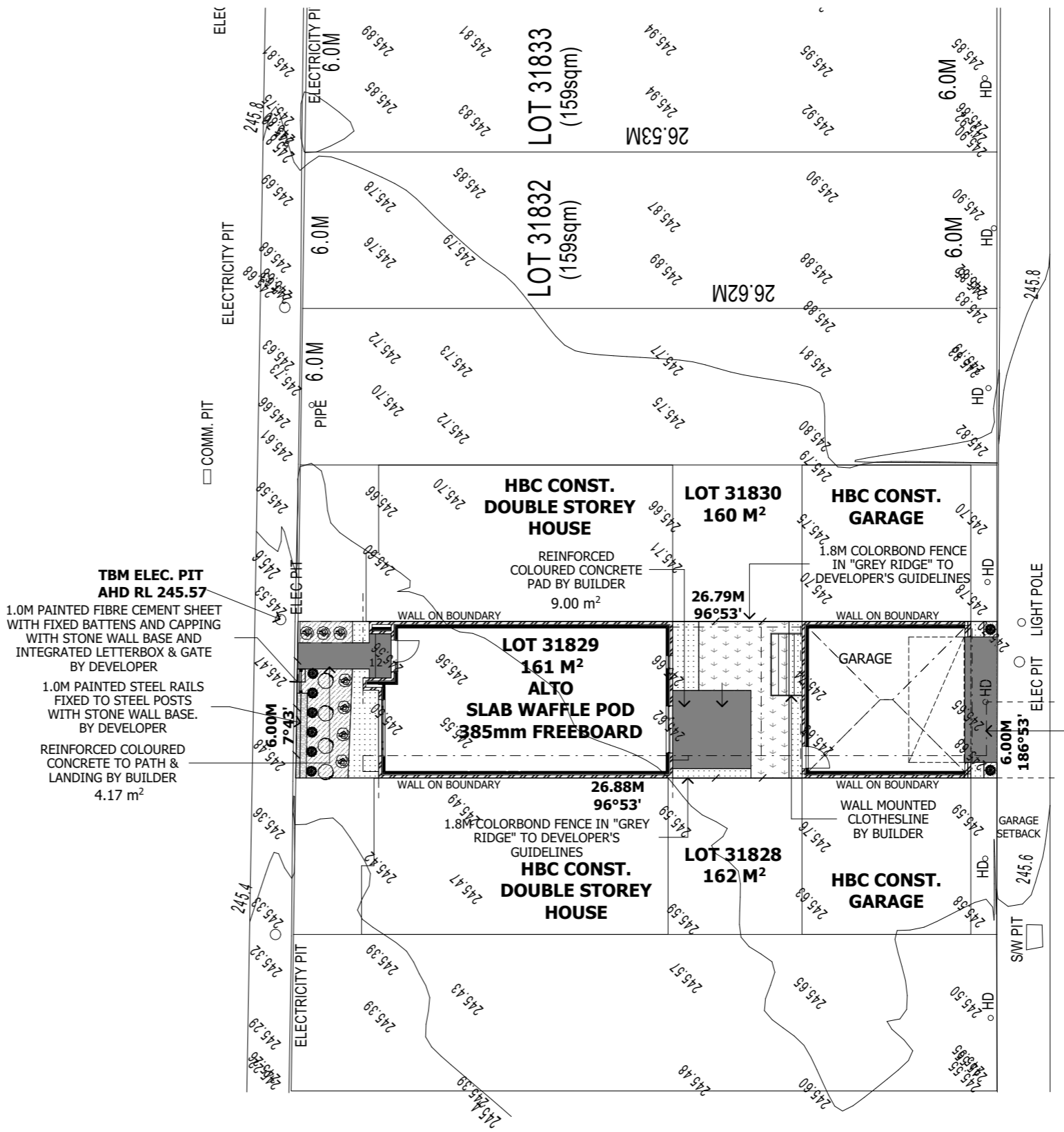
NOTE: TAPS TO FRONT OF PROPERTY MUST BE HIDDEN FROM PUBLIC VIEW BY PLANTING OR ANOTHER LANDSCAPING ELEMENT

NOTE: SHRUB SPECIES TO BE PLANTED FROM MINIMUM 200mm X 200mm POTS. TREE SPECIES TO BE PLANTED @ MINIMUM HEIGHT OF 2.0M

NOTE: LANDSCAPE TREATMENT TO THE NATURE STRIP TO BE PROVIDED AND MAINTAINED BY THE CLIENT AFTER HANDOVER TO DEVELOPER GUIDELINE REQUIREMENTS.

NOTE: IF LANDSCAPING DESIGN OR SPECIES ARE AMENDED BY THE CLIENT THE CLIENT MUST ENSURE LANDSCAPE PLAN IS SUBMITTED TO THE DEVELOPER FOR APPROVAL.

PARKFOREST WALK



OLIVETREE LOOP

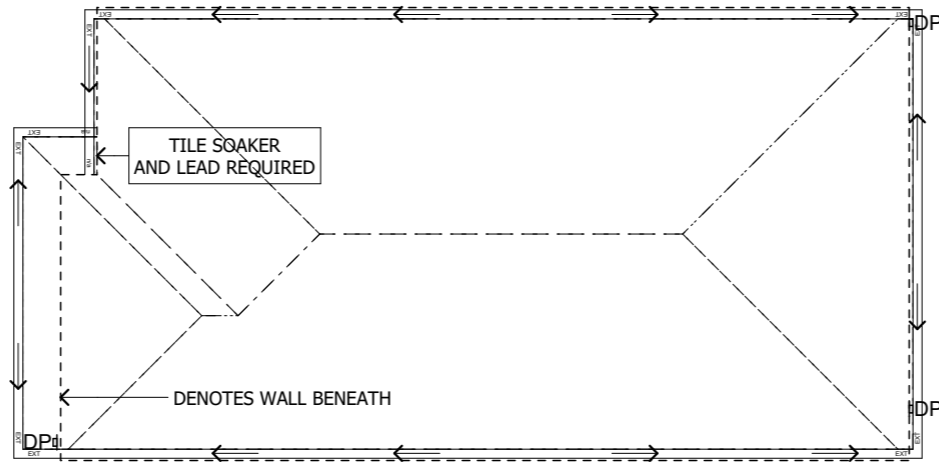
Metering Plan (Gas/Recycled & Drinking Water)

1:100

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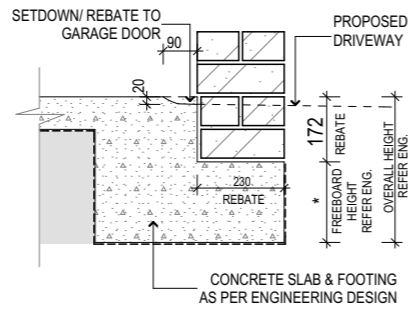
GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number : 2748420173698/0
 Issued by David Madeira on 22/09/2017



