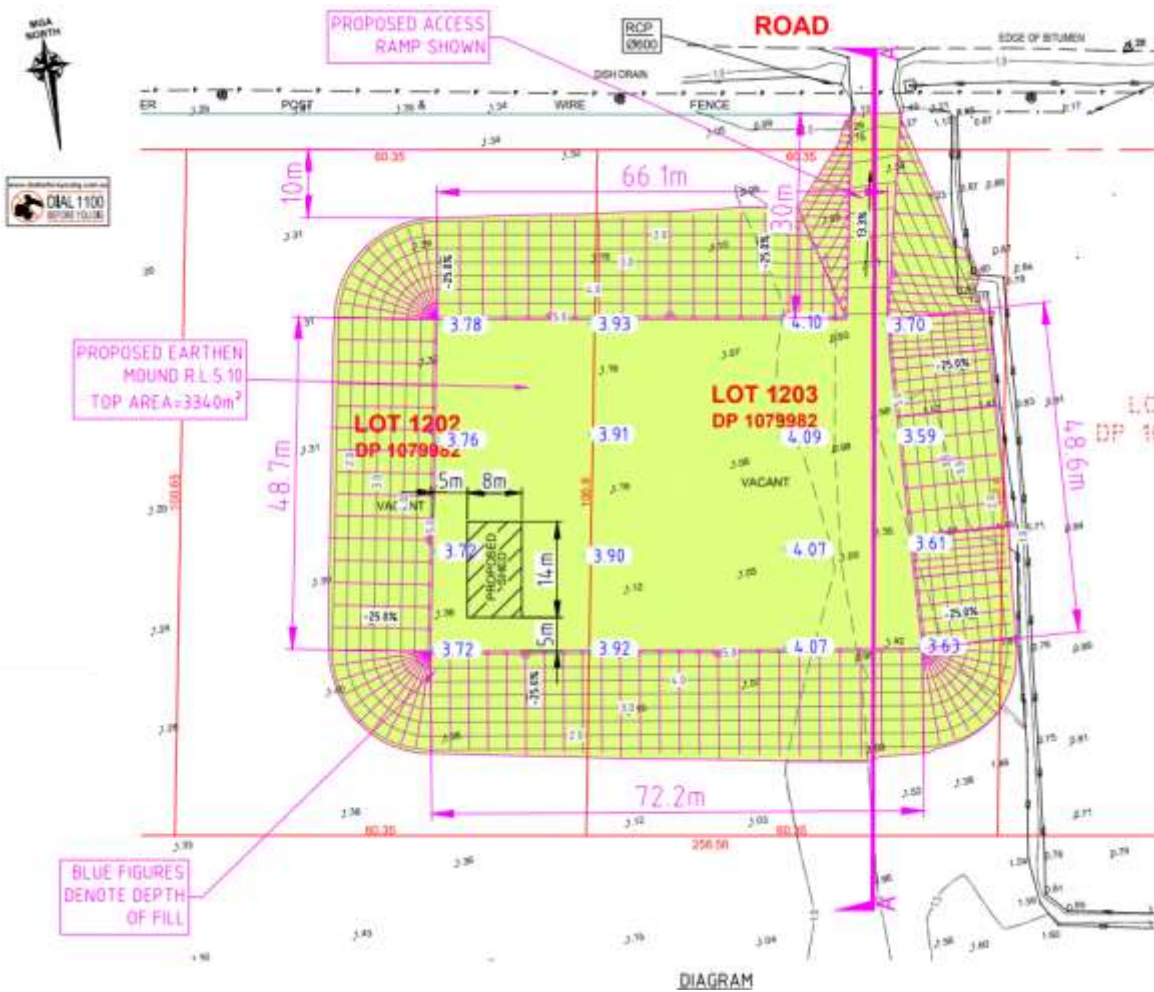




LE MOTTEE GROUP

SURVEYING | CIVIL ENGINEERING | TOWN PLANNING | PROJECT MANAGEMENT
STRATA CERTIFICATION | ECOLOGY | BUSHFIRE ASSESSMENT
Pty Limited ABN 38 136 535 156



PROPOSED EARTHEN MOUND AND SHED STATEMENT OF ENVIRONMENTAL EFFECTS

28 ALNWICK ROAD, MILLERS FOREST

OUR REF: 8898

This report was prepared by Liam Davis from Le Mottee Group Pty Ltd (LMG).

LMG Ref: 8898

Date: 12 October 2022

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Table of Contents

1.	Introduction.....	1
1.1	Background	1
1.2	Context	1
1.3	Overview	1
1.4	Scope and Structure of the Report	2
1.5	Supporting Documents	2
2.	Site Description.....	3
2.1	Locality	3
2.2	Subject Land	4
2.3	Existing Development	4
2.4	Surrounding Development	5
3.	Proposed Development.....	6
3.1	Aim of the Proposed Development	6
3.1.1	Development Details.....	6
4.	Planning Provisions.....	9
4.1	Environmental Planning and Assessment Act 1979	9
4.2	State Environmental Planning Policy (Resilience and Hazards) 2021	10
4.2.1	Clause 2.10 Development on land within the coastal environment area.....	10
4.2.2	Clause 2.11 Development on land within the coastal Use area.....	11
4.3	Maitland Local Environmental Plan, 2011	13
4.3.1	Existing Zoning.....	13
4.3.2	Clause 7.1 Acid Sulfate Soils.....	14
4.3.3	Clause 7.2 Earthworks.....	14
4.3.4	Clause 7.3 Flood Planning.....	17
4.3.5	Clause 7.4 Riparian Land and Watercourses.....	19
4.4	Maitland Development Control Plan, 2011	21
4.4.1	B.3 Hunter River Floodplain.....	21

4.4.2	C.4.14 Garages, Carports & Sheds.....	23
4.5	Other Planning Consideration	25
4.5.1	Traffic	25
4.5.1	Stock	25
5.	Conclusion	27

1. INTRODUCTION

1.1 BACKGROUND

Le Mottee Group (LMG) has been engaged by Briar Grove Nursery Pty Ltd to prepare a Statement of Environmental Effects (SoEE) to accompany a Development Application (DA) to Maitland City Council (MCC) for an earthen mound and shed at 28 Alnwick Road, Millers Forest.

