Briefing Report -

Department Assessment Report

File no: IRF19/5833

Report to the Southern Regional Planning Panel on an application for a site compatibility certificate under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

SITE: 120 Walker Street, Helensburgh (Figures 1 and 2, below).

LEGAL DESCRIPTION: Lot 2 DP 548129

Figure 1: Aerial photo of site (source: Nearmap).

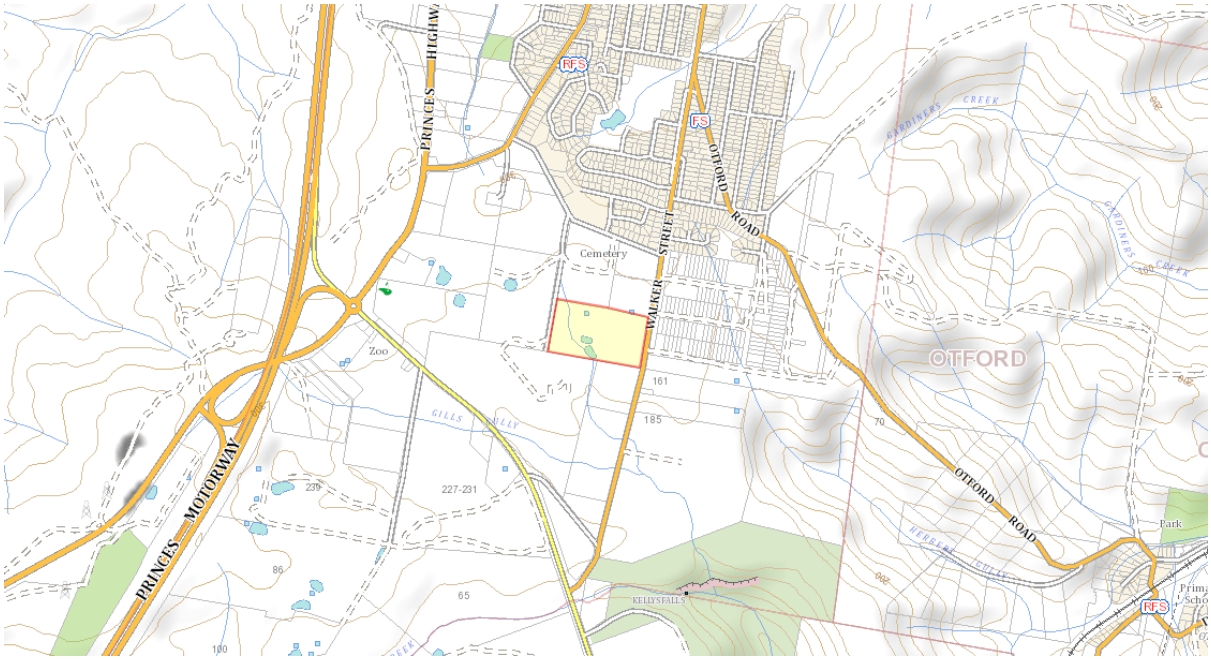


Figure 2: Site context map (source: SIX Maps).

APPLICANT: TCW Consulting Pty Ltd on behalf of Norman and Laraine Stibbard. The application for a site compatibility certificate (SCC) was submitted to the Department on 2 November 2018.

PROPOSAL: The proposal is for 176 seniors housing units and ancillary facilities at 120 Walker Street, Helensburgh. The proposal includes a mixture of serviced self-care housing and self-contained dwellings comprising 85 studio units and 38 dementia care units across two two-storey apartment buildings and 53 single-storey villas (including 10 dementia villas). Other development proposed includes:

- 193 at-grade parking spaces (including 47 spaces under a grass-covered structure), internal roads and footpaths;
- a two-storey resident facilities building with administration and medical offices;
- use of the existing cottage fronting Walker Street as a doctor and dentist surgery;
- use of the existing dwelling as a hairdresser, café, ATM, kitchen and hydrotherapy pool;
- use of three existing sheds/buildings for storage, waste collection and maintenance;
- cleaning and upgrading of three dams;
- landscaping; and
- construction of a new footpath, kerb and guttering along the site frontage and the provision of a new bus bay on Walker Street.

Indicative building plans have been provided for the site (Figures 3 and 4, below and next page). Architectural scheme drawings for the proposal by Phil O'Donnell Architects are provided at **Attachment A**.

The proposal is also supported by bushfire, traffic and preliminary stage 1 site investigation reports, a hydrologic and hydraulic modelling summary and a land use compatibility assessment **(Attachment A)**.

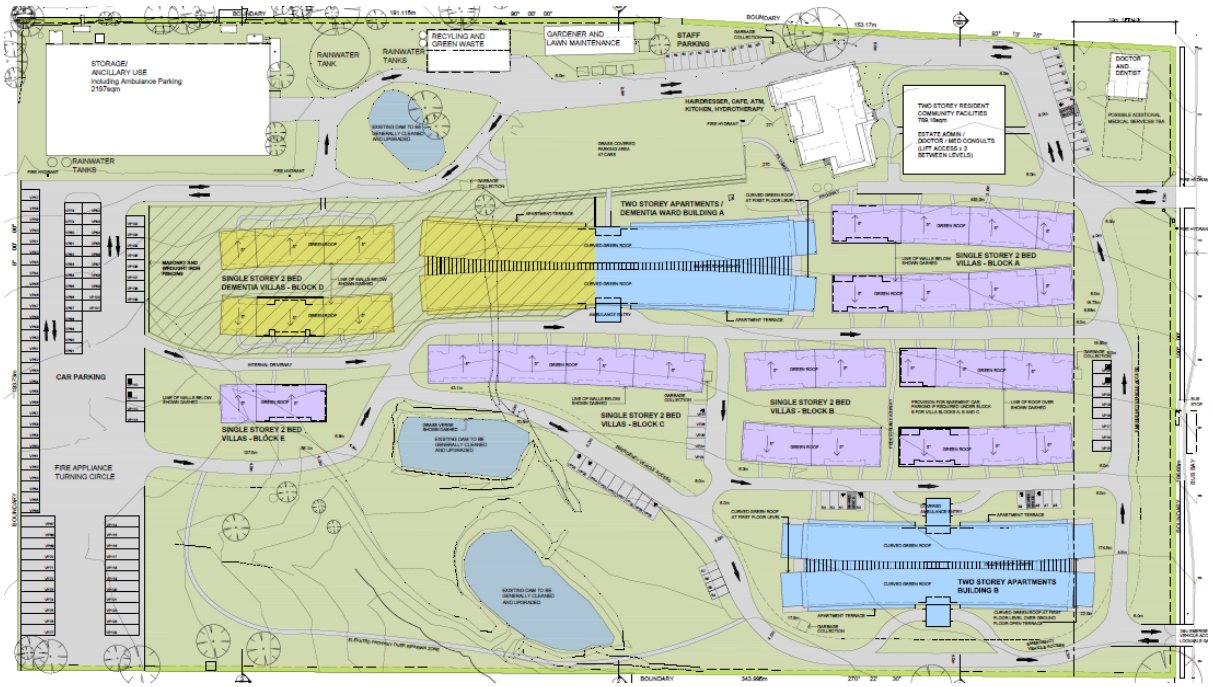


Figure 3: Indicative building plan (source: Phil O'Donnell Architects).

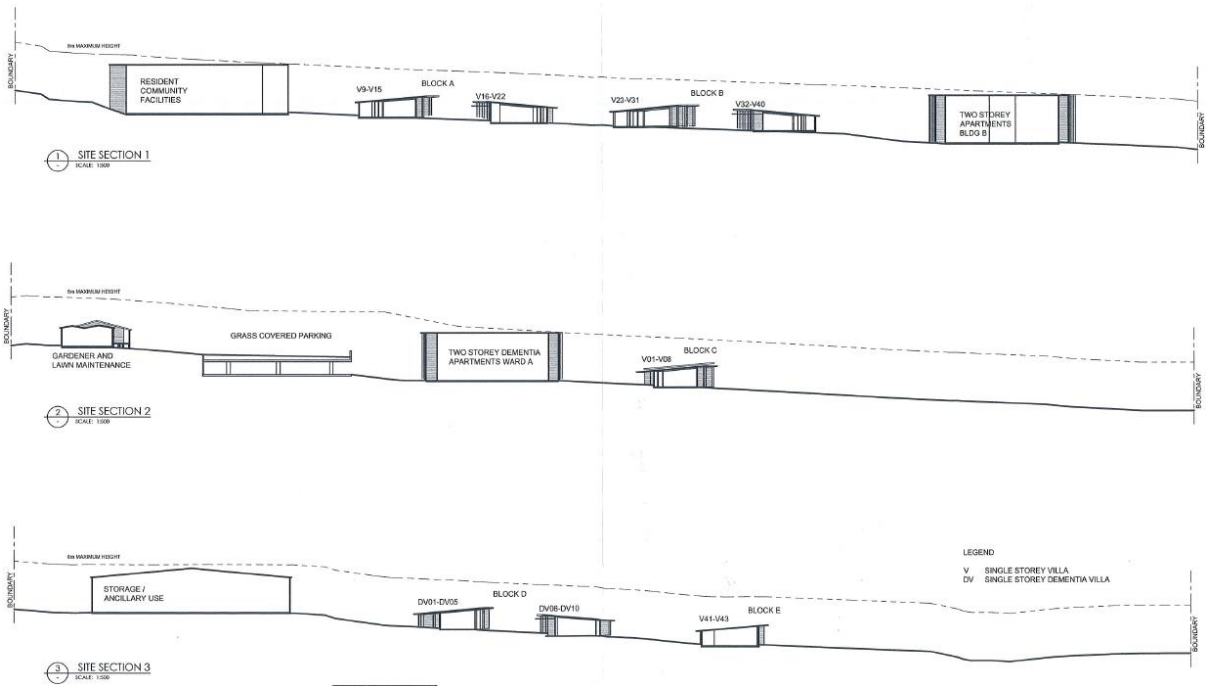


Figure 4: Indicative section plan of scheme (source: Phil O'Donnell Architects).

LGA: Wollongong City

PERMISSIBILITY STATEMENT

The seniors housing proposal is for a combination of self-contained dwellings and serviced self-care housing. The site is zoned RU2 Rural Landscape under the Wollongong Local Environmental Plan 2009 (Figure 5, below). Seniors housing is not a permitted land use in this zone under the LEP.

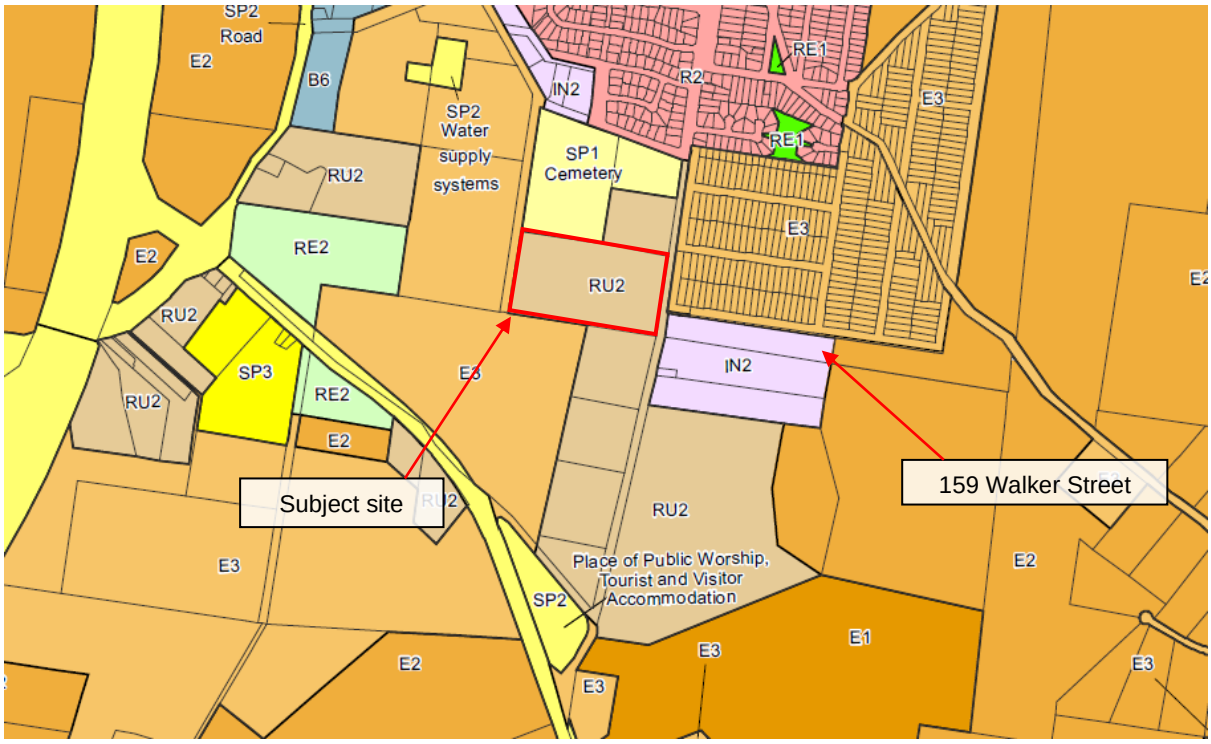


Figure 5: Land zoning map (source: Wollongong LEP 2009).

The applicant is seeking an SCC for seniors housing under clause 24(1)(a) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (Seniors Housing SEPP) on the basis that the subject site adjoins land zoned primarily for an urban purpose. The south-east portion of the site adjoins land on the opposite side of Walker Street, being 159 Walker Street, which is zoned IN2 Light Industrial under the Wollongong LEP 2009.

DOES THE SENIORS HOUSING SEPP APPLY TO THE SUBJECT SITE?
Subject to other considerations detailed later in this report, the Seniors Housing SEPP applies to land that is:

- zoned 'primarily for urban purposes' or land that 'adjoins land zoned primarily for urban purposes' (clause 4(1)); and
- where development for the purpose of any of the following is permitted on the land:
    - dwelling houses;
    - residential flat buildings;
    - hospitals;
    - development of a kind identified in respect of land zoned as special uses; or
    - the land is being used for the purposes of an existing registered club.

Is the subject site zoned 'primarily for urban purposes' or does it 'adjoin land zoned primarily for urban purposes'?

Land not zoned primarily for urban purposes is defined under clause 4(2) of the Seniors Housing SEPP as (but not limited to) land that is:

- principally for rural purposes;
- principally for urban investigation; and
- a zone that is identified as principally for residential uses on large residential allotments (for example, R5 Large Lot Residential or RU6 Transition zones per the Standard Instrument LEP).

The SCC application states that the subject site is not land zoned primarily for urban purposes, but rather adjoins land zoned primarily for an urban purpose, being the IN2 Light Industrial-zoned land on the opposite side of Walker Street.

After reviewing the characteristics and the key objectives of the IN2 zone, being to: provide a wide range of light industrial, warehouse and related land uses; encourage employment opportunities; and minimise any adverse effect of industry on other land uses, it is considered that the adjoining IN2 land is land zoned primarily for urban purposes.

The application form states the proposed development involves serviced self-care housing and self-contained dwellings.

Clause 13 of the Seniors Housing SEPP defines 'in-fill self-care units' and 'serviced self-care housing' for the purpose of the SEPP as part of defining 'self-contained dwellings' (itself a form of 'seniors housing').

Clause 13(1) of the Seniors Housing SEPP provides that:

> '… in-fill self-care housing is seniors housing on land zoned primarily for urban purposes that consists of 2 or more self-contained dwellings where none of the following services are provided on site as part of the development: meals, cleaning services, personal care, nursing care'.

Clause 13(2) of the Seniors Housing SEPP provides that:

> '… serviced self-care housing is seniors housing that consists of self-contained dwellings where the following services are available on the site: meals, cleaning services, personal care, nursing care'.

While both in-fill self-care housing and serviced self-care housing are considered self-contained dwellings under the Seniors Housing SEPP, serviced self-care housing requires the provision of services such as meals, cleaning services, personal care and nursing care, whereas in-fill self-care housing is characterised by the fact that it does not provide these services.

As a further point of distinction, clause 13(1) provides that in-fill self-care housing is seniors housing on land zoned primarily for urban purposes, whereas this restriction does not apply to serviced self-care housing.

This is further reinforced by clause 15 of the SEPP, which provides that chapter 3 (under which the provisions for SCCs are contained):

- allows any form of seniors housing, despite the provisions of any other environmental planning instrument (EPI), on land zoned primarily for urban purposes (if the development is carried out in accordance with the SEPP); and
- but only allows seniors housing in the form of a hostel, a residential care facility or serviced self-care housing on land that adjoins land zoned primarily for urban purposes.

This distinction is confirmed by clause 17, which provides that a consent authority cannot consent to a development on land that adjoins land zoned primarily for urban purposes unless the proposed development is for the purpose of a hostel, a residential care facility, or serviced self-care housing.

As such, an SCC can only be granted over the subject site where the proposed self-contained dwellings are wholly comprised of serviced self-care housing, and if an SCC is granted over the subject site, this should be stipulated in schedule 2 of the SCC as a requirement imposed under clause 25(7) of the Seniors Housing SEPP.

IS THE LAND EXCLUDED UNDER SCHEDULE 1?

Despite the Seniors Housing SEPP applying to the subject site under clauses 4(1) and 4(2) of the SEPP, clause 4(6)(a) of the SEPP provides that the SEPP does not apply to land described in schedule 1 of the SEPP (environmentally sensitive land).This includes land that is identified in another EPI by any of the following descriptions, or by like descriptions, or descriptions that incorporate any of the following words or expressions:

a) coastal protection;

b) conservation (but not land identified as a heritage conservation area in another environmental planning instrument);

c) critical habitat;

d) environment protection;

e) open space;

f) escarpment;

g) floodway;

h) high flooding hazard;

i) natural hazard;

j) (Repealed);

k) scenic (but not land that is so identified if:

   i. the land is within a residential zone in which development of two storeys or more in height is permitted, or

   ii. an adjacent residential zone, also identified as scenic, permits development of two storeys or more in height),

l) water catchment; and

m) natural wetland.

Part of the site is identified as riparian land under clause 7.4 of the Wollongong LEP 2009 (Figure 6, below). The clause requires the consent authority to consider the impact of the proposed development on the land and any opportunities for rehabilitation of aquatic and riparian vegetation and habitat on that land.

The applicant states that the riparian corridor exists over only part of the site, rather than as mapped, and the proposed development has been designed to provide a buffer around this area. It is also considered that the riparian land identification does not meet the classification for exclusion under schedule 1 as it is not 'critical habitat', 'conservation' or 'natural wetland', and development can occur on sites with identified riparian lands provided it adequately addresses clause 7.4 of the Wollongong LEP 2009.

Council's comments on the proposal identify that "Council's records indicate the site is flood affected and located within an uncategorised flood risk precinct". However, this is not relevant in this instance as the site is not identified as a flood planning area under the LEP.

As the land is not described as environmentally sensitive land in an EPI in accordance with the descriptions identified in schedule 1, the Seniors Housing SEPP does apply to the site.

Figure 6: Riparian lands (source: Wollongong LEP 2009).

PREVIOUSLY ISSUED SITE COMPATIBILITY CERTIFICATE ON THE LAND
No SCCs have been previously issued on the land.

A previous SCC application from the same applicant for 193 serviced and self-care dwellings and 201 parking spaces on the site was refused by the Secretary's delegate on 10 April 2018. The reasons for refusal were:

- having regard to the site location and accessibility, inadequate services (particularly retail, community, medical, transport services) and infrastructure (suitable access pathways) would be available to meet the demands of residents arising from the proposed development;
- the site is on flood-prone land and insufficient evidence has been provided to demonstrate development potential or to ensure there would be no adverse impact on surrounding land uses or risk to life and property;
- the proposed development would be likely to result in unacceptable land use conflicts with adjoining properties, which could adversely impact on the amenity of seniors' residents and is likely to restrict the existing and likely future uses of surrounding sites; and
- the bulk, scale, built form and density of the proposed development is considered to be incompatible with the existing and desired future character of the area and would result in adverse visual and amenity impacts on existing and future uses of land near the development.

The applicant has included a response to the reasons for refusal in the information provided with this application, including a response to issues of land use conflicts and compatibility prepared by Cardno Pty Ltd **(Attachment A)**. These issues are considered further in the assessment below.

CLAUSES 24(2) AND 25(5)
The panel must not issue a certificate unless the panel:

(a) has taken into account any written comments concerning the consistency of the proposed development with the criteria referred to in clause 25(5)(b) received from the general manager of the council within 21 days after the application for the certificate was made;

(b) is of the opinion that:

(i) the site of the proposed development is suitable for more intensive development; and

(ii) the proposed development for the purposes of seniors housing is compatible with the surrounding environment and surrounding land uses having regard to the criteria specified in clause 25(5)(b).

CLAUSE 25(2)(C)
There are no current SCCs or pending applications for SCCs for land within proximity of the site and, as such, a cumulative impact study has not been provided.

COUNCIL COMMENTS
The Department referred the SCC application to Council on 22 November 2018. Council's comments, dated 18 December 2018, were received on 7 January 2019 **(Attachment C)** and additional comments were sought from Council following additional information from the applicant. These comments were received on 20 March 2020 **(Attachment D)**. Council's comment reflect many of the issues raised in the comments provided in response to the previous SCC application. Council's submission states that while it acknowledges the need for seniors housing, the proposal could be more appropriately located on residential land closer to the Helensburgh town centre. The key issues from Council's submission are summarised in the table below:

Issue	Council comments
Local strategy	Use of the land for residential purposes was not envisaged by the Review of former 7(d) lands at Helensburgh, Otford and Stanwell Tops, being the most applicable local strategy for lands surrounding Helensburgh. The use of the and for self-care seniors' housing, enabled by a SCC would be tantamount to a rezoning without the rigor of a planning proposal and its associated community exhibition process. This is a concern given the inconsistency with the abovementioned strategic document, and the general level of public interest in land use matters in the locality.
Land zoning	The land is zoned RU2 Rural Landscape and seniors housing was not envisaged as a land use in the zone. The RU2 zoning was applied to the site in recognition of the ongoing agricultural land use. Previous development consents issued on the site are generally consistent with the objectives of the RU2 zone. Redevelopment of the site for seniors housing would result in an inability of the site to continue to meet the objectives of the zone.
Lot size	The site and surrounding RU2-zoned properties are under the minimum lot size for the zone. Redevelopment of the site for

Issue	Council comments
	seniors housing would inhibit opportunities to consolidate land and create appropriately sized lots for rural and agricultural development. The proposal would create an isolated, undersized lot immediately to the north of the site.
Local character	The scale of the development is not considered to be in context with surrounding development, which is characterised by single dwellings on rural/environmental allotments. The character of the rural-zoned area would be unlikely to undergo significant change in the foreseeable future and the proposed development would not be in keeping with the character of the street and in harmony with the buildings around it.
Design	The development fails to provide good design, thus not achieving the objectives of the Seniors Housing SEPP. The proposed use of the existing buildings for ancillary and support uses is considered to be a fragmented and ad hoc design approach. The location of car parking spaces remote from the dwellings is of concern. The provision of extensive carport areas over parking spaces is not considered to provide a good design outcome. Uncovered parking spaces at the rear of the site for residents do not provide a good development outcome. The front setback to Walker Street is not supported as it is not consistent with the streetscape and insufficient area is provided for landscaping along the street frontage. The proposed units lack architectural merit.
Land use conflict	Extensive development of the site is likely to result in ongoing land use conflicts between the surrounding rural/agricultural land uses and the proposed residential land use. The amenity of the future residents of the development may be compromised.
Stormwater/ flooding	The proponent's flood study indicates the site is located within a Medium Flood Risk Precinct. Chapter E13 of the Wollongong DCP 2009 defines development such as this as a 'critical utility' and these are not appropriate in a medium flood risk precinct. Council considers the proposed use of the site for seniors' housing does not give due regard to the potential risk to human life and damage to property arising from the natural flood hazard to which the site is subject. Council was also concerned about the need for flood refuges and associated filling and visual impacts.
Environment	Council has concerns with the possible impacts of the proposed development on the water quality of the perched aquifer underlying the site and Gills Creek. Redevelopment of the site would require the on-site dams to be lined and the development

Issue	Council comments
	would require design, siting, construction and management to ensure protection of the water quality in the area. Any seniors living development would need to protect and enhance the native vegetation in the identified riparian corridor area on the site.
Infrastructure	Council was concerned that the wastewater system servicing the subject site may not have capacity to service the proposed development. The proponent's submission included a letter from Sydney Water saying there is sufficient capacity in the system to support the proposed development.

Council's comments support the position that the subject site is not suitable for seniors housing development.

SUITABILITY FOR MORE INTENSIVE DEVELOPMENT

The panel must not issue a certificate unless the panel is of the opinion that the site of the proposed development is suitable for more intensive development (clause 24(2)(a)).

1. The site of the proposed development is not suitable for more intensive development (clause 24(2)(a))

The seniors housing development, at the density proposed, is not considered compatible with the adjoining rural and industrial-zoned land and uses. The site is in a semirural landscape with surrounding low-density development. The proposal would result in a form of development that is generally inconsistent with the existing and likely future character of the surrounding area prescribed by the site's RU2 zoning.

There are several environmental constraints that suggest the site is unsuitable for this form of development. The site and surrounding land are identified as bushfire-prone, and heavily vegetated land adjoins the site in parts to the north, south-east and west. This poses a risk if there is a need to evacuate a large number of elderly residents in a short time. There are also unresolved concerns about the impact of development on the site on the groundwater (perched aquifer) and surface flows, as well as the impact of flooding on the proposal.

The town centre of Helensburgh is approximately 1.4km from the site and is limited in the range of services available due to the small population. Other services and facilities, including hospitals, are located some distance away in Wollongong or southern Sydney. Residents will primarily rely on private transportation as public transport is limited and pedestrian access is not suitable due to the distance, a lack of footpaths along the full distance of Walker Street and the undulating terrain. The proposal is heavily reliant on services provided on-site, including medical, food and private shuttle bus. However, limited detail is provided regarding how these will be provided and managed.

For the above reasons and the matters discussed below, the site is not considered suitable for the proposed intensity of seniors housing development.

COMPATIBILITY WITH THE SURROUNDING ENVIRONMENT AND LAND USES

The panel must not issue a certificate unless the panel is of the opinion that the proposed development for the purposes of seniors housing is compatible with the

surrounding environment and surrounding land uses having regard to the following criteria (clause 25(5)(b)) and clause 24(2)(b)):

1. **The natural environment (including known significant environmental values, resources or hazards) and the existing and approved uses of land in the vicinity of the proposed development (clause 25(5)(b)(i))**

The key site attributes and constraints are listed below and discussed in the context of a proposed seniors housing development on the land.

Flooding and groundwater

Council's records indicate the site is flood affected and located within an uncategorised flood risk precinct.

A summary of hydrologic and hydraulic modelling of the 1% AEP (100-year) design flood, prepared by Rienco Consulting dated 26 July 2018, was submitted as part of the application. The summary concludes that the site is suitable for seniors housing development and overland flow can be managed across the site. Suggested overland flow measures include 'permitter drains or bunds ~300mm deep, and a pit and pipe collection system discharging to the formal watercourse starting at the southern boundary of the site'. This position was reiterated in a further flood study provided in December 2019 and submission in March 2020, both of which also concluded that direct evacuation access to Walker Street would be possible in a flood event.

In Council's comments on the proposal, it highlighted the proponent's flood study indicates the site is located within a Medium Flood Risk Precinct and that Chapter E13 of the Wollongong DCP 2009 defines development such as this as a 'critical utility' which are not appropriate in a medium flood risk precinct. Council considers the proposed use of the site for seniors' housing does not give due regard to the potential risk to human life and damage to property arising from the natural flood hazard to which the site is subject. Council was also concerned about the need for flood refuges and associated filling and visual impacts.

The proponent's supplementary information asserted the flood characteristics of the site did not mean the site was unsuitable, based on the DCP requirements for residential development, and that design responses to the flood issues could be determined at the DA stage.

While flooding and stormwater management issues may be able to be addressed in more detail at the development application stage, there remains uncertainty as to the extent of the site which is suitable for seniors housing due to flood risk and whether there will be any impacts on surrounding land.

Council also has concerns with the possible impacts of the proposed development on the water quality of the perched aquifer underlying the site and Gills Creek. Any development of the site will need to consider the impacts on groundwater and Council's requirements, including lining of the dams on-site. It is unclear based on the information provided whether the proposed development poses any risk to the aquifer.

Contamination

A stage 1 preliminary site investigation was undertaken by SESL Australia Pty Ltd (dated April 2017), which involved a desktop review of available information, a search of the historical records and a site visit.

The report concludes that there is the potential for soil contamination at the site from sources including the potential former agricultural activities, the storage of scrap

materials, fill of unknown origin, chemical spills and the presence of a large number of horses on the site (faecal matter). While the report considers the site could be suitable for the proposed development, it recommends that a detailed site investigation be undertaken to assess if the identified areas of environmental concern have resulted in contamination that would render the site unsuitable for the proposed development. The report also identifies that a detailed hazardous materials inspection may be required for structures on-site should demolition be proposed.

Should the proposal progress to the development application stage, site contamination and the suitability of the site for residential use will need to be studied in more detail, including the need for any remediation.

Flora and fauna

Much of the site has been cleared of vegetation. However, the site is identified as containing a riparian corridor under the Wollongong LEP 2009. Clause 7.4(3) of the LEP requires that 'development consent must not be granted for development on land to which this clause applies unless the consent authority has considered the impact of the proposed development on the land and any opportunities for rehabilitation of aquatic and riparian vegetation and habitat on that land'. A portion of the corridor appears to have been cleared and filled around 2014–15.

While the applicant has submitted a letter from Rienco Consulting (dated 1 July 2016) noting that the riparian corridor is across only part of the southern section of the site, the issue of rehabilitation would require further consideration at the development application stage. Any works proposed under a future development application within 40m of the watercourse may require a controlled activity approval under the *Water Management Act 2000*.

Clause 7.2 Natural resource sensitivity—biodiversity of the Wollongong LEP 2009 does not apply to the site but does apply to the land directly adjoining the western, north-western and south-western boundaries.

Impacts on the riparian corridor and adjoining sensitive land should be considered as part of any future development application, including the potential rehabilitation of riparian lands.

Bushfire

The site and land adjoining the site are identified as bushfire prone (Figure 7, below). A pre-development application advice meeting was held between the applicant and the NSW Rural Fire Service (RFS) on 19 January 2017. RFS stated that no significant constraints to the development were identified. However, the use of existing buildings that are within the asset protection zone (APZ) are to be for non-habitable uses.

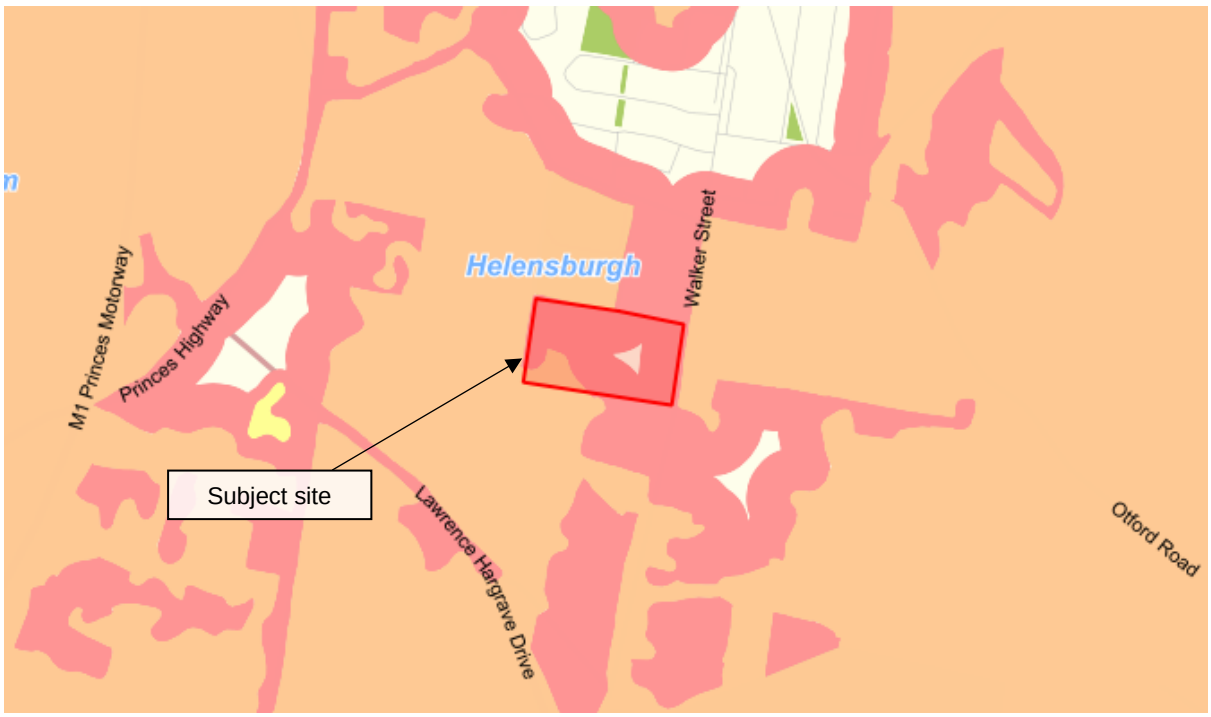


Figure 7: Bushfire-prone land (source: Wollongong City Council).

A bushfire assessment prepared by Peterson Bushfire (dated 17 October 2018) identifies the APZ requirements, necessary building setbacks and the area available for the development of habitable dwellings on the site (Figure 8, below).

The report confirms that the proposed development is compatible with the requirements of *Planning for Bush Fire Protection*. It is concluded that the available access in the north and south directions along Walker Street is adequate for the level of bushfire risk presented to the site, and the internal road layout ensures a compliant perimeter road and internal road layout, ensuring adequate evacuation or refuge could take place under the guidance of a bushfire emergency management and evacuation plan.

The site is surrounded by bushfire-prone land in all directions, and adjoining sites are heavily vegetated. Also, the development would rely on a bushfire emergency management and evacuation plan. The use of the site for a large seniors housing development is not suitable.

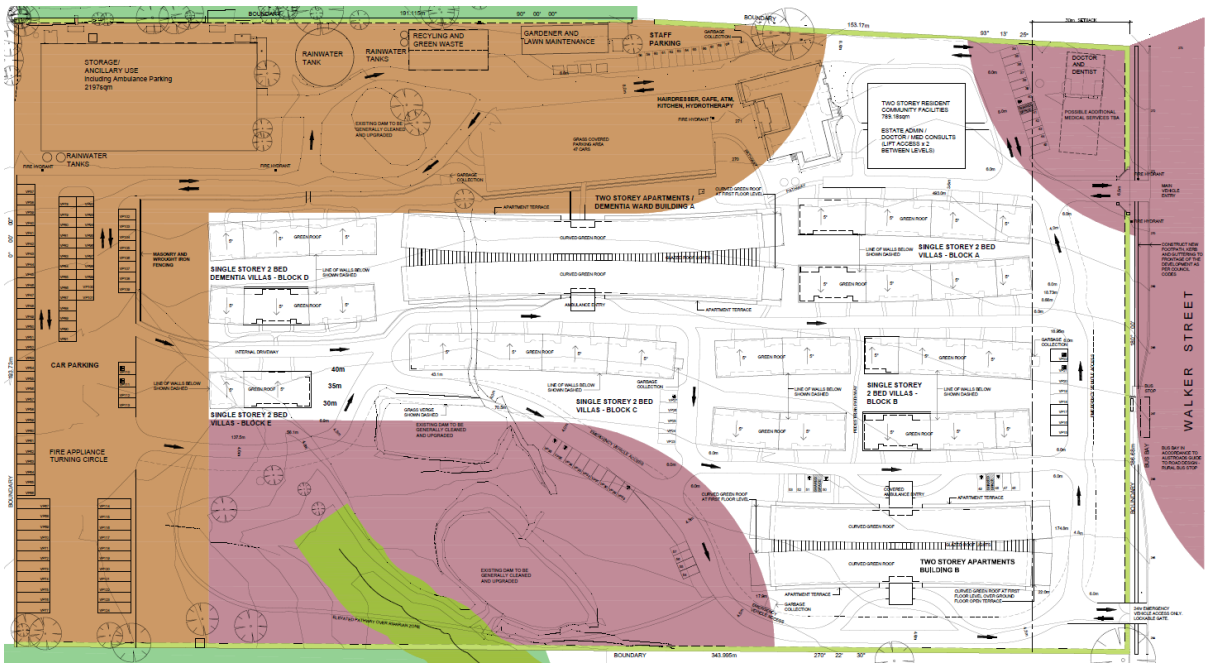


Figure 8: Proposed APZs (source: Phil O'Donnell Architects).

Heritage

The site is not identified as a heritage site or part of a conservation area under the Wollongong LEP 2009. The cemetery site directly to the north is identified as an archaeological heritage site under schedule 1 of the LEP.

It is unlikely that development on the site will have an impact on the archaeological significance of the cemetery. However, heritage impacts of any future proposal, including Aboriginal heritage, should be studied further at the development application stage.

Existing uses and approved uses of land in the vicinity of the proposed development

The subject site is used for horse training and agistment, and there are four dwellings, sheds, horse yards and other structures on the site. The surrounding properties consist of a variety of land uses, as summarised below:

North

The properties to the north are zoned RU2 Rural Landscape and SP1 Cemetery.

The rural property at 110 Walker Street is used for rural-residential purposes and an olive orchard, although several trees have been cleared in recent years. The dwelling on the site is approximately 113m from the boundary with the subject site and overlooks the site due to its higher elevation. A high-density seniors housing development has potential land use conflicts with any ongoing agricultural use of the land.

There is a vegetation buffer of approximately 70m between the cemetery, an archaeological site under the Wollongong LEP 2009, and the property boundary. The proposed development is not considered to have any significant impacts on the operation or amenity of the cemetery.

East

The properties directly to the east of the site, on the opposite side of Walker Street, are zoned E3 Environmental Management and IN2 Light Industrial.

The E3 land consists of a large paper subdivision, identified as the 'land pooling precinct' in Figure 9 (below). This area is densely vegetated and contains one dwelling accessed via Werrong Road, land that appears to be used for storage and an

associated structure; and a bus depot. The bus depot is directly opposite the site with access to Walker Street and operates under a consent issued by Council in 1987.