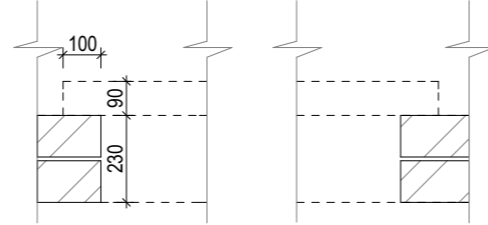
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<p>HomebuyersCentre First choice in first homes 81 LORIMER STREET DOCKLANDS, VIC. 3008 PH: (03) 9674 4500 FAX: (03) 9674 4501</p>	REVISIONS: <table border="1"> <tr> <td>A</td> <td>DA PLANS, FINALS, VO1, VO2, PSI</td> <td>23/08/17</td> <td>JP</td> </tr> <tr> <td>B</td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D</td> <td></td> <td></td> <td></td> </tr> <tr> <td>E</td> <td></td> <td></td> <td></td> </tr> <tr> <td>F</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G</td> <td></td> <td></td> <td></td> </tr> </table>	A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17	JP	B				C				D				E				F				G				GENERAL NOTES: - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES	CLIENT: V. & A. ROWLEY LOT 31829 PARKFOREST WALK CRAIGIEBURN	Roof Plan DESIGN:ALTO 19 FACADE:FACADE 4	JOB No: 40284 SCALE:1:100 DRAWING No: D.2 of 9
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JP	REV 1																																
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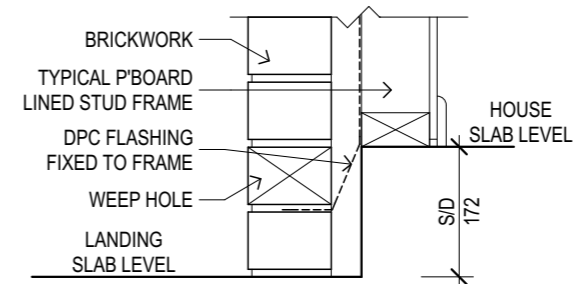
GROUP FOUR
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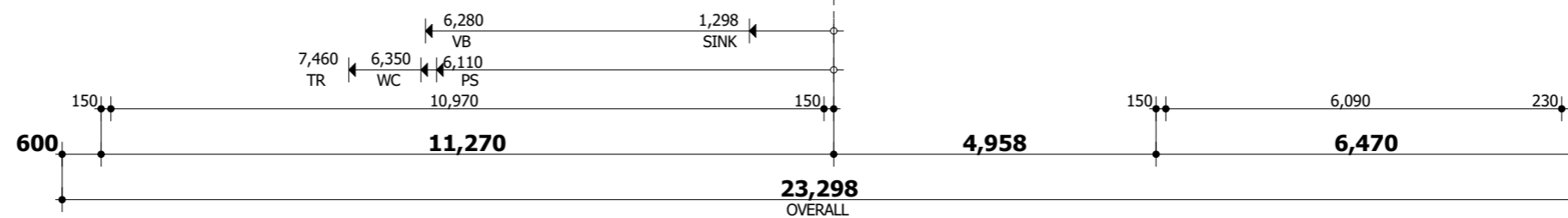
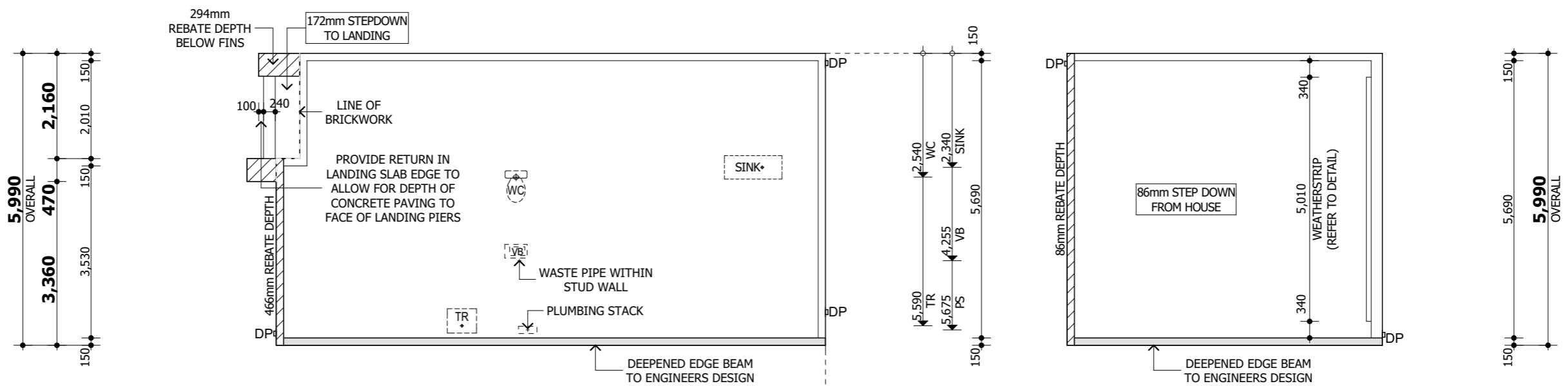
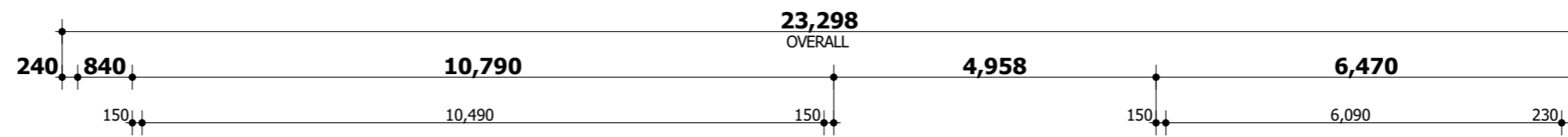
GARAGE VEHICLE OPENING DETAIL



GARAGE VEHICLE OPENING DETAIL PLAN VIEW



LANDING STEPDOWN
 SCALE 1:10



GENERAL NOTES:
 • WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
 • ALL PLUMBING DIMENSIONS ARE TO CENTRE OF WASTE UNLESS OTHERWISE NOTED
 • THIS PLAN IS TO BE READ IN CONJUNCTION AND CROSS REFERENCED WITH FLOOR PLANS AND INTERNAL ELEVATIONS.

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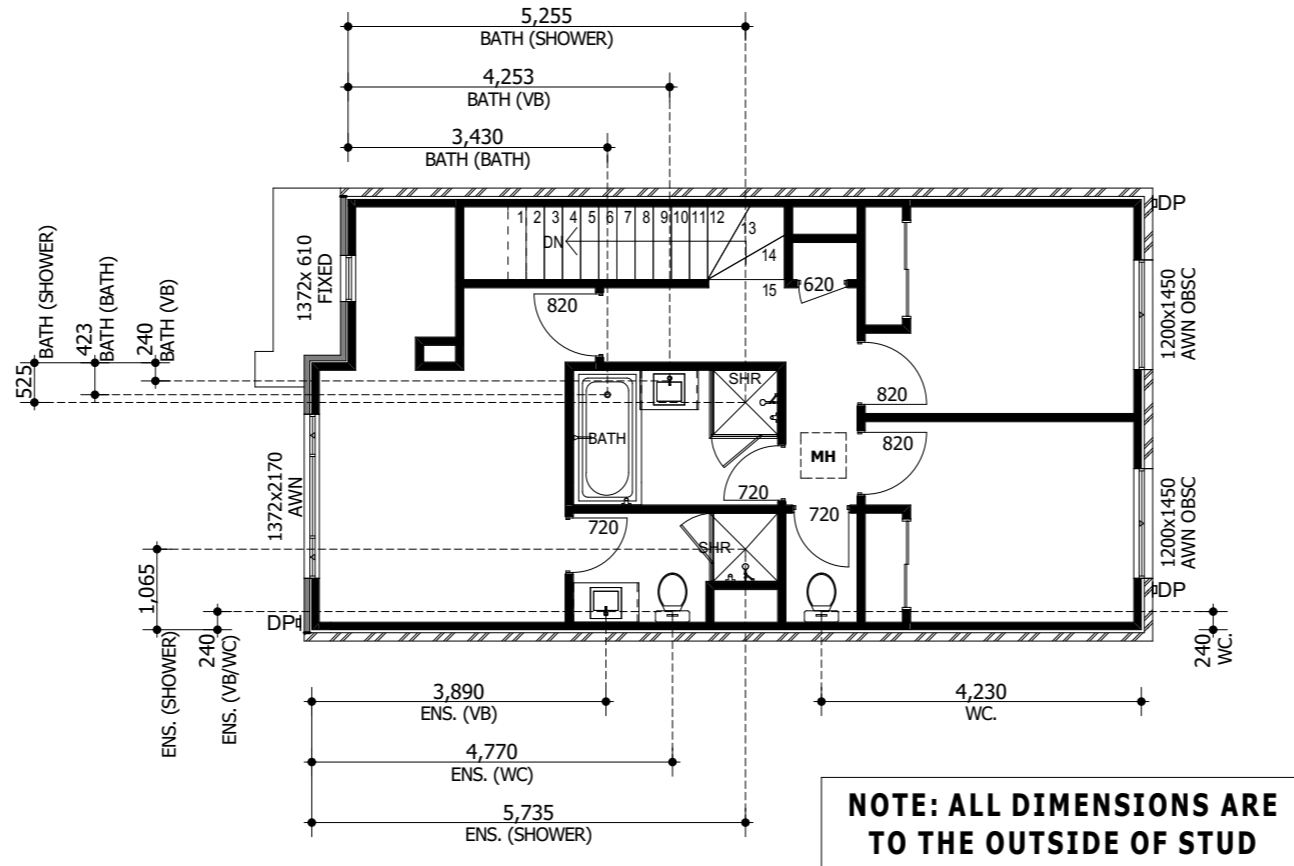
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CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Slab Plan		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	MASTER DRAWN : : D.3 of 9



