



KOALA KOALITION
ECONETWORK PORT STEPHENS INC.

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18/1/24

Attention: General Manager, Port Stephens Council

Via: email to council@portstephens.nsw.gov.au because DA Tracker submission portal not operating

Re: **Kings Hill – Monarch’s Rise** Development Application (16 - 2013 - 599 - 1)

Five into 100 lot Torrens title subdivision, clearing and associated site works

514 Newline Rd, Kings Hill 2324 NSW

587 Newline Rd, Raymond Terrace 2324 NSW

587A Newline Rd, Raymond Terrace 2324 NSW

603 Newline Rd, Raymond Terrace 2324 NSW

603A Newline Rd, Raymond Terrace 2324 NSW

Dear Sir,

KKEPS wishes to acknowledge the consultation Council’s Natural Systems staff has held with the proponent of this development, particularly in regard to recent requests for further information including flora and fauna surveys and impact statements. The additional information was necessary to address the biodiversity issues for the above-mentioned lots, which were not always part of the Kings Hill URA/KHD investigations, and we agree is relevant as part of the bigger picture.

Using the same logic, we are uncertain why only the first 100 lots of this larger development are the subject of this DA submitted to Council – except that by keeping the estimated cost to \$7,820,390.00 it doesn’t reach the threshold to trigger assessment through the State process. The first 100 lots are also in an area that has either been cleared or is less densely vegetated than the more easterly plots in the remaining development footprint (see plate 1). It seems the proponent may be avoiding appropriate levels of scrutiny for the whole Monarch’s Rise development. We object to this staged approach.

We believe the whole of the Monarchs Rise development should be considered together to allow appropriate consideration of the 1000 lot locations not all of which have been scoped in the various precincts mapped to date. For example, clarification is needed on the location of all access roads from the various precincts onto Newline Road and other appropriate planning considerations for the whole development.

It is not in the public interest for Council to approve approximately 10% of this intended housing development, and simultaneously approve the habitat clearance for future stages that are not yet under consideration for approval. The validity of this objection is supported by all the proponent's environmental reports applying to the whole development site. The proponent has not provided any significant or valid reasons why it should be considered as a part, rather than the whole housing development being considered, as is obviously intended.

Approval of this DA will provide a foot in the door for a potentially unsuitable development which we believe will have a negative impact on the community and local environment. For this reason, we are providing objections to the wider development as far as possible.

State Housing pressure

The NSW State government is demanding Port Stephens Council provide a further 11,000 homes in the LGA within 20 years. We urge Council to also heed the NSW government mandate for Councils not to allow residential homes to be built on flood plains where home-owners may not be able to find or afford appropriate home insurance against floods and/or bushfires. A high priority for social amenity is that residents must be able to safely egress their homes during emergencies.

Council resources

Council is already known to be struggling with the costs of maintaining local regional roads that are subject to floods and heavy vehicles and is, no doubt, predicting that these costs will escalate in the face of climate change and SSD applications.

Consideration should be given to the Voices of Wallalong and Woodville (VOWW) submission that advises of the certain flooding of Newline Road and that the intersection with Six Mile Road will require upgrading with the extra traffic generated from this development.

Until such infrastructure funding is available, Council is not in a position to approve this new development which will benefit the proponent commercially but will be a financial burden to all the council's ratepayers. It is not in the public interest.

Litigation

This DA is intrinsically linked to the KHD application which has been refused.

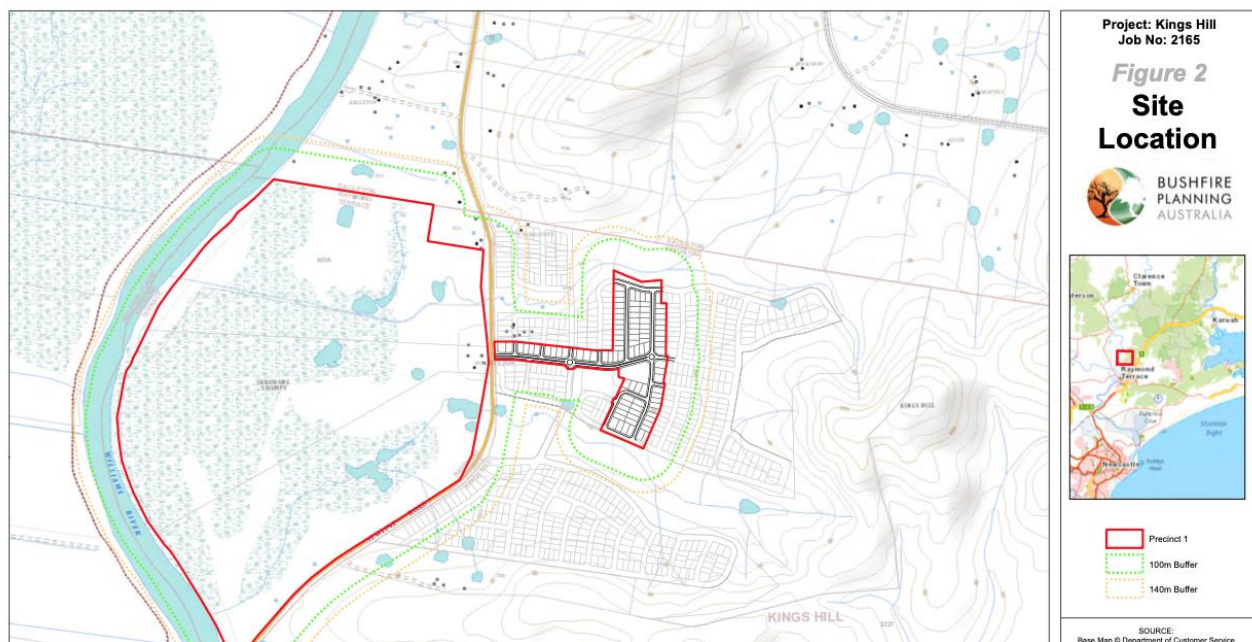
Council is aware of the lengthy considerations of the Concept Plans for KHD matter by the HCCRPP refusal to approve it in February 2022 and the NSWLEC determination to refuse it in August 2023. Commissioner Bish's findings and the HCCRPP reasons for refusal in both these determinations may apply to the entire KHURA area, including Monarchs Hill. This is mostly simply indicated by the proponent agreeing that the KHD flora and fauna survey findings are relevant.