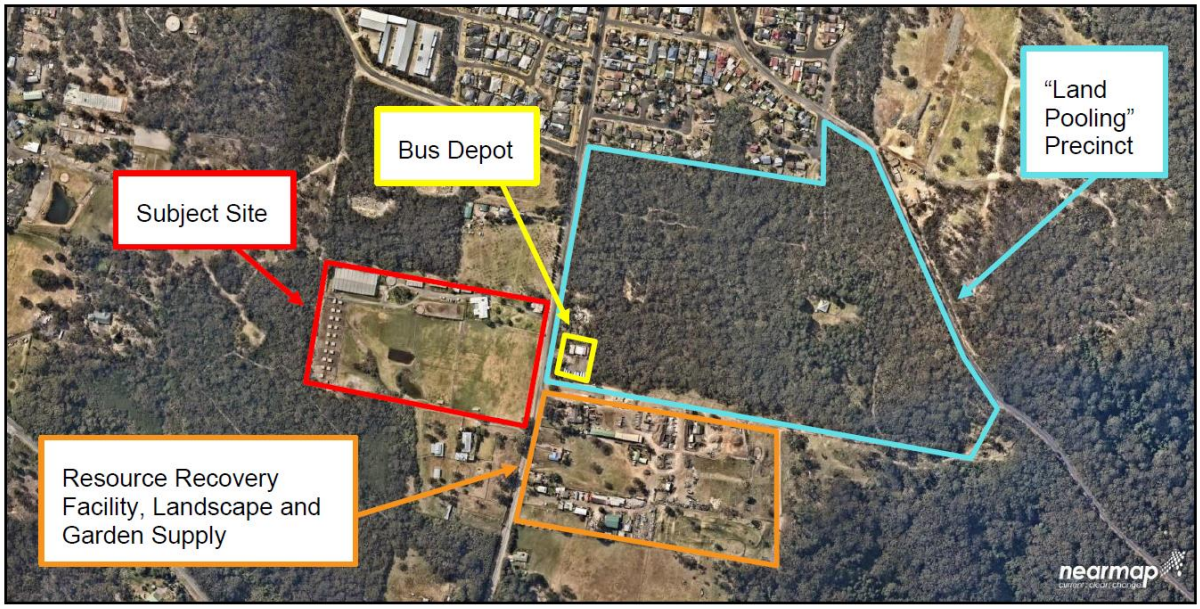


Figure 9: Land uses to the east of the site (source: Cardno).

The paper subdivision lots are held by several landowners. Council has previously not supported proposals to rezone this land and a nearby similar site to R2 Low Density Residential due to the potential impacts on the Hacking River Catchment and the Royal National Park. According to Council, Helensburgh is not identified as an urban release area and the Wollongong LGA is able to meet housing targets through land releases at West Dapto and Calderwood, and redevelopment in Wollongong and other centres.

The then Southern Joint Regional Planning Panel, in a pre-Gateway review and planning proposal review report dated 30 July 2014, stated:

- having considered the pattern of land ownership, the status of the paper subdivision of the land, the lack of dwelling entitlements and development capability, the regional panel is of the opinion that the land pooling area is not suitable for urban development and supports the application of zone E2 Environmental Conservation to this precinct and;
- the land is some distance from commercial and institutional services yet adjoins existing industrial development on land to the south, which may give rise to land use conflict.

The land pooling area adjoining the subject site is unlikely to undergo further development in the near future, and land to the south of Helensburgh is considered unsuitable for residential development.

The bus depot on the land pooling site is small and has a densely vegetated setback from the street. It is unlikely to have a significant impact on the use of the subject site. Similarly, a seniors housing development is unlikely to have a significant impact on the operations of the bus depot.

The IN2 land to the south of this area is primarily used as a landscape supply business. The four lots contain at least six dwellings and other structures. The area is also used for storage and horse stables. The low-density dwellings and structures on-site reflect the rural-residential character of the area.

Walker Street and a significant front setback of the landscape supplies business provide a reasonable buffer from the subject site. However, the activities undertaken on the site give rise to potential impacts, including noise and dust, on surrounding properties that are not compatible with the proposed residential development.

South

The properties adjoining the southern boundary of the subject site are zoned RU2 Rural Landscape and E3 Environmental Management.

The rural property at 130 Walker Street is used for rural-residential purposes. It contains a dwelling and associated structures for equine-related activities. The dwelling is approximately 28m from the boundary with the subject site. Equine-related activities present compatibility issues when adjoining higher-density residential development due to potential odour and noise impacts. The proposed development is likely to impact on the amenity of the residents of the property through changes to the rural character and increased noise from nearby units and internal roads.

The environmental-zoned land, Lot 1 DP 319310, is located to the rear of the southern boundary and, as identified in the application, has a consent for a caravan park development. Approval dates to 1980 and the consent can be considered to have physically commenced with the partial construction of a small number of structures in the 1980s – the remains of which still exist on-site. However, most of the site remains uncleared and the caravan park has not been completed. The site is densely vegetated, and it is unclear whether the caravan park development will ever proceed with the validity of the consent pending planning, environmental and legal considerations.

West

The land to the west of the subject site is zoned E3. Frew Avenue, a minor, unsealed road, directly adjoins the site. On the opposite side of the road, 14 Frew Avenue (Lot 339 DP 752033) is also zoned E3 and contains two dwellings and other structures and is used for rural-residential purposes. The closest dwelling is approximately 178m from the boundary of the subject site. The proposed development is unlikely to have significant impacts on this property due to the vegetation buffer and distance of the dwelling from the subject site.

2. The impact that the proposed development is likely to have on the uses that, in the opinion of the panel, are likely to be the future uses of that land (clause 25(5)(b)(ii))

The site is zoned RU2 Rural Landscape under the Wollongong LEP 2009. The objectives of the zone are to:

- encourage sustainable primary industry production by maintaining and enhancing the natural resource base;
- maintain the rural landscape character of the land;
- provide for a range of compatible land uses, including extensive agriculture; and
- encourage the retention, management or restoration of native vegetation.

A development comprising 176 seniors housing units is not compatible with primary industry production or rural landscape character.

The site is used for residential and horse training and agistment purposes. This is consistent with surrounding land uses, which include rural-residential, small-scale agriculture and animal boarding/training, environmental management and landscape supplies.

Council has indicated that “the character of the area would be unlikely to undergo significant change in the foreseeable future such that the development as proposed would not be in keeping with the character of the street and in harmony with the buildings around it”. Council has also raised concern that “extensive development of the site is likely to result in ongoing land use conflicts between the surrounding rural/agricultural land uses and the proposed residential land use”.

The subject site was rezoned to RU2 current zoning of the site and surrounding land was future of the Helensburgh is not identified as an area for further residential growth in the *Illawarra-Shoalhaven Regional Plan 2036*.

The rural and light industrial zoning of land adjoining the site permit activities that are not compatible with proposed density of seniors housing. The potential for agricultural land uses, including agistment or training of horses and other livestock, and industrial activities to be undertaken may be impeded as they are likely to impact on the amenity and operation of a seniors housing development by way of noise, odour and traffic. The potential for some land use conflicts with the surrounding land indicates that the proposed development is not compatible with the area where the site is located.

3. The services and infrastructure that are or will be available to meet the demands arising from the proposed development (particularly, retail, community, medical and transport services having regard to the location and access requirements set out in clause 26) and any proposed financial arrangements for infrastructure provision (clause 25(5)(b)(iii))

Location and access to facilities

The site is approximately 1.4km south of the Helensburgh town centre.

The number and variety of services and facilities available in Helensburgh is limited due to the relatively small size of the population and surrounding service area. The services available in the Helensburgh town centre include:

- one supermarket and other small specialty shops;
- one bank (Illawarra Credit Union);
- one post office;
- cafes and restaurants;
- two dentists, four doctors/GPs, one pharmacy, one optometrist, one physiotherapist, one podiatrist and one chiropractor;
- solicitors and accountants; and
- a public swimming pool and two gyms.

The closest public hospitals (Coledale, Bulli, Wollongong, Campbelltown, Sutherland) are 20-40 minutes’ drive away and not easily accessible by public transport from the site.

The applicant also proposes to provide services on-site, including a doctor and dentist, a hairdresser, a café, an ATM and a hydrotherapy pool. There is no detail on the operation of these services. Clause 42 of the Seniors Housing SEPP also requires residents of serviced self-care housing to have access to home-delivered meals, personal care and home nursing, and assistance with housework. The proponent has stated that ‘written evidence as to the provision of these services will be provided within any future development application. However, at this time, the proponents provide an assurance that these services can be delivered”.

In accordance with clause 44 of the SEPP, a consent authority must be satisfied that any facility or service provided as a part of a proposed development to be carried out on land that adjoins land zoned primarily for urban purposes will be available to residents when the housing is ready for occupation.

Traffic and transport services

In accordance with clause 26(2)(a), there are no services or facilities within 400m of the site. While Helensburgh town centre is accessible directly via Walker Street, the land is undulating, and footpaths are not provided for the entire distance to the site. It is currently not accessible for pedestrians to make this journey.

There is a public bus stop at the north-east corner of the site and the bus route provides access to and from the Helensburgh town centre more than once each day from Monday to Friday during daylight hours, in accordance with clause 26(2)(c). The plans submitted as part of the application propose the provision of a new bus bay and bus stop on Walker Street.

The public bus stop on the eastern side of the road when returning from Helensburgh may present a safety concern for elderly residents crossing Walker Street, where the speed limit is 70km/h, without a pedestrian crossing or traffic lights.

The applicant also proposes providing a private transport service to provide residents access to services and facilities. The applicant has provided a letter stating that the local bowling club would be willing to provide bus services to transport residents to the club. Limited detail is provided regarding the operation of these services; however, they will need to comply with the capacity and availability requirements of clause 43 – being a bus capable of carrying at least 10 passengers and available both to and from the proposed development to any such local centre at least once between 8am and 12pm each day and at least once between 12pm and 6pm each day.

While the site can comply with the access requirements of clause 26(2), residents will likely be reliant on either private transportation organised by the seniors housing management or personal vehicles as the distance and terrain are likely to make pedestrian access unviable.

A traffic and parking impact assessment was prepared by McLaren Traffic Engineering (dated 6 December 2018). It concludes that the proposal will have negligible impact on the surrounding road network.

Servicing

The applicant has provided evidence of correspondence with Sydney Water that confirms water and wastewater connections are available. Electricity, gas and telecommunication services have not been identified. However, it is likely that connections can be made to services available to the site and surrounding area.

It is considered that matters regarding the provision, capacity and/or augmentation of services can be confirmed at the detailed design/development application stage.

4. In the case of applications in relation to land that is zoned open space or special uses—the impact that the proposed development is likely to have on the provision of land for open space and special uses in the vicinity of the development (clause 25(5)(b)(iv))

The site is not zoned open space or special uses.

5. Without limiting any other criteria, the impact that the bulk, scale, built form and character of the proposed development is likely to have on the existing uses, approved uses and future uses of land in the vicinity of the development (clause 25(5)(b)(v))

The development comprises 14 new buildings and structures, including: two two-storey apartment buildings and 53 single-storey villas; 193 at-grade parking spaces (including 47 spaces under a grass-covered structure); internal roads and footpaths; a two-storey resident facilities building with administration and medical offices; and a potential extension to the cottage in the north-east corner of the site for 'possible additional medical services'. The proposal also includes the retention of existing dwellings and other structures on the site.

The two large, two-storey 'apartment buildings' are approximately 85m and 110m long and 30m wide. The attached single-storey villas are in 10 rows between 30m and 80m long. There are no residential buildings near the site that are comparable in bulk or scale. The properties directly adjacent to the site are large lots, some with 1-2 storey detached dwellings. There are only limited examples of multi-dwelling housing closer to the centre of Helensburgh, and most do not share similarities to the length, bulk and number of units as the two-storey buildings proposed. The large two-storey 'resident community facilities' building also adds to the bulk of the development at the front of the site. The bulk and scale of the proposed development is not in keeping with the surrounding development or future uses of the area.

While a 30m setback has been provided to the front boundary (excluding the existing cottage, new roads, parking spaces and part of 'Apartment Building B') and nearly 20m to the southern boundary, the development will still likely have a significant visual impact from the street and properties to the north and south. This is due to the sloping nature of the site, the lack of vegetation buffers and the open, rural appearance of the land. Given the site is surrounded by predominantly vegetated land or open space, there is no transition in the scale of development between the proposal and the surrounding area. The required APZs result in a design that concentrates buildings in the centre and front of the site, which increases the impact on the character of the streetscape and pushes most of the car parking spaces to the rear of the site, with limited car parking available closer to the proposed dwellings. This conflicts with the objective of the RU2 zone to 'maintain the rural landscape character of the land'.

Given the environmental, rural and special uses zoning of most land adjoining the site, it is unlikely that the scale or density of development will change in the foreseeable future. While the undeveloped property to the south-west of the site (Lot 1 DP 319310) has been identified as having a 1980 consent for a caravan park, there is no evidence to suggest development will proceed further after 39 years and pending planning, environmental and legal considerations. No recent development applications have been lodged for this site. As such, the surrounding area is likely to retain its rural character, which does not match the form of development proposed.

The scale of development and density of new population on the site, comprising residents of the 176 dwellings and an unidentified number of staff, is well above the residential density permissible on surrounding properties. This will also impact on the amenity of the area as a result of the noise generated by the increased number of people living and working on the site, as well as vehicles moving through and parking on the site. This will conflict with the noise levels experienced in the rural setting.

Design matters to be considered as part of any potential development application include the provision of adequate private open space for each dwelling, poor amenity

for units facing the covered car park structure, and use of landscaping to improve privacy and appearance of the development.

6. **If the development may involve the clearing of native vegetation that is subject to the requirements of section 12 of the *Native Vegetation Act 2003*—the impact that the proposed development is likely to have on the conservation and management of native vegetation (clause 25(5)(b)(vi))**

The *Native Vegetation Act 2003* was repealed on 25 August 2017 and therefore does not apply to the land.

7. **The impacts identified in any cumulative impact study provided in connection with the application for the certificate (clause 25(5)(b)(vii))**

As mentioned earlier in this report, a cumulative impact study was not required for this application.

CONCLUSION

The Department considers that an SCC should not be issued for the subject site on the basis that:

- the proposed density of seniors housing development is not considered compatible with the adjoining rural and industrial-zoned land and uses. The site is in a semirural landscape with surrounding low-density development. The proposal would result in a form of development that is generally inconsistent with the existing and future desired character of the surrounding area;
- the bulk, scale, built form and density of the proposed development are considered to be incompatible with the existing and desired future character of the area and would result in adverse visual and amenity impacts on existing and future uses of land in the vicinity of the development;
- the proposed development would be likely to result in unacceptable land use conflicts with adjoining properties, which could adversely impact on the amenity of future residents and is likely to restrict the existing and likely future uses of surrounding sites; and
- the level of services available to residents in Helensburgh and accessibility to the town centre is not adequate for the scale of seniors housing proposed. The area is also isolated from major centres with access to hospitals and other services.

ATTACHMENTS

Attachment A – Proposal documentation

Attachment B – Site map

Attachment C – Council comments December 2018

Attachment D – Council comments March 2020

Briefing Report -

Proposal Documentation

JP. GAICD, PIA.
Town Planner, Property Consultant
PH. 0417 241 827
E. terry@tcwconsulting.com.au
A/H: 02 4227 1746
A. 45 Eastern Av,
Mangerton, NSW 2500
ABN 57 055 186 126

5 November 2018

Project # 1837

The Director General
NSW Department of Planning and Environment
84 Crown Street
Wollongong NSW 2500

Attn: **Ms. S Lees**

Dear Sir

Application for Site Compatibility Certificate for Seniors Living Development
120 Walker Street Helensburgh

This application is the second made for the subject site with the previous determination to not issue the Site Compatibility Certificate made on 10 April 2018. However, the reasons for refusal have been carefully assessed and it is considered that their basis is, in one instance, incorrect and for other considerations worthy of reconsideration.

Given that the previous application has been determined, the only way to progress and address the concerns are by making a further Site Compatibility Certificate application.

This approach was discussed with the Director Region, Southern, at a meeting held on 30 July 2018. The consequence is that this further application is now submitted.

The request for a Site Compatibility Certificate has a protracted history outlined below:

- 27 April 2016 — Prelodgement meeting with Wollongong City Council. The minutes from this meeting are attached as ***Annexure "A".***

  The purpose of this meeting was to discuss the potential for a hospital on the subject site. The land is zoned RU2 Rural Landscape within Wollongong Local Environmental Plan 2009 and "*hospital*" is a

permissible use within the zone. However, the notes provided record the following:

"*The limited plans presented at the pre-lodgement meeting appeared to indicate a development more appropriately defined as some form of seniors housing as defined by the State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004."*

As seniors living is not a permissible land use within the zone, the proposal would need to rely upon the provisions of the SEPP "*as*" the subject site is considered to "*adjoin land zoned primarily for urban purposes …."*.

A Site Compatibility Certificate would, therefore, be required to be obtained from the Director General prior to the lodgement of the development application.

- 1 May 2017 — Site Compatibility Certificate application lodged with the Department of Planning & Environment.

- 26 May 2017 — Wollongong City Council forwards its response to the application to the Department. Council, in that response, advises that it recognises the need for provision of seniors living within the local government area, however, such a proposal could be more appropriately located on residential land with closer proximity to the Helensburgh town centre.

  This submission will attempt to substantiate, that without the unrealistic potential to amalgamate a number of properties, such land, as suggested by Council, is not available.

  Council's correspondence also raised a number of additional concerns.

  The following are responses to the issues raised:

i) The land is zoned RU2 Rural Landscape. The proposed use of the land for seniors housing was not envisaged as part of the rezoning of the former 7(d) zone, and the RU2 zoning was applied under Wollongong LEP 2009 in recognition of the on-going agricultural land use.

This statement fails to recognise the primacy of the Seniors SEPP and, in particular, **Clause 5(3)** which provides as follows:

"*If this policy is inconsistent with any other planning instrument made before or after this Policy, this Policy prevails to the extent of that inconsistency."*

In addition, **Clause 2(a)** of the SEPP advises that the aims of the Policy will be achieved by:
"*(a) setting aside local planning controls that would prevent the development of housing for seniors or people with a disability that meets the development criteria and standards specified in this Policy."*

ii) Redevelopment of the site would result in an inability of the subject site to continue to meet the objectives of the zone

The response outlined in (i) above would also apply to this comment. The Seniors SEPP takes precedence above other planning controls.

iii) The minimum lot size for the RU2 zoned land is 40 hectares. All RU2 lots in the vicinity are undersized and the proposed redevelopment of the site for seniors living would inhibit opportunities to consolidate land to create appropriately sized lots on which rural and agricultural type development could be carried out. Further the proposal would effectively create an isolated, undersized rural allotment immediately to the north of the subject site.

The provisions of the SEPP do not include a minimum lot size. The response to (i) above is also relevant to this comment.

Each of the surrounding RU2 lots to the north, south and west have been developed with housing and ancillary farm buildings to an extent that they provide a rural lifestyle.

Although the minimum lot size in the zone is 40 hectares, none of the rural lots within the precinct achieve that area and to suggest the potential for amalgamation is unrealistic and no reason not to support the application.

Further, these lots do not contain sufficient area and site suitability to provide for the intensive or extensive types of production suggested by the WLEP definition of "*agriculture*".

A report addressing land use conflicts of inconsistency with existing and desired future character in the locality, prepared by Cardno (20 September 2018), accompanies this application. This report offers an opinion that the character and identity of Walker Street is ambiguous due to the fragmentation of existing land uses and zoning. The report also recognises the existence of an active development consent on Lot 1 DP 319310 for 280 caravan sites.

The report also discusses the land pooling precinct located on the eastern side of Walker Street consisting of 23 hectares defined within a paper subdivision. The report advises that on 29 May 2015, the delegate of the Minister wrote to Council and advised that the LEP has been made under Section 59 (2) of the EP&A Act. However, the Land Pooling precinct was excluded from the plan and the E3 Environmental Management zone and existing planning controls retained for the following reason:
:……. there is uncertainty in relation to whether the environmental qualities of the land warrant the use of an E2 Environmental Conservation zone."

It is unclear whether the future investigation has been undertaken by Council relating to environmental qualities of the Land Pooling precinct.

The Cardno report advises that the ultimate outcome to date is that there is significant will from landowners to change the zone of the "*land pooling precinct*" to permit low density residential development and that there is expressed doubt on the part of State Planning that the area would be zoned to exclude development.

With regards to the comment on the "*isolated lot*" to the north, it is considered that the circumstances relating to this application do not invoke the Land & Environment Court Planning Principle outlined in either Melissa Grech v Auburn Council [2004] NSWLEC 40 or Karavellas v Sutherland Shire Council [2004] NSWLEC 251.

The key principle is whether both sites can achieve a development that is consistent with the planning controls. If variations to the planning controls would be required, such as non-compliance with a minimum allotment size, will both sites be able to achieve a

development of appropriate urban form and with acceptable level of amenity?

The primary planning control would be the minimum lot area of 40 hectares for the RU2 zone.

Either singularly or by way of consolidation, the lots would not achieve the minimum requirement. However, this application relies upon the aims of the Seniors Living SEPP, which is to encourage the provision of housing (including residential care facilities) that will:

a) increase the supply and diversity of residences that meets the needs of seniors or people with a disability; and

b) make efficient use of existing infrastructure and services; and

c) be of good design.

These aims will be achieved by:

a) setting aside local planning controls that would prevent the development of housing for seniors or people with a disability that meets the development criteria and standards specified in this Policy; and

b) setting out design principles that should be followed to achieve built form that responds to the characteristics of its site and form; and

c) ensuring that applicants provide support services for seniors or people with a disability for developments on land adjoining land zoned primarily for urban purposes

iv) <u>The scale of the development is not considered to be in context with surrounding development which is characterised by single dwellings rural/environmental allotments. It is considered that the character of the area would undergo significant change in the foreseeable future such that the development as proposed would be in keeping with the character of the street and in harmony with the buildings around it.</u>

This statement is not a true reflection of the character of the area. To the east of the site is a bus depot adjacent to dense native vegetation within a paper subdivision. The outcome of the Commission into 7(d) lands effectively sterilized in the short term this woodland from development so it will remain a buffer regardless of the development, on the subject land.

To the south east is industrial lands which are the lands adjoining the subject property zoned primarily for urban purposes and upon which the proposal relies to trigger the provisions of the SEPP.

Properties to the north include the rural residential development referred to in (iii) and also the Helensburgh Cemetery.

However, Council's response to the Department fails to disclose that an existing consent (DA 1980/731) applies to an adjoining property, Lot 1 DP 319310, for a caravan park development containing 280 sites and associated infrastructure. Council's report of 28 November 2011 acknowledges that this development has experienced "*substantial commencement*" and the consent is still valid.

Therefore, in Council stating that "*the area would be unlikely to undergo significant change in the foreseeable future …"* is a prediction that may not be substantiated.

In addition, floor space ratio (FSR) is a means to assess density and scale within a site and precinct. Although the site has no specific FSR provisions, the development provides for an FSR of 0.28: 1 and the proposal provides for a significant expanse of open space.
This is less than the allowance usually applied to the E4 Environmental Living zone of 0.3: 1.

The montages, accompanying the application, visually describe the scale of the development. The proposed 30 metre setback will soften the impact of the built form in views from the street. There is also the potential to provide tree planting in the front setback to enhance the local rural residential character.

Further detail in relation to this issue is provided in the response to the Department's correspondence of 10 April 2018.

v) <u>The development fails to provide good design. The response by Council offers the following concerns:</u>

- <u>the proposed use of existing buildings on site for ancillary and support buildings is considered to be a fragmented and ad hoc approach</u>

- the location of car parking spaces remote from the dwellings is a concern
- the provision of extensive carport areas over parking spaces is not considered to provide a good design outcome
- the front setback to Walker Street is not supported and it is not consistent with the streetscape and provides insufficient area for appropriate landscaping
- the proposed units are lacking in architectural merit
- the possibility of amenity of future residents of the development will be compromised.

A number of these issues are subjective and deserves some further discussion. In themselves, they are not considered matters that warrant the refusal of the application.

These are all issues that could be considered in a detailed assessment of a future development application. The purpose of the Site Compatibility Certificate is to state that the site is suitable for seniors housing at a general level, and then allow for a development application to be lodged and assessed. The issue of a SCC does not require the consent authority to grant consent and is not, in itself, acceptance of any final design.

Design provided is conceptual only and it is expected that final plans will support architectural merit. The intention will be to incorporate features that will respond to the immediate natural and built environment.

Plans and montages, provided with this application, indicate a 30 metre setback from Walker Street and ample screening along the front boundary. Further, it is considered that there will be adequate landscaping and open space within the development to provide for the amenity of future residents.

Stormwater/Flooding

Council's records indicate that the site is flood affected and located within an Uncategorised Flood Risk Precinct. Development under the

Seniors Living SEPP is categorised as "*Critical Utilities & Uses*" as described in Chapter E13 of Wollongong DCP 2009.
Schedule 10 identifies Critical Utilities & Uses as an unsuitable land use within the High and Medium Flood Risk Precinct. Sufficient information has not been provided to demonstrate that the proposed development is located wholly outside the High & Medium Flood Risk Precincts.

Council's response refers only to a Flood Impact Report, prepared by Zeta Engineers, in support of a previous application. The single purpose of providing some reference to this report was to indicate that flooding on the site had been previously considered. The Zeta engineering report is not a supporting document for this application.

However, in its previous assessment, Council made no reference to the detailed report by Rienco Consulting Water Engineering Specialist titled "*Guidance for Classification of Watercourse to Ascertain Indicative Flood Extents and Controlled Activity Permit, 120 Walker Street Helensburgh*" (1 July 2016) prepared to support the previous application.

The Rienco report includes the following text:
"*In terms of flooding, runoff from the 5 hectare catchment would be expected to produce 1% AEP peak flows of ~ 3m^3/S. Not all of this peak flow would be directed at the subject site, but even if it were, the entire 1% AEP peak flow could be entirely conveyed by a 600mm concrete pipe. This confirms the minor nature of the flood related matters.*
Based on the observations made on site and with the reference to relevant topographic maps, WCC's DCP 2009 (Chapter E13), it is our opinion that:

1. *The areas marked blue in Figure A are a watercourse for the purposes of the applicable legislation and a controlled activity permit.*
2. *All other areas should not be classified as a first order stream or a watercourse for the purposes of a controlled activity permit.*
3. *For any proposed development, those areas upstream of the blue line on Figure A (~600mm diameter), estimated peak flows are minor and can be readily managed through the proposed development.*
4. *Given the incised nature of the riparian area (marked blue in Figure A), we suggest a 10m from top of creek bank zone for the riparian*

area post-development. Any flood related extent would sit well inside this "10m from top of creek bank" zone.

Given that both Council and the Department consider the site to be flood prone, additional advice was obtained from Rienco titled "Summary of Hydrological & Hydraulic Modelling of the 1% AEP (100 Yr.) Design Flood – 120 Walker Street Helensburgh" (26 July 2018)."

This report concludes:

a. The site is not affected by mainstream flooding being water contained within, or that has broken out of, a watercourse.
b. The site is affected by shallow overland flow from the adjacent upslope areas, as are all lots in the LGA during a 1% AEP flood.
c. The typical flow depths, in the peak of the 1% AEP flood, are 50mm. Such depths are so shallow that they are usually not even mapped by Council in their catchment – wide, adopted flood studies. Council does not typically map flow depths under 150mm.
d. The typical flow velocities, in the peak of the 1% AEP event, are 1.0m^3/S. Such velocities do not pose any material risk or scour and/or erosion on the maintained site.
e. The peak flows through the proposed residential areas, in a 1% AEP event, are 2.0m^3/S. Such flows can be readily managed in a small diameter concrete pipe. In other words, the flows through the site are minor and can be readily managed (i.e. eliminated from being surface flows) using standard engineering techniques in accordance with Wollongong Council's DCP (Chapter E14).
f. Peak hydraulic hazard, determined in accordance with NSW Government's Floodplain Development Manual is Low.
g. As the overland flow is not derived from mainstream flooding (as there are no "*watercourses*" located upstream of the site) there are no applicable Flood Risk Precincts under WCC's DCP.

With regard as to whether or not the land is suitable for development permissible under the flood-related requirements of the Seniors SEPP, the report considered the worst case overflow affectation for the site. The SEPP states that "*only genuinely high flood hazard* "affected areas are classified as "*environmentally sensitive land*" under Schedule 1 of the SEPP. The flood model results demonstrate there are no high hazard areas on the land and, therefore, the site is suitable for development under the SEPP.

A Stormwater Concept Plan could support a future development application. This Stormwater Concept Plan would consist of minor

perimeter drains or bunds ~300mm deep and a pit and pipe collection system discharging to the formal watercourse starting at the southern boundary of the site.

vi) Traffic

The developer would need to provide a footpath along the full extent of the site frontage which links the existing pedestrian infrastructure in Helensburgh

The proponent agrees to this and this requirement could have been imposed as a condition of consent. This matter, in itself, is not reason to refuse the application.

The Department's assessment includes commentary that the amenity of future residents of the proposed development could be compromised through conflict with adjoining rural and light industrial land users particularly from noise, dust and traffic.
Conditions of consent relating to the light industrial activity existing at the property to the south-east (Blackwells) should ensure that concerns in relation to dust and noise are mitigated against.
A preliminary traffic assessment, by McLaren Traffic, indicates that the local road system is adequate in accepting future traffic volumes.

vii) Environment

Council has concerns with the possible impacts of the proposed development on the water quality of the perched aquifer underlying the site and Gills Creek. Redevelopment of the site would require dams to be lined and the development would require design, siting, construction and management to ensure protection of water quality in the area. Ongoing monitoring of water quality would be required.

It is assumed that the paper, provided by Council, "*Impact of hydrology and hydrochemistry on the ecological continuum of Maddens Plains Upland Wetlands"* authored by an officer of Council has some scientific veracity.

That aside, Council's comments appear to suggest that the works and ongoing monitoring are matters that could be provided for as conditions of consent. The Department's assessment of the previous application appears to support this view.

Again, this issue, in itself, is not reason to refuse the application.

The Department's assessment stated that water quality would need to be considered in any future development application.

viii) Any proposed seniors living development would need to protect and enhance the native vegetation in the identified riparian corridor area on the site

Again, this could be provided for as a condition of consent. Again, this issue is not of such significance as to refuse the application.

The intention would be to enhance landscaping on site.

- 14 July 2017 — Correspondence from Department of Planning & Environment that the SEPP cannot apply to the site.

- 7 August 2017 — Senior Counsel advice forwarded to the Department of Planning & Environment giving opinion as to why the SEP can apply to the site.

- 5 September 2017 — Further advice from the Department of Planning & Environment that the SEPP cannot apply to the site.

- 25 September 2017 — Further Senior Counsel advice forwarded to the Department as to why the SEPP can apply to the site.

- 10 April 2018 — Letter of determination from Department of Planning & Environment advising that a Site Compatibility Certificate will not be issued for the following reasons:

i) Having regard to the site location and accessibility, inadequate services (particularly retail, community, medical transport services) and infrastructure (suitable access pathways) would be available to meet the demands of residents arising from the proposed development

The site is located approximately 250 metres south of the Helensburgh low density residential area. Walker Street is a major road within the suburb, which provides a direct route to the town's commercial area.

The site is serviced with water, sewer, electricity and communications. A schedule of services, which are available within the Helensburgh township, appear in Annexure N.

There are 4 doctors, 2 dentists, a chemist and ambulance station located in close proximity.

A taxi service is available and a bus stop is located along the frontage of the site. The management of the seniors living centre will provide transport to meet the needs of residents.

As stated in response to Council's assessment, a footpath can be provided along Walker Street and it would be anticipated that this would be a condition of consent.

ii) <u>The site is on flood-prone land and insufficient evidence has been provided to demonstrate development potential or to ensure there would be no adverse impact on surrounding land uses or risk to life and property</u>

This issue has previously been addressed in the response to Wollongong Council's issues to the SCC. As a consequence of that assessment, further advice in relation to flooding was obtained from Rienco Consulting in a report titled "*Summary of Hydrological & Hydraulic Modelling of the 1% AEP (100 year) Design Flood – 120 Walker Street Helensburgh*" (26 July 2018).

This report concludes, in part, that the site is not affected by mainstream flooding, being water contained within, or that has broken out of, a watercourse. The site is affected by shallow overland flow from the adjacent slope areas, as are all lots in the LGA during a 1% AEP.

The Seniors Living SEPP states that "*only genuinely high flood hazard*" affected areas are classified as "*environmentally sensitive land*" under Schedule 1 of the SEPP. As demonstrated by the flood model results, there are no high hazard areas on the land and, as such, the site is suitable for development under the SEPP (2004).

iii) The proposed development would be likely to result in unacceptable land-use conflicts with adjoining properties, which could adversely impact on the amenity of future seniors residents and is likely to restrict the existing and likely future uses of surrounding sites

As has been previously explained, the land uses for adjoining premises are well defined and their future development potential constrained by current consents and planning controls.

To the immediate north is a rural residential lot, which is located closer to the low density residential area of Helensburgh. This property contains existing dwelling houses and ancillary farm sheds. Any expansion of this use is limited to lot size restrictions and the need to satisfy the provisions of **Clause 4.2A** of Wollongong LEP 2009.

The nearest structure is located about 100m from the northern boundary and any impacts will be mitigated by distance.

To the west of that site but also adjoining the subject site is Helensburgh Cemetery. An extensive vegetative buffer area exists on that land to ensure privacy. An alternate use to this land is extremely unlikely.

The proposal is unlikely to adversely impact on the function and operation of the cemetery.

To the west of the subject land is another rural residential lot, which is separated from the subject land by Frew Avenue. The plans, supporting this application, indicate an extensive APZ upon the subject property, which will be utilised for car parking.

Improvements consist of a single dwelling located about 175m from the subject site. Any adverse impacts would be mitigated by the roadway, bushland and separation distance between the two properties.

The property to the south is another rural residential lot containing two dwellings and associated out buildings. Further development of this land is constrained by planning requirements. The APZ will provide an extensive buffer between the two properties.

However, of some significance to this new application is that the land at the rear of that property, which also adjoins the subject site, holds a valid consent for a caravan park development. Council's report of 28 November 2011 acknowledges that the development has experienced "*substantial development*" and the consent is still valid.

The property opposite contains a bus depot and it is likely that this land use will continue. Surrounding that site is a paper subdivision extensively covered by native vegetation. The recommendation arising from the Commission into 7(d) lands at Helensburgh, Stanwell Tops and Otford have ensured that this land will not be available for immediate development.

The property to the south east is an industrial zone and land zoned primarily for urban purposes and is that land upon which this application relies.

An objective of the IN2 zone is to enable "*industrial activities that do not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise."*

It is submitted that land use conflicts with these adjoining properties can be avoided through the management of the proposal.

The future uses of surrounding sites are constrained by planning controls.

It is also submitted that the amenity of future seniors living can be carefully considered in the management of the site.

iv) <u>The bulk, scale, built form and density of the proposed development is considered to be incompatible with the existing and desired future character of the area and would result in adverse visual and amenity impacts on existing and future uses of land in the vicinity of the development</u>

The first observation is that the ability to develop the site is constrained by APZs required to provide bushfire protection. There is

extensive open space as a consequence of this fact that provides a control over the density of the site.

Although small rural holdings adjoin the site to the west, south and partly to the north, it is considered that this land use does not typify the character of the area.

The aerial photograph, appearing at **Annexure "D",** indicates varying land uses in proximity to the site including the Sri Venkateswara Temple, the Helensburgh Cemetery, Blackwells industrial land, a bus depot and proximity to Helensburgh township. Of relevance is the fact that the land notated as "*Temple Land*" to the south west of the subject site has a valid consent for a 280 site caravan park.

A Land & Environment Court Planning Principle relating to seniors living development is provided within the judgement *GPC No. 5 (Wombarra) Pty Ltd v Wollongong City Council (2203) NSWLEC 268*.

Although the application, the subject of that appeal, was made under SEPP 5 – Housing for Older People & People with a Disability, the planning principle remains relevant.

The judgement agreed that development under SEPP 5 was necessarily of higher density than single dwellings.

The issue of compatibility between a SEPP 5 development and the surrounding low-density zones arises in the majority of SEPP 5 applications. This is because the Policy allows development with different physical characteristics to what is permissible under the zoning.

For this reason, the Court found it useful to state some planning principles for assessing compatibility.

The first principle is that buildings in a SEPP 5 development do not have to be single storey to be compatible with the streetscape even when most existing buildings are single storey.

The second principle is that where the size of a SEPP 5 development is much greater that other buildings, it should be visually broken up so that it does not appear as one building.
The third principle is that, where the site has existing characteristics that assist in reducing the visual dominance of development, these characteristics should be preserved. Topography that makes development appear smaller should not be modified.

In this case, topography will not be significantly disturbed. The riparian corridor will be enhanced and a large cleared area of the site will be subject to APZs.

The fourth principle is that a SEPP 5 development should aim to reflect the materials and building forms of other buildings in the street. This is not to say that new materials and forms can never be introduced only that their introduction should be done with care and sensitivity.

It is considered that this proposal could satisfactorily interpret these principles through careful design. In addition, the proposal will:

- comply with the maximum height allowance of 9 metres;
- have a floor space ratio (FSR) which is indicative of low density residential development (NB: there is no specific FSR provision for this zone);
- provide ample solar access to neighbouring properties;
- ensure that visual privacy, both internally and externally, will meet the requirements of controls; and provide extensive front, rear and side setbacks;
- provide substantial separation with buildings on adjoining properties.

Further, in Project Venture Development v Pittwater Council (2005) NSWLEC 191, when discussing compatibility in the urban environment, the Senior Commission stated:
"*22 There are many dictionary definitions of **compatible**. The most apposite meaning in an urban design context is capable of living together in harmony. **Compatibility** is thus different from **sameness**. It is generally accepted that buildings can exist together in harmony without having the same density, scale or appearance, though as the*

differences in these attributes increases, harmony is harder to achieve."

The submission is that the proposal can be so designed as to be compatible with the existing and desired future character of the area.

This Application:

Minutes of a prelodgement meeting with Wollongong City Council (WCC) on 27 April 2016 relating to the use of the property as a hospital or seniors living development are provided at ***Annexure "A".***

The minutes advise, in part, the following:
"The SEPP does not permit seniors housing in the RU2 zone, however the subject site is considered to "adjoin" land zoned primarily for urban purposes, being IN2 Light Industrial land, on the opposite side of Walker Street. As such, a Site Compatibility Certificate would be required to be obtained from the Director General prior to the lodgement of the development application."

Clause 17 (1) of the State Environmental Planning Policy) Housing for Seniors or People with a Disability) 2004 (the SEPP) advises that *the consent authority must not consent to a development application on land that adjoins land zoned primarily for urban purposes unless the proposed development is for the purpose of any of the following:*

(a) a hostel;
(b) a residential care facility;
(c) serviced self-care housing.

This submission relates to serviced self-care housing with provision for housing for people with a disability.

Clause 24 (2) of the SEPP advises that *a consent authority must not consent to a development application to which this clause applies unless it is satisfied that the Director General has certified in a current site Compatibility Certificate, that, in the Director General's opinion*

(a) the site of the proposed development is suitable for more intensive development; and
(b) development for the purposes of seniors housing of the kind proposed in the development application is compatible with the surrounding environment having regard to (at least) the criteria specified in Clause 25 (5) (b).

The attached information responds to the **Clause 25 (5)** criteria and follows the document requirements specified within the Department's Part C requirements for Compatibility Certificates.

The subject site contains a number of existing improvements including four dwellings, a number of sheds, stables, dams and is currently used for the adjistment of horses.

A plan, prepared by Phil O'Donnell Architects, indicates the potential for seniors living development within the property and has considered a number of constraints on the land including the location of Asset Protection Zones (APZs) and the location of the riparian corridor.

