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SUBMISSION ON DA 201222226 – BLOCK 15 SECTION 42 GRIFFITH

Executive Summary

DA 201222226 should not be approved without significant modifications and the provision of more information by the proponent.

1. *The proposal does not comply with any of the Objectives for RZ4 in the Territory Plan.*

- a) RZ4 zoning applies to medium density residential development (25-60 dwellings per hectare). The proposal has a dwelling density of 80 dwellings per hectare. This density is categorized as high density and should not be approved in an RZ4 zone.
- b) Does not comply - the development does not respect or contribute to the neighbourhood and landscape character or carefully manage change.
- c) Does not comply - the proposal does not provide opportunities for medium density development because it is a high density development and is not close to a commercial or employment centre or a major transport corridor.
- d) Does not comply - this is a high not medium density development.
- e) Does not comply – the proposal is solely for accommodation.
- f) Does not comply – the proposal is solely for accommodation.
- g) Does not comply - No effort appears to be made to reduce potable water consumption by the use of grey or rain water or to encourage the use of solar energy or thermally insulated dwellings. ***The proponent has not demonstrated how Rule 46 47 and 48 will be complied with and should explain how the expected water reduction will be achieved. The proponent should also be required to ensure that a monitoring system is installed after completion to confirm that the reductions have been met.***

2. *The DA should be referred to the Conservator of Flora and Fauna and the authority shall seek a Statement of Heritage Effects and evidence of professional landscape conservation planning in respect to protected trees before the Application is considered by ACTPLA.*

This appears to be a mandatory requirement for an application of this size.

3. *The application does not comply with the Griffith Precinct Code.*

- a) The proponent should prove compliance with Rule 3, which requires reference to both the relevant Australian Standard and the plans for internal layout of the apartments.

- b) The development does not comply with Rule 4 in the south east corner of Block A and the south east corner of Block C. It may be in breach of the rule at the north west and the south west corners of Blocks E and F respectively.
4. ***A new flood hazard assessment should be carried out.*** Despite the Legislative Assembly's Planning Committee recommendation for a new flood assessment, the DA regurgitates the 2009 report, which relies on data collected in 1999. This situation is completely unsatisfactory. The 100 year average recurrence interval (ARI) estimates quoted in the DA cannot be checked because the Intensity-Frequency-Duration function used in the calculations has not been specified and furthermore no uncertainty estimates are provided for the model presented in the DA. A new comprehensive assessment should be undertaken.
5. ***A new traffic analysis should be undertaken to take into account the main changes in traffic flow rates due to recent changes in the Griffith area and to ascertain whether the proposed development needs to be scaled down as a result of the recent and expected increases in traffic.*** The traffic studies quoted in the DA by the proponent are out of date. They do not take account of the general increase in traffic in the area since the surveys were carried out, the impact of the 160 bed Baptist Community Services facility, the 31 apartment Altair development under construction in Stuart Street and the effects of the traffic calmers in and around Flinders Way.
6. ***Visitor Parking arrangements do not comply with the General Code.*** The proposed visitor parking arrangements are unacceptable. The rules require the provision of 34 visitor car parking places and this requirement has not been satisfied. Only nine places have been identified on the site. Twenty five more places are required on site.
7. ***More space on site should be allocated for workers' parking during construction.*** Our calculations indicate that the 607 m² allocated for car parking during construction will only cater for ~47 places. This will not be sufficient for a development of this size. A proper estimate of the space required should be made and allocated accordingly.
8. ***Sediment Control Plan needs to be endorsed.*** The plan shown on the file SEDIMENT-201222226-01 outlines a Sediment Control Plan but it is not clear if this has been endorsed by the ACT Environment Protection Authority. This should be done before the Development is considered by ACTPLA.
9. ***The Application does not comply with the Griffith Neighbourhood Plan.*** The scale of the proposal should be reduced to a 30 dwelling/hectare density; to be consistent with a medium density development.

Background

The Proposal

The Brumbies are seeking approval for the construction of 134 dwellings, comprising 34 one bedroom, 77 two bedroom and 23 three bedroom apartments, on the site of their current Club House at Block 15, Section 42, Griffith ACT. The site has an approximate area of 1.678 hectares or 16,780m², and the proposed apartments will have a total floor area of 13,297m². There will be 127m² of Service Area, giving a total Gross Floor Area (GFA) of 13,424m². It just complies with the maximum permitted plot ratio of 80%. There is to be one level of basement parking, with a total area of 9,804m², with parking for 234 cars.