Council would be prudent to reconsider all the HCCRPP and LEC Commissioner Bish's findings that may be directly relevant to the need to refuse this DA.

Flooding and Traffic and Bushfire Risks

We concur with, and wholly support, the excellent submission made by VOWW. We agree that the cumulative and combined flooding and traffic impacts are extremely important issues for the surrounding communities and the proposed residents of Monarchs Rise. Not only is the proposed development area mainly Flood Prone Land it is also Bushfire Prone Land. Flood and bushfire mitigation measures may be costly over time and require further habitat clearance and landscape modification which may be detrimental to the biodiversity on site.

The impacts of flood and bushfire risk may not have been correctly assessed for this portion of the KHURA when KHD has been so recently refused by the Land and Environment Court. The success or actual refusal of KHD, affects the bushfire risk assessment. For example, if housing does not go ahead and more bushland is subsequently retained to the north and east, there is a higher risk. Similarly, if another KHD concept plan is proposed and proves successful, and clearing for housing does go ahead, this will increase the stormwater run-off and flood risk to Monarchs Rise.



The Bushfire Assessment Report (BAR) seems to be underpinned by the assumption that Kings Hill URA will be successfully approved when KHD, the adjacent and largest portion, has been refused. A medium to high bushfire risk has been identified “immediately” to the north and east of the development site. “The forest is identified as the primary bushfire hazard” (BAR p10). The BAR recommends a secondary access road for safe egress that does not appear on the plans (p18).

“All vegetation up to 100m east of Precinct 1 will be managed as an Temporary APZ” (BAR p10). This presumably refers to the clearing for Precinct 2 occurring during construction of Precinct 1. If it is Temporary, where is the Permanent 100m APZ? The permanent APZ will impact the Conservation Areas but has not been discussed in the VMP. The proposed buffers by Bushfire Planning Australia indicate that only a small part of the conservation area between Precinct 3 and the more northerly precincts will fall outside of the buffers. There is no discussion of fire trails and firefighting entry into the Conservation Lands.

Stopping fires in the KHD and Conservation Area should they start, could lower the risk to Monarch’s Rise, but even RFS are unlikely to risk the danger of acting within the KHD property or Conservation Lands as their main priority is to protect human assets, i.e. property/houses.

We also submit that Council must carefully review the hydraulic conditions and possible stormwater that may affect the proposed conservation areas and the wetlands to the west of Newline Road, as recommended by VOWW.

Habitat clearance and replacement trees

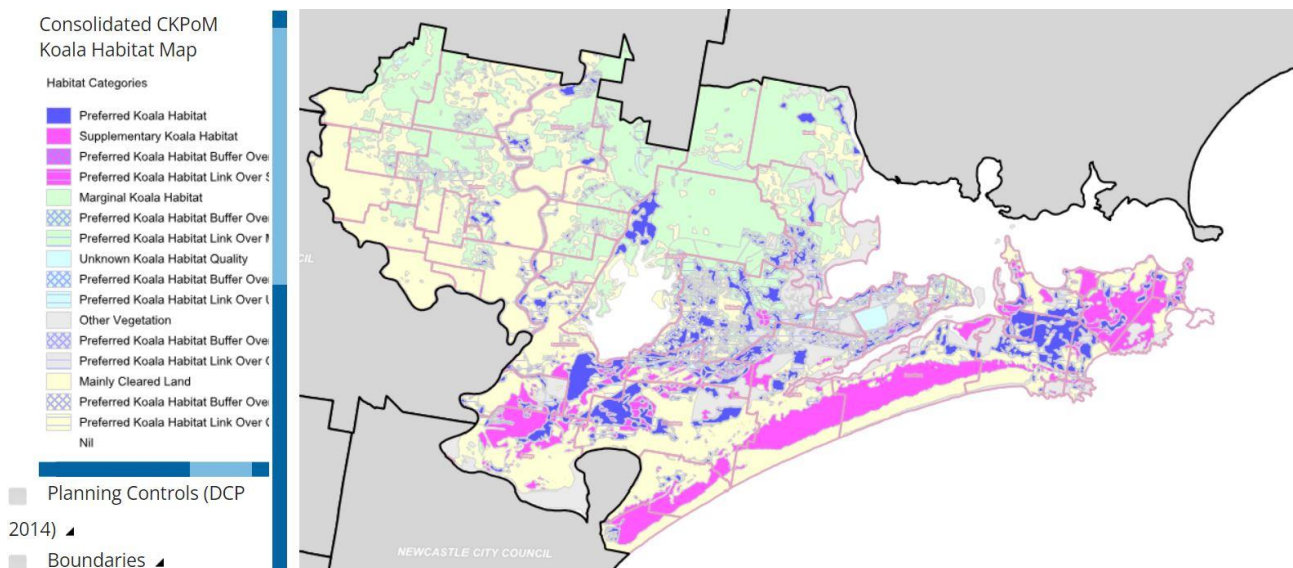
Given the presence or use of habitat by multiple threatened species in the KHURA, we have a number of concerns regarding tree clearance and the planting of replacement trees. The Biodiversity Construction Environmental Management Plan (BCEMP) identifies a number of actions that need to take place: As the plan states that the “Project Manager will be responsible for ensuring the Koala fence has been installed prior to construction work commencing”, which presumably means that koalas may be on site during the under scrubbing and habitat tree clearing processes.

