

JRPP Ref. No.:	2012SYW078
DA No.:	DA11/1445
PROPOSED DEVELOPMENT:	Lawn Cemetery, Memorial Gardens, Associated Buildings and Crematorium
PROPERTY ADDRESS	2207-2223 Elizabeth Drive Luddenham
DEVELOPMENT CATEGORY	Integrated Development
APPLICANT:	Stimson Consultant Services Pty Ltd
REPORT BY:	Gurvinder Singh - Senior Environmental Planner
RECOMMENDATION	Refusal

Assessment Report

Executive Summary

Council is in receipt of a development application for a lawn cemetery incorporating a memorial garden, crematorium, three chapels, associated buildings and car parking on the subject site.

The land is zoned RU2 Rural landscape under the provisions of Penrith Local Environmental Plan 2010. The proposed development is defined as 'Cemetery and Crematorium' which are permissible uses in this zone with Council's consent.

The application was advertised in the local newspapers and notified to adjoining and nearby property owners and occupants in the Penrith and Liverpool Local Government Areas. The exhibition period was from 20 January 2012 and extended to 9 March 2012. Council received 511 letters of objection including petitions from the concerned residents. These concerns related to environmental impacts of the proposed development on the surrounding area. These concerns are addressed in this report.

The application as made did not adequately address matters related to air quality, groundwater contamination, land contamination, wastewater and effluent disposal, bio security matters, noise, waste management and compliance with public health legislation. The applicant was requested to respond to these matters. After receiving the applicant's response which included an amended proposal and additional information, the application was placed on public exhibition for a second period from 17 to 31 July 2012. Council received further submissions from the concerned residents.

Council appointed an independent consultant for a peer review and assessment of some of the environmental impacts related to the proposal. The comments provided by the independent consultant are provided in this report.

An assessment under Section 79C of the Environmental Planning and Assessment Act 1979 has been undertaken and the following issues - discussed in detail in this report - have emerged as a result of this assessment process:

- Inconsistencies with the objectives of the zone
- Land contamination
- Air quality
- Groundwater contamination
- Bio security matters
- Rural character and visual impacts
- Accessibility
- Social and economic impacts.

The proposed development is not consistent with some provisions of the Environmental Planning Instruments and Development Control Plan applicable to the subject site. The site is not considered suitable for the proposed development and the proposal will not be in the public interest. This report recommends that the development application be refused.

There are 5 appendices to this report, as detailed below:

- Appendix No. 1 – Locality Plan
- Appendix No. 2 - Concept Site Plan
- Appendix No. 3 – Expression of Burials
- Appendix No. 4 –General Terms of Approval by NSW Office of Water
- Appendix No. 5 – Penrith DCP 2010 Development Control Table

Background

Council has previously refused a development application (DA10/1208) received on 22 November 2010 from AAC Lucas for a concept plan of a cemetery, crematorium, memorial gardens and associated buildings and car parking at the above site. The development application was refused on 1 March 2011 for the following reasons:

- 1. The application was not satisfactory for the purpose of Section 78A of the Environmental Planning & Assessment Act 1979 as the development application did not comply with the requirements of Clause 50 of the Environmental Planning and Assessment Regulation 2000 in that the development application:*
 - a) did not contain all of the information and documents, specified in Part 1 of Schedule 1 of the Environmental Planning and Assessment Regulation 2000, and*
 - b) was not accompanied by the fee prescribed by Part 15, determined by the consent authority, and*
 - c) was not accompanied by a list of any authorities from which concurrence must be obtained before the development may lawfully be carried out, and*

- d) was not accompanied by a list of any approvals of the kind referred to in section 91 (1) of the Act that must be obtained before the development may lawfully be carried out, and*
 - e) was not accompanied by a correct estimated cost of the development.*
- 2. The application was not satisfactory for the purpose of Section 79C (1) (c) of the Environmental Planning & Assessment Act 1979 as the site was not suitable for the proposed development due to its likely adverse impact on the quality of the groundwater.*
 - 3. The application was not satisfactory for the purpose of Section 79C (1) (b) of the Environmental Planning & Assessment Act 1979 due to the likely adverse impact on the residential amenity and natural environment.*
 - 4. The application was not satisfactory for the purpose of Section 79(1) (e) of the Environmental Planning & Assessment Act 1979 as the proposal would not be in the public interest due to matters raised in the submissions.*

The current development application was lodged on 23 December 2011. The applicant did not attend a pre lodgement meeting.

Site and Surrounds

The site is located on the northern side of Elizabeth Drive around 500 metres west of its intersection with Luddenham Road, Luddenham. It is an irregular shaped lot with a frontage of 176 metres to Elizabeth Drive. The total area of the land is 36.62 hectares. The land falls from north to south. The site is currently used for rural residential purposes with low intensity grazing. A single dwelling and associated buildings exist on the site. The surrounding area is characterised by poultry farms, market gardens, grazing land and rural residential living.

The immediate neighbouring property to the south east of the site is a poultry farm having large sheds for poultry and a residence. The property to the south of the site across Elizabeth Drive is also a poultry farm having large sheds for poultry and a residence. The immediate neighbouring property to the north east of the site has an olive farm having numerous olive trees. The Model Park society that runs automotive/air models is located to the east of the site. The immediate neighbouring property to the south west of the site is a residence and a fig farm. Various other strawberry farms and honey farms are located within the vicinity of the site. Luddenham village is located further to the south west of the site. The nearest residence is around 70m from the western boundary of the site.

The site has a slope of around 15 degrees and generally slopes from north to south. A few creeks traverse the site generally from north to south. The site is highly visible from Elizabeth Drive the Northern Road, and all surrounding properties in Luddenham. Rural residential areas of Liverpool Council are located to the south of the site across Elizabeth Drive.

Proposed Development

The proposed development involves use of the land as a lawn cemetery incorporating a crematorium. The plans indicate the following key elements:

- An administration building located towards the frontage of the land and to the north of the existing farm dam. A café and florist is also proposed adjacent to this building. Proposed setbacks are 75m to the west, 80m to the east and 190m to the front.
- A cluster of 3 chapels around the crematorium with this building to be located generally central to the site and having a total seating capacity of 200. Proposed setbacks are 130m to the west, 95m to the south, 240m to the east and 370m to the north.
- Maintenance building to be located adjacent to the eastern boundary (setback 25m) and central to that boundary.
- Below ground burial areas (14782 plots), above ground burial areas (46183 plots) and memorial plaques (10862 plots) and tombs/columbariums (4060 plots). Total number of plots will be 75887.
- Access is proposed from Elizabeth Drive via an upgraded intersection treatment.
- Principal access circulation road and car parking adjacent to the administration and chapel buildings. A total of 334 parking spaces are proposed.
- Landscaping over the site including plantings to all boundary setbacks.