The draft plan provides for serviced self-care housing providing for 136 studio style apartments, 44 villa style dwellings and 13 dementia dwellings.

The application is supported by the following documents:

- Survey plans by Survplan;
- Bushfire Constraints Analysis by Peterson Bushfire;
- Contaminated Land Preliminary Site Investigation by SESL Australia;
- a copy of Section 149 Certificate;
- Summary of Hydrological & Hydraulic Modelling of 1% AEP Design Flood by Rienco;
- Classification of Watercourses by Rienco Consulting;
- response from Office of Water;
- Pump to Sewer Approval from Sydney Water;
- advice from Rural Fire Service;
- Traffic report by McLaren Traffic Engineering; and
- Site Suitability by Cardno.

Yours faithfully

T Wetherall

Director

TCW Consulting Pty Ltd

CONTENTS

FIGURES:

ANNEXURES:

A	Prelodgement Notes from Council meeting dated 27 April 2016
B	RU 2 Land Use Tables
C	APZs Locations
D	Section 149 Certificate
E	Response from Department of Primary Industry of 30 March 2017
F	Site Photographs
G	Table 10 of ILUs
H	Table 12 of ILUs
I	Copy of Sydney Water Advice 18 June 2018
J	Copy of Sydney Water Advice of 15 March 2017
K	Copy of letter from Department of Planning & the Environment dated 14 December 2017
L	Copy of minutes from RFS meeting 19 January 2017
M	Survey Plan
N	Schedule of Services Available in Helensburgh
O	Aerial Photograph of Precinct
P	Copy of letter from Department of Planning and Environment dated 10 April 2018
Q	Bus time table

PART C – SITE COMPATIBILITY OF PROPOSED DEVELOPMENT

C1 – Development Proposal Information

1. Context

A. Location, zoning of the site and presentation of surrounding areas.

The location of the site, 120 Walker Street, Helensburgh, is indicated on the following aerial photograph. The property is approximately 1 kilometre south of the Helensburgh commercial centre.

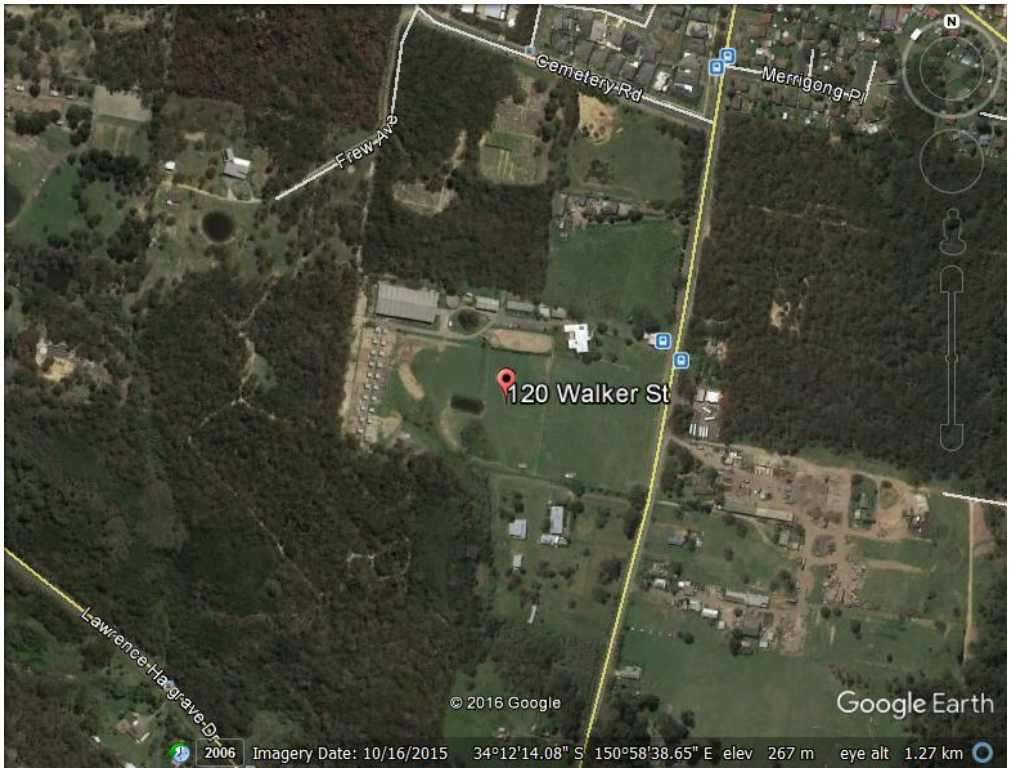


Figure 1 – Aerial Photograph of the Site

The property is located about 300 metres from the southern edge of the low density residential area of the Helensburgh township, the most dense urban landform in the northern area of the City of Wollongong. The site is bounded by predominantly rural residential properties to the north, west and south.

To the east of the site is a property utilised as a bus depot by Premier Buses. That property is significantly cleared but is bounded by mature native vegetation along its frontage. Immediately to the south of that property is a recycling and civil contracting operation identified as Blackwell Brothers (No 159 Walker Street). This is the IN2 property on which this application relies on as adjoining urban purpose land to trigger the Site Compatibility Certificate under the SEPP.

To the north of the subject site is an olive orchard and to the west of that site is the Helensburgh cemetery, which also adjoins in part of the subject land.

Immediately to the south of the subject property is a rural residential property containing two dwellings and outbuildings.

To the south west of the subject site (Lot 1 DP 319310) is a property, which contains consent for a 280 caravan park site and associated infrastructure.

The subject site is accessed from Walker Street, a bitumen sealed public access. Further access is available from Frew Avenue, an unformed road located at the rear of the site.

Approximately 500 metres to the south of the site is the Sri Venkateswara Hindu Temple (No 1 Temple Road).

The property is zoned RU2 Rural Landscape within the LEP. A copy of the land use table for the zone are included as ***Annexure "B"***.

Senior living development is not permissible within the zone and any future development application would need to rely upon **Clause 4 (4)** of the SEPP being land that adjoins land zoned primarily for urban purposes.

With regards representation of surrounding uses, it will be noted that the subject site is not too far removed from the low-density residential development of the Helensburgh township to the north.

B. Description of Surrounding Development

i) Built Form

The surrounding built form is limited in scale and will be generally restricted as a consequence of the zonings adjacent to the site. However, the Cardno report, accompanying this application, describes the character and identity of Walker Street as ambiguous due to the fragmentation of existing land uses and zonings.

A zoning map of the site and precinct appears below in Figure 2.

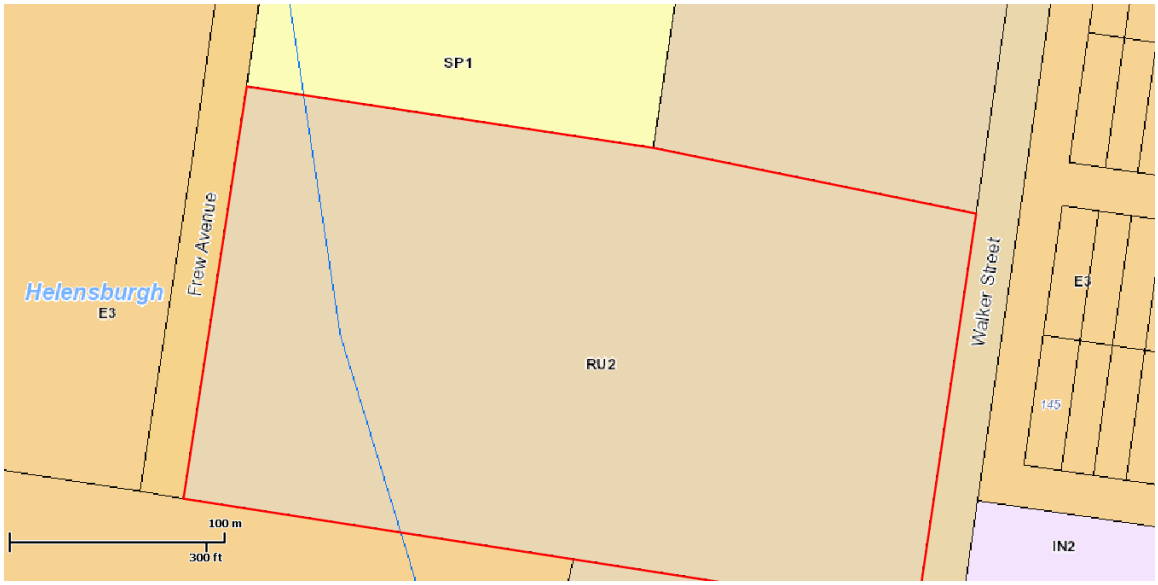


Figure 2 – Zoning Map

The immediate precinct is described hereunder:

West: Immediately to the west is Frew Avenue, a formed but unsealed road. To the west of Frew Avenue is a rural residential property. Access to that property is via Frew Avenue.

This property is zoned E3 – Environmental Management and consists of established native vegetation adjacent to Frew Avenue. Improvements upon the land include a dwelling and farm buildings.

The objectives of the E3 zone are:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values*
- *To provide for a limited range of development that does not have an adverse effect on those values.*

It is considered that the issue of a Compatibility Certificate and any future development of the land for seniors living will not impede these objectives being satisfied. Although the property is within a bushfire prone area, any bushfire mitigation works would need to be carried out on the subject land and there is no reliance on Frew Avenue for that purpose.

North: The northern boundary adjoins 2 properties.

The property with frontage to Walker Street is zoned RU2 Rural Landscape, similar to the subject site. This property contains a number of olive trees, which appear to be in poor condition. The improvements include a dwelling house and several outbuildings.

The objectives of the RU2 zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base*
- *To maintain the rural landscape character of the land*
- *To provide for a range of compatible land uses, including extensive agriculture*
- *To encourage the retention, management or restoration of native vegetation.*

This property is extensively cleared and is abutted to the north and west by Helensburgh Cemetery.

The site is not of an area to provide for sustainable primary industry production or extensive agriculture.

The other adjacent site, owned and managed by Wollongong City Council, to the north is zoned SP1 Special Activities and is the location of the Helensburgh Cemetery, which is a heritage site (item 6123) with an archaeological component.

The objectives of this zone are:

- *To provide for special land uses that are not provided for in other zones*
- *To provide for sites with special natural characteristics that are not provided for in other zones.*
- *To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that miminises any adverse impacts on surrounding land.*

The cemetery also has frontage to Cemetery Road, which adjoins low density residential development. The cemetery will be separated from any future seniors living development by dense vegetation as indicated on the aerial map.

The proposal is unlikely to have adverse impacts on the function and operation of the cemetery.

The accompanying Cardno report states the following:
"*A proposal for a retirement facility would not be in conflict with the functions of a cemetery, nor would the orderly operation of the cemetery have any negative impacts on the retirement village activity*."

As advised, Helensburgh Cemetery is an item of environmental heritage of local significance.

Clause 5.10 (1) of the WLEP 2009 in relation to heritage conservation advises that the objectives of this clause are:

(a) to conserve the environmental heritage of Wollongong; and

(b) to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views; and

(c) to conserve archaeological sites; and

(d) to conserve plans of Aboriginal heritage significance.

Subclause 5(c) advises that *the consent authority may require a heritage impact statement before granting development consent to any development within the vicinity of a heritage item*.

It is considered that a future seniors living development would not have any effect on the heritage significance of the heritage item.

South: The southern boundary adjoins two properties.

The property with frontage to Walker Street is zoned RU2 Rural Landscape and is extensively cleared and contains two dwelling houses and outbuildings.

The property to the rear of that land is zoned E3 Environmental Management. The property is identified as Lot 1 DP 319310 has an existing consent for a caravan park development containing 280 sites and associated infrastructure (DA 1980/731).

A report to Council of 28 November 2011 acknowledges that this development has experienced "*substantial commencement*" and, therefore, the consent is valid.

East: The properties to the east of the site are contained within two zones.

Council's mapping indicates a number of lots and roads are within a paper subdivision within the E3 Environmental Management zone. These properties are heavily vegetated with native vegetation and include some improvements including a bus depot.

The bus depot development was approved under DA 1987/383. The bus depot is setback approximately 24 metres from Walker Street and is screened by native vegetation along the street frontage.

The land further to the east of the bus depot is described within the Cardno report as the "Land Pooling Precinct", which is essentially undeveloped and would not conflict with a retirement living land use adjacent to it.

Following the review of the 7(d) lands, it is unlikely that this area would experience further development in the foreseeable future.

To the south of this lot is No 159 Walker Street, which is zoned IN2 Light Industrial. This lot is within a light industrial precinct, which also includes Nos159, 161 – 163, 165 and 167 – 169 Walker Street.

These properties accommodate Blackwell Brothers civil works operations.

The objectives of the IN2 zone are:

- *To provide a wide range of light industrial, warehouse and related land uses*
- *To encourage employment opportunities and to support the viability of centres*
- *To minimise any adverse effect of industry on other land uses*
- *To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area*
- *To encourage appropriate forms of industrial development which will contribute to the economic and employment growth of Wollongong.*

Blackwell Brothers recycling activities have been a long term occupant of their site. There have been issues with Council and the Office of Environment & Heritage with regards permissibility and occupation of the site but it is understood that the continued processes have not delivered any significant adverse environmental impacts upon the local community.

The business has consent and is now also operating a waste recycling business in Wylie Road Kembla Grange and, therefore, potential environmental impacts have been, in the main, relocated from the site.

Any future and current development on the recycling site will be controlled by conditions of consent imposed by both Council and also the Office of Environment & Heritage through conditions imposed under the Protection of the Environment legislation.

An objective of the IN2 zone is to minimise any adverse effect of industry on other land uses.

ii) <u>Potential Land Use Conflicts</u>

The above section identifies the properties surrounding the subject site. The section also recognises the zonings of those properties, the objectives of the zones and existing development upon the land.

As evidenced by the aerial photograph, there is little potential for land use conflict from those properties to the west, north and south.

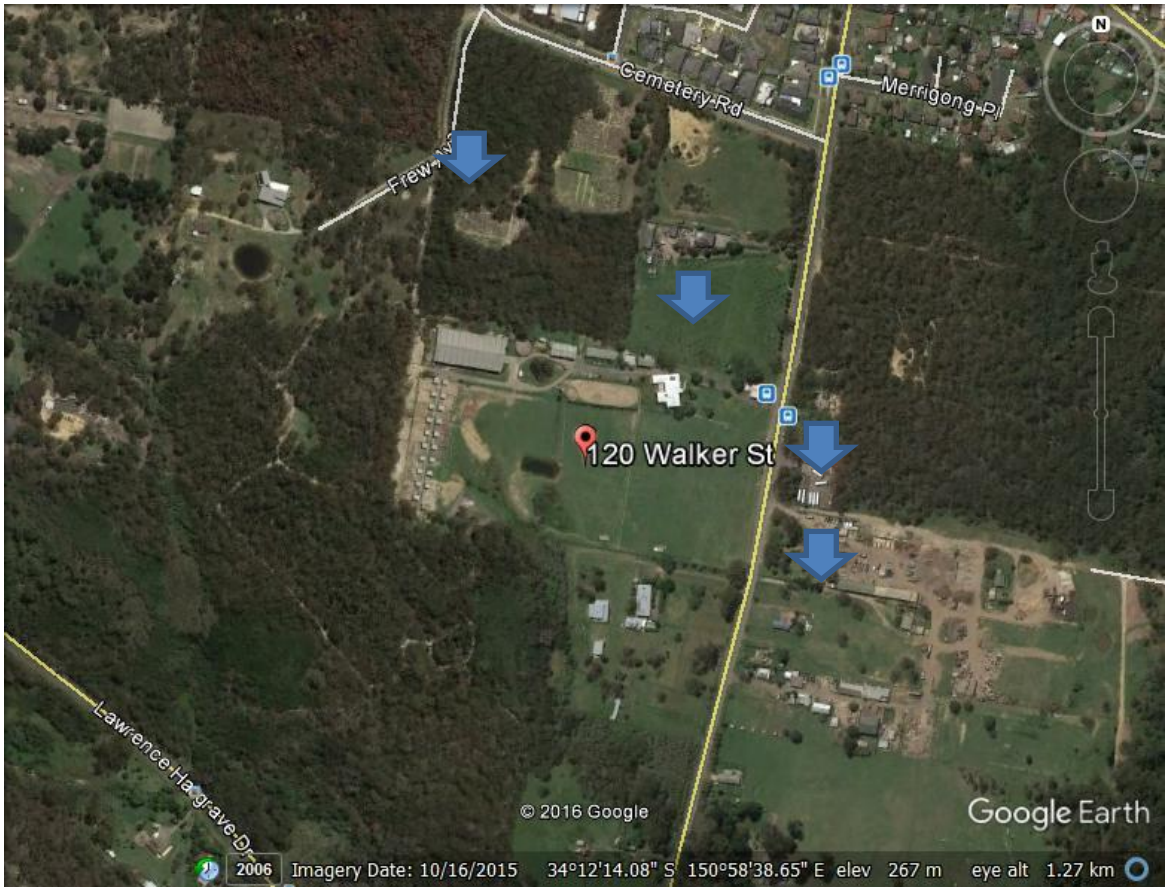


Figure 3 – Location of Walker Street Properties

The property to the west has been developed as a rural residential development containing a dwelling house, sheds and a dam but is densely vegetated at its frontage to Frew Avenue.

There are two adjoining properties to the north. One is Helensburgh Cemetery, which is provided with a dense vegetated buffer at its interface with the subject land.

The second is a rural residential lot consisting of an orchard. The dwelling and farm infrastructure are located within the north western corner of the property, which is the greatest distance from the subject site.

The site to the south is also developed as a rural residential site and includes a dwelling house and a number of substantial buildings.

The dwelling house is located approximately 50 metres from the common boundary. There will be sufficient distance between the proposed development and the existing dwelling including an emergency road access to minimise any significant visual impacts.

The existence of a valid consent for a 280 caravan park site to the south west of the site needs to consider the potential of such development. It is considered that a caravan park use could be in harmony with a retirement village operation.

To the east of Walker Street is a bus depot located at No 145. That property is screened by native vegetation along its frontage. The bus depot was approved under DA 1987/383.

Within that property, an area of about 3000m^2 has been cleared for hardstand for the parking of buses. At the rear of the site is a paper subdivision that indicates heavily vegetated allotments.

It is unlikely that the "*Land Pooling Precinct*" will be developed in the foreseeable future.

Adjoining the site is No 159 Walker Street occupied by Blackwell Brothers as a heavy machinery storage and recycling facility and has been operating for approximately 30 years.

The site operates under conditions of consent granted by WCC and an EPA Licence.

To better consider the potential land use, conflicts, consents and development history for each of the properties existing approvals for surrounding properties has been scrutinised as follows:

(a) 110 Walker Street Helensburgh

The property immediately to the north has the following development history:

DA 1984/145	- Dwelling
BA 1985/776	- Dwelling
DA 1988/993	- Swimming Pool
BA 1988/2482	- Inground Swimming Pool
DA 1991/106	- Granny Flat
BA 1991/1029	- Granny Flat
DA 1993/94	- Addition to Existing Dwelling
BA 1993/1199	- Addition to Dwelling
DA 1996/772	- Nine Stables and Feed Shed and Associated Water Quality Works

It is considered that these land uses are well established and would not create any adverse impacts with a proposed seniors living development. Similarly, it is considered that a seniors living development would not adversely impact upon the amenity of the approved use.

(b) 14 Frew Avenue

The property to the west of the subject site has the following history of applications:

DA 2002/2313	- Erect Single Storey Dwelling
DA 2004/1397	- Construction of Two Storey Dwelling and Pool
PC 2005/30248	- Construction of Two Storey Dwelling and Pool Enclosure
BC 2005/59	- Colorbond Shed
DA 2009/1371	- Machine and Pottery Shed

PC 2010/259 - Machine and Pottery Shed

As previously stated, the site is heavily vegetated along the joint boundary of the properties. It is considered that the approved land uses would have little impact upon a seniors living development and the seniors living development would be in harmony with these land uses.

(c) 130 Walker Street

The property immediately to the south of the subject property has the following history of applications:

DA 1981/279	- Garage for the Storage of Stud Records and Equipment
DA 1981/1447	- Dwelling
BA 1981/1881	- Water Closet
BA 1982/88	- Brick Veneer Dwelling
DA 1988/339	- Extension to Existing Dwelling
BA 1988/1023	- Additions to Dwelling, Living Space and Office
BC 2000/392	- Residence and Outbuildings
DA 2001/1868B	- Two Storey Addition & Construction of a Stable – Modification to extend lounge and stables
BC 2003/498	- Additions to Dwellings & Stables
PC 2007/1208	- Two Storey Addition and Construction of a Stable

These improvements are established. Although the dwelling house is located approximately 50 metres from the adjoining boundary, it is considered that a seniors living development could live in harmony with the occupants of 130 Walker Street particularly through the provision of appropriate conditions of consent.

(d) This property is located to the south west of the subject site:

DA 1980/731 - 280 site caravan park (72 sites within Stage 1)

A report to Council of 28 November 2011 advised that the development has experienced "*substantial development*" making the consent valid.

(e) 145 Walker Street (Lot 1 Sec 4 DP 2644)

This property is located on the eastern side of Walker Street and has the following development history:

DA 1987/383	- Bus Depot (approved 14/101997)
DA 1987/383/A	- Modification
DA 1987/383/B	- Modification of Condition 1 (approved 20/4/2016)
DA 2015/668	- Boundary Adjustment

The potential for the bus depot to create adverse impacts is mitigated by the following conditions of consent provided in DA-1987/383/A:

2. *The storage of goods, waste or extraneous material in the vehicular maneuvering and parking areas shall be strictly prohibited. These areas shall be kept clear at all times for the free movement of vehicles on site.*

10. *A landscape plan shall be submitted to Council with the Building Application and shall include:*
    i. *a 1.5m front landscape strip and a 1.5m landscape strip for the remaining boundary perimeter (except for vehicular accessways)*
    ii. *informally grouped trees and shrubs to reduce the visual impact of the building, planted in sufficient numbers to achieve a softening effect, and shall be in scale with the development.*

12. *Details of the proposed method of disposal of industrial waste shall be submitted to Council with the Building Application and the development shall not proceed until such details have been approved by Council.*

13. *The lighting of the premises shall be directed so as not to cause annoyance to the owners or occupiers of adjoining premises or glare to motorists on nearby roads.*

14. *All servicing and mechanical repairs to buses shall be carried out within the confines of the building at all times.*

15. *Any requirements of the State Pollution Control Commission shall be complied with prior to the commitment of the use.*

21. *All staff and visitor car parking must occur within the site.*

It is assumed that Council is satisfied that the operators are not causing concern by the deletion of Condition 1 relating to the early expiry date of the consent (Modification B approved 20.4.16). The condition requires visual screening and operational arrangements so as not to create nuisance. These appear to have been provided in accordance with the conditions of consent.

It is considered that a future seniors living development could live in harmony with the bus depot operation.

(f) <u>159 Walker Street</u> (Blackwell Brothers)

This property is located also on the eastern side of Walker Street and is in close proximity to the subject site. The property has a long history as a resource recovery facility and landscape material supply centre.

The application history of the site is as follows:

BA 1978/1722	- Brick Veneer Dwelling
DA 1978/1042	- Country Dwelling
BA 1978/2449	- Dwelling
CC 1999/1273	- Extension of Machinery Shed
DA 1982/61	- Double Garage, Fence Lines and Firebreak
DA 1983/668/B	- Clearing of Land for Fence Lines & Firebreak. Use of Earth Moving Business, Erection of Storage Bins & Identification Sign
BA 1983/5170	- Machinery Shed
DA 1986/536	- Dwelling
BA 1986/597	- Inground Swimming Pool
DA 1998/534/A	- Extension to Existing Shed
BC 2012/146	- Industrial Land Use – dwelling & shed located approximately 234 metres east of Walker Street front property boundary
DA 2012/847	- Environmental Protection Works
DA 2012/893	- Erection of two buildings (office & staff facilities) and landscaping
BC 2013/188	- Residential – metal shed & awning
DA 2015/1018	- Alterations & Additions to Use of Buildings Associated with Resource Recovery Facility/Landscaping Materials Supplies
PC 2016/220	- Clearing Land for Fence Lines & Firebreaks. Use for Earth Moving Business, Erection of Storage Bins & Identification Sign – Modification B
PL – 2016/48	- Upgrade to an Existing Approved & EPA licensed landscaping and material recycling facility

It is considered that DA 2015/1018 for alterations and additions to and use of buildings associated with the resource recovery facility/landscaping supplies would have the greatest potential to impact upon the above property. However, there are a number of conditions imposed to minimise any adverse effects on surrounding land uses.

The conditions imposed to mitigate adverse environmental impacts are as follows:

6. *On Site Waste Water Management System*
The proposed use of the building as an office must be connected to "Pump Out" on site wastewater management system.

19. *Piping of Stormwater to Existing Stormwater Drainage System*
Stormwater from the building/structure must be piped to existing stormwater drainage system that connects to the dam on the site.

21. *Restricted Hours of Work*
The developer must not carry out any work other than emergency procedures to control dust or sediment laden runoff outside the hours of 7.00 a.m. to 5.00 p.m. Monday to Friday and 7.00 a.m. to 1.00 p.m. Saturdays without the prior written consent of the Principal Certifying Authority and Council.
No work is permitted on public holidays, Sundays or the Saturday adjacent to public holidays on Mondays and Fridays.

The condition also includes the following note:

"The developer is advised that other legislation may control the activities for which Council has granted consent including but not limited to the Protection of the Environment Operations Act 1997. Developers must note that consistent with the Environmental Protection Authority's Interim Construction Noise Guidelines (July 2009) the noise from construction (< $_{Aeq}$ (15 min)) must not exceed the background noise level (< $_{A90}$ (15 min) plus 10dB(A), and < $_{Aeq}$ (15 min) of 75dB(A) when measured at the residential property boundary that is most exposed to construction noise, and at a height of 1.5m above ground level. If the property boundary is more than 30m from the residence, the location for measuring noise levels is at the most noise-affected point within 30m of the residence."

22. *The developer must carry out work at all times in a manner which will not cause a nuisance, by the generation of unreasonable noise, dust or other activity, to the owners and/or occupiers of adjoining and adjacent land.*

25. *Provision of Waste Receptacles*
The developer must provide an adequate receptacle to store all waste generated by the development, pending disposal. The receptacle must be regularly emptied and waste must not be allowed to lie or accumulate on the property other than in the receptacle. Consideration should be given to the source separation of recyclable and re-usable materials.

33. *Environment Protection Licence*
The operation of the use of the land must obtain and/or hold the relevant Environment Protection Licence from the NSW Environmental Protection Authority

34. Maintenance of Landscaping – this condition provides requirements as to how the site should be managed to mitigate against bushfire risk.

The conditions provide for licencing requirements and also for measures to minimise against potential adverse impacts. Further to this, the Blackwell Brothers waste recovery operation has relocated to a licensed premises at Kembla Grange so any expansion of the Helensburgh operation is unlikely.

It is considered that any future seniors living development on the subject site could co-exist in harmony with the Blackwell Brothers operations.

Overall, it is considered that that there are no potential land use conflicts that would adversely impact upon the site Compatibility Certificate going forward.

iii) Natural Environment (including known significant environmental values & resources or hazards)

The aerial photography indicates that the majority of the land area has been cleared of significant vegetation.

There are four issues that need to be considered being:

- bushfire risk;
- potential contamination;
- flooding; and
- riparian corridor.

1. Bushfire Risk

The site is mapped as bushfire prone. As a consequence, a Bushfire Constraints Analysis, provided by Peterson Bushfire, dated by 17 October 2018, accompanies this application. The report is an overview of constraints based on consideration of the hazards and possible future development outcomes, and features limitations and assumptions.

The development potential considered in the constraints analysis is Seniors Living is in accordance with the plan provided by Phil O'Donnell Architects.
Seniors living development proposals are defined as "Special Fire Protection Purpose" (SFPP) development in accordance with Section 100B *Rural Fires Act 1997.* Section 91A of the EPA ACT 1979 requires a bushfire assessment of SFPP development proposals on bushfire prone land following the process and methodology set out within s100B *Rural Fires Act 1997, clause 44 of the Rural Fires Regulation 2008 and the NSW Rural Fire Service (RFS) document Planning for Bushfire Protection 2006.*

Clause 25(5)(b)(i) of the SEPP requires an application for a SCC to demonstrate that a proposed development is compatible with the surrounding land uses having regard to known hazards.

Clause 27 of the SEPP advises that *a consent authority must not consent to a development application made pursuant to this Chapter to carry out development on land identified as bushfire prone land unless the consent authority is satisfied that the development complies with the document titles "Planning for Bush Fire Protection 2006 (PBP).*

Subclause (2) states that *a consent authority, in determining a development on land identified as bushfire prone, must take into consideration the general location of the proposed development, the means of access to and egress from the general location and other relevant matters including the following:*

(a) the size of the existing population within the locality,

(b) age groups within the population and the number of persons within those age groups,

(c) the number of hospitals and other facilities providing care to the residents within the locality, and the number of beds within those hospitals and facilities,

(d) the number of schools within the locality and the number of students at those schools,

(e) existing development within the locality that has been carried out under this Policy or SEPP No. 5 – Housing for Older People or People with a Disability,

(f) the road network within the locality and the capacity of the road network to cater for traffic to and from existing development if there were a need to evacuate persons from the locality in the event of a bushfire,

(g) the adequacy of access to and from the site of the proposed development for emergency response vehicles,

(h) the nature, extent and adequacy of bushfire emergency procedures that are able to be applied to the proposed development and its site, and

(i) the requirements of the NSW Fire Brigade.

Responses:

(a) size of the existing population

According to 2016 census information, the population of Helensburgh was 6,383 comprised of approximately 50.3% female and 49.7% males. There has been no significant urban expansion since that time to suggest a noticeable increase in population. The figures show little increase in population since 2011(5996). However there has been a significant change to the populations within the older cohorts (see below)

(b) **aged groups within the population**

The 2016 provided the following information in relation to age groups:

People	Number	Percentage
0 – 4	491	7.7
5 – 9	512	8.0
10 – 14	448	7.0

15 – 19	434	6.8
20 – 24	380	6.0
25 – 29	328	5.1
30 – 34	383	6.0
35 – 39	489	7.7
40 – 44	532	8.3
45 – 49	446	7.0
50 – 54	497	7.8
55 – 59	398	6.2
60 – 64	318	5.0
65 – 69	247	3.9
70 – 74	180	2.8
75 – 79	124	1.9
80 – 84	86	1.3
85+	55	1.3

There has been a significant increase in the following cohorts since the 2011 census results (in brackets):

-60-64 (249) an increase of 69.

65-69 (187) an increase of 60

70-74 (123) an increase of 57

75-79 (86) an increase of 38

80-84 (64) an increase of 22

85+ (55) an increase of 30

(b) <u>number of hospitals</u>

There are no hospitals within the township. Bulli Hospital provides some day care facilities and regional hospitals are located at Wollongong and Shellharbour.

There are 4 medical practices within Helensburgh and NSW Ambulance has a facility within the township.

(c) <u>number of schools</u>

There are two primary schools within the township viz

- Helensburgh Primary School: 487 students
- Holy Cross School: 169 students

(d) <u>existing seniors living development</u>

There are no other developments within the immediate area carried out under SEPP Seniors Living for SEPP No 5 – Housing for Older People or People with a Disability. A hostel with restricted capacity exists in Stanwell Park.

(e) <u>the road network</u>

A report from McLaren Traffic Engineers accompanies this report. This report advises that the current road network has the capacity to cater for traffic to and from the proposed development if there was need to evacuate persons from the locality in the event of a bushfire.

(f) emergency vehicle response

The McLaren report also states that the proposed access will be suitable for emergency response vehicles.

(g) bushfire emergency procedures

A report from Peterson Bushfire Consulting describes the nature, extent and adequacy of bushfire emergency procedures that are able to be applied to the proposed development and its site.

(h) requirements of RFS

A prelodgement consultation meeting was held with RFS on 19 January 2017 and the outcomes of that meeting are provided at ***Annexure "L".***

Proposals involving Seniors Living are defined as Special Fire Protection Purpose (SFPP) development, which is integrated development under the Rural Fires Act 1997 and development applications would be referred to the RFS for assessment and concurrence. [A pre-lodgement meeting was held with RFS on 19.1.2017.]

PBP outlines the planning requirements for development of bushfire prone land which needs to consider:

- asset protection zones (APZs);
- water supply;
- access for fire fighters; and
- building construction standards.

The report includes a bushfire hazard assessment, which shows that the site is impacted upon all four sides. This assessment assumes that the site will remain cleared and managed and will only contain limited landscaping.

The individual components of the assessment are discussed hereunder.

(i) Asset Protection Zones (APZs)

The required APZs range from 60m to the north-west and west, to 70m to the north- east and south-west

The APZs are contained wholly within the site. The site is currently maintained to an Inner Protection Area as described by PBP. The removal of trees or vegetation is not required to achieve compliance.

(ii) Access

The PBP requires an access design that enables safe evacuation whilst facilitating emergency and operational response. All bushfire prone areas should have an alternate access or egress option depending on the bushfire risk, the density of the development and the chances of the road being cut by fire for a prolonged period. The internal road layout is to comply with the Acceptable Solutions for public roads as prescribed in Planning for Bushfire Protection 2006

The Peterson Bushfire report advises that Walker Street is considered adequate access for a seniors living development as it will front the road, which provides a north and south access/egress option. Internal access roads have been designed to comply with PBP "*acceptable solutions*" for "*public roads*" designed for service and emergency vehicles.

In addition to the Peterson report, Preliminary Traffic Advice in relation to Seniors Living Development on the subject site has been provided by McLaren Traffic Engineers (27 April 2017).

This report advises that the site is well provided for in terms of road access during an emergency. The report also advises on internal road design and the plan provided meets with these requirements.

Clause 38 of the Seniors Living SEPP advises that *the proposed development should:*

(a) have obvious and safe pedestrian links from the site that provide access to public transport services or local facilities, and

(b) provide attractive, yet safe, environments for pedestrians and motorists with convenient access and parking for residents and visitors.

A drop off bus stop is located at the front of the subject site and a pick up bus stop is located by the opposite side of the road. It is considered that a future development will be capable of meeting the requirements of Clause 38. A pathway will be constructed from the site linking with that which exists to the north of the site. Adequate parking will be provided on site.

(iii) Evacuation

The Peterson Bushfire report advises that PBP requires the preparation of a Bushfire Emergency Management and Evacuation Plan to be finalised for release of the Occupation Certificate. The plan is to address the decision making process and procedures for safe onsite refuge or onsite

evacuation, as well as Emergency Control Organisation operations/administration, training and maintenance.

The plan will be adequate in addressing safe emergency management and evacuation, and will guide operation of evacuation procedures within an internal and external environment possessing a good level of access.

The McLaren Traffic Engineers report advises that the proposed internal access roads comply with PBP and the existing external roads also comply and offer alternatives in opposing directions providing sufficient redundancy and a good level of access to the local and state road network.

(iv) Water Supply and utilities.

Fire hydrants are to be provided to comply with AS 2419 – 2005 Fire hydrant installations – System design, installations and commissioning. An additional water supply for fire-fighting is not required for the proposal. Electricity should be underground wherever possible.

(v) Building Certificate Standards

The building construction standard is specified by a Bushfire Attack Level (BAL) determined in accordance with AS 3959 – 2009 Construction of Buildings in Bushfire prone areas. Part of the development will require compliance with a BAL – 12.5 rating.

A plan, indicating the location of APZs in relation to a potential development, appears as ***Annexure "C".***

2. Potential Contamination

The Site Compatibility Certificate application does not propose the rezoning of the land.

However, matters contained within State Environmental Planning Policy No 55 – Remediation of Land needs to be considered.

Clause 7 (1) of the SEPP advises that *a consent authority must not consent to the carrying out of any development on land unless:*

(a) it has been considered whether the land is contaminated; and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Subclause (2) provides that *before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning principles.*

A contaminated land preliminary site investigation report has been prepared by SESL Australia (April 2017) and accompanies this application.

A walkover of the site was undertaken to support the desk top review. The report advises that Asbestos Containing Material (ACM) was not observed at any part of the site. A detailed hazardous materials inspection may be required should demolition be required. Some filling was observed as a result of the construction of the horse arena within the north of the site.

Some potentially contaminating practices were observed at the site including fill of unknown origin, spill of oil or hydraulic fluid within the shed and the storage of scrap metal around the site.

The report identified the following areas of environmental concern (AEC):

- AEC 1 – potential former agricultural activities undertaken at the site (1947 – 1961)
- AEC 2 – storage of scrap metals
- AEC 3 – oil or hydraulic spill within the shed in the north western corner of the site
- AEC 4 – presence of a large number of horses at the site (faecal matter).

The report concludes that there is the potential for soil contamination to exist at the site. However, the site could be suitable for the proposed development, subject to the development of a Tier 1 Detailed Site Investigation (DSI) to assess if the AECs have resulted in actual contamination that would render the site unsuitable for the proposed development. The DSI must investigate all AECs identified within the report.

The proponent agrees to undertake the intrusive site investigation. However, as the filling relates to only portion of the site and demolition of all buildings is not being contemplated, it is considered that the information provided is adequate to assess the application for a Site Compatibility Certificate.

Any future development application would need to ensure that any contamination on the site can either be legally disposed of or adequately managed on site. Any future development application would include a Remedial Action Plan.

3. Flooding Risk

A 149 Certificate, appearing as ***Annexure "D"***, advises that the property is located within an uncategorised flood risk precinct. Any future development application would need to respond to the requirements of Wollongong Development Control Plan 2009 - Chapter E 13 Floodplain Management & Clause 7.3 of the LEP.

In addition to this, the pre lodgement notes of 27 April 2016 (***Annexure "A")*** advises that as the proposed development is located in close proximity to a watercourse traversing the site and, therefore, any future application would need to be referred to the Office of Water. Comments from the Office of Water are included within this application.

With regards the flooding issue, two reports are provided being:

- Flood Classification of Watercourse by Rienco Consulting dated 1 July 2016; and
-

(i) Rienco Report – 1 July 2016

This report was prepared on 1 July 2016 and provides the information relating to the following:

1. Review of all likely flood related extents and how they may impact on any proposed development across the site.
2. Review of the indicative watercourse through the site, and advise as to whether or not this watercourse constitutes a "watercourse" for the purposes of a controlled activity.
3. Provide opinion on the likely extent of riparian corridor that exists on the site and the likely riparian corridor widths that should be provided for in any proposed development on the site.

In terms of flooding, the runoff from the minor catchment area (approximately 5 hectares) above the site would be expected to produce 1% AEP peak flows of ~ $3m^3/s$. Not all of this peak flow would be directed at the subject site, but even if it were, the entire 1% AEP peak flow could be entirely conveyed by a 600mm concrete pipe. This confirms the minor nature of the flood related matters.

(ii) Rienco Report – 26 July 2018

This report is titled "*Summary of Hydraulic Modelling of the 1% AEP (100 year) Design Flood*."

