



Additional information

Planning Committee

Wednesday 2 November 2022, 6pm



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**PC22211-1 STIRLING HIGHWAY, NO. 130 (MULTIPLE LOTS), NORTH
FREMANTLE - 20-STOREY MIXED-USE DEVELOPMENT,
COMPRISING THREE (3) RESIDENTIAL APARTMENT
TOWERS (198 MULTIPLE DWELLINGS) AND VARIOUS
NON-RESIDENTIAL USES (RESTAURANT, SHOP, TAVERN,
OFFICE, RECEPTION CENTRE AND INDUSTRY-LIGHT)
(ED DAP003/22)**

Additional information - *provided electronically only*

1. Site Photos
2. Town Planning Report
3. Amended Development Summary
4. Design Advisory Committee (DAC) Meeting Minutes Combined
5. Amended Landscape Architecture
6. Public Art Statement
7. Applicant's R-Codes Vol. 2 Assessment
8. Acoustic Report
9. 10 Design Principles Report
10. Applicants Heritage Impact Assessment
11. Pedestrian Wind Assessment
12. Sustainability Strategy
13. Amended Stage 1 Traffic Impact Assessment
14. Amended Parking Management Plan
15. Amended Stages 1 & 2 Traffic Impact Assessment
16. Waste Management Plan
17. Community Needs Assessment
18. Schedule of Public Submissions
19. Amended Overshadowing and View Analysis
20. City of Fremantle Heritage Impact Assessment
21. Town of Mosman Park Comment
22. Applicant Response to Town of Mosman Park Comment
23. Applicant Response to Public Submissions
24. City of Fremantle/Stantec McCabe Street Area Traffic Study
25. McCabe Street Height Study (Prepared by Scenic Spectrums on behalf of the City of Fremantle, dated May 2008)

PC2211-2 AMHERST STREET, NOS. 34-38 (LOTS 1823, 1209, 1212, AND 1217) AND STACK STREET, NOS. 2-4 (LOTS 1223 AND 1222), FREMANTLE – 56 GROUPED DWELLINGS (JCL DAP001/22)

Additional Information 1 – Site Photos



Photo 1: Subject site (No. 2 Stack Street) as viewed from Stack Street



Photo 2: Subject site (No. 4 Stack Street) as viewed from Stack Street



Photo 3: No. 2 Stack Street viewed from Amherst Street



Photo 4: No. 38 Amherst Street viewed from Amherst Street



Photo 5: No. 36 Amherst Street viewed from Amherst Street



Photo 6: No. 34 Amherst Street viewed from Amherst Street



Photo 7: view of No. 34 Amherst Street looking south-east



Photo 8: view of No. 34 Amherst Street looking north-east



Photo 9: view of No. 36 Amherst Street looking south-east



Photo 10: view of No. 36 Amherst Street looking north-east



Photo 11: view north from northern portion of subject site along Amherst Street.



Photo 12: view south from northern portion of subject site along Amherst Street.



Photo 13: view of other side of Amherst Street from subject site looking south-west.



Photo 14: view of other side of Amherst Street from subject site looking south-west (from northern portion of subject site).



Photo 15: view of Stack Street looking west, with subject sites on right portion of photo.



Photo 16: view of southern neighbour on the other side of Stack Street.



Photo 17: view of southern neighbour on the other side of Stack Street towards Amherst Street intersection.



Photo 18: view of opposite side of Stack Street looking south-east.



Photo 19: view of eastern neighbour along Stack Street.



Photo 20: view of subject site from Stack Street looking north.



Photo 21: view of Western Power facility



Additional Information 2 – Schedule of submissions



Schedule of submissions – 56 Grouped dwellings - Nos. 34-38 Amherst Street and Nos. 2-4 Stack Street, Fremantle - DAP001/22

Email submission 1		
Issue raised	Applicant response	Officer response
Lack of open space and deep soiled zones due to maximising the yield to be as high as possible	Multiple areas of open space have been proposed throughout the development. The site is currently unvegetated and used for industrial purposes. Landscaping is provided within the development, both privately and communally. The application proposes a revitalised and native-orientated verge landscape which includes multiple communal spaces for both residents and the wider community. The amount of landscaping will be increased, and in turn, become more productive and usable for both the residents, community, and environment.	It is noted that whilst capacity exists for increased landscaping and areas of open space to be provided, it is considered that the proposed landscaping is generally acceptable.
No provision for mature trees	Mature trees are proposed as demonstrated in the landscape report.	The City notes the applicants response. It is noted that no substantial mature trees worthy of retention have been identified on the subject sites (not including the verge).
Dominance of internal roads within the site	The internal roads within the site have been designed in accordance with the R-Codes design principles, allowing a narrower road provision that functions to a high level.	The City notes the applicants response.
Only 16sq.m of private pen space for the dwellings	Noted. Refer DA report for Design Principle justification.	The City notes the applicants response. Refer to the body of the report for further Design Principle assessment.
Due to the dwellings being on small floor plates and over 2/3 levels means non are universally accessible or adaptable for ageing in place.	This is not a requirement for this development. 2 to 3 storey development is consistent with other infill development throughout the Knutsford and Perth Metropolitan Region. If required, the dwellings can be adapted to suit future inhabitants.	The City notes the applicants response.
Tokenistic attempt at a landscaped area at the northern end of Amherst frontage which is actually outside of the site on the verge... which then only 7 dwellings face onto and benefit from.	Landscaping of the street verge is consistent throughout the entire Amherst Street and Stack Street verges in the proposal. The investment into the streetscape is a community benefit that is proposed to increase the amenity of the entire Knutsford area and alleviate any existing ecological issues with the dominance of monoculture turf. The requirement for a detailed landscaping plan can be applied as a condition of planning approval.	The City notes the applicants response. See response above relating to landscaping provision.



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Poor solar access to the units' private open spaces and living areas.	All private living spaces have adjacent outdoor living areas (either balconies or courtyards) with significant glazing to maximise solar intake. The Type B & B1 have their internal courtyards solar provision amplified by skylights located over the living areas. Within the constraints of the site topography, each lot has been designed to maximise the available solar access with the side facades of dwellings at the end of each row also having additional glazing where practical.	The City notes the applicants response. Refer to the body of the report for further Design Principle assessment.
10x crossovers onto Amherst Street which has seen increased traffic since the High Street roundabout as its now a busy local road.	Crossovers proposed to Amherst Street have been rationalised throughout the prelodgement process. The vast majority of proposed dwellings have either rear-loaded or access via an internal road.	The City notes the applicants response. It is noted that the City's Infrastructure department is not supportive of the number of crossovers proposed. Nonetheless, crossovers are considered through a separate process separate, though related, to the planning process.
Using the street verge for the visitor parking and not within the site like every other new development does.	New development throughout the area has utilised alternative ways to provide for visitor parking, in particular the DevelopmentWA land in the Blinco and Amherst area. This development uses parallel parking provisions within the verge to support transient visitor parking. Visitor parking in this context is a site specific response, and supports the development of the site and use of the larger than standard road verges.	The City notes the applicants response. It is noted that visitor parking in the verge is not the preferred outcome for the City's Infrastructure Department. Nonetheless, it is considered that the proposed number of visitor bays is generally supported per the Design Principle assessment contained in the body of the report.
Poor sitting of buildings on the existing contours	The proposed development is orientated in accordance with the existing topography to minimise the requirement for cut and fill. The majority lots have been orientated east to west with a rectangular shape to enhance the potential of the site given its demanding topography and large southern slope. Dwellings with this orientation reduces any required impact of unfeasible fill requirements, whilst also preserving the current topography of the land and the character that brings to the area.	The City notes the applicants response. It is noted that the subject site comprises a complex topography, with a significant difference in levels from north to south.
No architectural consideration to the surrounding areas (it's just cookie cutter)	The proposal incorporates multiple elements of the surrounding transitional area, particularly of an industrial aesthetic. This includes materiality, colours, and dwelling design/shapes.	The City notes the applicants response.



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	Various housing typologies are proposed to provide a mix of built form. A detailed comparison is provided later in response to Submission 6. A schedule of materials and finishes can be applied as a condition of planning approval.	
CPTED concerns due to internal street configurations	All proposed dwellings overlook the internal streetscape, ensuring passive surveillance is maintained across the development. The internal streetscape is perpendicular to the external streetscape, allowing long visible sightlines from the public realm. In order to alleviate CPTED concerns, the plans have been updated to introduce gates across the site's entrances. This is to reduce any anticipated criminal and unsafe activity from occurring within the internal road network.	The City notes the applicants response.
Lack of sustainability with the overall concept (i.e. two cars per unit, poor cross ventilation, no talk of ESD initiatives).	A variety of sustainability focused approaches have been considered in the design, including but not limited to: - Potable water use by the landscape design has been reduce via hydrozoning, waterwise planting and non-potable irrigation. - Permeable paving has been provided to visitor parking areas to minimise heat island impacts - Dwellings have been designed to enable much of their construction in low carbon impact materials (timber stud, lightweight structures) - Light coloured roof material selections are used throughout to reduce heat intake Development has been designed to minimise cut and fill by following the existing contours while enabling functional site access	The City notes the applicants response. It is noted that the proposal is located within close proximity to public transportation.



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Fremantle and White Gum Valley residents deserve better and the Knutsford, Montreal Commons, Nightingale, WGV Precinct and Terrace Green proves that quality, sustainable design that adds to the community can be achieved.	The expectations of the surrounding locality and community are acknowledged and have been diligently referred to throughout the proposals design. The proposed development complies with the relevant planning framework and delivers sustainability initiative over and beyond the minimum requirements,	The City notes the applicants response. See comments in the body of the report for further relevant discussion.
Email submission 2		
Issue raised	Applicant response	Officer response
I completely oppose the development here.	Noted.	The City notes the applicants response.
Concerns for high traffic and safety matters	Transcore has undertaken a traffic analysis of the proposed development and concluded that traffic can be appropriately managed. The traffic modelling undertaken shows that the traffic generation of the proposed development is estimated to be in order of about 364 daily and 36 weekday AM and PM peak hour trips (both inbound and outbound). The traffic analysis demonstrates that the estimated development-generated traffic will have insignificant impact on the surrounding road network. This level of traffic is below with the initial traffic modelling prepared for the KSELSP.	The City notes the applicants response. It is noted that the City's Infrastructure Department concurs with the aforementioned traffic analysis.
Increased pollution	It is unclear where this has been derived from. The current land uses are general industrial that utilise primary resources and manufacturing, as well as being serviced daily by heavy duty vehicles. The proposal is for residential land uses which introduces and more sensitive land use to the area, supporting a transition away from impactful land uses.	The City notes the applicants response.



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	The proposed development will not result in increased pollution to the locality.	
Removal of vegetation	The site is currently unvegetated and used for industrial purposes. The application proposes a revitalised and native-orientated verge landscape, as well as including additional landscaping within the development, both privately and communally. The amount of landscaping will be increased, and in turn, become more productive and usable for both the residents, community and environment. A greater amount of landscaping will be provided than currently exists.	The City notes the applicants response.
Trying to avoid future medium high-density laws by the developers.	Not a planning consideration. The application is being assessed under the current applicable planning framework. The proposed development complies with the relevant planning framework and all associated legislation.	The City notes the applicants response.
Ruining the local landscape	The redevelopment of this area from its existing Industrial Uses to a future residential area has been outlined in the City of Fremantle's Knutsford Street East Local Structure Plan. Residential development is a permitted land use, and will result in an improved streetscape to the locality.	The City notes the applicants response. It is noted that the desired urban form is to reflect the existing and previous uses in the area. It is considered that the proposal has a generally acceptable impact in this regard, though has capacity for improvement.
No focus on renewable energy and/or energy consumption mitigation	A variety of sustainability focused approaches have been considered in the design, including but not limited to: • Potable water use by the landscape design has been reduce via hydrozoning, waterwise planting and non-potable irrigation. • Permeable paving has been provided to visitor parking areas to minimise heat island impacts • Dwellings have been designed to enable much of their construction in low carbon impact materials (timber stud, lightweight structures) • Light coloured roof material selections are used throughout to reduce heat intake • Development has been designed to minimise cut and fill by	The City notes the applicants response.



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	following the existing contours while enabling functional site access The proposed development incorporates a range of sustainable initiatives over and beyond the minimum requirements.	
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Email submission 3		
Issue raised	Applicant response	Officer response
Have you people put any consideration into how this new building is going to affect the community around it? A positive eyesore, I'm sure. I demand and environmental impact report. How will parking work? You are gentrifying a lovely landscape. Maybe I liked the barren industrial area!! You better insulate the buildings well, or demand it get done.	1. The redevelopment of this area from its existing Industrial Uses to a future residential area has been outlined in the City of Fremantle's Knutsford Street East Local Structure Plan. Residential development is a permitted land use. 2. Due to the site's industrial history, detailed contamination and environmental reporting has been undertaken. Sites 34 and 36 Amherst Street contained within this application have already received the relevant clearances from the then Department of Environmental Regulation (DER) in 2017. For the remaining sites within the application area, No. 38 and 34 Amherst Street, and No. 2 and 4 Stack Street, a Preliminary Site Investigation was prepared and lodged to assess the nature or current and/or historically potential contaminating activities that may have occurred on site. 3. Buildings will be insulated in accordance with the regulations listed in the BCA. 4. Parking has been demonstrated on plan, with dedicated visitor bays and each dwelling having their own vehicle storage through a garage. This parking arrangement is seeking to formalise what is currently informal, with ad hoc parking occurring around the existing site. Parking currently occurs on the landscaped part of the verge, in	The City notes the applicants response. It is noted that site contamination is the purview of the Department of Water and Environmental Regulation.



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	addition to the hardscaped verge portions which are undesirable on the streetscape.	
Email submission 4		
Issue raised	Applicant response	Officer response
Knutsford Structure Plan The proposed development appears to have completely ignored the ambition and opportunities offered under the Knutsford Precinct Structure Plan. The Structure Plan is the result of considerable community consultation and agreement...and its really disappointing that the first major development in the precinct the applicant has opted to largely ignored it. What about: - Adopting/advancing the historic character of Fremantle - Clever use of density allowances to achieve/resolve some of the issues noted below. - Diversity/mixed-use (residential/light commercial) - Recent 'development'/uses in the area suggest there is a demand/place for alternate mixed-use spaces within the precinct. What about a corner café (Amherst and Stack Street	The proposal conforms with the KSELSP in which a detailed assessment was provided as part of the development application. Please see below responses to queries from the submitter. 1. Please see response regarding Fremantle and Knutsford character in submission 6. 2. The proposal complies with the required density provisions. 3. A mixed-use component is not a development application element for this site under the KSELSP.	The City notes the applicants response. It is noted that the provision of a variety of land uses and densities is a key component of the Structure Plan. Please see body of report for further discussion relating to this point.



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Corner)?...shop houses along Amherst Street? Not just a line of cookie cutter townhouses.		
Subdivision Layout A good principal for sustainable building design to maximise lots with north/south orientation to maximised solar access/control during the subdivision stage. A majority of the lots created in the proposed plan face east/west. Surely with a site of this scale that a better outcome could be achieved for all lots...not just a few...its not hard!	With regards to lot orientation, the majority lots are orientated east to west with a rectangular shape to enhance the potential of the site given its demanding topography and large southern slope. All lots facing north to south would result in significant fill requirements that are unfeasible, with the current design appropriate given the constraints presented. The current layout represents a best practice and site responsible proposal. Notwithstanding the above, lot solar orientation is not considered to specifically east-west or north-south orientations to increase sustainability, with both options providing solar passive design. This is further acknowledged in Design Principle 5: Element 4 of the Draft Liveable Neighbourhoods 2015 document. East to west orientations in this regard propose longer frontages that face the northern sun, allowing for maximum solar exposure. Further, the Draft Liveable Neighbourhoods 2015 document delineates wider lots are more appropriate for east to west orientation. The majority of lots proposed are rectangular and/or square in shape.	The City notes the applicants response. The City provides the following comments: The Draft Liveable Neighbourhoods 2015 document provides the following comments relating to lot orientation for solar access: <i>"... Very narrow lots, for example, for terrace houses, work best oriented on a north-south axis so neighbouring buildings can shade east and west walls. Lots more than 12 metres wide are better oriented on an east-west axis to reduce the surface area of eastern and western walls and limit heat ingress. Design elements should incorporate strategies which mitigate urban warming such as the use of shade trees and vegetated stormwater management infrastructure on lots and within street reserves, such as green walls/ roofs, tree-pits, vegetated swales and bio filters...."</i> Noting the above, the vast majority of all proposed lots have a frontage of less than 12m, with the exception of the lots facing Stack Street. Therefore, the ideal orientation is north-south. It is noted that 15 lots have a north-south orientation, with the remaining lots having an east-west orientation. Nonetheless, it is considered that adequate solar access for the majority of proposed dwellings can be reasonably attained, as discussed in the body of the report.
Open Space	Multiple areas of open space have been proposed throughout the	The City notes the applicants comments. See City comments relating to landscaping above.



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The proposed development allocates zero common open space for use by residents and play space for kids. Each of the townhouse type plans submitted have only miniscule internal open living areas. The only available spaces within close proximity are on the verges to Stack and Amherst streets...largely taken up with either visitor parking or street crossovers in the current submission...and hardly safe play areas! The only POS is at Booyeembarra Park to the east and Stevens Reserve to the west. Both are some distance away and cannot be considered as an alternative to any on site open space requirements. The development must include a green space area for children's play at minimum and interconnected within the development for reasonable surveillance of all residents. See attached plan graphically illustrating possible approach.	development. The site is currently unvegetated and used for industrial purposes. Landscaping is provided within the development, both privately and communally. The application proposes a revitalised and native-orientated verge landscape which includes multiple communal spaces for both residents and the wider community. The amount of landscaping will be increased, and in turn, become more productive and usable for both the residents, community, and environment. This is detailed within the lodged Landscape report.	It is further noted that the City's preference is for public open space contributions to be provided through payment of cash in lieu, rather than through the provision of physical land, as discussed in the body of the report.
Parking	The application has proposed distinct visitor bays within the road verge that has resulted from prelodgement discussion	The City notes the applicants comments. Please see the body of the report for further discussion relating to parking.



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The proposed development has not allocated onsite parking for visitors. The only visitor parking shown are off site on council street verge. Street parking in Stack Street is already an issue (Even though there has been no redevelopment yet undertaken in the street since the Structure plan was adopted). The 4x parks required under the R-Codes must be provided and must be provided on the development site. The street verge must be retained for it is...a green space...importantly since there is no green space provided within the development!	with the city. These bays are not proposed to be hard stand as stated in this submission, but are to be off permeable, gravel-like materials which support drainage and other interests of the road verge. Street parking on Stack Street is currently an issue as the tenants on site do not utilise their land for parking, but rather direct parking to the street verge. The entire front verge for this parking is singular hard stand. This proposal alleviates two issues with regards to street parking in the locality. 1. Reduction in hardstand on the road verge. As shown in the bottom two extracts, the current Stack Street verge streetscape is vehicle dominated are majority hardscaped, the proposal greatly reduces the concentrated hardscape area, and rationalises it through the wider site frontages. Native landscaping is also proposed for the front verge, which contributes significantly more to the local environment than monoculture turf. 2. Movement of permanent parking on site from verge. The proposal alleviates the current Stack Street parking environment by proposing garages and parking for each dwelling within the development site, not on the verge. Existing properties fronting Stack St do not have parking available on site and require on the verge to compensate for this non-provision.	
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	This will greatly reduce the vehicle clutter currently on Stack St and preserve the proposed visitor bay for transient visitors only. All permanent parking is enclosed in site. This will be managed through the strata bylaws.	
Street Crossovers While the development only includes 2x crossover to access the internal road network, there are 9x townhouses that present to Amherst Street, each with a double paved crossover. This results in a continuous elevation of double garage roller doors to Amherst St and reduction of the only green space this development offers i.e the Council Street Verge.	Please refer to previous responses to Amherst Street crossover queries. Please refer to abovementioned responses to greenspace within the development.	Please refer to comments relating to crossovers provided above.
Density While we have no issue with the proponent adopting a lower density than permitted under the plan...we suggest that in adopting this lower density, the issues of access, parking, car/pedestrian safety and open space should be better resolved.	Noted. The proposal is compliant with density requirements for a residential development.	The City notes the applicants comments
Email submission 5		
Issue raised	Applicant response	Officer response
I was horrified when first looking at the proposal online. This	A One Planet Living Principles assessment is not a mandated requirement as part of a Development Application within the Knutsford Precinct Area or wider Fremantle Area.	The City notes the applicants comments.



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appears to be a stock-standard business as usual development proposal which totally fails to take into account the ecological and climate emergency we're experiencing currently and acknowledged by our council in declaring a Climate Emergency. Council has adopted principles recognising the Climate Emergency to support the transition to more sustainable planning and development which the development proposal appears to entirely ignore. In what way does this development proposal attempt to comply with the One Planet Living Principles?	Notwithstanding, a variety of sustainability focused approaches have been considered in the design, including but not limited to: • Potable water use by the landscape design has been reduce via hydrozoning, watervise planting and non-potable irrigation. • Permeable paving has been provided to visitor parking areas to minimise heat island impacts • Dwellings have been designed to enable much of their construction in low carbon impact materials (timber stud, lightweight structures) • Light coloured roof material selections are used throughout to reduce heat intake Development has been designed to minimise cut and fill by following the existing contours while enabling functional site access. The proposed development incorporates sustainability initiatives that greatly exceed those of existing development in the surrounding locality.	
The development appears to merely attempt to maximise profit without thought for environmental issues and requirements and creating pleasant homes and a community. It stands in stark contrast to the developments which have been done on Blinco and Knutsford Streets, in WGV eco-village and in East Village. These are all demonstrations of achieving greater density while	Please refer to above commentary on sustainability, in addition to community benefit provided through streetscape rehabilitation and removal of an industrial interface to established homes. This proposal is in alignment with the vision and intention of the Knutsford Street East Structure Plan and fulfills the desired residential transition of the area. The proposed development complies with the relevant planning framework.	The City notes the applicants comments.



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providing good amenity and reasoning to environmental realities and demands.		
There does not appear any attempt to orient homes to make the most of a northerly orientation.	With regards to lot orientation, the majority lots are orientated east to west with a rectangular shape to enhance the potential of the site given its demanding topography and large southern slope. All lots facing north to south would result in significant fill requirements, with the current design appropriate given the site constraints presented. The current layout represents a best practice and site responsible proposal. Notwithstanding the above, lot solar orientation has been maximised to increase sustainability, with both options providing passive solar design. This is further acknowledged in Design Principle 5: Element 4 of the Draft Liveable Neighbourhoods 2015 document. East to west orientations in this regard propose longer frontages that face the northern sun, allowing for maximum solar exposure. Further, the Draft Liveable Neighbourhoods 2015 document delineates wider lots that are more appropriate for east to west orientation. The majority of lots proposed are rectangular and/or square in shape.	The City notes the applicants comments. Please refer to the City's previous comments relating to lot orientation, provided above.
Amherst street becomes an almost unbroken series of cross-overs and garages.	Please refer to previous responses to Amherst Street crossover queries.	Please refer to the City's previous comments relating to crossovers above. Moreover, please refer to the body of the report for discussion relating to garage widths.
The internal space is dominated by roads with virtually n provision for green verges or even pedestrian use.	Please refer to abovementioned responses to greenspace within the development.	Please refer to the City's comments relating to landscaping contained above. It is further noted that the proposal provides improved pedestrian amenity, given it proposes the construction of footpaths along the development sites side of Stack and



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		Amherst Streets, where there are no or limited current footpaths.
There is the most rudimentary nod to landscaping and no provision for community green space, play space for children of any age, barbeque or any other amenities. Where each of the individual units have extremely limited external space, this becomes ever more imperative.	The site is currently unvegetated and used for industrial purposes. Landscaping is provided within the development, both privately and communally. The application proposes a revitalised and native-orientated verge landscape which includes multiple communal spaces for both residents and the wider community. The amount of landscaping will be increased, and in turn, become more productive and usable for both the residents, community and environment. The proposed development complies with the relevant planning framework.	Please refer to the City's comments relating to landscaping contained above.
There appears to be no provision for rainwater collection and retention on site nor rooftop solar. I would suggest that greywater use on site is also something which should be standard practice in these times.	Potable water use by the landscape design has been reduced via hydrozoning, waterwise planting and non-potable irrigation. Permeable paving has been provided to visitor parking areas to minimise heat island impacts. The proposed development complies with the relevant planning framework.	The City notes the applicants comments.
In short, I think this is an utterly awful development proposal and should be rejected outright.	Noted.	Noted.
Email submission 6		
Issue raised	Applicant response	Officer response
The Knutsford St Precinct, or as it is known locally as, The Fremantle Industrial Arts Quarter, bounded by Amherst, Stack, Montreal and Blinco St are one of the most unique and diverse environments in the metro area. As such, it was recognised by council, whose stated intention	This submission commented is noted. The redevelopment of this area from its existing Industrial Uses to a future residential area has been outlined in the City of Fremantle's Knutsford Street East Local Structure Plan and thus this proposal aligns with the desired amenity for the region. Residential development is a permitted land use. The proposed development complies with the relevant planning framework.	The City notes the applicants response. It is noted that the desired urban form is to reflect the existing and previous uses in the area. It is considered that the proposal has a generally acceptable impact in this regard, though has capacity for improvement.



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was to create an Arts Precinct in the area. Owners, and businesspeople took up that challenge, investing and preserving a developing, within the existing framework of the old industrial area, inspired by the reappropriation of derelict area, throughout the world, which were transformed into major tourist hubs, with funky cafes, artist and creative workshops, and places for start-up enterprises. In the past 10 years, the Fremantle Industrial Arts Quarter has flourished, and become a major destination, now housing 5 café's, 4 major Arts Hub's housing a diverse range of Arts and Crafts studios, health facilities, and countless new start-ups. Sometimes we don't know what we have got till its gone, and sometime governments and developers cannot see the potential of the areas in which they are developing. This often gives rise to simplistic and formulaic approaches to projects.		
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I feel this development falls into that category for these reasons.		
It bears no relevant to the existing mixed-use culture of the area.	A mixed-use component is not a development application element for this site under the KSELSP.	It is noted that the provision of a variety of land uses and densities is a key component of the Structure Plan. Please see body of report for further discussion relating to this point.
It doesn't include any commercial component.	A mixed-use component is not a development application element for this site under the KSELSP.	It is noted that the provision of a variety of land uses and densities is a key component of the Structure Plan. Please see body of report for further discussion relating to this point.
There is no use or architectural reference to the existing industrial activity or history of the buildings which will be bowled over. It missed the opportunity to add to that environment.	The materiality and shape of the dwellings have utilised elements obtained from industrial development, paying homage to the historical use of the KSELSP area. The existing structures on site are unsuitable for reuse due to their orientation and structural integrity for residential uses and lack any architectural merit. Large areas of the subject site are currently vacant or outdoor storage areas. The proposed dwelling facades utilise a mixture of exposed brick, sheet-cladding, and linear edges which introduce an industrial aesthetic to the development. Below are industrial comparisons within the Fremantle Area. 23A Montreal Street, Fremantle (KSELSP Area) • Linear Edges • Exposed Brick • Triangular Roof 178 Marine Terrace, South Fremantle • Exposed Brick • Steel Sheet Cladding • Linear Edges	The City notes the applicants comments.



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	22 Amherst St, Fremantle (KSELSP Area) • Varying materiality (sheeting, brick work, rendering). • Linear features with angled roof. Angular design.	
What attracts people to Fremantle is the rich cultural environment, I feel this development will do nothing to add to that.	The areas redevelopment has been outlined in the long-standing KSELSP in which this development is permissible. Further and outlined above, the proposal pulls upon strong industrial elements evident throughout Fremantle in its design. This supports the continuation of the Knutsford amenity.	The applicants comments are noted.
These days people want more than boring bland subdivision development, top end development recognises and aims to take advantage of interesting and stimulating environment, it improves their bottom line.	The architectural merit and site-specific design response is evident throughout this proposal and demonstrates that the Monument East redevelopment supports the growth of the KSELSP area and retention of the Knutsford Residential Amenity. Economic components are not a relevant planning consideration.	The applicants comments are noted.

MySay submission table (submissions summarised)

Issue Raised	Applicant comments	Officer comments
Generic design, architecture, and materials, proposed are inconsistent with the intent for, and context and character of, the locality per the vision and objectives of the Knutsford East Local Structure Plan (precinct 5).	Please refer above response concerning the materiality and architectural design's relationship with the Knutsford and Fremantle context.	It is noted that these elements aren't considered as part of the City's assessment.
Proposal is underwhelming and sets a poor precedent and is a setback in the development of the precinct. Other nearby developments better reflect the design standards suitable to the locality and better reflect the character of the area. The	The proposal delivers an appropriate density that aligns with the requirements of the KSELSP whilst also delivering an appropriate interface between the established residential to the south and the KSELSP redevelopment area. Whilst the KSELSP has a maximum overall building height of 4 storeys, the KSELSP also specifies a minimum of 2 storeys. This proposal is compliant with the KSELSP in the fact that is	The applicants comments are noted. The density proposed is generally consistent with the permitted R80 provisions, noting that several lots are 4m ² undersized, which is an element to be considered at the subdivision stage of development.



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development doesn't meet the potential for the site (e.g., development up to four storeys in height).	proposes a combination of 2 and 3 storey dwellings, in alignment with the KSELSP. The KSELSP also states that "development towards Stack and Blinco St should be generally 2 storeys at the street interface with any additional storeys set well back from the street". The dwellings fronting Stack St do not exceed 2 storeys.	
Proposal doesn't meet the ten principles of good design established by the State Design Review Panel.	This comment is unqualified and does not outline where it does not meet the 10 principles. Notwithstanding, the proposal delivers a high quality development in which its merits are detailed within this response and the lodged Development Application.	The applicants comments are noted.
Poor public realm and street interaction which doesn't enhance the surrounding urban environment.	The current public realm is hardscaped to provide additional parking for the operating land uses, preventing any form of interaction between the site and the public. Where there is not hardscaping, the public realm is turfed with no footpath or other public use. This proposal enhances the public realm abutting the development area through a dedicated landscape plan with proposes significant landscape rehabilitation. The investment into the streetscape is a community benefit that is proposed to increase the amenity of the entire Knutsford area and alleviate any existing ecological issues with the dominance of monoculture turf.	The applicants comments are noted. The Landscaping plan provides treatments which provide a degree of amenity to the public realm. It is considered that street interaction is somewhat achieved through the provision of balconies and major openings facing Amherst Street. It is noted that the dwellings facing Stack Street are limited in their direct interaction with the public realm, however this quantum of lots is limited.
Poor adaptive re-use due to lack of sufficient floor-to-ceiling heights to provide meaningful adaptive-reuse in future.	Please refer to above commentary with regards to the correlation of adaptability of the land use and ceiling heights.	The applicants comments are noted. The City's preference is for 4.2m floor to ceiling heights to be provided to allow for adaptation in future. It is noted that the floor to ceiling heights proposed are compliant with the requirements of the National Construction Code, and will allow for a satisfactory degree of adaptability.
The design of the corner of Stack and Amherst Street is important	Development along Stack Street is limited in its ability due to an existing power easement for the above-ground powerlines.	The applicants comments are noted.