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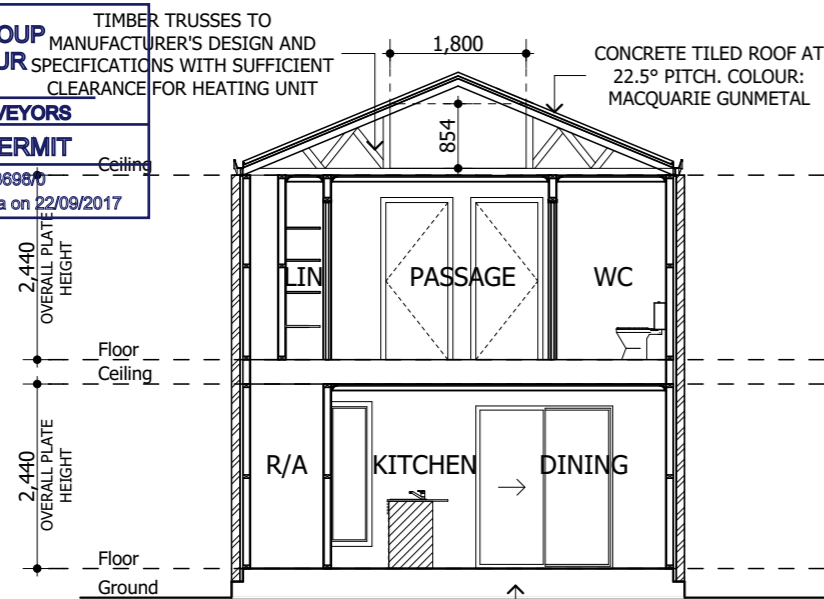
REVISIONS:		
A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17 JP
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GENERAL NOTES:
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CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

First Floor Plumbing Setout Plan		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	MASTER DRAWN : : D.4 of 9
SCALE:1:100, 1:10		DRAWING No:

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X Section

1:100

WAFFLE POD SLAB
 REFER TO ENGINEER'S DESIGN

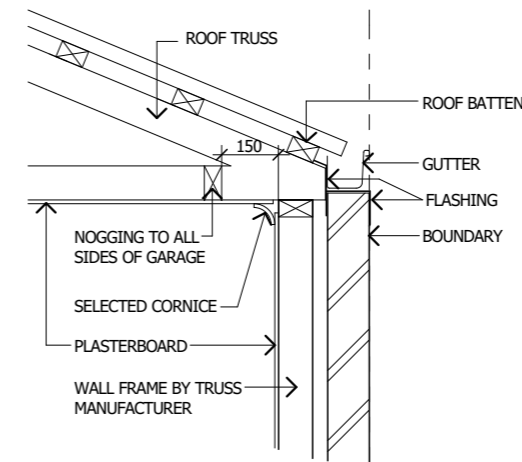
NOTE: REFER ENGINEER'S FOOTING DESIGN

ENERGY EFFICIENCY REQUIREMENTS					
	BULK R-VALUE	TYPE OF FOIL	NUMBER OF LAYER	POSITION OF FOIL	NOTES
CEILINGS	3.5	N/A	N/A		NO BULK INSULATION IN GARAGE
WALLS	2.5	AG	1	ON OUTSIDE OF STUD FRAME	NO BULK INSULATION IN GARAGE
FLOORS	0.9	N/A	N/A		WAFFLEPOD (AS PER CSIRO SPECIFICATION)
WALLS INT.	N/A	N/A	N/A		
DBL STOREY	N/A	N/A	N/A		

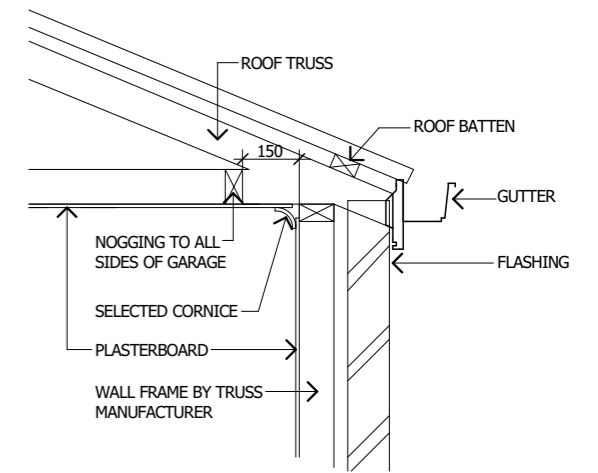
NOTES
 INCLUDES R2.5 PERIMETER WALL BATTS TO CEILING TO AVOID CEILING INSULATION COMPRESSION AS PER THE NCC
 SEAL GAPS & CRACKS. CAULKING AROUND ALL EXTERNAL WALL ARCHITRAVES TO ENSURE SEALED TO PLASTERBOARD LINING
 SEAL AND WEATHER STRIP ENTRY DOOR, GARAGE ACCESS DOOR AND IF APPLICABLE EXTERNAL LAUNDRY HINGE DOOR,
 WEATHER STRIP GARAGE REAR DOOR IF BAL 12.5 APPLIES
 EXHAUST FANS INCLUDING DRAUGHTSTOPS
 PROVIDE SOLAR HOT WATER SERVICE. SYSTEM TO PROVIDE MINIMUM 60% SOLAR GAIN

3.12.1.1 BUILDING FABRIC THERMAL INSULATION

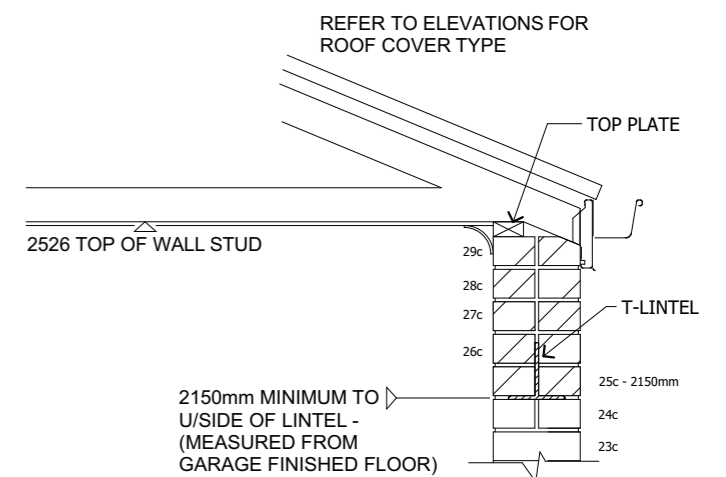
- a) WHERE REQUIRED, INSULATION MUST COMPLY WITH AS/NZS 4859.1 AND BE INSTALLED SO THAT IT:
 - i) ABUTS OR OVERLAPS ADJOINING INSULATION OTHER THAN AT SUPPORTING MEMBERS SUCH AS COLUMNS, STUDS, NOGGINGS, JOISTS, FURRING CHANNELS AND THE LIKE WHERE THE INSULATION MUST BUTT AGAINST THE MEMBER; AND
 - ii) FORMS A CONTINUOUS BARRIER WITH CEILINGS, WALLS, BULKHEADS, FLOORS OR THE LIKE THAT INHERENTLY CONTRIBUTE TO THE THERMAL BARRIER; AND
 - iii) DOES NOT AFFECT THE SAFE OR EFFECTIVE OPERATION OF A DOMESTIC SERVICE OR FITTING
- b) WHERE REQUIRED, REFLECTIVE INSULATION MUST BE INSTALLED WITH:
 - i) THE NECESSARY AIRSPACE TO ACHIEVE THE REQUIRED R-VALUE BETWEEN A REFLECTIVE SIDE OF THE REFLECTIVE INSULATION AND A BUILDING LINING OR CLADDING; AND
 - ii) THE REFLECTIVE INSULATION CLOSELY FITTED AGAINST ANY PENETRATION, DOOR OR WINDOW OPENING; AND
 - iii) THE REFLECTIVE INSULATION ADEQUATELY SUPPORTED BY FRAMING MEMBERS; AND
 - iv) EACH ADJOINING SHEET OF ROLL MEMBRANE BEING:
 - A) OVERLAPPED NOT LESS THAN 150MM; OR
 - B) TAPED TOGETHER.
- c) WHERE REQUIRED, BULK INSULATION MUST BE INSTALLED SO THAT:
 - i) IT MAINTAINS ITS POSITION AND THICKNESS, OTHER THAN WHERE IT CROSSES ROOF BATTENS, WATER PIPES, ELECTRICAL CABLING OR THE LIKE; AND
 - ii) IN A CEILING, WHERE THERE IS NO BULK INSULATION OR REFLECTIVE INSULATION IN THE EXTERNAL WALL BENEATH, IT OVERLAPS THE EXTERNAL WALL BY NOT LESS THAN 50MM.