The report concludes, in part, that the site is not affected by mainstream flooding, being water contained with, or that has broken out of, a watercourse. The site is affected by shallow overland flow from the adjacent slope areas, as are all lots in the LGA during a 1% AEP.

The Seniors Living SEPP states that "*only genuinely high flood hazard*" affected areas are classified as "*environmentally sensitive land*" under Schedule 1 of the SEPP. As demonstrated by the flood model results, there are no high hazard areas on the land and, as such, the site is suitable for development under the SEPP (2004).

The statutory provisions relating to flood planning areas is within Wollongong LEP 2009.

Clause 7.3 of the LEP – is the statutory assessment requirements in considering development applications within the Wollongong LGA

The objectives of this clause are:

(a) to maintain the existing flood regime and flow conveyance capacity,

(b) to enable evacuation from land to which this clause applies,

(c) to avoid significant adverse impacts on flood behaviour,

(d) to avoid significant effects on the environment that would cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourse,

(e) to limit uses to those compatible with flow conveyance function and flood hazard.

Clause 7.3 (3) provides *that development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied in relation to all the following matters*

(a) all habitable floor levels of the development will be above the flood planning level,

(b) the development will not adversely affect the flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties,

(c) the development will not significantly alter flow distributions and velocities to the detriment of other properties or the environment of the flood plain,

(d) the development will not affect evacuation from the land,

(e) the development will not significantly detrimentally affect the flood plain environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses,

(f) the development will not result in unsustainable social and economic costs to the community as a consequence of flooding,

(g) if located in a floodway area – the development will not be incompatible with the flow conveyance function of or increase a flood hazard in, the floodway area.

Summary:

- The Rienco report of 1 July 2016 advises that the run off from the minor catchment above the site would be expected to produce 1% AEP peak flows of ~ 3m^3/s, which could be entirely conveyed by a 600mm concrete pipe.

- The Rienco report of 26 July 2018 advises that the site is not affected by mainstream flooding and that the site is suitable for development under SEPP (2004).

- From the information already available, it is considered that the objectives of the clause could be satisfied in the assessment of a future development application.

- From the information already available, it is considered that a future development application could provide adequate information to satisfactorily respond to the requirements of **Clause 7.3 (3).**

4. Riparian Corridor

Council's maps indicate that an objective 2 riparian corridor traverses part of the site as indicated below:

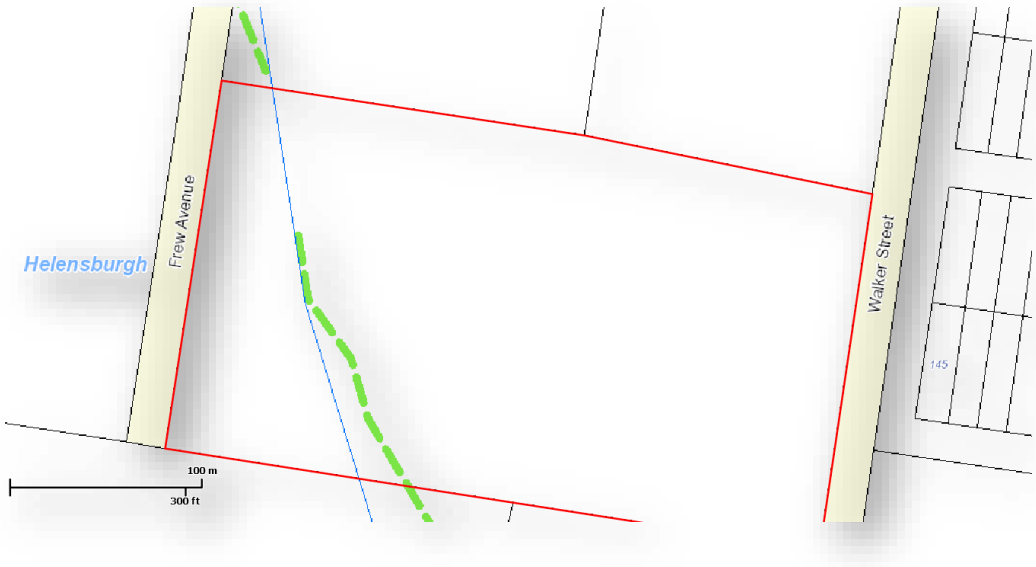


Figure 4 Riparian Corridor Map

A Category 2 watercourse provides for Terrestrial & Aquatic Habitat and aims to restore the natural functions of a stream in order to maintain the viability of riparian vegetation and provide suitable habitat for terrestrial and aquatic fauna as well as improve water quality and improve bank stability.

The provisions of the LEP also need to be satisfied.

Clause 7.4 of the LEP advises that the objective of the clause is *to ensure that development does not adversely impact upon riparian lands.*

Clause 7.3 (3) states that *development consent must not be granted for development on land to which this clause applies unless the consent authority has considered the impact of the proposed development on the land and any opportunities for rehabilitation of aquatic and riparian vegetation and habitat on that land.*

The Rienco Consulting report of 1 July 2016, accompanying this application, also considers the likely extent of the riparian corridor that exists on the site.

This report indicates an aerial photograph, which provides some commentary on the riparian corridor and is reproduced below:

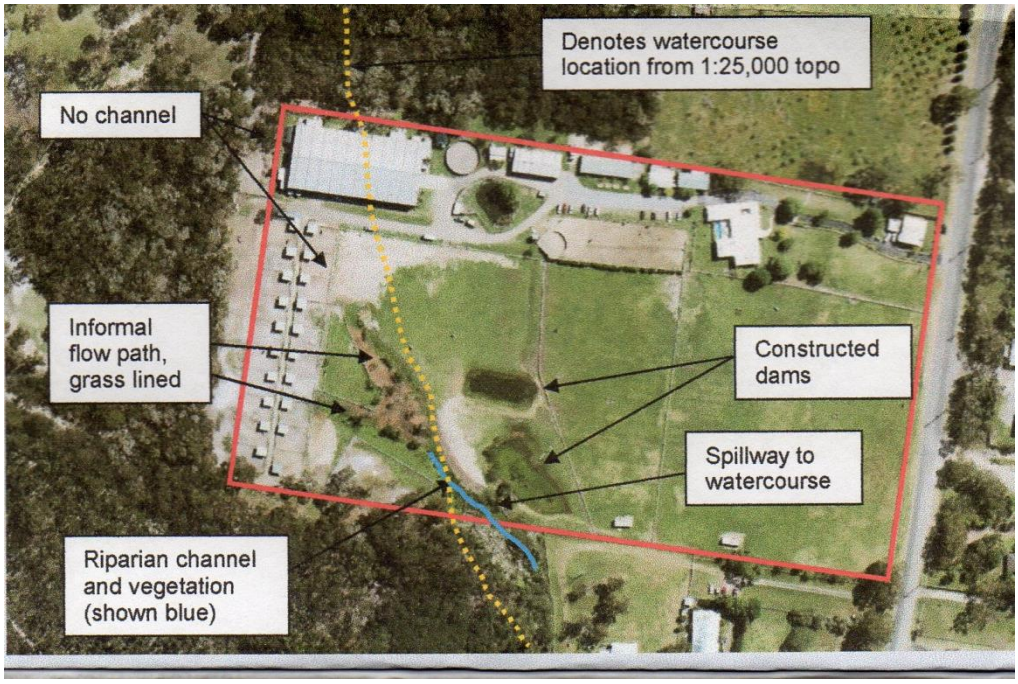


Figure 4 Rienco Figure A

The report provides the following observation:
"It is our opinion that the start of the watercourse or the start of the first order stream under the WM Act, is the upstream end of the blue line shown in Figure A. This is different to that shown on the 1: 25,000 topographic maps (shown in yellow on Figure A), where the watercourse can be seen running under the existing buildings and in a location that does not align with the observed on site."

The conclusion is that the only area where the existing “watercourse” exists is for the area of the blue link in Figure A.

The report also observes that there are no attributes associated with the watercourse of environmental value such as available or potential habitat and viable habitat.

Given the incised nature of the riparian area, the report suggests a 10m from top of creek bank zone for the riparian area post development. Any flood related extent would sit well inside this 10m zone.

A response to the Rienco report was received from the Department of Primary Industry/Water on 30 March 2017 (***Annexure “E”)*** advising of agreement with the assessment of the drainage lines and the recommended riparian corridor width contained within the Rienco report.

The response advised that any works within 40m from the top of the bank of the defined channel as depicted in Figure 4 of the report will require referral to DPI Water for assessment and potential issue of a Controlled Activity Approval under the Water Management Act.

Summary:

- Any future development application would need to be accompanied by a Vegetation Management Plan.

- The Rienco report challenges the mapped location of the first order stream and, as a consequence, an application was made to the NSW Office of Water to seek reclassification.

- The Department of Primary Industries/Water have agreed with the Rienco assessment of the drainage lines on the site and the recommended riparian corridor width.

- The existing condition of the riparian corridor could be vastly improved with a future development application.

C. Access to Services & Facilities & Access

Clause 26 of the Seniors Living SEPP states that ***consent cannot be granted unless the consent authority is satisfied that residents must have access that complies with subclause (2) to:***

1 (a) shops, bank service providers and other retail and commercial services that residents may reasonably require.

Response:

The commercial Helensburgh township centre commences approximately 1 kilometre north of the site. The town centre provides a wide range of commercial and retail services, which include:

IGA Supermarket	Walker Street
Smile Dentists	3/131 Parkes Street
Southern Pathology	2/131 Parkes Street
Dental Surgery	6/20 – 24 Walker Street
Babister Legal	Parkes Street
Helensburgh Pharmacy	cnr Parkes & Walker Street
La Belle Boutique	3/12 Walker Street
Neil Lyon Solicitor	5 Walker Street
Helensburgh Physiotherapy	20 Walker Street
Hey Beautiful Hair	14 Walker Street
McAnaney Lawyers	16 Walker Street
Natural Strands Hairdressers	Parkes Street
Helensburgh Newsagency	7/123 Parkes Street
Helensburgh Post Office	114 Parkes Street
Illawarra Credit Union ATM	114 Parkes Street

Besides other services including real estate offices, cafes, liquor stores and veterinary services the above list indicates not only a range but also a choice of services among suppliers.

The 2011 Census indicated a local population of 5,996 sufficient in size to provide for a range of retail and commercial activities.

(b) community services & recreation facilities

The area is provided with a number of community access services and recreational facilities.

Response:

The township is provided with a diverse range of facilities which includes:

- Charles Harper Park and swimming pool;
- Helensburgh Workers Club;
- Centennial Hotel;
- Helensburgh Library;
- Northern Illawarra Neighbourhood Aid (18 Walker Street); and
- NSW Ambulance Services (Lilyvale Street).

The area also offers abundant natural resources including the Garrawarra State Conservation Area and the Royal National Park.

It is an intention of the proposed development to include medical services on site.

(c) the practice of a general practitioner

Response:

The following medical practices currently exist:

- Helensburgh Family Practice - 4/131 Parkes Street
- Medical Practice - 129 Parkes Street

2) Access complies with this clause if:

a) The facilities and services referred to above are located at a distance of not more than 400 metres from the site of the proposed development that is a distance accessible by means of a suitable access pathway and the average gradient for the pathway is no more than 1 : 14, although the following gradient along the pathway are also acceptable

(i) a gradient of no more than 1 : 12 for slopes for a maximum of 1.5 metres at a time,

(ii) a gradient of not more than 1 : 10 for a maximum length of 5 metres at a time,

(iii) a gradient of no more than 1: 8 for distance no more than 1.5 metres at a time.

Response:

- The facilities and services referred to are approximately 1 kilometre from the site.
- External footpaths are not formally established but improvements will form part of any future application. The intention will be to provide footpath continuity to that existing to the north providing pedestrian access to the commercial centre.
- Internal pathway gradients will be made to comply with the nominated criteria.
- Where compliance is not achievable, the access requirements need to comply with the provisions of **Clause 26 (2) (c)** [see below].

Clause 26 (2) (c) – in the case of a *proposed development on land in a local government area that is not within the Sydney Statistical Division – there is a transport service available to residents that will occupy the proposed development:*

i) that is located at a distance of not more than 400 metres from the site of the proposed development and the distance is accessible by means of a suitable access pathway; and

ii) that will take those residents to a place that is located at a distance of not more than 400 metres from the facilities and services referred to in subclause (i); and

iii) that is available both to and from the proposed development during daylight hours at least once each day from Monday to Frida (both days inclusive)

and the gradient along the pathway from the site to the public transport services and the transport service to the facilities and services referred to above need to have an overall average gradient along a pathway from the site of the proposed development to the public transport services (and from the transport services and facilities previously mentioned) is to be no more than 1: 14, although the following gradients along the pathway are also acceptable:

(i) a gradient of no more than 1 : 12 for slopes for a maximum of 1.5 metres at a time,

(ii) a gradient of no more than 1 : 10 for a maximum length of 5 metres at a time,

(iii) a gradient of no more than 1: 8 for distance no more than 1.5 metres at a time.

Response

- The Illawarra Premier bus depot is located opposite the site and the bus stop into the Helensburgh township will be in close proximity to and from the entry to the site. Bus stops are located immediately adjacent to and also opposite the site. A time table for services to the site appear at "**Annexure Q".**
- The facility will provide its own transport services and will carry residents to facilities and services on request.
- As previously stated, the services and facilities nominated are at a greater distance than 400 metres from the site. However, this situation is not usual for seniors living facilities and residents will not be disadvantaged as the senior living provider will provide a transport service as well as on site facilities.
- The transport service will be provided on request and will exceed the minimum one daily requirement stipulated within the SEPP.
- Internal footpath gradients can be made to comply with the requirements of the SEPP.

The SEPP provides further specifics at Part 5 - Development on Land Adjoining Land Zoned Primarily for Urban Purposes as follows:

Clause 43 states that *a consent authority must not consent to a development application for the purpose of serviced self-care housing on land that adjoins land primarily for urban purposes unless the consent authority is satisfied that a bus capable of carrying at least 10 passengers will be provided for residents*

(a) that will drop off and pick up passengers at a local centre that provides residents with access to the following:

i) shops, bank service providers and other retail and commercial services that residents may reasonably require,

ii) community services and recreation facilities,

iii) the practice of a general medical practitioner, and that is available both to and from the proposed development to such a local centre at least once between 8.00 a.m. and 12.00 p.m. each day and at least once between 12.00 p.m. and 6.00 p.m. each day.

Response:

- It is the intention of the seniors living provider to provide a bus service capable of complying with the requirements of the SEPP.
- It is the intention of the seniors living provider to provide a general practitioner on the site.
- Bus services are available from the site.

D. Open space and special use provisions (if relevant)

The property is not in such close proximity to land zoned for public recreation, private recreation or National Parks and nature reserves to a degree that its use for seniors living would adversely impact upon the objectives of those zones or potential land uses.
As previously explained, the site abuts land to the north zoned SP1 Special Activities and is identified as Helensburgh Cemetery. As previously discussed, a dense vegetative buffer exists upon that land and it is considered that there are no potential land use conflicts with a future seniors living development.

Adequate private open space would be provided within the development for the needs and activities of residents.

E. Agricultural capability of the site and adjoining land if the proposal affects land not zoned primarily for urban purposes

The property is zoned RU2 Rural Landscape. The objectives of the zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base*
- *To maintain the rural landscape character of the land*
- *To provide for a range of compatible land uses, including extensive agriculture*
- *To encourage the retention, management or restoration of native vegetation.*

The property is known as Glen Keiri Ranch, which provides for the adjistment of horses. As previously noted, the property has a number of consents for infrastructure that provide for this land use. Photographs of the site appear as ***Annexure "F".***

Although the business has been existing for some time, it does so as an interest rather than a commercial activity. The land area is a restriction on the ability of the business to expand.
The current use for animal boarding and training establishments does meet with the definition of agriculture within the LEP. However, it is considered that there are abundant opportunities within the Northern Illawarra for similar activities.

Therefore, the loss of the existing activities upon the land would not be detrimental with regards the removal of an existing agricultural activity. The adjoining RU2 land, to the north of the site, has some orchard activity but not to a commercial scale. The seniors living development would not restrict that activity from continuing.

F. Types, values & significance of native vegetation on site, if land is not located in an urban LGA or urban zone listed under Schedule 1 of the Native Vegetation Act 2003

The site is not located with an urban area, urban zone or LGAs included within Schedule 1 of the Native Vegetation Act 2003.

The site has been extensively cleared. Opportunities for the enhancement of the riparian land have been discussed earlier in this application.

2. PROPOSAL

A. Description of the proposal including the type of seniors living proposed including numbers of beds/units, community facilities and any ancillary development

The Compatibility Certificate application relates to serviced self-care housing. Clause 13 (3) of the Seniors Living SEPP provides an example of "serviced self-care housing" as *seniors housing that consists of self-contained dwellings where the following services are available on the site: meals, cleaning services, personal care, nursing care.*

Plans, provided by Phil O'Donnell Architects, indicate a schematic overview of the property showing the location of the APZs, the riparian zone, position of community facilities, internal roads and identifies 90 studio dwellings, 40 villas, 13 dementia units and 38 dementia care apartments.

The site is impacted through the requirements to provide for APZs to mitigate against bushfire risk. However, this provides an opportunity to ensure that extensive open space will be provided and estimated at 33,844m^2, which will provide for the amenity of the residents.

The concept plan will also provide for health services, community facilities and ample car parking.

Plans are also provided of typical floor plans and elevations.

Planning Circular PS07-016 State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 advises that *a Site Compatibility Certificate is to accompany development applications to ensure new seniors living housing development occurs in appropriate places and is compatible with the local environment.*

Unless a current Site Compatibility Certificate has been issued by the Director General, a consent authority cannot grant consent for development on land adjoining land zoned primarily for urban purposes.

Serviced self-care housing is permitted on land adjoining land zoned primarily for urban purposes, subject to the consent authority being satisfied that housing will be provided for people with a disability, or in combination with a residential care facility or a retirement village under the Retirement Villages Act 1999.

Clause 42 of SEPP Seniors Living *advises that a consent authority must not consent to a development application to carry out development for the purpose of serviced self-care housing on land that adjoins land zoned primarily for urban purposes unless the consent authority is satisfied, by written evidence, that the residents of the proposed development will have reasonable access to*

(a) *home delivered meals; and*

(b) *personal care and home nursing; and*

(c) *assistance with housework.*

Response:

Written evidence as to the provision of these services will be provided within any future development application. However, at this time, the proponents provide an assurance that these services can be delivered.

The proposal provides for serviced self-care housing.

Clause 13 (3) of the SEPP explains an example of *"serviced self-care housing" as seniors housing that consists of self-contained dwellings where the following services are available on the site: meals, cleaning services, personal care and nursing care.*

Clause 50 of the SEPP provides *standards that cannot be used to refuse development consent for self-contained dwellings which includes serviced self-care housing.*

These standards include:

(a) *building height: if all proposed buildings are 8 metres or less in height (and regardless of any other development standard specified by another environmental planning instrument limiting development to 2 storeys)*

(b) *density and scale: if the density and scale of the buildings when expressed as a floor space ratio is 0.5 : 1 or less*

(c) *landscaped area: if*

  (i) *in the case of a development application made by a social housing provider – a minimum 35m^2 of landscaped area/dwelling is provided, or*

  (ii) *in any other case – a minimum of 30% of the area of the site is to be landscaped*

(d) *deep soil zones: if, in relation to that part of the site (being the site, not only of that particular development, but also of any other associated development to which this Policy applies) that is not built on, paved or otherwise sealed, there is soil of sufficient depth to support the growth of trees and shrubs on an area of not less than 15% of the area of the site (the deep soil zone). Two thirds of the deep soil zone should preferably be located at the rear of the site and each area forming part of the zone should have a minimum dimension of 3 metres*

(e) *solar access: if living rooms and private open spaces for a minimum of 70% of the dwellings receive a minimum of 3 hours of direct sunlight between 9.00 a.m. and 3.00 p.m. in mid winter*

(f) *private open space for in-fill self-care housing: if:*

(i) *in the case of a single storey dwelling or a dwelling that is located, wholly or, in part, on the ground floor of a multi-storey building, not less than 15m^2 of private open space/dwelling is provided and, of this open space, one area is not less than 3 metres wide and 3 metres long and is accessible from a living area located on the ground floor, and*

(ii) *in the case of any other dwellings, there is a balcony of not less than 10m^2 (or 6m^2 for a 1 bedroom dwelling) that is not less than 2 metres in either length or depth and that is accessible from a living area*

(g) *parking: if at least the following is provided:*

(i) *0.5 car spaces for each bedroom where the development application is made by a person other than a social housing provider, or*

(ii) *1 car space for each 5 dwellings where the development application is made by, or is made by a person jointly with, a social housing provider.*

Response:

(a) Building height will be at a maximum of 8 metres.

(b) The proposed FSR will be 0.28: 1.

(c) A total landscape area of 33,844m^2 could be available, which is 51% of the site area.

(d) Deep soil zones can be provided in accordance with the requirements.

(e) Solar access can comply with the requirements.

(f) Private open space can comply with the requirements.

(g) 0.5 car spaces/bedroom will be provided.

Schematic plans for the proposal have been prepared by Phil O'Donnell Architects. The design needs to consider Planning for Bushfire Protection considerations and the plans identify the location of the Asset Protection Zone (APZs).

In summary, the proposal will include the following development:

- 40 villa style dwellings;
- 90 studio dwellings;
- 13 dementia dwellings;
- 38 dementia care apartments;
- administration centre;
- café, hairdresser facilities;
- doctor and dentist surgeries;
- 101 car parking spaces; and
- landscaped areas.

The proposal is neither “in fill development” or “social housing”. The plans indicate that the required provisions of **Clause 50** of the SEPP can be satisfied.

B. Site description – natural elements of the site (including known hazards and constraints)

The application for the Compatibility Certificate needs to consider the natural environment (including known significant environmental values, resources or hazards) and the existing uses and approved uses of land in the vicinity of the proposed development **(Clause 25 (5) (b) (i)).**

The property is legally described as Lot 2 DP 548129.

A survey plan, prepared by Survplan, accompanies this application (***Annexure “M”).*** The plan identifies the existing buildings on the site, the location of two dams and contours indicate a fall to the south east. The survey detail compartmentalises areas within the property providing extensive detail.

The property has an area of 66,380m^2.

As previously explained, a waterway traverses the western section of the site and discussions have been had with the Office of Water seeking its reclassification. A copy of the Departments response is included.

The site is affected by bushfire hazard and a bushfire report is provided. A preliminary site assessment is provided in relation to potential contamination within the property.

Detailed description of surrounding land uses is contained within Section 1 of this report.

C. Building envelope – footprint and height relevant to adjoining development/uses and indicative layout of proposed uses in relation to adjoining development/uses

Plans, provided by Phil O’Donnell Architects, indicates footprint details for each type of seniors living housing. Plans also indicate indicative heights. The maximum building height proposed is 8 metres.

The site plan reveals the location of ancillary structures and their proximity to boundaries.

D. Proposed extent of native vegetation clearing, if land is not located in an urban LGA or urban zone listed under Schedule 1 of the Native Vegetation Act 2003

The land has been extensively cleared as a consequence of past land uses and has been maintained in that condition.

There will not be any clearing of native vegetation.

3. STRATEGIC JUSTIFICATION

A. Relationship with regional and local strategies

The following strategies and reports have been considered in the preparation of this application.

a) Illawarra Shoalhaven Regional Plan

The Regional Plan for the Illawarra Shoalhaven provides the strategic policy, planning and decision-making framework to guide the region to sustainable growth over the next 20 years. It will make efficient use of urban lands, promote energy efficiency and support healthy and vital communities.

A key principle of the Plan is to take a balanced approach to housing that provides choice, affordability and supports the orderly supply of land for development.

The Vision for the Illawarra-Shoalhaven region is for *a sustainable future and a resilient community capable of adapting to changing economic, social and environmental circumstances.*

The following goal is relevant to this application:

- *a region with a variety of housing choices, with homes that meet needs and lifestyles.*

Goal 2 of the Plan is to *provide a variety of housing choices, with homes that meet the needs and lifestyles. The region will need at least 35,400 new homes between 2016 and 2036 to meet the demands of population growth and change i.e. an average of 1770 each year.*

With one in four residents aged 65 years or older, and more one and two person households, decisions about the types of housing available and the locations of new housing, as well as the environmental impact of development, are all important.

Direction 2.1 of the Plan is to *provide sufficient housing supply to suit the changing demands of the region. Councils are to plan for the mix of housing that suits the projected growth, changing demographics (such as an ageing population) and market demand.*

This means that zonings and planning controls maintain, or in some cases, increase capacity for housing.

b) Review of Illawarra Housing Market – SGS Economical & Planning April 2014

SGS was commissioned by Planning & Infrastructure to conduct a review of the housing market in the Illawarra region. The report notes that the ageing population is a key demographic trend and likely to impact significantly on the Illawarra housing market over the coming decades. Local

councils should be encouraged to consider the requirements for accessible housing that allows residents to age in place if they choose.

In regards to this application, the following content within the report is significantly relevant:
"In terms of the supply of accommodation that supports ageing, there are around 994 independent living units (ILUs) in the Illawarra region, with a minimum expected demand of 1,436 new units by 2031. Assuming the current service ratio remains constant and no additional capacity is made available, an under supply of 442 units by 2031 is conservatively expected.
In addition, there are almost 4,000 total beds in residential aged care facilities in the Illawarra, 48% of which are in Wollongong. Currently, the supply of aged care in the Illawarra region meets the required ratio of 80 places per 1000 people aged 70 years and over. However, if there is no increase in supply in coming years, by 2016 there will be a gap of 495 places in residential aged care facilities increasing steadily to 2,879 places by 2031.
To address these predicted shortages in aged care, P & I should continue engaging with providers in the sector. This may improve communication and provide the right signals for developers and operators of aged care to consider the Illawarra as a feasible location for services. It is vital to encourage development of flexible housing that can be adapted to suit its occupants needs."

It is also of significance that the Illawarra Discussion Paper released by the Department of Planning & Infrastructure in August 2013 predicted that the proportion of the Illawarra population who will be 65 years and over by 2031 will be 23%. Further to this, the Illawarra Urban Development Program Update Report 2013 highlighted that greenfield release areas are expected to play more of a role in supplying dwellings over the next 5 years. Helensburgh is identified as a centre where increased dwelling density may be appropriate. The ageing of the population is the single most important trend predicted to occur in Australia in the next 25 years and beyond ("Integrated Report" – Commonwealth Government).

The report advises that the common issues affecting aged care accommodation and providers in regional NSW include:

- regional areas are seen as an attractive locations for retirement living, which leads to the perception that service providers must do more to support the planning needs of local population ageing
- prices may vary within different centres often relating to constrained rental and housing choice as a result of retirement living.
- retirement – led migration brings challenges for service provision in provision of facilities.

This proposal provides for predominantly serviced self-care housing. The report identifies this style of accommodation or independent living units (ILUs) where on site services are included.

Table 10 of the report identifies the number of ILUs in the Illawarra at the time of the report (***Annexure "G").***

This table has been compacted to indicate the number of ILUs in the Wollongong LGA:

Supplier	**Suburb**	**No of Units**
ARV St Lukes Village	Dapto	65
IRT Diment Towers	Wollongong	45
IRT Links Seaside	Wollongong	154
IRT Towradgi Park	Towradgi	66
* IRT William Beach Gardens	Kanahooka	60
IRT Woonona	Woonona	25
Nareena Homes	Figtree	20
Presbyterian Aged Care	North Wollongong	27
St Marys Aged Care	Berkeley	33
		495

* Recent Expansion

The report assumes that, if the current service ratio of 0.9% remains constant i.e. 9 in every 1000 55 residents seeking an ILU and no additional capacity is made available, an under supply of 442 units by 2031 is expected.

It is also noted that the closest facility to the subject site is at Woonona, some 22.5 kilometres to the south.

Residential aged care is split into 2 main categories:

- residential low care providing a semi-autonomous nursing home or hostel care accommodation
- residential high care catering to those with limited independent mobility or high personal care needs.

Residential aged care (low care) settings are nursing home establishments that provide lower levels of care support, catering for those who need some help with basic duties but who can generally move about on their own. Support services such as cleaning, laundry and meals are provided, and some health services may be delivered on site.

Residential aged care (high care) settings are nursing home establishments which cater to the needs of the frailed aged and older people with high or complex needs. Nursing and personal care services are provided.

Table 12 of the report (***Annexure "H"***) details the supply of residential aged care in the Illawarra. However, the table has been amended below to reflect the supply in the Wollongong LGA:

Name of Home	Suburb	High Care	Low Care	Total Beds
ARV St Lukes	Dapto	45	44	89
Chesalon Care	Woonona	60		60
HammondCare	Horsley	30	60	90
Hillside	Figtree		81	81
Illawarra Diggers	Corrimal		96	96
IRT Diment Towers	Wollongong		63	63
IRT Five Islands	Port Kembla		40	40
IRT Seaside Links	Wollongong	53	100	153
RT Towradgi Park	Towradgi	74	42	116
IRT William Beach Gardens	Kanahooka	34	126	160
IRT Woonona	Woonona	74	127	201
Kennett Home	Stanwell Park		24	24
Marco Polo	Unanderra	85	52	137
McCauley Lodge	Thirroul		36	36
Multicultural Village	Warrawong		74	74
Presbyterian Aged Care	North Wollongong	32		32
St Mary's	Berkeley		33	33
Uniting Care	Unanderra	58	50	108
Villa Maria	Unanderra	40	56	96
Warrigal Care	Coniston	60		60
Wollongong Nursing Home	Figtree	120		120
		765	1104	1869

Currently, the supply of aged care in the region meets the required ratio of 30 places/1000 people aged 70 and over. However, if there is no increase in coming years, by 2016 there will be a gap of 495 places, increasing steadily to 2879 places in 2031.

c) Helensburgh Urban Capacity Study – SES Economics & Planning – Final Report August 2006

The report responded to a request from Wollongong City Council to determine the potential ability of Helensburgh to increase its residential housing capacity. The report also reacts to the Sydney Metropolitan Strategy advice of December 2005 that the anticipated population growth over the next 25 years will be 1.1 million requiring an additional 640,000 new dwellings.

Further to this, the Sydney Futures Forum highlighted ageing population, smaller household sizes and population growth as the key drivers for demand for housing. The Strategy anticipates that 60 – 70% of new housing will be provided in existing urban areas.

The report advises that the key drivers of housing supply that should be considered within the context of Helensburgh include the:

- availability of vacant land and urban consolidation potential within the existing areas zoned for residential purposes within Helensburgh;
- infrastructure availability and servicing costs associated with the development, particularly environmental constraints and any inefficiencies involved in providing infrastructure to non-urban localities;
- the distance to existing services and infrastructure within the Wollongong and Sutherland Shire; and
- the demand for, and subsequent supply of, different dwelling types.

The report makes a number of assumptions including that family type and relationship in households will still change after 2011 due to underlying demographic changes including an ageing population.

The report estimates that Wollongong will require an additional 26,300 dwellings to accommodate population growth by 2031. Even in a situation of zero population growth, additional dwellings will still be required to accommodate for divorce and life expectancy contributing to older people living longer but often alone.

The report also noted that the Commission of Inquiry report found that Helensburgh and its surrounds has highly erosive soils, moderate to steep slopes and very intensive rainfalls. The potential for this is to impact on the Hacking River and the Royal National Park can include loss of fauna habitat, reduced wildlife corridor, increased domestic animal predation, increased weed invasion and increased nutrient/algal problems in National Park waters.

The report states that the supply of land zoned for residential development in Helensburgh is reducing and this will impact upon the extent to which Helensburgh's ability to meet future demand is extremely limited.

Two key findings emerge from the analysis:

1) taking a broader sub-regional view strategic planning settings are sufficient to provide for future housing demand; and
2) from a local Helensburgh market perspective, a demand for new housing product is strong and will remain so, and supply is constrained.

Given the second of these findings, there is a case for reviewing housing supply options for Helensburgh.

The context of the report provides valuation historical background and events, such as the review of 7D lands in the Helensburgh, Otford & Stanwell Tops area, has been concluded with recommendations towards amendments to the LEP.

However, two considerations have been exposed:

(i) the shortage of available residential land; and

(ii) the need for stringent environmental controls to guide any future development.

d) Planning Proposal – Review of Former 7(d) Lands at Helensburgh, Otford and Stanwell Tops

At an extraordinary meeting of Council on 29 July 2013, Council considered recommendations relating to the zoning of lands following the review of 7(d) lands at Helensburgh, Otford and Stanwell Tops.

The subject site is within the Walker Street and Frew Avenue Precincts.

Council adopted the following resolutions with regards the precinct:

1. *The part of the Planning Proposal for the Walker Street precinct (excluding 159 – 169 Walker Street), which seeks to amend the Wollongong LEP 2009 by rezoning the majority of the precinct to RU2 Rural Landscape zone, and part of Lot 2 DP 1127083 (Knowslay Park) to E2 Environmental Conservation, be progressed to finalisation.*

2. *The part of the Planning Proposal for the Frew Avenue precinct, which seeks to amend the Wollongong LEP 2009 by retaining a E3 Environmental Management zone, be progressed to finalisation.*

3. *The part of the Planning Proposal for Lot 672 DP 752033 (Crown land located on the corner of Walker Street and Cemetery Road) not proceed and the lot retains a SP1 Cemetery zoning, by deleting the site from the Planning Proposal.*

4. The new rezoning proposals for:
    a. *Lot 1 DP 606870 (No 338) Cemetery Road, requesting rezoning to IN2 Light Industrial;*
    b. *Lot 1 DP 319310 Lawrence Hargrave Drive, seeking a place of worship, education facility; and*
    c. *Lot 1 DP 584467 221 Parkes Street, requesting a rezoning to B6 Enterprise Corridor not be supported as amendments to the current Planning Proposal.*

The application for the Compatibility Certificate has no implications on the Planning Proposal as a rezoning is not being sought. This application relates to development on land adjoining land zoned primarily for urban purposes and provision is made for such circumstances within Clause 17 of SEPP (Housing for Seniors or People with a Disability) 2004.

Clause 5 (3) of the SEPP states that *if this policy is inconsistent with any other environmental planning instrument made before or after this Policy, this Policy prevails to the extent of the inconsistency*.

B. Public interest reasons for applying for seniors housing in this locality

This application provides evidence that the ageing population is a significant social issue facing the nation in the immediate future.

In the "Inaugural report on the funding and financing of the Aged Care Sector" (Aged Care Financing Authority 2013), it was projected that there is a need for an additional 75,000 residential and 85,000 home care packages from 2013 – 2023.

Further to this, in its submission to the Senate Standing Committee on Community Affairs, the Illawarra Forum (4 March 2016), the following was included:
"Statistics show that the Illawarra region has an ageing population growing at a rate higher than the national average and has limited care services available. 17% of the Illawarra population is over 65 (NSW 15%) rising in 20 years to 23% (NSW 20%). The dependency ratio is set to rise from 26% to 39%, outpacing the average for NSW."

The Illawarra Shoalhaven Medical Local in their "Population Health Profile 2013" estimates by 2021 there will be a 32% increase in the population 65^{+} and a 52% increase in the population 85^{+} (which is higher than the State and Australian average).

The SGS review of the Illawarra Housing Markets (April 2017) strongly encouraged the Department's role in encouraging the supply of seniors living housing by stating the following:
"To address these predicted shortages in aged care, P&I should continue engaging with providers in the sector. This may improve communication and provide the right signals for developers and operators of aged care to consider the Illawarra as a feasible location for services. It is vital to encourage development of flexible housing that can be adapted to suit its occupants' needs."
The 2016 Census outcomes for Helensburgh revealed that the population of the township of people aged 65 years and over is 11.3% of the population. There has also been a significant increase within the aged cohorts since the 2011 Census results as shown below:
60-64 an increase of 69
65-69 an increase of 602
70-74 an increase of 57
75-79 an increase of 38
80-84 an increase of 22 85+ an increase of 30

C. Adequacy of Services and Infrastructure to Meet Demand

Clause 28(1) of the Seniors Living SEPP states that *a consent authority must not consent to a development application made pursuant to this Chapter unless the consent authority is satisfied, by written evidence, that the housing will be connected to a reticulated water system and have adequate facilities for the removal or disposal of sewage.*

In relation to these infrastructure services, the following advices are provided:

i) Sewer

Advice from Sydney Water dated 22/12/2016 giving conditional authorisation to connect to their gravity wastewater system supports this application ***(Annexure "I").*** This permission is for domestic quality wastewater and is valid for one year from the date of the letter.

Further correspondence from Sydney Water dated 18 June 2018 appears at (**Annexure "J").** This correspondence advises that pump to sewer will be permitted at a maximum flow rate of 2l/s.

The proposed connection point is to the existing 150mm wastewater main located at Walker Street, constructed under PRO 1000 4111.

ii) Water

The correspondence of 15 March 2017 (**Annexure "J")** advises that the drinking water main available for connection is the 300mm main in Walker Street.

Enquiries have not, as yet, been made to Endeavour Energy in relation to the electricity supply. It would appear that supply is such that it could be increased on site through the installation of a transformer of suitable size.

4. Pre-lodgement Consultation

The following pre-lodgement discussions have been held in relation to the proposal.

a) Wollongong City Council

A pre-lodgement meeting was held with WCC on 27 April 2016 to discuss permissibility issues around the proposed land use as a hospital or Seniors Living Proposal in the RU2 zone.

Hospitals are a land use that is permissible with development consent in the RU2 zone however WCC had concerns with both the characterisation of the proposed "hospital" and also its compatibility with the surrounding development.

WCC considered that the development proposed may more appropriately be defined as some form of seniors housing as defined by SEPP (Housing for Seniors or People with a Disability) 2004. The SEPP does not permit seniors housing in the RU2 zone, however, the subject site is considered to "adjoin" land zoned primarily for urban purposes, being IN2 Light Industrial land on the opposite side of Walker Street. As such, a Site Compatibility Certificate would be required to be obtained from the Director General prior to the lodgement of the development application.

The main issues were identified as:

- Definition of hospital;
- Definition of seniors housing;
- Compatibility of both a proposed hospital or seniors housing development with the existing surrounding development; and
- Consideration of application under SEPP (Housing for Seniors or People with a Disability) 2004 and the need for a Site Compatibility Certificate.

A copy of the pre-lodgement minutes appear as ***Annexure "A"***.

b) Department of Planning and the Environment

A meeting with the Department was held on 7 July 2016. Departmental officers advised that they would not indicate support or otherwise for the proposal but would advise on the information to be provided.

Minutes of the meeting were not taken as it was a broader discussion on inputs to the application for the Compatibility Certificate was the key consideration. However, an email from the Department, dated 9 May 2016 ***(Annexure "K"),*** considers some of the matters arising.

A further meeting was held with the Department on 30 July 2018. This application is a consequence of that meeting.

c) Rural Fire Service

A meeting with the RFS was held on 19 January 2017 and minutes appear at ***Annexure "L".***

The significant matters raised were:

- Use of the shed in the north-west corner of the site located with an APZ. The use of the shed by residents is not supported, however, the use for administration is acceptable.
- The use of the existing dwelling, partly within the APZ, could compartmentalised into different uses.
- No significant constraints to the development were identified.