This SoEE provides details about the site and proposed development as well as making an assessment of the proposed development pursuant to the relevant matters under Section 4.15 of the *Environmental Planning and Assessment Act, 1979*.

1.2 CONTEXT

The Hunter Valley catchment undergoes regular inundation, creating in a significant risk to life and property for landowners residing in close proximity to major rivers within the valley.

Consequently, access to flood-free ground during a flood event is extremely important. This is particularly relevant within the context of moderate to heavy rainfall events occurring more frequent and resulting in an increased flood hazard. Given the instance of above-average rainfall occurring for northern and eastern Australia, it is considered vital that landowners put in place measures to protect their life and property.

This current proposal is for the erection an earthen mound and shed, which will act as a flood refuge for livestock and a storage place for essential belongings such as agricultural equipment and machinery. The mound will also provide ongoing support for the landowner in the weeks following a flood event, where dwellings, roads and other infrastructure may be damaged or inaccessible.

1.3 OVERVIEW

The aim of the proposed development is to construct an earthen mound and shed at at 28 Alnwick Road, Millers Forest.

This report considers the proposed development against the controls of the Maitland Local Environmental Plan (LEP) & Development Control Plan (DCP). Under the Maitland LEP (2011) the proposed development is permitted with consent in the current RU1 Primary Production zone.

1.4 SCOPE AND STRUCTURE OF THE REPORT

The remainder of the report is structured as follows:

- **Section 2** – Site Description
- **Section 3** – Proposed Development
- **Section 4** – Planning Provisions
- **Section 5** – Conclusion

1.5 SUPPORTING DOCUMENTS

The following documents are provided as Attachments to this report:

- **Annexure A** – Development Plans
- **Annexure B** – AHIMS Report (1km)
- **Annexure C** – Flood Impact and Cumulative Assessment
- **Annexure D** – Shed plans
- **Annexure E** – Council Flood Information

2. SITE DESCRIPTION

The following section identifies the subject land, existing development on site and the surrounding development.

2.1 LOCALITY

The subject land is in Millers Forest, within the Maitland LGA.

Millers Forest is situated approximately 3km west of Raymond Terrace and approximately 15km south east of Maitland. The approximate location of the subject land is shown below in *Figure 1*.



Figure 1: Location of the subject land (Source: NSW Six Map).

2.2 SUBJECT LAND



Figure 2: The site (Source: NSW Six Map).

The subject land is located at 28 Alwick Road, Millers Forest. The land is comprised of fourteen lots formally identified as Lots 3 And 4 in DP 1219110, Lots 1202 to 1205 in DP 1079982, Lot 4 in DP 1079927, Lot 1 Section 11 and Lots 1 To 6 Section 13 in DP 758019. For this report, the aforementioned lots shall be referred to as 'the site'.

Note: The proposed mound shall be constructed over Lot 4 in DP 1079927 and Lots 1202 and 1203 in DP 1079982 only. However, the mound will service the needs of the entire property, being 28 Alwick Road, Millers Forest.

The site has a combined area of approximately 12.7 ha and supports an existing dwelling and agricultural structures. Access to the site is direct from Alwick Road.

2.3 EXISTING DEVELOPMENT

The site supports existing dwelling and ancillary agricultural structures including cattle yards, sheds, greenhouses and infrastructure such as fencing and accessways.

The landowners use the site to support up to forty (40) head of Cattle.

The site is also used to propagate a range of plant seedlings, tubestock and young plants as part of their small business that operates out of local markets within the region, including Medowie, Newcastle, Speers Point, and Maitland. The business specializes in wide variety of species but focuses on hedges and fruit trees.

2.4 SURROUNDING DEVELOPMENT

Development in the surrounding area is predominantly rural in nature.



Figure 3: Surrounding land uses (Source: NSW Six Maps).

The site is bound in all directions by land predominantly used for agricultural purposes. Therefore, there will be no land use conflict.

3. PROPOSED DEVELOPMENT

3.1 AIM OF THE PROPOSED DEVELOPMENT

The aim of the proposed development is to construct an earthen mound and shed to act as a flood refuge for livestock and allow for the safe and practical storage of agricultural equipment during flood events. This will be achieved by providing sufficient land above the flood planning level.

The proposed mound has been sized to accommodate appropriate holding space for up to forty (40) head of cattle, space for feeding troughs, storage space for two weeks (14 days) feed, and watering space.

The proposed mound shall also support a relocated cattle yard, cattle crush, and adequate area for the erection of the shed. Further, sufficient space shall be set aside for a future greenhouse if desired, as the mound will also be used to safely store the seedlings propagated for sale as part of the existing horticulture business.

3.1.1 DEVELOPMENT DETAILS

MOUND

The proposed development includes the construction of a mound to allow for stock refuge on the site, and will include sufficient area for the future erection of a shed for storage of equipment and feed during a flood event. Please see below a section of the proposed mound.