General Comment

The Development Application comprises more than 450 pages of material, in over 80 pdf files. There is no table of contents or an index, and some of the material required for a detailed analysis was either illegible or had not been tabled until it was requested. The documentation provided lacks a comprehensive analysis against the required criteria. It is evident, however, that the proposal breaches the requirements in a number of important respects and that the Development Application should not be approved. .

GNCA's Analysis

1. Dwelling Density

The site is described as approximately 1.68 hectares in area (Environmental Report p5) and it is proposed to build 134 apartments. This equates to 80 dwellings per hectare.

Medium Density is not defined in the Territory Plan but, in the Glossary of the Canberra Spatial Plan (http://apps.actpla.act.gov.au/spatialplan/6_glossary/index.htm), Medium Density Housing is defined as “*Generally between 25 to 60 dwellings per hectare and not usually more than three or four storeys in height. Examples are townhouses and terrace housing.*” High Density Housing on the other hand is defined as “*Over 60 dwellings per hectare and generally five storeys or more high, for example apartment buildings.*” On these definitions, the proposed development, at 80 dwellings per hectare, and comprising apartments rather than town houses, should be classified as a high density not a medium density development, as RZ4 zoning requires.

Consequently it does not fall within the type of development allowed within the RZ4 zone.

The High-Density Liveability Guide developed by the Queensland University of Technology (http://www.highdensityliveability.org.au/about120_high_density_Living_impacts.php) supports

this conclusion with ‘high-density’ defined as ‘30 or more dwellings per hectare and includes flats, units, apartments, terraces, villas and townhouses’.

In New South Wales, the Growth Centres Commission has nominated the density ranges shown in the table below.

Net density	Number of dwellings per hectare
Residential Component in mixed used configurations	66 per hectare
High density development	40 per hectare
Medium density development	20-40 per hectare
Low density development	12.5-20 per hectare

(See: http://www.landcom.com.au/downloads/uploaded/Density%20Guide%20Book%20V9LR_0880.pdf)

The Application should be rejected on the grounds of excessive density.

2. Compliance with RZ4 - Medium Density Zone Objectives Residential

Considering each Zone Objective in turn, we make the comments in the table below.

Objective	Comment
a) Create a wide range of affordable and sustainable housing choices within a medium density residential environment to accommodate population growth and meet changing household and community needs.	The development is not situated within a medium density residential environment. It is surrounded by open parkland, a the Heritage Listed Griffith Oval, residential properties zoned as RZ1 and a park zoned as Urban Open Space and a parkland corridor also zoned as Urban Open Space. It cannot be construed as being situated within a medium density environment. <i>The DA does not comply.</i>
b) Ensure development respects and contributes to the neighbourhood and landscape character of residential areas whilst carefully managing change in suitable locations.	The development would comprise seven three storey buildings of apartments and one vast basement car park underlying all these buildings. As stated above the site is surrounded by open parkland zoned as Urban Open Space, a Heritage Listed oval and low density residential properties zoned as RZ1. Just across Flinders Way is the Blandfordia Heritage Precinct. It is therefore clear that the proposed development would conflict with the neighbourhood and landscape character of the residential areas, particularly those adjacent to the site. Moreover, the proposed development is not an example of carefully managed change in a suitable location. <i>The DA does not comply.</i>
c) Provide increased opportunities for medium density residential development, particularly in areas close to commercial and employment centres and along major transport corridors.	<i>The DA does not contribute to the Objective and does not comply.</i> The proposal involves high density development rather than medium density development. Further, the site is not close to a commercial or employment centre or a major transport corridor. It is 700 metres from Manuka, and Captain Cook Crescent cannot be classified as a major transport corridor because public transport along it is infrequent and there are no Town Centres at either end of the corridor.

d) Achieve developments with a high standard of residential amenity in medium density areas.	<i>Does not comply with this Objective</i> because it is a high rather than a medium density development and is not situated in medium density areas.
e) Provide opportunities for home based employment consistent with residential amenity.	<i>The DA does not comply with this Objective.</i> The DA is designed solely for accommodation.
f) Provide for a limited range of small scale facilities to meet local needs consistent with residential amenity.	<i>As for (e) above, the DA does not comply with this Objective.</i>
g) Promote energy efficiency and conservation and sustainable water use.	<i>Does not comply</i> , There is no strategy to promote energy efficiency and conservation or sustainable water use (more on this below).