The plan also states that an ecologist will attend the site a week before clearance to identify trees with “important fauna habitat features such as nests, dreys or hollows”. Should koalas find their way into the precinct areas, it may be important for them to retain some of the established non-feed trees for shelter, and some of the browse trees.

Habitat trees will be retained for three nights after the removal of non-habitat trees have been felled with an ecologist “gently knocking” the trunks to encourage fauna to leave. Given the noise and disturbance and noise of under scrubbing and non-habitat tree removal, there may be fauna who seek to climb higher rather than come to the ground. The plan states that the “ecologist will be on-site to remove and relocate fauna if required” but there is no reference to calling on the Port Stephens Koala Hospital to assist with traumatised, injured, sick or visibly diseased koalas. KKEPS suggests the following information be consulted in regard to helping koalas on site [Recognising a sick koala and calling for rescue](#).

The planned clearing for this application follows the same or similar idea of encouraging wildlife to move to conservation areas by clearing habitat, as assessed and disputed by expert ecologists looking at the larger Kings Hill development application.

Although the habitat at this location is identified as Marginal koala habitat in the CKPOM mapping, it should be recognised that if only Preferred koala habitat was protected or retained, the koala populations in Port Stephens and the koala breeding hub at Kings Hill would not have the connections or range to survive. With koalas being recognised as one of the species that will be most impacted by climate change, keeping established koala habitat intact is even more important.



Voluntary Planning Agreement (VPA)

The proponent is offering a VPA, with planned monetary contribution and intent for future Council management of the Conservation areas. We question whether adding permanently to future Council responsibilities is wise. We also appreciate, however, that the proponent will have little interest in its maintenance once the building is complete which could mean there is little option but for Council to accept it, if the DA is approved.

The VPA letter of offer dated 15/11/23 states "This offer remains open and capable of acceptance until COB on 26th January 2024." Since the public exhibition of this DA concludes on 18 January 2024, this date will require extension for submissions to be duly considered and issues raised if the applicant is to respond, and for further council consideration, according to due process.

The offer is to conserve 17.5ha of land zoned R1 General Residential on 514 and 587 Newline Road to protect Koala habitat with higher numbers of Koala food trees from development. The reason being that "267 Koala Feed trees will be removed as part of the proposed development. To compensate for this removal, the Landowner will plant a minimum of 1260 Koala Feed trees and 1260 supplementary trees/shrubs to meet the requirements of a "net gain" of Koala Feed trees under the CKPoM".

Such local conservation/mitigation efforts are much preferred over Biodiversity Offsets merely being paid for or bought in other locations that have absolutely no benefit to local fauna and flora but they must be implemented and managed in a way that allows for the best possible continuous and safe foraging and connectivity within and through the area.

We understand that this VPA will be managed in line with the existing conservation land already zoned C2 Environmental Conservation and consider that the additions proposed to the Conservation Area are well advised due to the locations of hollow bearing trees, and threatened fauna and flora survey findings. We do not, however, consider that a sufficient reduction of the residential zoned property has yet been reached. We also question whether it is possible to plant so many KFTs in the area proposed. We will address these issues later in our submission.

Landscape Plan

Some of the tree species proposed in the Landscape Plan relate to the koala, but not to the other numerous species known to live on or be browsing on the site. For example, I know black wattles are preferred by squirrel gliders. Nesting boxes may be provided for microbats. Plants could also be selected to attract native pollinators and perhaps located near the proposed park and community garden.

E.scoparia is drawn to be planted to the north of the first roundabout. Koalas should not be drawn to dangerous road locations by ill-considered planting. This species is known to be a koala feed tree (although not preferred) and would be better located elsewhere. *E.parramattensis* is a slow growing smaller tree that may be an appropriate species.

KKEPS suggests that the following information be consulted in regard to suitable plant and tree species:

[Koala-Trees-Port-Stephens.pdf \(econetworkkps.org\)](https://econetworkkps.org/Koala-Trees-Port-Stephens.pdf)

[Habitat-Planting-Guide-Tomaree-Peninsula.pdf \(econetworkkps.org\)](https://econetworkkps.org/Habitat-Planting-Guide-Tomaree-Peninsula.pdf) Hunter Botanic Gardens or Seaham Wetlands volunteers may be able to provide more localised information for the precise site.

A more well-considered Landscape plan should be requested by Council.

VMP/Conservation Area

The majority of the first stage of 100 dwellings will be on cleared farmland. The housing development then moves past the initial 100 lots to clear-fell for another 400-500 lots. It is proposed that the land for future development is to be cleared at the same time as Precinct 1. The Traffic Impact Assessment suggests subsequent housing is apparently planned to be released at 100 lots/year to result in up to 1000 homes. It is unclear where all those homes will be located.

KKEPS strongly objects to the clearance of habitat beyond Precinct 1, prior to the lodgement of appropriate detailed plans for other proposed precincts that require that clearing.

Although Council requested in their letter to McCloy group on 23/2/23 to provide details of the proposed 1260 plantings in the Revegetation areas, details are still lacking. The VMP states "Placement of Koala feed trees within the conservation area of a ratio of 2:1 for all Koala feed trees removed from within the development footprint, which equates to planting 1,260 Koala food trees. This number of trees is expected to cover 50% of the 5.06 ha revegetation extent." Although this could be sufficient space for small saplings, NSW guidelines for koala habitat restoration may recommend more space per tree to allow for successful growth. [Koala habitat restoration guidelines | NSW Environment and Heritage](#). This excellent reference is not cited in the VMP.