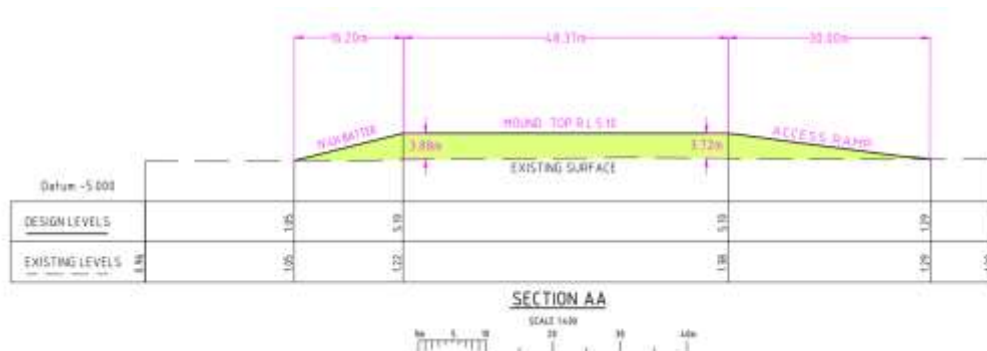


Figure 4: Section of proposed mound.

The proposed mound will create a level area of approximately 3,340m². Approximately 21,236m³ of fill is required to construct the mound and only certified VENM, ENM or material subject to a waste exemption under Clause 51 of the Protection of the Environment Operations (Waste) Regulation 2014 shall be used to construct the mound. No unclassified fill will be used.

The proposed mound has been designed and sited to provide the most efficient access to Alnwick Road. This ensures access to the mound remains available during low-level flooding events, where other parts of Alnwick Road and the site may be inundated.

It is also important to note that the purpose of the proposed mound is not merely as a flood refuge during a flood event. The mound also provides an area of level, accessible and most importantly well drained land in the weeks following a flood event.

This allows activities on site to resume as swiftly as possible, as the natural ground surface remains sodden for a long period of time. This is compounded by the effect of cows incidentally ripping up the soil. Even in low-level flood events, efforts to re-establish use of the site are often lengthy. It should be noted that during recent flood events cattle feed has been delivered via helicopter, incurring significant fees to the landowners. The mound will support ongoing cattle health during this time, by avoiding the opportunity for boggy ground to be created. Boggy ground creates the risk of foot rot and increases the potential for stock to become trapped and, in severe cases, being destroyed.

The erection of a mound will act as a climate resilient practice that ensures ongoing viability of the agricultural enterprise, independent of seasonal and long-term climate changes.

Finally, given the topography of the land and flood characteristics in the lower reaches of the Hunter Catchment, flood waters rarely drain within a 24-hour period, but linger for weeks and often up to months at a time.

SHED

The proposed 14m x 8m shed shall be 112m² with an apex height of 4.21m.

The size of the shed was determined based off what the owners of the site propose to store within the shed, which includes light machinery and other personal items for safety and security before, during and after the event of a flood. Please see floor plan as **figure 4**.

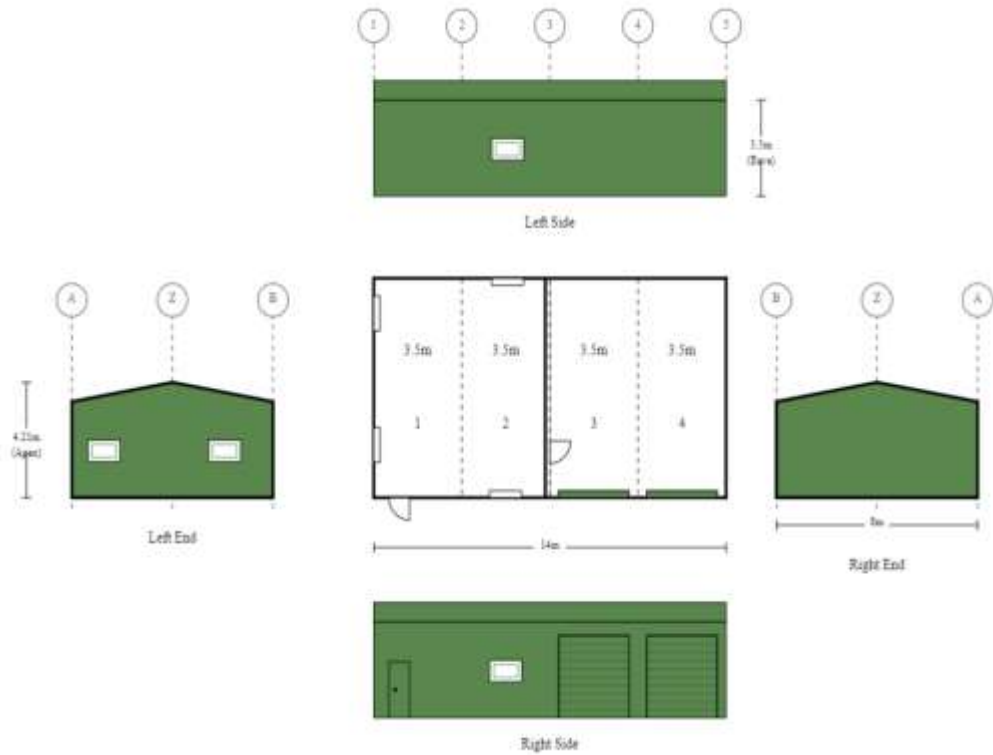


Figure 4: Shed Plan (Source: Apex Engineering).

The shed will be located on top of the proposed mound at least 5m from the side batters of the mound.

The shed has been strategically sited in the most practical location, without generating impacts on the amenity of the neighbourhood. The purpose of the shed will be for the storage of personal belongings, including farm equipment and other necessities.

For further details, please refer to the plans included as Annexure C.

4. PLANNING PROVISIONS

4.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Section 4.15 of the Environmental Planning and Assessment Act, 1979 provides the matters that must be considered in the assessment of any development application.