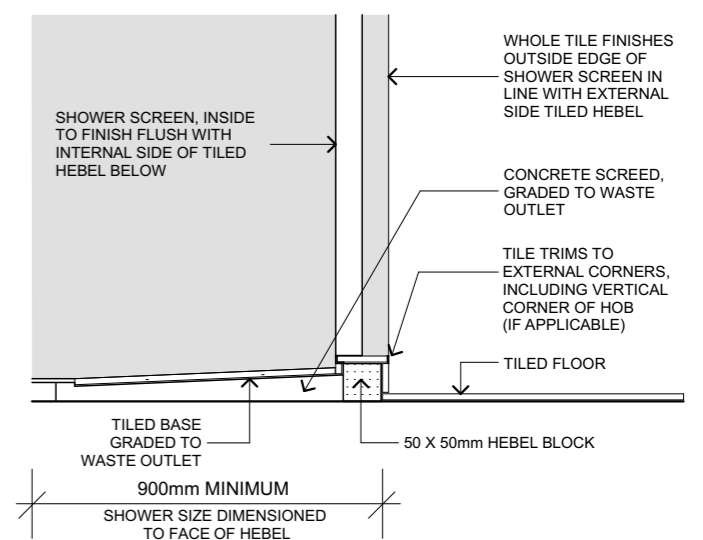
GUTTER ON BRICKWORK STD DETAIL (WALL ON BOUNDARY)
 SCALE 1:20



FASCIA TOP OF BRICKWORK STD DETAIL
 SCALE 1:20



BRICKWORK OVER GARAGE DOOR
 2526 CEILING HEIGHT, FACE BRICK, NO EAVE



Shower Hebel Block Detail

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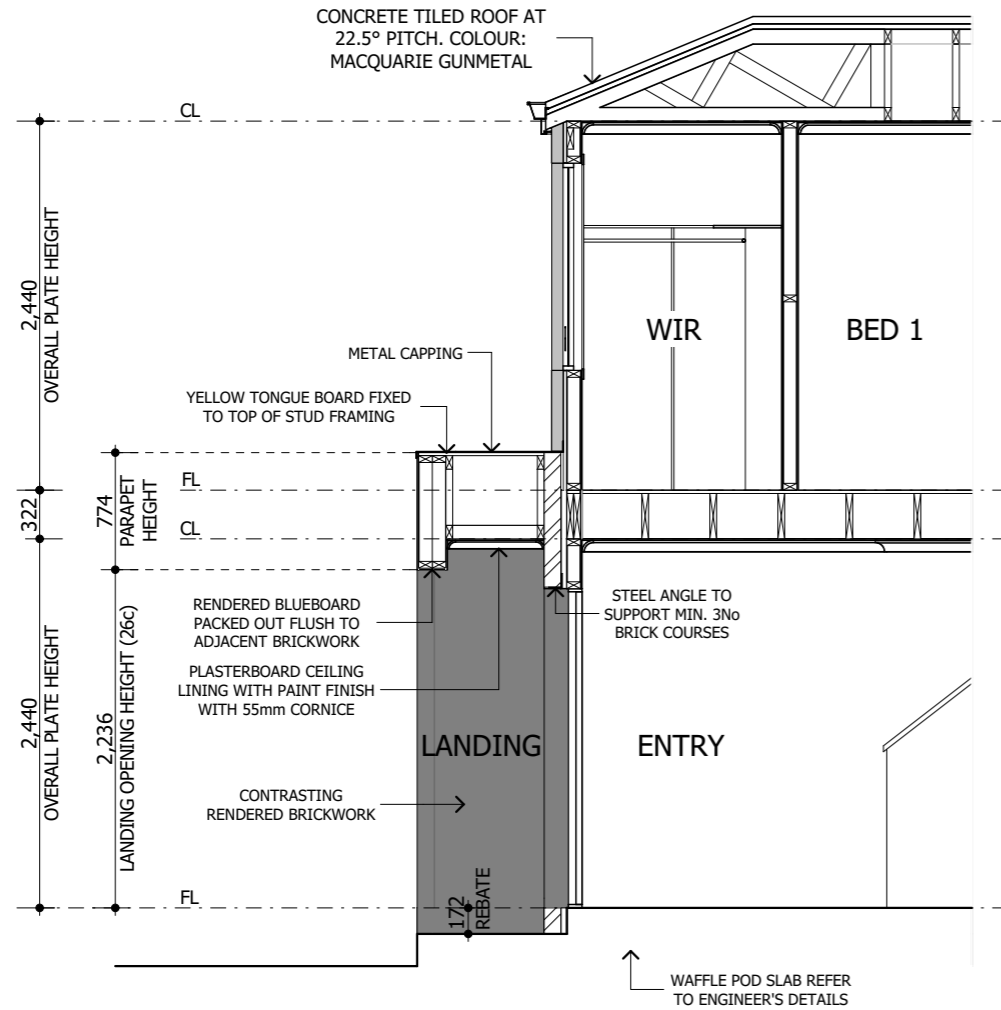
REVISIONS:		
A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17 JP
B		
C		
D		
E		
F		
G		

GENERAL NOTES:
 - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
 - WINDOW SIZES AND LOCATIONS ARE NOMINAL AND MAY VARY TO MANUFACTURERS FRAME SIZES

CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

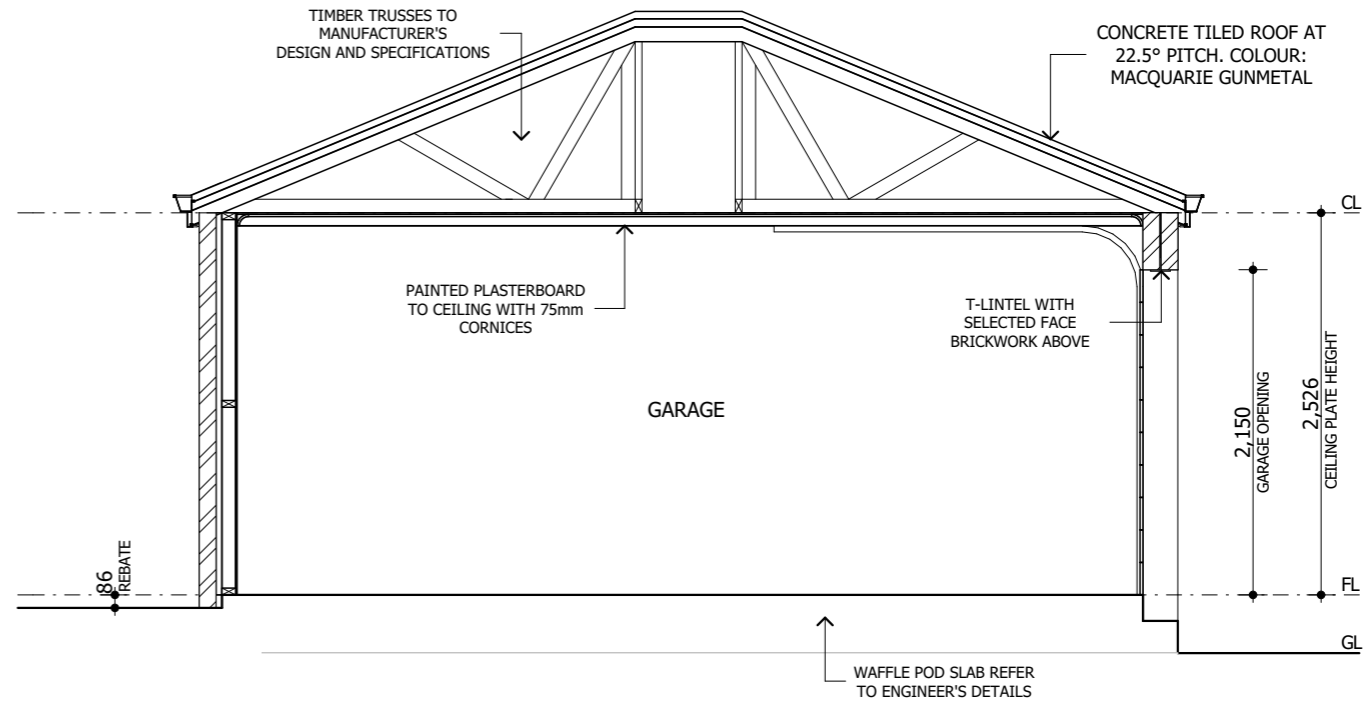
Section 1		JOB No:
DESIGN:ALTO 19	DRAWN BY: JP	40284
FACADE:FACADE 4	REVISION NO: REV 1	SCALE:1:100, 1:20
	MASTER DRAWN	DRAWING No: D.5 of 9