As a consequence of the use, the existing dwelling and associated outbuildings will be demolished.

The development application is supported by the following documents:

- Statement of Environmental Effects prepared by Stimson Consultant Services dated December 2011
- Traffic, Access and Car Parking Assessment prepared by Transport and Urban Planning dated July 2010
- Air Quality Impact Assessment prepared by Pae Holmes dated 16 December 2011
- Groundwater Contamination Assessment prepared by Geotechnique Pty Ltd dated 21 November 2011
- Supplementary Groundwater Contamination Assessment prepared by Geotechnique Pty Ltd dated 6 July 2011
- Preliminary Contamination Assessment prepared by Geotechnique Pty Ltd dated 22 November 2011

- Unexpected Finding Protocol prepared by Geotechnique Pty Ltd dated 22 November 2011
- Geotechnical Assessment of Onsite Effluent Disposal System prepared by Geotechnique Pty Ltd dated 26 October 2011
- Noise Impact Assessment prepared by Renzo Tonin and Associates dated 23 May 2011
- Stormwater and Effluent Management Strategy prepared by J Wyndham Prince dated November 2010
- Waste Management Plan prepared by Stimson Consultant Services dated December 2011
- Site and Vegetation Assessment prepared by Horticultural Management Services dated 3 December 2007

Planning Assessment

The proposed development has been assessed against the relevant heads of consideration contained in Section 23G, Section 79C and Section 91 of the *Environmental Planning and Assessment Act 1979*, and based on this assessment, the following issues have been identified for further consideration:

Section 23G – Joint Regional Planning Panels (JRPP)

Under Clause 13B of the *State Environmental Planning Policy (Major Development) 2005*, a regional panel has the function of determining certain development applications. The subject development application was forwarded to the JRPP on a request from the applicant as 120 days had lapsed after the submission of the application to Council and the application remained undetermined. The Sydney West Region Joint Planning Panel accepted the request of the applicant to determine the development application in accordance with Section 23G of the *Environmental Planning and Assessment Act 1979*.

Section 91 – Integrated Development

The proposed development is an Integrated Development under Section 91 of the *Environmental Planning and Assessment Act 1979* and approval was sought from the following state government authority in accordance with relevant legislation:

- NSW Office of Water – Section 91 of the *Water Management Act 2000* (Controlled Activity Approval to undertake works within 40m of a watercourse)

The NSW Office of Water has assessed the proposed development under the *Water Management Act 2000* and raised no objections to the proposal subject to General Terms of Approval (GTAs) (refer to Appendix No. 4 for a copy of the GTAs).

Section 79C(1)(a)(i) – Any Environmental Planning Instrument

State Environmental Planning Policy No. 55 (SEPP55) - Remediation of Land

The objectives of SEPP 55 are as follows:

- *to provide for a state wide planning approach to the remediation of contaminated land and*
- *to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.*

Pursuant to SEPP 55, Council must consider the following matters:

- *whether the land is contaminated*
- *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 proposed use.*

Geotechnique Pty Ltd (GPL) undertook a Phase I Preliminary Contamination Assessment for the applicant. This report accompanied the development application and provided a summary of the site setting, land uses, potential for contamination and conclusions and recommendations to assess if the site presents a risk of harm to human health and the environment.

GPL identified potential current and historical sources of contamination at the site using a combination of historical aerial photographs, title deeds and a site walkover. The reported potential contamination sources included:

- Current: garage and metal workshop, fibro building, soil stockpiles and dumping (scrap metal, wooden pallets and old car bodies); and
- Historical: market garden activities and poultry farming activities.

Based on the current and previous land uses, it was reported by GPL that the contaminants of potential concern (COPC) included: metals, organo-chlorine pesticides (OCP), organo-phosphate pesticides (OPP), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), phenols and asbestos.

GPL provided the following conclusions and recommendations within the Phase I:

- *It is considered that the site has only a low potential for contamination based on the current and historical land uses*
- *Undertake sampling and analysis, post demolition and prior to redevelopment, to assess the potential contamination and confirm the contamination status*
- *Prior to demolition of the existing buildings, undertake a hazardous materials survey, by a licensed contractor; and*
- *Undertake further investigation, analysis and assessment if latent contamination is identified.*

GPL prepared an *Unexpected Findings Management Plan / Protocol* during the proposed development works and during excavation of proposed gravesites. The

plan/protocol provides details on the management of asbestos cement pieces and friable asbestos; management of suspect materials and management of groundwater or seepage water. With the exception of asbestos management, the protocols for the last two items are limited to engagement of an environmental consultant and potential abandonment of the grave site respectively.

In Section 4.1.1 of the Statement of Environmental Effects (SEE) Stimson Consultant Services (SCS) provide a statement detailing the following:

“The subject site is not contaminated as demonstrated in the accompanying contamination report. Accordingly it is submitted that the site is suitable for the proposed use and that this SEPP is not applicable”. Further in Section 4.6.4 of the SEE, SCS provides a statement detailing that *“based on the Dent guidelines the soil type represents the best types for decomposition and decay product retention”.*

The GPL report submitted with the application was assessed by Council Officers and the independent consultant appointed by Council. Council Officers and the consultant have noted the following regarding the reports relating to Land Contamination submitted by the applicant:

- The Phase I assessment has made no reference as to the assessment of risk to human health and the environment from the proposed land use and the potential contaminants relating to the future burials at the site. Further, no conceptual site model has been developed including potential source-pathway-receptor pollutant linkages present at the site, based on current or proposed land uses
- The north-eastern portion of the site is likely underlain by Quaternary Deposits comprising fine grained sand silt clay; these deposits were not discussed in the GPL reports, although appear to be recorded in the GPL investigations (as residual/alluvial deposits)
- Given that there are three GPL investigations provided (and a further investigation referenced), the Phase I assessment has made limited commentary on the subsurface soil, geology and hydrogeological conditions. Two of the investigations have recorded the presence of Sandstone at the site, with the greatest observed thickness being observed as exceeding 8.3 m. The presence of Sandstone has not been discussed in the GPL reports in terms of the subsurface soils. Sandstone and Shales have different physico-chemical characteristics, and contaminants have the potential to behave differently (in terms of migration of contaminants / groundwater, adsorption etc) within each stratum
- The Phase I does not provide information on the presence of licenced or unlicensed groundwater abstractions near to the site; nor the abstraction uses. An independent review of the information provided on the NSW Office of Water website has indicated the following:

- Four onsite boreholes: Three with no data and one licensed (GW072774). The licensed borehole was used for exploration, and was drilled to 30 m in 1994
- Thirteen off-site boreholes: One licenced (GW105016). This borehole is approximately 600 m south and is used for domestic stock purposes; it was drilled to 95 m in 2003.
- There are two GPL reports that provide assessments on the permeability of water through the underlying Residual Soils / Shale. There are no specific details on the methodology (field data collection, calculation or summarised rates) for either of the methods utilised in the assessment. Further there appears to be disparities in the site specific data reports and the GPL interpretation of the data. In the GPL reports the underlying strata is generally described as very low permeability to impermeable,

Council's independent consultants have compared the site specific data with published hydraulic conductivity for the rates. The site specific calculated hydraulic conductivities indicate that the soils tested are typical of silt, sand or silty sand strata, which are considered as permeable to moderately permeable which contradicts that stated by GPL. Based on the visual description of the subsurface strata (i.e clayey soils) and the independent consultant's local knowledge of the subsurface profile in this area of Sydney the hydraulic conductivities more commonly associated with the Shale / clayey deposits would be much lower generally than estimated by GPL. There is therefore a disparity between the site specific data, the visual descriptions and the published hydraulic conductivities.

- The SEE provides a statement that the subsurface soils have been assessed against those provided in the Boyd Dent Thesis. None of the reports provided by the applicant have assessed the subsurface soils in detail against the recommendations within this thesis.

There is therefore insufficient information provided by the applicant especially in regard to the assessment of how the development will affect the soil environment and subsequent pathways to human health or environmental receptors (on or off site). There is also insufficient characterisation of the existing contamination status of the site in respect to potentially contaminating activities carried out, and a limited conceptual understanding of the nature of the unsaturated soils and their suitability for the proposed use.

State Environmental Planning Policy (Infrastructure) 2007 (SEPP 2007)

Clause 104 of SEPP 2007 has referral requirements relating to Traffic Generating Development. In accordance with this Clause a formal referral was sent to the Roads and Maritime Service (RMS) and a response from the Sydney Regional Development Advisory Committee was received. The RMS have recommended conditions to be imposed with respect to ensuring safe access and egress from the site. These conditions relate to intersection treatments and provision of 'No Stopping' zones along Elizabeth Drive.

Based on the advice provided by the RMS and Council's Senior Traffic Engineer, the proposed development is satisfactory for the purposes of Clause 104 of SEPP 2007.

Sydney Regional Environmental Plan (SREP) No.20 – Hawkesbury/Nepean River

Sydney Regional Environmental Plan No.20 – Hawkesbury/Nepean River (SREP) applies to the subject land. The relevant planning strategies under this SREP are discussed below:

Cultural Heritage

The subject site has not been identified to contain any items of heritage. No heritage buildings are located in the vicinity of the site. The proposal will not have an adverse impact on cultural heritage.

Water Quality

SREP No.20 requires that future development must not prejudice the achievement of the goals of use of the river for primary contact recreation (being recreational activities involving direct water contact, such as swimming) and aquatic ecosystem protection in the river system. If the quality of the receiving waters does not currently allow these uses, the current water quality must be maintained, or improved, so as not to jeopardise the achievement of the goals in the future.

Based on the assessment of the proposal against potential air quality, ground water and effluent disposal impacts as discussed under *the likely impacts of the Development*, the application has not demonstrated that there is no impact on water quality and the existing environment of the Hawkesbury-Nepean River system.

Agriculture/Aquaculture and Fishing

SREP 20 requires that agriculture must be planned and managed to minimise adverse environmental impacts and be protected from adverse impacts of other forms of development. The relevant strategies include:

- Give priority to agricultural production in rural zones.
- Ensure zone objectives and minimum lot sizes support the continued agricultural use of Class 1, 2 and 3 Agricultural Land (as defined in the Department of Agriculture's Agricultural Land Classification Atlas) and of any other rural land that is currently sustaining agricultural production.
- Incorporate effective separation between intensive agriculture and adjoining uses to mitigate noise, odour and visual impacts.
- Protect agricultural sustainability from the adverse impacts of other forms of proposed development.

The proposed development does not give priority to agricultural production. Zone objectives are addressed in a further section of this report. The agricultural sustainability from adverse impact of the proposed development is addressed in further sections of this report.

Penrith Local Environmental Plan (LEP) 2010

The land is zoned RU2 Rural landscape under the provisions of the Penrith Local Environmental Plan 2010. The proposed development is defined as 'Cemetery and Crematorium' which are permissible uses in this zone with Council's consent.

Clause 2.3 Zone objectives and Land Use Table of the LEP requires that the consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone. These objectives are addressed below:

- 1. To encourage sustainable primary industry production by maintaining and enhancing the natural resource base*

The proposed development does not encourage primary industry production as it will occupy 36.62 hectares of agricultural land. It does not protect agricultural land and does not promote the concept of sustainable agriculture for fresh food supply to the cities. The proposal is inconsistent with the first objective of the zone.

- 2. To maintain the rural landscape character of the land*

The proposal includes construction of 46183 above ground burial areas, 10862 memorial plaques and 4060 tombs/columbariums. These huge numbers of structures to be located on elevated land will be highly visible from the Northern Road and Elizabeth Drive. The cemetery will not look like a small cemetery intended for a local village in a rural setting instead for a much larger catchment. The sheer size of the cemetery with elevated structures will spoil the rural landscape character of the land. The proposed development is not consistent with the second objective of the zone.

- 3. To provide for a range of compatible land uses, including extensive agriculture*

The proposed cemetery use is incompatible with the immediate land uses in the vicinity of the site. The presence of thousands of above and below ground burial areas on elevated land and the runoff through the burial areas that will meander through the existing poultry farm and to the existing creek may have contaminants from the burial areas. These contaminants may have potential to affect the existing farms surrounding the subject site. This leads to the incompatibility of the proposed use with the surrounding uses and conflicts with the existing land uses surrounding the site. The proposal is inconsistent with the third and fourth objective of the zone.

- 4. To minimise conflict between land uses within the zone and land uses within adjoining zones*

This objective has been addressed above.