Objective (g) Energy Efficiency, Conservation and Sustainable Water Use

Energy Efficiency

- a) It is disappointing that for a development of this size, there does not appear to have been any analysis on energy efficiency within the complex. The link between urban consolidation and more energy efficient living is at best tenuous (*e.g.* Gray *et al.* 2010, <http://www98.griffith.edu.au/dspace/handle/10072/37534>). For example when lifts are installed overall energy requirements are automatically increased. Consequently, this proposed development, will be more energy intensive than alternative uses of the site, such as two storey “walk up” housing.
- b) The seven proposed blocks do not even appear to have been oriented to maximize mid-day insolation. In fact, the close proximity of Block F to Block E immediately to the north, and Blocks A to B and B to C, may preclude good solar access. There is no evidence that solar energy is to be captured through solar voltaic panels, or through solar hot water heaters.

Sustainable water use

As Minister Corbell stated when he introduced DV 307 into the Legislative Assembly on 1 May 2012:

“The multi unit housing development code contains water sensitive urban design requirements and as the block has an area greater than 5000 square metres, the development will need to: Achieve a reduction in mains water; provide onsite stormwater retention; reduce stormwater pollutant export loads; and ensure that the capacity of the existing overland (major) stormwater system to the site is not exceeded in the 1 in 100 year storm event.”

This statement emphasises the importance of Rules 46, 47, 48 and 49 of the Multi Unit Housing Development Code.

- Rule 46 requires evidence that shows a minimum 40% reduction in mains water consumption compared to an equivalent development constructed in 2003, and that the target is met without any reliance on landscaping measures to reduce consumption.
- Rule 47 requires that the site demonstrate “a storm water storage greater than or equal to the volume of 1.4 kl per 100 m² of impervious area and release over a period of 1 to 3 days”;
- Rule 48 requires that the development needs “to provide evidence showing a reduction in average annual storm water pollutant export load of:
 - a) suspended solids by 60%
 - b) total phosphorous by 45%
 - c) total nitrogen by 40%
 compared to an urban catchment with no water quality management controls, using the MUSIC model to demonstrate compliance”; and finally;
- Rule 49 requires that all sites of size greater than 2,000m² and subject to redevelopment need to ensure that the capacity of the existing overland (major) storm water system to the site is not exceeded in the 1-in-100 year storm event.

There is no evidence that there is any intention to reduce water consumption, nor the runoff from the block (which will increase from its current level because of the dramatic increase in the impermeable cover of the site), by making any use of captured rainfall for domestic purposes such as clothes washing, toilet flushing, or watering of gardens.

The current DA addresses these issues on the sheet called Storm Water – 01 and labelled Storm Water Plan. The drawing indicates that the development is to have 50 kl total rainwater storage to hold rain from the 5,850m² roof. This is to be used for garden watering and/or disposal via a 140 kl gravel trench with 50% void, giving it a water holding capacity of 70 kl. Any water falling onto an impermeable surface at ground level (4,800m²) is to also be disposed of by way of the gravel trench. Apparently when the trench is full it will drain directly into the storm water drain running beside Flinders Way along the northern boundary to the site.

The STORM 01 plan indicates that the proponent believes that Rules 46, 47 and 48 have been complied with and a 41% reduction will be achieved by this approach together with the use of four star shower heads, three star clothes washing machines, three star dish washers and four star toilets. However, there are no calculations to support this conclusion.

While some reduction in water usage can be made by the use of more water efficient domestic appliances, much of this reduction requires the active support of residents. The proposed 41% reduction appears optimistic, and if residents are not prepared to accept the long washing machine cycles, or endure very low-flow showers and toilets which have trouble flushing away effluents, then it is relatively easy for them to evade these inconveniences. ***The proponent has not demonstrated how Rule 46 will be complied with. The proponent should explain how the expected water reduction will be achieved by the introduction of each of the items listed, and explain why residents (especially if owner occupiers) will not circumvent these restrictions.***

The proponent should also be required to ensure that a monitoring system is installed after completion to confirm that the reductions have been met.

With a total (roof plus impermeable ground surface) impermeable area of 10,650m² it appears that storm water storage equal to or exceeding 149 kl would be required under Rule 47, and only 120 kl (50 kl rainwater storage tank, 70 kl gravel trench) appear to be available. ***We cannot see how compliance with Rule 47 will be achieved with the current proposal.***

The proponent asserts that the reduction in solid matter and nutrients required under Rule 48 will be met by use of the gravel trench. Retention of the excess Phosphorus and Nitrogen in the vicinity of the trench will result in vigorous eutrophication of the surrounding soil, and some additional nutrients may eventually make their way down stream.

The proposal does not comply with Rule 48.