Section 4.15 of The Environmental Planning and Assessment Act, 1979, as amended, states the following:

(1) Matters for consideration – general

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

(a) The provisions of:

- (i) Any environmental planning instrument, and*
- (ii) Any draft environmental planning instrument that is or has been place on public exhibition and details of which have been notified to the consent authority, and*
- (iii) Any development control plan, and*
- (iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and*
- (iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),
that apply to the land to which the development application relates,*

(b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) The suitability of the site for the development,

(d) Any submissions made in accordance with this Act or the regulations,

(e) The public interest.'

The matters of relevance for this application are dealt with in the following sections of this Statement.

4.2 STATE ENVIRONMENTAL PLANNING POLICY (RESILIENCE AND HAZARDS) 2021

4.2.1 CLAUSE 2.10 DEVELOPMENT ON LAND WITHIN THE COASTAL ENVIRONMENT AREA

(1) Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:

(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,

(b) coastal environmental values and natural coastal processes,

(c) the water quality of the marine estate (within the meaning of the [Marine Estate Management Act 2014](#)), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,

(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,

The land is located within the coastal environment area and therefore this clause applies. The proposed mound is not expected to result in any long-term detrimental impacts that would cause irreversible damage to the local environment. The proposed development considers the natural coastal processes occurring on and adjacent to the site, and as such the integrity of the biophysical, hydrological and ecological environment will be maintained. The development will not cause an adverse impact upon the local ecological environment and is not affected by coastal related hazards.

This application is supported by a Flood Impact Assessment Report. The report prepared by Torrent Consulting concludes that:

“The flood assessment has determined that the proposed mound construction is compatible with the existing flood hazard and does not result in adverse off-site flood impacts. Further, the proposed mound is consistent with the requirements derived for maintaining cumulative impacts at an acceptable level.”

(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

The proposed development will not interfere with the public's safe access to and along any beach, headland, or rock platform.

(f) Aboriginal cultural heritage, practices and places,

The proposed development is not expected to impact any aboriginal cultural heritage, practices or places. An AHIMS search has been

undertaken where there are no Aboriginal Heritage sites or Aboriginal Places identified within a 1 km radius of the site.

(g) the use of the surf zone.

n/a

(2) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or

(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

The development has been sensitively designed and sited to avoid detrimental impacts to the coast environment and avoid any ecological impacts.

(3) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of [Sydney Regional Environmental Plan \(Sydney Harbour Catchment\) 2005](#).

Is noted.

4.2.2 CLAUSE 2.11 DEVELOPMENT ON LAND WITHIN THE COASTAL USE AREA

(1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority:

(a) has considered whether the proposed development is likely to cause an adverse impact on the following:

(i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

The proposed development will not interfere with the public's safe access to and along any foreshore or the like.

(ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,

The proposed mound is considered a small-scale development. Accordingly, the development will not result in the loss of views from public places, overshadowing of existing developments or wind funnelling.

(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,

The proposed mound is considered a common rural development within the Millers Forest area. Therefore, the development will not result in any negative visual impacts or reduce the scenic quality of the area.

(iv) Aboriginal cultural heritage, practices and places,

A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken including a 1 km radius of the site. Accordingly, AHIMS has not detected any Aboriginal sites or places on the site or within 1 km of the site.

The proposed development is not expected to impact any aboriginal cultural heritage, practices or places. Negligible impacts are expected, and due diligence shall be undertaken. In the event artefacts are disturbed, all works shall cease, and the relevant authorities notified.

(v) cultural and built environment heritage, and

The proposed development will not impact on any cultural or built environmental heritage.

(b) is satisfied that:

(i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or

(ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and

The development has been designed and sited to avoid detrimental impacts to the ecological, visual and cultural aspects of the coastal environment.

(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.

The proposed mound is in keeping with the surrounding environment and development.

(2) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of [Sydney Regional Environmental Plan \(Sydney Harbour Catchment\) 2005](#).

Is noted.

4.3 MAITLAND LOCAL ENVIRONMENTAL PLAN, 2011

4.3.1 EXISTING ZONING

Under the *Maitland Local Environmental Plan (LEP) 2011*, the subject site is zoned **RU1 Primary Production**. An extract from the land zoning map is included below as *Figure 5*.

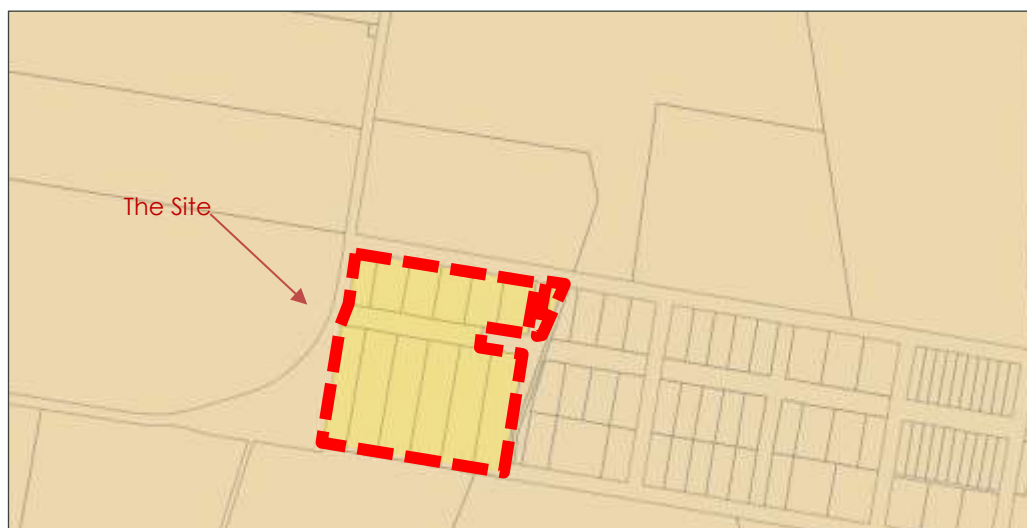


Figure 5: Maitland LEP 2011 land zoning map extract (Land Zoning Map - Sheet LZN_006).