HomebuyersCentre
 First choice in first homes
 81 LORIMER STREET
 DOCKLANDS, VIC. 3008
 PH: (03) 9674 4500 FAX: (03) 9674 4501



Y Section

1:50



W Section

1:50

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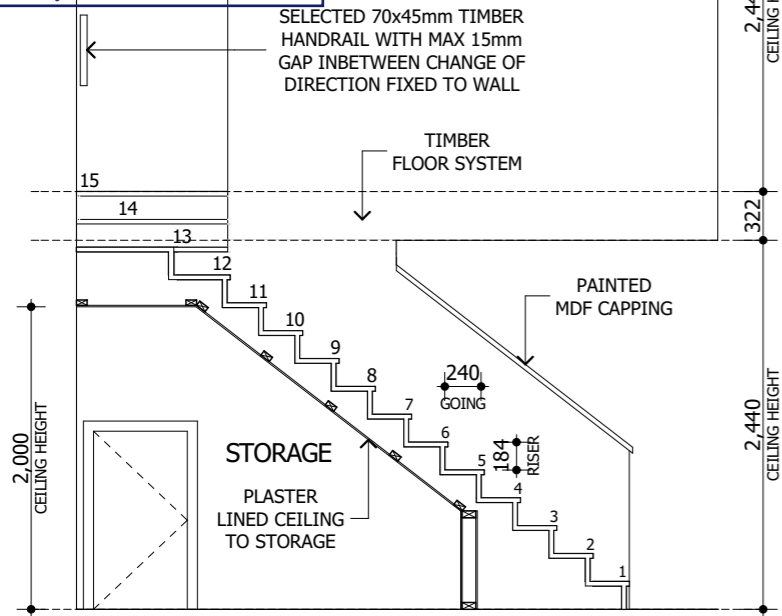
REVISIONS:		
A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17 JP
B		
C		
D		
E		
F		
G		

GENERAL NOTES:
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CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

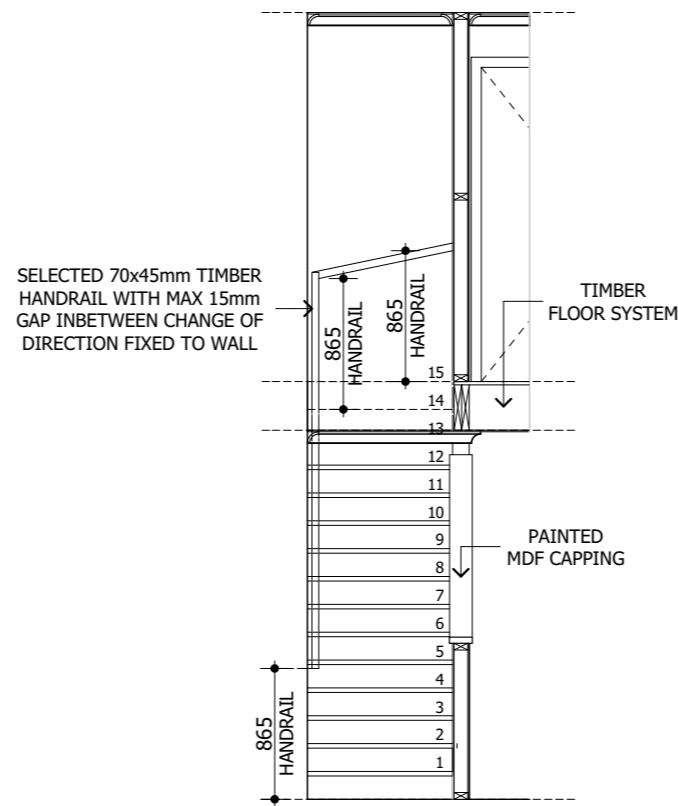
Section 2		JOB No: 40284
DESIGN:ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE:FACADE 4	TYP HGT: 24/24R SA	MASTER DRAWN : : D.6 of 9

GROUP FOUR
BUILDING SURVEYORS
BUILDING PERMIT
 Number : 2748420173698/0
 Issued by David Madeira on 22/09/2017



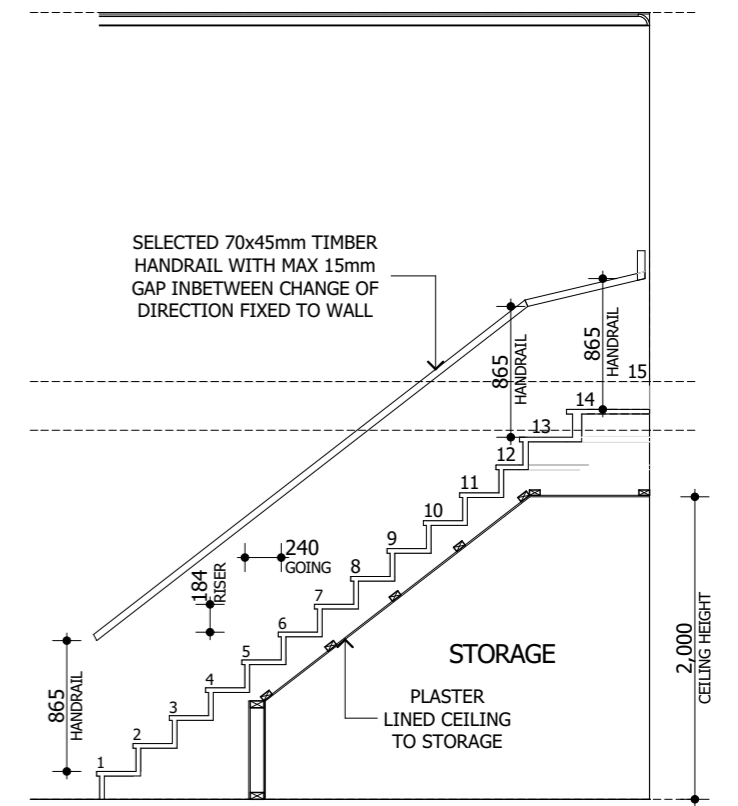
B Stairs

1:50



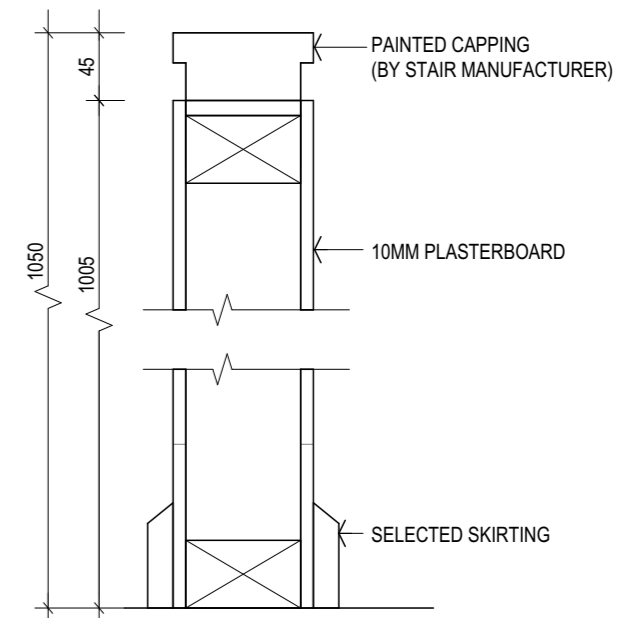
C Stairs

1:50



D Stairs

1:50



STAIR WALL DETAIL

Scale 1 : 5

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REVISIONS:		
A	DA PLANS, FINALS, VO1, VO2, PSI	23/08/17 JP
B		
C		
D		
E		
F		
G		

GENERAL NOTES:
 - WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE.
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CLIENT:
V. & A. ROWLEY
 LOT 31829 PARKFOREST WALK
 CRAIGIEBURN

Stairs		JOB No: 40284
DESIGN: ALTO 19	DRAWN BY: JP	REVISION NO: REV 1
FACADE: FACADE 4	TYP HGT: 24/24R SA	MASTER DRAWN :
		SCALE: 1:5, 1:50
		DRAWING No: D.7 of 9

HomebuyersCentre
 First choice in first homes
 81 LORIMER STREET
 DOCKLANDS, VIC. 3008
 PH: (03) 9674 4500 FAX: (03) 9674 4501

BUILDING PERMIT No: 2748420173698/0BUILDING ACT 1993, INTERIM BUILDING REGULATIONS 2017
REGULATION 313

FORM

2

**GROUP FOUR**
BUILDING SURVEYORS
SINCE 1999**GROUP FOUR BUILDING SURVEYORS**

1st Floor, 12 Hardner Road

Mount Waverley VIC 3149

ABN 96 158 953 425

P: (03) 9544 0544 E: reception@groupfour.com.au

F: (03) 9544 0244 www.groupfour.com.au

Part of Building : Double Storey Dwelling and Garage BCA Class - 1ai, 10a

PERFORMANCE SOLUTION

A Performance Solution was used to determine compliance with the following performance requirements of the BCA that relate to this project:

- Width of Masonry Veneer Cavity – P2.2.2
- DPC/Flashing Height – P2.2.2
- Mechanical Ventilation – P2.4.5
- Masonry Veneer Construction– P2.1/2.2.2/2.2.3
- Mortar Mix – P2.1/2.2.2/2.2.3
- Wall frame overhangs – P2.1
- Stair Tolerance – P2.5.1
- Masonry wall ties – P2.1
- Recycled Water – P2.6.1

INSPECTION REQUIREMENTS (Book inspections online - inspection.groupfour.com.au)

Pre Slab

Steel

Frame

Pre Plaster

Final

OCCUPATION OR USE OF BUILDING

An Occupancy Permit is required prior to the occupation or use of this building.