3. Rule 49 and Flood risk

The Standing Committee on Planning, Public Works and Territory and Municipal Services recommended, in a unanimous decision:

“that any redevelopment of Section 42, Block 15 Griffith be conditional on comprehensive flood studies being undertaken and made publicly available; the studies to model not only impacts on Section 42 but also flooding impacts on surrounding areas and those towards Canberra Avenue pre and post development, recognising that any use of infill on Block 15 may impact on flooding in nearby areas.”

The Committee’s report was adopted by the Legislative Assembly.

Despite this clear direction that a new and comprehensive flood study be undertaken, the proponents have failed to undertake and provide this. They have merely attached a four page “Flood Study Report” by Cardno Young which adds nothing to our knowledge of the flood situation. The report notes that the storm water system in the area was reviewed in 1978 by the then Department of Housing and Construction. This review was itself reviewed in 1999 by Bill Guy and Partners. The Cardno Young report claims to draw upon work done for the 1999 review, but neither the data nor the methodology used have been provided.

The proponent regards the provisions of Rule 49 as “Applicable but not required due to the proximity to the stormwater floodway.” Refer the statement by Cardno. This refers to Cardno's attempt to evade compliance with Rule 49, with a letter from Steve Bresnan of Cardno Young to Cox Architecture (the proponent’s architects) arguing that “attenuation of 5 year average recurrence interval (ARI) and 100 year ARI post-development discharges to pre-development levels as required by ESDD’s Waterways Code is not necessary for the proposed redevelopment and, in fact, could have a detrimental effect on downstream flows and flood levels if implemented.”

The proponent and their consultant engineers need to explain why they believe this to be the case, rather than just stating it. For example, what range of rainfall events they have been taken into account in reaching this conclusion. In any case, there appears to be no evidence in the DA that ESDD has agreed to the approach recommended by Cardno.

This means, in effect, that all parties (apart from Cardno Young) are asked to take the report's conclusions on trust. This subverts the entire point of making the supporting documents to DAs public so that interested members of the public can read and assess the information available to the proponent's consultants and form their own opinions as to the soundness of any conclusions drawn.

The report concludes that

“The modeling indicated that the lower bowling green on the western side of the site would be inundated to a depth of 0.53 m and the bottom floor of the existing club building inundated to a depth of 0.15 m in a 100 year ARI storm event. The remainder of the site is above the 100 year ARI flood.”

And “The model was then run for the proposed redevelopment by assuming that the development would cover the entire site except for a 6 m setback on each side of the block. The modeling indicated that the flood level on the western side of the site would be increased by 0.34m from RL 584.34 to RL 584.68. The flood levels around the remainder of the site are unaffected and thereby do not impact on the proposed redevelopment.”

There are a number of difficulties with these conclusions:

- **Firstly**, there is a worrying lack of research underlying the latest flood assessment. Cardno Young appears to have done nothing to investigate local circumstances. We therefore conclude that the information presented in the DA is unsatisfactory and more needs to be done.

For example the input function used to generate the model has not been specified and therefore the results presented cannot be confirmed.

Modelling floods usually necessitates specifying a rainfall Intensity Frequency Duration function as an input to obtain the model. All we know from the information provided is that a 1 hour storm was used. This is not sufficient. We need to know how much rain was precipitated, the area over which it fell and also why the one hour period was selected.

We are not told of the assumptions underlying the conclusions of the Flood Report, and in particular whether these reflect realistic assumptions about current rainfall patterns (which arguably are not the same as those one might reasonably expect in 1999, let alone 1978). It is now a warmer world, and the increased energy in the atmosphere means that we can expect, if nothing else, greater variability and intensity in weather patterns.

Up to date Intensity Frequency Duration functions can be obtained from the Bureau of Meteorology and better data should be available now than the 1999 data allegedly used to derive the results shown in the DA.

- **Secondly**, it should be pointed out that the 100 year ARI is only an estimate and for a proper analysis the uncertainties of this estimate should be stated.
- **Thirdly**, it is not clear whether or not the modelling makes allowance for the displacement factor arising from the extensive underground basement proposed for the site.
- **Fourthly**, there are no estimates in the DA of the effect of adding a 1.7 hectare impervious layer to the hydrological and the drainage patterns in the area surrounding the site.
- **Fifthly**, while the report concludes that the ground level for the project would be above the expected flood level, no consideration is given to the car park basement. At what rate can water be expected to enter during the 100 year flood, and what steps would be necessary to avoid damage to vehicles parked there?
- **Sixthly**, no consideration appears to have been given to assessing what challenges the likelihood of the basement being surrounded by saturated soil pose to the design of the basement and the overlying buildings. What steps if any would need to be taken to anchor the building?