ZONE OBJECTIVES:

The objective of the zone is:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

The purpose of the mound is to provide flood free land for a stock refuge and storage of agricultural equipment and other valuable possessions in the event of a flood. The proposed mound will not have an affect the natural resource base of the area nor result in adverse impacts on the surrounding primary industry practices.

Therefore, the proposed development is permitted with consent on the site within the RU1 zone.

4.3.2 **CLAUSE 7.1** **ACID SULFATE SOILS**



Figure 6: Maitland LEP Acid Sulfate Soils map extract (Map - Sheet ASS_006).

Acid Sulfate Soils (ASS) are naturally occurring sediments deposited under estuarine conditions; ASS contains iron sulphides (pyrite). When these soils are exposed to oxygen due to disturbance, they produce excess sulfuric acid, this makes the soils more acidic.

The subject site is located on land that potentially contains class 2 ASS. This means that works below the natural ground surface will require an ASS management plan. The development will not involve works below the natural ground surface, and therefore the potential for the development to trigger oxidation and the production of acid from acid sulfate soils is envisaged to be low to none. Therefore, the development does not require an ASS management plan and the provisions of SEPP No. 55 (Remediation of Land) are not applicable to this application.

4.3.3 **CLAUSE 7.2 EARTHWORKS**

(1) The objectives of this clause are as follows:

(a) to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land,

(b) to allow earthworks of a minor nature without requiring separate development consent.

The proposed mound will create an area above the flood planning level for the purpose of stock refuge during flood events.

The proposed mound has been positioned in an area with lower flood velocity impact.

Accordingly, the mound will not negatively impact environmental functions or processes, or adjoining land uses.

(2) Development consent is required for earthworks unless:

(a) the work is exempt development under this Plan or another applicable environmental planning instrument, or

(b) the work is ancillary to other development for which development consent has been given.

The proposed earthworks are not exempt. However, the proposed mound is ancillary to the use of the site, being rural agriculture. The mound will be used for providing flood refuge for equipment and livestock.

(3) Before granting development consent for earthworks, the consent authority must consider the following matters:

(a) the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,

The site is rural in nature and the proposed mound is not located within an existing drainage channel but is located within a flood affected area. A flood impact and cumulative impact assessment has been prepared to determine the mounds compatibility with the existing flood hazard. As a result of this study, it has been determined that the mound is compatible with the flood hazard and achieves all three recommended mound development criteria when assessing at a cumulative impact scale.

Therefore, the proposed development is not expected to result in a detrimental effect to the existing drainage patterns onsite and soil stability in the locality.

(b) the effect of the proposed development on the likely future use or redevelopment of the land,

The site is located within Millers Forest and is known to have highly fertile and productive soils that are paramount for agricultural production. However, the site is affected by flood waters during flood events, thus, it is crucial that farmers can protect livestock during flood events and the most effective way is through the implementation of flood mounds. Owing to this trend, flood mounds are not considered to impact upon the amenity of adjoining properties and are a common development that enhances agricultural production. Consequently, it is highly unlikely that the proposed mound will have any impact on the amenity of nearby properties.

(c) the quality of the fill or the soil to be excavated, or both,

Only certified VENM, ENM or waste-derived material the subject of a resource recovery exemption within the meaning of the Protection of the Environment Operations (Waste) Regulation (2014) shall be used to extend the mound. All certification will be issued to Council prior to certification of the mound. No unclassified fill will be used.

(d) the effect of the proposed development on the existing and likely amenity of adjoining properties,

The site is located within Millers Forest and is known to have highly fertile and productive soils that are paramount for agricultural production. However, the site is affected by flood waters during flood events, thus, it is crucial that farmers can protect livestock during flood events and the most effective way is through the implementation of flood mounds. Owing to this trend, flood mounds are not considered to impact upon the amenity of adjoining properties and are a common development that enhances agricultural production. Consequently, it is highly unlikely that the proposed mound will have any impact on the amenity of nearby properties.

(e) the source of any fill material and the destination of any excavated material,

The fill to be used for the mound shall be certified prior to being brought to site and certification shall be provided to Council or private certifier prior to practical completion of the mound.

(f) the likelihood of disturbing relics,

There are no known heritage relics on the site. Please refer *Annexure B* for Aboriginal Heritage Information Management System search.

(g) the proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.

Only certified VENM, ENM or waste-derived material the subject of a resource recovery exemption within the meaning of the Protection of the Environment Operations (Waste) Regulation (2014) shall be used to erect the mound. Further, the proposed flood refuge is not located within a drinking water catchment or in close proximity to an environmentally sensitive area.

Further, a flood impact and cumulative impact assessment has been prepared to determine the mounds compatibility with the existing flood hazard. As a result of this study, it has been determined that the mound is compatible with the flood hazard and achieves all three recommended

mound development criteria when assessing at a cumulative impact scale.

Therefore, with all things considered, it is determined the proposed development will not have an adverse impact on any nearby watercourses.