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given it is the interface with the southern neighbouring residential area. The lack of activation of this corner is a concern and contributes to poor legibility in the design.	To overcome limitations in the built form, landscaping elements are utilised to increase the activation of the corner lot. This includes detailed revegetation, seating and play elements, introduction of footpaths and habitat creators. Detail is outlined in the lodged landscape report.	
Lack of quality landscaping and community green space and deep planting zones. Lack of space for medium-large trees.	A number of medium to large trees are proposed throughout the redevelopment, in addition to a detailed landscape plan for the public realm and internally. Please refer to above responses regarding landscaping.	The applicants comments are noted. It is considered that the existing amount of mature vegetation present is minimal, however it is considered that the overall landscaping provision has capacity for improvement in this regard.
Lack of space in internal streets for vegetation. No proposed communal area of open space, which could include shared amenities and facilities.	Please refer to abovementioned responses to greenspace within the development. Please refer to abovementioned response to internal street width.	The applicants comments are noted. Further, it is noted that minor improvements in the provision of landscaping to the internal streets has been provided.
Addition of numerous crossovers and removal of the mature street tree is not a good outcome. Too much land is dedicated to parking, which could be used for additional landscaping – potential for consolidated communal parking areas could be explored.	A larger consolidated communal parking area was considered; however, it was of the view that a large singular space dedicated to parking was detrimental to the public realm and the wider amenity of the site. By evenly spacing the parking areas into smaller, isolated locations, this allows for a less intrusive provision of vehicle locations and reduces the potential for a 'car park' feel if all the bays are full.	The City's preference is for a reduction in the number of crossovers and parking bays present along Amherst and Stack Streets. It is noted that any works in the City's road reservations is subject to separate approvals.
Where is the location of permeable ground to allow for water to infiltrate into the aquifer?	Stormwater management is considered to be a condition of approval. All stormwater will be maintained on site.	The applicants comment is noted.
Traffic and visitor parking issues (insufficient visitor parking)	Please refer above response to traffic planning and parking provision.	It is considered that the overall amount of traffic likely to be posed by the proposal is supportable, given the Structure



Schedule of submissions – 56 Grouped dwellings - Nos. 34-38 Amherst Street and Nos. 2-4 Stack Street, Fremantle - DAP001/22

provided). Traffic intensified since High Street upgrades, and traffic is greater than that discussed by the proposal. Amherst Street is significantly busier.		Plan envisages dwelling densities in excess of that proposed. See the body of the report for the Visitor Parking assessment.
Issues relating to site works and drainage and the relation of these to neighbouring properties and the locality.	Stormwater management is considered to be a condition of approval. All stormwater will be maintained on site.	The applicants comment is noted.
Potential visual privacy issues may be posed to the proposal by future developments.	Future developments will need to consider privacy and overlooking provisions contained with SPP 7.3.	The applicants comment is noted. The City may impose appropriate conditions relating to visual privacy.
Lack of land use diversity. It is noted that existing businesses have closed down. No retail or food businesses are proposed. The locality needs such land uses within a walkable distance. Other uses of cultural benefit should be included, such as art galleries.	A mixed-use component is not a development application requirement for this site under the KSELSP.	The applicants comments are noted. It is noted that whilst there are no specific land use ratios, the provision of a mixture of land uses is an objective of the Structure Plan. In this regard, it is considered that acceptable provisions have been proposed to accommodate non-residential land uses in future. Please see the body of the report for additional comments relating to land use and adaptability.
Insufficient dwelling diversity (e.g., no one/two bedroom dwellings, affordable housing, or Multiple dwellings proposed).	Dwelling diversity is provided through a number of varying architectural typologies which will feature different price points. Multiple dwellings are not a requirement under the KSELSP.	The applicants comments are noted. It is noted that whilst there are no specific dwelling typology ratios, the provision of a variety of housing typologies is an objective of the Structure Plan. Please see the body of the report for additional comments relating to land use and adaptability.
Proposal sets precedent for future inappropriate higher density developments.	The proposal complies with the density requirements under the KSELSP. It is noted that higher density is permitted on site with multiple dwellings and 4-level structures.	Applicant comment is noted.
Solar access issues. The majority of private courtyards will be significantly overshadowed.	80% of dwellings obtain solar access at 12pm on June 21 st . All private living spaces have adjacent outdoor living areas (either balconies or courtyards) with significant glazing to	Applicants comments are noted. The City considers that the overshadowing proposed to the subject sites are generally excessive.



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	maximise solar intake. The Type B & B1 have their internal courtyards solar provision amplified by skylights located over the living areas. Within the constraints of the site topography, each lot has been designed to make best use of the available solar access with the side facades of dwellings at the end of each row also having additional glazing where practical.	
Universal access issues and lack of adaptability to allow for ageing in place.	The steep natural contours of the site (which have been minimised as much as possible) require a varied approach to the entrance typologies of different lots. Type A, B, B1, C & F dwellings which make up 39 of the 56 dwellings (70%) all have at-grade entries to the adjacent street areas from their front doors. The Type D, D1 & E dwellings have alternate at-grade access via the rear garage entries, while also having ground level bedroom and bathroom amenities for guests with lower mobility. Across the full development, there is a mix of ground floor and first floor living arrangements to provide maximum flexibility for different types of occupants.	The applicant comments are noted.
Safety (CPTED issues) and a lack of passive surveillance (e.g., lack of activation and passive surveillance of Road C, in addition to the broader internal street configuration, causing CPTED issues).	All proposed dwellings overlook the internal streetscape, ensuring passive surveillance is maintained across the development. The internal streetscape is perpendicular to the external streetscape, allow long visible sightlines from the public realm. If required, the applicant is supportive of gates being placed across the site's entrances, subject to appropriate operating conditions.	The applicant comments are noted. It is considered that the proposal has a satisfactory provision of passive surveillance over the public realm, in addition to the internal private roads.
Sustainability concerns (lack of sustainability report, provision of PV cells, shared energy on-site, electric car charging, and bike parking, etc).	A variety of sustainability focused approaches have been considered in the design, including but not limited to: • Potable water use by the landscape design has been reduce via hydrozoning, waterwise planting and non-potable irrigation. • Permeable paving has been provided to visitor parking areas to minimise heat island impacts	The applicants comments are noted.



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	- Dwellings have been designed to enable much of their construction in low carbon impact materials (timber stud, lightweight structures) - Light coloured roof material selections are used throughout to reduce heat intake. Development has been designed to minimise cut and fill by following the existing contours while enabling functional site access	
Private open spaces are insufficient for residents.	Private open spaces are compliant with the SPP 7.3 Design Principles	See body of report for discussion relating to outdoor living areas.
Poor internal design (poor outlooks for residents, kitchens insufficient in size relative to the number of bedrooms per dwelling, etc).	The dwellings are designed with a variety of outlook opportunities providing different options for different potential residents. A mix of first floor living with connected balconies and ground floor living with private courtyards all provide suitable outlook either outside of the site to the landscaped verges or internally to the streetscape or private areas. The kitchens throughout are spacious and through open facing, parallel and island bench layouts provide good functionality access to the adjacent living spaces. For example, as larger dwelling typologies the type D and D1 dwellings have over seven metres of proposed kitchen bench, or more if taking both faces of the island benches into account.	The applicant comments are noted.
Poor interface dominated by garages and lacking activation. This creates a hostile streetscape.	Refer aforementioned response regarding the Amherst Street interface and its design.	See discussion in body of report.
Lack of appropriate interface of dwellings along Stack Street, specifically with how they interface with the southern neighbouring residential development.	The ability to construct a built form interface with Stack Street and the southern residential development is limited due to the existing electrical easement pertaining to the above powerlines. In response, heightened effort was placed into the landscaping component of this interface, with the aim of delivering greater community amenity and rehabilitation of the	Applicant comment is noted. See discussion in body of report.



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	local urban flora and fauna. This is evident in the lodged Landscape Report	
Lack of cycling and pedestrian amenity.	The proposal introduces a realm for the pedestrian and cyclist that is at current non-existent within the locality and across the site. The application proposes the rehabilitation of the street verge to introduce a native interactive flora environment, in addition to the provision of a footpath (not existing) to connect the development to the landscaped element. Internally, the laneways and internal roads are narrow, designed to slow down cars and act as a shared space for pedestrians and cyclists. This follows principles of traffic calming and pedestrianisation.	Applicant comment is noted. It is considered that a degree of amenity is provided through the Landscaping plan, providing an improvement to the internal and public realm outlooks.
Contributes to the urban heat island effect.	The proposal in fact is reducing the urban heat island effect distributed by this site. Currently, there is very minimal greenery on site and is mostly hardscaped with pavement and industrial structures. The proposal introduces native greenspaces which were previously no existent, as well as the provision on permeable parking spaces through the removal of the existing hardscaped parking on Stack Street. This is provided along with a raft of aforementioned sustainability initiatives.	Applicant comments are noted. See comments in body of report for further discussion.
No indication of location of air conditioners and bins.	Air Conditioning Unit zones are shown on lodged elevations. Bin stores are shown on dwelling floor plans, in addition to a Waste Management Plan which demonstrates proposed waste servicing outcomes.	Applicant comments are noted.
Poor orientation of dwellings (minimal lots with north-south orientation) to ensure light, ventilation and a green outlook.	Please see above responses to dwelling orientation queries.	See discussion in body of the report.
No articulation of built form or facades with shallow verges.	No direct comment provided.	See discussion in body of the report.



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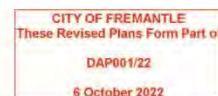
Design and interface with the streetscape is monotonous and lacks diversity.		
The proposal doesn't reference the industrial heritage of the surrounding area.	No direct comment provided.	Noted. Type E dwellings contain a saw like roof design, which echos an industrial aesthetic. It is noted that they are not readily visible from the public realm, and therefore don't contribute substantially to an overall design presentation that references the localities historical context.
No additional residential development should occur, as it will reduce housing values and will add nothing to the value of existing houses.	No direct comment provided.	Not a relevant planning consideration.
What will happen to the site if the building company collapses?	No direct comment provided.	Not a relevant planning consideration.
Proposal is too car-oriented and doesn't sufficiently promote alternative modes of transportation. It is noted there is nearby public transportation available.	No direct comment provided.	It is noted that the development provides parking as required by the RCodes (noting the visitor parking shortfall, discussed in the body of the report). Nonetheless, the development is located in close proximity to public transportation and has adequate pedestrian and cycling amenity.
Proposed density cannot be supported by current public amenities (footpaths, street lighting, bike paths, etc).	No direct comment provided.	The applicant is proposing improvements to the local footpath network. Other utilities are subject to other approvals issued by other internal and external departments.
Proposal is overdevelopment of the site.	No direct comment provided.	Noted.



Additional Information 3 – Landscaping plan



34-38 AMHERST & 2-4 STACK STREET FREMANTLE
DRAFT CONCEPT REPORT



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DOCUMENT STATUS

Date of Issue	Issue No	Reason for Issue	Author	Reviewed By	Approved by
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06/10/22	F	DA (JOAP)	RB/TD	RB	PV

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02 INTRODUCTION

Josh Byrne & Associates have been engaged by Locus Development Group to undertake the landscape concept design for a 56 dwelling Townhouse Development in Fremantle.

This report forms part of the application for development approval (DA) to the City of Fremantle.

The design intent outlined on the following pages creates a high quality streetscape and integrated residential environment. Waterwise streetscapes will incorporate shade trees and diverse understory plantings to support biodiversity and improve the local microclimate. These spaces also have the potential to provide opportunities for food production and informal play.

Key considerations of the brief relating to landscape design include:

- Universal and equitable access.
- Design for flexibility, choice, adaptability.
- Creates a safe, secure environment aligning with Crime Prevention Through Environmental Design (CPTED) principles.
- Clear delineation between private, semi private and external streetscape spaces.



WSV development, White gum valley, City of Fremantle (JBA)



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03 SITE CONTEXT

LOCAL CONTEXT

The site is located within 1.5km of the Fremantle CBD. 300m to the East is Booyeembara Park, which along with Fremantle golf course forms a significant green space within the City of Fremantle. The recent residential development at Knutsford East Village is 500m to the north.

VEGETATION

The site is within the Cottesloe vegetation complex, which originally a vegetation type of woodland / open forest (10-30m tall) with closed heath. Key species include *Eucalyptus marginata*, *Corymbia calophylla*, *Eucalyptus wandoo*.



img: Neermaps

SOILS

The soil type onsite is limestone - light, yellowish-brown, fine to coarse-grained, sub-angular to well rounded, quartz, a trace of feldspar, shell debris, variably lithified, surface kankar, of eolian origin. Minor heavy minerals may be present.

STREETSCAPE CONTEXT AND CHARACTER

The existing surrounding streetscape character is light industrial & residential area. The large block sizes and generous verges typically contain street trees and a turf understorey. Amherst Street heads up the hill towards Booyeembara Park 300m away. Recently the area has seen an emergence of residential investment, with several medium density developments contributing waterwise native landscapes as part of the evolving streetscape.

CONNECTIVITY

The site is within close proximity to both social and green space amenity, with an eclectic assortment of businesses and community nodes nearby. The local White Gum Valley Primary School, is within walking distance.

TOPOGRAPHY

Topographically, the local area is gently undulating, with the corner of Amherst and Stack Streets (pictured above right) providing both the South West boundary and the low point of the site. Eastwards along Stack at the topography rises relatively steeply towards Booyeembara Park.



Corner of Amherst and Stack St. Image: Google Street view



Native verge planting and locally appropriate materials form part of the streetscape immediately adjacent to site. Image: Google Street view



Waterwise planting and WSDU Streetscapes Knutsford East Village. Image: Google Street view



Residents of the local area are blessed with healthy street trees and generous verges to upgrade, as seen above. Image: Google Street view



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04 LANDSCAPE PRINCIPLES

				
FUNCTIONALITY Respond to needs of residents by creating a diverse range of outdoor spaces that can be used for socialising or withdrawing. Specify low maintenance durable materials. Design for safety and security by maintaining sightlines (low planting and avoid obstructions) and incorporating external lighting. Respond to the building's internal organisation and programme by creating direct access to communal areas, clear circulation and appropriate spatial adjacencies. Ensure universal and equitable access to external communal areas.	ECOLOGY AND BIOPHILIA Optimise level of green infrastructure by maximising vegetation cover. Enhance biodiversity by developing a local, diverse planting palette. Incorporate habitat trees and landscape elements such as insect hotels to attract birds and insects. Optimise views of nature from internal and external spaces through considered planting and layout (nature in the space). Use bunding instead of planters to create softer, natural forms instead of walls. Use principles of design for health and wellbeing to create restorative landscapes. Incorporate biomorphic forms, patterns, and colours and natural materials.	AMENITY AND COMFORT Enhance comfort with shading from trees and shade structure, seating and outdoor water fountains. Seating options to allow different ways of being in the space. Consider lighting, sightlines, night-time activation to enhance community safety. (Lighting for amenity must be balanced with impact on ecology and light pollution). Consider acoustic amenity and visual privacy of neighbours.	PLACE Develop a material and planting palette that reflects the sites local distinctiveness. Integrate landscape elements and materials that align thematically with a sense of 'home'. Consider how planting and external areas can contribute to a distinctive identity for the development in the streetscape. Consider opportunities for interpretative signage and education in relation to local cultural and ecology.	SUSTAINABILITY Reduce potable water demand by integrating hydrozoning, waterwise planting, and non potable irrigation. Reduce resource use and minimise use of high embodied carbon materials such as concrete and steel whilst maximising renewable or reclaimed materials such as timber. Mitigate urban heat island effects by maximising vegetative cover, and using high albedo materials. Develop a material palette of durable materials and elements that are designed for disassembly or recyclable.



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05 CURRENT PROPOSAL - LANDSCAPE STRATEGY





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CORNER LOT

Improving corner lot verge design can greatly benefit the community.

Better sight lines are safer for pedestrians when they move to cross the street.

Vehicles are given greater notice when pedestrians are more visible, so they reduce speed sooner.

Increased visibility provides greater opportunity for passive surveillance and reduction in opportunities for crime. This is a principle known as crime prevention through environmental design (CPTED).

Better designed streetscape corners enhance the pedestrian experience.



MID BLOCK

Taking advantage of the opportunity to enhance verges mid-block has a range of benefits.

Promotes neighborhood identity.

Encourages social interaction.

Engaging with the outdoor environment helps promote healthy living.

Enhanced biodiversity and habitat further benefits healthy living.



KEY STREETSCAPE LOCATIONS

Upgrading verges at key streetscape locations with landscape features planned by the new development also provides good outcomes.

Promotes a cohesive neighbourhood identity.

Enhances linkages for biodiversity, which improves our environment and can benefit our health.



INTERNAL STREETSCAPES

Maximise opportunities to soften and enhance the visual character of the public realm areas.

Diverse planting using a mix of hardy native and shade tolerant species.

Achieve a sense of place through consistent use of plant palette throughout internal streetscape

A plant palette that is waterwise, hardy, and easily maintained.



PRIVATE LANDSCAPES / COURTYARDS

Provide functional small gathering and amenity spaces.

Provide colour and texture to soften the surrounding built form.

A plant palette that is shade tolerant and easily maintained.

Materials palette to compliment built form look and feel.



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06 CURRENT PROPOSAL - TREE LOCATION DIAGRAM





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07 STREETSCAPE CONCEPT - MIDBLOCK

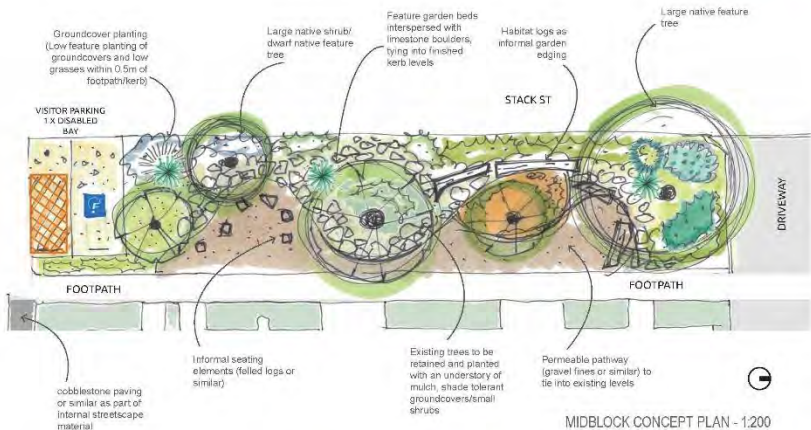
Connected native Verge Garden

DESIGN OBJECTIVES

- Encourage social interaction (place-making).
- Foster community networks.

DESIGN CONSIDERATIONS

- Structures such as planters and other furniture items, as well as landscape items such as rocks and logs are permitted but will require approval from the City of Fremantle.
- Shrubs and approved structures should be set back and clear of kerbs and footpaths by 500mm.
- Clear pedestrian and traffic sightlines must be maintained at all times and can be achieved via a scaled approach to planting heights.
- Better designed streetscape corners enhance the pedestrian experience.



LOOK AND FEEL



Curten steel edging with crushed aggregate pathway (image: Yerrabingin)



Verge planting. Image: ASPACE



Streetscape amenity, WGV development. Image: J&A



Streetscape amenity, WGV development. Image: J&A



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MID BLOCK PLANT PALETTE

Waterwise Native

Verge Trees



Shrubs/ Groundcovers/ Strappy Plants



Productive

Productive trees/shrubs



Edibles/Herbs

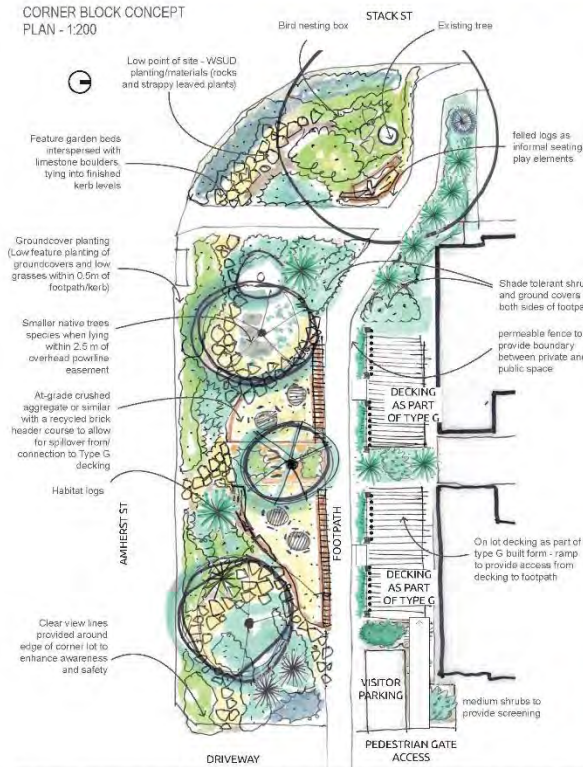




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08 STREETSCAPE CONCEPT - CORNER BLOCK

CORNER BLOCK CONCEPT
PLAN - 1:200



Community corner block garden

DESIGN OBJECTIVES

- Diverse planting using local native species.
- Habitat creation and provision.
- Space for gathering/spillover from ground floor decking
- Beautification of verge.
- Sense of place.

DESIGN CONSIDERATIONS

- Structures such as planters and other furniture items, as well as landscape items such as rocks and logs are permitted but will require approval from the City of Fremantle.
- Shrubs and approved structures should be set back and clear of kerbs and footpaths by 500mm.
- Clear pedestrian and traffic sightlines must be maintained at all times and can be achieved via a scaled approach to planting heights.



Permeable visitor parking image: Sustainable paving systems



Informal roadside play elements, image:JBA



Food and beverage spillover space image: ABC news



Image: we love Aintree



Rocks and planting, image:JBA



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CORNER BLOCK PLANT PALETTE

Waterwise native

Native Feature Trees



Groundcovers/ Strappy Plants



WSUD

Shrubs/ Groundcovers/ Strappy Plants to 1200mm



Shade tolerant

Shrubs/ Groundcovers





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09 PRIVATE COURTYARD CONCEPT

Lush and inviting courtyards

DESIGN OBJECTIVES

- Functional and inviting.
- Soften without cluttering the space.

DESIGN CONSIDERATIONS

- Planting response to respond to available light - plant palette to cater for areas where little direct sunlight is available.
- permeable paving to be used where possible
- Materials palette to compliment built form look and feel.

LOOK AND FEEL



Shade tolerant courtyard planting, Image: Define LA



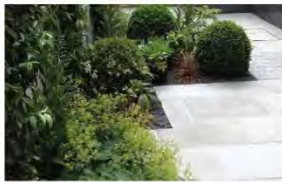
Shade tolerant groundcovers and paving, Image: Garden Express



Raised planter beds and seating elements Image: K+M Landscapes



Espeller planting & shade tolerant understory planting, Image: K+M



Paving, gravel mulch & shade tolerant planting, Image: Country Living



TYPICAL COURTYARD CONCEPT PLAN - 1:50



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PRIVATE GARDENS PLANT PALETTE

Shade tolerant

Small feature Trees



Shrubs/strappy plants



Groundcovers/climbers

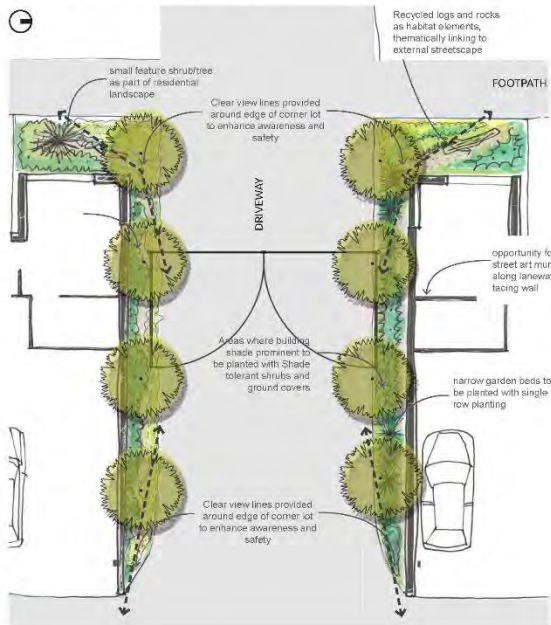




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10 STREETScape CONCEPT - INTERNAL STREETSCAPES

INTERNAL STREETSCAPES PLAN - 1:100



Waterwise and hardy streetscapes

DESIGN OBJECTIVES

- Diverse planting using a mix of hardy native and shade tolerant species.
- Thematic connection to streetscape corner blocks and mid block lots through consistent use of materials and planting.
- Achieve a sense of place through consistent use of plant palette throughout internal streetscape.

DESIGN CONSIDERATIONS

- Clear pedestrian and traffic sightlines must be maintained at all times and can be achieved via a scaled approach to planting heights.
- Better sightlines are safer for pedestrians when they move to cross the street.
- Vehicles are given greater notice when pedestrians are more visible, so they reduce speed sooner.
- Increased visibility provides greater opportunity for passive surveillance and reduction in opportunities for crime.
- Better designed streetscape corners enhance the pedestrian experience.
- Strata maintenance to help guide species selection.



Shrubs and groundcovers along footpath (Elysian Landscapes)



Locally themed driveway mural Image JBA



Cobblestone pathways to provide wayfinding intro/out of site through the site Image Natural Stone Flooring



Shade tolerant hardy plant selection along hard edge. Image Stone lotus landscapes



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INTERNAL STREETSCAPE PLANT PALETTE

Waterwise Native

Verge Trees



Shrubs/ Groundcovers/ Strappy Plants to 1200mm



Groundcovers/ Strappy Plants



Shade tolerant

Shrubs/ Groundcovers/strappy plants





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11 FRONTAGE PLANTING APPROACH - BUILDING TYPOLOGIES



A ROAD FRONTAGE
INTERFACE

Shrubs

- Banksia nivea
- Calistemon viminalis
- Melaleuca incana
- Scaevola nitida

Strappy plants

- Conostylus acualata
- Dianella revoluta
- Dampiera linearis
- Lomandra longifolia
- Liriope muscari

B ROAD FRONTAGE
INTERFACE

Shrubs

- Banksia nivea
- Calistemon viminalis
- Melaleuca incana
- Scaevola nitida

Strappy plants

- Dianella revoluta

C ROAD FRONTAGE
INTERFACE

Shrubs

- Banksia nivea
- Calistemon viminalis
- Melaleuca incana
- Scaevola nitida

Strappy plants

- Conostylus acualata
- Dianella revoluta
- Dampiera linearis
- Lomandra longifolia
- Liriope muscari

D/D1 PRIVATE GARDENS

Tree

- Crepe Myrtle

Shrubs

- Boronia crenulate
- Dampiera linearis
- Scaevola aemula
- Dianella revoluta
- Liriope muscari

Groundcovers

- Billardiera fusiformis
- Hibbertia scandens
- Trachelospermum jasminoides
- Viola hedeacea

D/D1 ROAD FRONTAGE
INTERFACE

Shrubs

- Calistemon viminalis
- Melaleuca incana

Strappy plants

- Dianella revoluta
- Liriope muscari

E ROAD FRONTAGE
INTERFACE

Shrubs

- Banksia nivea
- Melaleuca incana
- Scaevola nitida

Strappy plants

- Conostylus acualata
- Dampiera linearis
- Liriope muscari

F ROAD FRONTAGE
INTERFACE

Shrubs

- Banksia nivea
- Calistemon viminalis
- Melaleuca incana
- Scaevola nitida

Strappy plants

- Conostylus acualata
- Dianella revoluta
- Dampiera linearis
- Lomandra longifolia
- Liriope muscari



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12 PLANT SCHEDULE

PLANT SCHEDULE

Client: Lucas
Project: Amhurst and Stack
Location: Amhurst and Stack
Date: May 2022
Rev: A
Author: MC
Reviewed by: PV



Amhurst and Stack lies within the Cottesloe Central and South Vegetation Complex (CCS)
Cottesloe Central and South consists of woodland / open forest (10-30m tall) with closed heath. Key species include Eucalyptus marginata, Corymbia calophylla, Eucalyptus wandoo. The soil type onsite is limestone - light, yellowish-brown, fine to coarse-grained, subangular to well rounded, quartz, a trace of feldspar, shell debris, variably lithified, surface kankar, of eolian origin. Minor heavy minerals.