In short, ***the flood hazard study requirements have not been met; this Application should be not be approved until a comprehensive flood study is undertaken as recommended by the Legislative Committee's Planning Committee.***

4. Compliance with Multi Unit Housing Development Code

The proposal breaches the Multi Unit Housing Development Code in a number of important respects including non-compliance with the Griffith Precinct Code (Rule 32), provisions relating to trees (Rule 40) and water usage and storm water provisions (Rules 46 to 49) which already been mentioned above. Issues relating to trees and the Griffith Precinct Code are commented on further below.

4.1 Trees

Rule 40 - This rule applies to a development that has one or more of the following characteristics:

- a) requires groundwork within the tree protection zone of a *protected tree*, and
- b) is likely to cause damage to or removal of any *protected trees*.

The authority shall refer the Development Application to the Conservator of Flora and Fauna.

Notes:

1. Under the *Planning and Development Regulation 2008* a development application for a *declared site* under the *Tree Protection Act 2005*, must be referred to the Conservator of Flora and Fauna.
2. The authority will consider any advice from the Conservator of Flora and Fauna before determining the application in accordance with the *Planning and Development Act 2007*.
3. *Protected tree* and *declared site* are defined under the *Tree Protection Act 2005*.

As outlined in the DA (TREE-201222226-06), the development requires groundwork within the tree protection zones of protected trees.

As such, the authority is required to refer the Development Application to the Conservator of Flora and Fauna. ***Because there is no evidence in the DA that this happened, this should be done before the Application is considered by ACTPLA.***

4.2 Comments regarding heritage sensitivities and the protection of trees

The proposed development is situated in an area known by locals as ‘Old Canberra’ and has been identified in the past as being of territorial significance. The proposed development is designed of materials traditionally associated with modern industrial and office buildings. The scale and density of the proposal is completely out of keeping with the surrounds. The current design could adversely impact the heritage value of listed areas both opposite and adjacent to Block 15. The proposed views from Blandfordia and Griffith Oval 1 will primarily be of metal panels and glass (refer to proposed drawings ELEV-201222226-Building_D-01.pdf and ELEV-201222226-Building_B-02.pdf, respectively).

DA 201222226 has not shown consideration for the heritage sensitivities of the area and as such ***the authority should seek the advice from the Heritage Council*** to ensure the design, aesthetics and materials proposed do not adversely affect the surrounding heritage listed areas.

Griffith Oval No. 1 is of particular value to the community. It is listed on the ACT Heritage Register because it “*is a rare and unique example in its comparative intactness of mature deciduous plantings which form a dense perimeter ring around the oval, providing a largely intact historical landscape setting. The mature plantings represent sequential planting at the site which began in the 1930s and extended through to the 1950s*”.

The Heritage Council advised (in its submission to DV 307) that “*the proposed rezoning is acceptable provided that a condition is appended to any approval for this lease variation. This condition should require the retention of the trees on the common boundary, providing sufficient distance from these trees during planning and development to allow their continued good health, and replacing these trees when they reach the end of their lifespan.*”

The aesthetic qualities of the oval's mature plantings are valued by the neighbourhood community, the public who use the oval and the wider community for the immediate and uncompromised visual backdrop they provide to the oval.

The National Trust in its submission to ACTPLA on DV 307 stated that: *“a proposed development, adjacent to the heritage site, has the potential to adversely affect the features intrinsic to oval's heritage significance in a number of ways, including: ‘The potential loss of some of the perimeter trees that form the dense perimeter ring to the oval.’”*

As stated in Heritage (Decision about Registration for Griffith Oval No. 1, Griffith) Notice 2010 Notifiable Instrument NI 2010 – 476, made under the Heritage Act 2004 Section 42 Notice of Decision about Registration, a feature that is *“intrinsic to the heritage significance of the place which require conservation include: The oval together with its historical landscape setting, including the perimeter ring of mature deciduous plantings, forming an immediate and unimpeded aesthetic backdrop to the oval.”*

It is further stated that *“Any works that have a potential impact on significant fabric (and / or other heritage values) shall be guided by a professionally documented assessment and conservation policy relevant to that area or component (i.e. a Statement of Heritage Effects – SHE).”* In addition *“Any actions impacting on the significance of the Griffith Oval No. 1 are to be based on professional landscape conservation planning.”*