(d) NSW Department of Primary Industries/Water

Advice was sought through the Rienco report relating to the significance of the drainage lines on site. An email response from the Department, dated 30 March 2017, advised:

- DPI Water is in agreement with the assessment of drainage lines on the site and the recommended riparian corridor width.
- Any works within 40m from the top of the bank of the defined channel as depicted in Figure 4 of the report will require referral to DPI Water for assessment and potential issue of a Controlled Activity Approval under the Water Management Act 2000.

A copy of this response appears at **"Annexure E"**

SUMMARY

The application for a Compatibility Certificate needs to consider the natural environment (including known significant environmental values, resources or hazards) and the existing uses and approved uses of the land in the vicinity of the proposed development.

In issuing a Compatibility Certificate, the Director General needs to have been satisfied that

(a) the site of the proposed development is suitable for more intensive development, and

(b) development for the purposes of seniors housing of the kind proposed in the development application is compatible with the surrounding environment having regard (at least) to the criteria specified in Clause 25 (5) (b).

This application provides responses to these criteria and is summarised hereunder:

(i) the natural environment (including known significant environmental, resources or hazards) and the existing uses and approved uses of land in the vicinity of the development

The report makes commentary on the bushfire risk, the existing watercourse and the contamination on site.

The proposal has been discussed with the RFS and its comments are included. The existing and approved uses of land in the vicinity of the site have been provided in some detail.

The subject site and its neighbours to the north and south have been extensively cleared.

Advice has been received from the DPI Water commenting on the status of the drainage lines. A preliminary site contamination assessment has been provided to satisfy the provisions of SEPP 55.

(ii) the impact that the proposed development is likely to have on the uses that, in the opinion of the Director General, are likely to be the future uses of that land

The subject site and its precinct were included in a Commission of Inquiry into 7(d) lands in Helensburgh, Otford and Stanwell Tops. The lands are now included in a draft Planning Proposal, which suggests that the site and the properties immediately to the north and south zoned RU2 Rural Landscape and given recent zoning recommendations are likely to remain so in the foreseeable future.

The application relies on the provisions of the Seniors Living SEPP, and not a rezoning for its advancement.

The report details the surrounding development and gives reasons why it is considered that the proposed development could exist in harmony with its surrounds.

(iii) the services and infrastructure that are or will be available to meet the demands arising from the proposed development (particularly retail, community, medical and transport services having regard to the location and access requirements set out in Clause 25) and any proposed financial arrangements for infrastructure provisions

Advice is provided in relation to sewer availability and water supply. Electricity is available to the site. It is acknowledged that the site is greater than 400 metres from retail, recreational or community services, however, there is sufficient precedent to suggest that this requirement could be considered in the light of service to the site.

The application does highlight the services and recreational facilities within the Helensburgh township, which would be available to residents.

Of particular importance is to note that the development will provide both transport services and a medical practitioner.

(iv) In the case of applications in relation to land that is zoned open space or special uses – the impact that the proposed development is likely to have on the provision of land for open space and special uses in the vicinity of the development

The site is neither zoned for open space or special uses.

(v) without limiting any other criteria, the impact that the bulk, scale, built form and character of the proposed development is likely to have on the existing uses, approved uses and future uses of land in the vicinity of the development

It is a significant consideration that the APZ requirements for the development will limit the extent of the development upon the land.

It is also noted that the edge of the residential development for the Helensburgh township is approximately 300 metres to the north of the site.

The majority of the surrounding development, with the exception of the southern property, is set back a considerable distance from the proposed development. The southern dwelling is some 50 metres south of the adjoining boundary and is considered that future design will protect its amenity.

It is also a relevant consideration that a future seniors living development could meet with the standards outlined in Clause 50 of the SEPP i.e. standards that cannot be used to refuse development for self-contained dwellings.

A constraint to development within Helensburgh identified in the Commission of Inquiry has been the potential of environmental degradation. It is considered that a suitable scheme in relation to water reuse and discharge and mitigation against siltation could accompany a future development application.

The plans, provided by Phil O'Donnell Architects, indicate a proposed FSR of 0.28: 1 and a potential landscape area in excess of 50% of the site area.

Elevations indicate a maximum height of 8 metres, which is contained in limiting areas. Floor plans indicate the extent of the residential amenity.

(vi) if the development may involve the clearing of native vegetation that is the subject to the requirements of Section 12 of the Native Vegetation Act 2003 - the impact that the development is likely to have on the conservation and management of native vegetation

The proposal will not involve in clearing of native vegetation. Further, the Peterson Bushfire report advises that the removal of trees or vegetation is not required to achieve compliance.

In summary, it is considered that the criteria, set out in Clause 25, have been addressed. Although not a specific requirement for assessment, it is required that the ongoing demand for seniors living accommodation, set out in the application, also be carefully considered.

The involvement by the Department in encouraging senior living housing supply is explained in the SGS Review of the Illawarra Housing Market (April 2017).

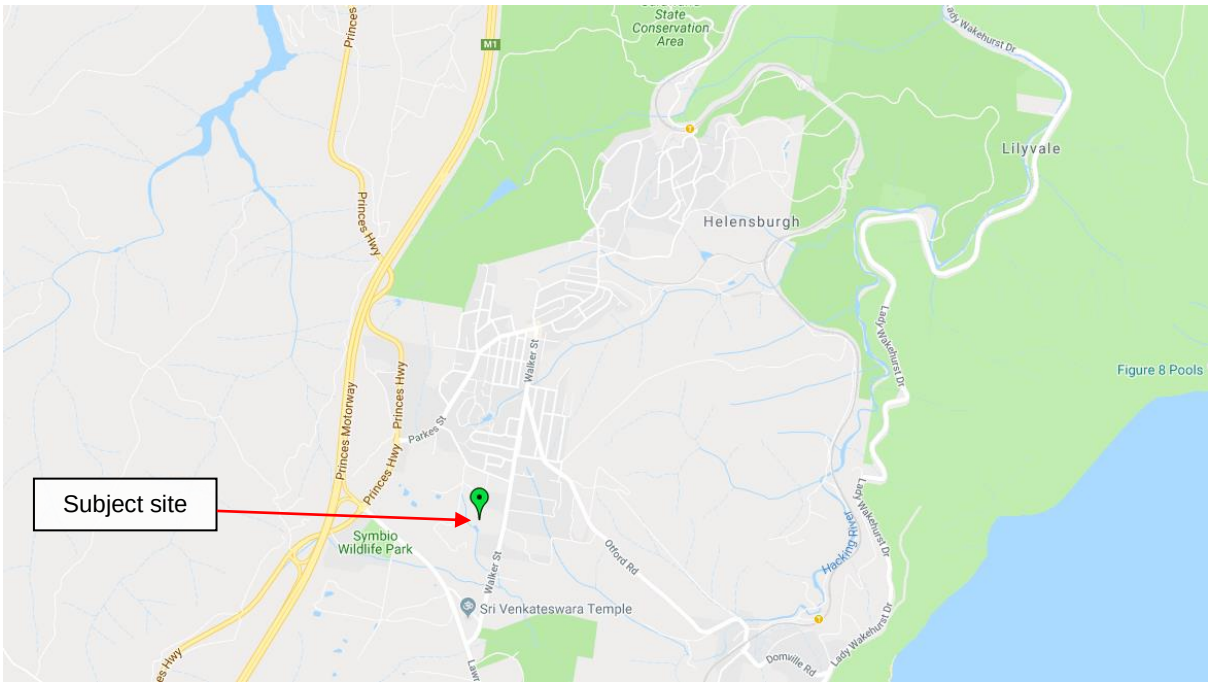
It is considered that this application provides an opportunity to substantially increase the supply and support for the issue of a Compatibility Certificate is now requested.

T Wetherall
Director
TCW Consulting Pty Ltd

Briefing Report -

Site Map


Subject site


Subject site
State Conservation Area
Lilyvale
Helensburgh
Figure 8 Pools
Princes Hwy
Princes Motorway
Walker St
Parkes St
Symbio Wildlife Park
Sri Venkateswara Temple
Orford Rd
Lady Wakehurst Dr
Hacking River
Domville Rd
M1

Briefing Report -

Council Comments December 2018

wollongong
city of innovation

WOLLONGONG CITY COUNCIL
Address 41 Burelli Street Wollongong • **Post** Locked Bag 8821 Wollongong DC NSW 2500
Phone (02) 4227 7111 • **Fax** (02) 4227 7277 • **Email** council@wollongong.nsw.gov.au
Web www.wollongong.nsw.gov.au • ABN 63 139 525 939 - GST Registered

017

Department of Planning & Environment
PO BOX 1226
NEWCASTLE NSW 2300

Your Ref:	SCC_2018_WOLLG_001_00
Our Ref:	Z18/363266
File:	DE-2018/211
Date:	18 December 2018

Dear Sir/Madam

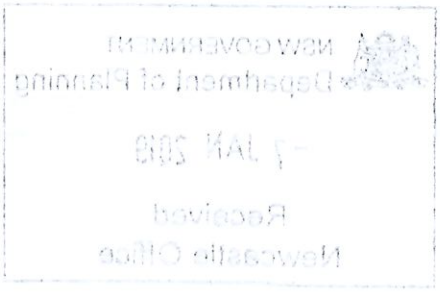
APPLICATION FOR SITE COMPATABILITY CERTIFICATE – 120 WALKER STREET HELENSBURGH

Thank you for the opportunity to respond to the above application for a Site Compatibility Certificate. Council recognises the need for the provision of seniors housing within our Local Government Area, including Helensburgh. However, it is considered at this time that such a proposal could be more appropriately located on residential land with closer proximity to the Helensburgh town centre.

Please find attached Council's comments in relation to the proposal.

Yours faithfully

David Farmer
General Manager
Wollongong City Council
Telephone: (02) 4227 7111


NSW GOVERNMENT
Department of Planning
7 JAN 2019
Received
Newcastle Office

Attachment One

Planning

The land is zoned RU2 Rural Landscape. The proposed use of the land for seniors housing was not envisaged as part of the rezoning of the former 7(d) zone, and the RU2 zoning was applied under Wollongong Local Environmental Plan 2009 in recognition of the on-going agricultural land use.

Council's records indicate that the site has the following development history:

Application Number	Proposed Development	Type of Application	Decision
PL-2016/25	Hospital	Pre Lodgement Application	Completed
DA-2014/828	Use of existing premises as a Jockey Training Establishment with an Indoor Horse Training Arena, Worker and Jockey Self-Contained Cabins, Lunchroom, Service Room (Laundry), Waste Storage Area and Teaching Facility	Development Application	Withdrawn
PC-2002/31380	Proposed Additions To Existing Dwelling	Private Certifier Application --	Approved
PC-2002/1380/A	Modification - amendments to dwelling including extension to kitchen and meals room, relocate laundry and construction of lap pool	Private Certifier Application --	Approved
DA-2002/683/A	Modification To Alterations And Additions To Existing Dwelling And Construction Of Lap Pool	Development Application	Approved
DA-2002/683	Alterations And Additions To Existing Dwelling	Development Application	Approved
CC-2000/791	Dwelling	Construction Certificate Application	Approved
DA-2000/659	Manager S Residence For Equestrian Complex	Development Application	Approved
BA-1998/716	Stables, Jockey Accommodation & Toilets	Building Application	Approved
BA-1997/502	Stables	Building Application	Refused
DA-1997/237	7 Stables And Jockey S Quarters (For 4 Jockeys)	Development Application	Deferred Commencement
BA-1996/2277	Stables	Building Application	Refused
BC-1996/1261	Stables Outdoor Arena - Pound Yard	Building Certificate Application	Approved
BA-1996/911	Indoor Horse Training Arena	Building Application	Approved
BC-1996/647	Workers Cottage	Building Certificate Application	Approved
DA-1996/609	Horse Outdoor Arena Stables & Round Yard	Development Application	Withdrawn
DA-1996/198	Workers Cottage	Development Application	Approved

DA-1996/142	Indoor Horse Training Arena	Development Application	Approved
BA-1995/2443	Storage Shed - DA 754/95	Building Application	Approved
DA-1995/754	Storage Shed	Development Application	Approved
DA-1995/654	Stabled Yards, Training Arena & Yard, Feed Shed & Toilets	Development Application	Withdrawn
RE-1995/66	Demolition	Demolition	Approved
BA-1980/1984	Dwelling & Double Garage	Building Application	Approved

The above approved uses indicate a general consistency with the objectives of the RU2 zone. Redevelopment of the site would result in an inability of the subject site to continue to meet the objectives of the zone.

It is noted that the minimum lot size for the RU2 zoned land including and in the vicinity of the subject site is 39.99ha. Whilst all of these RU2 lots are currently undersized, the proposed redevelopment of the subject site for seniors housing would inhibit opportunities to consolidate land to create appropriately sized lots on which rural and agricultural type development could be carried out. Further, the proposal would effectively create an isolated, undersized rural allotment immediately to the north of the subject site.

The development as presented consists of 193 dwellings, parking for 193 cars plus ancillary buildings. The scale of this development is not considered to be in context with surrounding development which is characterised by single dwellings on rural/environmental allotments. Future residential development of the adjoining sites is restricted by the zoning of the land and the provisions of Clause 4.2A Erection of dwelling houses on land in certain rural and environmental protection zones of Wollongong Local Environmental Plan 2009. As such, it is considered that the character of the area would be unlikely to undergo significant change in the foreseeable future such that the development as proposed would not be in keeping with the character of the street and in harmony with the buildings around it.

Council has the following concerns with the proposal, and considers that the development fails to provide good design, thus not achieving the objectives of the SEPP:

- The proposed use of the existing buildings on site for ancillary and support buildings is considered to be a fragmented and ad hoc design approach. These structures are predominantly rural in nature and as such, have an appearance that is inconsistent with the proposed seniors housing use.
- The location of car parking spaces remote from the dwellings is of concern, particularly as many of the residents will be experiencing mobility issues. The remote location of parking could also result in haphazard unplanned parking as residents try to park closer to their front doors blocking access roads or damaging verges and landscaping.
- The provision of extensive carport areas over parking spaces is not considered to provide a good design outcome. The plans do not clearly indicate if the parking spaces at the rear of the site are covered. It is noted that if the spaces at the rear are proposed as parking for the residents, uncovered parking spaces do not provide a good development outcome.
- The front setback to Walker Street is not supported as this is not consistent with the streetscape, and fails to provide sufficient area for an appropriate landscaping treatment along the Walker Street frontage
- The proposed units are lacking in architectural merit

It is also considered that extensive development of the site is likely to result in ongoing land use conflicts between the surrounding rural/agricultural land uses and the proposed residential land use. As a result, it is possible that the amenity of the future residents of the proposed development will be compromised.

Stormwater/Flooding

Council's records indicate that the site is flood affected and located within an Uncategorised Flood Risk Precinct. Development under the Seniors Living SEPP is categorised as 'Critical Utilities and Uses' as described in Chapter E13 of the Wollongong DCP2009. Schedule 10 of this Chapter identifies Critical Utilities and Uses as an Unsuitable Land Use within the High and Medium Flood Risk Precincts. The application for a Site Compatibility Statement fails to demonstrate compliance with Chapter E13, as

sufficient information has not been provided to demonstrate that the proposed development is located wholly outside the High and Medium Flood Risk Precincts.

The Flood Study extract by Rienco Consulting submitted with the proposal has been reviewed and the following comments are noted:

- There is limited detail included in the information presented with respect to input parameters, flood model extents, contributing catchment, input locations, and so on
- The catchment area utilised in the Guidance for Classification of Watercourse by Reinco Consulting underestimates the contributing catchment area to the site.
- The flood modelling does not consider the PMF flood extent

In light of the above, insufficient information has been provided to identify the extent of flood affectation on the site and demonstrate that proposed development could be undertaken in compliance with Chapters E13 and E14 of the Wollongong DCP2009 and Clause 7.3 of the Wollongong LEP2009.

The following information would be required in order to enable a complete assessment of any development proposed for the site:

- The full flood study report prepared by a suitably qualified civil engineer in accordance with Chapters E13 and E14 of the Wollongong DCP2009. Including details of all input parameters, contributing catchment, flood model extents, input locations, WBNM details, and so on.
- The flood study must identify the existing flood extents and delineate existing flood risk precincts on the site inclusive of the total catchment area contributing to the site.
- The flood study must include a plan showing an overlay of the proposed development layout in relation to the delineated flood risk precinct boundaries.
- The flood study must consider the PMF flood event

Environment

Council has concerns with the possible impacts of the proposed development on the water quality of the perched aquifer underlying the site and Gills Creek. Currently, the existing unlined dams on the property intersect the known perched aquifer in the area. Redevelopment of the site would require these dams to be lined and the development would require design, siting, construction and management to ensure protection of the water quality in the area. Ongoing monitoring of water quality would also be required.

The document titled "*Impact of hydrology and hydrochemistry on the ecological continuum of the Maddens Plains Upland Wetlands*" produced by Dr Iradj Yassini is attached for information purposes as it also relates to the subject area.

It is noted that a limited amount of native vegetation that also includes planted specimens exists on the site. Any proposed seniors living development would need to protect and enhance the native vegetation in the identified riparian corridor area on the site (refer to the Guidance for Classification of Watercourse document prepared by Rienco Consulting dated 1 July 2016).

Attachment Two

Impact of hydrology and hydrochemistry on the ecological continuum of the Maddens Plains Upland Wetlands

1.1 Introduction

Maddens Plain Landscape at the Beginning of the Quaternary Period

At the onset of the Quaternary Period, on the eastern margin of the Sydney sedimentary basin, the massive bedded and cross laminated fluvial deposits of the Hawkesbury Sandstone of Triassic age formed the basement rock of the Woronora Plateau.

In the Late Tertiary period, the surface of the Hawkesbury Sandstone, which was uplifted in the mid-Oligocene period (R.W. Young, 1977, in Ann Young, 1986) was carved with numerous shallow and broad ditches, concavities and troughs of various widths and depths at the head water at the eastern margin and deep gorges and canyons towards the west. The depressions and concavities were flanked by shallow ridges and low elevation sandstone crests and flow the slop of the underlying sandstone beds.

These erosive features on Woronora Plateau were called 'Dells' by Ann Young (1986) who provided an age of 17,000 years BP for the oldest dell. However recent work by Keith et al. (2006) and Tomkins and Humphreys (2006) suggest that the oldest dells were 12,800 years BP and the youngest was 300 years BP.

Accumulation of sand, silt and clay within the dells created an extremely porous media and highly productive unconfined, perched aquifers. These perched aquifers are independent of the natural regional water table underlying Hawkesbury Sandstone (N P Merrick, Metropolitan Coal Project, Groundwater Assessment, 2008).

The high water retention capacity of these aquifers is partly due to the accumulation of large volumes of organic detritus within the sediment and formation of humic rich sandy loam. Continuous discharged from these aquifers in Maddens plain, similar to the rest of the Woronora Plateau **support the base flow to the numerous local creeks, the riparian vegetation and the entire upland swamp ecosystems on the plateau**.

The water table in these perched aquifers is generally high and the depth of the water table fluctuates with slope gradient and rainfall - runoff in the catchment. In periods of extended wet weather, the water table rises to the surface and is mixed with the surface runoff. **The shallowness of the water table in these perched aquifers makes them extremely vulnerable to surface contamination**.

A combination of silica rich substrates and sediments with a high humus content leads to acidification of local soil and the groundwater. Soil pH in Madden Plains often ranges between 3 to 4 (Hazelton and Tille, 1990, SEEC Morse McVey, 2007) and groundwater long-term mean pH value varies from 3.7 to 4.5.

Acidic soil and water in the Maddens Plain dell environment are also caused by oxidation of Marcasite iron sulphides which are present in the unweathered fresh surfaces of the Hawkesbury Sandstone (Steve Short, personal communication 8/07/2009 and Chris Wearing, ANSTO, personal communication, 08/07/09).

In the vadose zone, oxidative reactions caused by aerobic or facultative aerobic iron and sulphur oxidising bacteria such as *Thiobacillus ferroxidans, Thiobacillus thiooxidans* and *Gallionell spp.* bacteria takes place as follows (Ribet et al., 1995).

$FeS2 + 7/2\ H20 + 15/4\ O2 \rightarrow Fe(OH)3 + 4H + \mathbf{2SO4}$

$4FeS2 + H2O + 15\ O2 \rightarrow 2Fe2(SO4)3 + \mathbf{2H2SO4}$

Figure 1- Iron oxidising bacteria forming a thin film on the surface of water at the Outlet of the sedge land drain, near the proposed Lot 1A. Bacteria oxidise the soluble iron (Fe2) into insoluble Fe^3 and precipitate of Iron hydroxide

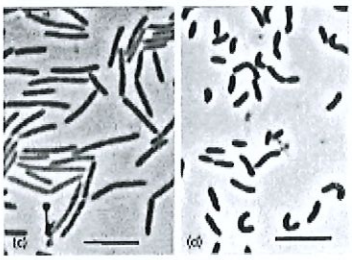


Figure 1a -Scanning Electron micrograph of Iron and sulphur oxidising bacteria

In the upland swamp unconfined aquifer, oxygen is continuously supplied to the groundwater by recharged water or by sedge grasses which pump oxygen into their roots and rhizomes.

Disturbance of the Hawkesbury Sandstone and the local soil would expose the Marcasite to oxidation process and generation of acidic leachate

Progressive invasion of these permanently water logged terrains by hydrophilic and hdyrophytic plants species and their adaptation to the **highly acidic pH and low nutrient conditions** make these swamps a unique environment known as Upland Swamps or Hanging Swamps.

The Upland Swamps/Wetlands host several threaten or endangered plant species (refer to specialist submission on the local fauna and flora). Subsidence caused by coal mining activities in Illawarra is a serious threat to many of these upland swamps. The proposed six hectare size subdivision is another threat to the integrity of water quality of the perched aquifers, the local swamps and creeks.

Subsequent erosion and weathering of the Hawkesbury sandstone in the Holocene period generated the detritus which gradually filled the ditches and concavities on the Woronora Plateau. Carbon dating In the course of transport by stormwater runoff, the weathered detritus were segregated, the clay and silt fraction were deposited along the axes and deeper part of the troughs and ditches, and the medium to coarse sand were deposited in the shallower portion and on the side shoulders of these depositional environment. Accumulation of sand, silt and clay in these concavities created an extremely porous media and formed unconfined, perched aquifers.

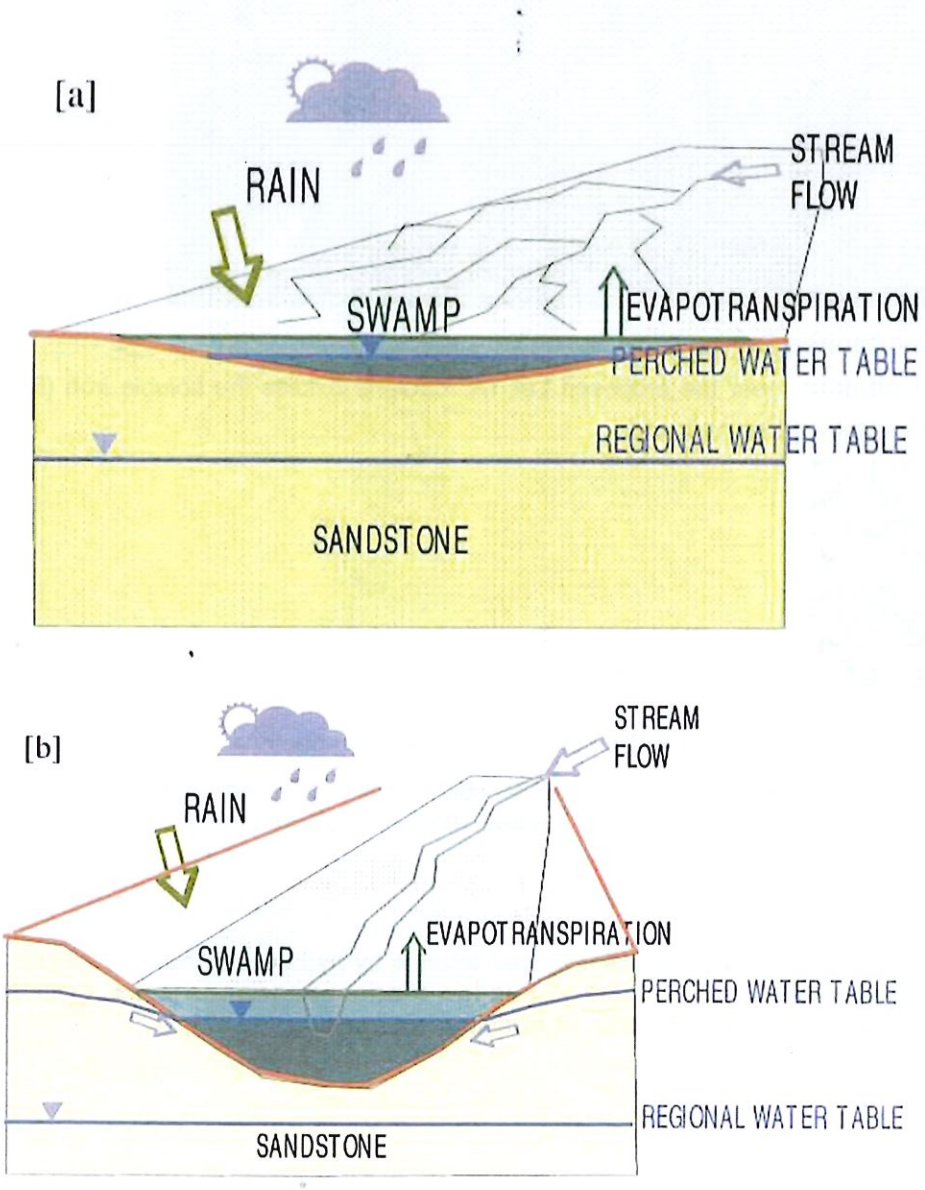


Figure 1 a- b- Schematic drawing showing independence of the perched aquifer water table from the Regional Water Table which is beneath the Hawkesbury Sandstone

(From Metropolitan Hydrological Assessment, 2008)

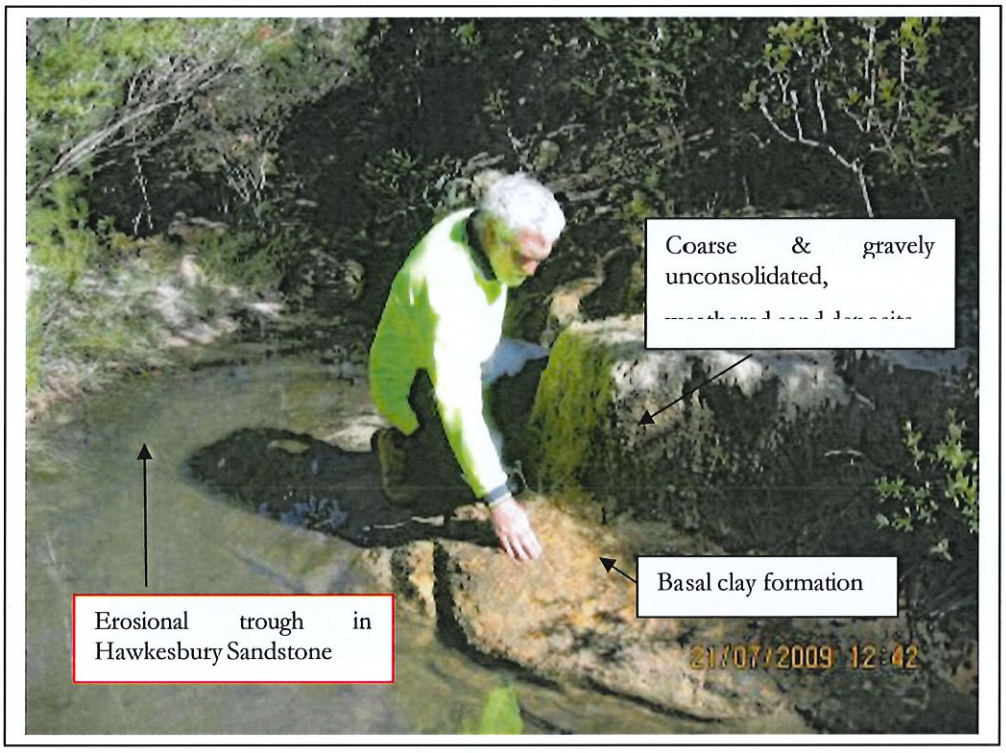
Figure 2 –Shallow longitudinal ditches dogged into the Hawkesbury Sandstone, on the bed of Stony Creek, downstream of the ICC Dam after construction of the dam. These erosive features are similar to the early Holocene period dells on the Woronora Plateau.

Generalised stratigraphical sequence of the perched aquifer in Madden Plains

The Quaternary deposits on Madden Plains include the following sequences:

1. 0.1 to 0.15 m thick organic rich horizon (surface crust) composed of organic detritus, fungus, algae and bacteria.
2. 0.5 to 2.25 m thick medium to fine grained unconsolidated white to pink sand with randomly dispersed well rounded quartz gravel.
3. 0.3 to 0.6 m thick reddish brown, aluminium and iron rich gravel and pebbles size pisolith (Laterite). The pisolithes are resulted from leaching of the weathered Hawkesbury Sandstone under humid and warmer climatic conditions.
4. 0.2 to o.3 meters thick yellow- white Kaolinitic clay with red mottles of iron oxides. This basal clay unit acts as a seal at the bottom of the perched aquifers reservoir.

Figure 3- An erosional through in Hawkesbury sandstone and Quatemary depositional Sequences which form the local perched aquifer



Maddens Plain Perched Aquifer Generalised Stratigraphy

Core: Outcrops, Maddens Plains
Location UTM (AGD 1966): N/A
Elevation (AHD): N/A

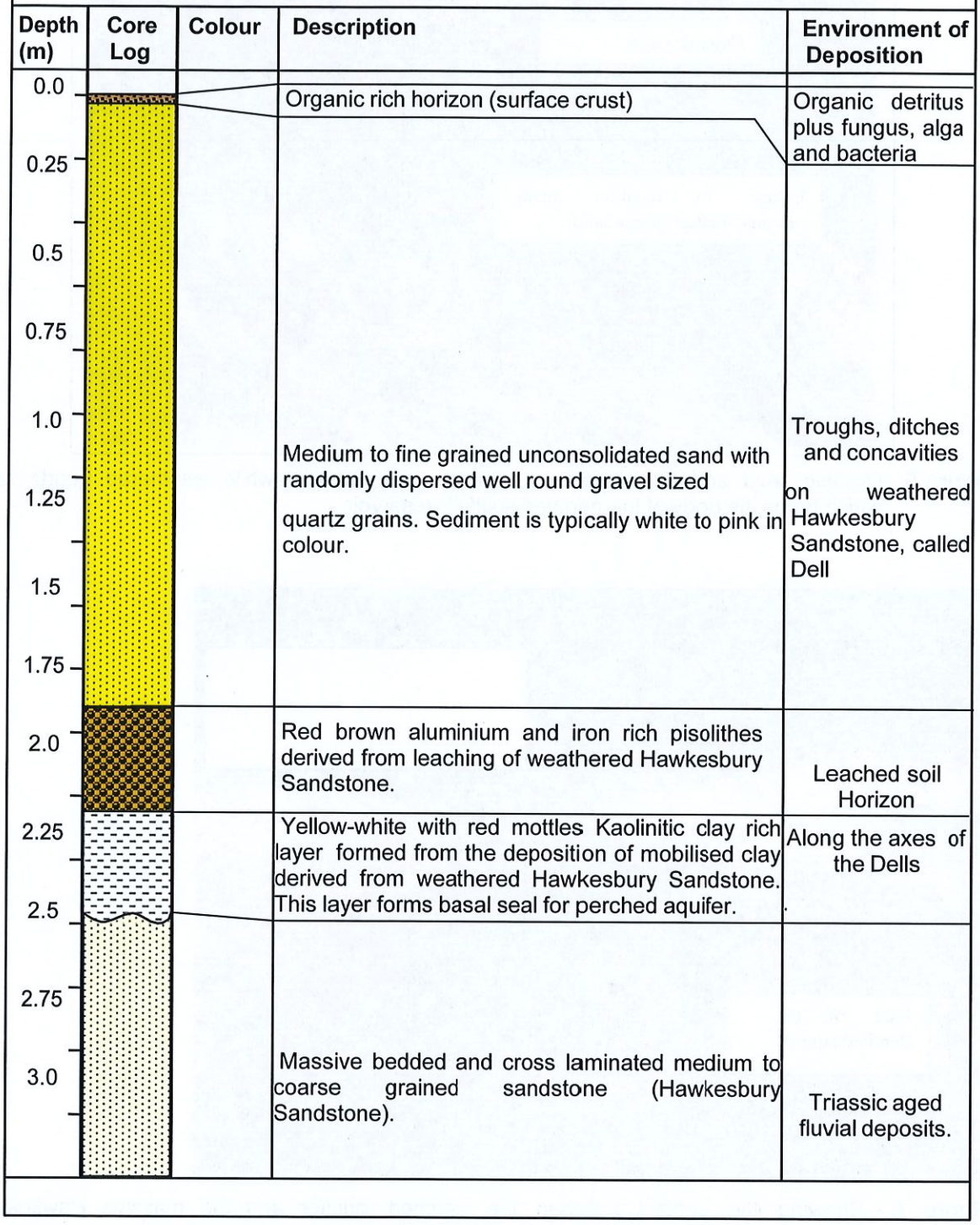


Figure 4- Generalised Quaternary Stratigraphical Sequence in Madden Plain.

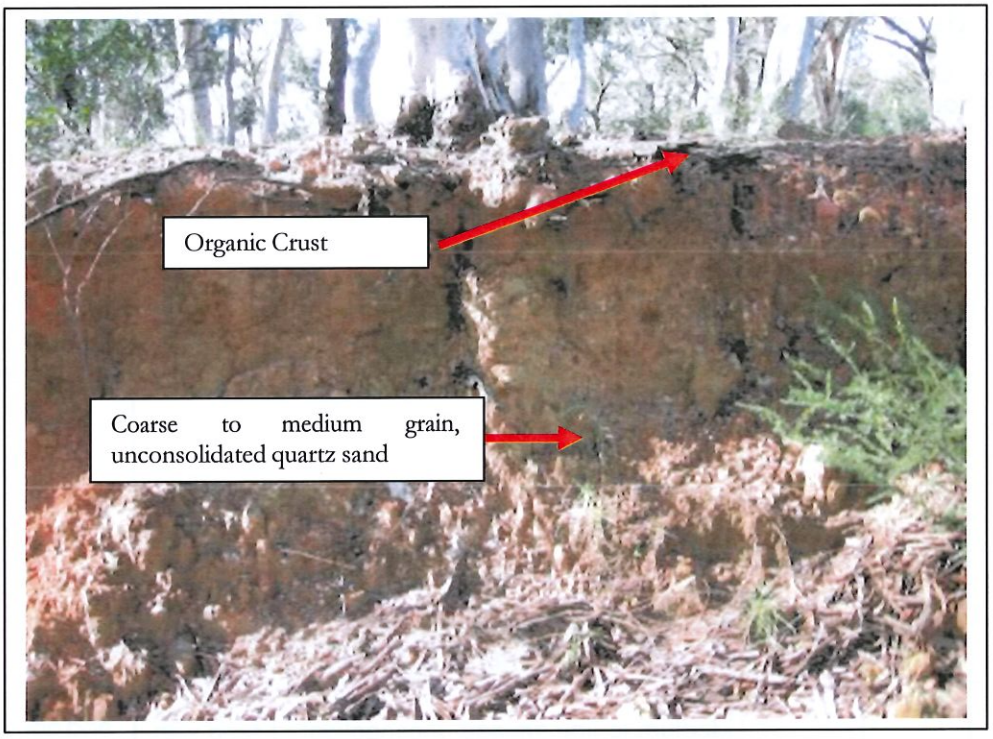


Figure 5- Organic crust and the coarse to medium grain, pinkish white weathered quartz sand which forms the body of the perched aquifers reservoir

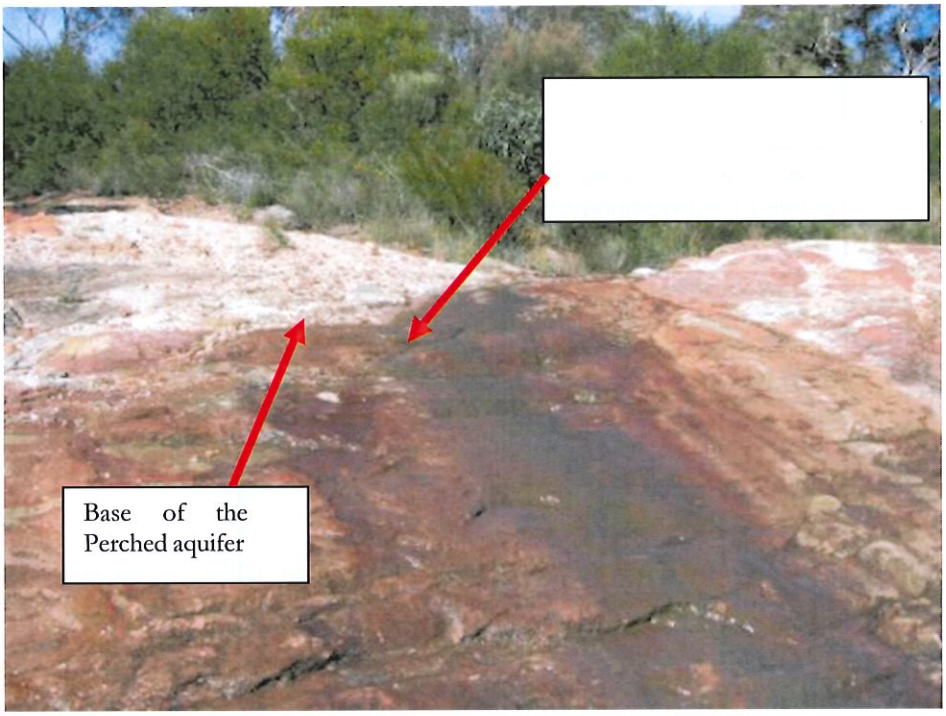


Figure 6 - Showing the contact between the perched aquifer and the massive Hawkesbury Sandstone. Water from the perched aquifer seeping along the contact zone

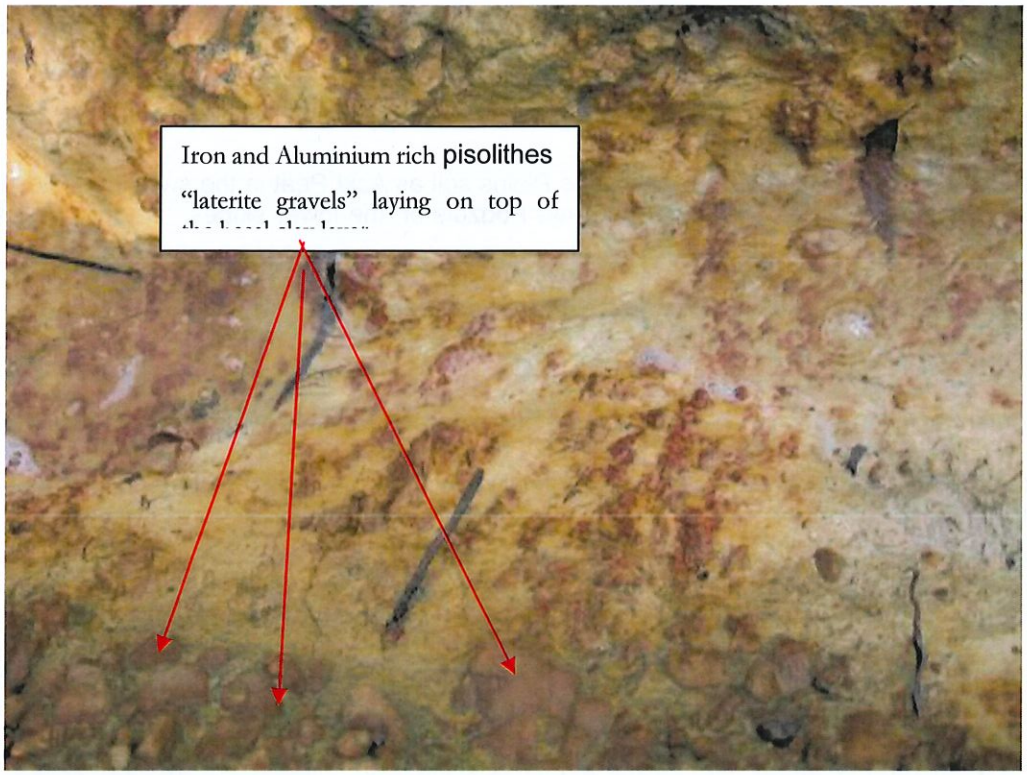


Figure 7 - Showing the yellow- white Kaolinitic clay at the base of the perched aquifer

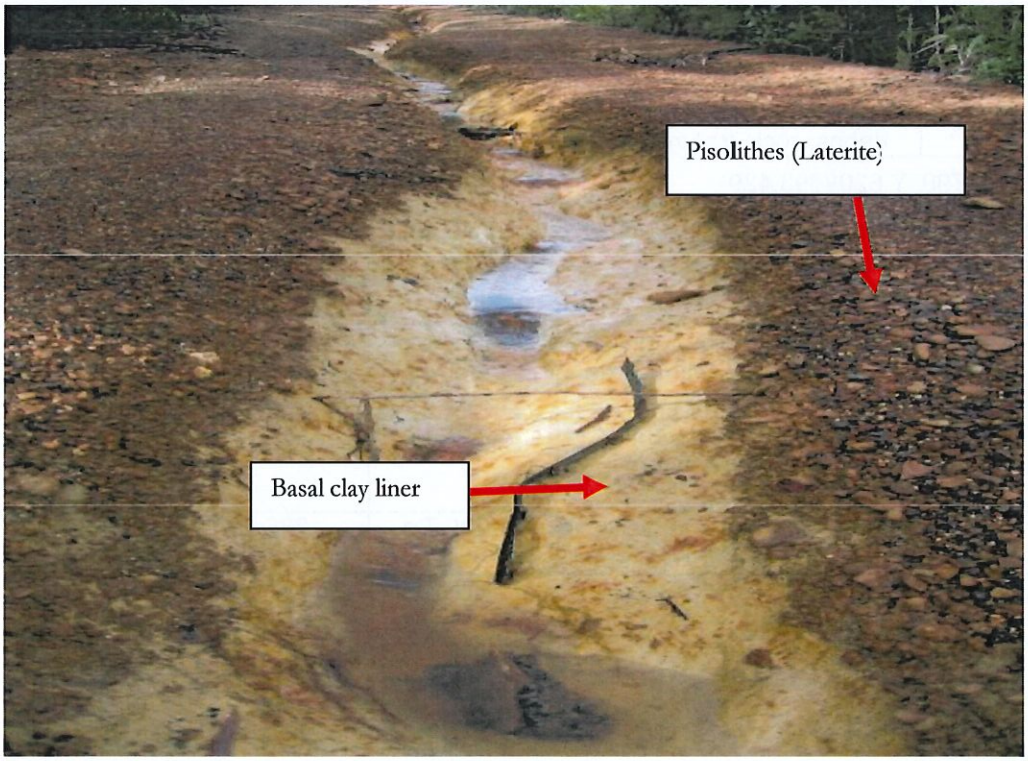


Figure 8 - Longitudinal rill erosion in the basal clay layer and Laterite pisolithes lying on the top of the clay layer. Note erosion of the overlaying unconsolidated sand horizon after construction of the road has exposed the Laterite pisolithes

Water table is shallow and the depth of the water table varies with rainfall in the catchment and the slope of the underlying bed rocks land.