KEY	BOTANIC NAME	Variety	COMMON NAME	HEIGHT (M)	WIDTH (M)	POT
VERGE TREES				Height (m)	Width (m)	Stock Size
All	<i>Agonis flexuosa</i>		WA Weeping Peppermint (CCS)	12	8	75L
Be	<i>Eucalyptus erythrocorys</i>		Red Cap Gum	8	3	75L
Efo	<i>Eucalyptus foecunda</i>		Fremantle Mallee (CCS)	5	3	75L
Efor	<i>Eucalyptus forrestiana</i>		Fuchsia Gum	5	3	75L
Epl	<i>Eucalyptus platypus platypus</i>		Round leaved mirt (local)	4 to 10	3	75L
Eto	<i>Eucalyptus toditana</i>		Coastal Blackbutt (CCS)	6	5	75L
Eto	<i>Eucalyptus utilis</i>		Coastal Moort (local)	6	5	75L
Evi	<i>Eucalyptus victrix</i>		Little ghost gum	6	5	75L
Xpr	<i>Xanthorrhoea preissii</i>		Grass Tree			Transplant
MIDBLOCK - AMHERST VERGE				Height (m)	Width (m)	Stock Size
GROUNDCOVERS						
Acu	<i>Adenanthos cuneatus</i>	Coral Carpet	Basket Flower	0.3	1	140mm
Bbl	<i>Banksia blechnifolia</i>		Groundcover Banksia	0.2	3	140mm
Ggg	<i>Grevillea obtusifolia</i>	Gin Gin Gem	Grevillea Gin Gin Gem	0.3	2	140mm
Gmm	<i>Grevillea thelemanniana</i>	Mini Marvel	Spider Grevillea Green Gem	0.3	1	140mm
Ebh	<i>Eremophila glabra</i>	EREM1 Blue Horizon	Bmu Bush Blue Horizon	0.3	1	140mm
Sff	<i>Scaevola crassifolia</i>	'Flat Fred PBR'	Flat Fred Fan Flower	0.2	1	140mm
STRAPPY						
Aer	<i>Anigozanthos hybrid</i>	Everlasting Red	Kangaroo Paw Everlasting Red	0.45	0.35	140mm
Abr	<i>Anigozanthos hybrid</i>	Bush Rampage	Kangaroo Paw Bush Fury	1	0.5	140mm
Cac	<i>Conostylis aculeata</i>		Prickly Conostylis	0.5	0.5	140mm
Cca	<i>Conostylis caudicans</i>		Grey Cottonheads	0.5	0.3	140mm
Drv	<i>Dianella revoluta</i>	Revelation	Dianella revelation	0.5	0.5	140mm
Lgl	<i>Lepidosperma gladiatum</i>	LEP01 Gladiator	Coastal Sword Sedge	0.6	0.6	140mm



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PLANT SCHEDULE (CONTINUED)

SHRUBS - LOW					
Oam	<i>Olearia axillaris mini</i>	Mini PBR	Mini Coastal Daisy Bush	0.5	0.5
Wgb	<i>Westringia hybrid</i>	'Grey Box'	Native Rosemary Grey Box	0.45	0.45

PRODUCTIVE TREES					
Ch	<i>Citrus x latifolia</i>		Lime - Tahitian		
Cl	<i>Citrus x limon</i>		Lemon		
Mdg	<i>Malus domestica</i>	'Granny Smith'	Dwarf Apple Granny Smith	2.5	2.5
Mdp	<i>Malus domestica</i>	'Pink Lady'	Dwarf Apple Pink Lady	2.5	2.5
Pdu	<i>Prunus dulcis</i>		Almond	6	6

BUSHTUCKER					
	<i>Apium prostratum</i>		Seal Celery	0.3	1
	<i>Atriplex semibaccata</i>		Creeping Saltbush	small	
	<i>Austromyrtus dulcis</i>		Midyim Berry	small	
	<i>Backhousia citriodora</i>		Lemon Myrtle	3	3
	<i>Myoporum insulare prostratum</i>		Boobialla / Native Juniper (CCS)		2

PRODUCTIVE					
Lno	<i>Laurus nobilis 'dwarf'</i>		Bay tree / dwarf variety	1.5	0.5

CORNER BLOCK - STACK ST VERGE				Height (m)	Width (m)
GROUNDCOVERS					
Acu	<i>Adenanthos cuneatus</i>	Coral Carpet	Basket Flower	0.3	1
Bbl	<i>Banksia blechnifolia</i>		Groundcover Banksia	0.2	3
Ggg	<i>Grevillea obtusifolia</i>	Gin Gin Gem	Grevillea Gin Gin Gem	0.3	2
Gmn	<i>Grevillea thelemanniana</i>	Mini Marvel	Spider Grevillea Green Gem	0.3	1
Ebh	<i>Fremontia glabra</i>	EREMI Blue Horizon	Emu Bush Blue Horizon	0.3	1
Sff	<i>Scacvola crassifolia</i>	'Flat Fred PBR'	Flat Fred Fan Flower	0.2	1

STRAPPY					
Aer	<i>Anigazanthus hybrid</i>	Everlasting Red	Kangaroo Paw Everlasting Red	0.45	0.35
Abr	<i>Anigazanthus hybrid</i>	Bush Rampage	Kangaroo Paw Bush Fury	1	0.6
Cac	<i>Conostylis aculeata</i>		Prickly Conostylis	0.5	0.5
Cca	<i>Conostylis confinis</i>		Grey Cottonheads	0.5	0.3
Drv	<i>Dianella revoluta</i>	Revelation	Dianella revelation	0.5	0.5
Lgl	<i>Lepidosperma gladiatum</i>	LEPol Cladiator	Coastal Sword Sedge	0.5	0.6



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PLANT SCHEDULE (CONTINUED)

SHRUBS - LOW

Bnd	<i>Banksia menziesii Dwarf</i>		Firewood Banksia	2	1.5
Cup	<i>Calothamnus quadrifidus prostratus</i>		One Sided Bottlebrush	0.8	2
Lgd	<i>Leremophila glabra</i>	Dawson	Leremophila Dawson	0.8	1
Gpr	<i>Grevillea preissii</i>		Spider Net Grevillea	1	1
Lbr	<i>Leucophyta brownii</i>		Cushion Bush	1	1
Min	<i>Melaleuca incana nana</i>		Dwarf honey myrtle	1	1.5
Oam	<i>Olearia axillaris mini</i>	Mini PBR	Mini Coastal Daisy Bush	0.5	0.5
Pro	<i>Proelia rosea</i>		Rose Hamline	0.5	0.5
Wda	<i>Westringia dampieri</i>		Coastal Rosemary	0.8	1
Tre	<i>Templetonia reusa</i>		Cockles Tongue	2	1

WSUD

Ahu	<i>Anigozanthos humilis</i>		Catpaw	0.5	0.3
Cup	<i>Carex appressa</i>		Tall Sedge	0.5	0.5
Coc	<i>Coprosyris aculeata</i>		Prickly Coprosyris	0.5	0.5
Ulc	<i>Leremophila glabra</i>	Kalbarri Carpet	Kalbarri Carpet Linu Bush	0.3	1
Fno	<i>Vicinia norkosa</i>		Knobby Club Rush	0.3	0.8
Hpu	<i>Hemianthus pungens</i>		Snake Bush	0.3	2
Jpa	<i>Juncus pallidus</i>		Pale rush	0.5	1.5
Lgl	<i>Lepidosperma gladiatum</i>	LEPol Gladiator	Coastal Sword Sedge	0.6	0.6
Poc	<i>Paterosonia occidentalis</i>		Western Paterosonia	0.5	0.5

MID BLOCK - STACK ST VERGE (SHADE TOLERANT)

GROUNDCOVERS			Height (m)	Width (m)
Bbl	<i>Banksia blechnifolia</i>		0.2	2
Ddl	<i>Dampiera diversifolia</i>		0.5	1.5
Dcm	<i>Dampiera linearis</i>	Cobalt Mound	0.3	0.5
Del	<i>Darwinia citriodora</i>	Seaspray	0.6	0.9
Drp	<i>Dichondra repens</i>		0.1	0.3
Gcp	<i>Grevillea crithmifolia prostrata</i>		0.3	2
Hco	<i>Hardenbergia comptoniana</i>		0.2	1
Hpu	<i>Hemianthus pungens</i>		0.3	1.5
Llr	<i>Lianella revoluta</i>	Little Rev	0.4	0.4
Drv	<i>Dianella revoluta</i>	Revelation	0.5	0.5
Jce	<i>Juncus cernuus</i>		0.3	0.3
Lgl	<i>Lepidosperma gladiatum</i>	Gladiator	0.6	0.6
Lst	<i>Lepidosperma squamatum</i>	Twilight Green	0.5	0.5
Luj	<i>Liriope muscari</i>	Just Right	0.5	0.5
Llt	<i>Lomandra longifolia</i>	Tanika	0.6	0.65
Ola	<i>Orthrosanthus laxus</i>		0.5	0.5
Poc	<i>Paterosonia occidentalis</i>		0.5	0.5



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PLANT SCHEDULE (CONTINUED)

SHRUBS - LOW

Bpp	<i>Baronia crenulata</i>	Pink Passion	Aniseed Baronia	0.5	0.5
Lsn	<i>Leucoplyta brownii</i>	Silver Nugget	Silver Nugget Cushion Bush	0.5	0.5
Oau	<i>Olearia axillaris mini PBR</i>		Mini Coastal Daisy Bush	0.5	0.5
Wab	<i>Westringia hybrid</i>	Aussie Box	Native Rosemary Aussie Box	0.9	0.9

PRIVATE COURTYARD (SHADE TOLERANT)

				Height (m)	Width (m)
TREES					
Cco	<i>Cyathea cooperi</i>		Australian Tree Fern	6	3
Lfs	<i>Lagerstroemia indica</i>	Fauriet Sioux	Crepe Myrtle	4	3
Apa	<i>Acer palmatum atropurpurea</i>		Purple Japanese Maple	4	3
Bpe	<i>Betula pendula</i>	Alba Moss White	Moss White Silver Birch	10	3
Cch	<i>Cercis chinensis</i>	Avondale	Chinese Red Blood	3	2

GROUNDCOVERS/ CLIMBERS

Bbl	<i>Banksia blechnifolia</i>		Banksia blechnifolia	0.2	2
Cnp	<i>Billardiera fusiformis</i>		Australian Blue Bell	G/C /Climber	2
Cas	<i>Centella asiatica</i>		Pennywort	0.2	1
Ddi	<i>Dampiera diversifolia</i>		Dampiera diversifolia	0.5	1.5
Dcm	<i>Dampiera linearis</i>	Cobalt Mound	Dampiera	0.3	0.5
Dcl	<i>Darwinia citriodora</i>	Seaspray	Prostrate Lemon Scented Darwinia	0.6	0.9
Drp	<i>Dichondra repens</i>		Kidney Plant	0.1	0.3
Dsf	<i>Dichondra 'Silver Falls'</i>		Kidney Weed	0.5	0.8
Hgl	<i>Hibbertia grossularifolia</i>		Strawberry Leaf Buttercup	0.1	1
Hgl	<i>Hibbertia scandens</i>		Snake Vine	0.3	2
Skp	<i>Scaevola aemula</i>	Kings Park Midnight	Van Mower	0.25	1
Tja	<i>Trachelospermum jasminoides</i>		Chinese Star Jasmine	G/C /Climber	2
Vhe	<i>Viola hederacea</i>		Australian Native Violet	0.1	1

STRAPPY PLANTS

Ac	<i>Arthropodium cirratum</i>		New Zealand Rock Lily		
Dbr	<i>Dianella caerulea</i>	Breeze	Dianella Breeze	0.45	0.5
Dcl	<i>Dianella caerulea</i>	Little Jess	Dianella Little Jess	0.4	0.4
Dtr	<i>Dianella tasmanica</i>	Tasred	Dianella Tasred	0.6	0.6
Dre	<i>Dianella revoluta</i>		Flax Lily	1	1
Dlr	<i>Dianella revoluta</i>	Little Rev	Flax Lily Little Rev	0.4	0.4
Drv	<i>Dianella revoluta</i>	Revelation	Flax Lily Revelation	0.5	0.5
Ice	<i>Isoplepis cernua</i>		Nodding Club Rush	0.3	0.3
Lmj	<i>Liriope muscari</i>	Just Right	Liriope Just Right	0.5	0.5
Ltr	<i>Lomandra longifolia</i>	Tanika	Lomandra Tanika	0.6	0.65
Ojn	<i>Ophiopogon japonicus</i>	Nanus	Dwarf Mondo Grass	0.15	0.15
Ola	<i>Orthrosanthus laxus</i>		Morning Iris	0.5	0.5
Poc	<i>Patersonia occidentalis</i>		Western Patersonia	0.5	0.5
Str	<i>Sansevieria trifasciata</i>	Superba	Mother in law tongue	1	1



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PLANT SCHEDULE (CONTINUED)

INTERNAL STREETSCAPE			Height (m)	Width (m)	
TREES					
Lfor	<i>Eucalyptus forrestiana</i>	Fuchsia Gum	5	3	
Efo	<i>Eucalyptus foccunda</i>	Fremantle Mallee (CCS)	5	3	
Lvi	<i>Eucalyptus victrix</i>	Little ghost gum	6	5	
GROUNDCOVERS					
Bbl	<i>Banksia blechnifolia</i>	Groundcover Banksia	0.2	3	
Cci	<i>Casuarina glauca</i>	'Cousin It'	0.1	1	
Dwb	<i>Dampiera linearis</i>	'Western Blue'	0.3	1	
Fbh	<i>Fremophila glabra</i>	EREM1 Blue Horizon	0.3	1	
Ero	<i>Eremophila glabra</i>	'GR70 Roseworthy'	0.3	2	
Gmm	<i>Grevillea thelemanniana</i>	Mini Marvel	0.3	1	
Hpu	<i>Hemikandra pungens</i>	Puparua	0.3	1.5	
Sma	<i>Senecio mandraliscae</i>	Blue Chalk Sticks	0.6	0.9	
STRAPPY					
Abr	<i>Anigozanthos hybrid</i>	Big Red	Kangaroo Paw Big Red	2	1
Afr	<i>Anigozanthos hybrid</i>	Frosty Yellow	Kangaroo Paw Frosty Yellow	0.6	0.6
Cca	<i>Conostylis candidans</i>		Grey Cottonheads	0.5	0.3
Drv	<i>Dianella revoluta</i>	Revelation	Dianella revelation	0.5	0.5
Lgl	<i>Lepidosperma gladiatum</i>	L.I. Pol. Gladiator	Coastal Sword Sedge	0.6	0.6
Lmj	<i>Liriope muscari</i>	Just Right	Liriope Just Right	0.5	0.5
Llt	<i>Lomandra longifolia</i>	Tanika	Lomandra Tanika	0.6	0.65
SHRUBS					
Acl	<i>Acacia cognata</i>	Limelight	Bower of Beauty Wattle	0.8	1
Lgd	<i>Lremophila glabra</i>	Dawes	Lremophila Dawes	0.8	1
Lsu	<i>Leucophyta brownii</i>	Silver Nugget	Silver Nugget Cushion Bush	0.5	0.5
lno	<i>Laurus nobilis 'dwarf'</i>		Bay tree / dwarf variety	1.5	0.5
Oam	<i>Olearia axillaris mini</i>	Mini PBR	Mini Coastal Daisy Bush	0.5	0.5



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Additional Information 4 – Traffic report



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26 May 2022

Proposed Townhouse Development, Fremantle

Transport Impact Statement

PREPARED FOR:
Locus Development Group
May 2022



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26 May 2022

Document history and status

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Client: Locus Development Group

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Document revision: r02

Project number: t22.067

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APPENDIX A: PROPOSED DEVELOPMENT PLAN

APPENDIX B: TURN PATH PLANS





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1 Introduction

This Transport Impact Statement has been prepared by Transcore on behalf of Locus Development Group with regard to the proposed townhouse development at 34-38 Amherst Street and 2-4 Stack Street in the City of Fremantle (hereafter the subject site).

The subject development (also known as “Monument East”) is situated at the southeast corner of the existing intersection of Amherst Street and Stack Street, as shown in **Figure 1**.



Figure 1: Location of the subject site

The Transport Impact Assessment Guidelines for Developments (WAPC, Vol 4 – Individual Developments, August 2016) states: “A Transport Statement is required for those developments that would be likely to generate moderate volumes of traffic and therefore would have a moderate overall impact on the surrounding land uses and transport networks”. Section 6 of Transcore’s report provides details of the estimated trip generation for the proposed development. Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this redevelopment.

The site is bounded by Amherst Street to the west, Stack Street to the south and the existing light industrial and commercial developments to the immediate north and



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east. The site currently accommodates a number of commercial and workshop buildings and associated outbuildings.

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Vehicular access to the site is currently available from both fronting roads.

The Knutsford Street East Structure Plan area (hereafter KSESP) occupies an area of about 11.5ha between Montreal Street, Blinco Street, Amherst Street and Stack Street. Presently and in the past, this area accommodated mostly light industry and commercial developments but has been earmarked for redevelopment from industrial to mixed use residential purpose. In accordance with the current planning, this area is expected to be transformed into a new residential precinct over a period of 15 years through potential acquisitions. Development of the subject site is one of the steps in this process.

The subject site is zoned “Development” and forms part of the Development Area 1 under the provisions of the City of Fremantle Local Planning Scheme No. 4 with a total combined area of approximately 1.03ha.

The subject site is also zoned “Urban” in the Metropolitan Region Scheme. Refer Figure 2 for more details.



Figure 2: Location of the subject site within the Metropolitan Region Scheme





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2 Development Proposal

The development proposal for the subject site comprises 56 residential dwellings (mix of 3- and 4-bedroom townhouses) distributed across the site. The associated internal two-way road system includes a network of loop roads which connect externally to Amherst Street at the west and Stack Street at the south.

The majority of the residential dwellings are proposed to be served by the internal road system, while a total of nine dwellings, at the southwestern end of the site, will have driveways onto Amherst Street.

The proposed residential development will be served by an internal loop road system comprising roads with varying carriageway width (between 6.0m and 7.0m width). The internal road system is envisaged as a space shared by vehicles and pedestrians so no dedicated footpaths are proposed in this case. It is anticipated that the combination of low speed, low traffic volume and vehicle/cycle/pedestrian mix will help create a safe environment for all users.

The internal road system is designed to integrate seamlessly with the existing road network in the immediate vicinity and provide for balanced traffic distribution of development-generated traffic.

As part of the proposed development a total of 14 on-street parking bays are also provided to cater for the visitor parking. This parking is proposed in the form of 90-degree verge parking on both Amherst Street and Stack Street frontages.

As part of the development proposal a pedestrian footpath is proposed to be constructed along the Amherst Street and Stack Street frontage. It is anticipated that this footpath will ultimately integrate with the wider precinct footpath system once the remainder of the KSESP is developed.

Refer to **Appendix A** for the proposed master plan.





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3 Vehicle Access and Parking

The internal site's road system connects to the existing surrounding road network via two access intersections, one of which at the western side (Amherst Street) and the other on the south side (Stack Street). The Amherst access intersection is proposed to be located approximately 20m from the northern end of the site while the Stack Street access intersection is proposed to be located approximately 17m west of the eastern end of the site. Both access intersections are proposed in form of 7.0m wide full-movement intersection.

All resident parking will be accommodated on-site with accesses off the internal loop road or (in case of nine dwellings) off Amherst Street. The visitor parking is proposed to be accommodated through verge parking at three locations along Amherst Street and Stack Street. All 14 visitor bays are proposed in the form of 90-degree verge parking. The proposed parking rate of one visitor bay per four dwellings is consistent with the provisions of the Residential Design Codes.





4 Provision for Service Vehicles

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The internal development road network will be designed to accommodate service and emergency vehicles of up to 10m in length.

The waste collection is likely to be organised weekly on designated dates when the rubbish bins shall be wheeled out to several designated locations on internal road network for collection. The nine townhouses at the southwest end of the site fronting Amherst Street will have their bins collected from the street verge.

A turn path assessment using a 10.0m long rigid truck template (with appropriate clearances) was used to confirm the suitability of the proposed internal road system. Refer to [Appendix B](#) for the turn path plan.





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5 Hours of Operation

The proposed development is expected to generate heaviest traffic movements during the typical weekday morning and afternoon commuter peaks.

Therefore, the peak period of development traffic and road network traffic will be experienced during the weekday AM and PM peak hours typically between 8:00-9:00AM and 5:00-6:00PM.





6 Daily Traffic Volumes and Vehicle Types

6.1 Trip Generation

The traffic volumes likely to be generated by the proposed development have been estimated based on the type of the proposed land uses and in accordance with RTA *New South Wales Guide to Traffic Generating Developments 2002* documents, which provides daily and peak hour trip rates for town houses.

The total daily, AM and PM peak hour trip rates of 6.5, 0.65 and 0.65 trips/dwelling respectively was adopted for the development.

Accordingly, it is estimated that the proposed development would generate a total of approximately **364** daily vehicle trips with about **36** trips during both AM and PM peak hour periods. These trips include both inbound and outbound vehicle movements.

The traffic distribution detailed in **Table 1** was based on the following directional split assumptions for peak hour periods:

- Morning (AM) peak split estimated at 25%/75% for inbound/outbound trips, respectively; and,
- Afternoon (PM) peak split estimated at 66%/34% for inbound/outbound trips, respectively.

Table 1: Peak hour trips for the residential development

Peak Period	Direction	Residents	Peak Hour Trips
AM Peak	Inbound	9	36 cars
	Outbound	27	
PM Peak	Inbound	24	36 cars
	Outbound	12	

6.2 Trip Distribution

Considering the location of the proposed development, the available access and egress routes to and from the development as well as location of key regional attractors the anticipated directional trip distribution of the development-generated traffic is assumed to be as follows:





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- A total of 10% of all development-generated traffic would travel to **DA P001** the areas north of the site;
- A total of 40% of all development-generated traffic would travel to and from the areas west of the site;
- A total of 20% of all development-generated traffic would travel to and from the areas east of the site; and,
- A total of 30% of all development-generated traffic would travel to and from the areas south of the site.

The directional morning, afternoon and total daily trip distribution of the development-generated traffic is illustrated in **Figure 2**.



Figure 3. Estimated traffic movements for the subject development – morning peak / afternoon peak / total daily trips

6.3 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines* (2016) provides guidance on the assessment of traffic impacts:

“As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 percent may. All sections of road with an increase greater than 10





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percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where the development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

From **Figure 2** it can be seen that the estimated traffic impact from the proposed development would be nowhere near the critical thresholds with the most pronounced traffic increases of 15vph along Amherst Street during AM peak hour (north of crossover) and 9vph during both AM and PM peaks along Stack Street (east of crossover), hence the impact on the surrounding road network will be insignificant.

It is considered that the surrounding roads and intersections have capacity to accommodate the relatively low traffic generation of the proposed development.

It should be noted that this traffic assessment disregards the existing traffic generation of the site and is therefore a conservative one. Hence, the net traffic increase as a result of the proposed development will be less than the development traffic generation outlined previously.



7 Traffic Management on Frontage Streets

7.1 Context

The subject site occupies land at the southeast corner of the existing intersection of Amherst Street and Stack Street.

7.2 Existing Road Network

Amherst Street and Stack Street, in the immediate vicinity of the site, are both constructed as single-carriageway, two-lane roads with approximately 7.6m (Amherst Street) and 6.2m (Stack Street) wide carriageways. Pedestrian paths are intermittently in place along one side of Amherst Street and fully on Stack Street. Refer **Figure 4** to **Figure 7** for more details.



Figure 4: Northbound view along Amherst Street in the vicinity of the site

Both roads, including majority of surrounding roads, operate under a default built-up area speed limit of 50km/h.

Both of these roads are classified as *Access Roads* in the Main Roads WA *Metropolitan Functional Road Hierarchy* document and are under care and control of City of Fremantle.

Traffic count data obtained from City of Fremantle indicates that Amherst Street (north of Stack Street) carried average weekday traffic flows of 2,928 vehicles per day (vpd) in October 2020.



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There are no available traffic counts for Stack Street but it is estimated to carry relatively low level of local traffic only.



Figure 5: Southbound view along Amherst Street in the vicinity of the site



Figure 6: Eastbound view along Stack Street from Amherst Street intersection

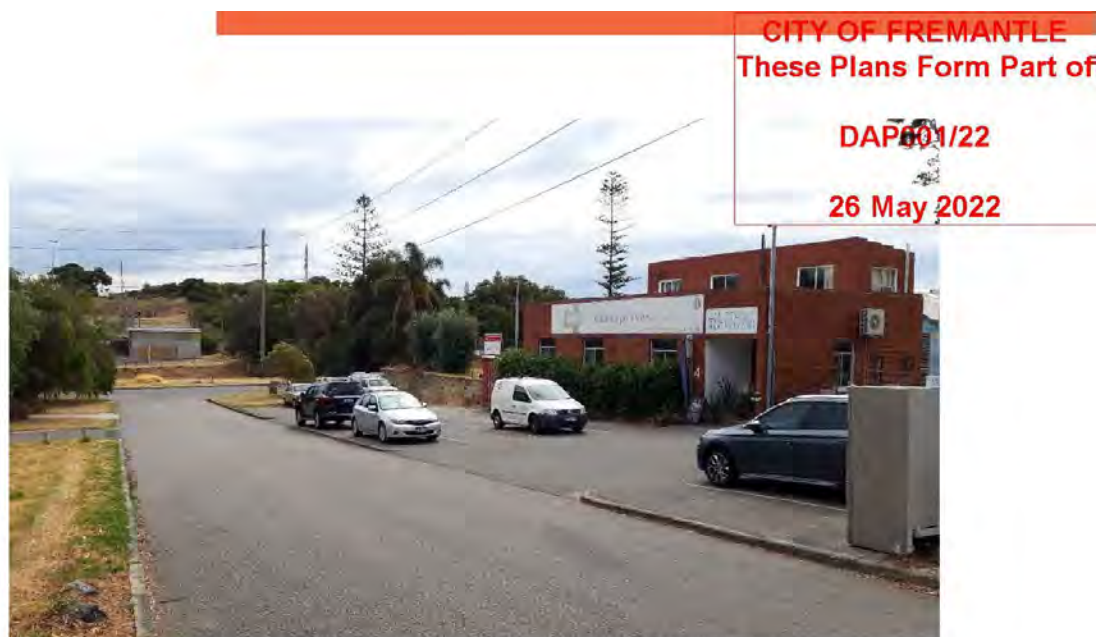


Figure 7: Westbound view along Stack Street towards Amherst Street intersection

Amherst Street and Stack Street form a priority-controlled T-intersection at the southwest corner of the subject site.

Main Roads WA Intersection *Crash Ranking Report* provides detailed crash data for the Amherst Street/Stack Street intersection over the 5-year period ending 31 December 2020. Crash report information for this intersection is presented in **Table 2**. Information available on the Main Roads WA website indicates that the intersection of Amherst Street/Stack Street recorded one crash and no fatalities over the five-year period ending in December 2020.

Table 2: Crash history for the Amherst Street/Stack Street intersection

Intersection				Total Crashes	Casualty
Amherst Street/Stack Street				1	1
Right Angle	Rear End	Pedestrian	Cycle	Wet	Night
1	0	0	N/A	N/A	0



8 Public Transport Access

The subject site has limited exposure to public transport services at present. The nearest bus stops are located on Amherst Street immediately south of the site and are accessible via the existing path system. Bus service Nr. 502 connects Fremantle Train Station with Bull Creek Train Station providing access to the Fremantle and Mandurah Train Lines.

The bus routes operating in the vicinity of the subject site are detailed in Table 2.

Table 3: Bus services operating in vicinity of the site

Bus Service	Route
502	Fremantle Station – Bull Creek Station

As detailed in the bus routes map presented in in Figure 9, the existing bus services operating along Amherst Street provides high frequency public transport connectivity between Fremantle and Bull Creek.



Figure 8: Public transport services (Transperth Map)





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9 Pedestrian Access

Pedestrian access to the subject site is via the existing external footpath network comprising paved footpaths on Stack Street. There is no continuous footpath in place along Amherst Street; however, as part of the proposal the footpath along the section of this road fronting the site will be implemented.

Pedestrian crossing facilities including drop kerbs are currently provided at the intersection of Amherst Street and Stack Street.





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10 Cyclist Access

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Bike access to the site is not readily available however, there is an interconnected network of routes in the close proximity of the site comprising roads classified as “good road riding environment” which link to a network of shared paths and PBN – continuous signed routes, providing links to Fremantle town centre to the west of the site. Accordingly, the site is indirectly linked to a network of cyclist paths providing a viable non-motorised transport option for the future residents.

The Department of Transport’s Perth Bike Map series (see Figure 9) shows cyclist facilities in the immediate vicinity of the site.



Figure 9: Extract from Perth Bicycle Network (Department of Transport)





11 Site Specific Issues

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No site-specific issues were identified within the scope of this assessment.





12 Safety Issues

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No safety issues were identified within the scope of this assessment.





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13 Conclusions

This Transport Impact Statement has been prepared by Transcore behalf of Locus Development Group with regard to the proposed townhouse development at 34-38 Amherst Street and 2-4 Stack Street in the City of Fremantle.

The proposal contemplates construction of 56 residential dwellings (mix of 3- and 4-bedroom townhouses) with associated visitor car parking. The dwellings will be served by an internal system of loop roads connecting externally to Amherst Street and Stack Street via full-movement access intersections.

The traffic modelling undertaken in this report shows that the traffic generation of the proposed development is estimated to be in order of about 364 daily and 36 weekday AM and PM peak hour trips (both inbound and outbound).

The traffic analysis undertaken in this report demonstrates that the estimated development-generated traffic will have insignificant impact on the surrounding road network.

The subject site has very good accessibility by the existing pedestrian and to a lesser degree cyclist networks and has direct access to public transport service through existing bus service operating immediately adjacent to the site.

In conclusion, the findings of this Transport Impact Statement are supportive of the proposed residential development.





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Appendix A

PROPOSED DEVELOPMENT PLAN



transport planning
traffic engineering
modelling



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Appendix B

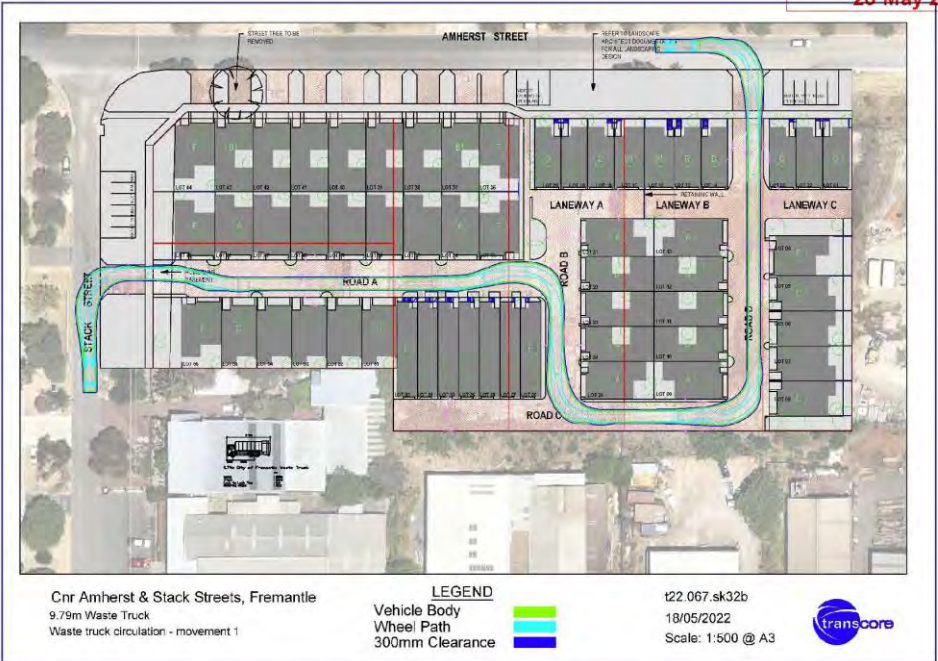
TURN PATH PLANS



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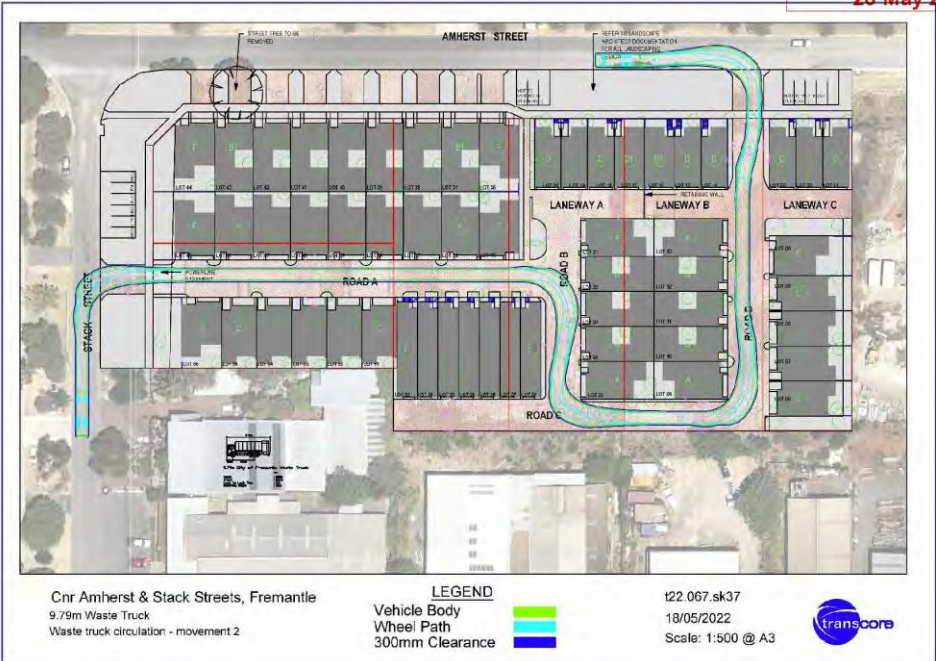




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Additional Information 5 – Waste Management Plan



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Waste Management Plan

Amherst and Stack Street, Fremantle

Prepared for Locus Development Group

18 May 2022

Project Number: TW22044



Waste Management Plan
 Amherst and Stack Street, Fremantle
 Locus Development Group



DOCUMENT CONTROL					
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Signature					
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Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



Executive Summary

Locus Development Group is seeking development approval for the proposed townhouse development located at 34-38 Amherst Street and 2-4 Stack Street, Fremantle (the Proposal).