Trees on the Eastern side of Block 15, Section 42 form part of the perimeter ring of mature deciduous plantings around the oval. The proposed development of Block 15 is an action that impacts on the significance of the Griffith Oval No. 1. As such, ***the authority is required to seek a Statement of Heritage Effects –and evidence of professional landscape conservation planning in respect to protected trees.***

4.3 Comment on specific trees

The Brumbies Site Griffith Tree Assessment (TREE-201222226-Report-01.pdf) identifies tree 278 as a Street tree in good health and as follows:

Tree No.	Species	Height (m)	Trunk Dia.	Trunk Circum (mm)	Health	Tree Surgery	Canopy diam (m)	Expect Longevity	M'ment Status	TDA applies
278	Ulmus Parvifolia	8	0.35	1.1	Good	Light Prune	14	>25 years	High	No

However as outlined in the DA (TREE-201222226-Report-01.pdf) tree 278 is marked for removal.

The DA includes an Application to undertake tree damaging activities (TREE-201222226-TDA_application-02.pdf). In particular it identifies the removal of trees 133, 152, 161 and 167.

Regarding tree 133, in the Tree Assessment Report dated 31 July 2012 (TREE-201222226-Report-01.pdf), Tree 133 was identified as follows:

Tree No.	Species	Height (m)	Trunk Dia.	Trunk Circum (mm)	Health	Tree Surgery	Canopy diam (m)	Expect Longev	M'ment Status	TDA applies	Notes
133	Ulmus Procera	13	0.3	0.9	Fair	Formative Pruning	4	10-25 years	Medium	Yes	Larger tree amongst numerous suckers.

However in the report (TREE-201222226-Report-03.pdf) dated 28 August 2012 (less than one month after the initial report), tree 133 is identified as having poor health.

Tree number	Name of tree	Common name	Condition/problem	Action required
133	Ulmus procera (protected by legislation)	English Elm	Poor health Head has dropped out.	Remove and stump grind

It is difficult to see how the tree could have deteriorated so much in so short a time.

The DA needs to be referred to the Conservator of Flora and Fauna for a Statement of Heritage Effects – and evidence of professional landscape conservation planning in respect to protected trees. These materials have not been included in the DA.

5. Compliance with Griffith Precinct Code

The Griffith Precinct Code imposes six mandatory rules on any development on Block 15, Section 42, Griffith. The Application does not comply with Rule 4 and compliance with Rule 3 has not been demonstrated.

Rule 3 states that “100% of the dwellings of any multi unit housing development are designed to meet the relevant Australian Standard for Adaptable Housing and any relevant considerations in the Access and Mobility General Code”.

The proponent should demonstrate compliance with Rule 3. This requires reference to both the relevant Australian Standard and the plans for internal layout of the apartments.

Rule 4 states “Building and construction works do not encroach on land within the drip zone plus 2.0 m of the existing stands of trees on the perimeter of Block 15 as identified on Figure 1.”

The development does not comply in the south east corner of Block A, which clearly breaches this Rule, the south east corner of Block C, which appears to breach the Rule and north west and the south west corners of Blocks E and F respectively.

The Application does not comply with the Griffith Precinct Code.

6. Traffic flows

The Development Application proposes the construction of 134 one, two and three bedroom apartments. This would generate large additional traffic flows and add to traffic congestion in the area, particularly at peak traffic times.

The 2009 traffic impact study used Development Application is now obsolete because of the general increased traffic flows in this part of Canberra and the impact of the current developments in Stuart Street. It concluded, that at the time: *“the proposed development will not have any significant adverse impact on the surrounding road network in terms of traffic efficiency or road safety and that no ameliorative treatment be implemented as part of the proposed development.”*

The detailed evidence in the supporting documentation does not support this conclusion. The traffic consultants measured current peak hour morning traffic volumes in October and December 2009 in the vicinity of Block 15 and found that in both Flinders Way and Austin Street the traffic flows were above the levels specified in ACTPLA’s Residential Subdivision Development Code.

For example in Austin Street the 2009 survey of the two way traffic volume in peak hour was 307 vph, above the 300 vph specified in the Development Code. The expected number in the Mott MacDonald report is 365 vph at peak hour.

No allowance has been made of the impacts of the 160 bed Baptist Community Services old person’s high care nursing home (effectively a hospital), the 31 apartments being constructed near the Griffith Shops on Stuart Street and other recent developments in the Griffith/Narrabundah/Red Hill areas. These will all add to traffic volumes in the area, particularly to roads like Austin, La Perouse and Dalrymple Streets, which will be used to access Canberra Hospital and the Woden Town Centre.