4.3.4 **CLAUSE 7.3 FLOOD PLANNING**

The site is mapped as being flood prone. The following figure is taken from the Maitland LEP flood planning map:

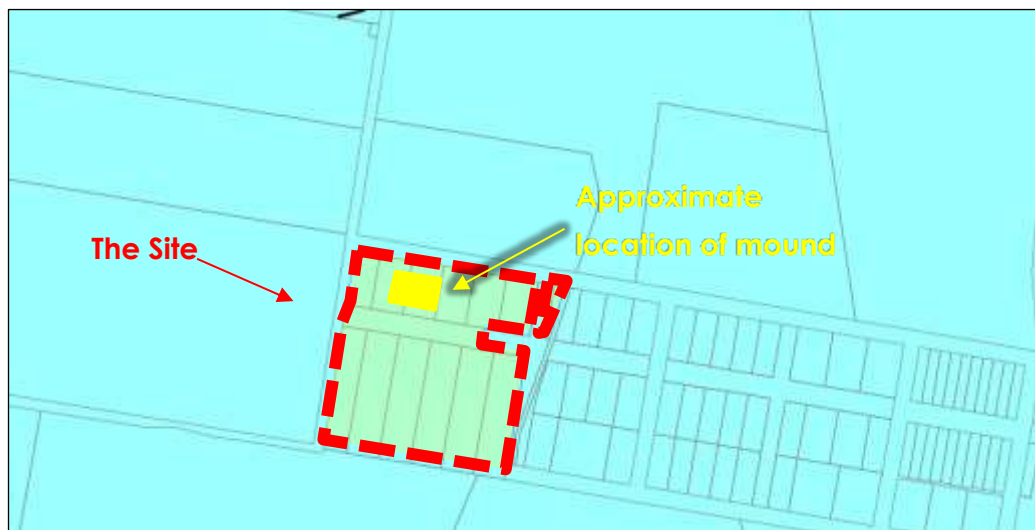


Figure 7: Maitland LEP Flood Planning Map extract (Map - Sheet FLD_006).

(1) *The objectives of this clause are as follows:*

- (a) *to minimise the flood risk to life and property associated with the use of land,*
- (b) *to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,*
- (c) *to avoid significant adverse impacts on flood behaviour and the environment.*

The site currently supports existing rural dwelling, cattle yards, grazing land and other ancillary agricultural structures. The proposed mound will provide land above the Flood Planning Level for stock refuge and support the construction of a shed. The mound will also allow for the storage of machinery, stock feed, potted plants and other belongings in time of flood. The development will not create adverse impacts on flood behavior in the environment; however, it will decrease the risk to life and property in the event of a flood.

It is expected that the proposed mound will not have a major impact on local flood behaviour.

(2) This clause applies to:

(a) land that is shown as "Flood planning area" on the Flood Planning Map, and

(b) other land at or below the flood planning level.

The land is mapped as being within the Flood Planning area; therefore, this clause applies.

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:

(a) is compatible with the flood hazard of the land, and

(b) is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and

(c) incorporates appropriate measures to manage risk to life from flood, and

(d) is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

The mound will provide an area above the flood planning level. This area will provide flood free land suitable for the construction of the proposed shed, stock refuge and storage of machinery, agricultural equipment, stock feed and other belongings during a flood event.

A comprehensive Flood Impact Assessment has been prepared to support the application and has concluded that the mound is compatible with the flood hazard. The cumulative impact assessment has also demonstrated that the mound is suitable and shall not significantly adversely affect the surrounding environment or adjacent properties.

(4) A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0), published in 2005 by the NSW Government, unless it is otherwise defined in this clause.

Is noted.

(5) In this clause:

flood planning level means the level of a 1:100 ARI (average recurrent interval) flood event plus 0.5 metre freeboard.

Is noted.

4.3.5 CLAUSE 7.4 RIPARIAN LAND AND WATERCOURSES

The property is mapped as being adjacent to a watercourse, however the mound location is sufficient distance from the watercourse. The following figure is taken from the Maitland LEP Watercourse map:

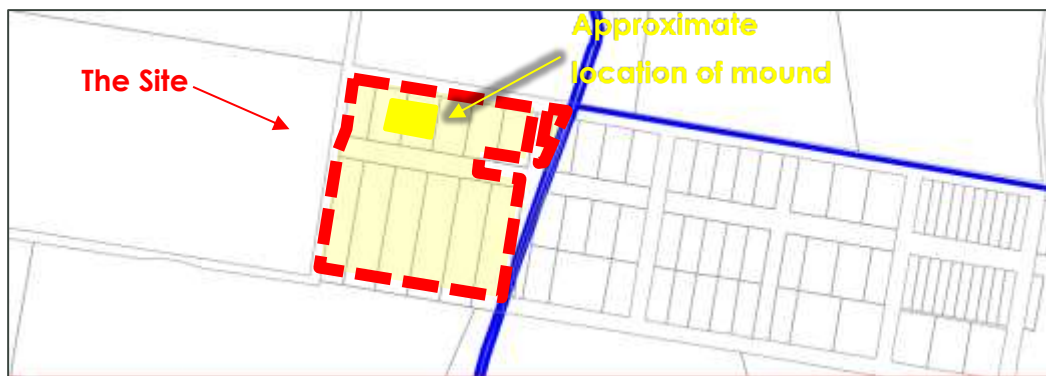


Figure 8: Maitland LEP Watercourse Map extract (Map - Sheet WCL_006).

The development site is more than 40m of the top of the bank of a watercourse identified as "Watercourse land" on the Watercourse Map (Scotch Creek). Therefore, no further action is required in this instance.

PERMISSIBILITY:

The proposed development subject to this report includes the erection of a mound at 28 Alnwick Road, Millers Forest for use as a flood refuge.

The development is considered an innominate use and is ancillary to the existing 'extensive agriculture', which is defined in the LEP as:

extensive agriculture means any of the following:

- (a) the production of crops or fodder (including irrigated pasture and fodder crops) for commercial purposes,
- (b) the grazing of livestock (other than pigs and poultry) for commercial purposes on living grasses and other plants on the land as their primary source of dietary requirements, and any supplementary or emergency feeding, or temporary agistment or housing for weaning, dipping, tagging or similar husbandry purposes, of the livestock,
- (c) bee keeping,

(d) a dairy (pasture-based) where the animals generally feed by grazing on living grasses and other plants on the land as their primary source of dietary requirements, and any supplementary or emergency feeding, or temporary agistment or housing for weaning, dipping, tagging or similar husbandry purposes, of the animals.