To satisfy the conditions of the development application the City of Fremantle (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The City will collect refuse, recyclables and FOGO from the Proposal utilising its kerbside collection service. The City's waste collection vehicle will service the bins from Amherst Street and the internal roads from the respective townhouses.

Strata management/residents will oversee the relevant aspects of waste management at the Proposal.



Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



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Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



1 Introduction

Locus Development Group is seeking development approval for the proposed townhouse development located at 34-38 Amherst Street and 2-4 Stack Street, Fremantle (the Proposal).

To satisfy the conditions of the development application the City of Fremantle (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The Proposal is bordered by commercial developments to the north and east, Stack Street to the south and Amherst Street to the west, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse, recyclables and FOGO) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Area, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation and Storage;
- Section 3: Waste Collection;
- Section 4: Waste Management; and
- Section 5: Conclusion.



Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



2 Waste Generation and Storage

The anticipated volume of waste is based on 56 townhouses at the Proposal. Waste materials generated from each townhouse at the Proposal will be collected in the bins located in each individual townhouse or from Amherst Street, as shown in Diagram 1, and discussed in the following sub-sections.

2.1 Waste Generation

As per the City's requirements, each townhouse must accommodate one 140L refuse bin, one 240L recycling bin and one 240L FOGO bin.

2.2 Bin Sizes

Table 2-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 2-1: Typical Bin Dimensions

Dimensions	Bin Sizes	
	140L	240L
Depth (mm)	615	730
Width (mm)	535	585
Height (mm)	915	1,060

Reference: SULO Bin Specification Data Sheets

2.3 Bin Requirements

Each townhouse will be provided with one 140L refuse bin, one 240L recycling bin and one 240L FOGO bin. Refuse and recycling will be collected on alternating fortnights and FOGO will be collected weekly.

Table 2-2 shows the total bin numbers required for the Proposal.

Table 2-2: Bin Requirements

Waste Stream	Number of Bins Required	
	140L	240L
Refuse	56	-
Recycling	-	56
FOGO	-	56

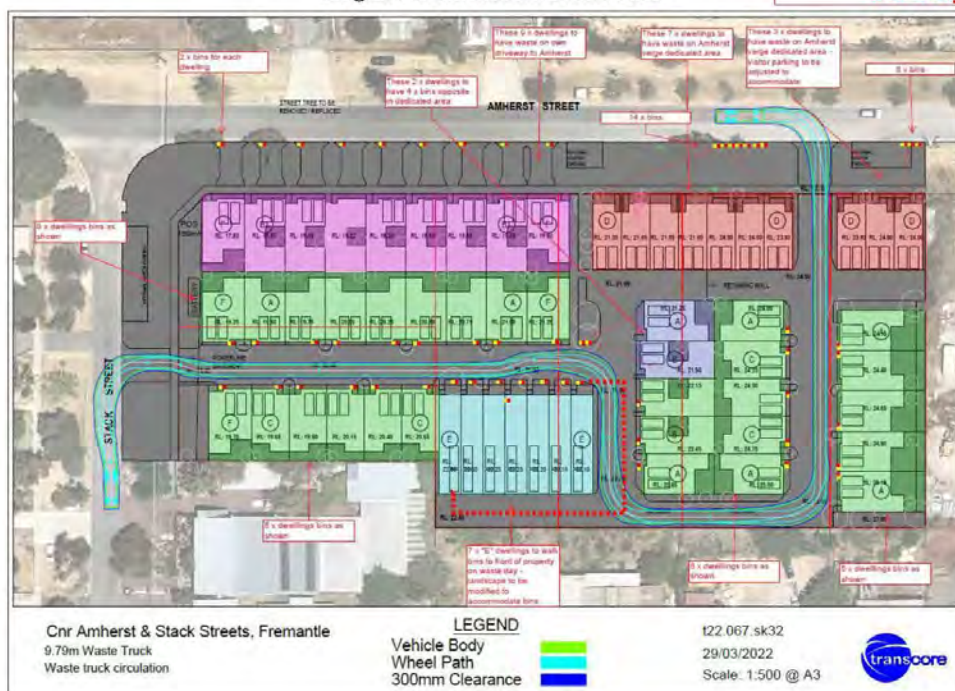
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Amherst and Stack Street, Fremantle
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3 Waste Collection

The City will service the Proposal by providing the townhouses with one 140L bin for refuse, one 240L bin for recyclables and one 240L bin for FOGO. The City will collect refuse and recyclables on alternating fortnights and FOGO weekly from the Proposal utilising the City's side arm waste collection vehicle.

The City will service bins from Amherst Street and the internal roads from the respective townhouses as shown in Diagram 1. Internal roads will be designed to carry a heavy rigid waste truck with an all up load of 24 tonnes.

The property owner will sign a waiver form to indemnify the City and its refuse, recyclables and FOGO collector/s against any possible damage they may do to this property, its structures etc.

Bins will be presented for collection with the wheels and handles facing away from Amherst Street/townhouse garages as shown in Diagram 1. The bins will remain clear of obstructions such as power poles, signs and street trees, and will be placed so as not to obstruct pedestrians, footpaths or bike lanes. Bins will be lined up neatly, with sufficient space between each bin to facilitate collection by the City's side arm waste collection vehicle.

Strata management/residents will ferry the bins to and from the Bin Presentation Area (Amherst Street or outside the respective townhouse) on collection days. The travel path will be of flat surface and kept free of obstacles. Strata management/residents will return the bins to their respective townhouse's garage as soon as possible on the same day following collection.

The ability of the City's side loader waste collection vehicle to access the Proposal in a safe manner has been assessed by Transcore (refer Transcore Transport Impact Statement May 2022) with bin presentation points shown in Diagram 1 and following the circulation paths shown in Diagram 2 and Diagram 3.

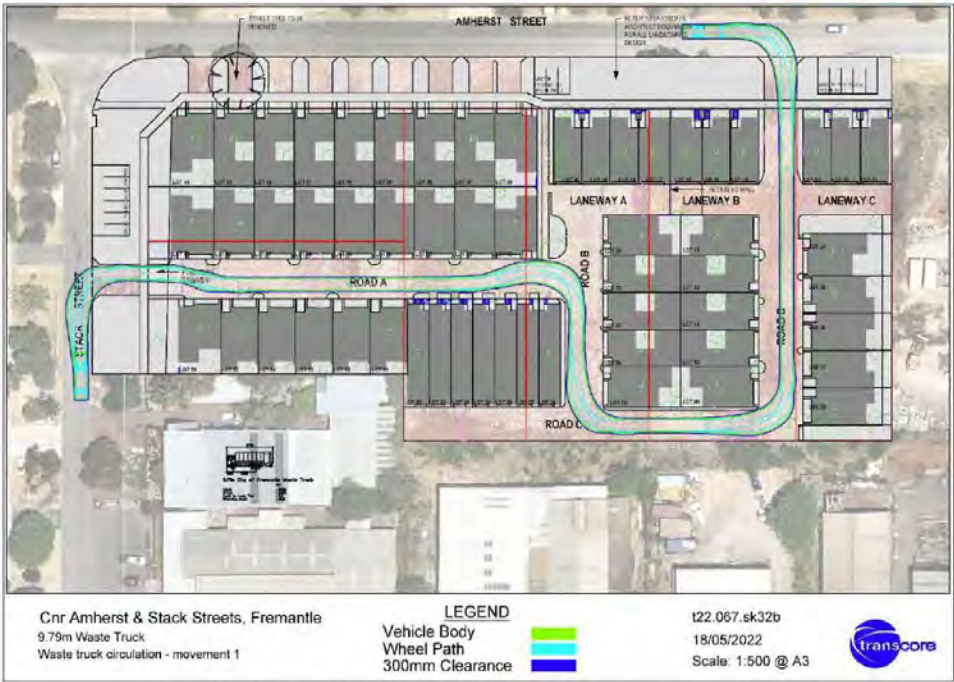


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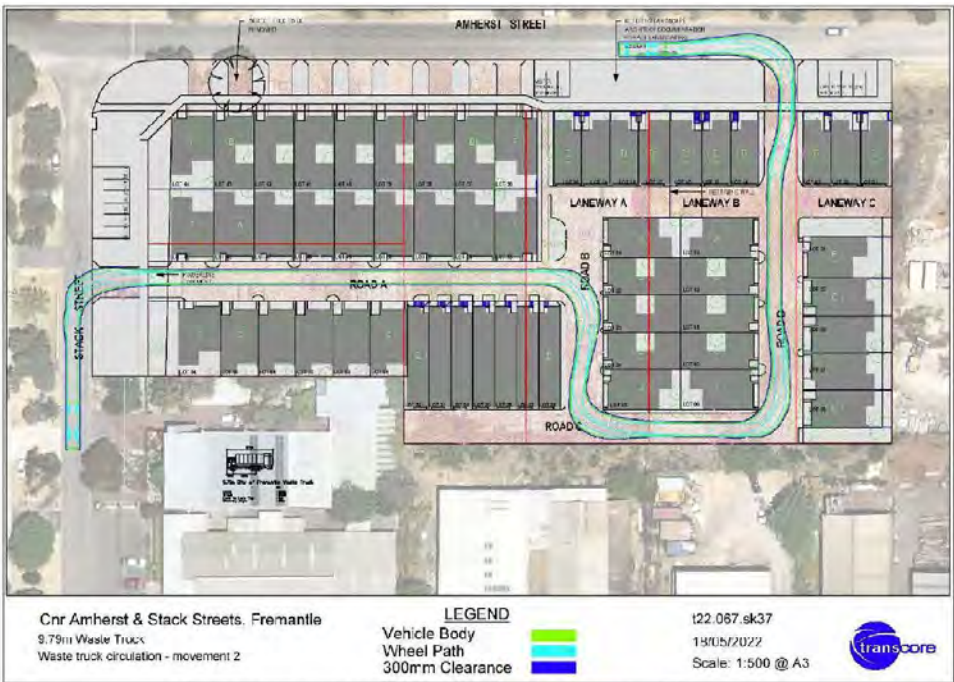
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Diagram 2: Waste Truck Circulation Path 1



Reference: Transcore Transport Impact Statement (May 2022)

Diagram 3: Waste Truck Circulation Path 2



Reference: Transcore Transport Impact Statement (May 2022)



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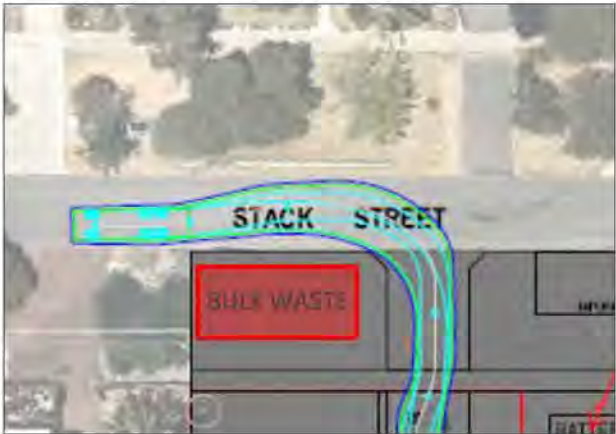
3.1 Bulk Waste and Greenwaste Collection

Given the streetscape adjacent to the Proposal, placement of bulk waste on the internal roads for collection would be considered undesirable. Strata management will inform residents prior to occupancy that they will not receive any general or green waste bulk verge services from within the property. Instead bulk waste material will be removed from the Proposal as it is generated from the Stack Street verge as indicated in Diagram 4.

Removal of bulk waste will be monitored by strata management, who will assist with the removal of bulk waste, as required.

Greenwaste collection services will be provided by external contractors, as required. Strata management will liaise with service providers to ensure an efficient and effective service is maintained.

Diagram 4: Bulk Waste Presentation Point





Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



4 Waste Management

Strata management in conjunction with residents will be engaged to complete the following tasks:

- Monitoring and maintenance of bins;
- Cleaning of bins, as required;
- Ensure all residents at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor resident behaviour and identify requirements for further education and/or signage;
- Monitor bulk waste accumulation and assist residents, as required;
- Regularly engage with residents to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the City to ensure efficient and effective waste service is maintained.



Waste Management Plan
Amherst and Stack Street, Fremantle
Locus Development Group



5 Conclusion

As demonstrated within this WMP, the City will provide each townhouse with the following:

- One 140L refuse bin, collected fortnightly;
- One 240L recycling bin, collected fortnightly; and
- One 240L FOGO bin, collected weekly.

The City will collect refuse, recyclables and FOGO from the Proposal utilising its kerbside collection service. The City's waste collection vehicle will service the bins from Amherst Street and the internal roads from the respective townhouses.

Strata management/residents will oversee the relevant aspects of waste management at the Proposal.

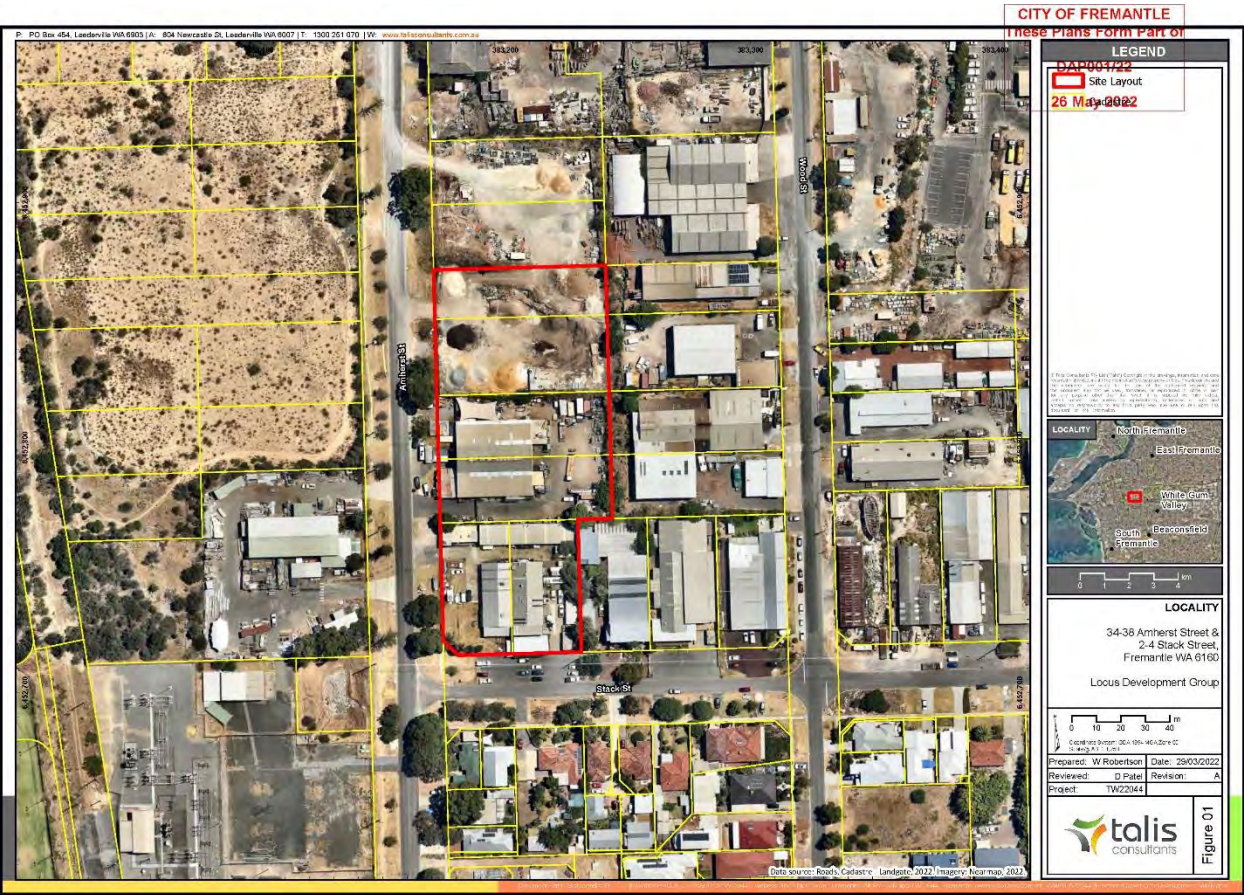


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Figures

Figure 1: Locality Plan





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Assets | Engineering | Environment | Noise | Spatial | Waste

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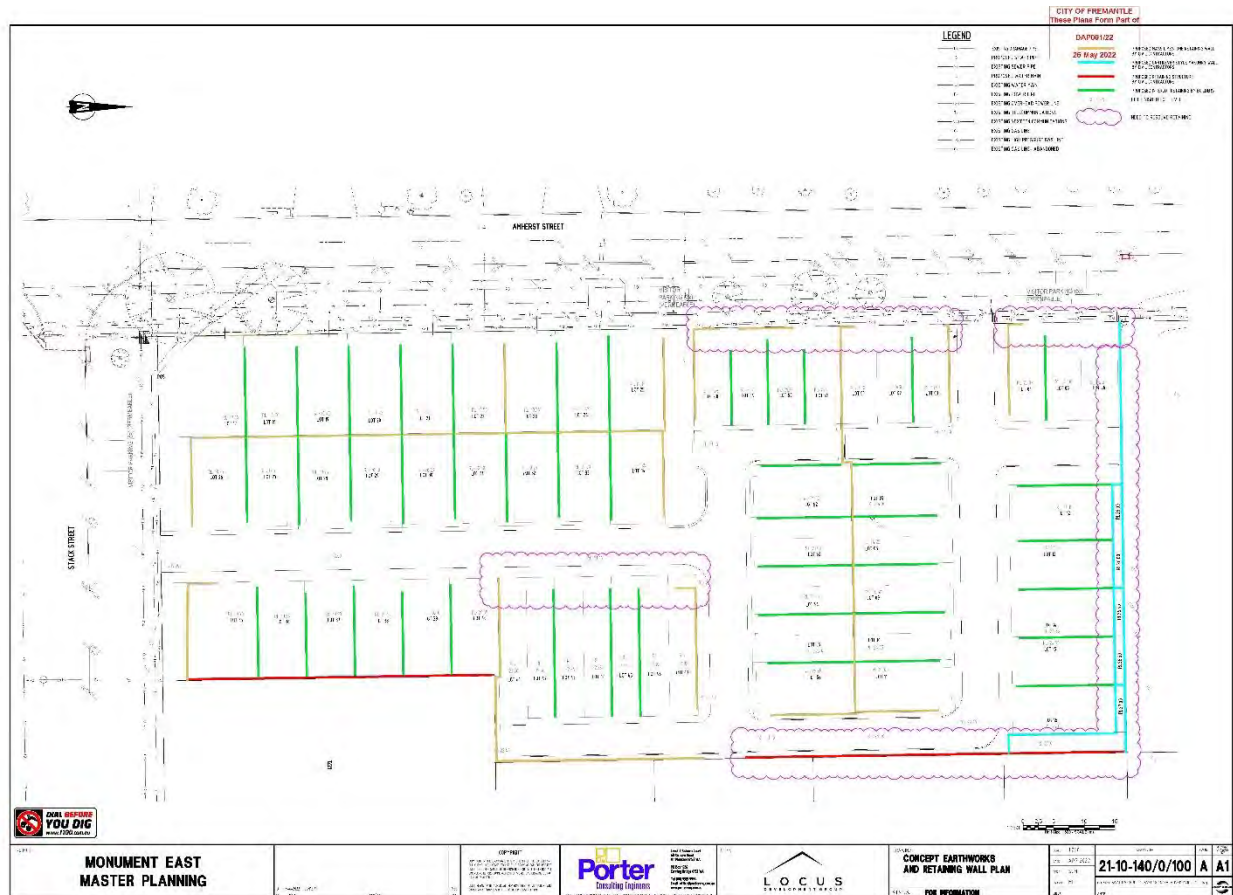
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Additional Information 6 – Indicative retaining plan





Additional Information 7 – Indicative staging plan



DEVELOPMENT APPLICATION



Additional Information 8 – Planning Report prepared by applicant (Urbis)



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1. OVERVIEW

1.1. INTRODUCTION

This proposal presents an exciting design collaboration between Locus Development Group, Fratelle Architects, John Byrne & Associates and Urbis to deliver **Monument East**, a new living precinct on Amherst Street and Stack Street in the Knutsford precinct of Fremantle.

We are pleased to lodge this development application for what will be a welcome addition to the Knutsford East precinct, continuing the transformation of the underutilised site to a vibrant residential community. The proposal represents the transformation of a highly challenging piece of land with dramatic level differences, into an urban community promoting a diverse demographic that delivers housing choice through innovative design and a focus on the creation of a memorable place that meets the needs of its residents.

The design team have crafted an urban design response that is grounded by a contextual understanding that responds to both the existing and emerging built form, and guided by the desired future scale and intensity development envisaged for the area in the planning framework. The development will provide high quality accommodation that is distinctly 'Fremantle', and foster a future community that reinforces social cohesion both within the redevelopment as well into the wider established community. The proposal represents a highly curated architectural outcome which draws on its location, whilst building on the new vernacular that has emerged through a range of recent quality developments in the revitalised Knutsford precinct.

This report details the scope of works for the development and outlines how development complies with the relevant State and local planning framework. The proposal is being lodged concurrently with the survey strata subdivision application to establish the tenure arrangement for the estate (refer Lodged Survey Strata Subdivision Plan attached at **Appendix J** and Lodged Site Amalgamation Plan attached at **Appendix K**).

Urbis is proud to submit this development application on behalf of our client to the City of Fremantle.

1.2. SITE LOCATION AND LOT PARTICULARS

The traditional owners of the land in which this development is located are the Whadjuk People of the Noongar Nation. The subject site occupies 1.03 ha of development zoned land with frontages to both Stack Street and Amherst Street, and is approximately 1.5 km from the Fremantle City Centre and Fremantle Train Station/Busport. The subject site is approximately 15 km south-west of the Perth CBD. The site is surrounded by transitioning light industrial land uses and single detached residential dwellings (refer **Figures 1 and 2**).

The subject site is within the suburb of Fremantle, close to the border with White Gum Valley. This area of Fremantle is characterised by medium density town homes, workers cottages and light industrial uses. As demand for housing stock and diversity in the area has increased, a number of contemporary housing projects have emerged in areas previously used for light industrial purposes. This proposal seeks to continue the transitional nature of the area, proposing an infill development to accommodate the increased population intended for Strategic Metropolitan Centres like Fremantle.

Table 1 – Surrounding Land Uses

Direction	Immediate Surroundings	Further
North	Light industrial	John Curtin College of the Arts, low/medium density residential
East	Light Industrial	Royal Fremantle Golf Course, O'Connor industrial area
South	Low/medium density residential	White Gum Valley Primary School, low/medium density residential
West	Light Industrial, old quarry site, public open space, Western Power substation	Fremantle CBD, medium/high density residential



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Figure 1 – Aerial Photograph



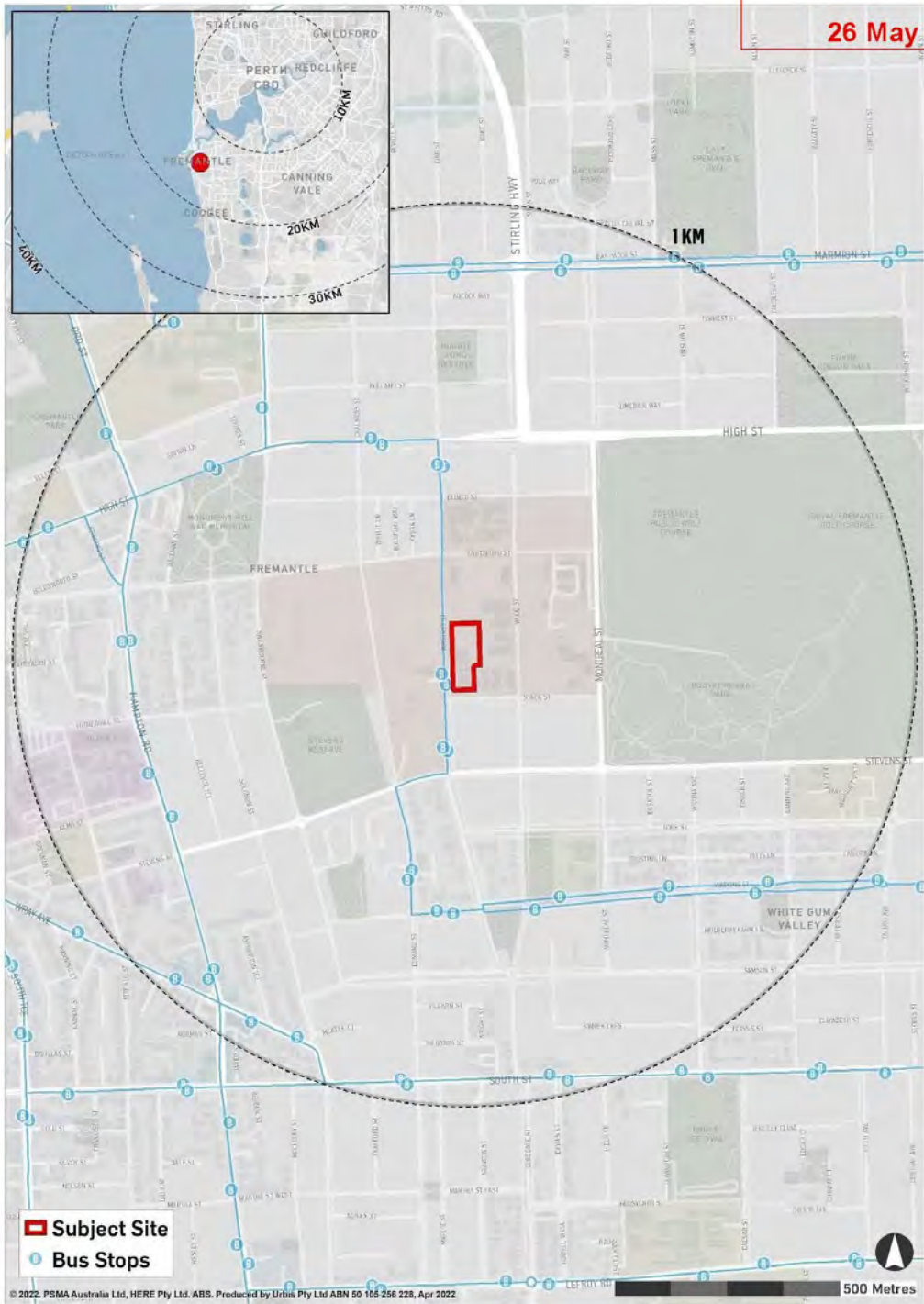


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Figure 2 – Locality Plan





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1.3. SITE DETAILS

Table 2 – Lot Particulars

Street Address	Lot	Plan	Vol/Fol	Proprietors	Size
34 Amherst Street	1823	DP 162649	1377/73	LATENZA 3 PTY LTD	1416 sq. m
36 Amherst Street	1209	DP 162649	1906/331	LATENZA 3 PTY LTD	2195 sq. m
38 Amherst Street	1212	DP 162649	1230/406	LATENZA 3 PTY LTD	1831 sq. m
40 Amherst Street	1217	DP 162649	1230/406	LATENZA 3 PTY LTD	1829 sq. m
2 Stack Street	1223	DP 162649	1694/39	LATENZA 3 PTY LTD	1505 sq. m
4 Stack Street	1222	DP 162649	1694/38	LATENZA 3 PTY LTD	1525 sq. m
Total					10,301 sq.m

The certificates of title are attached at Appendix A.

Figure 3 – Cadastral Plan



The site survey is attached at Appendix B.



2. PROPOSED DEVELOPMENT

2.1. PROPOSED DESIGN OUTCOME

The Knutsford Street East precinct was born out of the opportunity created by the deletion of the Fremantle Eastern Bypass (FEB) Reservation from the MRS. The uncertainty associated with the designation of a large swathe of land for a future high-speed highway resulted in years of neglect and lack of investment in the wider locality. It is serendipitous that this long-term neglect stemming from a planned highway extension has created the opportunity for the redevelopment creating a highly connected community that offers a new urban lifestyle.

This proposal has been created through assembly of six (6) lots, previously used for light industrial purposes, that has created the scale required to achieve a quality outcome that delivers 56 town houses in a landscaped setting. The central and most fundamental challenge of the redevelopment of the site is the dramatic level differentials that occur across the site. Through careful urban design, the level issues have been overcome, which has resulted in a solution that ameliorates the negative impacts of the terrain and converts them into an enriching feature that positively defines the development. A traditional 'tick and flick' design against the R-Codes is not possible on the site, and a more sophisticated response is required to achieve an appropriate development outcome and support the needs of the future households.

The proposal is focused on providing a housing typology that is suitable for the widest range of households, nuanced by the integration of six different house configurations that are interspersed through the development. The arrangement of the different housing types provides a considered density and diversity of housing type that provides a scale that provides the appropriate transition from the redevelopment areas of the Knutsford East precinct down to the existing residential uses on the southern side of Stack Street.

The dwellings have been designed using a materiality that acknowledges the historical industrial uses of the area, being applied in a manner that has the clarity of a residential dwelling. The resultant development provides high-quality homes which maximise access to natural light, ventilation, amenity of the private and communal open space, and functional pedestrian and vehicle access/connectivity. The development fits elegantly on the site and offers a well-considered design response that is cognisant and respectful of the relationship with adjoining properties and the wider streetscape.

Overall, the assembly of the site with the design response overlaid reflects the character of the area and achieves the strategic vision of the City of Fremantle, demonstrating compliance with the Knutsford Street East Local Structure Plan.

2.2. LANDSCAPING

From the early inception of the project, it was clear once a general spatial resolution of the site had been achieved that overcame the significant level challenges, the next design response was a high-quality landscape that reflects the landscape that is emerging as a defining quality of the Knutsford locality.

