URBIS

LOT 2 BANSKIA ROAD, DARDANUP - CLEANAWAY WASTE FACILITY

VISUAL IMPACT ASSESSMENT REVIEW

PREPARED FOR

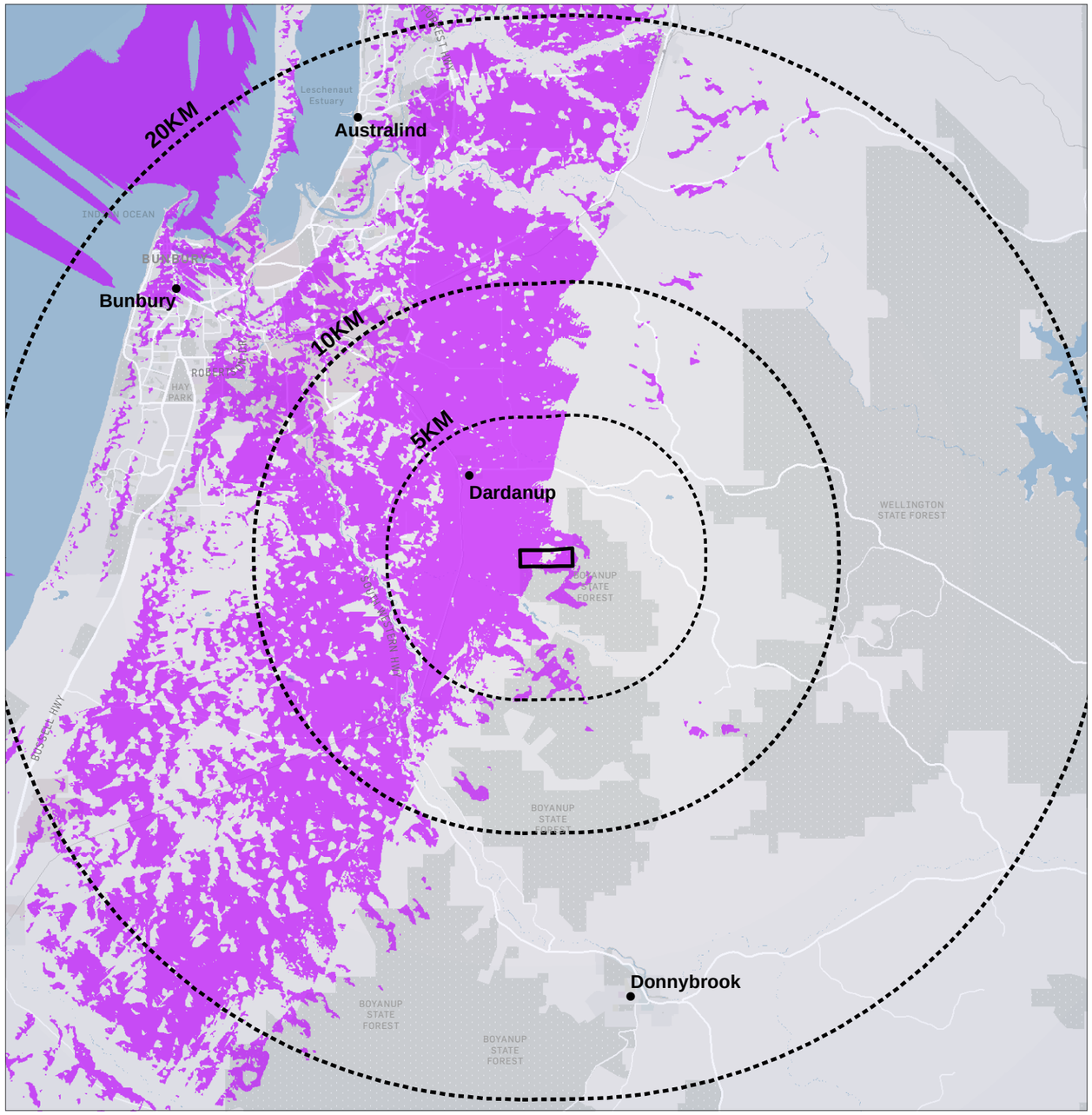
SHIRE OF DARDANUP