Further detailed planning is required to identify what may be achieved in Conservation Land and Revegetation areas that are also identified as needing to comply with the rules for an APZ.

Newline Rd Kings Hill VMP

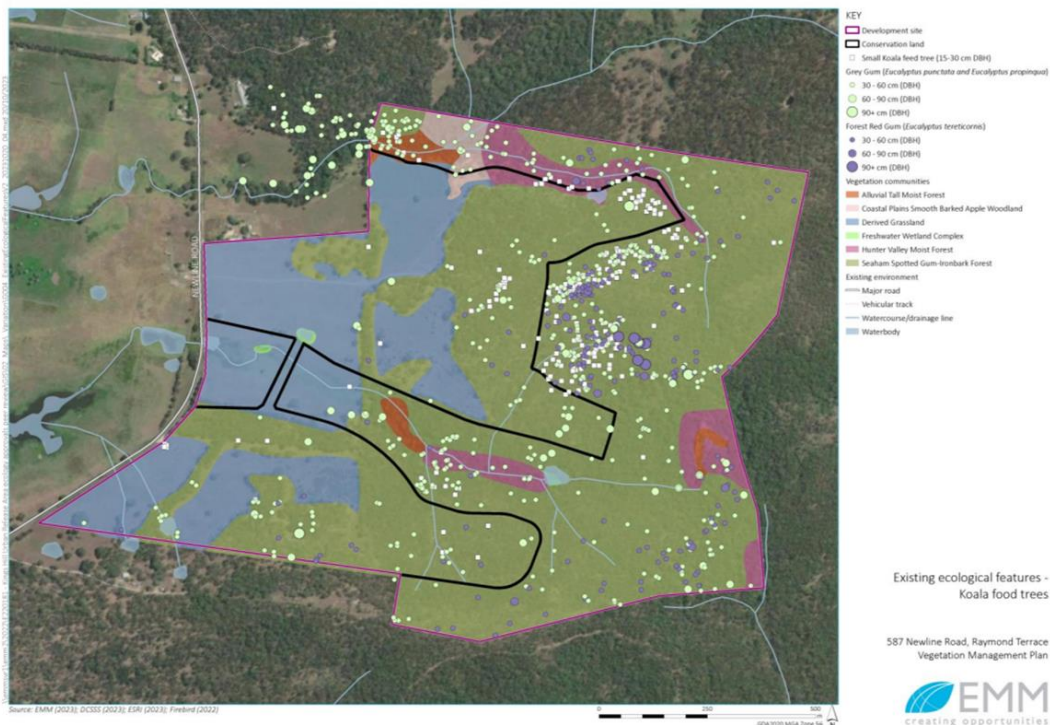


Figure 2-2: Existing ecological features

The VMP P14 figure 2-2 shows a proliferation of young grey gums in the northeast of the proposed residential area, in close proximity to the moist forest and a watercourse. These should not be cleared.

The BCEMP figure 1-3 shows a great proliferation of hollow bearing trees within the middle east and southeast building extremities. These should not be cleared.

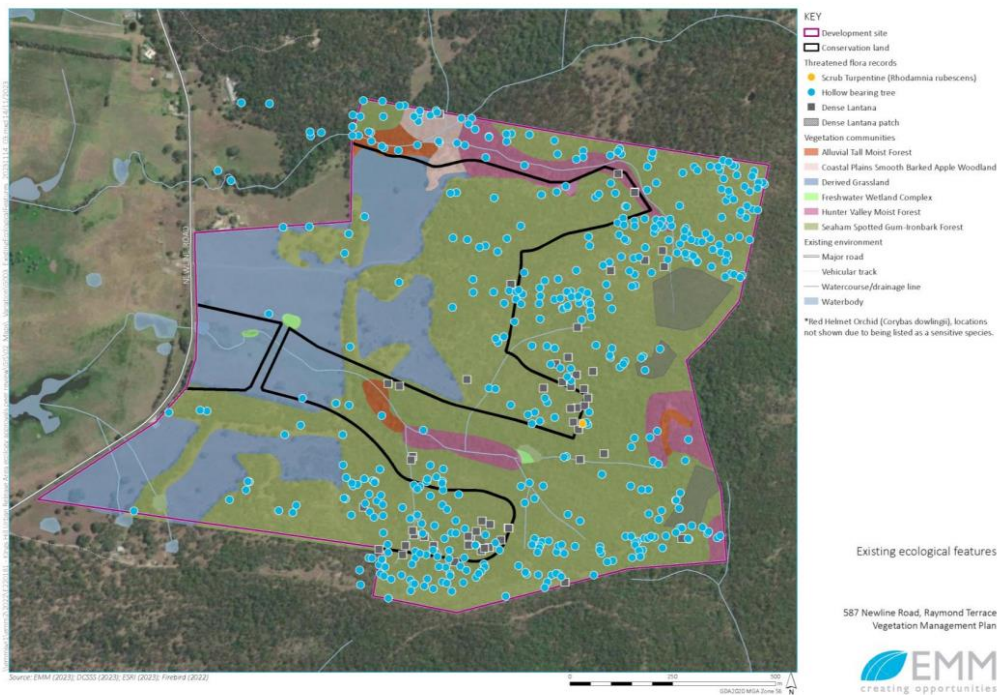


Figure 1-3: Existing ecological features – hollow bearing trees

It is the three planned building sites extending furthest east into the existing forest, indenting substantially the Conservation Area, that are of highest concern. Several report maps/figures highlight the ecological value of these areas. These three most easterly housing areas show a large number of suitable hollow bearing trees for powerful owls and other wildlife and preferred koala feed trees. Given that suitable hollows for Powerful Owls and other species may take trees 150 years to form, this area should not be cleared, but should be added to the Conservation area.