A detailed landscaping report has been prepared by local landscape architects, Josh Byrne and Associates. The design intent creates a high-quality streetscape and integrated residential environment. The landscaping has taken a 'whole of site' approach whereby the streetscapes have been designed to blur the line between the public and private domain to foster interaction and community wellbeing. The oversized verge areas are planted out with waterwise species that incorporate shade trees and diverse understory plantings to support biodiversity and improve the local microclimate. These spaces also have the potential to provide opportunities for food production, casual interaction and informal play, and will be ensured due to it being managed via the strata to ensure its on-going health and quality.

This has created the opportunity to diminish the focus on the internal circulation of the site as a 'road' but conceived to reclaim the streets as a more usable space for all users, not just for vehicles driving at speed. Despite being designed to accommodate the full movement and operational requirements of the City's refuse collection vehicles, there are a series of yield points that will force drivers to proceed through the development crawling speeds. This ensures the conflict between pedestrians and vehicles is virtually eliminated, and the internal streets become a space that is valued and used by all. The accessway has been designed to include large trees and feature lighting, ensuring a safe and attractive environment with a canopy cover that provides a strong leafy feel, creating a strong sense of place that provides a clear and logical entry sequence for residents and their visitors.

The complete Landscape Report is located in **Appendix C**.



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Figure 4 – Master Plan





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2.3. TRANSPORT CONSIDERATIONS

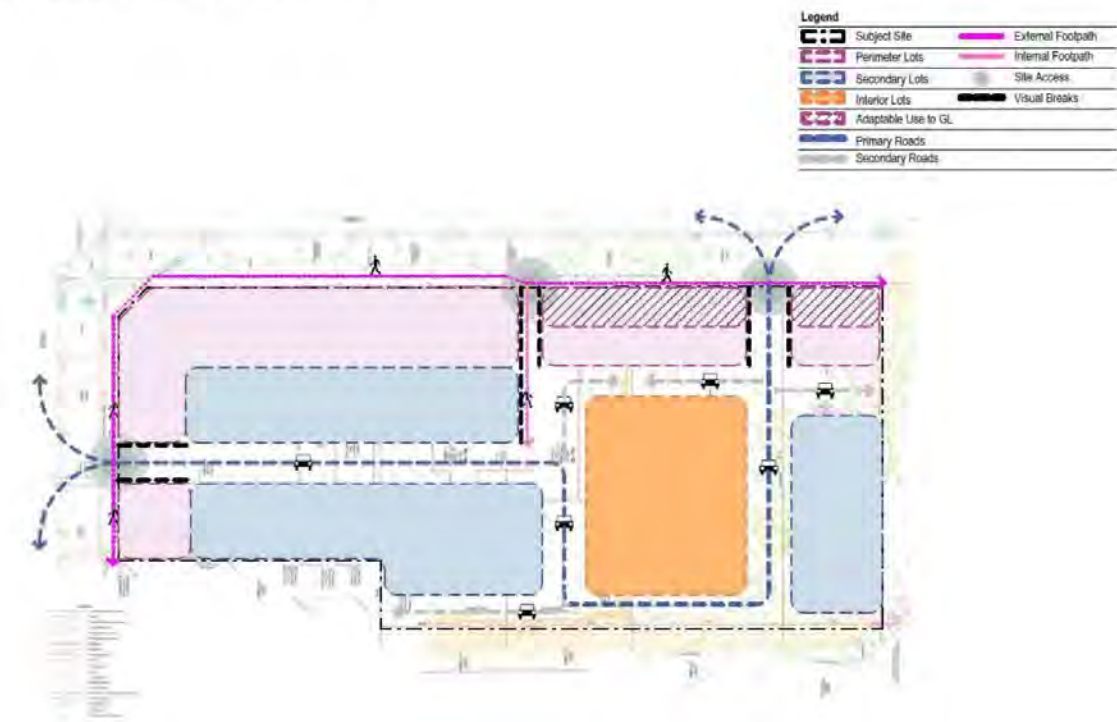
The proposed development will be served by an internal system of roads connecting externally to Amherst Street and Stack Street via full-movement access intersections (refer **Figure 5**). Transcore has undertaken a traffic analysis of the proposed development and concluded that traffic can be appropriately managed.

The traffic modelling undertaken shows that the traffic generation of the proposed development is estimated to be in order of about 364 daily vehicle trips and about 36 trips during both AM and PM peak hour trips (including both inbound and outbound). The traffic analysis demonstrates that the estimated development-generated traffic will have insignificant impact on the surrounding road network.

The subject site has very good accessibility via the existing pedestrian and cyclist networks, and has direct access to public transport services through existing bus service operating immediately adjacent to the site.

The completed Transport Assessment is attached at **Appendix D**.

Figure 5 – Proposed Movement Plan



2.4. WASTE MANAGEMENT

Talis has prepared a Waste Management Plan for the site which demonstrates how waste is stored and collected from the site. Waste collection is via the City of Fremantle's waste collection service, with management by the strata managers/residents of the development. The specific measures and arrangements within the proposed Waste Management Plan have been developed in consultation with the technical officers at the City of Fremantle to ensure the efficient and effective collection, whilst minimising the visual and spatial impact of these unavoidable urban elements.

The completed Waste Management Plan is attached at **Appendix E**.



2.5. SERVICING

2.5.1. Siteworks and Preliminaries

All existing structures across the site will be demolished, and remaining materials removed to establish a clear site. Existing points of servicing (wastewater, water, power, communications etc) will be decommissioned and removed as per the normal process with a development of this nature.

2.5.2. Earthworks and Retaining

The need to resolve the levels has been the greatest challenge in achieving a workable master plan solution of the site. The natural lay of the land will require earthworks and retaining to establish flat level lots. The interface with the existing properties and road frontage will require consideration to ensure safe and constructible solutions are achieved.

Standard retaining structures will be established around the perimeter of the site as required. Internal larger retaining walls will be constructed as part of the civil works stage with minor inter-lot retaining being managed by the house builder. The retaining has been provided at regular lot boundaries to create a consistent rhythm of the built form that provides a quality streetscape for the length of the development.

Refer Indicative Retaining and Levels Plan attached at **Appendix F** and Indicative Staging Plan attached at **Appendix G**.

2.5.3. Wastewater and Internal Sewer Servicing

The Water Corporation has existing infrastructure in the surrounding network. To ensure compliance with Water Corporation requirements, a mains extension is required along Amherst Street. Preliminary designs confirm there are no physical constraints that will prohibit this extension.

Monument East will have the internal sewer servicing infrastructure extended to each lot.

2.5.4. Water and Internal Water Servicing

The Water Corporation has existing infrastructure in the surrounding network. Preliminary advice from the Water Corporation suggests minor upgrade works are required to ensure sufficient supply can be provided to Monument East. Preliminary designs confirm there are no physical constraints that will prohibit this extension.

Primary water connections will be provided to Monument East along with standard flow control infrastructure. Monument East will have a standard internal water supply network providing a point of connection for each lot.

2.5.5. Drainage and Onsite Management

The existing street network has a series of existing drainage collection pits with pipework flowing to the topographic low and existing drainage basin opposite the Stack intersection on Amherst Street. This infrastructure appears to be in good working order and handles the flow from its existing catchment.

Monument East will include stormwater drainage provisions to ensure runoff is held and disposed of onsite, compliant with City of Fremantle requirements. It is expected the ground is highly permeable and onsite soakage is appropriate. The specifics of this will be resolved during detailed designs and pending the outcomes of the geotechnical investigation. Where possible, direct connections to each lot will be provided to centralise the stormwater infrastructure.

2.5.6. Power

There is significant infrastructure in the surrounding road network and its spare capacity is more than sufficient to service this development. Alternate power arrangements to best suit Monument East and its future residents that align with its environmental targets are currently being investigated. Whilst no fixed solution has been determined, it is not a level of detail that needs to be resolved at this stage.



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2.5.7. Communications and Data

The existing street network contains significant communications infrastructure which is more than sufficient to service the site. Monument East will have an internally reticulated communications and data network. The developers are currently working with a service provider to establish a premium product to future proof the development and fitout of each unit.

2.5.8. Gas Reticulation

The existing street network contains gas mains that could provide a point of supply to the development. However, Monument East will not have any gas supply as this is fossil fuel and its use conflicts with the development's objectives.

2.5.9. Verge, Crossovers, Roads and Paths

The existing land use has a series of crossovers that will be removed as part of the Monument East development. New crossovers will be established for the main access points plus driveways for the individual units as well as dedicated pedestrian zones as noted on the development layout.

2.6. SITE REMEDIATION

Due to the subject site's historical land uses, the land is required to be either decontaminated or identified as not having any existing contamination to support residential land uses.

Lots 1209 and 1823, within the subject site, have been reclassified under the *Contaminated Sites Act 2003* as Decontaminated by the Department of Water and Environmental Regulation (**DWER**) (formally the Department of Environment Regulation). A letter from DWER states "*The site has been successfully remediated and is suitable for all land uses. Therefore, the site is classified as 'decontaminated'*" (refer **Appendix H**).

The remaining Lots 1223, 1222, 1212, and 1217 are not listed as either contaminated or remediated in accordance with the DWER's Contaminated Sites Database.

Notwithstanding the above, the Knutsford Street East Local Structure Plan requires the preparation a Preliminary Site Investigation (**PSI**) or a Detailed Site Investigation (**DSI**) when no formal decontaminated classification exists. Prelodgement consultation with the City of Fremantle and DWER has been undertaken in which both the City and DWER requested that a PSI accompany the lodgement of the Monument East Development Application. Accordingly, a PSI report concerning Lots 1223, 1222, 1212, and 1217 has been prepared by Strategen JBS&G to accompany this Development Application (refer **Appendix I**).

The PSI states that the site is largely safe for future land uses outside of industrial, however it has recommended minor management items in order to ensure its usability, which can be implemented as part of the site works and development phase. If it is determined that a PSI is required, this can be conditioned as part of the Development Approval.



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3. PLANNING FRAMEWORK ASSESSMENT

3.1. STATE PLANNING FRAMEWORK

Table 3 – State Planning Framework

Document	Relevant Provisions	Compliance
Metropolitan Region Scheme (MRS) The MRS is a high-level statutory land use plan which pertains to the Perth Metropolitan Region.	The subject site is zoned 'Urban' under the MRS (refer Figure 6).	Residential land uses are typical in the Urban Zone.
Directions 2031 and Beyond Directions 2031 – Metropolitan Planning Beyond the Horizon (Directions 2031) establishes a vision for the future growth of the Perth and Peel area, which is expected to grow from 1.65 million people to 2.2 million people 2031.	This policy identifies Fremantle as a Strategic Metropolitan Centre within the Central Metropolitan Sub-Region. This area is expected to need an additional 121,000 dwellings by the year 2031 with a 47% infill rate.	The proposed development is an infill development in line with the future growth aspirations detailed in Directions 2031. The development of the subject site will assist in creating a diverse housing stock with a higher density around a Strategic Metropolitan Centre.
Perth and Peel @ 3.5 Million This document is a continuation and complements Directions 2031. The document provides a framework for a population of 3.5 million people in Perth by 2050.	The document states that the dominance of low-density suburban development is placing undue pressure on infrastructure and the environment. In response, the document calls for increased housing diversity through greater access to townhouses and apartments.	The development on the subject site responds strongly to the principles of Perth and Peel @ 3.5 Million. Monument East will provide additional infill dwelling diversity to the Fremantle locality, supporting the infill development and reducing urban sprawl – which being sensitive to the existing character of the locality.
State Planning Policy 7.3: Residential Design Codes – Volume 1 The R-codes provide comprehensive control of residential development throughout Western Australia.	The relevant provisions and objectives are highlighted in Table 4.	Discussion of compliance is highlighted in Table 4.

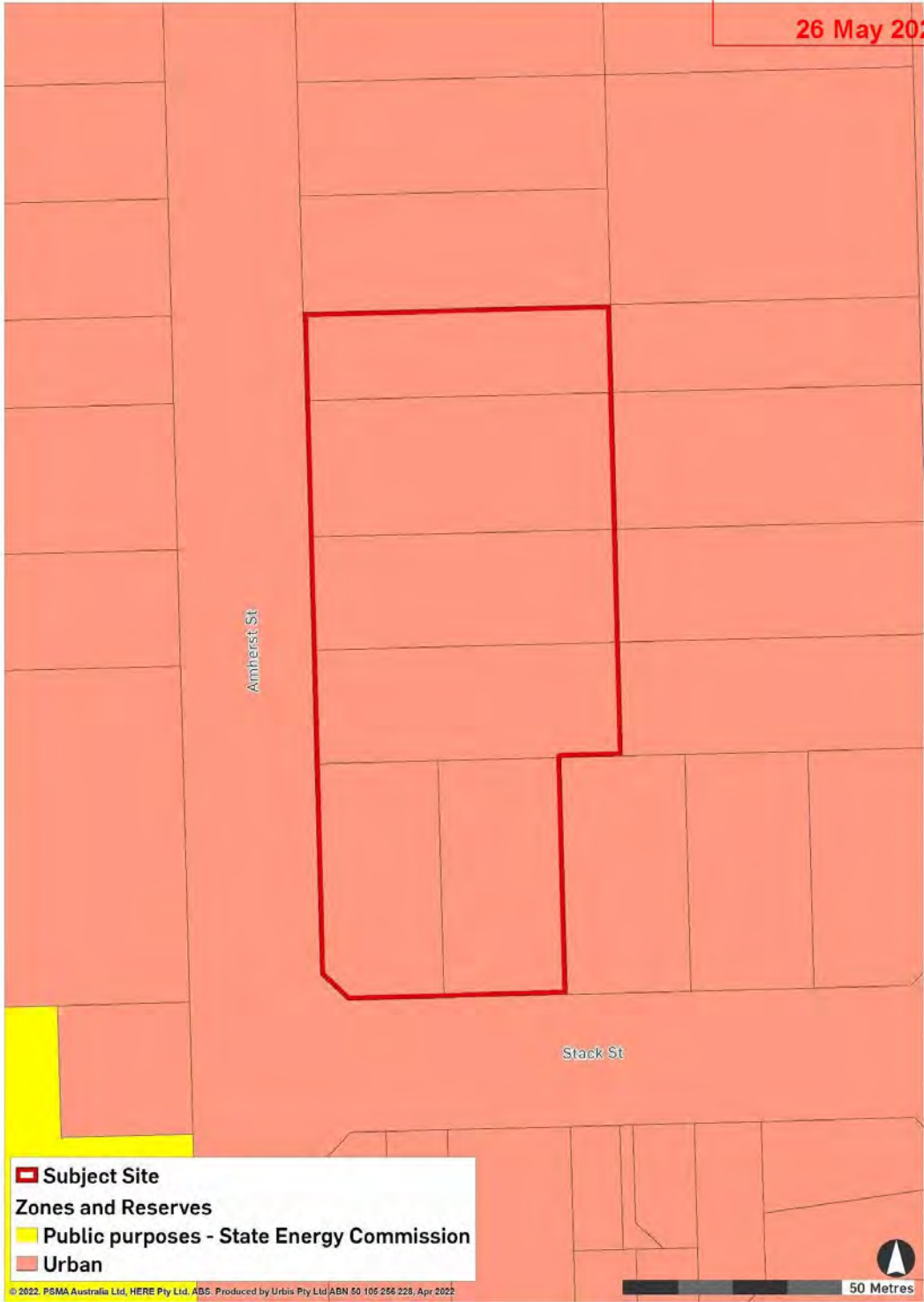


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Figure 6 – Metropolitan Region Scheme





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3.2. LOCAL PLANNING FRAMEWORK

3.2.1. City of Fremantle Local Planning Scheme No. 4

The subject site is zoned 'Development' and is within the Development Area 1 – Knutsford Street Industrial Area (East of Amherst Street) (DA1) and Local Planning Area No. 2 (LPA2) pursuant to the City of Fremantle Local Planning Scheme No. 4 (LPS4).

DA1 has the following provisions applicable:

1. "A structure plan is to be prepared and adopted for this development area before any future subdivision or development is undertaken.
2. Investigations of potential site contamination to the satisfaction of the DEC.

Development applications received prior to adoption of a structure plan shall be assessed via the Mixed Use provisions of the Scheme. Applications for any form of residential development and subdivision applications, should be deferred until the structure plan is adopted in order that servicing, open space provision, environmental remediation and other issues are resolved."

The Knutsford Street East Local Structure Plan has been prepared and adopted to guide development and subdivision over the subject site, as addressed below.

3.2.2. Knutsford Street East Local Structure Plan

The Knutsford Street East Local Structure Plan (**KSELSP**) has been prepared to support the strategic vision of transitioning the historic industrial area of approximately 12ha bounded by Blinco Street to the north, Montreal Street to the east, Stack Street to the south and Amherst Street to the west into an area of infill residential uses. The KSELSP is the prevailing planning framework over the site, given effect through the 'Development' zoning specified in LPS4.

The site is within Precinct 5 of the KSELSP area. Within the KSELSP there are a number of applicable planning requirements that guide development across the structure plan area. An assessment has been undertaken in **Table 4**.

Table 4 – Assessment Against Key KSELSP Requirements

Provision	Relevant Provision Detail	Compliance
Interfacing	Any proposed development must ensure a sensitive and appropriate interface with the surrounding existing residential.	Monument East is within Precinct 5 and in the south-west boundary of the precinct. As such, the most important interface is with the existing detached low-density residential development on the southern side of Stack Street. The proposed development has a complementary interface with Stack Street and the neighbouring residential, ensuring an appropriate residential interface is proposed.
Land Use	Permitted land uses include, but not limited to: Single dwellings Grouped dwellings Multiple dwellings	Monument East is an entirely grouped dwelling proposal, compliant under the KSELSP.
Density	The intended level of density proposed is a minimum of R60 and maximum of R100.	The proposal has utilised a density of R80 which complies with the KSELSP. Refer to Section 3.3 for assessment against SPP 7.3.



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Provision	Relevant Provision Detail	Compliance
Movement Systems	Any proposed development is not to result in an overdevelopment of the site that greatly impacts the functionality of the existing road network.	The existing street structure within the KSELSP area is to be maintained, with this application proposing no public roads and subsequently no additional intersections. The site design proposes the use of a communal road/laneway network to service the majority of lots. This is in direct alignment with the specific KSELSP provision of rear laneways to be utilised as part of the subdivision design stage to allow internal permeability without attracting through traffic, whilst also enhancing the streetscape and pedestrian/cyclist connections. With the proposed density being in alignment with the provisions with the KSELSP, the initial traffic modelling prepared for the KSELSP remains accurate. As such, the proposed development will not result in a higher than anticipated traffic generation and will not adversely impact the function of the existing road network.
Contamination	Appropriate measures to ensure decontamination are to be made prior to residential development. This includes, where required, the preparation of a Preliminary or Detailed Site Assessment.	<i>Refer report Section 2.6.</i>
Built Form	<u>Height</u> Maximum overall building height of 4 storeys. A minimum of 2 storeys when fronting Stack Street. <u>Adaptable Ground Floor</u> All ground floors to be designed in the form of adaptable buildings with 4.2m ground level floor to-ceiling height minimum with front door access.	<u>Height</u> Maximum overall building height of 3 storeys is proposed. 2 storeys are proposed when fronting Stack Street. <u>Adaptable Ground Floor</u> The housing types D and E include adaptable rooms that front the main street access that is adaptable for a range of uses, providing flexibility to the residents over time.
Servicing	Proposed development is to ensure servicing requirements can be catered for, if not, what is to be upgraded to support the development.	<i>Refer report Section 2.5.</i>



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Provision	Relevant Provision Detail	Compliance
Community Infrastructure and Benefit	Development within the KSELSP area is to make an appropriate contribution to community infrastructure and provide a greater community benefit.	Monument East will remove inappropriate activities from the area and allow for remediation and new residential development consistent with the vision for the KSELSP. This will remove existing conflicts with adjacent residential areas and provide a greater range of housing types/options which are well-designed and make optimal use of this infill opportunity. The proposed landscaping of both internal and external areas of the development contributes to enhanced pedestrian, cyclist and vehicular permeability, fostering community interaction and a sense of place. The proposed materiality of the built form is reflective of the historical land uses of the area, continuing the strong emerging identity for the greater Knutsford area.

3.2.3. City of Fremantle Local Planning Policies (LPPs)

3.2.3.1. Local Planning Policy 2.0 – Residential Streetscape Policy

Local Planning Policy 2.0 – Residential Streetscapes (**LPP2.0**) is the City of Fremantle's general policy in guiding residential built form. The below table provides an assessment of the proposal against the relevant provisions of the policy.

Table 5 – LPP 2.0 Assessment

Provision	Provision Requirement	Compliance
Setbacks	Min setback of 7m Variation permitted subject to the following relevant parameters: Setback of the building is consistent with the setback of buildings of comparable height within the prevailing streetscape Setback of the building does not result in a projecting element into an established streetscape Where there is no prevailing streetscape	Proposed minimum setback of 1m, aligning with the SPP7 3 requirement (refer Section 3.3). This variation is justified through the following: Existing streetscape is of an industrial nature, with no relevant residential streetscape to use as comparison. The wide road reserve of Amherst Street favours an outcome where the built form provides a sense of enclosure to the street. The buildings will create a consistent streetscape, and define the transformation of the area from industrial uses. There is no prevailing streetscape.
Garages and Carports	Garages, carports and outbuildings, except as provided for below, are to be	Complies.



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Provision	Provision Requirement	Compliance
	setback in line with, or behind the front wall of the dwelling.	
Building Height	Building height is superseded by the KSELSP.	Refer section 3.2.2
Building Orientation	Buildings shall be orientated parallel with the front boundary of the property with front doors and windows facing and clearly visible from the street.	Complies.
Vehicular Access	Access where possible from a non-public road or secondary street.	Monument East has been designed such that a significant majority of dwellings are not accessed from a public road. 48 of the 56 dwellings achieve access from internal laneways, with only 9 dwellings proposing access from the street.
	Additional requirements being:	Complies
	No closer than 0.5m from side boundary or street pole	
	No closer than 6m to a street corner	Minor variation, a crossover is within 5.45m from street corner.
	Aligned at right angles to the street, tapered at angles 1:5 to each side.	Complies
	Located so as to avoid street trees, or, where this is unavoidable, the street trees replaced at the applicant's expense.	Complies where possible. One street tree is to be removed. A number of additional canopy trees are being planted as per the Landscape Plan (refer Appendix C).
	Adequately paved and drained.	Complies

3.3. R-CODE ASSESSMENT

The purpose of State Planning Policy 7.3 - Residential Design Codes Volume 1 (**R-Codes**) is to provide a comprehensive basis for the control of residential development throughout Western Australia. The subject site has a density coding minimum of R60 and maximum of R100 in accordance with the KSELSP. An R80 density coding has been applied due to the typologies proposed. Specific residential development requirements are stipulated by SPP 7.3.

Table 6 provides an assessment of the proposed development against the relevant R-Code provisions. Where a variation to the Deemed-to-comply requirements is proposed, the applicable design principles criteria and response is listed.



Table 6 – R-Code Assessment

Item	Criteria	Response	Compliance
Context			
5.1.1 Site Area	Deemed to Comply Minimum: 100sq.m per dwelling. Minimum Average: 120sq.m per dwelling. Design Principles <i>P1.2 The WAPC may approve a lot size smaller than required subject to no more than 5% less than required and:</i> <i>Facilitate the development of lots with separate and sufficient frontage more than one public street.</i> <i>Overcome a special or unusual limitation (size, shape, or other feature).</i> <i>Allow development to occur in a form representative of the locality.</i>	Deemed to Comply Average lot size proposed: 131.3sq.m. Design Principles P1.2: 8 (or 18%) of the proposed lots are 96sq.m, 4sq.m less than the stipulated lot size. The remaining lot sizes exceed the minimum required. It is important to note that the 100 sq.m minimum is derived through the R-80 designation, and therefore in order to achieve a wider range of densities allowed within the R100 a number of smaller lots are proposed. This is only 4% lower than the minimum lot size, and within the 5% variation permissibility. The lots that are 4sq.m lower than the required are all fronting the public Amherst Street and rear loaded, delivering dwelling diversity in an accessible and publicly fronting manner. The lot shapes proposed are in response to a complex and sloping site (level change of approx. 15m), Previous development opportunities have not progressed on this site, necessitating alternative designs to alleviate these challenges. The development is representative of the intended future development of the KSELSP area.	✓ <i>Alternative Design Solution Proposed through Design Principles</i>
5.1.2 Street Setbacks	Deemed to Comply Primary Street Min: 1m Secondary Street Min: 1m	Deemed to Comply All proposed dwellings have a 1m setback from their frontage to the respective roadway.	✓
5.1.3 Lot Boundary Setback	Design Principle P3.1 Buildings set back from lot boundaries or adjacent	Design Principles The development has been conceived to ensure that all dwellings relate to each other harmoniously - ensuring that	



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Item	Criteria	Response	
	buildings on the same lot so as to; ▪ reduce impacts of building bulk on adjoining properties; ▪ provide adequate direct sun and ventilation to the building and open spaces on the site and adjoining properties; and ▪ minimise the extent of overlooking and resultant loss of privacy on adjoining properties. P3.2 Buildings built up to boundaries (other than the street boundary) where this: ▪ Makes more effective use of space for enhanced privacy. ▪ does not compromise the design principle contained in clause 5.1.3 P3.1; ▪ does not have any adverse impact on the amenity of the adjoining property; does not compromise direct sun to key areas. ▪ positively contributes to the prevailing or future development context and streetscape as outlined in the local planning framework.	overlooking is controlled and all dwellings have good access to natural light and ventilation. The building types are assembled on the lot in a way that provides a rhythm and scale along the street that is appropriate to context. The design carefully provides variety and interest with unifying elements that tie the precinct together in a cohesive manner. The development makes use of common boundaries walls to avoid the wasted space created between narrow side setbacks, maximising the efficient use of land and allow for views and daylight to be co-ordinated without an undue reliance on screening. The development is designed such that generous setbacks are provided to all external site boundaries so that there is sufficient separation for whatever future residential forms emerges on these sites in the fullness of time.	
5.1.4 Open Space	Deemed to Comply Min: 30% Total Open Space	Deemed to Comply Total proposed open space of 47.4% across the development area.	✓
5.1.5 Communal Open Space	<i>None proposed, no assessment required</i>	<i>None proposed, no assessment required. Only communal street area proposed.</i>	N/A
5.1.6 Building Height	Superseded by KSELSP provisions.	Superseded by KSELSP provisions.	N/A



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Item	Criteria	Response	
Streetscape			
5.2.1 Setback of Garages and Carports	Design Principle Garage is to be set back to maintain clear sightlines along the street, to not obstruct the views of dwellings from the street and vice versa, and design to contribute positively to streetscaped and to the appearance of dwellings.	Design Principle <i>Garages fronting Amherst Street</i> Due to the wide Amherst Street Road Reserve, the garages are setback in alignment with the street setback provisions of 5.1.2. Further acknowledging the wide road reserve, the garages do not impact sightlines, do not obstruct views from dwellings, whilst contributing to the desired town-house built form of the area. The architectural response to the upper levels, including the provision of a balcony that projects beyond the lower level, reduces the visual dominance of the garages and ensure a high quality streetscape. <i>Internal Fronting Garages</i> The architectural response to the upper levels, including the provision of a balcony that projects beyond the lower level, reduces the visual dominance of the garages. Further, as all dwellings are to be developed in a masterplan fashion, the garage setbacks are uniform and subsequently ensure that dwelling sight lines and views are not blocked. This is due to no dwelling being setback behind another. This is carried through with the 'laneway' style development, with minimal traffic movements, alternative design solutions can be proposed due to more manageable safety aspects.	✓ <i>Alternative Design Solution Proposed through Design Principles</i>
5.2.2 Garage Width	Design Principle Visual connectivity between the dwelling and the streetscape should be maintained and the effect of the garage door on the	Design Principle The garage widths have been designed to accommodate a dual garage structure in which its streetscape impact is mitigated by 2nd storey treatments, detailed landscaping, and architectural	✓ <i>Alternative Design Solution Proposed through</i>



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Principles

Item	Criteria	Response	
	streetscape should be minimised whereby the streetscape is not dominated by garage doors.	wayfinding features for pedestrians and vehicles. These include overhangs, articulation, and glazing. <i>All lots excluding Lots 26-32</i> Due to the size of each dwelling, a dual garage cannot fit within 60% of the frontage, and therefore additional attention has been placed on the façade composition by the architects to ensure the garage doors do not dominate. <i>Lots 26-32</i> Due to the alternative design and smaller width of the lots, a tandem bay garage has been pursued to reduce the impact of the garage on the internal streetscape.	
5.2.3 Street Surveillance	Deemed to Comply The street elevation(s) of the dwelling to address the street with clearly definable entry points visible and accessed from the street. At least one major opening from a habitable room of the dwelling faces the street and the pedestrian or vehicular approach to the dwelling.	Deemed to Comply Street elevations of the dwellings all address the street with clearly definable entry points visible and accessed from the street. At least one major opening from a habitable room of each proposed dwelling faces the street and vehicular approach to the dwelling.	✓
5.2.4 Street Walls and Fences	Deemed to Comply Max non-permeable front fence height fronting primary street: 1.2m Max solid fence post height: 1.8m Solid fence posts must be linked by permeable fencing	Deemed to Comply All front fences are semi-permeable and are designed to comply with the R-Code height requirements.	✓
5.2.5 Sight Lines	Deemed to Comply Walls, fences and other structures no higher than 0.75m within 1.5m of where they adjoin a driveway.	Deemed to Comply Walls, fences and other structures no higher than 0.75m within 1.5m of where they adjoin a driveway.	✓



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Item	Criteria	Response
5.2.6 Appearance of Retained Dwelling	<i>Not applicable – no dwellings to be retained</i>	<i>Not applicable – no dwellings to be retained</i>

Site Planning and Design

5.3.1 Outdoor Living Areas	Design Principles P1.1 A consolidated outdoor living area is provided to each single house and grouped dwelling which provides space for entertaining, leisure and connection to the outdoors that is: 1. Of sufficient size and dimension to be functional and usable; 2. Capable of use in conjunction with a primary living space of the dwelling; 3. Sufficient in uncovered area to allow for winter sun and natural ventilation into the dwelling; 4. Sufficient in uncovered area to provide for landscaping, including the planting of a tree(s); and 5. Optimises use of the northern aspect of the site. P1.2 Where provided within the street setback area, the outdoor living area to a single house or grouped dwelling: 1. Achieves the design principles of clause 5.3.1 P1.1 2. Is designed to facilitate street surveillance between the dwelling and the street; and 3. Minimises the use of visually impermeable or solid front fences above 1.2m in height	Design Principles P1.1 1. All outdoor living spaces are of useable size and cater for a variety of outdoor activities. 2. Outdoor living spaces have direct links to the primary living spaces of each proposed dwelling. 3. No substantial outdoor living space is covered by over two thirds. 4. Detailed landscaping for each dwelling. Refer landscape report. 5. All dwellings incorporate a northern aspect to uncovered outdoor living areas. P1.2 1. Achieves design principle of P1.1. 2. All dwellings facing a street (both public and private) incorporate passive surveillance in a provided outdoor living area. This is through provision of front courtyards or balconies. 3. No fence on a dwelling's frontage is above 1.2m and is semi-permeable.	✓ <i>Alternative Design Solution Proposed through Design Principles</i>
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Item	Criteria	Response
5.3.2 Landscaping	Design Principles Landscaping of open spaces that: 1. Contribute to the appearance and amenity of the development for residents 2. Contribute to the streetscape 3. Enhance security and safety for residents 4. Contribute to positive local microclimates, including provision of shade and solar access as appropriate; and 5. Retains existing trees and/or provides new trees to maintain and enhance the tree canopy and local sense of place.	Design Principles 1. The landscaping has been designed in conjunction with the built form to ensure high levels of amenity for residents. This amenity includes high levels of native plants, verge beautification, the encouragement of social interaction, and food production. 2. The Landscape plan contributes to the street scape in two ways. First, being the enhancement of the existing public streetscape. The wide Amherst Street and Stack Street reserves are being regenerated to provide more than parking and monoculture turfed areas. This includes habitat creation, plant diversity, street furniture and community gardens. Secondly, the new internal streetscape created through this proposal is to establish beautified streetscape and traffic calming through planting, creation of view lines to provide pedestrian safety, and utilise low maintenance planting. 3. The landscaping has been designed to ensure traffic and pedestrian sight lines are maintained, as well as tree canopies providing privacy from the public realm. 4. Food production, native and diverse species planting, canopy producing trees, and low water requirements establish a positive provision to the locality. 5. Existing trees are retained where possible, however multiple canopy producing trees are proposed to ensure shade production is enhanced..