If an occupancy permit is required, the permit is required for the whole of the building in respect of which the building work is carried out.

COMMENCEMENT AND COMPLETION

This building work must commence by: 22-Sep-2018

This building work must be completed by: 22-Sep-2019

CONDITIONS

All building works are to be carried out in accordance with the endorsed building permit documents and/or suitable equivalent to the satisfaction of the Building Inspector and/or the Relevant Building Surveyor.

All relevant Planning Conditions and covenants on title must be complied with.

Floor joist design & layouts to be submitted for approval prior to the frame inspection.

The work must be carried out strictly in conformity with the endorsed plans and specifications. One copy of which must be kept on site and made available for inspection while the work is in progress.

There must be no unauthorized encroachment of any part of the work beyond the building alignment.

Truss computations certification and layouts to be submitted for approval prior to the frame inspection.

Timber framing specifications and layouts to be submitted for approval prior to the frame inspection.

Bracing layout and computations to be submitted for approval prior to the frame inspection.

The building is to be protected in accordance with AS3660. 2014 Termite Management.

Energy rating certificates to be submitted prior to the occupancy permit.

A Performance Assessment has been issued to allow the use of recycled water in lieu of a RWT.

SIGNED

PERMIT ISSUE DATE : 22-Sep-2017

Our Reference Number : 11467

Building Surveyor : David Madeira (BS-U 27484)

ASSESSING OFFICER: Adam Cakmak

This Permit expires on 22 September 2019

FORM 16

Building Act 1993

Building Regulations 2018

Occupancy Permit - 2748420173698/0

Property details

Lot 31829 18 Parkforest Walk, Craigieburn

Lot 31829 PS724966 Vol 11894 Folio 729

Municipal District City of Hume

Crown allotment N/A Section N/A Parish N/A County N/A

Building permit details

Building permit number 2748420173698/0

2016 version of BCA applicable to building permit

Building details

Building to which permit applies Double Storey Dwelling and Garage
BCA Class of building 1ai
Maximum permissible 1.5 floor live load
Permitted use Residential
Storeys contained 2

Performance solution

A performance solution was used to determine compliance with the following performance requirements of the BCA that relate to the building or place of public entertainment to which this permit applies:

Relevant performance requirement	Details of performance solution
	A Performance Solution was used to determine compliance with the following performance requirements of the BCA that relate to this project: - Width of Masonry Veneer Cavity – P2.2.2 - DPC/Flashing Height – P2.2.2 - Mechanical Ventilation – P2.4.5 - Masonry Veneer Construction – P2.1/2.2.2/2.2.3 - Mortar Mix – P2.1/2.2.2/2.2.3 - Wall frame overhangs – P2.1 - Stair Tolerance – P2.5.1 - Masonry wall ties – P2.1 - Recycled Water – P2.6.1

Conditions to which this permit is subject

Occupation is subject to the following conditions -

(2) Other conditions

- All cooking appliances, hot water appliances and if applicable the rain water tank to be operational prior to occupation. All services to be connected prior to occupation.
- All landscaping to ensure a vapour barrier is installed and maintained to the edge beam of the slab. Such vapour barrier is to extend above the height of soil.
- All landscaping works to maintain a minimum distance from below weep holes of 150mm to ungraded soil; or 75mm to paving or graded soil; or 50mm to paving with a roof cover.
- External steps & landings to be maintained to comply with BCA 3.9.
- Facilities to be installed & connected at handover.

Suitability for occupation

At this date this occupancy permit is issued, the building to which this permit applies is suitable for occupation.

Relevant building surveyor

Name David Madeira

Building practitioner registration number BS-U 27484

Occupancy permit no. 2748420173698/0

Date of issue: 30-November-2018

Date of final inspection: 30-November-2018

Municipal District: City of Hume

Signature:



Your rates and valuation notice

For the period 1 July 2023 to 30 June 2024
Enquiries: 9205 2200



A J ROWLEY & V A M ROWLEY
100 CHARTERIS DR
CRAIGIEBURN VIC 3064

PROPERTY NUMBER: 714542
PAYMENT REFERENCE: 9901364
DATE OF ISSUE: 31/08/2023



For emailed notices:
hume.enotices.com.au
Reference: 252888217H

025
RO_718090

PROPERTY DETAILS

18 PARKFOREST WALK CRAIGIEBURN VIC 3064
Lot 31829 PS 724966S Vol 11894 Fol 729
Owner Details: ANTHONY JOHN ROWLEY VERONICA ANNE MAREEE ROWLEY

Site Value

\$ 170,000

Capital Improved Value

\$ 455,000

Net Annual Value

\$ 22,750

Level of Value Date: 01/01/2023 AVPCC: 120-Single Strata Unit/Villa U
Date Adopted for Rating Purposes: 01/07/2023

* Council has been appointed agent to collect these funds on behalf of the Victorian Government.

RATES, CHARGES AND REBATES

General Rate	0.0023143 x \$ 455,000	\$ 1,053.00
Kerbside Waste Charge	\$ 295.74	\$ 295.74
Public Waste Charge	\$ 200.93	\$ 200.93
Vic State Gov FSPL Residential Fixed*	\$ 125.00	\$ 125.00
Vic State Gov FSPL Residential Variable*	.000046 x \$ 455,000	\$ 20.90
Total Amount Due		\$ 1,695.57

INSTALMENT 1

\$ 423.57

Payable 30/09/2023

INSTALMENT 2

\$ 424.00

Payable 30/11/2023

INSTALMENT 3

\$ 424.00

Payable 29/02/2024

INSTALMENT 4

\$ 424.00

Payable 31/05/2024



Scan here to pay



HOW TO PAY

Avoid late payment interest by paying your rates on time. Payment plans are available.



BPAY (BPAY View Registration No: 9901364)
Access Bpay via your internet banking
BILLER CODE: 12500
REF: 9901364



DIRECT DEBIT
Register online at
hume.vic.gov.au/rates to arrange
automatic payment of your account



POST BILLPAY
BILLPAY CODE: 0862
REF: 9901364



IN PERSON
Pay at your nearest Council Customer
Contact Centre in Broadmeadows,
Craigieburn or Sunbury or visit your
nearest Post Office.



*862 9901364



MAIL
Send this slip with your cheque made
payable to: Hume City Council,
PO Box 119 Dallas 3047



ONLINE OR PHONE
Call 13 18 16 or visit hume.vic.gov.au/pay

IMPORTANT INFORMATION FOR RATEPAYERS

PAYMENT BY FOUR INSTALMENTS

Hume City Council's rates and charges are raised by way of a uniform rate and for 2023/24 are payable in four instalments. Instalment amounts and due dates are detailed on the front of this notice. Reminders will be issued for the second, third and fourth instalment due dates.

PAYMENT BY INSTALMENTS

Rates and charges may be paid in four or nine monthly instalments via direct debit. To apply, use the attached direct debit form and mail it to Council by 22 September 2023. Please note, your account must be paid up to date to apply. The first payment will be deducted on 2 October 2023 with further payments as per your payment arrangement. If your payment due date falls on a weekend or public holiday, the payment will be processed the next business day.

PART PAYMENTS AND PRE-PAYMENTS

Any amount may be paid at any time provided the full amount of each instalment is paid before each due date.

PAYMENT ALLOCATION

All payments will be credited in the following order: legal costs, interest, overdue rates and charges, current rates and charges.