The site is currently zoned RU1 Primary Production. Under the provisions of the Maitland Local Environmental Plan (2011) the proposed mound and shed is permitted with consent.

There is nothing in the MLEP that prohibits the proposed development.

4.4 MAITLAND DEVELOPMENT CONTROL PLAN, 2011

4.4.1 B.3 HUNTER RIVER FLOODPLAIN

The site is located on floodplain land, as per mapping extract in *Figure 9*. As such Chapter B.3 Hunter River Floodplain Management from Part B of the Maitland DCP has been addressed below.

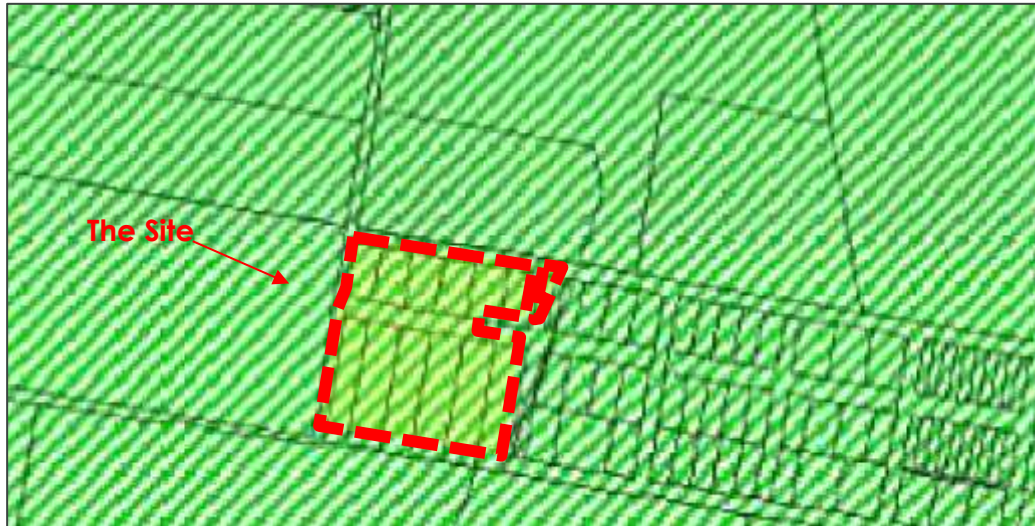


Figure 9: Maitland DCP Flood Planning Map extract (Map - Sheet_006).

Filling of Flood Storage and Flood Fringe Areas:

Significant adverse impacts on flood behaviour and the environment are avoided.

Filling does not increase flood affectation elsewhere on the floodplain.

Minimise the flood risk to life and property associated with the use of land.

The site is noted by Maitland Council as being flood prone. However, Council's mapping does not indicate the hazard level or hydraulic category for the site as it is within an area subject to further investigation. Therefore, flood planning information has been provided by Council and is included as *Annexure E*.

Given that Council's flood mapping for the Millers Forest area is somewhat limited, Council have relied on mapping associated with the adoption of the 1% flood standard in 1994. Based on these maps, the RL AHD of the 1:100yr (1%) flood affecting the property is 4.4m with the Flood Planning Level (FPL) at 4.9m, being 500mm above the flood standard. The 1% flood velocity in the locality is estimated to range from .03m/sec possibly up to .8m/sec. The proposed mound has been constructed to RL of 4.90m.

While the maps within Part B3 of Council's DCP do not cover this specific locality, the subject land is deemed to be in a high hazard area.

The proposed development includes the construction a mound to allow for stock refuge on the site and erection of a shed upon the mound for storage of equipment generally as well as feed during a flood event. Given the low-lying nature of the site, flood refuge is essential to the existing business and shall decrease the effect of flooding to life and property.

Further, a flood impact and cumulative impact assessment has been prepared to determine the mounds compatibility with the existing flood hazard. As a result of this study, it has been determined that the mound is compatible with the flood hazard and achieves all three recommended mound development criteria when assessing at a cumulative impact scale. Consequently, the proposed mound meets the requirements of the DCP.

General building requirements

Minimise the flood risk to life and property associated with the use of land.

All habitable finished floors shall be no lower than the FPL.

Parts of buildings and structures at or below the FPL shall be constructed in accordance with Table 1: Flood Aware Design Requirements for Residential Development on Flood Prone Land.

The proposed mound will provide a flood refuge above the flood planning level, without impacting upon surrounding property. Furthermore, the proposed mound will provide safe refuge for stock and belongings during flood events.

The development shall be certified by a qualified Structural Engineer that the building has been designed to withstand the depth of inundation, buoyancy and flow velocity forces (including potential for debris impact) at the development site for a 1:100 ARI event.

No structures proposed with this application, however the shed will be built above the FPL; therefore, it is reasonable to expect that it will not be subjected to the forces of a flood event and certification would not be required. However, if it is necessary, structural certification can be provided at future DA stage.

Flood-free access shall be provided from the development to an appropriate evacuation facility (as identified in the Maitland Local Flood Plan), at the 1:20 ARI flood level or higher.

Provision shall be made for the safe evacuation of people from the development in accordance with the Maitland Local Flood Plan.

The proposed storage shed will be ancillary to the use of the site and not considered habitable. Nevertheless, evacuation egress in the event of a flood can be achieved so via Alnwick Road toward Woodberry Road.

During events of heavy rainfall, public radio broadcasts shall be monitored for warnings by the BOM and the issue of evacuation orders by the SES. Warnings are to be issued to areas of high threat, and when flash-flooding is imminent. Occupants should move away from a flood threat, via the evacuation route from the site. Anyone on-site shall have adequate warning time to evacuate the site via this route to a flood free area if need be.