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Item	Criteria	Response	
5.3.3 Parking	Deemed to Comply Minimum car parking for a 2+ bedroom grouped dwelling in 'Location B': 2 parking spaces. Visitor parking to be provided at the rate of 1 bay per every 4 dwellings. (14 bays required).	Deemed to Comply 2 parking spaces provided per dwelling 16 visitor bays provided (surplus of 2)	
5.3.4 Design of Car Parking Spaces	Deemed to Comply Car parking spaces and manoeuvring areas designed and provided in accordance with AS2890.1 (as amended). Visitor car parking spaces clearly marked and providing accessible path for people with disabilities. Car parking areas of 6 or more spaces to be provided with landscaping.	Deemed to Comply Designed to compliance.	✓
5.3.5 Vehicular Access	Design Principles P5.1 Vehicular access provided for each development site to provide: 1. Vehicle access safety 2. Reduced impact of access points on the streetscape 3. Legible access 4. Pedestrian safety 5. Minimal crossover 6. High quality landscaping features P5.2 Development with potential to be subdivided to create 20 or more green title, strata or survey strata lots provides legible internal and external connections to the surrounding road network and accommodates traffic movement and volume, visitor parking, pedestrian access, street shade trees, utility	Design Principles P5.1: 1. All vehicles can enter and exit their prospective lots safely. 2. Existing streetscape access has been rationalised where possible, with only 9 of the proposed 56 lots seeking access from the public street. Remaining will utilise internal communal street. 3. Access will be legible and is to be designed to a high quality. Access to the internal communal road will be highly visible and are located away from existing intersections. Refer Landscape plan. 4. A footpath is to be provided around the site to facilitate safe pedestrian movement in the public realm. Internally, the communal road is to be designed as a shared space, with priority given to pedestrians and	✓ <i>Alternative Design Solution Proposed through</i>



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Item	Criteria	Response
	services and access for waste collection and emergency services.	cyclists. This will be designed through traffic calming principles (surface treatment, geometries, vegetation). As the communal road only functions as access for the homes, vehicle movements will only relate to residents and visitors. 5. Only proposed lots 36 to 44 will require an individual crossover onto the public street. The remaining 47 lots will all be either rear loaded or have access internally from the communal street. 6. Due to the size of the development, landscaping is a high priority for the final spatial outcome. P5.2 Connections to the surrounding network from the internal road have been rationalised where possible. Only two connections are proposed, with one on each frontage. This will support movement internally with to access points, whilst also reduce conflict points with the local road network. Only 9 of the total 56 dwellings have direct access to the public network, reducing the cumulative residential impact. The proposal is compliant with the anticipated KSELSP density, resulting in vehicle movements being within anticipated levels. Visitor parking is to be provided in the road verge, as well as informally via the availability of individual garages where households only have one car. Internally, the communal road is to be designed as a shared space, to create a comfortable environment for pedestrians and cyclists. This will be designed through traffic calming principles. As the communal road only functions as access for the homes, vehicle movements will



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Item	Criteria	Response	
		only relate to residents and visitors. There is a pedestrian only access located between lot 20 and 36, which will be landscaped and provide a natural emphasis to the entry sequence and logical way finding. Access for utility services, waste collection and emergency vehicles has all been assessed through technical document, whilst also receiving preliminary support from the City of Fremantle. Please refer waste management plan and TIA.	
5.3.6 Pedestrian Access	Design Principles Legible, safe, and direct access for pedestrians to move between communal car parking areas or public streets and individual dwellings.	Design Principles The communal road is to be designed as a shared space, with priority given to pedestrians and cyclists. This will be designed through traffic calming principles. As the communal road only functions as access for the homes, vehicle movements will only relate to residents. There is a further pedestrian only access located between lot 20 and 36, of which will be landscaped. A high degree of landscaping will occur within the road reserve, ensuring that pedestrians are separated from public realm traffic movements. A footpath is to be provided around the site within the verge to facilitate safe pedestrian movement in the public realm.	✓ <i>Alternative Design Solution Proposed through</i>
5.3.7 Site Works	Design Principles Development that considers and responds to the natural features of the site and requires minimal excavation/fill. Where excavation/fill is necessary, all finished levels respecting the natural ground level at the lot boundary of the site and as viewed from the street.	Design Principles The proposal is situated on a highly complex and sloping site (approx. 15m level change). The development has sought to rationalise and celebrate the natural undulation of the KSELSP area through appropriate and considered retaining. Where excavation/fill is necessary, all finished levels respecting the natural ground level at the lot boundary of the site and as viewed from the street.	



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Item	Criteria	Response	
5.3.9 Stormwater Management	Deemed to Comply All water draining from roofs, driveways, communal streets and other impermeable surfaces shall be directed to garden areas, sumps or rainwater tanks within the development site where climatic and soil conditions allow for the effective retention of stormwater on-site.	Deemed to Comply All stormwater will be maintained and disposed of within the lot. Further requirements may be conditioned accordingly.	
Building Design			
5.4.1 Visual Privacy	Design Principles P1.1 Minimal direct overlooking of active habitable spaces and outdoor living areas of adjacent dwellings achieved through: 1. Building layout and location 2. Design of major openings 3. Landscape screening of outdoor active habitable spaces and/or 4. Location of screening devices. P1.2 Maximum visual privacy to side and rear boundaries through measures such as: 1. Offsetting the location of ground and first floor windows so that viewing is oblique rather than direct 2. Building to the boundary where appropriate 3. Setting back the first floor from the side boundary 4. Providing higher or opaque and fixed windows; and/or 5. Screen devices (including landscaping, fencing, obscure glazing, timber	Design Principles P1.1 & P1.2 The Townhouses have been orientated to create privacy between the living areas of each townhouse. There are minimal opportunities for overlooking between the adjoining proposed dwellings. Any opportunity for overlooking will occur at the upper level and will not involve any loss of privacy for primary living areas of dwellings. House Type D and D1 have a 1600mm privacy screen between the balconies to preserve privacy of outdoor living areas proposed.	 <i>Alternative Design Solution Proposed through</i>



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Item	Criteria	Response	
	6. Screens, external blinds, window hoods and shutters).		
5.4.2 Solar Access for Adjoining Sites	Deemed to Comply Shadow cast on adjacent dwellings at midday on the 21st of June must not exceed 50% of the site area.	Deemed to Comply Shadow cast on adjacent dwellings at midday on the 21st of June is 59.48 sq.m. Approx. 3.9% of neighbouring site area.	✓
5.4.3 Outbuildings	No outbuildings proposed.	No outbuildings are proposed.	N/A
5.4.4 External Fixtures, Utilities and Facilities	Design Principles External fixtures such as solar panels and television aerials should be hidden from the primary and secondary street. A storage area, external or within an enclosed garage, should be provided to every group dwelling.	External fixtures will be located so that they are not visually obtrusive or will be screened. This can be conditioned accordingly.	✓



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4. CONCLUSION

The proposed application seeks approval for 56 grouped dwellings in the transitional area of Knutsford East, Fremantle. The proposal is delivering high quality infill development to support the Strategic Centre of Fremantle, introducing additional dwelling typologies that will provide new homes for a wide range of demographics, that will in turn create a cohesive community. The grouped dwellings have been designed in a high-quality architectural manner, producing town homes that reflect both the site's previous uses, and its future.

The proposal is compliant with all relevant planning frameworks, ensuring that the final residential product aligns with the future Knutsford vision. This proposal will continue the wider area's delivery of appropriate infill and urban regeneration to a landmark region that has sought to outgrow its industrial past.

We, look forward to working with the City of Fremantle, the Metro Inner-South Joint Development Assessment agencies, and the relevant referral agencies to achieve a development approval with reasonable and relevant conditions.



MONUMENT EAST



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DISCLAIMER

This report is dated 20 May 2022 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Locus Development Group (**Instructing Party**) for the purpose of Development Application (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

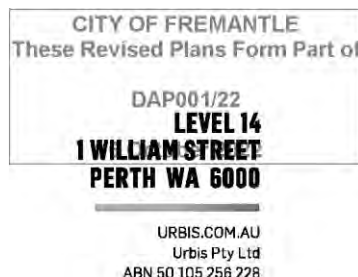
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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.



Additional Information 9 - Applicant letter addressing reasons for deferral



6 October 2022

Chloe Johnston
Manager of Development Approvals
City of Fremantle
151 High Street
FREMANTLE 6160

Dear Chloe,

METRO INNER-SOUTH JDAP: DAP/22/02244 - RESPONSE TO APPLICATION DEFERRAL – AMHERST AND STACK STREET, FREMANTLE

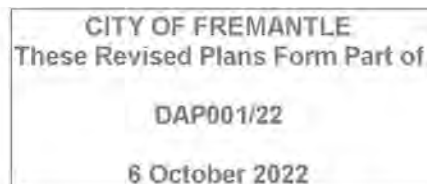
We refer to the current Metro Inner-South Joint Development Assessment Panel (JDAP) development application at No. 34-38 (Lots 1823, 1209, 1212 And 1217) Amherst Street and No. 2-4 (Lots 1223 and 1222) Stack Street, Fremantle (**subject site**). This application is for 56 Grouped Dwellings and is referenced as DAP/22/02244.

The application was heard at a JDAP meeting on the 19th of September 2022 where the panel voted to defer the application for the following reasons:

1. Demonstrate how the internal laneways and spaces can accommodate increased functional areas of soft landscaping.
2. Consider the reduction of on-site private parking and the inclusion of some of the required on-site visitors parking, parking for share vehicles, and suitably located EV charging facilities.
3. Increased functional area of the outdoor living areas to units Type A and Type C (units 51-55).
4. Reconsider the size and impact of the vehicle crossovers to Amherst Street including the potential mitigation through mature tree planting.
5. Consider the reduction of the verge visitor parking on Amherst Street to be offset by on-site visitor parking.
6. Demonstrate how universal access will be provided to dwelling Type D and D1.
7. Improve the solar passive design to ensure that the majority of dwellings have adequate access to the northern winter sun in living areas.
8. Demonstrating how non-residential activities can be accommodated on site.

This letter contains the written responses to each of the deferral items, and is accompanied by the enclosed amended Architectural Plans and Landscape report. We trust that the responses contained within this letter and the revised documentation will adequately address the reasons for deferral and assist in the determination of the proposal.

Metro Inner-South JDAP: DAP/22/02244 - Response to Application Deferral – Amherst and Stack Street, Fremantle



1. Demonstrate how the internal laneways and spaces can accommodate increased functional areas of soft landscaping.

In consideration with the vision of a pedestrianised and shared internal road space, the proposal has been further revised to increase landscaping within the site. This has been completed in consultation with the Traffic Reporting and swept paths to identify areas where landscaping can be achieved whilst not impacting the movement of private, service and emergency vehicles through the site. As a result, there has been 5 key areas identified as being viable for increasing soft landscaping. These areas are at the frontage of Type A's; along the eastern edge of Road C; between the eastern boundary of Type A's along Road C; an unbroken landscaping strip along the western frontage of the Type E's; and along the eastern edge of Laneway A and Laneway B.

This has resulted in an increase of 86sq.m to landscaping which is partnered with a remodelled internal road design which introduces an element of difference between the external streetscape and the internal roadway. As such, demonstrating a different environment for drivers and their requirement to drive more cautious and slowly within the site.

2. Consider the reduction of on-site private parking and the inclusion of some of the required on-site visitors parking, parking for share vehicles, and suitably located EV charging facilities.

The provision of on-site private parking has been retained in order maintain compliance with Section 5.3.3 of the Residential Design Codes Volume 1 (**RCodes**), requiring a minimum of two (2) car parking spaces for a 2+ bedroom grouped dwelling in 'Location B'. As such, the dual car garages have been retained.

Other areas which could be used for informal private parking have been reduced to respond to this comment. This is evident in the crossovers onto Amherst Street. Despite not being within the site boundary and within the road verge, the tapering of the crossovers reduces potential for additional private parking within the frontage of the Amherst Fronting lots. This reduces the perceived impact of private parking allocated to the development.

Three (3) additional visitor parking bays have been included on-site in the revised plans in response to the above comment. This has been elaborated upon further in the provided response to deferral reason no. 5. Within the redesign of the visitor parking, one bay has been allocated as a vehicle charging bay of which is to be operated by a third party (e.g. RAC, Tesla or ChargeFox). This bay is located within the verge in order to increase the visibility and useability of the charging station for visitors. A shared vehicle bay has further been accommodated on plan for future use by share cars.

3. Increased functional area of the outdoor living areas to units Type A and Type C (units 51-55).

Unit Type A and Type C (Lots 51-55 only) have been redesigned to accommodate a greater Outdoor Living Area (**OLA**) for each dwelling type. The Type C dwellings identified for Lots 51-55 have been redesigned to propose a 18.28sq.m OLA, increasing the previously proposed OLA from 4.31 sq.m. Further, the Type A dwellings have been redesigned to propose a 24.04sq.m OLA, 8.76 sq.m greater than originally proposed. The Type A rear courtyard at the clothesline area has been increased to 1350mm in width to allow greater functionality of this area.

4. Reconsider the size and impact of the vehicle crossovers to Amherst Street including the potential mitigation through mature tree planting.

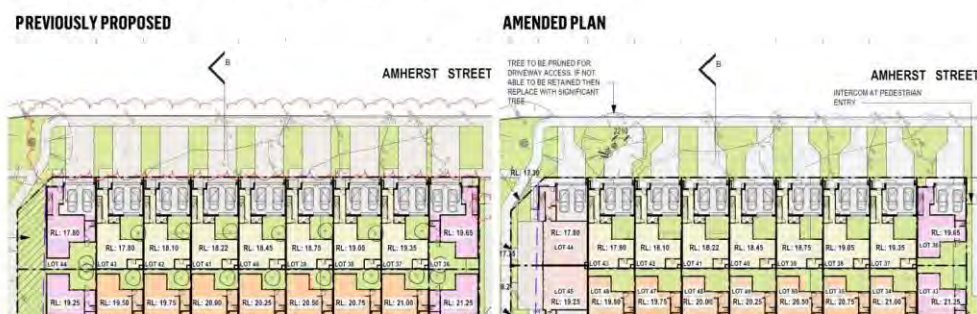


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In accordance with the deferral, the Amherst Street streetscape has been revised to minimise the perceived bulk and scale of the previously proposed crossovers. The previous design provided for linear crossovers that were parallel to Amherst Street, and included no tapering towards the street edge. Dedicated street access to lots fronting Amherst Street is provided for through subdivision approval (WAPC ref 39-022), preventing rear loading to these lots.

The amended plans have introduced tapering to each crossover proposed in order to minimise the hardstand and increase the landscaping area between each crossover. This widened area increases the ability for tree root growth and supports the establishment of larger trees to the streetscape. Where possible, existing street trees have been retained, including in front of Lot 43. Figure 1 illustrates the original and revised crossover layout.

Figure 1 Proposed Crossover Reconfiguration



5. Consider the reduction of the verge visitor parking on Amherst Street to be offset by on-site visitor parking.

As discussed in response to deferral reason No. 2, three (3) visitor parking bays are now provided on site. These are located to the south of the development and are situated adjacent to the entry gate, further highlighting the visibility for visitors. These visitor parking bays further complement the adaptable housing types in Lots 44 and 45, and included within the revised plan set.

Additional visitor bays have been provided as an offset for the reduction of 3 visitor bays from the Amherst Street road reserve. As shown below in Figure 2, the bays previously provided along Amherst Street have been rationalised from 8 into 5, with a new dedicated ACROD bay. This reduction supports an increase to the landscaped area within the Amherst Road verge as shown in the revised Landscape Report. This reduces the areas of segregation to landscaping within the Amherst Street road reserve, providing a larger cluster of landscaping adjacent Type D & D1 dwellings (lots 14 – 20).

Further, the reallocation of visitor parking further east on Stack Street assists with minimising the impact of off-site parking, as demonstrated below:

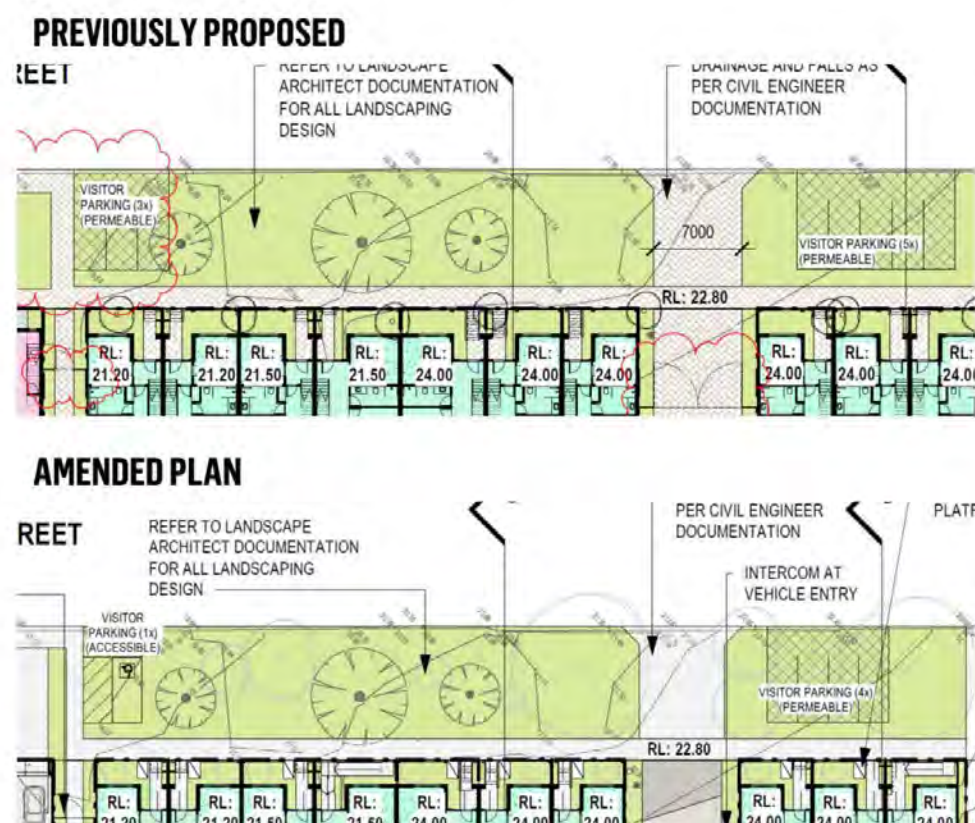
- Reduced areas of segregation to landscaping within the Stack Street road reserve, providing a larger cluster of landscaping adjacent Type G adaptable dwellings.
- Reduction in any perceived conflict between vehicles entering and exiting parking areas and those utilising the T-intersection between Stack Street and Amherst Street.



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- Visitor bays are located closer to existing commercial and retail uses within the neighbouring Stack Street context, demonstrating a communal approach to its provision.

Figure 2 - Visitor Parking Changes



6. Demonstrate how universal access will be provided to dwelling Type D and D1.

As part of the revised plans, Type D and Type D1 dwelling designs have been modified to improve universal access. This has resulted in a revised design that provides the ability for universal access to be achieved. Lot 1 and Lot 17 have been altered to increase accessibility through the provision of a AS1428 compliant ramp, linking the front entry to the Amherst Street streetscape. As a result of constraints posed by the site's topography, ramps are not able to be accommodated on all Type D and Type D1. Instead, the OLA provided to the front of these lots can be retrofitted to accommodate the provision of platform/wheelchair lifts should one be required.



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Universal access has been included into the remodelled adaptable Type G dwellings. Similar to Lot 1 and 17, an AS1428 compliant ramp has been proposed at the southern frontage of Lots 44 and 45. This increases the accessibility of the home and further validates the proposed adaptability of the dwellings. Please refer to the response to reason no. 8 for further discussion on the Type G dwellings.

7. Improve the solar passive design to ensure that the majority of dwellings have adequate access to the northern winter sun in living areas.

As outlined previously, the proposed development is subject to an approved subdivision which informs the lot layout over the site. Accordingly, the ability to change the lot layout through the JDAP process is restricted. Notwithstanding this, the revised plans demonstrate a genuine commitment to increasing solar access and ensuring greater levels of amenity are achieved.

Lots 33 and 36 (Type F) have been reorientated to provide increased solar access, particularly during the winter months, and include a courtyard on the northern side of each lot, increasing both the solar efficiency and usability. Refer to Figure 3 illustrating these changes.

Figure 33 - Proposed Reorientation of Lot 36 and Lot 33

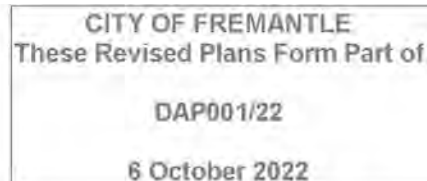


Further changes have been undertaken to increase the Outdoor Living Area of 17 Lots within the proposal including Lots 33 to 45 and Lots 51 to 55. Overall, the OLA's have increased between 4 sq.m and 8sq.m per dwelling. This has resulted in improved solar access both internally within the dwellings and to the OLA's.

This is already in addition to the 17 other dwellings, being Lots 1-8 and 13-21, which currently obtain high levels of solar access throughout the year. The shadow diagram underpinning the revised designs show shadows cast at 12pm at the winter solstice and demonstrate the most impactful period of low solar access for the year.

8. Demonstrating how non-residential activities can be accommodated on site.

As identified within the Knutsford Street East Local Structure Plan (KSELSP), adaptability in dwelling design to facilitate opportunities for future commercial use of dwellings is promoted. The amended plans (attached) have sought to expand on the previous provision of adaptable spaces by introducing a ninth dwelling type, shown as Type G on plan. These dwellings replace two Type F dwellings



previously proposed (Lots 44 and 45). This dwelling type is located along the Stack Street frontage to support increased engagement to the Stack Street streetscape and introduce a larger and more open ground floor which can be adapted into a commercial offering in the future.

The Stack Street frontage has been selected as opposed to Amherst Street due to the existing commercial offering along Stack Street. The neighbouring site's host Stackwood, which includes retail and café tenancies as well as an event space, and a commercial office and manufacturing site at No. 8 and No. 6 Stack Street.

Drawing DA4.F.01 shows the Type G floor plan with a ground floor which has direct, universal access from the Stack Street frontage and is separated from the alternative access via the internal road. This dual access demonstrates a future ability to utilise the dwelling for two purposes, being a commercial/retail/office use on the ground floor and residential at the rear and on the second floor. Access fronting Stack Street includes a decked area which can be utilised as a shopfront/alfresco area. This increases the activation between the built form and the street scape and establishes a dynamic and mixed-use environment as depicted in the KSELSP, whilst also allowing for the potential for a revitalised road verge through the proposed landscaping. This dwelling type has been designed to include an internal dual key access between adaptable space and residential exclusive space.

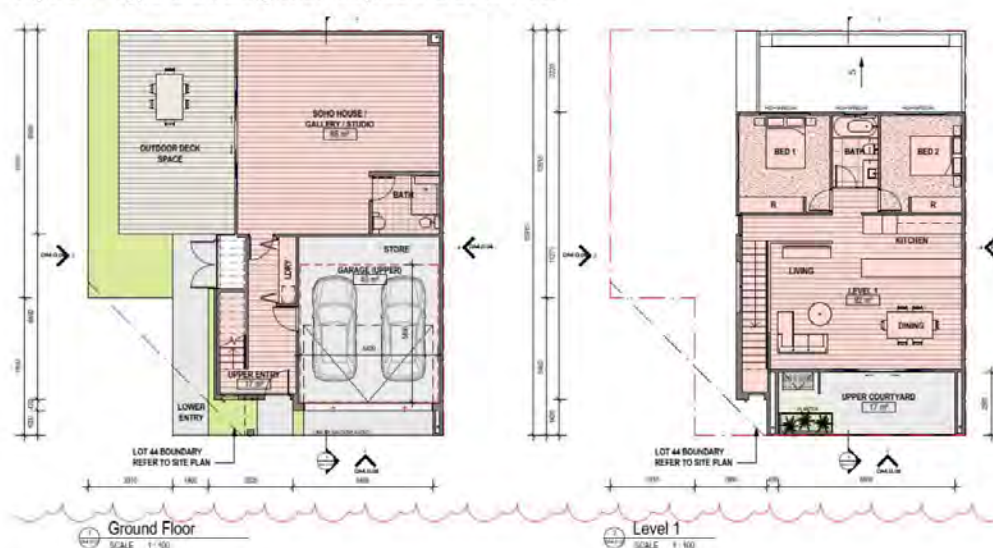
It is noted that the provision in the KSELSP regarding adaptability is the provision of a 4.2m ceilings for the ground floor. The recommended 4.2m ceiling height is an unnecessary planning provision that does not increase the ability to achieve adaptability or a permanent commercial land use. This is evident throughout the City of Fremantle where successful shop housing has been either historically utilised or recently developed in key mixed-use areas.

Accordingly, a lower ceiling height does not preclude commercial activity or a home business suited to this location, nor does it increase the categories of small-scale commercial land uses a residential site can attend. This has been further ratified in the Officer's Recommendation and considered that the proposed dwellings provide sufficient floor to ceiling height dimensions to allow for a variety of non-residential uses to occur. It was further noted in the Officer's Report that per the National Construction Code, the minimum floor to ceiling height for commercial premises is 2.4m. Accordingly, a 3.2m floor to ceiling height is considered suitable in this instance, and allows for meaningful flexibility to be provided. The proposed floor to ceiling heights of the revised Type G dwellings do not depart from this assessment. Refer to **Figure 4** which demonstrates adaptability of the dwelling.



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Figure 4 - Type G Dwelling With Adaptable Ground Floor



Conclusion

As outlined in the above response, modifications to the proposed designs have been undertaken to address comments received from JDAP and assist with the determination of this proposal. If there are any further queries regarding the enclosed, please contact the undersigned or [REDACTED] via [REDACTED]

Yours sincerely,

[REDACTED]

[REDACTED]

Enc: Revised Architectural Plans
Revised Landscape Report



Additional Information 10 – Department of Water and Environmental Regulation comments.



Government of Western Australia
Department of Water and Environmental Regulation

Your ref: DAP001/22

Our ref: DMO 2815

Enquiries: [REDACTED]

Email: [REDACTED]

[REDACTED]
City of Fremantle
PO Box 807
FREMANTLE WA 6959

By email [REDACTED] & info@fremantle.wa.gov.au

Dear Josh

CITY OF FREMANTLE DAP APPLICATION – DAP001/22 – 34-40 AMHERST ST AND 2-4 STACK STREET, FREMANTLE

I refer to your email dated 30 May 2022 to the Department of Water and Environmental Regulation (the department) regarding an application to the City of Fremantle for the proposed development of the above-mentioned lots.

Land at Lot 1209 on Deposited Plan 16249, known as 36 Amherst Street, Fremantle was reported to the department in November 2007 along with nearby lots 1196 and Lot 1201 (30 and 32 Amherst Street) for historical use as an abattoir and staining was observed in washdown bay areas and concrete basins. These three lots were initially classified as *possibly contaminated – investigation required* under the *Contaminated Sites Act 2003* (CS Act) in 2008.

Between 2016 and 2017, investigations were carried out on the above lots and Lot 1823 on Deposited Plan 162649, known as 34 Amherst Street, Fremantle. The investigations found that the four lots had been used for various industrial activities including brake and clutch repair workshop, abattoir, welding workshop and pet food processing between 1960 and 2007.

The investigations found some metal and hydrocarbon impact in soil at isolated locations at concentrations that were not considered to pose an unacceptable risk to any potential receptors and no impacts were identified in groundwater above relevant guidelines.

Remediation of asbestos-containing materials (ACM) from beneath a concrete slab and subsequent validation found that ACM had been successfully remediated. The investigations and risk assessment were the subject of an independent review by an accredited contaminated sites auditor. The auditor recommended that, at that time, the site was suitable for residential land use and the site was classified as *decontaminated* under the CS Act in March 2017. This classification was based on information available at that time i.e. does not take into account possible contamination associated with ongoing commercial/industrial uses of the site since March 2017.

Prime House, 8 Davidson Terrace Joondalup Western Australia 6027
Locked Bag 10 Joondalup DC WA 6919
Telephone: 1300 762 982 Facsimile: 08 6364 7001
www.dwer.wa.gov.au



The department notes that Lots 1823 and 1209 form part of the subject of this investigation. While these lots were classified as *decontaminated* in 2017, aerial photographs show that these lots have been used for stockpiling of unknown materials since 2021.

Lots 1212 and 1217 on deposited plan 162649, known as 38 and 40 Amherst Street and Lots 1222 and 1223 on deposited plan 162649, known as 2-4 Stack Street, Fremantle have not been reported to the department as known or suspected contaminated sites and the department holds no records for these sites.

However, historical aerial photographs indicate that Lots 1212 and 1217 have been used for industrial purposes since potentially the 1960's. Lots 1222 and 1223 appear to have been used for industrial or commercial activities since the 1960's also.

A Preliminary Site Investigation (PSI), dated May 2022, was also undertaken to accompany the development application. The PSI found that hydrocarbon impacts in soil were identified around laydown areas, potentially contaminating activities have occurred on the subject lots for over 70 years, potential uncontrolled fill has been identified on all the lots and elevated hydrocarbons and metals have been identified in groundwater in the general area. The PSI recommended intrusive investigations to determine the nature and extent of potential contamination.

The proposed development involves a change of land use from commercial/industrial to residential use which is considered a more sensitive land use and the nature and extent of potential contamination at the site is unknown.

Given the proposed change in land use, the department cannot comment on the suitability of the site for the proposed development. The department recommends that contamination condition EN9 and advice Ena2 are applied to any approval granted by WAPC, as published in 'Model Subdivision Conditions Schedule' (Department of Planning, Lands and Heritage; WAPC, December 2020).