LATE PAYMENT INTEREST

Instalments not paid on or before each of the due dates will be charged interest from the due date and will accrue interest until the instalment and interest are paid. Penalty interest is charged at 10% per annum as provided for in the Penalty Interest Rates Act 1983.

FINANCIAL HARDSHIP POLICY AND SUPPORT

Council is committed to assisting ratepayers who are experiencing financial hardship. To apply for a flexible, interest free payment plan, change an existing one or advise of extreme financial hardship, complete our online application form at hume.vic.gov.au/rates or call the Rates team on 9205 2200.

KERBSIDE AND PUBLIC WASTE SERVICE CHARGES

The cost of providing waste services has been removed from your general rates and is now two separate charges. For information visit hume.vic.gov.au/waste-service-charge

FIRE SERVICES PROPERTY LEVY (FSPL)

Council must collect the Fire Services Property Levy to support emergency services. If the leviable land is rateable land, or if it is classed as residential for FSPL purposes but is not rateable land, you may apply for a waiver, deferral or concession in accordance with section 27 & 28 of the *Fire Services Property Levy Act 2012*.

SINGLE FARM ENTERPRISE (SFE)

Where multiple parcels of farm land are used to operate a single farming enterprise, you may only be required to pay the FSPL fixed charge once by applying for the single farming enterprise exemption. Apply online at hume.vic.gov.au/rates

RATE CAPPING

Council has complied with Victorian Government's rate cap of 3.5%. The cap applies to the average increase of rates and charges. The rates and charges for your property may have increased or decreased by a different percentage amount for the following reasons:

- The valuation of your property relative to the valuation of other properties in the municipal district;
- The application of any differential rate by Council;
- The inclusion of other rates and charges not covered by the Victorian Government's rates cap.

CHANGE OF PROPERTY OWNERSHIP

All changes of ownership or postal address must be notified to Council in writing.

APPEAL AGAINST VALUATION

Objections to Council's valuation of your property including the AVPCC can be made under section 17 of the *Valuation Land Act 1960*. Objections must be made within two months of this notice being issued. Objections can be lodged online at ratingvaluationobjections.vic.gov.au. Regardless of an objection being lodged, the rates and charges as assessed must be paid by the due dates. Any overpayments will be refunded. The valuations shown on this notice are assessed on values calculated at 1 January 2023. These valuations may be used by other authorities. The State Revenue Office uses the site value in assessing Land Tax. Contact the State Revenue Office for more information.

PENSION REBATE

Ratepayers who hold a Pension Concession Card or certain cards issued by the Department of Veterans' Affairs may be entitled to a rate rebate on their main place of residence. Health Care Cards are not eligible. Council also provides an additional \$40 rebate on top of the State Government rebate. Apply online at hume.vic.gov.au/rates

PRIMARY PRODUCER RATE REBATE

Landholders with properties larger than 2 hectares that are used as an agricultural business can apply for the annual 30% discount off the general rate. Owners will need to provide evidence of agricultural business use and suitable land management practices. For details visit hume.vic.gov.au/REP

PRIVACY STATEMENT

All personal information collected by Council will be used for Council business purposes and kept confidential. It will not be shared with third parties unless Council is required to disclose the information under other legislation or it is deemed reasonable under the circumstances, including notices to fence. You may access your information by contacting Council. For further details see Council's Information Privacy Policy online.

Date rates declared
26 June 2023



We acknowledge our traditional owners: hume.vic.gov.au/traditional-owners

Language Support

Support is available in a variety of languages to better support our proudly diverse community.



hume.vic.gov.au/translate



Up to two free waste disposal passes for every household

Bring a copy of this notice to one of our resource recovery centres to redeem your pass. For conditions and further information go to hume.vic.gov.au/waste



Valid from 1 October 2023 to 30 September 2024 only.

PAYMENT SLIP

Receipts will not be forwarded for payments received in the mail. Please return this portion only.

PROPERTY LOCATION 18 PARKFOREST WALK CRAIGIEBURN VIC 3064

RATEPAYER A J ROWLEY & V A M ROWLEY

PROPERTYNUMBER
714542

INSTALMENT
\$ 423.57



Your quarterly bill



Emailed to: rowls1977@gmail.com
MR ROWLEY & MRS V ROWLEY
100 CHARTERIS DR
CRAIGIEBURN VIC 3064

Enquiries 1300 304 688
Faults (24/7) 13 27 62

Account number 58 4776 7755
Invoice number 5846 4462 31971
Issue date 1 Mar 2024
Tax Invoice Yarra Valley Water ABN 93 066 902 501

Amount due
\$184.98

Due date
22 Mar 2024

Summary

18 PARKFOREST WALK, CRAIGIEBURN

Property Number **5167 858**, PS 724966

Product/Service	Amount
Water Supply System Charge	\$20.04
Sewerage System Charge	\$114.46
Yarra Valley Water Total	\$134.50
Other Authority Charges	
Waterways and Drainage Charge on behalf of Melbourne Water	\$29.38
Parks Charge	\$21.10
TOTAL (GST does not apply)	\$184.98

Payment summary

Last Account	\$187.01
Paid/Adjusted	-\$187.01
Balance	\$0.00
Total this Account	+\$184.98
Total Balance	\$184.98



Important note

Your bill includes the parks charge, which is now billed quarterly.
No water usage has been charged on this account.



How to pay



*3042 584644623197 1



Direct Debit

Sign up for Direct Debit at yvw.com.au/directdebit or call **1300 304 688**.



Centrepay

Arrange regular deductions from your Centrelink payments. Visit yvw.com.au/paying CRN reference: **555 054 118T**



EFT

Transfer direct from your bank account to ours by Electronic Funds Transfer (EFT).

Account name:
Yarra Valley Water
BSB: **033-885**
Account number: **584722043**



Credit card

Online: yvw.com.au/paying
Phone: **1300 362 332**



Post Billpay®

Pay in person at any post office, by phone on **13 18 16** or at postbillpay.com.au
Bill code: **3042**
Ref: **5846 4462 31971**



BPAY®

Bill code: **344366**
Ref: **584 7767 7555**

MR ROWLEY & MRS V ROWLEY

Account number	58 4776 7755
Invoice number	5846 4462 31971
Total due	\$184.98
Due date	22 Mar 2024
Amount paid	\$

Your usage detail

1kL = 1,000 litres

No water usage has been charged on this account.

Your *NAV is at a sufficiently low level to attract the current quarterly minimum parks charge of \$21.10.

*NAV = Net Annual Value of your property which is capped at 1990 levels.

Your charges explained

→ Water supply system charge

1 January 2024 - 31 March 2024

A fixed cost for maintaining and repairing pipes and other infrastructure that store, treat and deliver water to your property.

→ Sewerage system charge

1 January 2024 - 31 March 2024

A fixed cost for running, maintaining, and repairing the sewerage system.

→ Other authority charges

Waterways and drainage charge

1 January 2024 - 31 March 2024

Collected on behalf of Melbourne Water each quarter and used to manage and improve waterways, drainage, and flood protection. For more information visit melbournewater.com.au/wwdc



Parks charge

1 January 2024 - 31 March 2024

Collected on behalf of Parks Victoria each quarter, and used to maintain and enhance Victoria's parks, zoos, the Royal Botanic Gardens, the Shrine of Remembrance and other community facilities. For more information visit parks.vic.gov.au

Financial assistance

Are you facing financial difficulty? For more time to pay, payment plans and government assistance, we can find a solution that works for you.

Please call us on **1800 994 789** or visit yvw.com.au/financialhelp.

Registering your concession can also reduce the amount you need to pay.

Please call us on **1800 680 824** or visit yvw.com.au/concession.

Contact us

	Enquiries	1300 304 688	For language assistance
	Faults and Emergencies	13 27 62 (24hr)	العربية 1300 914 361
	enquiry@yvw.com.au		廣東話 1300 921 362
	yvw.com.au		Ελληνικά 1300 931 364
	TTY Voice Calls	133 677	普通话 1300 927 363
	Speak and Listen	1300 555 727	For all other languages call our translation service on 03 9046 4173



Next meter reading:

Between 31 May-7 Jun 2024

Property Clearance Certificate

Land Tax



INFOTRACK / COMPLETE HOME CONVEYANCING

Your Reference: 2024/1264

Certificate No: 77678216

Issue Date: 29 MAY 2024

Enquiries: ESYSPROD

Land Address: 18 PARKFOREST WALK CRAIGIEBURN VIC 3064

Land Id	Lot	Plan	Volume	Folio	Tax Payable
44133415	31829	724966	11894	729	\$975.00

Vendor: ANTHONY ROWLEY & VERONICA ROWLEY

Purchaser: FOR INFORMATION PURPOSES

Current Land Tax	Year	Taxable Value	Proportional Tax	Penalty/Interest	Total
MR ANTHONY JOHN ROWLEY	2024	\$170,000	\$975.00	\$0.00	\$975.00

Comments: Land Tax will be payable but is not yet due - please see notes on reverse.