Maddens Plain Soil and Subsoil classification

Hazelton and Tille (1990) have classified the Maddens Plains soil as Acid Peat in the swamps, Gleyed Podzolic soils in the drainage lines, Siliceous Sand and Podzols on the lower slopes, Lateritic Yellow Earth and Lithosol on crests.

Soil and Subsoil moisture content and grain size characteristics

Soil moisture content

Soil moisture content in the three locations investigated varied from 6.92% to 39. 58% on the shallow depth close to the surface at Lot 4 and lot 1A and from16 to 28 % at the depth of 250- 500 mm. Table 2 give description of subsurface sediments and their respective moisture contents at the three auger hole sites.

Table 1- Description of the auger hole samples and their moisture content

Lot 4 (X 311605.0112, Y 6207416.807)

Total depth of the borehole 70 cm, beginning with coarse to medium size gray sand

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
1	0 - 10 cm	Grey sand coarse to medium in size	158.8 g	147.8 g	6.92
2	20 - 25 cm	Grey medium sand with iron hydroxide and humic material	406.4 g	339.8 g	16.58
3	60 - 65 cm	Coarse white to grey sand, with organic debris, rock fragments &	441.3 g	372.3 g	15.63

Lot 3. (X 312759.6799, Y 6209893.429)

Total depth of borehole 60 cm. Beginning of lateritic layer at 46 cm.

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
4	0 - 12 cm	Gravelly - yellow greyish sandy clay, with large rock pieces	531.4 g	489.0 g	7.97
5	50 - 55 cm	Gravelly (lateritic pisolithes) yellow-grey clayey sand	347.1 g	315.7 g	28.8
6	55-70 cm	Gravelly (lateritic pisolithes) sandy clay	290.7 g	266.1 g	8.46

Lot 1A. (X 311918.4234, Y6210636.081)

Total depth of borehole 70 cm. 15 to 20 mm thick organic layer on top.

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
7	0 -12 cm	Organic layer	153.1 g	92.5 g	39.58
8	12 - 22 cm	Grey sand	272.7 g	226.7 g	16.86
9	70 cm	Yellow clayey sand	496.5 g	413.7 g	16.67

Three auger holes to the depth of 800 mm were sunken in the building envelope of the proposed Lot 1A, Lot 3 and Lot 4. Figure 8 shows the location of the auger holes, water samples and photography illustrated in this statement.

Figure 9- Auger hole at the proposed Lot 1A, showing organic crust on the top of weathered unconsolidated sand horizon

Two duplicate soil samples were collected at each auger hole site. Samples were collected at three different intervals based on the changes in soil colour and texture.

One lot of the samples were analysed for moisture content and grain size by Wollongong City Council's NATA accredited Geotechnical laboratory.

The second lot was send to Envirolab analytical laboratory in Chatswood for

pH, EC, Cation Exchange Capacity and P sorption tests.

Major grain size categories of the soil samples from the proposed Lot 1A, Lot 3 and Lot 4 are summarised in table 1 and Appendix...gives details of soil grain size analysis.

It is clear that the coarse fractions are dominant in all three lots and closely correlate with soil poor Cation Exchange Capability and soil P sorption results.

Table 2- Summary of the soil and sub- soil fractional analysis

Location	Fraction ▶1000µm (Gravels)	Fraction 600 µm - 300 µm (Coarse sand)	Fraction 150 µm - >75 µm (Fine sand and silt)	**Total Fraction >75 µm Fine sand to Gravel**	Fraction >75 µm- 13 µm (Silt and Clay)
Lot 4					
0-10cm depth	8%	65%	7%	**79%**	19.2%
60- 65 cm depth	3%	53%	8%	**64%**	13.4%
Lot 3					
0-12cm depth	43%	21%	16%	**80%**	12.5%
55- 70 cm depth	46%	17%	16%	**79%**	18.8%
Lot 1A					
0-12cm depth	10%	27%	38%	**75%**	24%
70 cm depth	2%	18%	17%	**37%**	26.5%

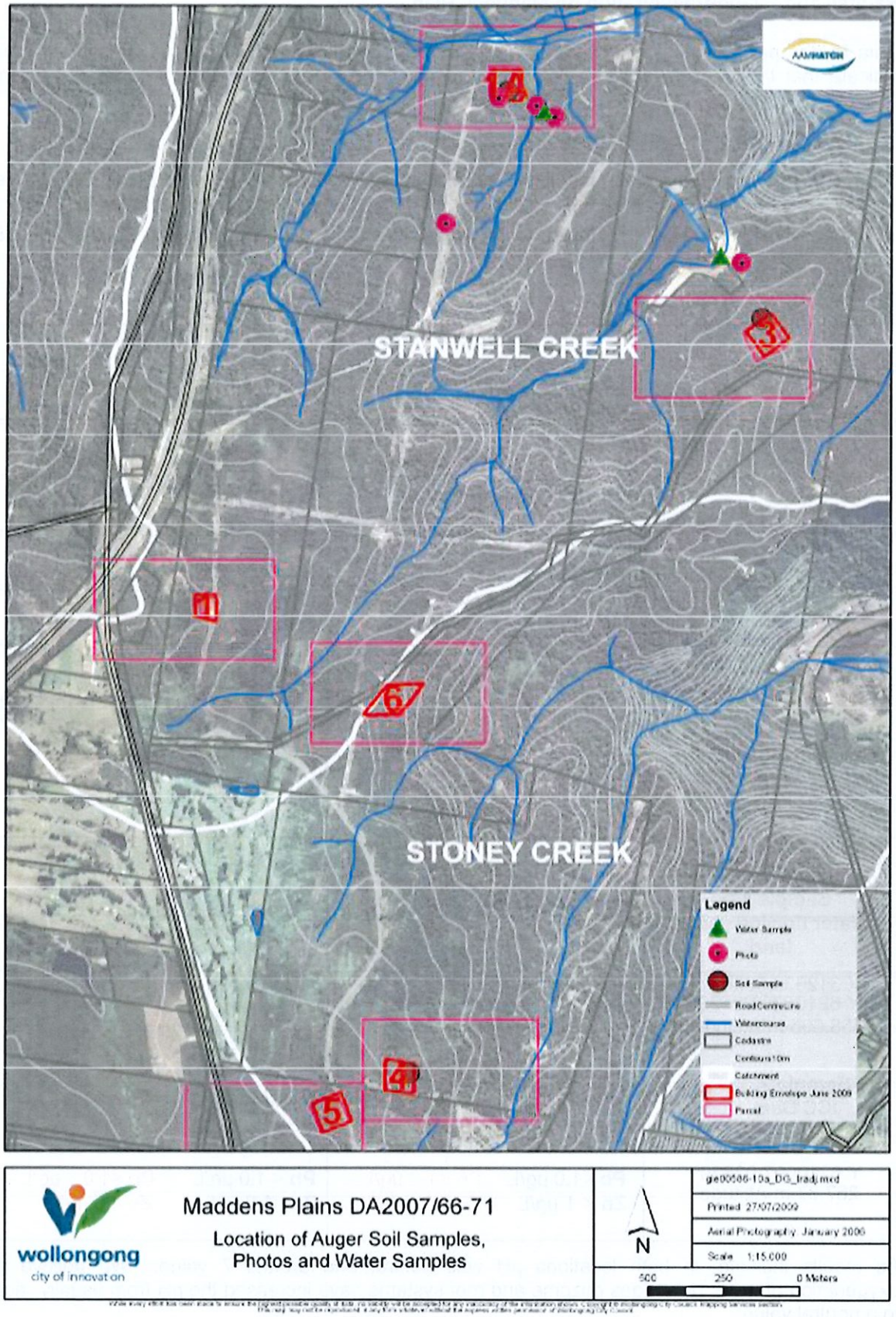


Figure 10- Location of photography, water samples and soil samples

Rainfall and Evapo-transpiration on Maddens Plan

Data for the period 1894 to 2006 from Bureau of Meteorology rain station 68024 at Darkes Forest indicate that the average annual rainfall in Maddens Plain is around 1420 mm and the average annual pan evaporation for Nowra RAN Air station is 1600 mm

Madden plain perched aquifer groundwater quality

On 6 of July 2007 two duplicate samples, one unfiltered and one in situ filtered through 0.45µm Teflon membrane were collected from the outflow of the sedge land (Figure) and from the ICC dam immediately behind the weir. Samples were sent to the Envirolab in Chatswood under the chain of custody for testing.

Table 3 - Analytical results of the water quality samples of July the 6, 2009

Sample Location	Sample 1 0.45um filtered mg/L	Sample 1 unfiltered mg/L	Sample 2 0.45 filtered mg/L	Sample 2 unfiltered mg/L
Sample 1 Water flowing From the sedge land X 312039.962071 Y 6210570.99123 358.695 m Altitude **Sample 2 ICC Dam** X 312622.987669 Y 6210097.92829 267.37 m Altitude	**pH** 7.0 **EC** µS/cm 19 0 **Phosphate** <0.05 mg/L **Total P** <0.05 mg/L **NOx** <0.1 mg/L **NH3** <0.1 mg/L **Al** 20 µg/L **Fe** 780 µg/L **Mn** 100 µg/L **Cu** <1.0 **Pb** <1.0 µg/L **Zn** <1.0 µg/L	**Al** 80 µg/L **Fe** 3300µg/L **Mn** 95 µg/L **Cu** <1.0 µg/L **Pb** <1.0 µg/L **Zn** 4.0 µg/L	**pH** 7.1 **EC** µS/cm 140 **Phosphate** <0.05 mg/L **Total P** <0.05 mg/L **NOx** <0.1 mg/L **NH3** <0.1 mg/L **Al** 230 µg/L **Fe** 320 µg/L **Mn** 10 µg/L **Cu** <1.0 µg/L **Pb** <1.0µg/L **Zn** <1.0 µg/L	**Al** 500 µg/L **Fe** 630 µg/L **Mn** 10 µg/L **Cu** <1.0 µg/L **Pb** <1.0 µg/L **Zn** 3.0 µg/L
Duplicates Sample 1 (x) Water flowing sedge land X 312039.962071 Y 6210570.99123 358.695 m Altitude **Sample 2 (k) ICC Dam** X 312622.987669 Y 6210097.92829 267.37 m Altitude	**pH** 7.2 **EC** µS/cm 200 **Phosphate** <0.05 mg/L **Total P** <0.05 mg/L **NOx** <0.1 mg/L **NH3** < 0.1 mg/L **Al** 20 µg/L **Fe** 860 µg/L **Mn** 90 µg/L **Cu** <1.0 µg/L **Pb** <1.0 µg/L **Zn** < 1 µg/L	<0. 1 <0.1 **Al** 80 µg/L **Fe** 3000 µg/L **Mn** 90 µg/L **Cu** <1.0 µg/L **Pb** <1 µg/L **Zn** 3.0 µg/L	**pH** 7.3 **EC** µS/cm 140 **Phosphate** <0.05 mg/L **Total P** <0.05 mg/L **NOx** <0.1 mg/L **NH3** <0.1 mg/L **Al** 230 µg/L **Fe** 330 µg/L **Mn** <5.0 µg/L **Cu** < 1.0 µg/L **Pb** < 1.0 µg/L **Zn** <1.0 µg/L	**Al** 520 µg/L **Fe** 600 µg/L **Mn** 10 µg/L **Cu** <1.0 µg/L **Pb** <1.0 µg/L **Zn** 4.0 mg/L

As results indicate, in both locations pH was neutral and around 7 values. We believe that oxygenation of water by sedges rhizome and root systems have increased the pH from usually acidic to a neutral value.

It should be noted that concentration of Nitrogen species and phosphorus in both unfiltered and filtered samples was very and no difference between filtered and unfiltered samples were observed.

In Sample 2 which was collected behind ICC dam soluble aluminium was several folds above the ANZECC Water Quality Guidelines 2000, the trigger values for 95% protection of ecosystem in the freshwater where the pH value is above pH> 6.5 is 55 µg/L

Soil Cation Exchange Capacity (CEC)

Cation exchange Capacity (CEC) is a measure of soil's capacity to hold nutrient; specially, positively charged ions such as K, Ca, and Mg. Clay and soil organic matter contribute to cation exchange capacity, thus soils with high CEC will retain nutrient better than low CEC soils.

The following rating for cation exchange capacity is given by P. Hazelton and Brian Murphy (CSIRO, 2007)

Table 4 – Rating of soil based on Cation Exchange Capacity

Rating	CEC cmol(+)/Kg
Very Low	<6
Low	6-12
Moderate	12-25
High	25-40
Very high	>40

As the analytical results of our soil samples from Lot 4, Lot 3 and Lot 1A (table 4) indicate the CEC values for the studied samples varies between <1 and 1.6 (meq/100 g) which is far below the very low CEC category.

This is an indication that the nutrient retention capacity of the soil in the proposed allotments is extremely poor. If one decided to lay the lawn or create garden bed, one need to import soil to cover the existing natural landscape or to apply large quantity of P and N fertilizer to overcome the natural limitation.

Importation of soil also means introducing various types of bacteria, fungi, parasites and seeds to this natural landscape.

The acidic nature of the local soil will quickly mobilise and washes away the applied fertiliser through the perched aquifer . the mobilised fertilisers will end up in the upland swamps and local creek and contribute to nuisance algal growth and weed infestation of the existing landscape..

Table 5 - Analytical results of the Cation Exchange Capacity and P-Sorption of the soil samples from Lot 1A, Lot3 and Lot 4

Depth cm below the surface	Date Sampled	pH	Electrical Conductivity	Total Organic Carbon	NOx as N in soil	Ammonia as N in soil	Phosphorus Sorption	Exchangeable Al*	Exchangeable Ca*	Exchangeable K*	Exchangeable Mg*	Exchangeable Na*	Cation Exchange Capacity*
		1:5 soil:water	1:5 soil:water	(Walkley Black)									
		pH Units	µS/cm	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g
			<1	<1000	<0.5	<0.5	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<1
		LAB.1	LAB.2	LAB.13	LAB.55	LAB.57	Ext-020	Metals.23	Metals.23	Metals.23	Metals.23	Metals.23	Metals.23
0-10	21/07/2009	5.5	62	16000	<0.5	1.1	**4.6**	1	0.51	0.26	0.43	0.37	**1.6 Auger hole 1(Lot 4)**
0-10 dup	21/07/2009	5.4	55	16000	[NT]	0.9	[NT]	1	0.5	0.25	0.42	0.36	**1.5**
20-25	21/07/2009	5.6	11	10000	<0.5	<0.5	**4.7**	0.89	0.14	0.1	0.08	0.13	**<1**
60-65	21/07/2009	5.7	18	8400	<0.5	0.8	**4.3**	1	0.11	0.2	0.12	0.17	**<1**
0-12	21/07/2009	5.8	7	8200	<0.5	0.7	**4.5**	0.81	0.1	0.12	0.08	0.12	**<1 Auger hole 2 (Lot 3)**
50-52	21/07/2009	5.6	10	6200	<0.5	0.9	**4.4**	0.57	0.08	0.12	0.08	0.12	**<1**
58-59	21/07/2009	5.5	12	4700	<0.5	0.6	**4.4**	0.37	0.06	0.12	0.08	0.11	**<1**
0-25	21/07/2009	4.6	64	63000	<0.5	3.8	**4.8**	3.6	1.7	0.33	1.1	0.36	**3.4 Auger hole 3 (lot 1A)**
20-22	21/07/2009	5.8	10	7800	<0.5	<0.5	**5.1**	1.1	0.16	0.14	0.3	0.14	**<1**
80	21/07/2009	5.3	18	3900	<0.5	<0.5	**6.1**	1.1	0.09	0.13	0.22	0.13	**<1**

P-Sorption Capability:

Soil phosphorus retention capability is measurable when a sample of soil is shaken with 1000 mg P/ L and the percentage of P retained

The method originated from the need to differentiate between soils exhibiting high and low P retention

There is a clear relation between soil pH and soil P sorption capability. The lowest P sorption occurs in acidic soil and highest sorption in alkaline environment. As table 5 shows in Maddens Plain soil acidic pH which generally fluctuate between 4.5 and 5.5 is sever limitation for Phosphorus retention.

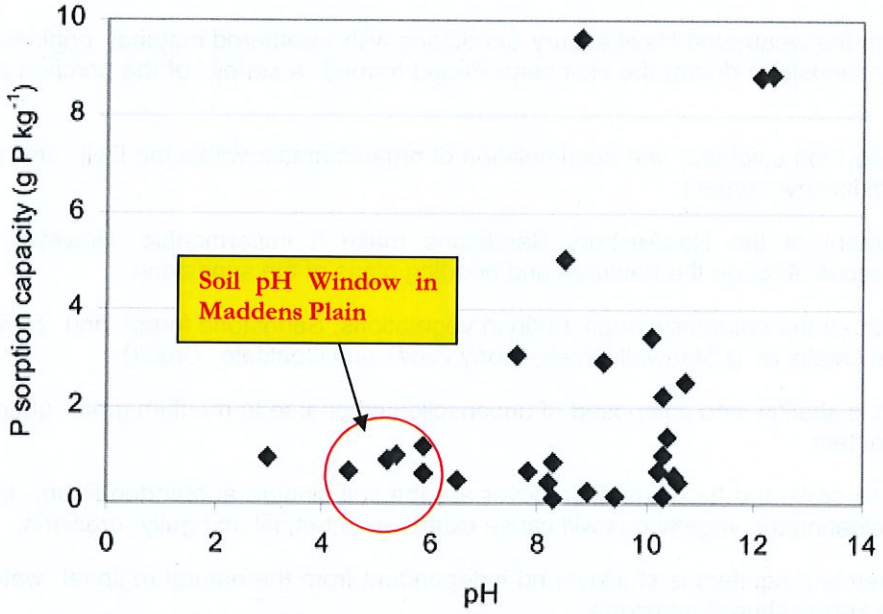


Figure 11- Relationship between the P sorption capacity and pH

Based on soil phosphorus retention capability five classes of soil are identified: very low < 10%, low 10-30%, medium 30-60%, high 60-90% and very high >90%. Soil in Maddens Plan fall within the <10 % category in relation to phosphorous retention.

Low P sorption capability and very low cation exchange capability make the

Analysis of soil samples from Illawarra Ridge Golf Resort (Conceptual Water Quality Management Plan, SEEC Morse McVey, 2008) indicated that the Maddens Plains soils have very low Cation Exchange Capacity. As table… shows, the phosphorus sorption capacity is particularly very low.

Soil horizon	P sorp. (mg/Kg)	P sorp. index
Upper weather sand horizon	3.32- 5.25	2.6- 3.6
Lower weathered Sand horizon	4.63- 4.76	3.3- 3.4

If soil absorption capacity is below 2000 mg/Kg, that means the soil would be unable to immobilise the excess P. If the future owners of the proposed lots decided to laid turf in their property, as the local soil is poor in phosphorous and the soil P retention capacity is limited, to maintain a healthy lawn they need to apply larger quantities of fertiliser. If the rate of P fertiliser application in a normal sandy loam is approximately 500- 700 Kg / hectare, they must apply something around 1300 Kg/hectare. As the soil is porous, acidic and with little clay content majority of the applied fertilizers would be quickly washed away and through the groundwater aquifer discharged into the adjacent wetlands and Creeks.

Increase in P or N in these low nutrient regulated upland swamps and creeks will encourage nuisance algal growth and infestation of exotic species.

Maintenance of the lawn and ornamentation plants often requires application of pesticide and fungicides, in this land of

Impact of fertilizers on native flora and weed infestation of the site Impact of pesticides and herbicide of Aquatic Ecosystems

Conclusions

- By Quaternary period the Paleo-surface of Hawkesbury sandstone was carved with erosional throughs, gullies, ditches and concavities of various shapes, lengths and depths. These erosional features are called "Dell"
- Infilling of the dells on the weathered Hawkesbury Sandstone with weathered material originated from parents Hawkesbury sandstone during the Holocene Period formed a series of the perched aquifers on Maddens Plain.
- Oxidation of Marcasite (iron sulphide) and accumulation of organic matter within the Dell environment created a strongly acidic environment.
- Clay and silica cement of the Hawkesbury Sandstone make it impermeable. However, lateral movement of water occurs through the fractures and bedding plans of the sandstone.
- Perched aquifers support the upland swamps, riparian vegetations, Sandstone forest and provide the base flow to the local creeks (e. g Stanwell Creek, Stony Creek and Coaldale Creek)
- Soil in Madden Plain is shallow and composed of unconsolidated coarse to medium grain quartz sand with very little clay content.
- A thin layer of organic crust and the vegetation cover are the soil binders at Madden Plain, breaking the organic crust or clearing the vegetations will cause extensive sheet, rill and gully erosions.
- Water table of the perched aquifers is shallow and independent from the natural regional water table which is beneath the Hawkesbury Sandstone.
- Shallow water table of the Maddens Plain perched Aquifers makes them vulnerable to surface contamination.
- Soil in Maddens Plain is poor in nutrient and the perched aquifers Phosphorus and nitrogen contents is also very low
- Soil CEC data from 9 auger holes soil samples at Lot 1A, Lot 3 and Lot 4 as well as soil CEC results from nearby Illawarra Ridge Golf Resort soil indicate that the soil P sorption capacity is very low. If fertilizers are applied to this soil, they will be quickly washed away by groundwater.
- Strong acidity of groundwater is responsible for iron and aluminium mobilisation.

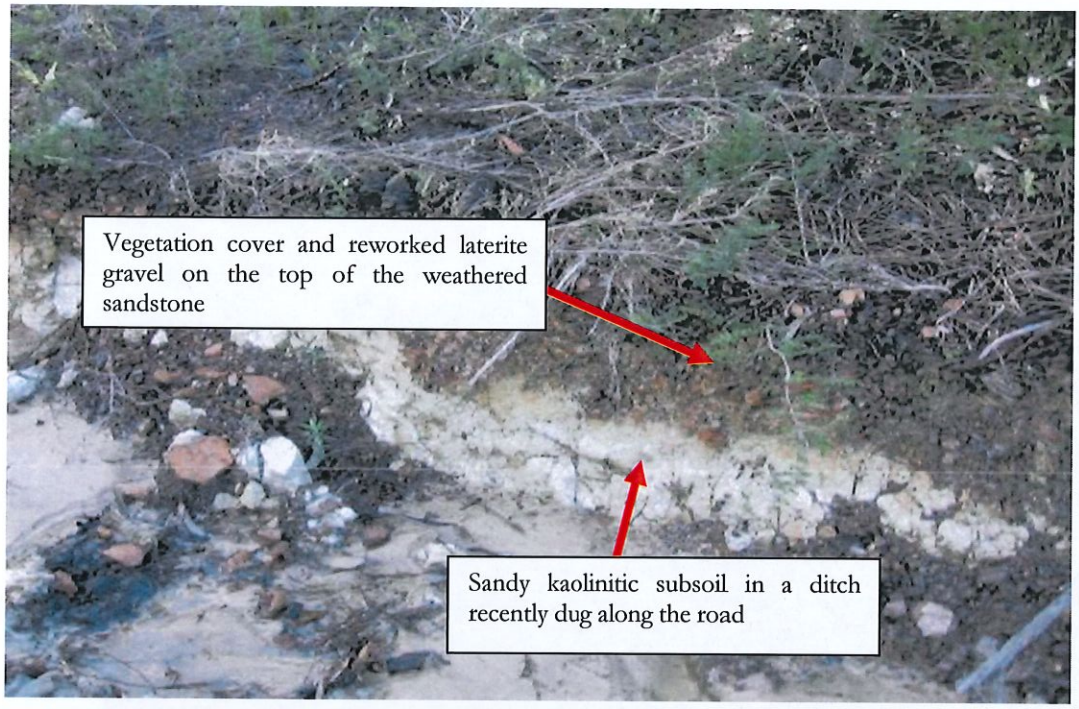


Figure 12– Soil and subsoil horizons in a recently excavated ditch along the road

Figure 13- Gully erosion within the coal wash layer used for road construction on the road

Figure 14- Close up picture of erosion pathway along the road shoulder, where coalwash was used.

Figure 15- Freshly deposited sediment in the drainage line along the recently upgraded road

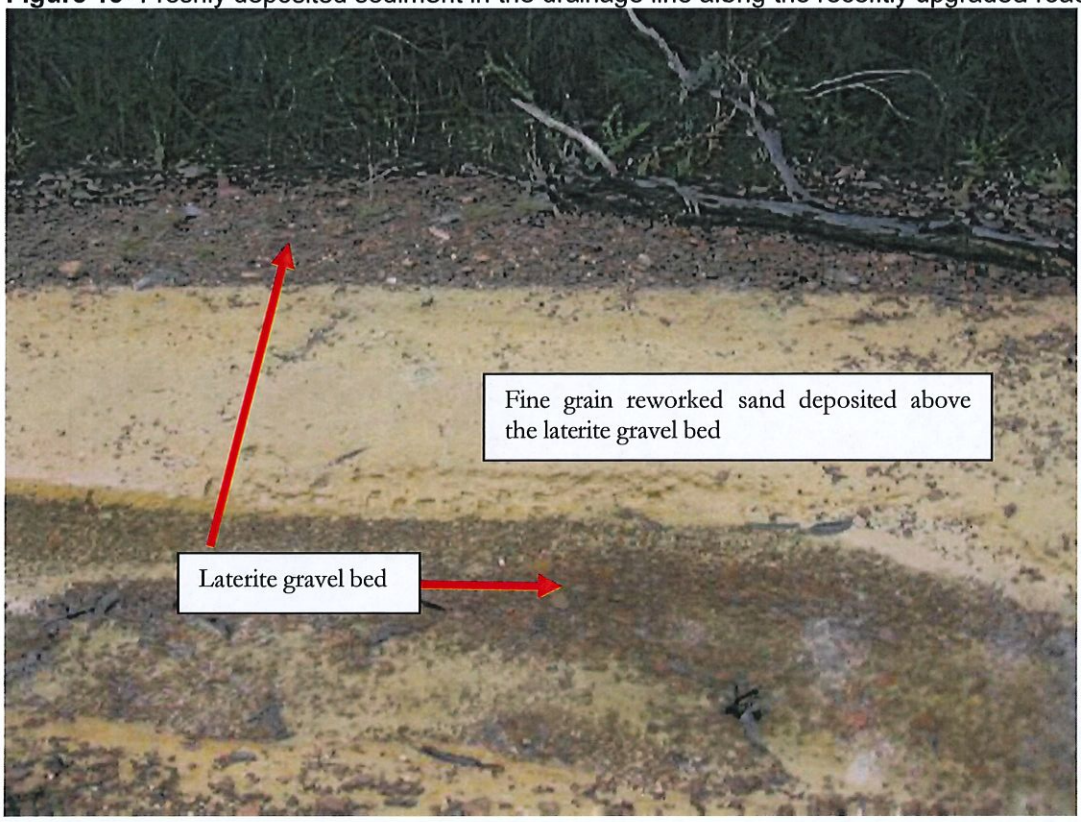


Figure 16- Deposition of the recently reworked fine sand on the top of pisolithes layer

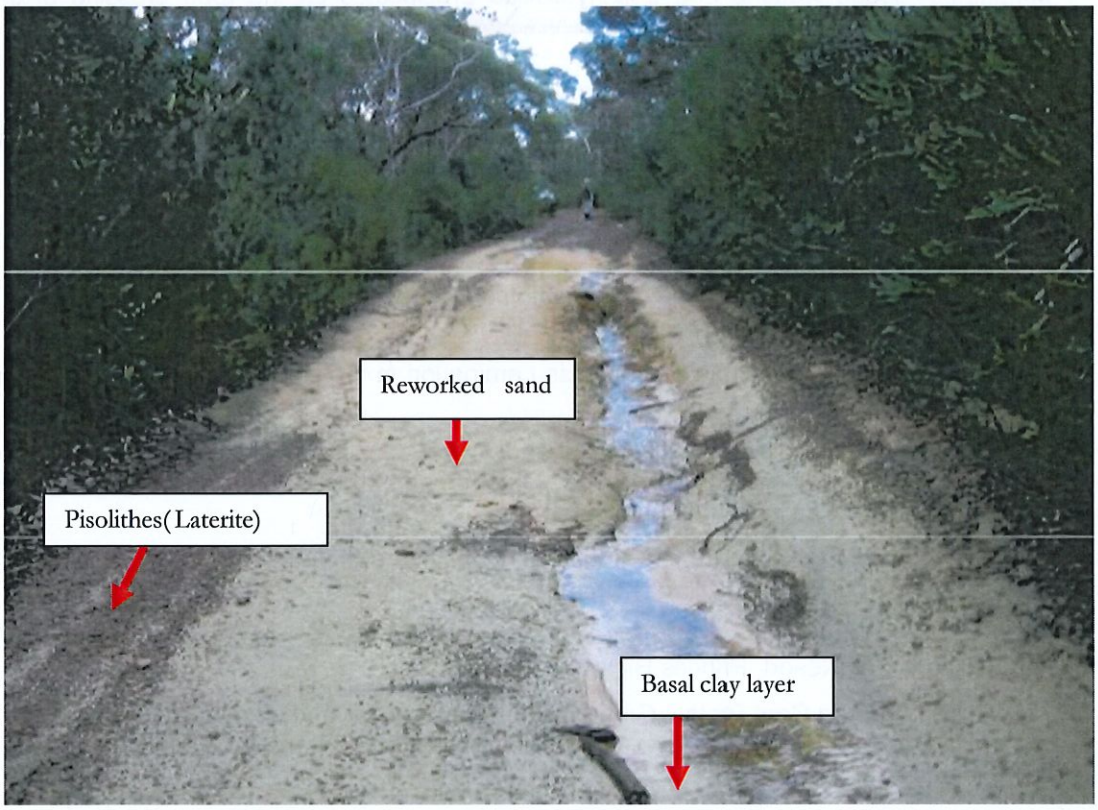


Figure 17- Rill erosion along the axes of the road showing pisolithes layer, overlaying weathered sand and a basal clay horizon. Perched Aquifer, groundwater hydrochemistry

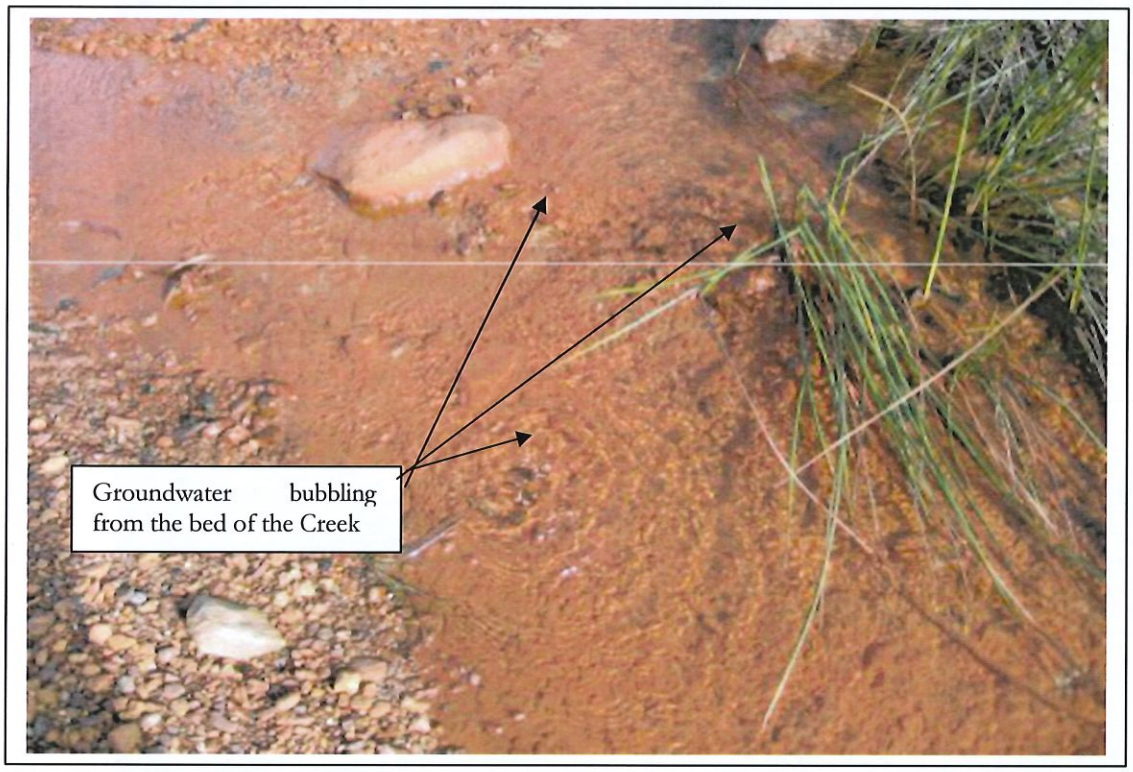


Figure 15- Groundwater discharges from the *Leptocarpus tenax Schoenus bervifolius Schoenus paludosis* dominated sedge wetland and Iron hydroxide precipitates on the road crossing of the sedge wetland

References

Young Ann - 1983- Upland swamps-dells- on Woronora Plateau, near Wollongong, New South Wales. University of Wollongong, 1983

Hazelton P.A. and P.J. Tille 1990- Soil Landscapes of the Wollongong-Port Hacking 1:100 000 Sheet, Soil Conservation of NSW.

Read, H.W. and A.C. Cook, 1970- Note on Coal Containing Marcasite Plant Petrifactions, Yarrunga Creek Sydney Basin, New South Wales The Royal Society of NSW.

Read H. W. and A.C. Cook, 1973- Ripple –Drift Cross-Lamination in the Hawkesbury Sandston, New South Wales. Royal Society of NSW

Chafer, Chris J. 2007- Wildfire Catchement Health and Water Quality: a review of knowledge derived from research undertaken in Sydney Water Supply Catchement 2002-2007. Catchment Operation and Major Project Division, Sydney Catchment Authority, Penrith.

Ecological impact of Longwall Mining In the Southern Coalfield of NSW- A review. Scientific Services Section, Department of Environment and Climate Change.

Andrew Macleod 2007- For SEEC Morse McVey. Conceptual Water Quality Management Plan For proposed Illawarra Ridge, Golf Resort, Princes Highway Darkes Forest.

Merrick N.P. 2008- Metropolitan Coal Project Groundwater Assessment, A Hydrological Assessment is Support of Metropolitan Colliery Longwalls 20 to 44 Environmental Assessment, for Helensburgh Coal Pty Ltd, PO Box 402, Helensburgh NSW 2508.

Keith David, S. Rodoreda., L. Holman L and J. Lemmon- 2006- Monitoring Changes in Upland Swamps in Sydney's Water Catchments: the roles of fire and rain. Sydney Catchment Authority Special Area Strategic Management Research and Data Program.