AUGUST 2022

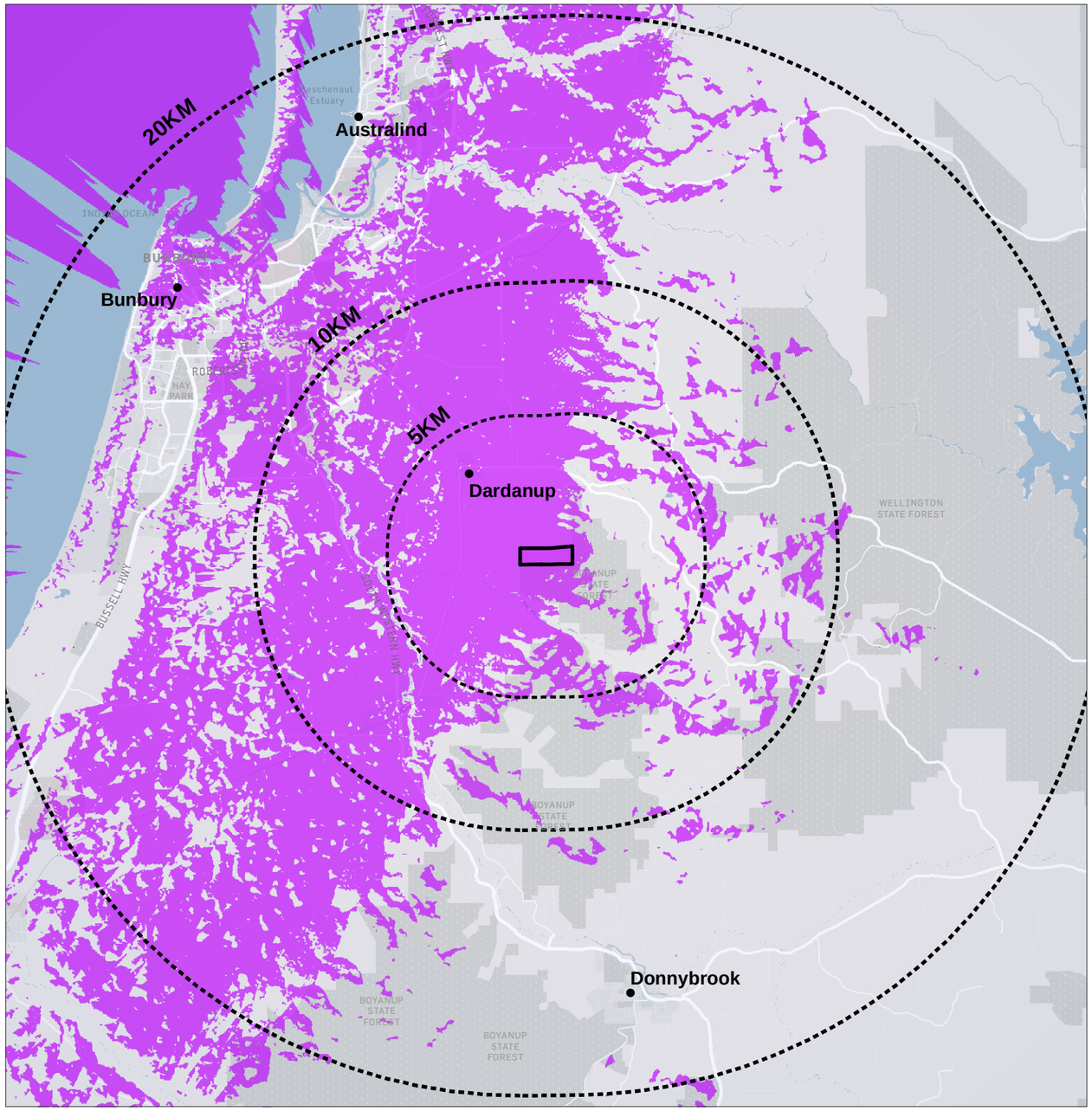
URBIS.COM.AU

Figure 1 Project Site Location Plan

EXISTING - 114 m AHD



FUTURE - 151 m AHD



LEGEND

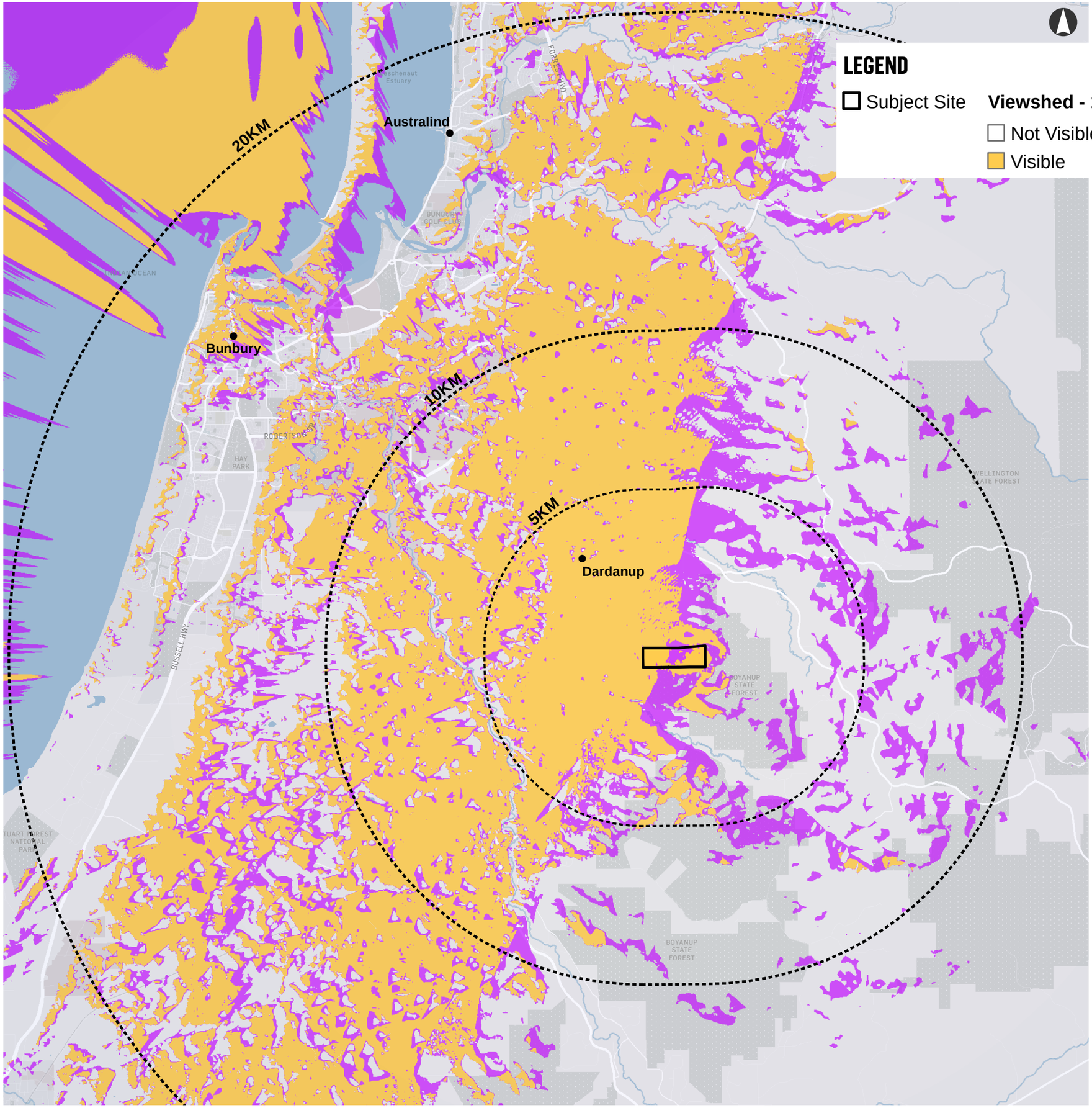