Condition X

- a) Prior to commencement of development works, investigation for soil and groundwater contamination is to be carried out to determine if remediation is required.
- b) If required, remediation, including validation of remediation, of any contamination identified shall be completed prior to the commencement of construction works to the satisfaction of the City of Fremantle on advice from the Department of Water and Environmental Regulation, to ensure that the site is suitable for the proposed use.

Investigations and remediation are to be carried out in compliance with the *Contaminated Sites Act 2003* and current Department of Water and Environmental Regulation contaminated sites guidelines. (Department of Water and Environmental Regulation)

Advice

In relation to Condition [X] and in accordance with regulation 31(1)(c) of the *Contaminated Sites Regulations 2006*, a Mandatory Auditor's Report, prepared by an accredited contaminated sites auditor, will need to be submitted to the Department of Water and Environmental Regulation as evidence of compliance with Condition [X]. A current list of accredited auditors is available from www.dwer.wa.gov.au.

The site is not located within an area that is mapped as having a risk of encountering acid sulfate soils. The department therefore advises that no specific comment is required in relation to acid sulfate soil management during development.



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If you have any queries in relation to the above, please contact Environmental Officer, [REDACTED]

Yours sincerely



22 June 2022



**PC2211-3 GOLD STREET, NO. 25 (LOT 1), SOUTH FREMANTLE –
DETACHED STUDIO ADDITION WITH LOFT LEVEL TO EXSTING DWELLING
(ED DA0069/22)**

Additional Information 1 – Site Photos



Photo 1: Subject site as viewed from corner of Gold Street and Francisco Street.







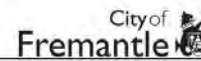
Photos 2, 3 & 4: Subject site as viewed from Francisco Street.



Photo 5: Rear existing common property area to rear of terraced houses and southern adjoining property (10 Francisco Street) side setback area.



Additional Information 2 – CoF Heritage Impact Assessment



Heritage Impact Assessment - Internal

Address: 25 Gold Street, South Fremantle
Application number: DA0069/22
Proposal: Two storey studio to rear of site
Requesting officer: Catherine Sullivan
Date: 15/08/2022



25 Gold Street, South Fremantle, Aerial photograph, CoF ESRI, September 2021

INTRODUCTION

The purpose of this heritage comment is to assess the changes to the place that are proposed in the revised drawings received on 7 June 2022 for DA0069/22 and the affect that they will have upon the heritage values of 25 Gold Street and the South Fremantle Heritage Area. The proposed changes include:

- Demolition of garden walls to rear and part of Francisco Street side boundaries
- Demolition of brick outbuildings to rear of site
- Construction of new 2 storey ancillary dwelling?

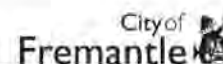
HERITAGE LISTINGS

State Register of Heritage Places

The place is NOT on State Register - referral to DPLH not required

Inherit

Inherit Database number – 20682



Heritage List

The place is included on the City of Fremantle's Heritage List.

Heritage Area

The place is included in the South Fremantle Heritage Area which was designated as a Heritage Area in accordance with clauses 7.2.1, 7.2.9 of Local Planning Scheme No. 4.

Local Heritage Survey

The place is included in the Local Heritage Survey.
The Management Category is Level 2

RELEVANT PREVIOUS DEALINGS

Recent meetings or discussions:

- N/A

Previous relevant DAs:

- N/A

Previous relevant legal dealings:

- N/A

BACKGROUND

Historical Information

Prior to European settlement, it was estimated that about 60 Whudjuk Nyoongar Aboriginal people lived in the 'Beeliar' region surrounding Fremantle. 'Bidi' tracks led from one food source and campsite to another, and it is likely that early white settlers used the same bidi tracks as transport routes. Hampton Road and its continuance into Rockingham and Cockburn roads, as well as South Terrace, are probably bidi tracks, as they follow the contours of the landscape, rather than any geometric pattern.

South Street (the northern boundary of South Fremantle) was initially the boundary of the Fremantle settlement. Marine Terrace developed as a beach track. Subdivision of the land beyond South Street began after 1850, with five acre allotments that extended to Douro Road. East of this subdivision, the allotments were at 'farm' proportions.

The main settlement of South Fremantle occurred with the dramatic population increases of the 1890s, due to the influx of immigrants attracted by the discovery of gold. Between 1890 and 1930 South Fremantle was largely developed as a residential area to accommodate the families of workers who laboured in local industries such as Arnott's Mills and Wares Factory, Robbs Jetty Meatworks, Cockburn Wool Scouring Sheds, fishing, shipbuilding, market gardens and on the waterfront. Minimal development occurred between 1930 and 1939 due the Depression and the Second World War.

Individual property history

The following information is taken from the Inherit database:

Gold Street was gazetted as George Street on 2 September 1904. The land formed a part of a large block owned by Henry Briggs, then President of the Legislative Council. George (Gold) Street was constructed in 1905 at a cost of £250. By 1908, a public reserve had been earmarked at the intersection of Francisco Street and George Street. George Street was



renamed Gold Street in circa 1921. The majority of the housing stock in the street dates from the late 1890s and early 1900s.

Terrace, 25 Gold Street was built c. 1902 as one of three terrace cottages (25, 27, 29 Gold Street). In 1904/05, the terraces were listed in the rate book as being owned by George Stockham. No. 25 was occupied by Edward Harrison, a labourer; No. 27 by Gertrude Gildbride; and, No. 29 by Charles Thomas, a storeman.

A Metropolitan Sewerage diagram dated 1908 shows three terrace houses, each with a full length front verandah and small bathrooms and verandahs to the rear. Each also had a water closet located against the back fence. The backyards were divided by fences.

In 1912/13, the terraces were sold to James Browne. Richard Pollard rented No. 25; Gertrude Gilbride continued to live at No. 27; and, John Baldwin lived at No. 29.

By 1922/23, the terraces were owned by Minetta Lancaster and all continued to be rental properties. By 1942/43, ownership had passed to Edna Lancaster, who continued to lease them to tenants. Gertrude Gilbride moved from No. 27 to No. 29 c. 1930.

In the early 1950, the terraces were owned by Spiridon Petron and then Stevros and Christina Evengelou. By 1954, a large brick laundry had been built at the back of No. 25 and a smaller brick addition at the back of No. 29. By the early 1960s, the terraces were in separate ownership and it is from this time that it appears that they all became owner occupied residences.

Terrace, 25 Gold Street was owned by Caremelo Mignassa and in the mid-1960s, then by Tanino Vecchio. By the mid-1970s, the property was owned by Peter and Katherine Cooper. It was purchased by John Campbell in 1975; then Diane Groves in 1978 and then Gerard McCann and Susan Gawned in 1978. Terrace, 25 Gold Street has had several owners since that time.

This place was included in the list of heritage places in the City of Fremantle identified by the Fremantle Society (1979/80) - RED -significant for contributing to the unique character of Fremantle.

25 Gold Street was included on the first Fremantle Municipal Heritage Register in 2000 as part of the listing Terrace 25, 27 & 29 Gold Street and the Heritage List in 2007.

Physical Description

The South Fremantle Precinct Heritage Area is bounded by South Street (northern boundary), the Indian Ocean shoreline (western boundary), Healy Road (southern boundary) and Mather Street, Annie Street, and York Street (eastern boundary).

Gold Street is a short, narrow street that runs roughly west to east from Coral Street, across South Terrace and Francisco Street to Attfield Street. The street cranks slightly between South Terrace and Francisco Street where there is a limestone ridge. 25 Gold Street is located on the west corner of Francisco Street.

The following description is included in the Inherit database:

Terrace, 25, 27 & 29 Gold Street, is a typical limestone, brick and iron single storey group of 3 terrace houses dating from 1902. The place has aesthetic value for its contribution to the streetscape and the surrounding area. It is representative of the typical workers' houses in the Fremantle area. The place is an example of the Federation Bungalow style of architecture.



25 Gold Street at the intersection with Francisco Street, Google November 2021



The rear and Francisco Street side boundary of 25 Gold Street with neighbouring property 10 Francisco Street on the left hand side of the photograph, Google November 2021



IMPACT ASSESSMENT

Statement of Significance for the place

25 Gold Street is part Terrace, 25, 27 & 29 Gold Street, which is a typical limestone, brick and iron single storey group of 3 terrace houses dating from 1902. The proposed development of the place was assessed against the following values identified in the statement of significance for the place:

The place has aesthetic value for its contribution to the streetscape and the surrounding area.	Minor impact
It is representative of the typical workers' houses in the Fremantle area.	Minor impact
The place is an example of the Federation Bungalow style of architecture.	No discernible impact

Statement of Significance for the South Fremantle Heritage Area

South Fremantle is significant as an area located to the south of the City of Fremantle with a history of settlement dating back to the mid nineteenth century. The proposed development of the place was assessed against the following values identified in the statement of significance for the South Fremantle Heritage Area:

The concentration of mainly modest workers accommodation dating from the Victorian and Federation periods	Minor impact
The cultural diversity resulting from successive periods of migrant settlement in the area	No discernible impact
The industrial focus of industries relating to seafaring including fishing and boat-building along Marine Terrace	No discernible impact
The former industrial character resulting from industries such as the former Mills and Wares Factory and the Robbs Jetty meatworks; and	No discernible impact
The expansion into Beaconsfield and Chesterfield in the 1930s and the subsequent working class residential development of these areas.	No discernible impact

Heritage values

The impact of the proposed development of the place on the South Fremantle Heritage Area was assessed using the heritage values from the ICOMOS Burra Charter, 2013:

Aesthetic value	Minor impact	Condition	No discernible impact
Historic value	No discernible impact	Integrity	No discernible impact
Scientific value	No discernible impact	Authenticity	Minor impact
Social value	No discernible impact	Historical evolution	No discernible impact
Rarity	No discernible impact	Streetscape	No discernible impact
Representativeness	Minor impact		



Heritage Impact Comments

25 Gold Street is part of a terrace of three houses which sit on the corner of Gold and Francisco Streets in South Fremantle. The proposed studio will not be visible from Gold Street, the primary street frontage, because it will be concealed by the roofs of the terrace houses.

The studio will be visible from Francisco Street. However, the impact of this building on the heritage streetscape will be minimal because:

- The additions are modest in scale with the upper floor being tucked into the roof
- The building responds to the character of the surrounding streetscape by using traditional forms and materials but in a modern fashion
- The studio is separate from the main house so will have no impact on original fabric of the three terrace houses. It can also be removed or changed in future with no impact on original fabric.

RECOMMENDATIONS:

This proposal is supported from a heritage perspective because it will have minimal impact on the heritage values or fabric of 25 Gold Street, the terrace of three houses 25, 27 & 29 Gold Street or the South Fremantle Heritage Area.



**PC2211-4 AINSLIE ROAD, NO. 4 (LOT 28), NORTH FREMANTLE - SECOND
STOREY ADDITION AND ALTERATIONS TO EXISTING SINGLE
HOUSE (JCL DA0255/22)**

Additional Information 1 – Site Photos



Photo 1: Subject site as viewed from Ainslie Road



Photo 2: Streetscape (south-west of site)



Photo 3: Streetscape (north-east of site)



Photo 4: View of south-western elevation of subject site



**PC2211-5 EDMUND STREET, NO. 142 (LOT 32), BEACONSFIELD,
ALTERATIONS AND ADDITIONS TO EXISTING SINGLE
HOUSE (JCL DA0284/22)**

Additional Information 1 – Site Photos



Photo 1: Subject site as viewed from Edmund Street



Photo 2: Streetscape (looking north-east, noting a pedestrian accessway separates the northern neighbour from the two storey dwellings to the left of frame).



Photo 3: Streetscape (looking south-east)



Photo 4: view of location of proposed addition (northern neighbour to left of frame).

**PC2211-6 BELLEVUE TERRACE, NO. 10 (LOT 65), FREMANTLE –
ADDITIONS AND ALTERATIONS TO EXISTING SINGLE
HOUSE (ED DA0122/22)**

Additional Information 1 – Site Photos



Photo 1: Subject site as viewed from Bellevue Street



Photo 2: View of subject site from front of adjoining southern property (No. 12)



Photo 3: View of subject from front of adjoining northern property (No. 8)



Photo 4: View of front and side setback area of adjoining southern property (No. 12) with existing carport at subject site.

**PC2211-7 BROMLEY ROAD, NO. 28 (LOT 181) HILTON – ANCILLARY
DWELLING AND ADDITIONS AND ALTERATIONS TO EXISTING
SINGLE HOUSE (JL DA0235/22)**

Additional Information 1 – Site Photos



Photo 1: Subject site as viewed from Bromley Road



Photo 2: No.30 Bromley Road (southern adjoining property)



Photo 3: 26 Bromley Road, Hilton (northern adjoining property)



**PC2211-8 REVIEW OF LOCAL PLANNING POLICY D.B.M9 –
TELECOMMUNICATIONS**



Additional information- 1- D.B.M9 – Telecommunications



OBJECTIVE

The objectives of this policy are to:

- a) guide telecommunications infrastructure providers on the siting and design of telecommunication facilities, specifically mobile phone towers, antennae and associated infrastructure (henceforth the term 'telecommunications' facilities will be used in this policy); and
- b) facilitate the installation of an effective telecommunications network in the City of Fremantle that minimises the adverse impacts to the community, and the natural and built environments.

Legislative Framework

The development of telecommunications infrastructure across Australia is controlled by the Telecommunications Act 1997.

Supplementing the Act is the Telecommunications (Low-impact facilities) Determination Act 1997 that defines the classes of telecommunications infrastructure and location of the facility to determine if it is a low-impact facility. This policy should be read in conjunction with the Act.

The Telecommunications Code of Practice 1997 outlines the requirements for the erection and/or installation and maintenance of telecommunications infrastructure.

Telecommunications facilities that meet the requirements of the Telecommunications (Low-impact Facilities) Determination 1997 are exempt from the requirement to obtain town planning approval under City of Fremantle Town Planning Scheme No. 3 and the Metropolitan Region Scheme. Hence this policy applies to non low impact facilities. Council will encourage providers of all facilities to adhere to the policy requirements.

Due to community and local government concern over lack of control in the siting of low-impact facilities the Australian Communications Industry Forum released the Deployment of Radiocommunication Infrastructure 2000 (draft industry code) to supplement the present legislation and aims to:

- provide clear guidelines for telecommunication suppliers, particularly in relation to community consultation;
- ensure rights under the telecommunications legislation are exercised responsibly; and
- require councils to be notified of proposed telecommunication installations prior to construction.



The Deployment of Radiocommunication Infrastructure 2000 is presently in draft format and should be finalised and adopted by the end of 2001.

POLICY

This policy applies to new facilities and the upgrading or relocating of existing facilities which do not qualify as low impact facility under the Telecommunications (Low-impact Facilities) Determination 1997. Such works will require formal town planning consent to be granted in accordance with Town Planning Scheme No. 3.

1) Planning Approval

- a) Planning approval is required from the City of Fremantle for the erection and/or installation of all non low impact telecommunication facilities defined under the Telecommunication Act 1997, Telecommunications (Low-impact facilities) Determination 1997.

It is recognised that low-impact facilities do not require Council approval, but to facilitate better relations between carriers, the Council and the community encourages applications for all telecommunication facilities to be referred to Council for assessment against this policy.

- b) Prior consultation with the community shall be undertaken in accordance with policy D.A5 Advertising and Notification of Development Applications.
- c) Telecommunication facilities proposed on land reserved under the Metropolitan Region Scheme will be determined by the West Australian Planning Commission and the Commission will consider any recommendations from Council.

2) Site Selection

- a) The siting process of telecommunication facilities is achieved through having regard to network requirements and minimising the adverse impacts to the community, and the natural and built environments.
- b) The siting of a facility will take into account:
 - I. opportunity for co-location with another facility (refer 3);
 - II. the proximity of sensitive uses (refer 4);
 - III. maintenance of Fremantle's unique heritage (refer 5);
 - IV. minimising the impact on the visual amenity of the area (refer 6);
 - V. protection of public health and safety through a precautionary approach to siting of facilities (refer 7); and
 - VI. minimising the impact on vegetation and other natural aspects of the site (refer 8).

3) Co-location

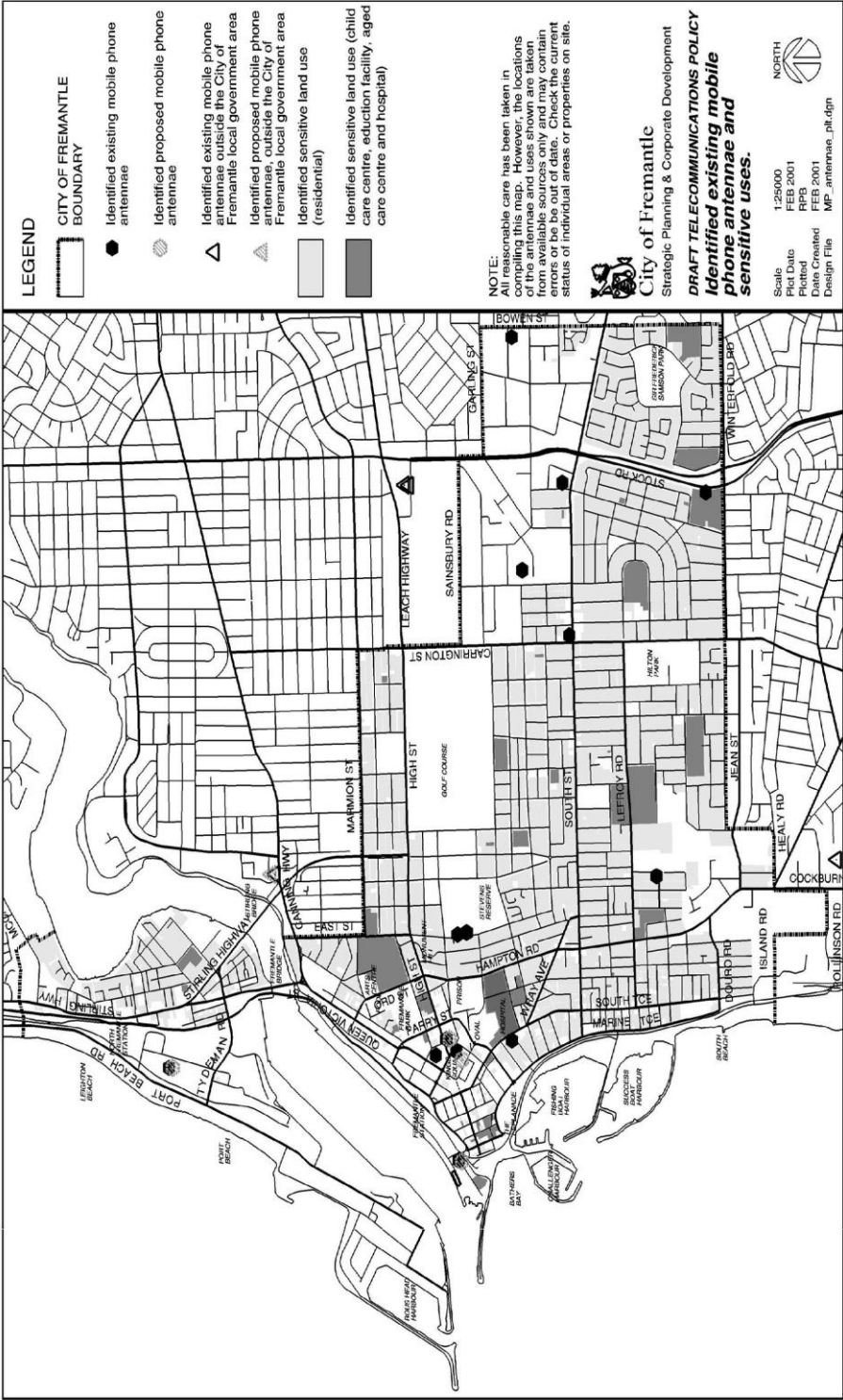


- a) Telecommunication facilities should preferably be co-located and any new facilities should be designed to accept additional future facilities required by carriers;
- b) All applications for telecommunications facilities must include a written assessment demonstrating that the carrier has undertaken a process to identify and assess the option of co-location;
- c) Co-location or upgrading an existing facility will not be permitted if the facility cannot meet a maximum cumulative radiofrequency (RF) electromagnetic energy (EME) level set by the Australian Communications Authority (ACA) at sensitive uses within a 500m radius of the facility; and
- d) If an existing telecommunications facility cannot meet the ACA standard at sensitive uses within a 500m radius, any existing approvals will be withdrawn (under clause 93 of Town Planning Scheme No. 3). Council may impose a condition(s) to this effect.

Note: For the purpose of this policy, 'sensitive uses' is defined as: any dwelling, childcare facility, kindergarten, preschool, school, aged care and hospitals (reference – SPP4, State Industrial Buffer Policy).

4) Preferred Sites for Telecommunication Facilities

- a) To facilitate the implementation of a telecommunications network in the locality and to minimise the conflict between the siting of facilities and residents and/or sensitive land uses, a map has been prepared that identifies existing facilities and sensitive uses within the City (refer Figure 1). The map is provided as a guide to assist in siting of facilities.
- b) Telecommunication facilities should be located in industrial and commercial areas and away from sensitive uses.





Heritage

- a) Council will not approve the installation or upgrade of any telecommunications facility that:
 - I. has an adverse impact or threatens the visual amenity or integrity of heritage properties as listed on the City of Fremantle Municipal Heritage Inventory, the Australia Heritage Commission, the National Trust of Australia (WA), or the Heritage Council of Western Australia databases,
 - II. will obstruct significant vistas, or instances where they will adversely impact upon the cultural heritage significance of a building,
 - III. where attached upon the building, negatively impacts upon the architectural integrity of the existing building.
 - IV. natural heritage sites, conservation areas and remnant vegetation areas.
- b) The applicant shall seek written approval from the abovementioned heritage listing agency (with the exception of the City of Fremantle Municipal Heritage Inventory) prior to the submission of a application for planning consent for any facilities on a heritage listed property.

5) Visual Amenity and Facility Design

- a) All telecommunication facilities should be located and designed to ensure visual compatibility with existing built form and maintain the landscape character of the local area.
- b) Broadband aerial telecommunication cabling is not permitted and any such cabling is to be located underground, within existing conduits or ducts where present.
- c) Any new or upgraded telecommunication facility will not be permitted unless it :
 - I. is integrated on or into any existing suitable structures on the site;
 - II. is screened, through design, artwork and/or landscaping to minimise the visual impact and maintain the amenity of the area;
 - III. is designed to blend in with the surrounding area through the use of non-reflective compatible colours, landscaping and/or artwork;
 - IV. does not visually dominate the site or surrounding views into the site; and
 - V. does not negatively impact on the architectural integrity of any existing building.
- d) Landscaping of facilities should occur using advanced species compatible with the surrounding vegetation, where appropriate (see section 8).

6) Public Health and Safety



- a) Council recognises the need for a telecommunications network within the locality and equally recognises the community's concern over the potential health impacts from telecommunication facilities. The Council adopts a precautionary approach to the installation and operation of telecommunication facilities and considers it important to protect sensitive uses. This is based on inconclusive scientific evidence regarding the long term health impacts.
 - b) The siting of telecommunications facilities should be based on a precautionary approach and meet the following location requirements:
 - I. meet a maximum cumulative RF EME level set by the ACA at sensitive uses within a 500m radius of the facility;
 - II. the beam of greatest intensity should not fall on any sensitive use without agreement from owners and occupiers of the sensitive use;
 - III. all telecommunication facilities are required to be enclosed by appropriate fencing and/or barriers to prevent unauthorised access and to maintain public safety; and
 - IV. appropriate warning/information signs are to be erected on the subject facility where there is a potential hazard or risk to public safety. Signage should be clearly visible to the public and contain information for the community to contact the carrier(s) regarding any enquiries.
 - c) The predicted RF EME levels from the facilities (up to 500m and the distance to the highest RF EME level) are submitted as part of the application for planning consent. Where required, advice from the Australian Communications Authority will be sought.
 - d) On installation of a facility the actual maximum cumulative RF EME levels will be measured by the carrier and submitted to the Director Urban Management to ensure compliance with 7 b (i) of this policy. Non compliance will require the carrier to implement measures to achieve these levels or approval for the facility will be revoked.
- 7) Vegetation and Natural Aspects
- a) The installation, operation and maintenance of telecommunication facilities should be conducted in a manner to minimise the impact to vegetation and other natural aspects of the site and its immediate surrounds.
 - b) Council will not approve facilities unless the installation or upgrading of a facility :
 - I. results in zero net loss of native vegetation and where the site is cleared a vegetation enhancement program implemented using advanced species; and
 - II. not result in the destruction or alteration of any significant topographical forms including limestone outcrops.



- c) The following factors should be complied with in planning applications:
- I. not result in the destruction or alteration of any significant topographical forms including limestone outcrops;
 - II. if earthworks are undertaken on the site, a site management plan is required to manage stormwater and soil erosion, noise and/or dust levels that may result from the installation, operation and maintenance of a telecommunications facility; and
 - III. the site management plan will be prepared to the satisfaction of the Director of Urban Management.

Adopted: 23/7/2001, item SP34
Review Date: 2003 or as new information is available.





Additional information 2 - Telecommunications (Low-impact Facilities)



Telecommunications (Low-impact Facilities) Determination 2018

made under subclause 6(3) of Schedule 3 to the

Telecommunications Act 1997

Compilation No. 3

Compilation date:	9 November 2021
Includes amendments up to:	F2021L01523
Registered:	20 November 2021

Prepared by the Office of Parliamentary Counsel, Canberra

Authorised Version F2021C01154 registered 20/11/2021

2018

Determination



About this compilation

This compilation

This is a compilation of the *Telecommunications (Low-impact Facilities) Determination 2018* that shows the text of the law as amended and in force on 9 November 2021 (the **compilation date**).

The notes at the end of this compilation (the **endnotes**) include information about amending laws and the amendment history of provisions of the compiled law.

Uncommenced amendments

The effect of uncommenced amendments is not shown in the text of the compiled law. Any uncommenced amendments affecting the law are accessible on the Legislation Register (www.legislation.gov.au). The details of amendments made up to, but not commenced at, the compilation date are underlined in the endnotes. For more information on any uncommenced amendments, see the series page on the Legislation Register for the compiled law.

Application, saving and transitional provisions for provisions and amendments

If the operation of a provision or amendment of the compiled law is affected by an application, saving or transitional provision that is not included in this compilation, details are included in the endnotes.

Editorial changes

For more information about any editorial changes made in this compilation, see the endnotes.

Modifications

If the compiled law is modified by another law, the compiled law operates as modified but the modification does not amend the text of the law. Accordingly, this compilation does not show the text of the compiled law as modified. For more information on any modifications, see the series page on the Legislation Register for the compiled law.

Self-repealing provisions

If a provision of the compiled law has been repealed in accordance with a provision of the law, details are included in the endnotes.



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Preliminary Part 1

Section 1.1

Part 1—Preliminary

1.1 Name

This Determination is the *Telecommunications (Low-impact Facilities) Determination 2018*.

1.3 Authority

This Determination is made under subclause 6(3) of Schedule 3 to the *Telecommunications Act 1997* and subsection 33(3) of the *Acts Interpretation Act 1901*.

1.4 Repeal

The *Telecommunications (Low-impact Facilities) Determination 1997* in force immediately before this Determination commences is repealed.

Background to determination

Part 1 of Schedule 3 to the *Telecommunications Act 1997* authorises a carrier to enter on land and install a facility if the facility is a low-impact facility.

Under subclauses 6 (3) of Part 1, the Minister may, by written instrument, determine that a specified facility is a low-impact facility.

Under subclauses 6 (4), (5) and (7), certain facilities cannot be low-impact facilities:

- designated overhead lines
- a tower that is not attached to a building
- a tower attached to a building and more than 5 metres high
- an extension to a tower that has previously been extended
- an extension to a tower, if the extension is more than 5 metres high
- temporary towers unless certain conditions are satisfied.

A facility cannot be a low-impact facility unless it is specified in this determination. Therefore, new mobile telecommunications towers are not low-impact facilities.

Also, a facility will be a low-impact facility only if it is installed in particular areas identified in this determination. The areas have an order of importance, based on zoning under State or Territory laws, so that any area only has its “highest” possible zoning. The order of priority is:

- area of environmental significance
- residential areas
- commercial areas
- industrial areas



Part 1 Preliminary

Section 1.5

- rural areas.

One effect of this determination is that a facility in an area of environmental significance cannot be a low-impact facility.

Rules for the installation and maintenance of a low-impact facility can be found in Schedule 3 to the *Telecommunications Act 1997* and the *Telecommunications Code of Practice 2018*.

Simplified outline of determination

The determination has 3 Parts.

Part 1 is introductory, containing matters such as, commencement, definitions and principal designated use (for the purposes of clarifying the zoning category);

Part 2 identifies areas in which a facility may be installed, by reference to zoning arrangements under State and Territory planning laws.

Part 3 and the Schedule identify the low-impact facilities.

Definitions for words and expressions used in this determination are to be found in section 1.5.

1.5 Definitions

- (1) In this Determination:

Aboriginal person has the same meaning as in clause 2 of Schedule 3 to the Act.

access terminal means a connector device that allows a line link to be connected to a drop cable.

Act means the *Telecommunications Act 1997*.

amplifier means an enclosure (and any associated devices) which is used to amplify a signal along a telecommunications cable (whether such a cable is deployed overhead or underground).

area of environmental significance has the meaning given by section 2.5.

certifiable facility has the meaning given by section 3.2.

co-located facilities means one or more facilities installed on or within:

- (a) an original facility; or
- (b) a public utility structure.

Note: A facility installed near, but not either on or within, an original facility or public utility structure will not be a co-located facility.

co-location volume means the volume of materials that constitute:

- (a) co-located facilities; or



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- (b) an original facility; or
- (c) a public utility structure;

where the materials are visible from a point outside the co-located facilities, original facility, or public utility structure.

commercial area has the meaning given by section 2.1.

drop cable means a cable (whether deployed overhead or underground) from an access terminal, optical node or splice enclosure to any of the following:

- (a) a premises connection device;
- (b) a network termination device; or
- (c) a point of connection situated at an end user's premises.

emergency, for the installation of a facility, means circumstances in which the facility must be installed without delay to protect:

- (a) the integrity of a telecommunications network or a facility; or
- (b) the health or safety of persons; or
- (c) the environment; or
- (d) property; or
- (e) the maintenance of an adequate level of service.

emergency services organisation means:

- (a) a police force;
- (b) a fire service;
- (c) an ambulance service;
- (d) a service specified in the numbering plan made under subsection 455(1) of the Act, as in force from time to time; and
- (e) a service for despatching a force or service.

external building connection equipment means a facility which is:

- (a) installed or attached to a multi-unit building; and
- (b) used (or intended to be used at some future time) in the supply of carriage services to end users that are, or are to be, located in any of the following:
 - (i) the building to which the facility is installed or attached; or
 - (ii) nearby any related buildings.

high-demand holiday period has the same meaning as in clause 2 of Schedule 3 to the Act.

in-building network equipment means equipment installed within a building for purposes other than directly supplying carriage services to end users.

in-building subscriber connection equipment means a facility installed within a building:

- (a) with the aim of managing and maintaining the supply of carriage services to a customer of a carrier; or



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- (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications on a wholesale-only and non-discriminatory access basis, where the facility is to be used (or intended to be used at some future time) by end users of carriage services delivered by such a network. For the avoidance of doubt, the end users are to be located in the building in which the facility is installed.

industrial area has the meaning given by section 2.2.

installation, for a facility, has the same meaning as in clause 2 of Schedule 3 to the Act.