Yassini, Iradj, 1995- Geotechnical and Groundwater Quality Assessment of the proposed Builders Refuse Tip, Lot 2, Halls Road, Helensburgh. Wollongong City Council, Reference Library LR 363.728 YAS.

Yassini, Iradj, 2004- Pulsative discharge of dissolved metals from copper slag emplacements into the Windang Unconfined Sandy Aquifer adjacent to Lake Illawarra. Wetlands (Australia) Vol.21, No 2, pp 253-273

Yassini, Iradj, Daniel Robson 2006 Nitrogen Sources and species in the unconfined Sandy Aquifer of the Windang Peninsula, Illawarra Coast of New South Wales. September 2006 River Symposium, Brisbane, Australia.

Briefing Report -

Council Comments March 2020

wollongong
city of innovation

WOLLONGONG CITY COUNCIL

Address 41 Burelli Street Wollongong • **Post** Locked Bag 8821 Wollongong DC NSW 2500
Phone (02) 4227 7111 • **Fax** (02) 4227 7277 • **Email** council@wollongong.nsw.gov.au
Web www.wollongong.nsw.gov.au • ABN 63 139 525 939 - GST Registered

Ms Sarah Lees
Director, Southern Region
Department of Planning, Industry and Environment
PO Box 5475
WOLLONGONG NSW 2520

Your Ref: SCC_2018_WOLLG_001_00
Our Ref: Z20/39283e: DE-2018/211
Date: 10 March 2019

Dear Ms Lees SARAH

RESPONSE TO ADDITIONAL INFORMATION FOR REQUEST FOR SITE COMPATABILITY CERTIFICATE SELF CARE SENIORS HOUSING AT NO 120 WALKER STREET HELENSBURGH

Thank you for providing Council with the opportunity to review the additional information provided in relation to the above request for a Site Compatibility Certificate. Council's position remains generally unchanged from the correspondence provided to the Department on 11 December 2018, a copy of which can be found at Attachment 2.

Whilst Council recognises the need for the provision of seniors' housing throughout the Local Government Area, it is considered that a location closer to the Helensburgh town centre would provide better outcomes for the occupants and the wider community.

Comments in relation to the matters raised in the additional information provided by the proponent are attached.

Yours faithfully

Greg Doyle
General Manager
Wollongong City Council
Telephone: (02) 4227 7111

Attachment 1 – Comments in relation to additional information forwarded to Council on 5 February 2020

Planning

Council would like to reiterate that the proposed use of the land for residential purposes was not envisaged by the *Review of former 7(d) lands at Helensburgh, Otford and Stanwell Tops*, being the strategic document for lands surrounding R2 zoned land in Helensburgh.

The use of the land for self care seniors' housing, enabled by a Site Compatibility Certificate (SCC), would be tantamount to a rezoning of the land without the rigor of a Planning Proposal and its associated community exhibition process. This is of concern to Council given both the inconsistency of the proposal with the abovementioned strategic document, and the general level of public interest in land use matters in the locality.

Council's previous planning comments detailed in our correspondence dated 11 December 2018 in relation to the request for a Site Compatibility Statement remain relevant and Council requests the Department's consideration of those comments in their assessment of the request for a SCC.

The following additional comments are provided in response to the proponent's additional information:

- The majority of the perimeter of the subject site adjoins land zoned E3 Environmental Management, RU2 Rural Landscape and SP1 Cemetery, none of which are considered to be land used primarily for urban purposes;
- The development consent that exists on the adjoining property Lot 1 DP 319310 for a caravan park, whilst physically commenced, would require a significant amount of construction work and land clearing to enable its completion. It is unclear that the necessary statutory approvals to support the caravan park would be able to be obtained under the current legislative requirements;
- The SCC submission fails to clearly demonstrate that the proposal satisfies the requirements of Clause 26 of the State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 (SEPP), such that compliant access is achievable to facilities and services.

Stormwater/Flooding

The Detailed Flood Study dated 16 December 2019 and prepared by Rienco Consulting indicates that the site is located within a Medium Flood Risk Precinct. Based on the requirements of Chapter E13 of the Wollongong Development Control Plan 2009 (WDCP 2009) it is noted that the development type is considered a 'critical utility'. WDCP 2009 identifies that critical utilities are not considered to be a suitable land use within a medium flood risk precinct. In this regard, Council considers that the proposed use of the site for seniors' housing does not give due regard to the potential risk to human life and damage to property arising from the natural flood hazard to which the site is subject.

Additionally, the flooding impacts may also directly influence the built form outcome across the site. There is the possibility that a place, or places of refuge would be required for the residents on site and reliable access for pedestrians or vehicles may be required from each building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF level. If required, this may result in additional fill on site, increased two storey development across the site, and significant changes to the configuration of the buildings to ensure resident safety. A higher and more consolidated development on the site would exacerbate Council's concerns raised in relation to character of the area in our previous response to the Department.

Environment

Council's Environment comments provided in the correspondence dated 11 December 2018 remain relevant to the proposal. Council requests the Department's consideration of those comments in their assessment of the request for a SCC.

In response to the proponent's submission of additional information, Council would like to reaffirm its concerns in relation to the environmental sensitivity of the site and any development proposed thereon.

The existing unlined dams on the property intersect the known perched aquifer in the area. *The Impact of Hydrology and Hydrochemistry on the Ecological Continuum of the Maddens Plains Upland Wetlands* document prepared by Dr Iradj Yassini (former Council Environmental Scientist) has concluded the perched aquifers are extremely vulnerable to surface contamination. The carparks, roads, lawns and gardens of the proposed seniors living development would be potential sources of water pollution and the proposed seniors' living development would need to be designed, sited, constructed and managed to protect the water quality of the perched aquifer and Gills Creek. Ongoing monitoring of water quality prior to water leaving the site would also be required for any future development.

Existing Infrastructure

Council is aware that the wastewater system servicing the subject site was delivered as part of Priority Sewerage Program between Stanwell Tops and Helensburgh, and therefore may not have the capacity to service the proposed development. Further, the implications of an extension to the sewerage system have not been fully explored in the application, particularly any resultant need for the further system upgrades in the downstream wastewater system.

Attachment Two – Council response dated 11 December 2018 to application for Site Compatibility Certificate

WOLLONGONG CITY COUNCIL

Address [redacted] • Post [redacted]
Phone [redacted] • Fax [redacted] • Email [redacted]
Web [redacted]

017

Department of Planning & Environment
PO BOX 1226
NEWCASTLE NSW 2300

Your Ref: SCC_2018_WOLLG_001_00
Our Ref: Z18/363266
File: DE-2018/211
Date: 18 December 2018

Dear Sir/Madam

APPLICATION FOR SITE COMPATABILITY CERTIFICATE – 120 WALKER STREET HELENSBURGH

Thank you for the opportunity to respond to the above application for a Site Compatibility Certificate. Council recognises the need for the provision of seniors housing within our Local Government Area, including Helensburgh. However, it is considered at this time that such a proposal could be more appropriately located on residential land with closer proximity to the Helensburgh town centre.

Please find attached Council's comments in relation to the proposal.

Yours faithfully

David Farmer
General Manager
Wollongong City Council
Telephone: (02) 4227 7111

Attachment One

Planning

The land is zoned RU2 Rural Landscape. The proposed use of the land for seniors housing was not envisaged as part of the rezoning of the former 7(d) zone, and the RU2 zoning was applied under Wollongong Local Environmental Plan 2009 in recognition of the on-going agricultural land use.

Council's records indicate that the site has the following development history:

Application Number	Proposed Development	Type of Application	Decision
PL-2016/25	Hospital	Pre Lodgement Application	Completed
DA-2014/828	Use of existing premises as a Jockey Training Establishment with an Indoor Horse Training Arena, Worker and Jockey Self-Contained Cabins, Lunchroom, Service Room (Laundry), Waste Storage Area and Teaching Facility	Development Application	Withdrawn
PC-2002/31380	Proposed Additions To Existing Dwelling	Private Certifier Application --	Approved
PC-2002/1380/A	Modification - amendments to dwelling including extension to kitchen and meals room, relocate laundry and construction of lap pool	Private Certifier Application --	Approved
DA-2002/683/A	Modification To Alterations And Additions To Existing Dwelling And Construction Of Lap Pool	Development Application	Approved
DA-2002/683	Alterations And Additions To Existing Dwelling	Development Application	Approved
CC-2000/791	Dwelling	Construction Certificate Application	Approved
DA-2000/659	Manager S Residence For Equestrian Complex	Development Application	Approved
BA-1998/716	Stables, Jockey Accommodation & Toilets	Building Application	Approved
BA-1997/502	Stables	Building Application	Refused
DA-1997/237	7 Stables And Jockey S Quarters (For 4 Jockeys)	Development Application	Deferred Commencement
BA-1996/2277	Stables	Building Application	Refused
BC-1996/1261	Stables Outdoor Arena - Pound Yard	Building Certificate Application	Approved
BA-1996/911	Indoor Horse Training Arena	Building Application	Approved
BC-1996/647	Workers Cottage	Building Certificate Application	Approved
DA-1996/609	Horse Outdoor Arena Stables & Round Yard	Development Application	Withdrawn
DA-1996/198	Workers Cottage	Development Application	Approved

DA-1996/142	Indoor Horse Training Arena	Development Application	Approved
BA-1995/2443	Storage Shed - DA 754/95	Building Application	Approved
DA-1995/754	Storage Shed	Development Application	Approved
DA-1995/654	Stabled Yards, Training Arena & Yard, Feed Shed & Toilets	Development Application	Withdrawn
RE-1995/66	Demolition	Demolition	Approved
BA-1980/1984	Dwelling & Double Garage	Building Application	Approved

The above approved uses indicate a general consistency with the objectives of the RU2 zone. Redevelopment of the site would result in an inability of the subject site to continue to meet the objectives of the zone.

It is noted that the minimum lot size for the RU2 zoned land including and in the vicinity of the subject site is 39.99ha. Whilst all of these RU2 lots are currently undersized, the proposed redevelopment of the subject site for seniors housing would inhibit opportunities to consolidate land to create appropriately sized lots on which rural and agricultural type development could be carried out. Further, the proposal would effectively create an isolated, undersized rural allotment immediately to the north of the subject site.

The development as presented consists of 193 dwellings, parking for 193 cars plus ancillary buildings. The scale of this development is not considered to be in context with surrounding development which is characterised by single dwellings on rural/environmental allotments. Future residential development of the adjoining sites is restricted by the zoning of the land and the provisions of Clause 4.2A Erection of dwelling houses on land in certain rural and environmental protection zones of Wollongong Local Environmental Plan 2009. As such, it is considered that the character of the area would be unlikely to undergo significant change in the foreseeable future such that the development as proposed would not be in keeping with the character of the street and in harmony with the buildings around it.

Council has the following concerns with the proposal, and considers that the development fails to provide good design, thus not achieving the objectives of the SEPP:

- The proposed use of the existing buildings on site for ancillary and support buildings is considered to be a fragmented and ad hoc design approach. These structures are predominantly rural in nature and as such, have an appearance that is inconsistent with the proposed seniors housing use.
- The location of car parking spaces remote from the dwellings is of concern, particularly as many of the residents will be experiencing mobility issues. The remote location of parking could also result in haphazard unplanned parking as residents try to park closer to their front doors blocking access roads or damaging verges and landscaping.
- The provision of extensive carport areas over parking spaces is not considered to provide a good design outcome. The plans do not clearly indicate if the parking spaces at the rear of the site are covered. It is noted that if the spaces at the rear are proposed as parking for the residents, uncovered parking spaces do not provide a good development outcome.
- The front setback to Walker Street is not supported as this is not consistent with the streetscape, and fails to provide sufficient area for an appropriate landscaping treatment along the Walker Street frontage
- The proposed units are lacking in architectural merit

It is also considered that extensive development of the site is likely to result in ongoing land use conflicts between the surrounding rural/agricultural land uses and the proposed residential land use. As a result, it is possible that the amenity of the future residents of the proposed development will be compromised.

Stormwater/Flooding

Council's records indicate that the site is flood affected and located within an Uncategorised Flood Risk Precinct. Development under the Seniors Living SEPP is categorised as 'Critical Utilities and Uses' as described in Chapter E13 of the Wollongong DCP2009. Schedule 10 of this Chapter identifies Critical Utilities and Uses as an Unsuitable Land Use within the High and Medium Flood Risk Precincts. The application for a Site Compatibility Statement fails to demonstrate compliance with Chapter E13, as

sufficient information has not been provided to demonstrate that the proposed development is located wholly outside the High and Medium Flood Risk Precincts.

The Flood Study extract by Rienco Consulting submitted with the proposal has been reviewed and the following comments are noted:

- There is limited detail included in the information presented with respect to input parameters, flood model extents, contributing catchment, input locations, and so on
- The catchment area utilised in the Guidance for Classification of Watercourse by Reinco Consulting underestimates the contributing catchment area to the site.
- The flood modelling does not consider the PMF flood extent

In light of the above, insufficient information has been provided to identify the extent of flood affectation on the site and demonstrate that proposed development could be undertaken in compliance with Chapters E13 and E14 of the Wollongong DCP2009 and Clause 7.3 of the Wollongong LEP2009.

The following information would be required in order to enable a complete assessment of any development proposed for the site:

- The full flood study report prepared by a suitably qualified civil engineer in accordance with Chapters E13 and E14 of the Wollongong DCP2009. Including details of all input parameters, contributing catchment, flood model extents, input locations, WBNM details, and so on.
- The flood study must identify the existing flood extents and delineate existing flood risk precincts on the site inclusive of the total catchment area contributing to the site.
- The flood study must include a plan showing an overlay of the proposed development layout in relation to the delineated flood risk precinct boundaries.
- The flood study must consider the PMF flood event

Environment

Council has concerns with the possible impacts of the proposed development on the water quality of the perched aquifer underlying the site and Gills Creek. Currently, the existing unlined dams on the property intersect the known perched aquifer in the area. Redevelopment of the site would require these dams to be lined and the development would require design, siting, construction and management to ensure protection of the water quality in the area. Ongoing monitoring of water quality would also be required.

The document titled "*Impact of hydrology and hydrochemistry on the ecological continuum of the Maddens Plains Upland Wetlands*" produced by Dr Iradj Yassini is attached for information purposes as it also relates to the subject area.

It is noted that a limited amount of native vegetation that also includes planted specimens exists on the site. Any proposed seniors living development would need to protect and enhance the native vegetation in the identified riparian corridor area on the site (refer to the Guidance for Classification of Watercourse document prepared by Rienco Consulting dated 1 July 2016).

Attachment Two

Impact of hydrology and hydrochemistry on the ecological continuum of the Maddens Plains Upland Wetlands

1.1 Introduction

Maddens Plain Landscape at the Beginning of the Quaternary Period

At the onset of the Quaternary Period, on the eastern margin of the Sydney sedimentary basin, the massive bedded and cross laminated fluvial deposits of the Hawkesbury Sandstone of Triassic age formed the basement rock of the Woronora Plateau.

In the Late Tertiary period, the surface of the Hawkesbury Sandstone, which was uplifted in the mid-Oligocene period (R.W. Young, 1977, in Ann Young, 1986) was carved with numerous shallow and broad ditches, concavities and troughs of various widths and depths at the head water at the eastern margin and deep gorges and canyons towards the west. The depressions and concavities were flanked by shallow ridges and low elevation sandstone crests and flow the slop of the underlying sandstone beds.

These erosive features on Woronora Plateau were called 'Dells' by Ann Young (1986) who provided an age of 17,000 years BP for the oldest dell. However recent work by Keith et al. (2006) and Tomkins and Humphreys (2006) suggest that the oldest dells were 12,800 years BP and the youngest was 300 years BP.

Accumulation of sand, silt and clay within the dells created an extremely porous media and highly productive unconfined, perched aquifers. These perched aquifers are independent of the natural regional water table underlying Hawkesbury Sandstone (N P Merrick, Metropolitan Coal Project, Groundwater Assessment, 2008).

The high water retention capacity of these aquifers is partly due to the accumulation of large volumes of organic detritus within the sediment and formation of humic rich sandy loam. Continuous discharged from these aquifers in Maddens plain, similar to the rest of the Woronora Plateau **support the base flow to the numerous local creeks, the riparian vegetation and the entire upland swamp ecosystems on the plateau**.

The water table in these perched aquifers is generally high and the depth of the water table fluctuates with slope gradient and rainfall - runoff in the catchment. In periods of extended wet weather, the water table rises to the surface and is mixed with the surface runoff. The shallowness of the water table in these perched aquifers makes them extremely vulnerable to surface contamination.

A combination of silica rich substrates and sediments with a high humus content leads to acidification of local soil and the groundwater. Soil pH in Madden Plains often ranges between 3 to 4 (Hazelton and Tille, 1990, SEEC Morse McVey, 2007) and groundwater long-term mean pH value varies from 3.7 to 4.5.

Acidic soil and water in the Maddens Plain dell environment are also caused by oxidation of Marcasite iron sulphides which are present in the unweathered fresh surfaces of the Hawkesbury Sandstone (Steve Short, personal communication 8/07/2009 and Chris Wearing, ANSTO, personal communication, 08/07/09).

In the vadose zone, oxidative reactions caused by aerobic or facultative aerobic iron and sulphur oxidising bacteria such as *Thiobacillus ferroxidans, Thiobacillus thiooxidans* and *Gallionell spp.* bacteria takes place as follows (Ribet et al., 1995).

$FeS2 + 7/2\ H20 + 15/4\ O2 \rightarrow Fe(OH)3 + 4H + \mathbf{2SO4}$

$4FeS2 + H2O + 15\ O2 \rightarrow 2Fe2(SO4)3 + \mathbf{2H2SO4}$

Figure 1- Iron oxidising bacteria forming a thin film on the surface of water at the Outlet of the sedge land drain, near the proposed Lot 1A. Bacteria oxidise the soluble iron (Fe2) into insoluble Fe^3 and precipitate of Iron hydroxide

Figure 1a -Scanning Electron micrograph of Iron and sulphur oxidising bacteria

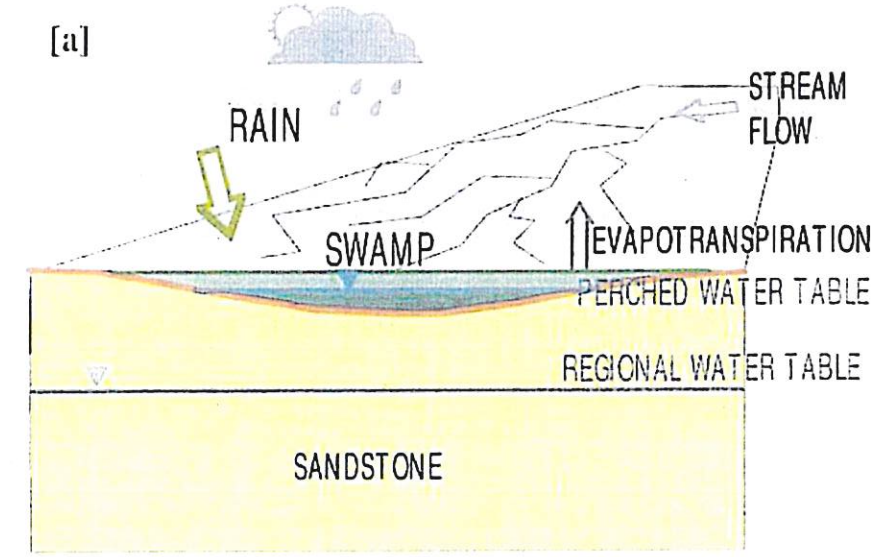
In the upland swamp unconfined aquifer, oxygen is continuously supplied to the groundwater by recharged water or by sedge grasses which pump oxygen into their roots and rhizomes.

Disturbance of the Hawkesbury Sandstone and the local soil would expose the Marcasite to oxidation process and generation of acidic leachate

Progressive invasion of these permanently water logged terrains by hydrophilic and hdyrophytic plants species and their adaptation to the **highly acidic pH and low nutrient conditions** make these swamps a unique environment known as Upland Swamps or Hanging Swamps.

The Upland Swamps/Wetlands host several threaten or endangered plant species (refer to specialist submission on the local fauna and flora). Subsidence caused by coal mining activities in Illawarra is a serious threat to many of these upland swamps. The proposed six hectare size subdivision is another threat to the integrity of water quality of the perched aquifers, the local swamps and creeks.

Subsequent erosion and weathering of the Hawkesbury sandstone in the Holocene period generated the detritus which gradually filled the ditches and concavities on the Woronora Plateau. Carbon dating In the course of transport by stormwater runoff, the weathered detritus were segregated, the clay and silt fraction were deposited along the axes and deeper part of the troughs and ditches, and the medium to coarse sand were deposited in the shallower portion and on the side shoulders of these depositional environment. Accumulation of sand, silt and clay in these concavities created an extremely porous media and formed unconfined, perched aquifers.



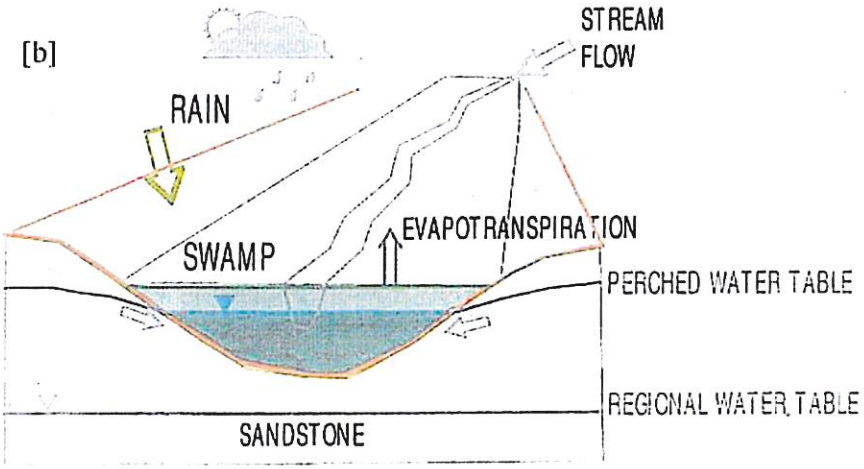


Figure 1 a- b- Schematic drawing showing independence of the perched aquifer water table from the Regional Water Table which is beneath the Hawkesbury Sandstone

(From Metropolitan Hydrological Assessment, 2008)

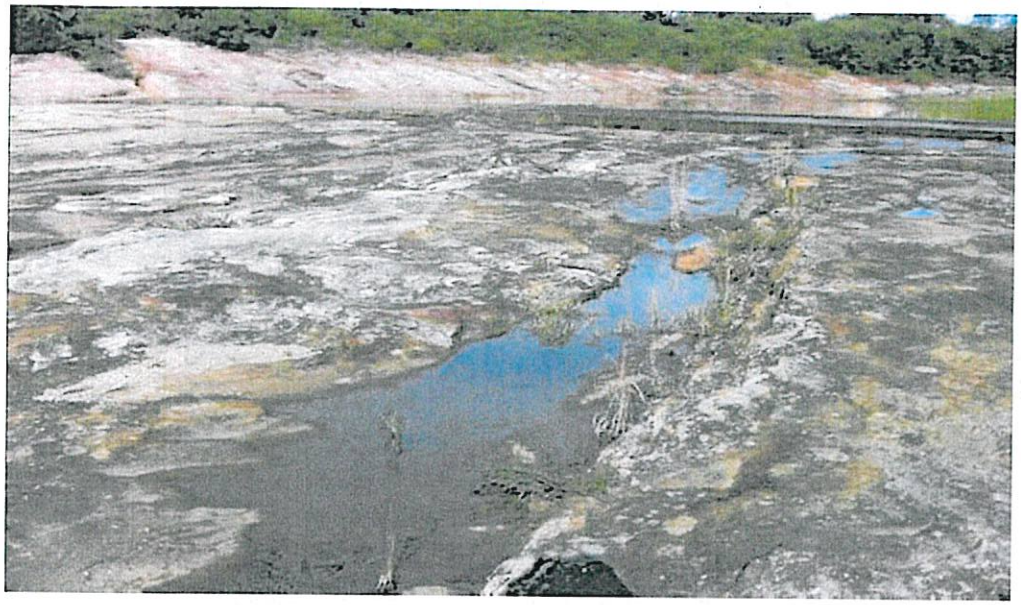


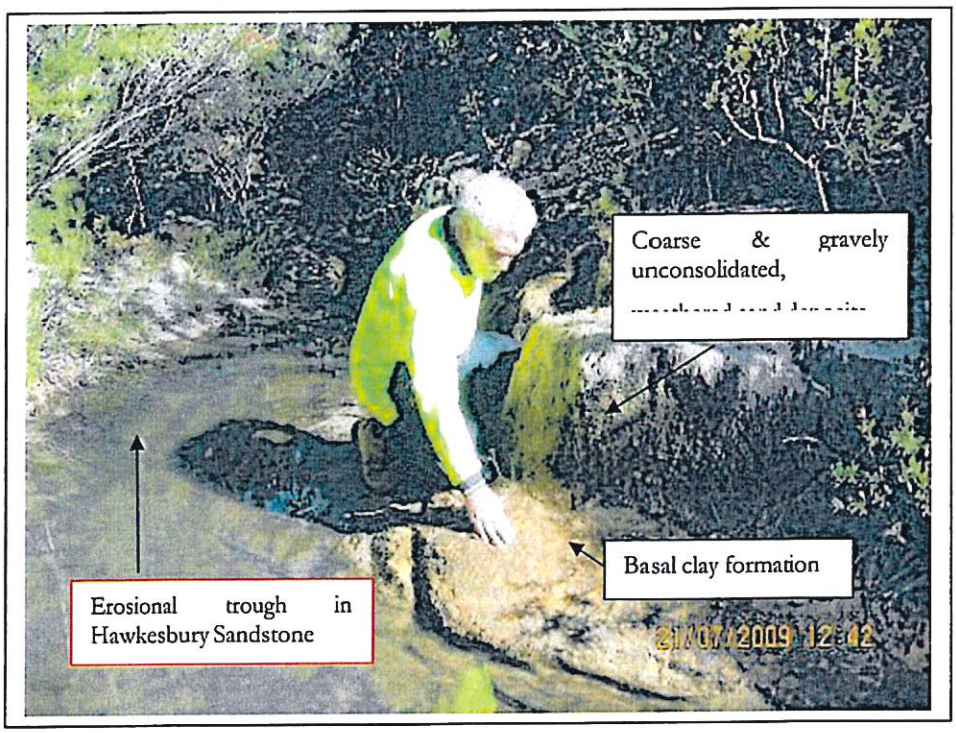
Figure 2 –Shallow longitudinal ditches dogged into the Hawkesbury Sandstone, on the bed of Stony Creek, downstream of the ICC Dam after construction of the dam. These erosive features are similar to the early Holocene period dells on the Woronora Plateau.

Generalised stratigraphical sequence of the perched aquifer in Madden Plains

The Quaternary deposits on Madden Plains include the following sequences:

1. 0.1 to 0.15 m thick organic rich horizon (surface crust) composed of organic detritus, fungus, algae and bacteria.
2. 0.5 to 2.25 m thick medium to fine grained unconsolidated white to pink sand with randomly dispersed well rounded quartz gravel.
3. 0.3 to 0.6 m thick reddish brown, aluminium and iron rich gravel and pebbles size pisolith (Laterite). The pisolithes are resulted from leaching of the weathered Hawkesbury Sandstone under humid and warmer climatic conditions.
4. 0.2 to o.3 meters thick yellow- white Kaolinitic clay with red mottles of iron oxides. This basal clay unit acts as a seal at the bottom of the perched aquifers reservoir.

Figure 3- An erosional through in Hawkesbury sandstone and Quatemary depositional Sequences which form the local perched aquifer



Maddens Plain Perched Aquifer Generalised Stratigraphy

Core: Outcrops, Maddens Plains
Location UTM (AGD 1966): N/A
Elevation (AHD): N/A

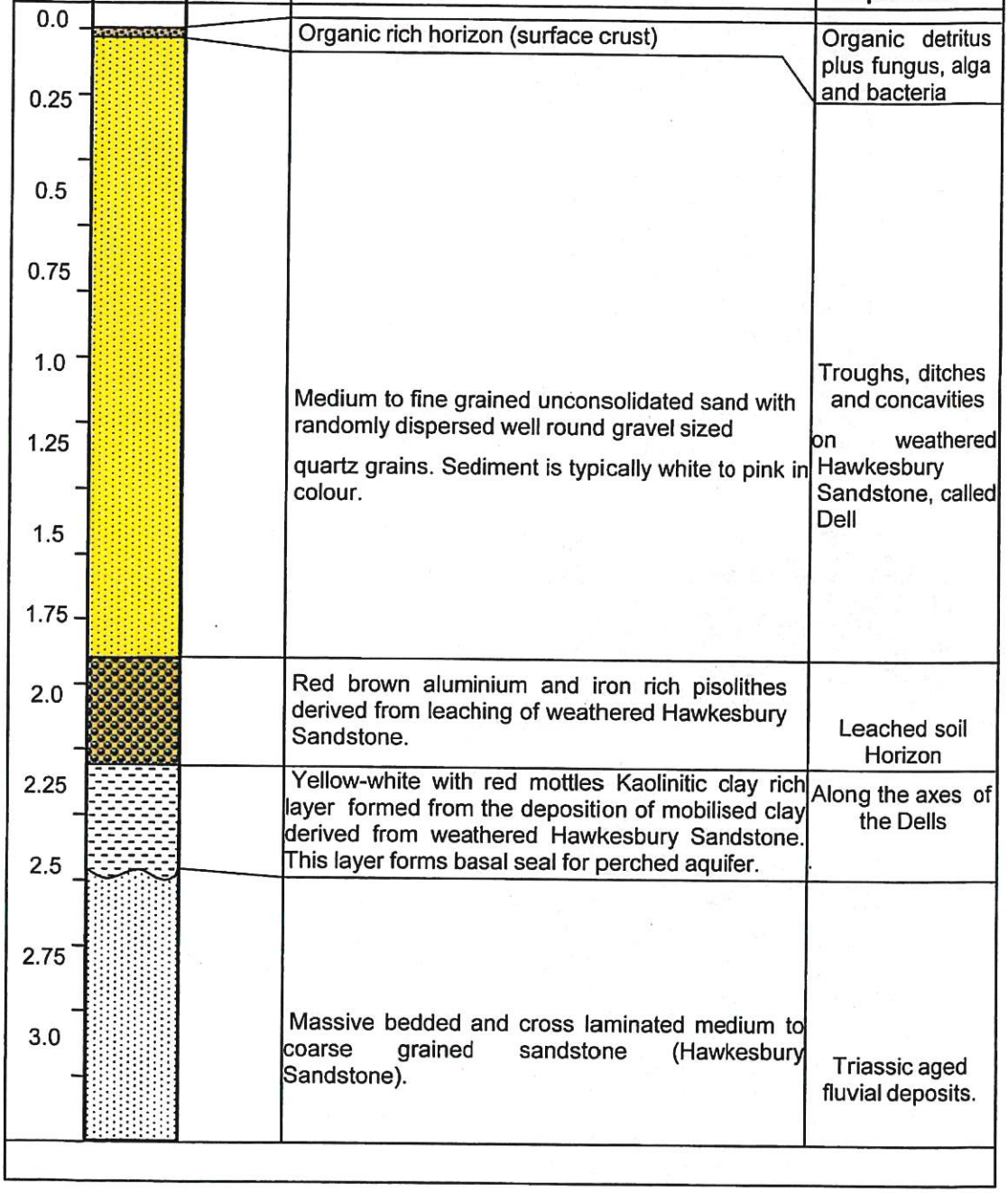


Figure 4- Generalised Quaternary Stratigraphical Sequence in Madden Plain.

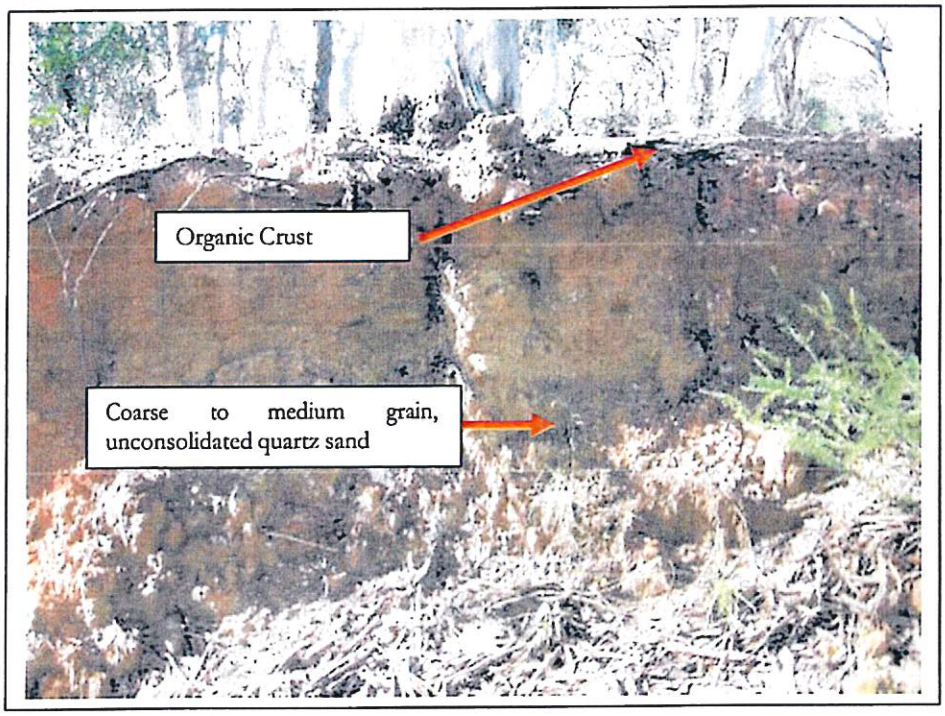


Figure 5- Organic crust and the coarse to medium grain, pinkish white weathered quartz sand which forms the body of the perched aquifers reservoir

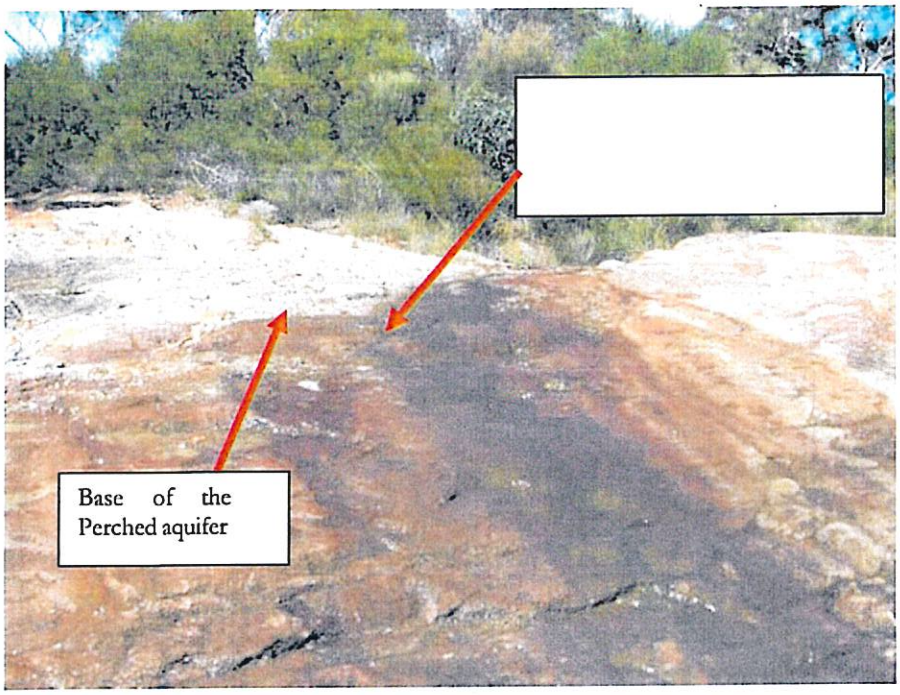


Figure 6 - Showing the contact between the perched aquifer and the massive Hawkesbury Sandstone. Water from the perched aquifer seeping along the contact zone

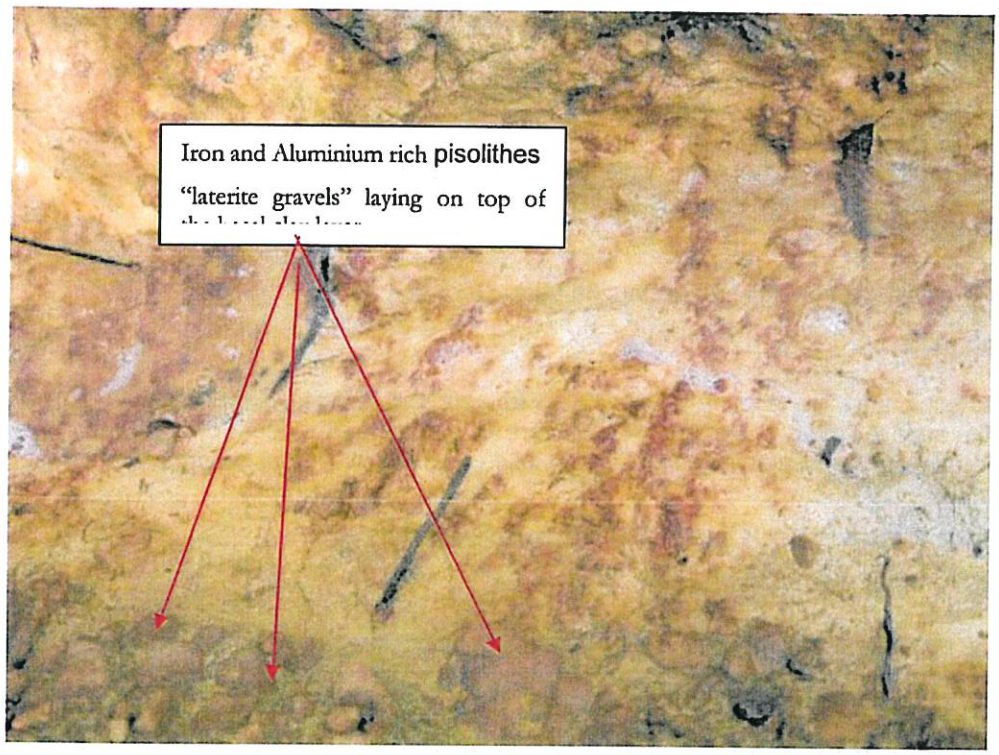


Figure 7 - Showing the yellow- white Kaolinitic clay at the base of the perched aquifer

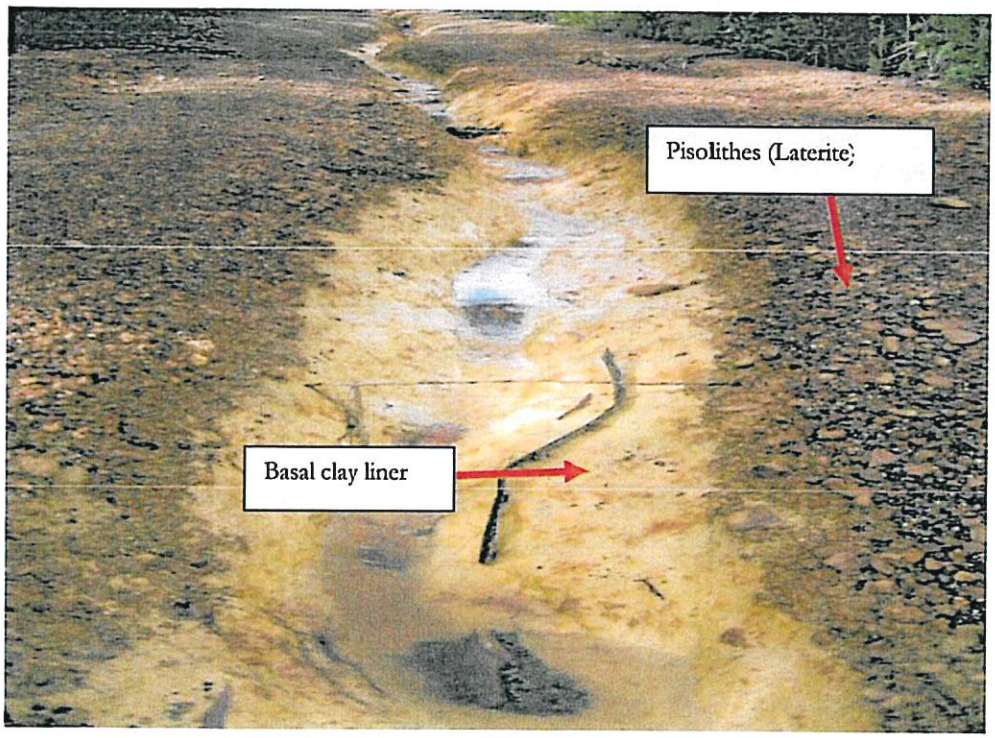


Figure 8 - Longitudinal rill erosion in the basal clay layer and Laterite pisolithes lying on the top of the clay layer. Note erosion of the overlaying unconsolidated sand horizon after construction of the road has exposed the Laterite pisolithes

Water table is shallow and the depth of the water table varies with rainfall in the catchment and the slope of the underlying bed rocks land.