Moreover, the Bushfire Assessment Report (BAR) recommends 100m APZ requiring suitable planting that will necessarily impact them in order to reduce flammability. There is no discussion in the BAR of fire trails and firefighting entry into the Conservation Lands.

These eastern-most residents will bear the brunt of approaching fire from the north and east that was assessed as posing the highest risk. The ability of residents to safely egress, particularly from these three most easterly sections, to Newline Road is of concern.

Egress apparently relies on all residents using the one exit from Precinct 1, while emergency services try to enter. Those residents in all streets of precinct 3 will need to cross the internal raised road to precinct 1 to exit. It is likely they will be unable to enter the roundabout to exit onto Newline Rd until all residents of Precincts 1 and 2 have exited. This will be chaotic and dangerous.

Safe egress plans were stated as needing to be prioritised in the Bushfire Assessment Report (BAR) that recommended an emergency access road to the south of precinct 1 that does not appear on plans. The same residents will also be the least aware of rising floodwaters across Newline Road. If floodwaters rise at both North and South Creek as has happened before, they will become trapped in Monarch's Rise. There

was a proposed east-west road for KHURA that may have been an all-weather flood resilient access/egress, but that is no longer an option since the KHD refusal.

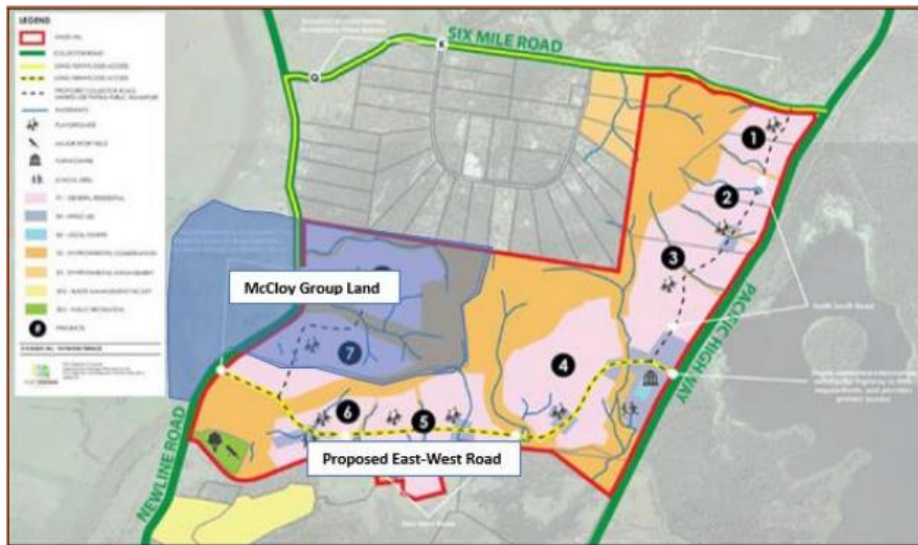
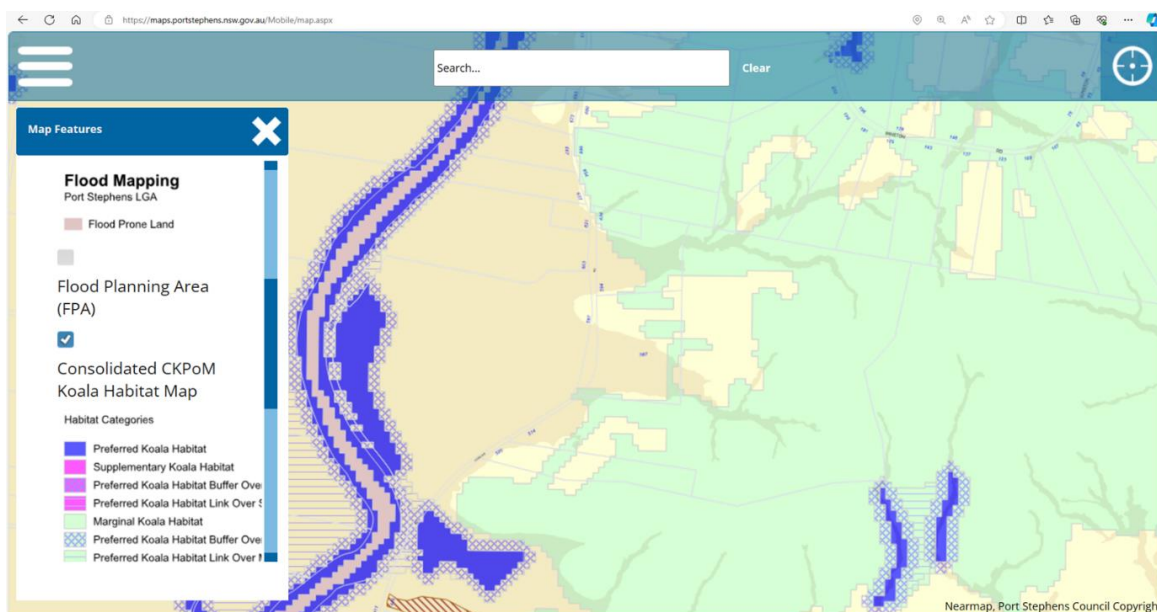


Figure 1: Kings Hill Urban Release Area

The proponent fails to alleviate the risk to safe egress for residents in emergency situations. There being no safe emergency egress for residents indicates that Council should refuse this DA.

Our main concern for koala/wildlife safety is that the Conservation areas, particularly the revegetation zone and the raised road between precincts, will directly funnel koalas and other wildlife towards Newline Road. The fauna fencing has not been extended to prevent this happening.