- 5. To preserve and improve natural resources through appropriate land management practices*

The proposed cemetery will not preserve and improve the existing agricultural natural resource. The land will be locked for cemetery for many years to come that will destroy the natural agricultural resource located close to urbanised cities. The proposal is inconsistent with the fifth objective of the zone.

6. *To ensure development is compatible with the environmental capabilities of the land and does not unreasonably increase the demand for public services or public facilities.*

The environmental capabilities of the land that will be affected are addressed in a further section of this report. The proposal is considered inconsistent with the sixth objective of the zone.

Clause 4.3 – Height of buildings – No maximum building height is stipulated under this clause. However, the proposed chapels and function room and structures such as columbariums will protrude into the skyline and will have an adverse visual impact on the rural character of the area. This matter is addressed in detail in a further section of this report.

Clause 6.1 – Earthworks – Details of earthworks have not been submitted.

Clause 6.3 – Flood planning – The proposed development will not be affected by flooding.

Clause 6.5 – Protection of scenic character and landscape values – the development does not comply. This matter is addressed in a further section of this report.

Clause 6.6 – Servicing – No detailed commentary is provided in the Statement of Environmental Effects on compliance with the above clause.

Clause 6.14 - Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport - No commentary is provided in the Statement of Environmental Effects on compliance with the above clause.

Section 79C(1)(a)(ii) – Any Draft Environmental Planning Instruments

No draft environmental planning instruments apply to the site.

Section 79C(1)(a)(iii) – Any Development Control Plan

Penrith Development Control Plan 2010

The proposed development does not achieve some controls of the *Penrith Development Control Plan 2010*. . An assessment against the controls in the DCP is provided as in the Development Control Table in Appendix 5.

Section 79C(1)(a)(iv) – The Regulations

The Environmental Planning and Assessment Regulation 2000 requires the consent authority to consider the provisions of the Building Code of Australia (BCA).. Appropriate conditions can be imposed on compliance with the BCA.

Section 79C(1)(b) – The Likely Impacts of the Development

Air quality

The development application is accompanied by a report titled *Air Quality Impact Assessment – Luddenham Memorial Park* by PAE Holmes. This report has assessed air quality impacts from the crematorium. The maximum allowable emission concentrations in the report have been identified from the following sources:

- NSW Protection of the Environment Operations (Clean Air) Regulation (2010) (POEO Act)
- The United Kingdom Department for Environment Food and Rural Affairs (DEFRA) Process Guidance Note 5/2 (12) Statutory Guidance for Crematoria (2004)
- The Australian Cemeteries and Crematoria Association (ACCA) Environmental Guidelines for Crematoria and Cremators in Australia (2004).

The report states that crematoria are regulated as non-scheduled premises under the Protection of the Environment Operations Act. Notwithstanding this, the cremator is a fuel burning emission source and a source of principal toxic air pollutants. The report has assessed the predicted impact of some air pollutants based on emissions calculated from the *NSW Clean Air Regulation (2010) Schedule 2 Standards of concentration for scheduled premises: afterburners, flares and vapour recovery units*. These emission concentration standards must be met for the cremator furnace emissions. This should be achieved either with or without emission controls..

During public exhibition of the development application strong concerns were received from the community regarding impacts of the emissions from the crematorium, particularly, the matter in the emissions from the crematorium will land onto the roof of nearby properties and ultimately into the tank water used for drinking. Also, the emitted matter will contaminate the crops which are grown in the surrounding area thus contaminating food supply. Council appointed an independent consultant to review and assess the air quality issues related to the proposed development.

The independent consultant appointed by Council has advised that the approach used in the air quality report submitted by the applicant to assess air emissions is an appropriate approach. However the consultant has noted the following:

- The approach for the review and assessment of existing ambient air quality in the local region has identified the year 2010 but does not include comparison to other years
- The use of background air quality concentrations for a cumulative impact assessment of criteria air pollutants has not been discussed in the report
- The general modelling approach is appropriate and meets the requirements of the *Approved Methods (2005)*, However, deviation from the NSW EPA guidance document has been made for the option to model *Dry Deposition*. In addition to this, there is no reference to the modelling of wet deposition. While this is not entirely unreasonable for the assessment of the gaseous air pollutants, consideration should have been given to modelling dry and wet deposition for the prediction of particle deposition on roofs when assessing the accumulation of heavy metals in rainwater tanks. During exhibition of the DA the public raised concerns over deposition of metal particulates on roofs and their pathway into rainwater tanks. This is of major concern due to the residents in the local area not having access to the town water supply and their reliance on rain water tanks.
- Based on the emission rates calculated by the independent consultant the emission rates of the following substances are considered to be underestimated by a factor of:

Mercury	17.1
Carbon monoxide	3.5
Nitrogen oxides (NOX)	3.5
PM10	3.5
VOCs	11
Cadmium	17.6
Hydrogen chloride	3.5

Consequently, the impact is expected to be higher.

- An incorrect NPI derived emission rate value has been used in the modelling assessment
- The results for PAH presented in the report are incorrect.
- A cumulative assessment including background PM10 has not been made. PM10 emissions are high and emissions controls should have been considered and assessed.
- The accuracy of some of the information presented in the report and consequently the report's conclusions are debatable considering the issues associated with:

- calculation and selection of emission rates
- calculation and presentation of the impact assessment findings
- application of the impact assessment criteria.

Based on the information submitted with the development application and considering the above comments by the independent consultant, the proposed crematoria will have detrimental impact on the existing air quality and may result in deposition of particulate matter onto the roofs of the surrounding properties thus resulting in pollution of rainwater stored in the rainwater tanks. The food supply may also be contaminated by such emissions.

Groundwater Contamination

Geotechnique Pty Ltd (GPL) undertook a Groundwater Contamination Assessment at the subject site for the applicant.. As their assessment work progressed the initial interpretation of the groundwater regime was amended and consequently this resulted in the proposed locations of the below ground burials being changed. In the case of the effluent irrigation additional work was undertaken which amended the proposed system and its location.