Subject Site

Viewshed

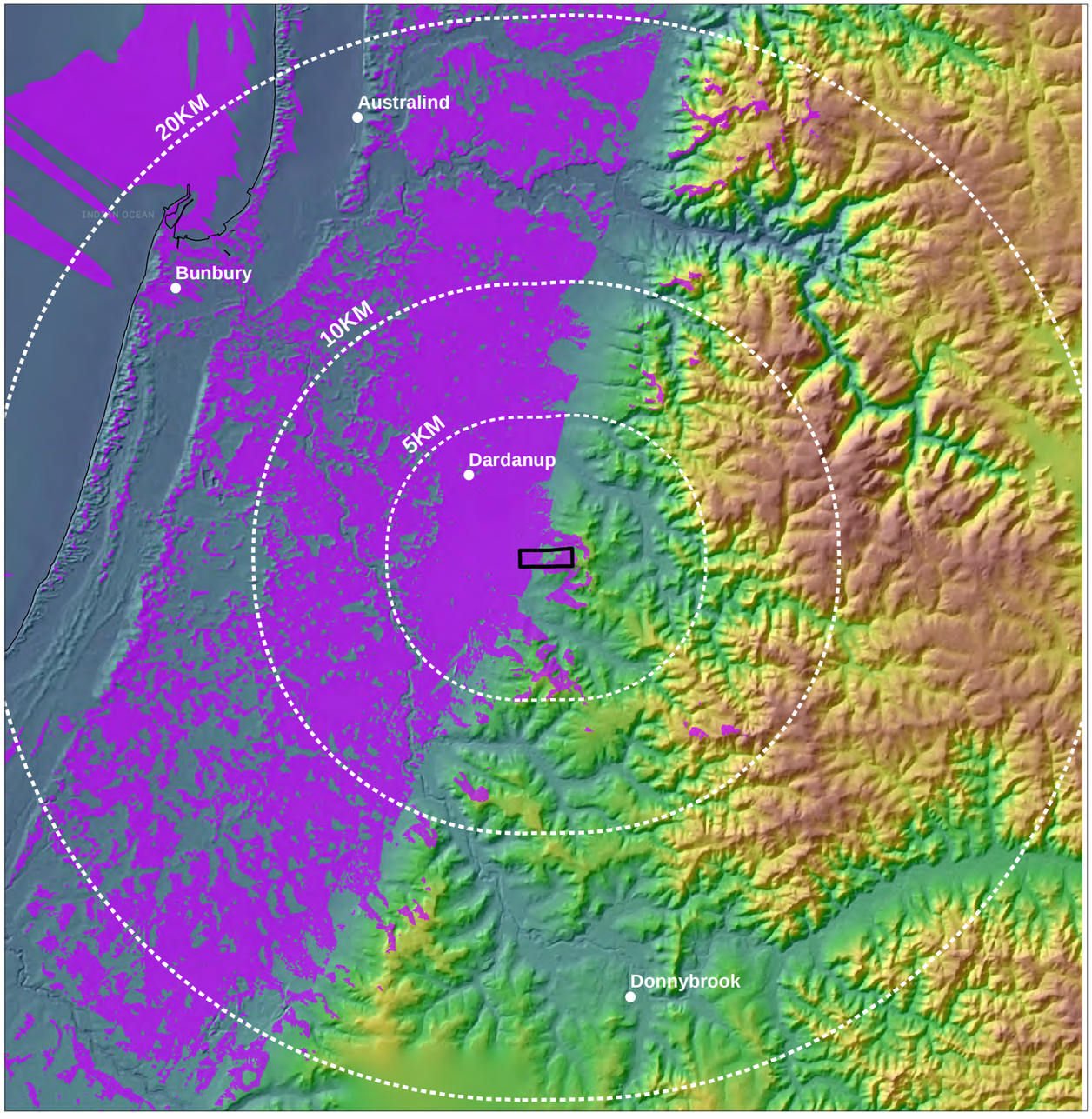
Not Visible

Visible

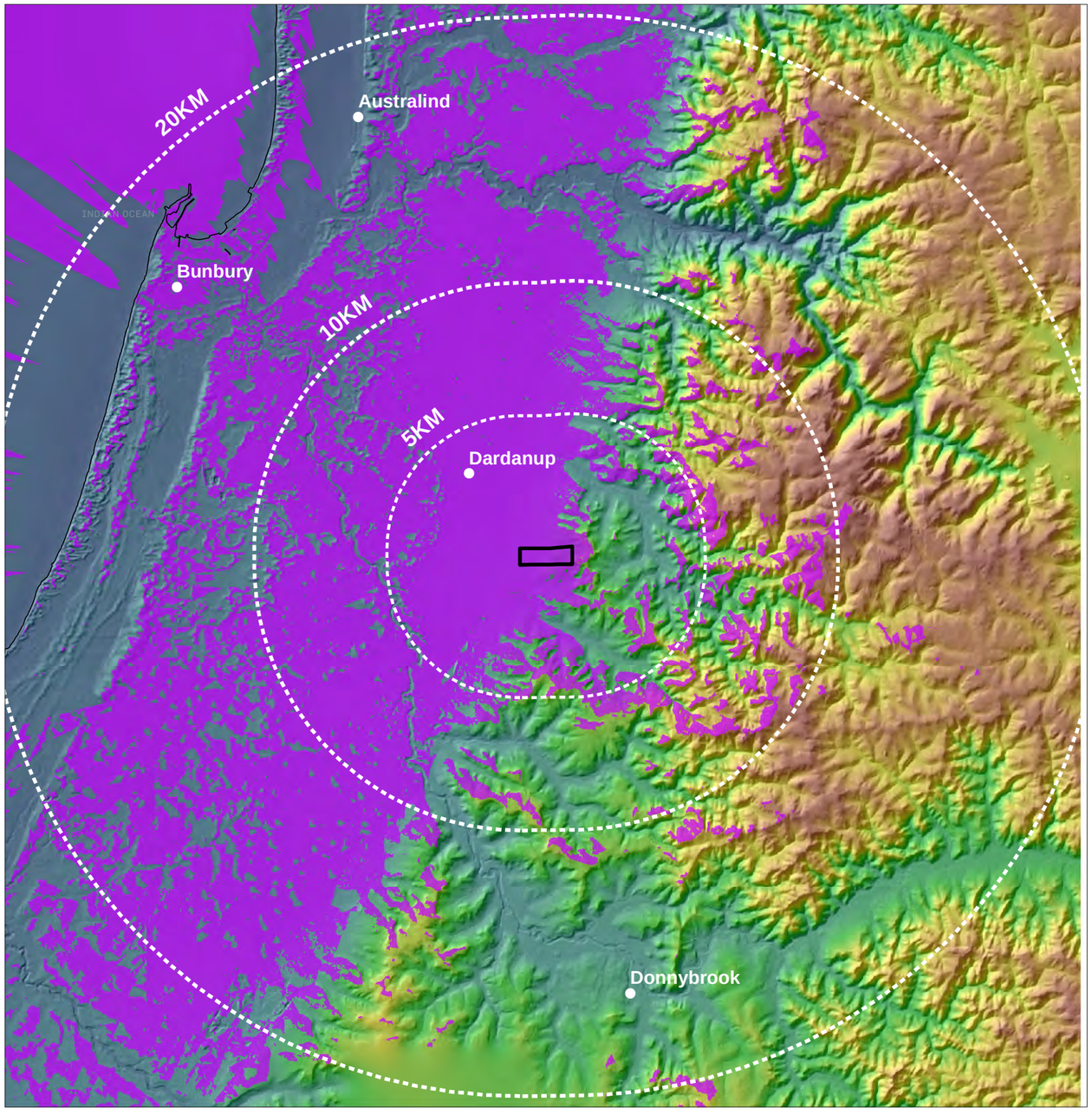
0 1 2 4 6 8 Kilometers


LEGEND
Subject Site
Viewshed - 114 mAHD
Not Visible
Visible
Viewshed - 151 mAHD
Not Visible
Visible
0 0.5 1 2 3 4
Kilometers
Australind
Bunbury
Dardanup
20KM
10KM
5KM
Leschenaut Estuary
FORREST HWY
BUNBURY GOLF CLUB
INDIAN OCEAN
ROBERTSON DR
HAY PARK
BUSSELL HWY
WELLINGTON STATE FOREST
BOYANUP STATE FOREST
BOYANUP STATE FOREST
TUART FOREST NATIONAL PARK