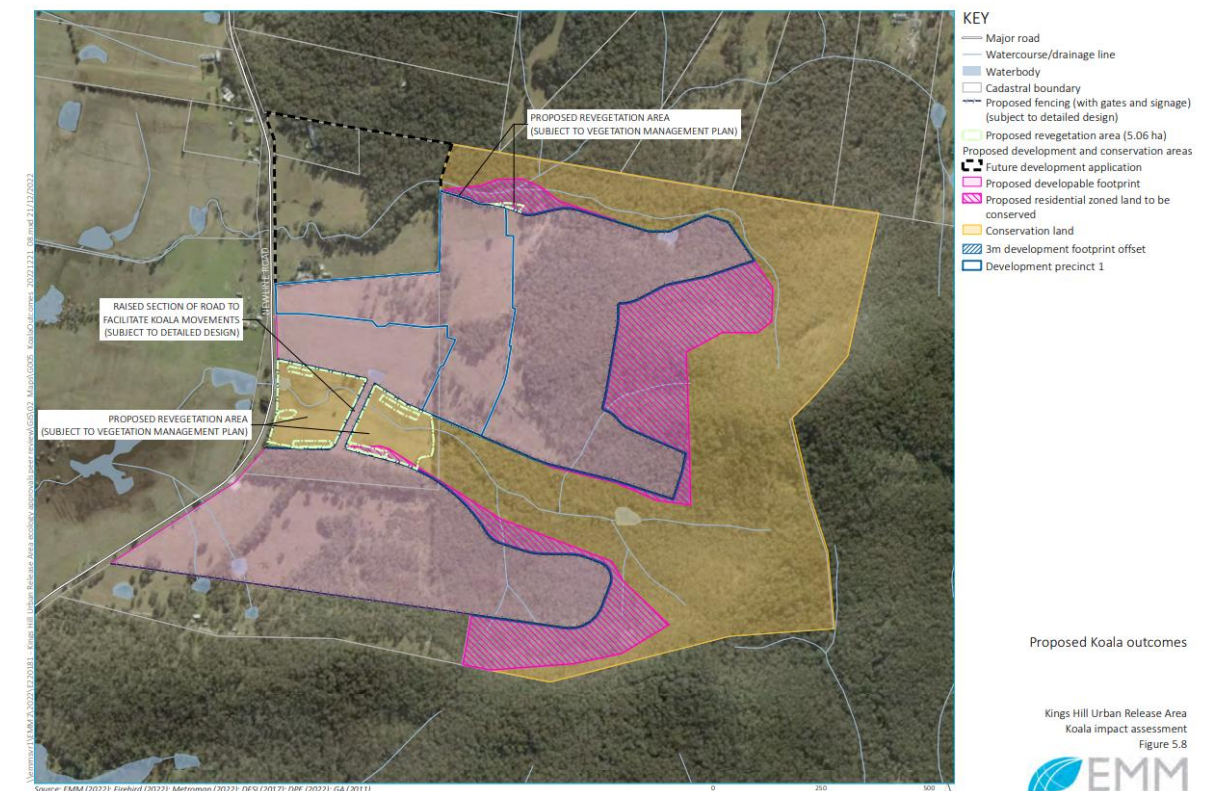
The preferred koala habitat is identified by CKPOM mapping to the west of Newline Road near the river, but there is no plan to help animals reach that area in appropriately dry weather and return to the wider forest safely. A suitable culvert with koala furniture may be a solution but has not been proposed.



This figure created using the PSC mapping portal, shows how much of Newline Road and the development site is known to be flood prone land, clearly showing the watercourses of North and South Creek. The flood

risk is overlapped with the CKPOM mapping showing preferred habitat near the river to the west of Newline Road. Sightings of koalas indicate that they will wish to browse along the river in suitably dry weather. Because of regular flood inundations, this area may not be the territory of a single koala but attract a number of surrounding koalas to browse these Preferred Koala Feed Trees. As preferred habitat, it would be regularly contested territory.

Figure 5-8 in the Koala Impact Statement serves to show the location of koala fencing. Council requested in their letter of 23/2/23 to the McCloy group to show the koala fencing location and that a “detailed plan for the restoration of the proposed revegetation area as shown in Figure 5.8 of the Koala Impact Assessment should be provided as part of the VMP.” (P 152-3 of the Threatened Species Impact Assessment (TSIA) appendix). No suitable response has been received as the VMP mentions twice on Fig 1-2 that the fencing and the road is still subject to detailed design.



The fencing does not appear to continue along the roadside to prevent animals accessing the road. The fencing also does not appear to be proposed near the future proposed development site to the north. There are cream-coloured dashed lines creating looping shapes in the revegetation areas that are not explained in the key. This could be fencing within the two main revegetation areas of South Creek. Fencing also appears to block the access from one revegetation area to the other on both sides of the raised road, that is supposed to allow access beneath it.

The proposed fencing strategy needs further clarification but if our interpretation is correct, this proposal will have very undesirable outcomes for koalas/wildlife:

- be subject to greater risk of road strike as they attempt to cross Newline Rd where the fauna fencing isn't planned.
- be subject to greater risk of dog attack via the unfenced north-western “future proposed development area” and from along the roadside where fauna fencing isn't planned.
- not be able to navigate between the two major revegetation areas due to fencing on both sides of the north-south precinct connecting road.

- not be able to find their way out of the conservation area between the precincts as it funnels them into an inappropriate area.

No mention has been made of cats and their role in wildlife kills, nor how to mitigate/avoid this.