Note: Installation includes:

- construction of the facility
- attachment of the facility to a building or other structure
- any activity ancillary to installation.

internal building connection equipment means a facility which is:

- (a) installed in a multi-unit building; and
- (b) used (or intended to be used at some future time) in the supply of carriage services to end users that are, or are to be, located in any of the following:
 - (i) the building in which the facility is installed; or
 - (ii) nearby any related buildings.

listed international agreement has the same meaning as in clause 2 of Schedule 3 to the Act.

Note: Listed international agreements are agreements specified in the regulations.

maintenance, for the purposes of Items 1–4 and Item 8 of Part 6A to the Schedule, has the same meaning as in clause 7 of Schedule 3 to the Act.

Note: The maintenance of a facility generally includes a reference to the installation of a temporary facility where certain conditions are satisfied.

national network means a network that has:

- (a) a geographic reach into every state or mainland territory;
- (b) a significant number of end users connected, or likely to be connected; and
- (c) importance to the national economy.

network termination device means a device which establishes a demarcation point between the carrier's telecommunications network and customer cabling or customer equipment.

optical fibre access terminal means a connector device that allows one or more individual fibres from an optical fibre line link to be connected to an optical fibre drop cable.

optical node means an enclosure or device in which a telecommunications cable is connected:

- (a) with one or more drop cables; or
- (b) to an access terminal.



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optical fibre splice enclosure means an enclosure in which individual fibres from an optical fibre line link are separated out and spliced to an optical fibre drop cable or otherwise connected to an optical fibre access terminal.

original facility means the original structure that is currently used, or intended to be used, for connection to a telecommunications network where the original structure was:

- (a) in place on the date on which the *Telecommunications (Low-impact Facilities) Determination 1997 (Amendment No. 1 of 1999)* took effect; or
- (b) installed after that date by means other than in accordance with Part 8 of the Schedule to this Determination.

planning law, for an area, means a law of the State or Territory where the area is located dealing with land use, planning or zoning.

power supply means a device that connects a network termination device, optical node or amplifier to a source or supply of electrical power.

premises connection device means an enclosure (and any associated devices) which is used to terminate a drop cable (whether such a cable is deployed overhead or underground) for the transition of that cable to another facility or in-building cabling.

principal designated use, for an area, has the meaning given by section 1.6.

public land has the same meaning as in clause 2 of Schedule 3 to the Act.

public utility has the same meaning as in clause 2 of Schedule 3 to the Act.

public utility structure means a structure used, or for use, by a public utility, for the provision to the public of:

- (a) reticulated products or services, such as electricity, gas, water, sewerage or drainage; or
- (b) carriage services (other than carriage services supplied by a carriage service provider); or
- (c) transport services; or
- (d) a product or service of a kind that is similar to a product or service covered by paragraph (a), (b) or (c).

relevant local government authority, for land in a State or Territory, means an authority of the State or Territory responsible for the local government of the area where the land is located.

residential area has the meaning given by section 2.3.

rural area has the meaning given by section 2.4.

significant environmental disturbance means significant interference with the relationship between a species or community and its immediate environment or habitat and includes, for example, significant interference with identified flora



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Section 1.6

and fauna, ecological communities, geological features, wilderness values or scientific values within an area.

splice enclosure means a device that is spliced to a drop cable or other line link, or otherwise connected to an access terminal.

subscriber connection means an installation for the sole purpose of connecting premises to a telecommunications network.

substantive volume means the size of a facility measured in three dimensions without including the size of any ancillary fixings, protrusions, or other attachments of an incidental nature in this calculation.

Torres Strait Islander has the same meaning as in clause 2 of Schedule 3 to the Act.

tower means a tower, pole or mast.

underground network equipment means a device that is:

- (a) located underground in a pit or conduit; and
- (b) part of a network for the high speed carriage of communications.

Note: A number of other words and expressions used in this Determination are defined in the *Telecommunications Act 1997* (see s 7), including 'carrier' and 'facility'.

- (2) For the purposes of Items 1–7 of Part 6A of the Schedule, the height of the temporary tower is to be ascertained in accordance with subclause 6(5C) of Schedule 3 to the Act.

1.6 Principal designated use

- (1) If an area is described, under a planning law, as having a sole or principal use, the use is the **principal designated use** of the area.
- (2) If an area is described, under a planning law, as having 2 or more uses, in terms that show that 1 of the uses is the predominant, preferred or most likely use, the use is the **principal designated use** of the area.
- (3) If an area is described, under a planning law, as having 2 or more principal uses, without any indication of the predominant, preferred or most likely use, the **principal designated use** of the area is determined on the following basis:
 - (a) if the uses include residential purposes, the principal designated use is for residential purposes;
 - (b) if the uses include commercial purposes, but not residential purposes, the principal designated use is for commercial purposes;
 - (c) if the uses include industrial purposes, but neither residential nor commercial purposes, the principal designated use is for industrial purposes.
- (4) If a carrier proposes to engage in a low-impact facility activity in an area under Chapter 4 of the *Telecommunications Code of Practice 2018*, the principal designated use of the area is to be determined by reference to the time when the



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carrier proposes to issue the first notice to the owner or occupier of land in the area under Part 5 of that Chapter.

Note: Areas of environmental significance are identified in accordance with section 2.5 of this Determination, not by reference to planning laws.

The effect of this Determination is that an area may be an area of environmental significance, and also a residential, commercial, industrial or rural area identified by reference to planning laws. However, the area's status as an area of environmental significance is more important for the identification of low-impact facilities.



Part 2 Areas

Section 2.1

Part 2—Areas

2.1 Commercial area

An area is a commercial area if its principal designated use is for commercial purposes.

Note: The use of an area is to be assessed at the time mentioned in subsection 1.6 (4).

2.2 Industrial area

An area is an industrial area if its principal designated use is for industrial purposes.

Note: The use of an area is to be assessed at the time mentioned in subsection 1.6 (4).

2.3 Residential area

- (1) An area is a residential area if its principal designated use is for residential purposes.
- (2) A part of a built-up area is a residential area if it cannot otherwise be described as a commercial, industrial or rural area.

Note: The use of an area is to be assessed at the time mentioned in subsection 1.6 (4).

2.4 Rural area

- (1) An area is a rural area if its principal designated use is for rural purposes.
- (2) An area that is not part of a built-up area is a rural area if it cannot otherwise be described as a commercial, industrial or residential area.

Note: The use of an area is to be assessed at the time mentioned in subsection 1.6 (4).

2.5 Area of environmental significance

- (1) An area is an area of environmental significance if it is a 'declared World Heritage Property' within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*.
- (2) An area is an area of environmental significance if it is a place that Australia is required to protect by the terms of a listed international agreement.
- (3) An area is an area of environmental significance if, under a law of the Commonwealth, a State or a Territory:
 - (a) it is designated as a reserve for nature conservation purposes; and
 - (b) the principal purpose of the designated reserve is for nature conservation.
- (4) An area is an area of environmental significance if it is an area that, under a law of the Commonwealth, or a State or Territory, is protected from significant environmental disturbance.



Areas Part 2

Section 2.5

- (5) An area is an area of environmental significance if, under a law of the Commonwealth, a State or a Territory, it consists of a place, building or thing that is entered in a register relating to heritage conservation.
- (6) An area is an area of environmental significance if, under a law of the Commonwealth, a State or a Territory, it is:
 - (a) entered in a register; or
 - (b) otherwise identified;as being of significance to Aboriginal persons or Torres Strait Islanders, in accordance with their traditions.



Part 3 Low-impact facilities

Section 3.1

Part 3—Low-impact facilities

3.1 Facilities

- (1) A facility described in column 2 of an item in the Schedule is a low-impact facility only if it is installed, or to be installed, in an area mentioned in column 3 of the item.
- (2) However, the facility is not a low-impact facility if the area is also an area of environmental significance.
- (3) For subsection (1), trivial variations for a facility mentioned in column 2 are to be disregarded.
- (4) A facility that is ancillary to a facility covered by subsection (1) is also a low-impact facility only if it is:
 - (a) necessary for the operation or proper functioning of the low-impact facility; or
 - (b) a shroud installed over a low-impact facility, where the shroud is intended to minimise the visual amenity impact of the low-impact facility and is colour-matched to its background; or
 - (c) installed, or to be installed, solely to ensure the protection or safety of:
 - (i) the low-impact facility; or
 - (ii) a facility covered by paragraph (a); or
 - (iii) persons or property in close proximity to the low-impact facility.

3.2 Certifiable Facilities

- (1) Subject to subsection (2), the following facilities are a *certifiable facility*:
 - (a) a facility described in column 2 of Items 3 to 8, 12 and 13 of Part 1 to the Schedule; and
 - (b) a solar panel described in column 2 of Item 7 of Part 3 to the Schedule.

Note: See the *Telecommunications Code of Practice 2021* for conditions that apply to a certifiable facility.

- (2) A facility is not a certifiable facility if it is:
 - (a) located on the ground; or
 - (b) attached to a structure which is owned by the carrier.



Facilities and areas **Schedule**
Radio facilities **Part 1**

Schedule—Facilities and areas

(section 3.1)

Part 1—Radio facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Subscriber connection deployed by radio or satellite terminal antenna or dish: (a) not more than 1.2 metres in diameter; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
2	Subscriber connection deployed by radio or satellite terminal antenna or dish: (a) not more than 1.8 metres in diameter; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority	Industrial Rural
3	Panel, yagi or other like antenna: (a) flush mounted to an existing structure; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
4	Panel, yagi or other like antenna: (a) not more than 2.8 metres long; and (b) if the antenna is attached to a structure— protruding from the structure by not more than 5 metres; and (c) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
5	An omnidirectional antenna or an array of omnidirectional antennas: (a) not more than 4.5 metres long; and (b) not more than 5 metres apart; and (c) if the array is attached to a structure— protruding from the structure by not more than 2 metres	Residential Commercial Industrial Rural



Schedule Facilities and areas

Part 1 Radio facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
6	Radiocommunications dish: (a) not more than 1.2 metres in diameter, and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority; and (c) if attached to a supporting structure, the total protrusion from the structure is not more than 2 metres	Residential Commercial Industrial Rural
7	Radiocommunications dish: (a) not more than 2.4 metres in diameter; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority	Industrial Rural
8	Radiocommunications facility: (a) with one or more separate antenna and each antenna is not more than 1.2 metres long; and (b) with a cabinet that does not exceed 1 cubic metre in volume	Residential Commercial Industrial Rural
9	Radiocommunications facility: (a) with a transmitter unit not more than 0.03 cubic metres in volume, attached to an existing structure; and (b) each external antenna is not more than 1.2 metres long	Residential Commercial Industrial Rural
10	In-building coverage installation: (a) to improve cellular coverage to mobile phone users operating inside a building; and (b) wholly contained and concealed in a building	Residential Commercial Industrial Rural
11	Equipment installed inside a structure, including an antenna concealed in an existing structure	Commercial Industrial Rural
12	An extension to a tower if: (a) the height of the extension does not exceed 5 metres; and (b) either: (i) there have been no previous extensions to the tower; or (ii) if there was a previous extension to the tower – the cumulative height of the extensions is not more than 5 metres.	Commercial Industrial Rural



Facilities and areas: **Schedule**
Radio facilities: **Part 1**

Column 1 Item no.	Column 2 Facility	Column 3 Areas
13	Radiocommunications lens antenna:	Industrial
	(a) the volume of which is not more than 4 cubic metres; and	Rural
	(b) if the radiocommunications lens antenna is attached to a structure – protruding from the structure by not more than 5 metres; and	
	(c) either:	
	(i) colour matched to its background; or	
	(ii) in a colour agreed in writing between the carrier and the relevant local government authority;	



Schedule Facilities and areas

Part 2 Underground housing

Part 2—Underground housing

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Pit with surface area of not more than 2 square metres	Residential Commercial Industrial Rural
2	Manhole with surface area of not more than 2 square metres	Residential Commercial Industrial Rural
3	Underground equipment shelter or housing with surface area of not more than 2 square metres	Residential Commercial Industrial Rural



Facilities and areas Schedule
Above ground housing Part 3

Part 3—Above ground housing

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Pillar; (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural
2	Roadside cabinet; (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural
3	Pedestal; (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural
4	equipment shelter; (a) not more than 2.5 metres high; and (b) with a base area of not more than 5 square metres; and (c) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
5	equipment shelter; (a) used solely to house equipment used to assist in providing a service by means of a facility mentioned in Part 1; and (b) not more than 3 metres high; and (c) with a base area of not more than 7.5 square metres; and (d) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
6	In-building subscriber connection equipment	Residential Commercial Industrial Rural
7	Solar panel with a base area of not more than 12.5 square metres	Rural



Schedule Facilities and areas

Part 3 Above ground housing

Column 1 Item no.	Column 2 Facility	Column 3 Areas
8	External building connection equipment: (a) the substantive volume of which is not more than 0.59 cubic metres; and (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
9	Internal building connection equipment: (a) the substantive volume of which is not more than 1.3 cubic metres; and (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
10	In-building network equipment: (a) the substantive volume of which is not more than 1.3 cubic metres; and (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural



Facilities and areas **Schedule**
Underground facilities (for fixed-line networks) **Part 4**

Part 4—Underground facilities (for fixed-line networks)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Underground conduit or cable deployed by: (a) narrow trench not more than: (i) 450 millimetres wide; or (ii) 650 millimetres wide if intended to be used by more than one carrier; or (b) direct burial; or (c) bore or directional drill hole at least 600 millimetres below the surface; where: (d) access to business premises is not restricted between the hours of 8 am and 6 pm, Monday to Friday, or such other hours agreed to by the relevant local government authority; and (e) in relation to residential areas, not more than 200 metres of excavation is left open for each trench at any time and vehicle access to each property is not lost for more than 8 hours in total.	Residential Commercial Industrial Rural
2	Conduit or cabling to be laid in: (a) an existing trench; or (b) a trench created by a developer, relevant local government authority, public utility or carrier.	Residential Commercial Industrial Rural
3	Cable location marking post or sign	Residential Commercial Industrial Rural
4	Underground optical fibre splice enclosure: (a) forming part of (or integrated with) a cable; and (b) the substantive volume of which is not more than 0.046 cubic metres.	Residential Commercial Industrial Rural
5	Underground optical fibre access terminal: (a) the substantive volume of which is not more than 0.02 cubic metres.	Residential Commercial Industrial Rural



Schedule Facilities and areas

Part 4 Underground facilities (for fixed-line networks)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
6	Underground network equipment:	Residential
	(a) the substantive volume of which is not more than 0.23 cubic metres; and	Commercial
	(b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Industrial
		Rural



Facilities and areas **Schedule**
Above ground facilities (for fixed-line networks) **Part 5**

Part 5—Above ground facilities (for fixed-line networks)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	A single line link or a bundle of line links: (a) suspended above the surface of: (i) land (other than submerged land); or (ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; or (b) protruding from the surface of land (other than submerged land); and (c) the maximum external cross-section of any part is: (i) in the case of a single line link—48 millimetres; (ii) in the case of a bundle of line links—48 millimetres; (d) deployed on, or attached to, a public utility structure, building or other structure; and (e) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
2	Optical node: (a) suspended above the surface of: (i) land (other than submerged land); or (ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and (b) either: (i) forming part of (or integrated with) a cable; or (ii) clamped to, strung from, or otherwise affixed to a cable; or (iii) mounted on a public utility structure, building or other structure; (c) the substantive volume of which is not more than 0.21 cubic metres; and (d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
3	Splice enclosure: (a) suspended above the surface of: (i) land (other than submerged land); or (ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and (b) either: (i) forming part of (or integrated with) a	Residential Commercial Industrial Rural



Schedule Facilities and areas

Part 5 Above ground facilities (for fixed-line networks)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	- cable; or (ii) clamped to, strung from, or otherwise mounted on a public utility structure, building or other structure; (c) the substantive volume of which is not more than 0.046 cubic metres; and (d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	
4	Access terminal: (a) suspended above the surface of: (i) land (other than submerged land); or (ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and (b) either: (i) clamped to, strung from or otherwise affixed to a cable; or (ii) clamped to, strung from, or otherwise mounted on a public utility structure, building or structure; (c) the substantive volume of which is not more than 0.035 cubic metres; and (d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
5	A single drop cable or a bundle of drop cables: (a) either: (i) suspended above the surface of: A. land (other than submerged land); or B. a river, lake, tidal inlet, bay, estuary, harbour or other body of water; or (ii) protruding from the surface of land (other than submerged land); and (b) either: (i) clamped to an electrical drop cable or other cable; or (ii) strung from a public utility structure, building or other structure; and (c) attached to a building or other structure for the purposes of a subscriber connection; (d) the maximum external cross-section of any part is: (i) in the case where a single drop cable is attached to a single-unit building—13 millimetres; or (ii) in the case where a bundle of drop cables is attached to a single-unit building—13	Residential Commercial Industrial Rural



Facilities and areas: **Schedule**
Above ground facilities (for fixed-line networks) **Part 5**

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	millimetres; or (iii) in the case where a single drop cable is attached to a multi-unit building—30 millimetres; or (iv) in the case where a bundle of drop cables is attached to a multi-unit building—30 millimetres; and (e) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	
6	Premises connection device: (a) attached to a building or other structure for the purposes of a subscriber connection; (b) the substantive volume of which is not more than 0.04 cubic metres; and (c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
7	Network termination device: (a) attached to a building or other structure for the purposes of a subscriber connection; (b) the substantive volume of which is not more than 0.02 cubic metres; and (c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
8	Power supply: (a) attached, clamped, strung from, or otherwise mounted, to a public utility structure, building or other structure for the purposes of powering network equipment and/or a subscriber connection; (b) the substantive volume of which is not more than: (i) 0.005 cubic metres—where connected to a network termination device; (ii) 0.15 cubic metres—where connected to an optical node or amplifier; and (c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural
9	Amplifier: (a) suspended above the surface of: (i) land (other than submerged land), or	Residential Commercial Industrial



Schedule Facilities and areas

Part 5 Above ground facilities (for fixed-line networks)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	(ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and	Rural
	(b) either:	
	(i) clamped to, strung from or otherwise affixed to a cable; or	
	(ii) clamped to, strung from, or otherwise mounted on a public utility structure, building or structure;	
	(c) the substantive volume of which is not more than 0.02 cubic metres; and	
	(d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	
10	Auxiliary network equipment:	Residential
	(a) which is used to:	Commercial
	(i) connect, isolate, or split a cable; or	Industrial
	(ii) inject power into cable; or	Rural
	(iii) balance the distribution of power and radio frequency budget of a telecommunications network; or	
	(iv) actively manage the operational elements of a telecommunications network; and	
	(b) either:	
	(i) clamped to, strung from or otherwise affixed to a cable; or	
	(ii) clamped to, strung from, or otherwise mounted on a public utility structure, building or structure;	
	(c) the substantive volume of which is not more than 0.002 cubic metres; and	
	(d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	



Facilities and areas **Schedule**
Public payphones **Part 6**

Part 6—Public payphones

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Public payphone cabinet or booth: (a) used solely for carriage and content services; and (b) not designed for other uses (for example, as a vending machine); and (c) not fitted with devices or facilities for other uses; and (d) not used to display commercial advertising other than advertising related to the supply of standard telephone services	Residential Commercial Industrial Rural
2	Public payphone instrument: (a) used solely for carriage and content services; and (b) not designed for other uses (for example, as a vending machine); and (c) not fitted with devices or facilities for other uses; and (d) not used to display commercial advertising other than advertising related to the supply of standard telephone services or displayed as part of the supply of a content service	Residential Commercial Industrial Rural



Schedule Facilities and areas
Part 6A Above ground facilities (temporary)

Part 6A—Above ground facilities (temporary)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	A tower if: (a) the tower is a temporary facility that is installed to minimise disruption to the supply of a carriage service that might result from the maintenance of another facility; (b) the height of the tower does not exceed, whichever is higher: (i) 30 metres; or (ii) the height of the other facility; (c) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the other facility is located—the tower is installed on that land; (d) if paragraph (c) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (e) if neither paragraphs (c) or (d) are applicable—the tower is installed in the vicinity of the other facility.	Rural
2	A tower if: (a) the tower is a temporary facility that is installed to minimise disruption to the supply of a carriage service that might result from the maintenance of another facility; (b) the height of the tower does not exceed 30 metres; (c) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the other facility is located—the tower is installed on that land; (d) if paragraph (c) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (e) if neither paragraphs (c) or (d) are applicable—the tower is installed in the vicinity of the other facility.	Residential Commercial Industrial
3	A tower if: (a) the tower is a temporary facility that is installed to minimise disruption to the supply of a carriage service that might result from carrying out the replacement of another facility; (b) the height of the tower does not exceed,	Rural



Facilities and areas **Schedule**
Above ground facilities (temporary) **Part 6A**

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	whichever is higher: (i) 30 metres; or (ii) the height of the other facility; (c) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the other facility is located—the tower is installed on that land; (d) if paragraph (c) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (e) if neither paragraphs (c) or (d) are applicable—the tower is installed in the vicinity of the other facility.	
4	A tower if: (a) the tower is a temporary facility that is installed to minimise disruption to the supply of a carriage service that might result from carrying out the replacement of another facility; (b) the height of the tower does not exceed 30 metres; (c) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the other facility is located—the tower is installed on that land; (d) if paragraph (c) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (e) if neither paragraphs (c) or (d) are applicable—the tower is installed in the vicinity of the other facility.	Residential Commercial Industrial
5	A tower if: (a) the tower is a temporary facility that is installed to provide additional capacity to supply carriage services to persons who are attending an event at a venue; (b) the height of the tower does not exceed 30 metres; (c) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the venue is located—the tower is installed on that land; (d) if paragraph (c) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (e) if neither paragraphs (c) or (d) are applicable—	Residential Commercial Industrial Rural



Schedule Facilities and areas

Part 6A Above ground facilities (temporary)

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	the tower is installed in the vicinity of the venue.	
6	A tower if: (a) the tower is a temporary facility that is installed to provide additional capacity to supply carriage services to persons who are attending any or all of 2 or more events at a venue; (b) the intervals between those events are not longer than 28 days; (c) the height of the tower does not exceed 30 metres; (d) where it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on the land on which the venue is located—the tower is installed on that land; (e) if paragraph (d) does not apply, and it is practicable to achieve the purpose mentioned in paragraph (a) by installing the tower on public land—the tower is installed on public land; and (f) if neither paragraphs (d) or (e) are applicable—the tower is installed in the vicinity of the venue.	Residential Commercial Industrial Rural
7	A tower if: (a) the tower is a temporary facility that is installed to provide additional capacity to supply carriage services to persons who are physically present in a particular area during a high-demand holiday period; (b) the height of the tower does not exceed 30 metres; and (c) the tower is installed on public land.	Residential Commercial Industrial Rural
8	A telecommunications facility if: (a) the facility is designed to be transportable from place to place; (b) the length of the facility (including any trailer) does not exceed 6 metres once fully deployed; (c) the height of the facility (including any trailer) does not exceed 5 metres once fully deployed; (d) the facility is installed either separately or in conjunction with one or more other low-impact facilities owned by that carrier for any of the following purposes: (i) to minimise disruption to the supply of a carriage service that might result from the maintenance of another facility; or (ii) to minimise disruption to the	Residential Commercial Industrial Rural



Facilities and areas: **Schedule**
Above ground facilities (temporary) **Part 6A**

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	supply of a carriage service that might result from carrying out the replacement of another facility; or (iii) to provide additional capacity to supply carriage services to persons who are attending one or more events at a venue and the intervals between those events are not longer than 28 days; or (iv) to provide additional capacity to supply carriage services to persons who are physically present in a particular area during a high-demand holiday period; (e) where it is practicable to achieve the applicable purpose mentioned in subparagraph (d)(i), (ii) or (iii) by installing the facility on the land on which the other facility or venue (as the case may be) is located—the facility is installed on that land; (f) if paragraph (e) does not apply, and it is practicable to achieve the applicable purpose mentioned in subparagraph (d)(i), (ii) or (iii) by installing the facility on public land—the facility is installed on public land; and (g) if neither paragraphs (e) or (f) are applicable: (i) in cases where the applicable purpose of the installation is mentioned in subparagraph (d)(i), (ii) or (iii)—the facility is installed in the vicinity of the other facility or the venue (as the case may be); (ii) in cases where the applicable purpose of the installation is mentioned in subparagraph (d)(iv)—the facility is installed on public land.	



Schedule Facilities and areas

Part 7 Emergency facilities

Part 7—Emergency facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	A temporary facility installed: (a) in an emergency; and (b) to provide assistance to an emergency services organisation	Residential Commercial Industrial Rural
2	A tower if: (a) the tower is a temporary facility that is installed wholly or partly to provide capacity to supply carriage services to one or more emergency services organisations so that those organisations can deal with an emergency or natural disaster.	Residential Commercial Industrial Rural



Facilities and areas **Schedule**
Co-located facilities **Part 8**

Part 8—Co-located facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Facility mentioned in: (a) Part 1, 6 or 7; or (b) item 3 of Part 4; installed on or within: (c) an original facility; or (d) a public utility structure	Industrial Rural
2	Facility mentioned in: (a) Part 1, 6 or 7; or (b) item 3 of Part 4; installed on or within: (c) an original facility; or (d) a public utility structure; where: (e) the total co-location volume of the co-located facilities is no more than 25 per cent greater than the volume of the original facility or the original infrastructure; and (f) the levels of noise that are likely to result from the operation of the co-located facilities are less than or equal to the levels of noise that resulted from the operation of the original facility or the public utility structure	Residential
3	Facility mentioned in: (a) Part 1, 6 or 7; or (b) item 3 of Part 4; installed on or within: (c) an original facility; or (d) a public utility structure; where: (e) the total co-location volume of the co-located facilities is no more than 50 per cent greater than the volume of the original facility or the original infrastructure; and (f) the levels of noise that are likely to result from the operation of the co-located facilities are less than or equal to the levels of noise that resulted from the operation of the original facility or the public utility structure	Commercial



Endnotes

Endnote 1—About the endnotes

Endnotes

Endnote 1—About the endnotes

The endnotes provide information about this compilation and the compiled law.

The following endnotes are included in every compilation:

Endnote 1—About the endnotes

Endnote 2—Abbreviation key

Endnote 3—Legislation history

Endnote 4—Amendment history

Abbreviation key—Endnote 2

The abbreviation key sets out abbreviations that may be used in the endnotes.

Legislation history and amendment history—Endnotes 3 and 4

Amending laws are annotated in the legislation history and amendment history.

The legislation history in endnote 3 provides information about each law that has amended (or will amend) the compiled law. The information includes commencement details for amending laws and details of any application, saving or transitional provisions that are not included in this compilation.

The amendment history in endnote 4 provides information about amendments at the provision (generally section or equivalent) level. It also includes information about any provision of the compiled law that has been repealed in accordance with a provision of the law.

Editorial changes

The *Legislation Act 2003* authorises First Parliamentary Counsel to make editorial and presentational changes to a compiled law in preparing a compilation of the law for registration. The changes must not change the effect of the law. Editorial changes take effect from the compilation registration date.

If the compilation includes editorial changes, the endnotes include a brief outline of the changes in general terms. Full details of any changes can be obtained from the Office of Parliamentary Counsel.

Misdescribed amendments

A misdescribed amendment is an amendment that does not accurately describe the amendment to be made. If, despite the misdescription, the amendment can be given effect as intended, the amendment is incorporated into the compiled law and the abbreviation “(md)” added to the details of the amendment included in the amendment history.

If a misdescribed amendment cannot be given effect as intended, the abbreviation “(md not incorp)” is added to the details of the amendment included in the amendment history.



Endnotes

Endnote 2—Abbreviation key

Endnote 2—Abbreviation key

ad = added or inserted	o = order(s)
am = amended	Ord = Ordinance
amdt = amendment	orig = original
c = clause(s)	par = paragraph(s)/subparagraph(s) /sub-subparagraph(s)
C[x] = Compilation No. x	pres = present
Ch = Chapter(s)	prev = previous
def = definition(s)	(prev ...) = previously
Dict = Dictionary	Pt = Part(s)
disallowed = disallowed by Parliament	r = regulation(s)/rule(s)
Div = Division(s)	reloc = relocated
ed = editorial change	renum = renumbered
exp = expires/expired or ceases/ceased to have effect	rep = repealed
F = Federal Register of Legislation	rs = repealed and substituted
gaz = gazette	s = section(s)/subsection(s)
LA = <i>Legislation Act 2003</i>	Sch = Schedule(s)
LIA = <i>Legislative Instruments Act 2003</i>	Sdiv = Subdivision(s)
(md) = misdescribed amendment can be given effect	SLI = Select Legislative Instrument
(md not incorp) = misdescribed amendment cannot be given effect	SR = Statutory Rules
mod = modified/modification	Sub-Ch = Sub-Chapter(s)
No. = Number(s)	SubPt = Subpart(s)
	<u>underlining</u> = whole or part not commenced or to be commenced



Endnotes

Endnote 3—Legislation history

Endnote 3—Legislation history

Name	Registration	Commencement	Application, saving and transitional provisions
Telecommunications (Low-impact Facilities) Determination 2018	1 Mar 2018 (F2018L00170)	2 Mar 2018 (s 1.2)	
Telecommunications (Low-impact Facilities) Determination 2018 (Amendment No. 1 of 2018)	2 Mar 2018 (F2018L00180)	2 Mar 2018 (s 2)	—
Telecommunications (Low-impact Facilities) (Temporary Facilities) Amendment Determination 2020	1 Apr 2020 (F2020L00379)	2 Apr 2020 (s 2)	—
Telecommunications (Low-impact Facilities) Amendment Determination 2021	8 Nov 2021 (F2021L01523)	9 Nov 2021 (s 2(1) item 1)	—



Endnotes

Endnote 4—Amendment history

Endnote 4—Amendment history

Provision affected	How affected
Part 1	
s 1.2	rep L.A.s 48D
s 1.4	am F2020L00379
	ed C2
s 1.5	am F2020L00379; F2021L01523
Part 3	
s 3.2	ad F2021L01523
Schedule	
Part 1	
Part 1	am F2020L00379; F2021L01523
Part 6A	
Part 6A	ad F2020L00379
	ed C2
Part 7	
Part 7	am F2020L00379
Part 8	
Part 8	am F2018L00180; F2021L01523