During public exhibition of the development application strong concerns were received from the community regarding impacts of the contamination from burials on groundwater. The independent consultant appointed by Council has provided the following comments regarding the reports submitted on groundwater contamination:

- There is the absence of a hydrogeological interpretation of the site and its surrounds. The reports do not identify that there is a groundwater system which likely exists in the clay on the shale and also possibly the sandstone interface which is directly influenced by rainfall infiltration.
- A conceptual site model has not been developed to explain the groundwater flow regime. The potential receptors of the groundwater impacted by the proposed burials and on-site effluent disposal have not been identified. These potential receptors are the on and off-site dams (into which the groundwater may discharge), nearby creeks and users of both licensed and unlicensed groundwater extraction bores. The reports do not investigate and report on licensed and unlicensed bores in the vicinity of the site (of which there are at least 13).
- By understanding the potential receptors the studies should have been undertaken to identify and assess the risks which the proposed activities pose to them and assess whether the proposed site is suitable. The parameters (e.g. breakdown products of formaldehyde and bacterial indicators) were not identified along with proposed trigger values to be used to initiate remedial action should they be exceeded

On-site bore construction faults

- Some of the groundwater bores installed on site and converted to groundwater monitoring bores would be incapable of monitoring any potential plume moving off site in the upper levels of the geology.

Groundwater and Rock Levels

- The provided standing water levels indicate that the groundwater level is generally within 1 metre from the base of the proposed below ground burial plot (and may be higher as seasonal data has not been gathered and the groundwater levels have not been compared to rainfall).
- The groundwater monitoring data indicates that the groundwater level (saturated clay/rock) is close to the surface and likely to be within 1 metre or above the base of the burial pits. This view is backed up by the groundwater levels encountered in some of the excavated test pits (TP3 and TP4).
- Relying on the encountered water levels during drilling to justify the groundwater level is not supported because these levels are likely to be associated with the higher water bearing zones in the rock geology. It is considered that the geology above these levels is also likely to be saturated.
- There is a high likelihood that over a portion of the area proposed for below ground burials that the groundwater level is within 1 m or even above the base of the proposed burial plots and the burial plot may need to be excavated into shale (and groundwater) and not have the advantage of unsaturated clay material to attenuate pollutants before they enter the groundwater.

Hydraulic testing of the groundwater regime, direction of flow and risk of impact on receptors

There has been no standard hydraulic testing of the groundwater to assess its permeability. The submitted report recommends that permeability testing should be undertaken where the rock is encountered when digging the proposed graves but does not acknowledge that rock (sandstone) is likely to be encountered (as shown by test pits 6 and 7) in the area proposed for the below ground burials. The report should have been followed up by permeability testing and consideration of the results.

On-Site Effluent Disposal

The application has proposed to dispose of up to approximately 11,500 Lites/day of effluent (including mostly sewage) on-site. The proposed on-site treatment system includes an AWTs (aerated wastewater treatment system) and propriety Ecomax system. No details of the design, location or performance requirements of the AWTs are provided in the documentation supporting the development application, other than a request that they be addressed by the conditions of consent. A review of the proposed on-site effluent treatment has raised the following concerns:

- The proposed system does not appear to take into account the NSW EPA's *Environmental Guidelines: Use of Effluent by Irrigation*. The report assumes that groundwater will be at a significant depth (10-15m or greater), This may be incorrect and the groundwater may be a lot shallower at the site (i.e. groundwater levels at MW6 may not have recovered between drilling, development and measuring the water levels and/or groundwater in this area may be associated with temporary rainfall infiltration above the clay/sandstone interface); and
- It appears that the water balance relies on average rainfall and does not consider wetter period (up the 90th percentile as recommended by the NSW EPA's *Environmental Guidelines: Use of Effluent by Irrigation*). The use of average rainfall data will underestimate the performance of the proposed system.

Review against Published Guidelines submitted by the Community during Public Exhibition of the Proposed Development

The following sections provide commentary on the reports supporting the development application compared to the relevant guidelines:

World Health Organisation (WHO)1998 The Impact of Cemeteries on the Environment and Public Health

An assessment of the proposed cemetery (below ground graves) against the WHO Guideline draft conditions for siting and designing future well managed cemeteries is provided below:

- a) *Human health or animal remains must not be buried within 250 metres of any well, borefield or spring from which potable water is drawn.*

As discussed above licensed bores are located nearby the site, with the closest licensed bore being 600 m south of the site (used for domestic stock purposes). However there may be unlicensed bores within 250 m of the site and a survey should have been undertaken of the nearby property occupiers to assess this possibility.

- b) *The place or internment should be at least 30m away from any other spring or water course and at least 10 m away from any field drain.*

Based on the revised 'Expression of Burials' plan this condition does not appear to be met by the proposed cemetery.

- c) *All burials pits at the site must maintain a minimum of 1 m of subsoil below the bottom of the burial pit (ie, the base of the burial pit must be at least 1 metre above solid rock).*

The reason for this condition is to have a sound layer of soil between the base of the pit and rock as the soil can act as an attenuation zone. It can be seen

from MW5 which is near the proposed below ground burials that the shale interface is approximately 1.5 m from the land's surface and this bore is in close proximity to the proposed below ground burial plots. Also test pits 6 and 7 also encounter rock within 2 metres of the planned excavation depth of the below ground burial plots. Therefore it is likely that some of the plots will not have any soil beneath them.

- d) *The base of all burial pits on the site must maintain a minimum of 1 metre of clearance above the highest natural water table (and any variation in the water table should be taken into account.*

As stated above it is likely that there will be less than 1 m clearance from the base of some of the below ground burials to the groundwater. This would mean that this condition would not be met at the site. This circumstance contradicts the statements made in the SEE and supplementary document which reference the Dent Thesis.

- e) *Burial excavations should be backfilled as soon as the remains are interred, providing a minimum of 1 m soil cover at the surface.*

This condition appears to be met by the proposed cemetery.

United Kingdom (UK) Guidelines

Environment Agency (UK), *Assessing the Groundwater Pollution Potential of Cemetery Developments*, 2004 (UK 2004) are specific to the UK regulatory regime, however, they do offer relevant advice. The guidelines suggest a risk based assessment. The documentation submitted with the development application does not assess risk of the proposed development to human health and environment/livestock (i.e. the receptors).

Pollution of Water

Under the Protection of the Environment Operations Act 1997 ('the Act') Section 120 States '*A person who pollutes waters is guilty of an offence. In this section: pollute waters includes cause or permit any waters to be polluted.*

The decomposition of bodies in the proposed cemetery would potentially result in the contaminants from the bodies being flushed into the underlying groundwater and polluting it (WHO 1998 and Dent 2002). If the proposed cemetery is approved and below ground burials and on-site effluent disposal is commenced at the site, there is a likelihood that Section 120 could be contravened.

Under the Act, Penrith City Council would be the 'appropriate regulatory authority' responsible for regulation of any non-compliance with Section 120, i.e. pollution of waters. This matter is not addressed in the development application, other than suggesting that as the groundwater is more than 4 metres below the base of the proposed burials the waters will not be polluted.