EXISTING - 114 m AHD



FUTURE - 151 m AHD



LEGEND

- Subject Site

Viewshed

- Not Visible
- Visible

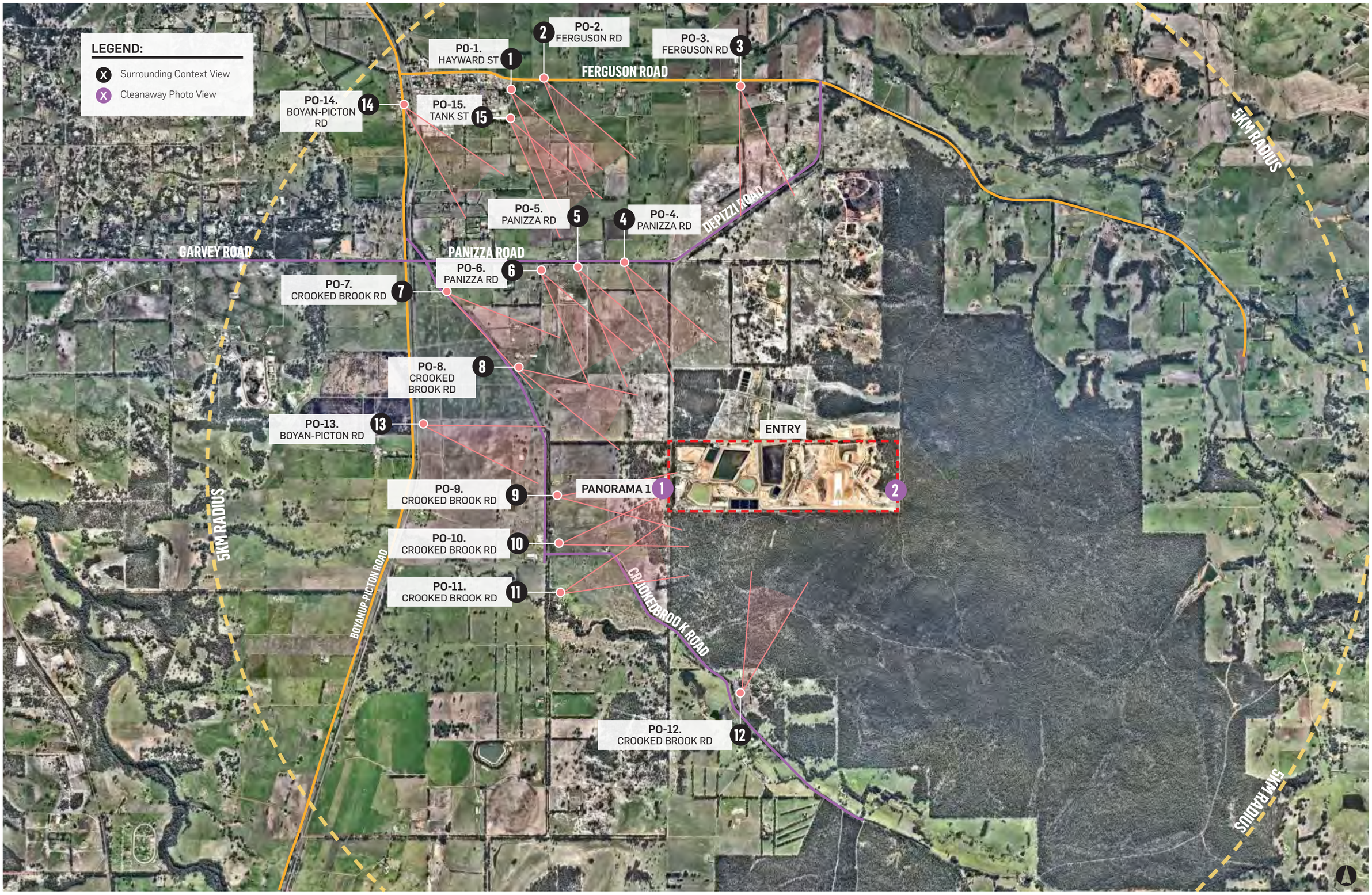
Elevation [m AHD]