Maddens Plain Soil and Subsoil classification

Hazelton and Tille (1990) have classified the Maddens Plains soil as Acid Peat in the swamps, Gleyed Podzolic soils in the drainage lines, Siliceous Sand and Podzols on the lower slopes, Lateritic Yellow Earth and Lithosol on crests.

Soil and Subsoil moisture content and grain size characteristics

Soil moisture content

Soil moisture content in the three locations investigated varied from 6.92% to 39. 58% on the shallow depth close to the surface at Lot 4 and lot 1A and from16 to 28 % at the depth of 250- 500 mm. Table 2 give description of subsurface sediments and their respective moisture contents at the three auger hole sites.

Table 1- Description of the auger hole samples and their moisture content

Lot 4 (X 311605.0112, Y 6207416.807)

Total depth of the borehole 70 cm, beginning with coarse to medium size gray sand

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
1	0 - 10 cm	Grey sand coarse to medium in size	158.8 g	147.8 g	6.92
2	20 - 25 cm	Grey medium sand with iron hydroxide and humic material	406.4 g	339.8 g	16.58
3	60 - 65 cm	Coarse white to grey sand, with organic debris, rock fragments &	441.3 g	372.3 g	15.63

Lot 3. (X 312759.6799, Y 6209893.429)

Total depth of borehole 60 cm. Beginning of lateritic layer at 46 cm.

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
4	0 - 12 cm	Gravelly - yellow greyish sandy clay, with large rock pieces	531.4 g	489.0 g	7.97
5	50 - 55 cm	Gravelly (lateritic pisolithes) yellow-grey clayey sand	347.1 g	315.7 g	28.8
6	55-70 cm	Gravelly (lateritic pisolithes) sandy clay	290.7 g	266.1 g	8.46

Lot 1A. (X 311918.4234, Y6210636.081)

Total depth of borehole 70 cm. 15 to 20 mm thick organic layer on top.

Sample No.	Depth	Description	Wet Weight	Dry Weight	% Loss
7	0 -12 cm	Organic layer	153.1 g	92.5 g	39.58
8	12 - 22 cm	Grey sand	272.7 g	226.7 g	16.86
9	70 cm	Yellow clayey sand	496.5 g	413.7 g	16.67

Three auger holes to the depth of 800 mm were sunken in the building envelope of the proposed Lot 1A, Lot 3 and Lot 4. Figure 8 shows the location of the auger holes, water samples and photography illustrated in this statement.

Figure 9- Auger hole at the proposed Lot 1A, showing organic crust on the top of weathered unconsolidated sand horizon

Two duplicate soil samples were collected at each auger hole site. Samples were collected at three different intervals based on the changes in soil colour and texture.

One lot of the samples were analysed for moisture content and grain size by Wollongong City Council's NATA accredited Geotechnical laboratory.

The second lot was send to Envirolab analytical laboratory in Chatswood for

pH, EC, Cation Exchange Capacity and P sorption tests.

Major grain size categories of the soil samples from the proposed Lot 1A, Lot 3 and Lot 4 are summarised in table 1 and Appendix...gives details of soil grain size analysis.

It is clear that the coarse fractions are dominant in all three lots and closely correlate with soil poor Cation Exchange Capability and soil P sorption results.

Table 2- Summary of the soil and sub- soil fractional analysis

Location	Fraction ▶1000µm (Gravels)	Fraction 600 µm - 300 µm (Coarse sand)	Fraction 150 µm - >75 µm (Fine sand and silt)	**Total Fraction >75 µm Fine sand to Gravel**	Fraction >75 µm- 13 µm (Silt and Clay)
Lot 4					
0-10cm depth	8%	65%	7%	**79%**	19.2%
60- 65 cm depth	3%	53%	8%	**64%**	13.4%
Lot 3					
0-12cm depth	43%	21%	16%	**80%**	12.5%
55- 70 cm depth	46%	17%	16%	**79%**	18.8%
Lot 1A					
0-12cm depth	10%	27%	38%	**75%**	24%
70 cm depth	2%	18%	17%	**37%**	26.5%

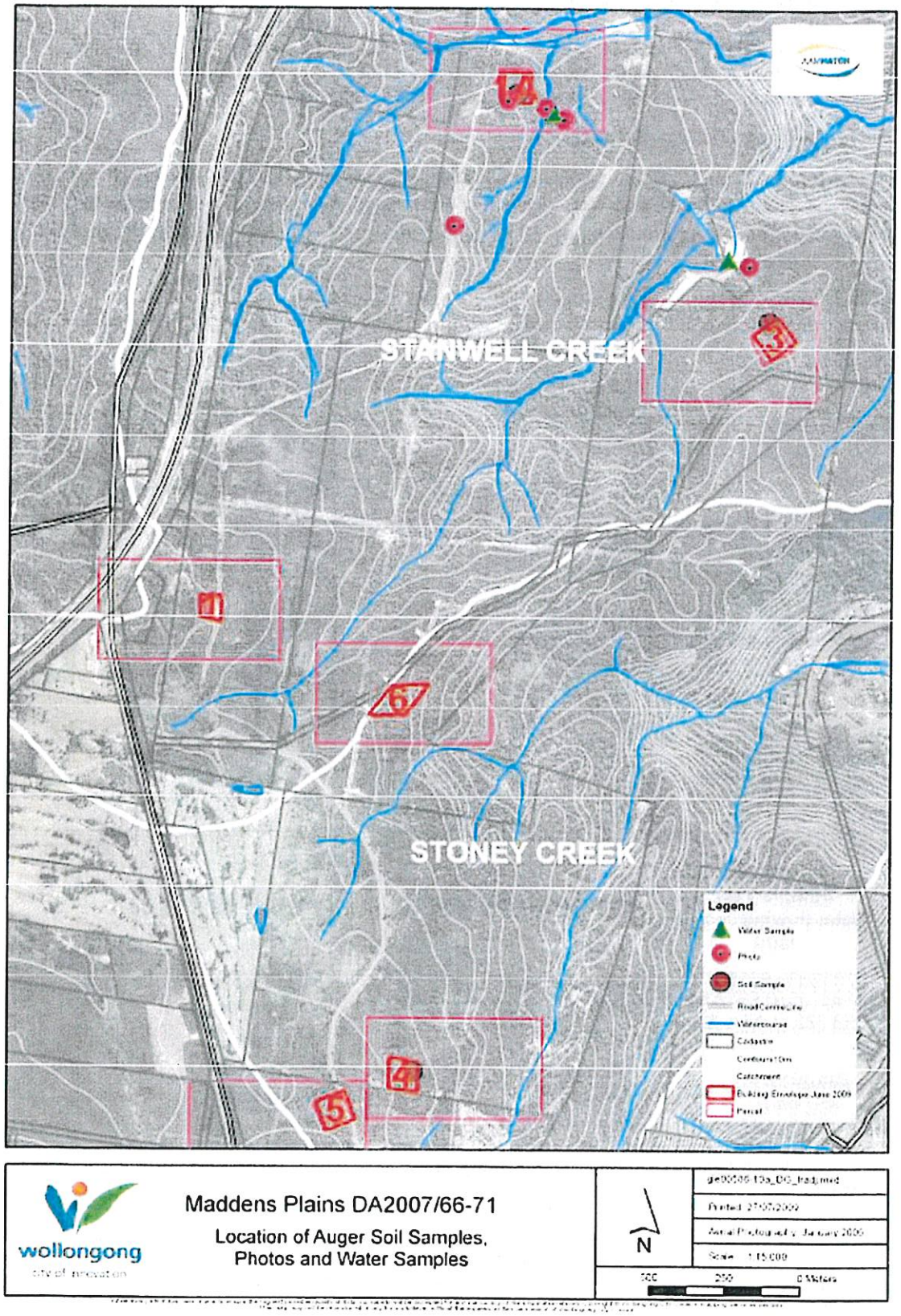


Figure 10- Location of photography, water samples and soil samples

Rainfall and Evapo-transpiration on Maddens Plan

Data for the period 1894 to 2006 from Bureau of Meteorology rain station 68024 at Darkes Forest indicate that the average annual rainfall in Maddens Plain is around 1420 mm and the average annual pan evaporation for Nowra RAN Air station is 1600 mm

Madden plain perched aquifer groundwater quality

On 6 of July 2007 two duplicate samples, one unfiltered and one in situ filtered through 0.45µm Teflon membrane were collected from the outflow of the sedge land (Figure) and from the ICC dam immediately behind the weir. Samples were sent to the Envirolab in Chatswood under the chain of custody for testing.

Table 3 - Analytical results of the water quality samples of July the 6, 2009

Sample Location	Sample 1		Sample 2	
	0.45um filtered mg/L	unfiltered mg/L	0.45 filtered mg/L	unfiltered mg/L
Sample 1 Water flowing From the sedge land X 312039.962071 Y 6210570.99123 358.695 m Altitude **Sample 2 ICC Dam** X 312622.987669 Y 6210097.92829 267.37 m Altitude	pH 7.0 EC µS/cm 19 0 Phosphate <0.05 mg/L Total P <0.05 mg/L NOx <0.1 mg/L NH3 <0.1 mg/L Al 20 µg/L Fe 780 µg/L Mn 100 µg/L Cu <1.0 Pb <1.0 µg/L Zn <1.0 µg/L	Al 80 µg/L Fe 3300µg/L Mn 95 µg/L Cu <1.0 µg/L Pb <1.0 µg/L Zn 4.0 µg/L	pH 7.1 EC µS/cm 140 Phosphate <0.05 mg/L Total P <0.05 mg/L NOx <0.1 mg/L NH3 <0.1 mg/L Al 230 µg/L Fe 320 µg/L Mn 10 µg/L Cu <1.0 µg/L Pb <1.0µg/L Zn <1.0 µg/L	Al 500 µg/L Fe 630 µg/L Mn 10 µg/L Cu <1.0 µg/L Pb <1.0 µg/L Zn 3.0 µg/L
Duplicates Sample 1 (x) Water flowing sedge land X 312039.962071 Y 6210570.99123 358.695 m Altitude **Sample 2 (k) ICC Dam** X 312622.987669 Y 6210097.92829 267.37 m Altitude	pH 7.2 EC µS/cm 200 Phosphate <0.05 mg/L Total P <0.05 mg/L NOx <0.1 mg/L NH3 < 0.1 mg/L Al 20 µg/L Fe 860 µg/L Mn 90 µg/L Cu <1.0 µg/L Pb <1.0 µg/L Zn < 1 µg/L	<0. 1 <0.1 Al 80 µg/L Fe 3000 µg/L Mn 90 µg/L Cu <1.0 µg/L Pb <1 µg/L Zn 3.0 µg/L	pH 7.3 EC µS/cm 140 Phosphate <0.05 mg/L Total P <0.05 mg/L NOx <0.1 mg/L NH3 <0.1 mg/L Al 230 µg/L Fe 330 µg/L Mn <5.0 µg/L Cu < 1.0 µg/L Pb < 1.0 µg/L Zn <1.0 µg/L	Al 520 µg/L Fe 600 µg/L Mn 10 µg/L Cu <1.0 µg/L Pb <1.0 µg/L Zn 4.0 mg/L

As results indicate, in both locations pH was neutral and around 7 values. We believe that oxygenation of water by sedges rhizome and root systems have increased the pH from usually acidic to a neutral value.

It should be noted that concentration of Nitrogen species and phosphorus in both unfiltered and filtered samples was very and no difference between filtered and unfiltered samples were observed.

In Sample 2 which was collected behind ICC dam soluble aluminium was several folds above the ANZECC Water Quality Guidelines 2000, the trigger values for 95% protection of ecosystem in the freshwater where the pH value is above pH> 6.5 is 55 µg/L

Soil Cation Exchange Capacity (CEC)

Cation exchange Capacity (CEC) is a measure of soil's capacity to hold nutrient; specially, positively charged ions such as K, Ca, and Mg. Clay and soil organic matter contribute to cation exchange capacity, thus soils with high CEC will retain nutrient better than low CEC soils.

The following rating for cation exchange capacity is given by P. Hazelton and Brian Murphy (CSIRO, 2007)

Table 4 – Rating of soil based on Cation Exchange Capacity

Rating	CEC cmol(+)/Kg
Very Low	<6
Low	6-12
Moderate	12-25
High	25-40
Very high	>40

As the analytical results of our soil samples from Lot 4, Lot 3 and Lot 1A (table 4) indicate the CEC values for the studied samples varies between <1 and 1.6 (meq/100 g) which is far below the very low CEC category.

This is an indication that the nutrient retention capacity of the soil in the proposed allotments is extremely poor. If one decided to lay the lawn or create garden bed, one need to import soil to cover the existing natural landscape or to apply large quantity of P and N fertilizer to overcome the natural limitation.

Importation of soil also means introducing various types of bacteria, fungi, parasites and seeds to this natural landscape.

The acidic nature of the local soil will quickly mobilise and washes away the applied fertiliser through the perched aquifer . the mobilised fertilisers will end up in the upland swamps and local creek and contribute to nuisance algal growth and weed infestation of the existing landscape..

Table 5 - Analytical results of the Cation Exchange Capacity and P-Sorption of the soil samples from Lot 1A, Lot3 and Lot 4

Depth cm below the surface	Date Sampled	pH	Electrical Conductivity	Total Organic Carbon	NOx as N in soil	Ammonia as N in soil	Phosphorus Sorption	Exchangeable Al*	Exchangeable Ca*	Exchangeable K*	Exchangeable Mg*	Exchangeable Na*	Cation Exchange Capacity*
		1:5 soil:water	1:5 soil:water	(Walkley Black)									
		pH Units	µS/cm	mg/kg	mg/kg	mg/kg	mg/kg	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g	meq/100g
			<1	<1000	<0.5	<0.5	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<1
		LAB.1	LAB.2	LAB.13	LAB.55	LAB.57	Ext-020	Metals.23	Metals.23	Metals.23	Metals.23	Metals.23	Metals.23
0-10	21/07/2009	5.5	62	16000	<0.5	1.1	4.6	1	0.51	0.26	0.43	0.37	1.6 Auger hole 1(Lot 4)
0-10 dup	21/07/2009	5.4	55	16000	[NT]	0.9	[NT]	1	0.5	0.25	0.42	0.36	1.5
20-25	21/07/2009	5.6	11	10000	<0.5	<0.5	4.7	0.89	0.14	0.1	0.08	0.13	<1
60-65	21/07/2009	5.7	18	8400	<0.5	0.8	4.3	1	0.11	0.2	0.12	0.17	<1
0-12	21/07/2009	5.8	7	8200	<0.5	0.7	4.5	0.81	0.1	0.12	0.08	0.12	<1 Auger hole 2 (Lot 3)
50-52	21/07/2009	5.6	10	6200	<0.5	0.9	4.4	0.57	0.08	0.12	0.08	0.12	<1
58-59	21/07/2009	5.5	12	4700	<0.5	0.6	4.4	0.37	0.06	0.12	0.08	0.11	<1
0-25	21/07/2009	4.6	64	63000	<0.5	3.8	4.8	3.6	1.7	0.33	1.1	0.36	3.4 Auger hole 3 (lot 1A)
20-22	21/07/2009	5.8	10	7800	<0.5	<0.5	5.1	1.1	0.16	0.14	0.3	0.14	<1
80	21/07/2009	5.3	18	3900	<0.5	<0.5	6.1	1.1	0.09	0.13	0.22	0.13	<1

P-Sorption Capability:

Soil phosphorus retention capability is measurable when a sample of soil is shaken with 1000 mg P/ L and the percentage of P retained

The method originated from the need to differentiate between soils exhibiting high and low P retention

There is a clear relation between soil pH and soil P sorption capability. The lowest P sorption occurs in acidic soil and highest sorption in alkaline environment. As table 5 shows in Maddens Plain soil acidic pH which generally fluctuate between 4.5 and 5.5 is sever limitation for Phosphorus retention.

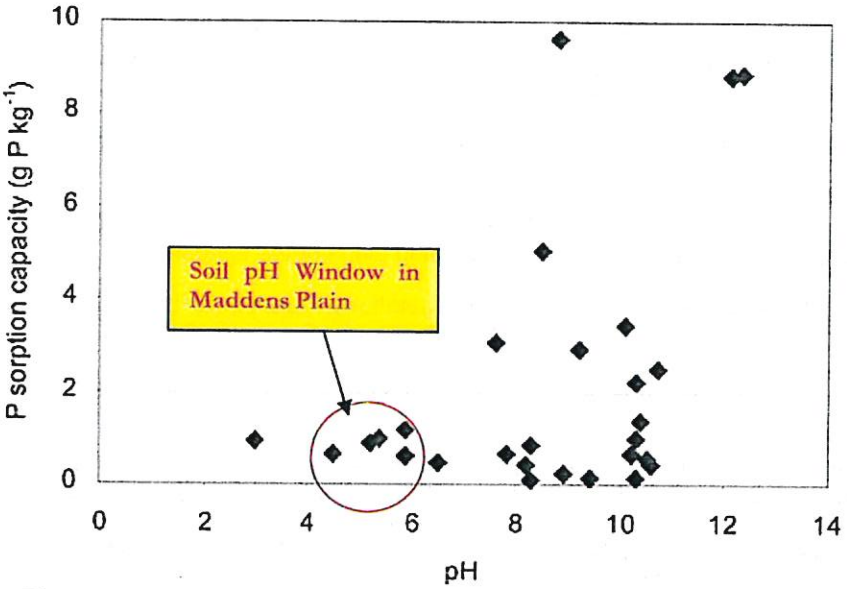


Figure 11- Relationship between the P sorption capacity and pH

Based on soil phosphorus retention capability five classes of soil are identified: very low < 10%, low 10-30%, medium 30-60%, high 60-90% and very high >90%. Soil in Maddens Plan fall within the <10 % category in relation to phosphorous retention.

Low P sorption capability and very low cation exchange capability make the

Analysis of soil samples from Illawarra Ridge Golf Resort (Conceptual Water Quality Management Plan, SEEC Morse McVey, 2008) indicated that the Maddens Plains soils have very low Cation Exchange Capacity. As table... shows, the phosphorus sorption capacity is particularly very low.

Soil horizon	P sorp. (mg/Kg)	P sorp. index
Upper weather sand horizon	3.32- 5.25	2.6- 3.6
Lower weathered Sand horizon	4.63- 4.76	3.3- 3.4

If soil absorption capacity is below 2000 mg/Kg, that means the soil would be unable to immobilise the excess P. If the future owners of the proposed lots decided to laid turf in their property, as the local soil is poor in phosphorous and the soil P retention capacity is limited, to maintain a healthy lawn they need to apply larger quantities of fertiliser. If the rate of P fertiliser application in a normal sandy loam is approximately 500- 700 Kg / hectare, they must apply something around 1300 Kg/hectare. As the soil is porous, acidic and with little clay content majority of the applied fertilizers would be quickly washed away and through the groundwater aquifer discharged into the adjacent wetlands and Creeks.

Increase in P or N in these low nutrient regulated upland swamps and creeks will encourage nuisance algal growth and infestation of exotic species.

Maintenance of the lawn and ornamentation plants often requires application of pesticide and fungicides, in this land of

Impact of fertilizers on native flora and weed infestation of the site Impact of pesticides and herbicide of Aquatic Ecosystems

Conclusions

- By Quaternary period the Paleo-surface of Hawkesbury sandstone was carved with erosional throughs, gullies, ditches and concavities of various shapes, lengths and depths. These erosional features are called "Dell"
- Infilling of the dells on the weathered Hawkesbury Sandstone with weathered material originated from parents Hawkesbury sandstone during the Holocene Period formed a series of the perched aquifers on Maddens Plain.
- Oxidation of Marcasite (iron sulphide) and accumulation of organic matter within the Dell environment created a strongly acidic environment.
- Clay and silica cement of the Hawkesbury Sandstone make it impermeable. However, lateral movement of water occurs through the fractures and bedding plans of the sandstone.
- Perched aquifers support the upland swamps, riparian vegetations, Sandstone forest and provide the base flow to the local creeks (e. g Stanwell Creek, Stony Creek and Coaldale Creek)
- Soil in Madden Plain is shallow and composed of unconsolidated coarse to medium grain quartz sand with very little clay content.
- A thin layer of organic crust and the vegetation cover are the soil binders at Madden Plain, breaking the organic crust or clearing the vegetations will cause extensive sheet, rill and gully erosions.
- Water table of the perched aquifers is shallow and independent from the natural regional water table which is beneath the Hawkesbury Sandstone.
- Shallow water table of the Maddens Plain perched Aquifers makes them vulnerable to surface contamination.
- Soil in Maddens Plain is poor in nutrient and the perched aquifers Phosphorus and nitrogen contents is also very low
- Soil CEC data from 9 auger holes soil samples at Lot 1A, Lot 3 and Lot 4 as well as soil CEC results from nearby Illawarra Ridge Golf Resort soil indicate that the soil P sorption capacity is very low. If fertilizers are applied to this soil, they will be quickly washed away by groundwater.
- Strong acidity of groundwater is responsible for iron and aluminium mobilisation.

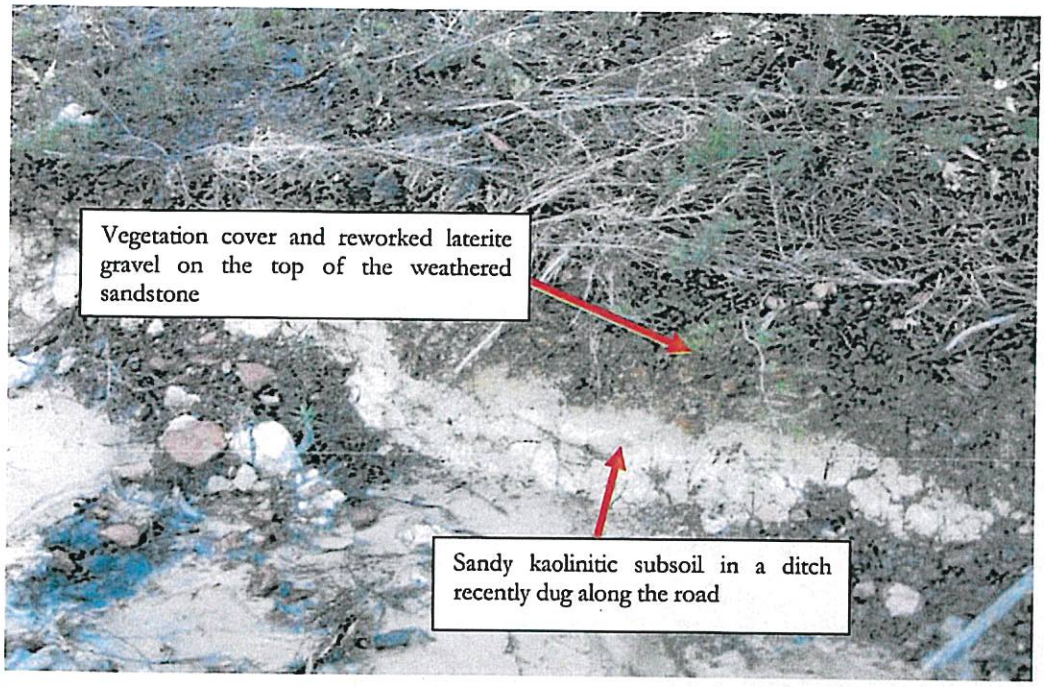


Figure 12– Soil and subsoil horizons in a recently excavated ditch along the road

Figure 13- Gully erosion within the coal wash layer used for road construction on the road

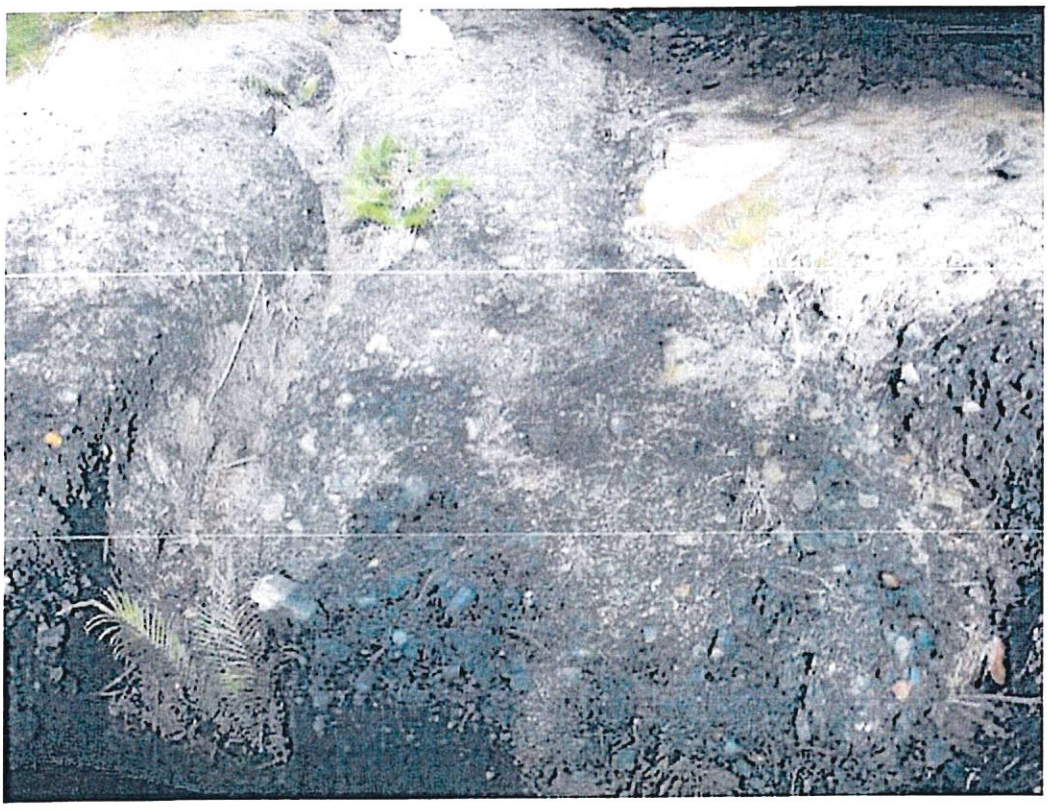


Figure 14- Close up picture of erosion pathway along the road shoulder, where coalwash was used.

Figure 15- Freshly deposited sediment in the drainage line along the recently upgraded road

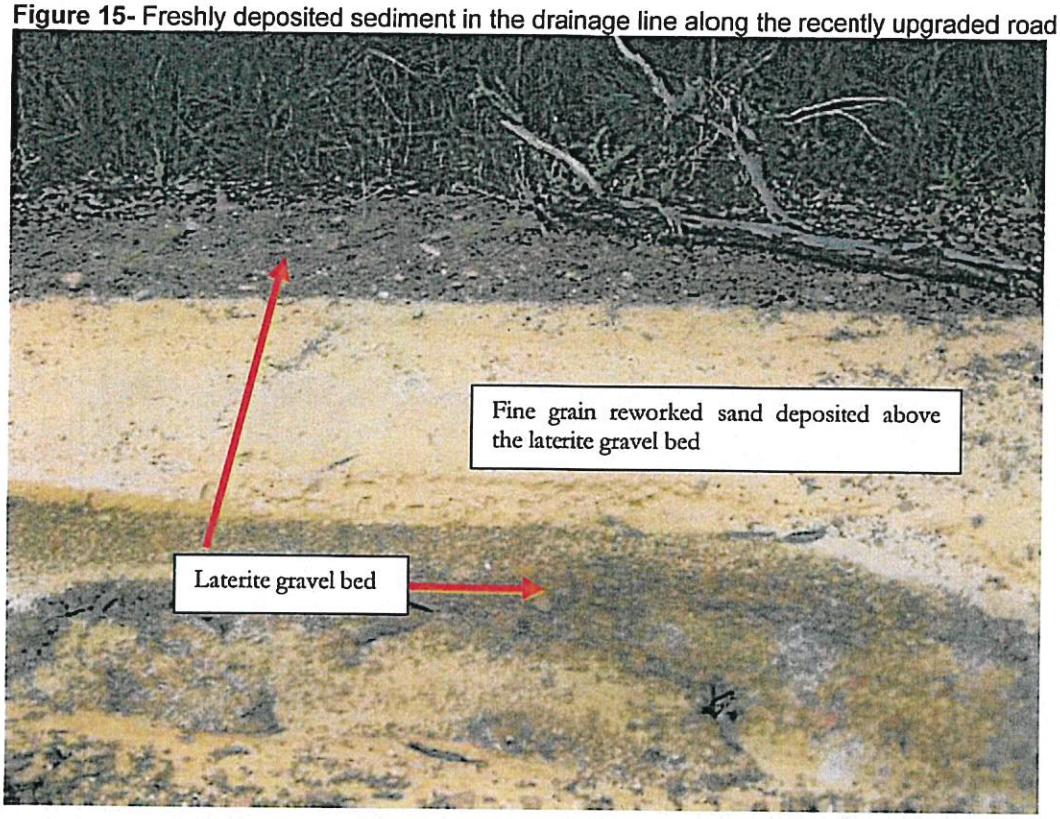


Figure 16- Deposition of the recently reworked fine sand on the top of pisolithes layer

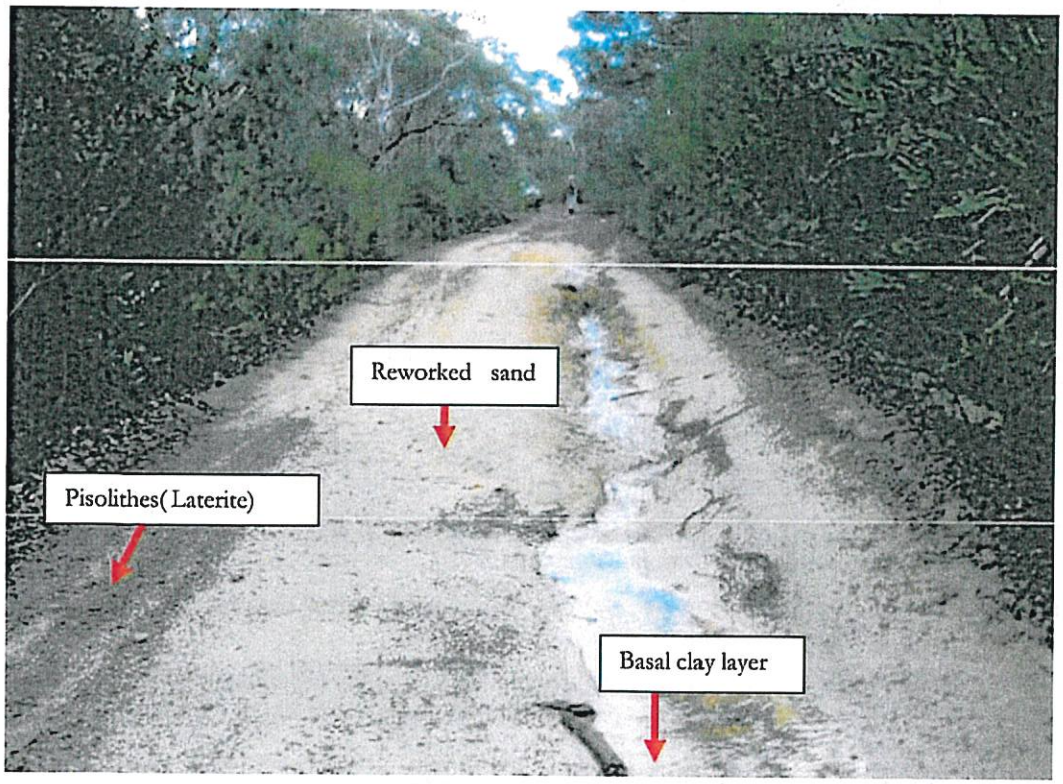


Figure 17- Rill erosion along the axes of the road showing pisolithes layer, overlaying weathered sand and a basal clay horizon. Perched Aquifer, groundwater hydrochemistry

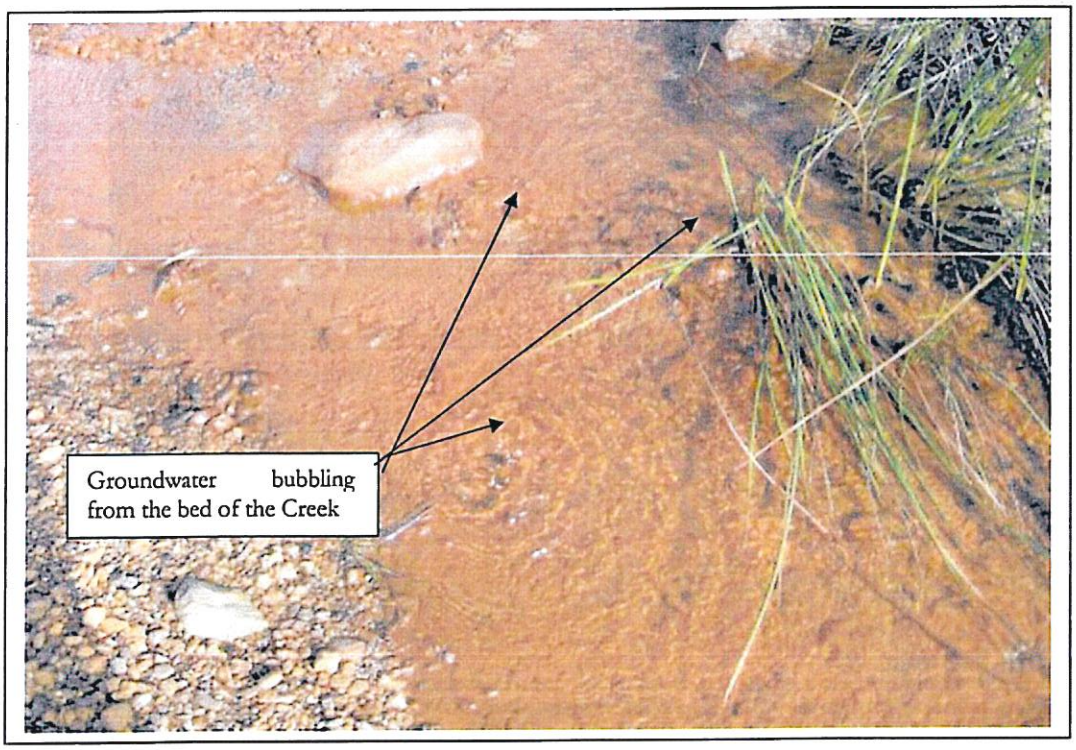


Figure 15- Groundwater discharges from the *Leptocarpus tenax Schoenus bervifolius Schoenus paludosis* dominated sedge wetland and Iron hydroxide precipitates on the road crossing of the sedge wetland

References

Young Ann - 1983- Upland swamps-dells- on Woronora Plateau, near Wollongong, New South Wales. University of Wollongong, 1983

Hazelton P.A. and P.J. Tille 1990- Soil Landscapes of the Wollongong-Port Hacking 1:100 000 Sheet, Soil Conservation of NSW.

Read, H.W. and A.C. Cook, 1970- Note on Coal Containing Marcasite Plant Petrifactions, Yarrunga Creek Sydney Basin, New South Wales The Royal Society of NSW.

Read H. W. and A.C. Cook, 1973- Ripple –Drift Cross-Lamination in the Hawkesbury Sandston, New South Wales. Royal Society of NSW

Chafer, Chris J. 2007- Wildfire Catchement Health and Water Quality: a review of knowledge derived from research undertaken in Sydney Water Supply Catchement 2002-2007. Catchment Operation and Major Project Division, Sydney Catchment Authority, Penrith.

Ecological impact of Longwall Mining In the Southern Coalfield of NSW- A review. Scientific Services Section, Department of Environment and Climate Change.

Andrew Macleod 2007- For SEEC Morse McVey. Conceptual Water Quality Management Plan For proposed Illawarra Ridge, Golf Resort, Princes Highway Darkes Forest.

Merrick N.P. 2008- Metropolitan Coal Project Groundwater Assessment, A Hydrological Assessment is Support of Metropolitan Colliery Longwalls 20 to 44 Environmental Assessment, for Helensburgh Coal Pty Ltd, PO Box 402, Helensburgh NSW 2508.

Keith David, S. Rodoreda., L. Holman L and J. Lemmon- 2006- Monitoring Changes in Upland Swamps in Sydney's Water Catchments: the roles of fire and rain. Sydney Catchment Authority Special Area Strategic Management Research and Data Program.

Yassini, Iradj, 1995- Geotechnical and Groundwater Quality Assessment of the proposed Builders Refuse Tip, Lot 2, Halls Road, Helensburgh. Wollongong City Council, Reference Library LR 363.728 YAS.

Yassini, Iradj, 2004- Pulsative discharge of dissolved metals from copper slag emplacements into the Windang Unconfined Sandy Aquifer adjacent to Lake Illawarra. Wetlands (Australia) Vol.21, No 2, pp 253-273

Yassini, Iradj, Daniel Robson 2006 Nitrogen Sources and species in the unconfined Sandy Aquifer of the Windang Peninsula, Illawarra Coast of New South Wales. September 2006 River Symposium, Brisbane, Australia.