Public Health Regulation 2012

Clauses 64 and 66 of this Regulation state:

'Unless otherwise approved by the Director-General in a particular case, a person who buries a body contained in a coffin must place the coffin so that its upper surface is not less than 900 millimetres below the natural surface level of the soil where it is buried. A person must not bury a body in or on any land if to do so would make likely the contamination of a drinking water supply or a domestic water supply'.

The depth of the proposed burials is 2 metres and it is expected that the 900 mm requirement will be achieved by the proposed development. It is unlikely that any water supply bores are located within a proximity which may be unacceptably impacted by the proposed development. The bores, if they are present would probably need to extend down through the saline Wianamatta Group and intercept groundwater in the underlying Hawkesbury Sandstone. Nevertheless to err on the side of caution, the applicant should undertake a survey to confirm that there are no unlicensed (or recently licensed) bores within approximately 250 metres from the proposed development which may be used for domestic water supply.

Likely risks that the proposed development would present to human health and the environment, including farming and livestock (via the groundwater pathway)

The most likely risk that the proposed development would present to human health and the environment is via polluted groundwater entering nearby surface water dams which overflow off site and this water used for agricultural purposes and should the polluted groundwater entering any bores within approximately 250 metres of the site likely used for agricultural purposes.

There is insufficient information provided by the applicant, especially in regard to the assessment of how the development will affect the groundwater environment and subsequent pathways to human health or environmental receptors (on or off site).

The applicant argues that based on the groundwater levels encountered during drilling that the groundwater level (due to groundwater being confined in the underlying rock) is more than 4 metres below the base of the proposed below ground burial plots. Consequently the applicant presents that the proposed below ground burials meet the recommendation of Dent 2002 for more than 1 m of unsaturated soils below the base of the burial plots and consequently the risk of the burial plots causing an impact is minor. The applicant also appears to ignore the fact that some of the below ground graves will need to be excavated into rock. The applicant does not accept the standing groundwater level data which suggests that the groundwater level (mostly in the clays) is much higher than observed when the bores were installed. Based on the data and Council's independent consultant's knowledge and experience it is considered that groundwater is more elevated at the site than is suggested by the applicant and resides in the soils (clays) above the rock interface. Consequently the applicant's argument regarding the site being suitable for the proposed below ground burials is potentially flawed.

Biosecurity Matters

Biosecurity is an important consideration for all agricultural producers and the proposed cemetery can create potential biosecurity risks on surrounding land. Agricultural enterprises on surrounding land are horticulture (market gardens, fruit production), intensive animal production (eggs, broilers) and grazing (cattle, sheep, horses). The farm biosecurity website (<http://www.farmbiosecurity.com.au>) states that farmbiosecurity brings together a range of practices that aim to keep Australian livestock and crops free of disease, pests and weeds. Keeping diseases, pests and weeds out is important because they can:

- reduce on-farm productivity
- affect farm incomes
- affect animal welfare
- reduce the value of farming land
- close export markets or reduce export prices – with a flow on effect to domestic producers.

Farm biosecurity highlights five key areas of risk, as the main ways that disease is spread:

- People movement
- Product movement
- Vehicles and equipment
- Feed and water
- Pests and weeds.

Of the above, people movement; feed and water; and pests and weeds are considered to be the most relevant biosecurity issues arising from the proposed cemetery development.

The applicant has not directly referred to biosecurity in any of the reviewed documents or reports. The applicant does however include a number of reports that could potentially relate to some biosecurity matters. These reports are based around water quality and contamination. The applicant has also provided documents that consider both groundwater and surface water management. The applicant has also made brief mention of a buffer zone but does not directly discuss this in relation to biosecurity.

There have been over 500 objections to the DA for a number of different reasons. The main areas of concern are the contamination of water sources. The surrounding agricultural enterprises rely on rooftop rainfall collection (tank water), dam water (surface water run-off) and bore water (ground water) for livestock drinking water and irrigation. There is no acknowledgement in the documentation that local residents do not have access to the Sydney Water public water supply and therefore rely on using only collected water for livestock drinking and agricultural purposes. There is also a concern that contamination of water sources may occur as a result of air quality pollution (emissions from the crematorium) and also groundwater seepage (burial residue).

The air quality impact assessment undertaken by PAE Holmes on drinking water quality is based on an industry publication '*Australian Cemeteries & Crematoria Association Environmental Guidelines for Crematoria and Cremators*' (May 2004), but there is no reference to potential implications on agricultural and livestock production. The DA does not directly address potential agricultural biosecurity issues on surrounding land and as such the documentation provided does not include a suitable biosecurity assessment. In particular, the application does not address the following in relation to biosecurity on surrounding lands:

- People movement – barriers to prevent ingress by cemetery patrons to surrounding land
- Feed and water – potential contamination of livestock drinking water and irrigation supplies
- Pests and weeds – potential movement onto surrounding land.

Land Contamination

Land contamination has been addressed in a previous section of this report. Further to that assessment Council's independent consultant carried out an assessment of the potential contaminants of concern (COPC) relating to burials against the following publically available guidance on the development and operations of cemeteries:

- NEPC, *National Environment Protection (Assessment of Site Contamination) Measure (NEPM)*, 1999
- Environment Agency (UK), *Assessing the Groundwater Pollution Potential of Cemetery Developments*, 2004
- Boyd Dent, *The hydrogeological Context of Cemetery Operations and Planning in Australia Thesis*, the University of Technology, December 2002
- Public Health (Disposal of Bodies) Regulation 2002 (Clauses 20 and 22)
- World Health Organisation (WHO), *The Impact of Cemeteries on the Environment and Public Health*, 1998

The independent consultant provided the following comments:

- The published documents provide summaries of the COPC and these include range of metals, ammonia, cations and anions, pathogens, microbes, pH and formaldehyde. The presence and concentrations of these COPC is dependent on the burial methods, burial density, and demographic of the population requiring burials. These are not discussed within the reports submitted with the development application.
- The development application does not include an assessment of the physico-chemical nature of the subsurface soils, including the physical descriptions, permeability and the behaviour of the soils with the potential contaminants; and the thickness of the unsaturated and saturated zones, desiccation, soil pH and cation exchange capacity. All these characteristics are essential to provide a robust understanding of the site specific nature of the site, as

detailed in the WHO15 guidelines the 'unsaturated soil layer has been found in past studies to be the most important line of defence against the transport of degradation products into aquifers';

- The development application does not include an assessment of the proposed burial depths within the subsurface deposits with consideration to the soils types, unsaturated/saturated nature of the subsurface deposits, physico-chemical nature of the deposits and migration pathways within the subsurface strata was not undertaken by the applicant.
- The development application does not include an assessment of the proximities to on and off site receptors (human health and the environment (e.g. surface water, groundwater, agriculture) and the migration pathways of the COPC to these receptors
- The Boyd Dent thesis states that the 'best soils for cemeteries in order to favour decomposition and with food decay product attenuation are well drained clayey sands'. The site specific subsurface conditions are questionable and there are contradictory descriptions on permeability.