Current Vacant Residential Land Tax	Year	Taxable Value	Proportional Tax	Penalty/Interest	Total
-------------------------------------	------	---------------	------------------	------------------	-------

Comments:

Arrears of Land Tax	Year	Proportional Tax	Penalty/Interest	Total
---------------------	------	------------------	------------------	-------

This certificate is subject to the notes that appear on the reverse. The applicant should read these notes carefully.

Paul Broderick
Commissioner of State Revenue

CAPITAL IMPROVED VALUE: \$455,000

SITE VALUE: \$170,000

CURRENT LAND TAX CHARGE: \$975.00

Notes to Certificate - Land Tax

Certificate No: 77678216

Power to issue Certificate

1. Pursuant to section 95AA of the *Taxation Administration Act 1997*, the Commissioner of State Revenue must issue a Property Clearance Certificate (Certificate) to an owner, mortgagee or bona fide purchaser of land who makes an application specifying the land for which the Certificate is sought and pays the application fee.

Amount shown on Certificate

2. The Certificate shows any land tax (including Vacant Residential Land Tax, interest and penalty tax) that is due and unpaid on the land described in the Certificate at the date of issue. In addition, it may show:
 - Land tax that has been assessed but is not yet due,
 - Land tax for the current tax year that has not yet been assessed, and
 - Any other information that the Commissioner sees fit to include, such as the amount of land tax applicable to the land on a single holding basis and other debts with respect to the property payable to the Commissioner.

Land tax is a first charge on land

3. Unpaid land tax (including Vacant Residential Land Tax, interest and penalty tax) is a first charge on the land to which it relates. This means it has priority over any other encumbrances on the land, such as a mortgage, and will continue as a charge even if ownership of the land is transferred. Therefore, a purchaser may become liable for any such unpaid land tax.

Information for the purchaser

4. Pursuant to section 96 of the *Land Tax Act 2005*, if a purchaser of the land described in the Certificate has applied for and obtained a certificate, the amount recoverable from the purchaser by the Commissioner cannot exceed the amount set out in the certificate, described as the "Current Land Tax Charge" overleaf. A purchaser cannot rely on a Certificate obtained by the vendor.

Information for the vendor

5. Despite the issue of a Certificate, the Commissioner may recover a land tax liability from a vendor, including any amount identified on this Certificate.

Apportioning or passing on land tax to a purchaser

6. A vendor is prohibited from apportioning or passing on land tax to a purchaser under a contract of sale of land entered into on or after 1 January 2024, where the purchase price is less than \$10 million (to be indexed annually from 1 January 2025, as set out on the website for Consumer Affairs Victoria).

General information

7. A Certificate showing no liability for the land does not mean that the land is exempt from land tax. It means that there is nothing to pay at the date of the Certificate.
8. An updated Certificate may be requested free of charge via our website, if:
 - The request is within 90 days of the original Certificate's issue date, and
 - There is no change to the parties involved in the transaction for which the Certificate was originally requested.

For Information Only

LAND TAX CALCULATION BASED ON SINGLE OWNERSHIP

Land Tax = \$975.00

Taxable Value = \$170,000

Calculated as \$975 plus (\$170,000 - \$100,000) multiplied by 0.000 cents.

Land Tax - Payment Options

BPAY




Billers Code: 5249
Ref: 77678216

Telephone & Internet Banking - BPAY®

Contact your bank or financial institution to make this payment from your cheque, savings, debit or transaction account.

www.bpay.com.au

CARD



Ref: 77678216

Visa or Mastercard

Pay via our website or phone 13 21 61.
A card payment fee applies.

sro.vic.gov.au/paylandtax

Property Clearance Certificate

Windfall Gains Tax



INFOTRACK / COMPLETE HOME CONVEYANCING

Your Reference: 2024/1264

Certificate No: 77678216

Issue Date: 29 MAY 2024

Land Address: 18 PARKFOREST WALK CRAIGIEBURN VIC 3064

Lot	Plan	Volume	Folio
31829	724966	11894	729

Vendor: ANTHONY ROWLEY & VERONICA ROWLEY

Purchaser: FOR INFORMATION PURPOSES

WGT Property Id	Event ID	Windfall Gains Tax	Deferred Interest	Penalty/Interest	Total
		\$0.00	\$0.00	\$0.00	\$0.00

Comments: No windfall gains tax liability identified.

This certificate is subject to the notes that appear on the reverse. The applicant should read these notes carefully.

CURRENT WINDFALL GAINS TAX CHARGE:

\$0.00

Paul Broderick
Commissioner of State Revenue

Notes to Certificate - Windfall Gains Tax

Certificate No: 77678216

Power to issue Certificate

1. Pursuant to section 95AA of the *Taxation Administration Act 1997*, the Commissioner of State Revenue must issue a Property Clearance Certificate (Certificate) to an owner, mortgagee or bona fide purchaser of land who makes an application specifying the land for which the Certificate is sought and pays the application fee.

Amount shown on Certificate

2. The Certificate shows in respect of the land described in the Certificate:
 - Windfall gains tax that is due and unpaid, including any penalty tax and interest
 - Windfall gains tax that is deferred, including any accrued deferral interest
 - Windfall gains tax that has been assessed but is not yet due
 - Windfall gains tax that has not yet been assessed (i.e. a WGT event has occurred that rezones the land but any windfall gains tax on the land is yet to be assessed)
 - Any other information that the Commissioner sees fit to include such as the amount of interest accruing per day in relation to any deferred windfall gains tax.

Windfall gains tax is a first charge on land

3. Pursuant to section 42 of the *Windfall Gains Tax Act 2021*, windfall gains tax, including any accrued interest on a deferral, is a first charge on the land to which it relates. This means it has priority over any other encumbrances on the land, such as a mortgage, and will continue as a charge even if ownership of the land is transferred. Therefore, a purchaser may become liable for any unpaid windfall gains tax.

Information for the purchaser

4. Pursuant to section 42 of the *Windfall Gains Tax Act 2021*, if a bona fide purchaser for value of land applies for and obtains a Certificate in respect of the land, the maximum amount recoverable from the purchaser by the Commissioner is the amount set out in the certificate, described as the "Current Windfall Gains Tax Charge" overleaf.
5. If the certificate states that a windfall gains tax is yet to be assessed, note 4 does not apply.
6. A purchaser cannot rely on a Certificate obtained by the vendor.

Information for the vendor

7. Despite the issue of a Certificate, the Commissioner may recover a windfall gains tax liability from a vendor, including any amount identified on this Certificate.



Passing on windfall gains tax to a purchaser

8. A vendor is prohibited from passing on a windfall gains tax liability to a purchaser where the liability has been assessed under a notice of assessment as at the date of the contract of sale of land or option agreement. This prohibition does not apply to a contract of sale entered into before 1 January 2024, or a contract of sale of land entered into on or after 1 January 2024 pursuant to the exercise of an option granted before 1 January 2024.

General information

9. A Certificate showing no liability for the land does not mean that the land is exempt from windfall gains tax. It means that there is nothing to pay at the date of the Certificate.
10. An updated Certificate may be requested free of charge via our website, if:
 - The request is within 90 days of the original Certificate's issue date, and
 - There is no change to the parties involved in the transaction for which the Certificate was originally requested.
11. Where a windfall gains tax liability has been deferred, interest accrues daily on the deferred liability. The deferred interest shown overleaf is the amount of interest accrued to the date of issue of the certificate.

Windfall Gains Tax - Payment Options

<p>BPAY</p>  <p>Billers Code: 416073 Ref: 77678217</p> <p>Telephone & Internet Banking - BPAY®</p> <p>Contact your bank or financial institution to make this payment from your cheque, savings, debit or transaction account.</p> <p>www.bpay.com.au</p>	<p>CARD</p>  <p>Ref: 77678217</p> <p>Visa or Mastercard</p> <p>Pay via our website or phone 13 21 61. A card payment fee applies.</p> <p>sro.vic.gov.au/payment-options</p>	<p>Important payment information</p> <p>Windfall gains tax payments must be made using only these specific payment references.</p> <p>Using the incorrect references for the different tax components listed on this property clearance certificate will result in misallocated payments.</p>
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