Furthermore, since the 2009 analysis, traffic calmers have been installed on La Perouse Street, along Flinders Way and Murray Crescent. It is not known how the traffic flows have changed as a result of these.

In addition, traffic volumes throughout Canberra have increased since 2009. So the conclusion that *“it is expected that all roads and intersections in the vicinity of the site will continue to operate at a good Level of Service”* is not evidence based.

An order of magnitude calculation of the traffic impact is given in the box below.

The Mott Macdonald Report concludes that the new development will generate an additional 804 vpd along Austin St, a 40% increase, based on the assumption that each apartment generates 6 vpd. This assumes that all other variables remain constant, which is unlikely. In particular, this ignores the two major developments currently underway near the Griffith shops on Stuart St, viz the construction of the 160 Aged Persons Nursing Facility (basically a hospital) for Baptist Community Services at the site of the former O'Connell Centre, and the construction of the 31 apartment (45 bedrooms) Altair development at 52-60 Stuart St, opposite the shops. These can be expected to generate considerable traffic (256 vpd for the nursing home, 186 for the Altair development, a total of 442), as can the continuing efforts by the government to "reinvigorate" Griffith Shops (we can expect more bars like the Gryphon) and to "intensify" development in the associated RZ2 zone.

In addition, the figure of an additional 804 vpd along Austin St appears decidedly conservative. The trip generation parameter of 6 vpd was published by the NSW RTA in October 2002, and can be expected to significantly underestimate traffic generation in Canberra. Firstly per capital car ownership in Canberra (719 cars per 1,000 persons, Jan 2011) is higher than in Sydney (660 cars per 1,000 persons, Jan 2011), and car ownership throughout Australia is higher now (730 cars per 1,000 persons, 2011) than it was in 2002 (632 cars per 1,000 persons). In addition, about 22.9% of people in Sydney take public transport to work, compared with only about 7.7% in Canberra. Adjusting the trip generation parameter by the increase in the number of cars per head overall, and the greater propensity to own a car in Canberra, suggests that this number should be

$6 \times 730/632 \times 719/660 = 6 \times 1.155 \times 1.089 = 7.55$ vpd.

If we use this revised number the expected additional traffic along Austin St can be estimated at 1012 vpd, or an increase of about 51%. We can be sure that those using Austin St, or living nearby, would notice the difference. This would increase daily traffic along Austin St to over 3,000 vpd, which would exceed its maximum daily capacity (assuming that it, like Stuart St, is assessed to be a "minor collector road"). To be consistent we should also increase the additional traffic estimates for Stuart St arising from the nursing home and Altair developments by 25%, to 553 vpd.

The 134 apartments in the development will provide a total of 257 additional bedrooms to the area. This is about the same as adding a residential district as big as that surrounded by Captain Cook, Stuart St and Hovell St/Favenc Circle to the local area. Whether one accepts these traffic estimates or not, it is undeniable that there will be considerably more traffic on the roads in this part of Canberra than there has been in the past.

The GNCA recommends that a new traffic analysis be undertaken to take into account the main changes in traffic flow rates due to recent changes in the Griffith region and ascertain whether the proposed development needs to be scaled down as a result of the recent and expected increases in traffic flows.

7. Car Parking

7.1 Visitors' parking

There is inadequate provision for visitor parking. The Parking Provisions as per the General Code require 34 visitor car parking places for the proposed development. In the Application (TRAFFICREPORT-20122226-01 and SITE-20122226-01) only 9 places are identified on the site. It is proposed that the other 25 will be found along Austin St.

This arrangement is totally unacceptable, especially given that one side of Austin Street is zoned RZ1. There are already too many cars parked on the verges and streets of Canberra.

The Application is in breach of the Code and should not be approved. It is essential that the Code's requirements be met - namely that provision should be made for an additional 25 suitable visitor parking places on site.

7.2 Construction Workers' Parking

The developers of the 31 apartment Altair development in Stuart St, opposite the Griffith shops, have publicly estimated that the maximum number of construction workers working on the site at any one time would be about 40. Prorating this figure to a development of 134 apartments suggests that construction workforce could reach 170.

The plan "Site Works Temporary Traffic Management Plan" indicates that it is intended to retain the existing car park to the south and west of the block to use as parking for construction workers during the construction phase. 170 workers are likely to require parking for at least 85 vehicles, and it is unlikely that the proposed parking area will be able to accommodate them. It is also not clear whether the vehicles will be parked on the current bitumen surface in the car park or on the verges beneath the drip lines of the trees. Cars parked beneath the trees will not be acceptable.