Moreover, the proposed mound and shed will provide adequate shelter in flooding events and will be readily accessible in an emergency situation.

The development will in no way increase the risk to life or property. There will be no further occupants on the site as a result of the proposed development being approved. Accordingly, risk to human life has been adequately addressed through consideration of evacuation requirements, access restrictions and warning time.

Sufficient storage space for household effects shall be provided above the FPL.

Electrical fixtures such as light fittings and switches shall be sited above the FPL unless they are on a separate circuit (with earth leakage protection) to the rest of the building.

The proposed mound will allow a safe and accessible area above the Flood Planning Level that will be able to provide storage and support stock.

4.4.2 C.4.14 GARAGES, CARPORTS & SHEDS

It is noted that the Maitland City Council DCP (2011) adheres to a merit-based process for the erection of garages, carports and sheds. The following guidelines are recommended:

Garages and carports should preferably be detached and located at the rear or set well back at the side of a building behind the rear building line.

The proposed shed will not be attached to a dwelling.

Garages should be set back a minimum of 500mm from the side and the rear boundary.

The proposed shed shall exceed the minimum setback requirements and will be located upon the proposed mound.

Garages and carports should make reference to any established historic patterns in the street.

The use of landscaping such as screening or planting and front fences may be useful tools in integrating the structure with its site.

The site is in a rural zone with minimal dwellings within close proximity. It is unlikely that the proposed shed will have any visual impact in the public realm.

Colours and materials should blend into the surrounding landscape.

The colour scheme will be chosen to suit rural sheds in the surrounding area. No reflective material shall be used.

Garages should have simple hipped, gable or skillion roofs depending on the design of the existing main building.

Gable or hipped roof with skillion roofed attachment is the most appropriate double garage roof form.

The proposed shed will have a simple gable roof and will not detract from the amenity of the area.

Existing outbuildings should be maintained and reused wherever possible.

All existing development on site will be maintained.

Simple open light construction carports are preferable to solid heavily detailed buildings.

The proposed shed is rural and is not for the purpose of a carport. The shed is visually sympathetic to the surrounding rural area.

The pitch of a garage or carport roof should, in most cases, be comparable or slightly lower than that of the main building – generally 25° – 30°.

The pitch of the shed is appropriate for the site and development, not exceeding 25° – 30°.

4.5 OTHER PLANNING CONSIDERATION

4.5.1 TRAFFIC

Truck and Dog trailer combination will be used to transport the fill on-site. The maximum length of each truck and dog is 19m and will carry approximately 35 tonnes of fill. The mound will require approximately 7,499 tonnes of fill. This will involve 214 deliveries over a period of 5 to 6 weeks totalling approximately 8 to 10 deliveries per day Monday to Saturday.

Alnwick Road is a public road with good site distance in both directions. Accordingly, there is ample space and time for trucks to pull off so that traffic is not impacted. The trucks will make egress either via the entry at Alnwick Road.

These types of truck movements can already be undertaken as exempt development on a daily basis. For example, a farmer may have several silos on a property that are to be filled with grain. Without any development consent from Council, the farmer can order the grain and have it delivered in trucks that could require many trips. This situation is no different. Accordingly, it is envisaged there will be no impact on road network.

4.5.1 STOCK

The NSW Department of Primary Industries has prepared the *Livestock flood refuge mounds 2009*, a guideline that aims to assist in the sustainable planning of rural developments. This document discusses the issues that may arise from keeping livestock on coastal floodplains, and further outlines the best approaches to alleviate and manage flood risk. Under the provisions of the guideline, the proposed mound has the capacity to safely provide refuge for approximately forty (40) head of cattle.

Holding space =

$$H = 25\text{m}^2 \times 40 \text{ adult cattle} = 1,000 \text{ m}^2$$

Feeding space = 0.8m² per head

$$F = 0.8 \times 40 \text{ head} = 32 \text{ m}^2$$

Watering space = 0.5m² per head.

$$W = 0.5 \times 40 \text{ head} = 20 \text{ m}^2$$

Storage space = 3m² per head

$$S = 3 \times 40 \text{ head} = 120 \text{ m}^2$$

Total useable area = H + F + W + S

$$= 2,250 + 72 + 45 + 270 = 1,172\text{m}^2$$

The mound will also be used for the storage of agricultural equipment and potted plants and seedling associated with the owner's horticultural business, some of which may be within the proposed shed. These provisions are considered to make the mound size suitable to reduce the risk to both life and property, and enable ongoing viability for the owners of the land.

Given the recent loss of plants, tube stock and seedlings ready for sale during the 2021-2022 flood events, additional space is anticipated to be required for the future erection a greenhouse to accommodate storage of plants.

5. CONCLUSION

The proposed development subject to this report is the construction of a mound at 280 Martins Wharf Road, Millers Forest.

The aim of the proposed development is to construct an earthen mound to provide flood refuge for livestock as well as sufficient area to erect a future shed on top of the mound to provide shelter for machinery, equipment and personal items in the event of a flood. The proposed development is ancillary to the current use of the site.

This statement sets out the primary matters for consideration under Section 4.15 of the Environmental Planning & Assessment Act and is accompanied by a number of attachments dealing with specific issues related to the site.

Given that there are no matters which justify refusal of the application, we respectfully request that Council provide a favourable determination.

Annexure A

Development Plans
Le Mottee Group

Annexure B

AHIMS Report (1 km)
NSW Office of Environment & Heritage

Annexure C

Flood Impact & Cumulative Assessment
Torrent Consulting

Annexure D

Shed Plans
Apex Engineering

Annexure E

Council Flood Information