Part of the solution to the inadvisable shape of the conservation areas that will result in funnelling koalas/wildlife onto Newline Rd, or to a dead end due to fencing (whichever may be the case), may be to further reduce the residential land area by eliminating the 3 most easterly portions of this precincts proposed, where the housing will impact the biodiversity values of the forest most severely. This revision may also provide somewhat safer egress for human residents not having to travel so far to the only exit point.

It is proposed to place the trunks of cleared trees there for ground dwelling animals in the conservation/revegetation area and to plant “a minimum of 1260 Koala Feed trees and 1260 supplementary trees/shrubs”. There is no indication whether all these logs and new plants will be placed in the revegetation area, but this would not be recommended.

In times of flood, the swelling of South Creek may carry the logs towards the river resulting in the culvert becoming blocked and the plantings being swept away. Although it is proposed any dead trees will be replaced, this would be a major setback to the plantings meant to compensate for clearing of koala habitat because plantings will take at least 5-10 years to grow to a suitable size for browsing.

Further planning is required for the revegetation areas, culverts, stormwater and safe road crossing for fauna. The proposal does not give sufficient detail for approval to be granted.

Rural lots

While there is no habitat clearance proposed for the three lots to the west of Newline Road, we note that the small proposed building envelope rising above mapped flood prone land is directly opposite the entrance to the Monarchs Rise housing development. The traffic, noise and light pollution emanating from the development will have a significant impact on residents of these rural lots. The impermeable surfaces built at Monarch’s Rise will also increase their risk of flood inundation by stormwater runoff and inadequate drainage beneath Newline Road.

Mitigation efforts - light and noise

The proposed mitigation effort to move light poles to the housing side of roads to benefit nocturnal species is noted (ref TSIA p70). However, the proponent could offer more permanent lighting mitigation plans through having sensors on streetlights closest to the conservation areas that switch off for most of the night unless activated by movement.

The lighting from all the combined residences of Monarchs Rise will have a growing and ongoing impact. The proponent should consider and propose further mitigation solutions that might also offer energy saving benefits to the residents.

Further information about lighting effects on wildlife is available in the 2023 [National Light Pollution Guidelines for Wildlife - DCCEEW](#) that provides detailed guidance on how to manage artificial light and specific advice on how to protect bats, terrestrial mammals and ecological communities.

Noise impacts wildlife causing a stress response that can prevent communication and breeding as well as induce disease and cause local extinctions, although it has received no attention in the proposal. There are many research reports that conclude that noise does impact wildlife such as the article 'Impacts of Anthropogenic Noise on Wildlife: Research Priorities for the Development of Standards and Mitigation', a 2010 article by Blickley and Patricelli published in the Journal of International Wildlife Law & Policy:

"[Noise] can impact wildlife species at both the individual and population levels. The types of impacts run the gamut from damage to the auditory system, the masking of sounds important to survival and reproduction, the imposition of chronic stress and associated physiological responses, startling, interference with mating, and population declines." (p. 274)

"Masking occurs when the perception of a sound is affected by the presence of background noise, with high levels of background noise decreasing the perception of a sound.¹⁹ One possible consequence of masking is a decrease in the efficacy of acoustic communication. Many animals use acoustic signals to attract and retain mates, settle territorial disputes, promote social bonding, and alert other individuals to predators. Disruption of communication can, therefore, have dramatic impacts on survival and reproduction.²⁰... Beyond interfering with communication, introduced background noise can also mask the sounds of approaching predators or prey, and increase the perception of risk from predation." (p.279)

"In addition to the acute effects of noise, animals may suffer chronic effects, including elevated stress levels and associated physiological responses. Over the short term, chronic stress can result in elevated heart rate. ²⁷ Longer term stress can be associated with the ability to resist disease, survive, and successfully reproduce.²⁸ Good measures of chronic stress come from elevated stress hormones, like corticosterone, in blood or fecal samples.²⁹" (p.280)

"The cumulative impacts of noise on individuals can manifest at the population level in various ways that can potentially range from population declines up to regional extinction. If species already threatened or endangered due to habitat loss avoid noisy areas and abandon otherwise suitable habitat because of a particular sensitivity to noise, their status becomes even more critical." (pp.280-81)

"Species vary widely in their ability to tolerate introduced noise and can exhibit very different responses to altered acoustic environments. This variability in response to noise makes generalizations about noise impacts among species and among noise sources difficult. Generalizations relevant to a single species can also be hard to make, because the ability to tolerate noise may vary with reproductive status, prior exposure to noise, and the presence of other stressors in the environment." (p.281)

While their conclusions admit wildlife responses to noise may vary, it is clear to me as a koala carer for over 13 years, that koalas do most certainly have a stress response to noise and that not only their mating, but their communication with others in their surrounding population group relies on acoustic communication. Koalas have a hearing ability well in excess of that of humans. This is necessary so that they can find mates. The prolonged noise made by residents of the Monarchs Rise housing development, will affect koalas' ability to communicate with others both to find a mate, and advertise their presence to warn off other koalas to prevent fights over territory. Other species on the site will be similarly negatively impacted by noise.