Approx. : 347m

Approx. : -13m

0 1 2 4 6 8 Kilometers

Figure 2 Assessed Vantage Point Locations



1 PHOTO-SIMULATION 1 FERGUSON ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~4008m**

1 PHOTO-SIMULATION 1
FERGUSON ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	35mm	~4008m

ZOOM
200%

2 PHOTO-SIMULATION 2
FERGUSON ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~3950m**

ZOOM
200%

3 PHOTO-SIMULATION 3
FERGUSON ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~3339m**

4 PHOTO-SIMULATION 4
PANIZZA ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 2355m**

5 PHOTO-SIMULATION 5
PANIZZA RD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~2626m**

5 PHOTO-SIMULATION 5
PANIZZA RD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 2626m**

ZOOM
200%

6 PHOTO-SIMULATION 6
PANIZZA ROAD

Camera Lens Height From Ground
1.75m

Camera Lens Focal Length (full frame equivalent)
35mm

Site Distance (to centre)
~2722m

7 PHOTO-SIMULATION 7 CROOKED BROOK ROAD

Camera Lens Height From Ground
1.75m

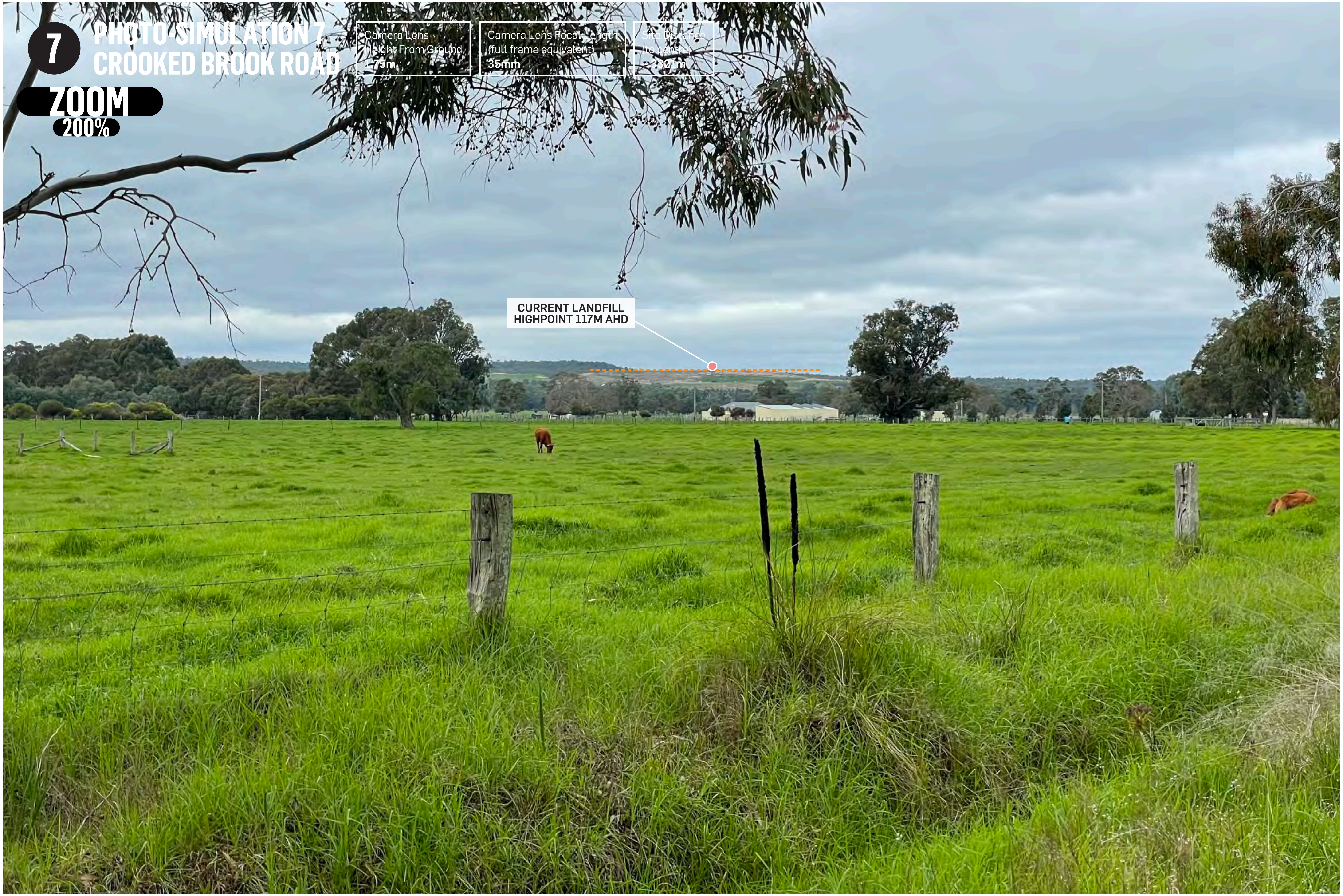
Camera Lens Focal Length (full frame equivalent)
35mm

Site Distance (to centre)
+3321m

CURRENT LANDFILL HIGHPOINT 117M AHD

50MM FL REFERENCE VIEW

ORIGINAL PHOTO EXTENT - 35MM FL


7
PHOTO-SIMULATION 7
CROOKED BROOK ROAD
ZOOM
200%
Camera Lens Height From Ground
1.75m
Camera Lens Focal Length (full frame equivalent)
35mm
Site Distance (to centre)
~3321m
CURRENT LANDFILL HIGHPOINT 117M AHD