There is insufficient information provided by the applicant especially in regard to the assessment of how the development will affect the soil environment and subsequent pathways to human health or environmental receptors (on or off site). There is also insufficient characterisation of the existing contamination status of the site in respect of potentially contaminating activities carried out, and a limited conceptual understanding of the nature of the unsaturated soils and their suitability for the proposed site.

Noise

A Noise Assessment Report prepared by Benzo Tonin and Associates dated 23 May 2011 was submitted with the development application. This report provided an assessment of noise from various sources within the proposed development. Council Officers undertook an assessment of this report and raised matters relating to noise from the use of the function room, chapels, caretakers facility, car park and various plant and equipment.

The applicant provided additional information on the matters raised by Council Officers. This additional information has satisfactorily addressed the concerns raised and Council Officers can provide conditions to address construction and operational noise.

Access, Parking and Traffic

Vehicle access to / from the site is proposed from about the location of the existing driveway off Elizabeth Drive. The new access is proposed by a single combined (7.0 metres wide) entry / exit two way access road to Elizabeth Drive and it is proposed to provide all vehicle access to the site for staff and visitors. This access road is proposed to meet Elizabeth Drive as a new tee junction with (RTA) BAR and BAL treatments for the 80km/h speed zone. Internal roads are proposed to be 7.5 metres

wide between roll kerbs and widened by a further 2.5metres where designated parallel parking bays are provided. An on site speed limit of 25km/h is proposed.

A traffic, access and parking assessment report prepared by Transport and Urban Planning Consultants has accompanied the development application. This report has included surveys of the existing car parking demands for similar cemetery and crematoriums. These surveys have indicated that the car parking demands varies from 105 to 226 spaces between 9.30am to 2.30pm during business hours Monday to Friday. The development application proposes a total of 334 parking spaces dispersed throughout the site.

The report also indicates that there will be a maximum (indicative) traffic generation level of up to 414 two way vehicle trips per hour, during business hours Monday to Friday and that the existing road network has the capacity to accommodate the increase in traffic.

The NSW Roads and Maritime Service (RMS), the Sydney Regional Development Advisory Committee and Council's Senior Traffic Engineer have assessed the above report and they have recommended conditions of consent to be imposed with respect to ensuring safe access and egress from the site. These conditions relate to intersection treatments and provision of 'No Stopping' zones along Elizabeth Drive.

Rural Character and Visual Impacts

The exiting rural character is dominated by large rural lots having little built form. These lots are undulating providing scenic landscape views to the residents of Luddenham and motorists on The Northern Road and Elizabeth Drive. The natural features such as creeks, dams and strands of vegetation add to the rural character. The following components of the proposed cemetery will deteriorate the existing scenic views which in turn will have a detrimental impact on the rural character:

- Thousands of memorial structures including huge columbriams erected on the existing elevated land. These structures will be viewable from the Northern Road, Elizabeth Drive all surrounding and many district properties. Any landscaping proposed will take a long time to establish and difficult to maintain throughout the life of the cemetery. Landscaping cannot be taken as a guaranteed component to curtail cemetery views from major focal points. The proposed cemetery site can even be viewed from elevated areas of the Luddenham Village.
- Large scale function rooms and chapels
- Internal roads and car parking areas.

Safety and Security

Safety and security of the site and the proposed operations has not been adequately addressed in the development application. The applicant was requested to address matters related to any possible vandalism of the site. This matter was also raised by the concerned residents during the public exhibition of the development application.

The applicant's response was that "There is no evidence to suggest that vandalism will occur as a result of the proposed development. That said the entrance point will to the site be controlled and monitored. Passive surveillance will occur naturally as well through the ongoing use of the site."

Although the applicant's response is not detailed enough, it is considered that safety and security matters can be managed by imposing conditions of consent relating to the preparation and implementation of a safety and security management plan that could include provision of appropriate fencing, installation of security cameras, appropriate lighting and regular security patrols.

Accessibility

The application was not accompanied by an Accessibility Report. The development application was reported to Council's Access Committee who raised the following matters:

- The proposal should be re-reported to the Access Committee when an accessibility report has been submitted by the applicant. Floor plans and a more detailed site plan should also be provided for perusal by the Committee.
- The slope of the site appears to be significant. The accessibility report should address this consideration.

The applicant was requested to provide an accessibility report. This report was not received by Council. However it is considered that accessibility matters can be resolved through appropriate design of various components such as pedestrian paths and entrance to buildings. These matters can be suitably conditioned.

Social and Economic Impacts

The environmental impacts discussed in the report have the potential to have an adverse economic impact on the existing poultry farms and other farms in the vicinity of the site. The proposed development due to its highly visible location may have social impacts on the residents/children of Luddenham Village who will encounter funeral activity on a frequent basis.

Section 79C(1)(c) – The Suitability of the Site for the Development

The site is unsuitable for the proposed development for a number of reasons outlined in the report particularly the following:

- The objectives of the RU2 Rural Landscape zone are not conducive to the proposal
- The site is a large landholdings suitable for agricultural production within the Sydney basin
- The environmental impacts of the proposed development will be detrimental to the existing poultry farms and other farms in the locality
- The emissions from the crematorium are likely to affect the quality of potable water which is relief upon

- The proposal will have a detrimental impact on the rural character and scenic and landscape values of the land.

Section 79C(1)(d) – Any Submissions made in relation to the Development

External Referral Comments

The table below summarises the results of external referrals in relation to the proposal.

<i>Referrals</i>	<i>Comments</i>
NSW Office of Water	No objection, subject to general terms of approval.
NSW Roads and Maritime Service	No objection, subject to general terms of approval

Internal Referral Comments

<i>Referrals</i>	<i>Comments</i>
Environment Team	Concerns were raised as discussed in the report.
Traffic Engineer	No objection.
Building Surveyor	No objection subject to conditions.
Development Engineer	No objection subject to conditions.