This view is supported by the 2020 article 'Evidence of the impact of noise pollution on biodiversity: a systematic map' which concludes that "A majority of species hear and emit sounds [13]. Sounds are often used to communicate between partners or conspecifics, or to detect prey or predators. The problem arises when sounds turn into "noise", which depends on each species (sensitivity threshold) and on the type of

impact generated (e.g. disturbances, avoidance, damage). In this case, we may speak of “noise pollution”. For instance, man-made sounds can mask and inhibit animal sounds and/or animal audition and it has been shown to affect communication [14], use of space [15] and reproduction [16]" (p.2)

"We identified noise pollution as an emergent threat for species and ecosystems that public authorities and practitioners will have to mitigate in the coming years. Indeed, for decades, noise regulations have focused primarily on the disturbances for humans, but we expect that public policies for biodiversity conservation will start to pay more attention to this threat." (p.2)

A 2015 paper entitled ‘A synthesis of two decades of research documenting the effects of noise on wildlife’ states "Terrestrial mammals exhibited increased stress levels and decreased reproductive efficiency at noise levels between 52 and 68 dBA SPL (re 20 µPa). Traffic noise exceeding 60 dBA SPL (re 20 µPa) impacted the vocal behaviour of male anurans and traffic noise exceeding 80 dBA SPL (re 20 µPa) reduced the foraging efficiency of gleaning bats" (p.993)

Further evidence of a stress response is given the 2016 article ‘Understanding the dynamics of physiological impacts of environmental stressors on Australian marsupials, focus on the koala (*Phascolarctos cinereus*)’ by Dr Edward Narayan: "Koalas spend around 19.3 – 20 h a day resting or sleeping [172, 174] however hypervigilance has been demonstrated in response to human presence/noise [171]. The energetic cost of chronic stress impacts reproduction [12, 13], growth [7], and the immune system [7, 15] whilst hypervigilance, the relationship with proximity to suburbia (Fig. 3) creates an energy/water/thermoregulation deficit [171, 172] when unable to engage in physiological and behavioural adaptations [174]." (p.8)

See also the 2023 article ‘Systematic acoustic surveys inform priority conservation areas for koalas in a modified landscape which states "Furthermore, higher levels of anthropogenic noise and light pollution associated with modified landscapes can alter behaviour and be a cause of chronic stress for wildlife species. This can result in reduced breeding rates or an increase in disease (Blickley and Patricelli 2010; Taylor-Brown et al. 2019)" (p. 1280). "As a species that relies heavily on vocal cues for communicating, anthropogenic noise may disrupt [koalas'] communication and the potential for social interactions." (p.1288)

Stress can induce symptoms of the potentially fatal disease chlamydia in koalas. The more stressors, the more likely that koalas will become sick with this disease that all koalas in Port Stephens seem to have latently, although they may remain asymptomatic when feeling safe.

Low levels of stress are key to koala health and welfare. Although the proponent claims that the habitat clearance associated with the project will not introduce disease nor disrupt the breeding cycle of koalas, any environmental stressors can impact the neuroendocrine and immune systems, reducing their ability to keep symptoms of chlamydia to a minimum and reducing breeding success. Clearing trees and groundworks is likely to impact their foraging habits and the new edge effect could lead to increased time on the ground and a higher risk of predation. This theory can be extended to other threatened species requiring assessment, such as nearby grey-crowned babbler that the TSIA report admits may be foraging on the Monarchs Rise land.

Adult koalas being territorial, do not easily and readily relocate to alternative areas, as having to fight for territory and locating suitable trees for browse and mating, in already occupied areas, are inherently stressful experiences, which frequently result in death.

It follows that the Monarch's Rise development, on this greenfield site, will have a significant impact on the 14 threatened and endangered species successful breeding cycles and foraging efforts by preventing communications that has not and possibly cannot be adequately avoided or mitigated.

We disagree with the conclusion in the TSIA p130 that "the proposed precinct 1 works and the Subdivision DA is unlikely to result in a 'significant impact' on the above 14 species under the TSC Act."

Noise and light pollution will have a significant impact on threatened species.

Cumulative and Combined Impact

Table 6.5 Potential impact of other projects on local populations of subject species p77-78 of the TSIA provides a short review of cumulative impact on species from other projects ie Stone Ridge, Deep Creek, Kings Hill and Eagleton. This was done responding to a Council request. This table does not serve to adequately assess the cumulative and combined impacts of these proposed quarries, and does not include existing quarries such as the nearby Hanson Brandy Hill quarry and even closer Boral Seaham quarry that are already operating and want to extend their operations.

Cumulative and combined impact on wildlife corridors must be further advanced by Council staff assessments, informed by the CKPOM and more recent vegetation mapping projects and drone investigations.

Conclusion

Cumulative and combined impact considerations extend much further than threatened species, including social amenity, traffic and community safety, cycleways and providing links to access services including public transport, shops, schools, doctors and hospitals, sporting and recreation facilities, among many more considerations. These have not been adequately addressed by the proponent, resulting in the conclusion that the site is not suitable for the development.

The proponent has not provided any significant or valid reasons to as to why it may be appropriate for Council to approve the first 100 houses of the Monarch's Rise development, while including threatened species habitat clearing for hundreds more houses, without submitting more than vague plans for them.

Our submission has identified significant flaws in the proposal that have not been adequately addressed by reasonable planning, or avoidance and mitigation strategies, including:

- Inadequate Council resources to provide significant necessary infrastructure, including flood resilient egress.
- Intrinsic links of this DA with the refused Kings Hill Concept Development (KHD) proposal.
- VPA and Conservation Lands posing burden on Council in the future.
- Flooding, Traffic and Bushfire risks.
- Modelling for climate change, especially increased risk of flooding and bushfires.
- Significant Noise and Light pollution impacts on threatened species.
- Impact on native species as a result of further introduction of domestic animals such as dogs and cats into the area.
- Loss of rural character.
- Combined impacts on rural neighbours.

These concerns about significant negative impacts, cannot be appropriately dealt with by conditions of consent.

In summary, the applicant has not provided a full and robust level of assessment of the key environmental, social and economic impacts of the proposed development.

The public benefit of the development does not outweigh the potential unacceptable impacts it may have. It is not in the public interest.

Therefore, this DA for 100 lots in the much larger intended Monarch's Hill housing estate should not be approved.

Carmel Northwood

Convenor

Koala Koalition EcoNetwork Port Stephens