As the proponent has not provided any information about the construction workforce or their likely parking needs, we have made some estimates (in the box below) on the parking area required. This amounts to between 1100 m² and 1500 m².

The area allocated in the DA is ~607 m². As this is scarcely larger than the work force for the Altair project (20 places needed) we conclude that the identified parking space is grossly inadequate.

The developer should be required to address this problem as a matter of urgency.

Preferred Builders, the firm constructing the Altair development at 52-60 Stuart St, has estimated the maximum workforce on the site at 40, and indicated that these will need parking spaces for 20 vehicles (indicating a possibly optimistic assumption that only half the workers will travel to the site in their own vehicles). The Altair development involves the construction of 31 one and two bedroom apartments with a total floor area of 2,325m².

The Brumbies development involves the construction of 134 one, two and three bedroom apartments with a total area of 13,424 m².

If we ignore the larger size of the Brumbies' apartments and just adjust for the differences in the number of apartments, the Brumbies development could expect to have a maximum work force of:

Workforce = $40 \times 134/31 = 172.9 = 173$; to be conservative we can round this down to 170.

If we assume the workforce scales with the actual amount of construction and compare the total areas of the developments. We have:

Workforce = $40 \times 13424/2325 = 230.9 = 231$; let's round this down to 230.

So it is reasonable to assume that the maximum workforce at any one time at the Brumbies site will be between 170 and 230. Using Preferred Building's estimate that half of these will bring their vehicles; the site needs to provide parking for between 85 and 115 vehicles.

Assuming minimum dimensions for each parking space of $2.4 \text{ m} \times 5.4 \text{ m} = 12.96 \text{ m}^2$ (say 13 m^2). For 85 vehicles we will need an area of $13 \times 85 = 1,105 \text{ m}^2$, and for 115 vehicles a minimum area of $13 \times 115 = 1,495 \text{ m}^2$.

These estimates exclude the need for access to the vehicle parking spaces, and assume that all vehicles will fit within these minimum parking spaces. This latter assumption is unlikely to be correct, as many construction workers drive 4 wheel drive vehicles, or 4 door utes (both types of vehicle more likely to require at least 6 m of parking rather than 5.4 m. In addition, many workers will have tradesmen's trailers behind their vehicles.

The area identified by the proponent for parking of construction workers vehicles (see 41 - PLAN-201222226-Temp_Traffic-01.pdf.) appears to have (reading off an A4 print of the plan with a ruler) the dimensions:

$8.2 \times 42.0 + 31.6 \times 5.9 + 12.9 \times 5.9 = 344.4 + 186.4 + 76.1 = 606.9 = 607 \text{ m}^2$

This estimated available area is considerably lower than the estimated parking requirements of $1,105 \text{ m}^2$ to $1,495 \text{ m}^2$. Clearly the identified parking space is grossly inadequate.

Estimating the typical parking space at 13 m^2 suggests that the identified parking area could accommodate at most some $607/13 = 46.7 = 47$ workers.

8. Erosion and Sediment Control Plan

The Multi Unit Housing Development Code (Effective: 10 August 2012) for RZ4 states: Rule R44

For development on a site greater than 0.3 of a hectare, the application is accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.

Criteria: C44

If an endorsed Sediment and Erosion Control Plan is not provided the application will be referred to the relevant agency in accordance with the requirements of the Planning and Development Act 2007.

The development is on a site greater than 3,000 m², as such the application must be accompanied by an Erosion and Sediment Control Plan endorsed by the ACT Environment Protection Authority.

Plan SEDIMENT-201222226-01 outlines a Sediment Control Plan but there is no evidence that has been endorsed by the ACT Environment Protection Authority.

The Plan needs to be referred to the ACT Environment Protection Authority for consideration. If the Plan is not endorsed by the EPA, Development Approval should not be given.

9. Griffith Neighbourhood Plan

One of the key strategies outlined in the Griffith Neighbourhood Plan is:

“To promote high-quality residential development that is sympathetic to the existing garden suburb neighbourhood character in terms of scale, form and landscape setting.”

The current proposal, which seeks to construct high density dwellings (80 dwellings/hectare) in an area surrounded by open space and low density (RZ1) residences, clearly does not comply with this strategy.

The scale of the proposal should be scaled-back to 30-40 dwellings/hectare density to be consistent with medium density development.

A handwritten signature in black ink, appearing to read 'David Bentham', with a stylized, cursive script.

President

17 November 2012