Community Consultation

The application was advertised in the local newspapers and notified to adjoining and nearby property owners and occupants in the Penrith and Liverpool Local Government Areas. The exhibition period was from 20 January 2012 and extended to 9 March 2012. Council received over 500 objections and petitions from the concerned residents. These concerns related to environmental impacts of the proposed development on the surrounding area. A brief of these concerns is provided in this paper.

The application did not adequately address matters related to air quality, groundwater and land contamination, wastewater and effluent disposal, noise, waste management and compliance with public health legislation. The applicant was requested to respond to these matters. After receiving the applicant's response which included amended proposal and additional information, the application was placed on public exhibition for a second period from 17 to 31 July 2012. Council received further submissions from the concerned residents. The concerns raised in those submissions mainly related to the following:

- *Air quality - The particulate matter in the emissions from the crematorium will land onto the roof of nearby properties and ultimately into the drinking*

water from the roof catchment. Also, this particulate matter will contaminate the crops which are grown in the surrounding area

- *Groundwater contamination as a result of burial of bodies and its affect on nearby poultry farms and other farms which use groundwater.*
- Contamination of drinking water and creeks*
- *Land contamination*
- *Bio security of animals/birds and crops and related land use conflicts*
- *Noise.*
- *Traffic impacts and non-availability of public transport*
- *Impacts on scenic heritage valley of Mulgoa and tourism*
- *Lack of appropriate buffer zones with surrounding properties*
- *Increase in salinity levels*
- *Permissibility and non compliance with the objectives of the RU2 zone*
- *Waste Management*
- *Impacts on agriculture*
- *Vandalism*

The concerned residents have also submitted various reports relating to environmental impacts of the cemeteries and crematoriums. Given the extent of public interest in this matter, two meetings were convened with the representatives of the Action Group formed by the local community that is opposing the cemetery, along with Council staff and Councillors. In these meetings the action group voiced their concerns and provided various reports relating to environmental impacts of the cemeteries and crematoriums. The concerns raised by the community have been addressed in the report.

Section 79C(1)(e) – The Public Interest

The proposal is not in the public interest for the reasons outlined in the report particularly the following:

- Contamination as a result of the emissions from the crematorium which will in turn contaminate drinking water. Residents in the local area rely on rainfall for their water. This is both ground water and water collection from roofing.
- Contamination of ground water due to high water table which can rise and fall during dry and wet periods. Should contamination occur it will be a major Bio Security issue. With a number of farming enterprises in close proximity of the site this could have a detrimental impact on these enterprises and overall food safety
- The proposal does not protect agricultural land
- The proposal will be detrimental to the scenic and landscape values of the land.

Conclusion

The development application seeks consent for a lawn cemetery incorporating a memorial garden, crematorium, three chapels, associated buildings and car parking on the subject site. The application was placed on public exhibition on two occasions and over 500 objections were received.

An assessment against the relevant provisions of the environmental planning instruments was undertaken which has revealed that the proposed development will be located in the vicinity of a number of sensitive land uses including poultry farms, other farms and rural residential uses. Such uses would be sensitive to potential environmental impacts that may result from the proposal mainly via potentially elevated contaminant emissions from the cremator and potential contaminant emissions to surface water and groundwater. The end result of these contaminants could be contamination of food supply.

The development is proposed to be located in a scenic landscaped area. This location will have a detrimental impact on the scenic and landscape values of the land and the rural character of area would also be detrimentally affected. The proposed development will not protect agricultural land. The assessment has concluded that the proposed development is not worthy of support.

Recommendation

That the report for DA11/1445 which proposes a lawn cemetery incorporating a memorial garden, crematorium, three chapels, associated buildings and car parking at Nos. 2207-2223 Elizabeth Drive Luddenham be received; and the proposed development be refused on the following grounds: -

1. The application is not satisfactory for the purpose of Section 79C (1) (a) of the Environmental Planning & Assessment Act 1979 as the proposed development is inconsistent with the following provisions of Penrith Local Environmental Plan 2010:
 - i) Objectives of the RU2 Rural Landscape zone
 - ii) Clause 6.5 – Protection of scenic character and landscape values
2. The application is not satisfactory for the purpose of Section 79C (1) (a) of the Environmental Planning & Assessment Act 1979 as the proposed development is inconsistent with the following provisions of Sydney Regional Environmental Plan (SREP) No.20 – Hawkesbury/Nepean River

Clause 6 Specific planning policies and recommended strategies

(3) Water quality

- (a) Quantify, and assess the likely impact of, any predicted increase in pollutant loads on receiving waters.*

- (d) Do not carry out development involving on-site disposal of sewage effluent if it will adversely affect the water quality of the river or groundwater. Have due regard to the nature and size of the site.*
- (g) Minimise or eliminate point source and diffuse source pollution by the use of best management practices.*

(8) Agriculture/aquaculture and fishing

- a) Give priority to agricultural production in rural zones.*
- b) Ensure zone objectives and minimum lot sizes support the continued agricultural use of Class 1, 2 and 3 Agricultural Land (as defined in the Department of Agriculture's Agricultural Land Classification Atlas) and of any other rural land that is currently sustaining agricultural production.*
- c) Incorporate effective separation between intensive agriculture and adjoining uses to mitigate noise, odour and visual impacts.*
- d) Protect agricultural sustainability from the adverse impacts of other forms of proposed development.*

3. The application is not satisfactory for the purpose of Section 79C (1) (a) of the Environmental Planning & Assessment Act 1979 as the proposed development is inconsistent with the following provisions of Penrith Development Plan 2010:

- C1 Site Planning and Design
- C4 Land management

4. The application is not satisfactory for the purpose of Section 79C (1) (b) of the Environmental Planning & Assessment Act 1979 as the likely impacts of the proposed development on the environment and surrounding uses will be detrimental in relation to the following:

- Air quality
- Groundwater contamination
- Land contamination
- Bio-security of adjoining farms
- Rural character and visual amenity.

5. The application is not satisfactory for the purpose of Section 79C (1) (c) of the Environmental Planning & Assessment Act 1979 as the site is unsuitable for the proposed development having regard to the adverse environmental and visual impacts of the proposed development.

The application is not satisfactory for the purpose of Section 79C (1) (e) of the Environmental Planning & Assessment Act 1979 as the proposal is not in the public interest having regard to the extent of submissions and petitions received and concerns raised in those submissions.