8 PHOTO-SIMULATION 8
CROOKED BROOK ROAD

Camera Lens Height From Ground
1.75m

Camera Lens Focal Length (full frame equivalent)
35mm

Site Distance (to centre)
~2460m

8 PHOTO-SIMULATION 8
CROOKED BROOK ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 2460m**

ZOOM
200%

9 PHOTO-SIMULATION 9
CROOKED BROOK ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~2012m**

10 PHOTO-SIMULATION 10 CROOKED BROOK ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 2067m**

11 PHOTO-SIMULATION 11 TWOMEY ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	35mm	2248m

12 PHOTO-SIMULATION 12
CROOKED BROOK ROAD

Camera Lens Height From Ground
1.75m

Camera Lens Focal Length (full frame equivalent)
35mm

Site Distance (to centre)
~2081m

13 PHOTO-SIMULATION 13
BOYANUP-PICTON ROAD

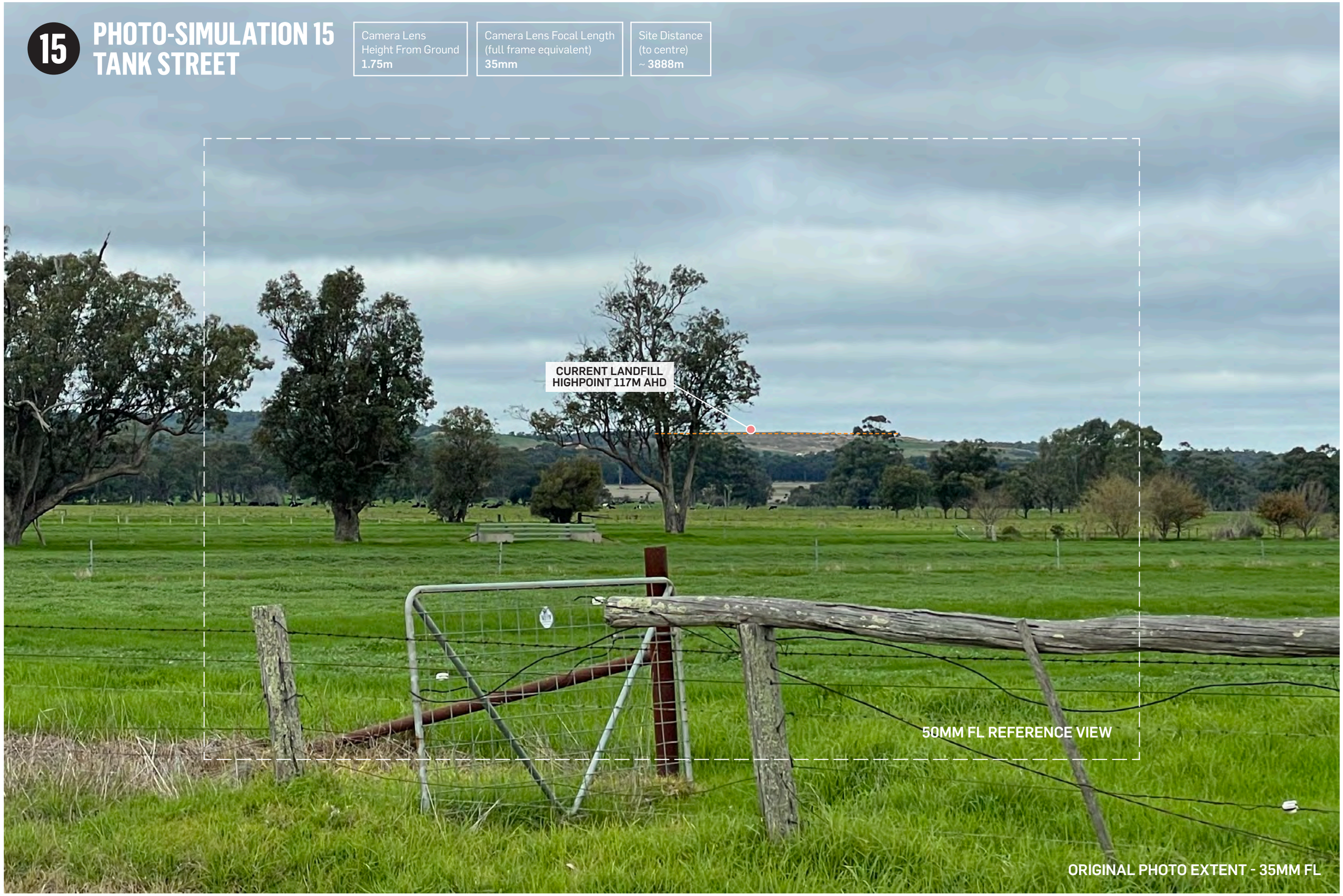
Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 3163m**

14 PHOTO-SIMULATION 14
BOYAN-PICTON ROAD

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~4219m**

15 PHOTO-SIMULATION 15
TANK STREET

Camera Lens Height From Ground	Camera Lens Focal Length (full frame equivalent)	Site Distance (to centre)
1.75m	**35mm**	**~ 3888m**



1 PHOTO VIEW 1 - EASTERN BOUNDARY

Camera Lens Height From Ground
1.75m

Camera Lens Focal Length (full frame equivalent)
35mm

2 PHOTO VIEW 2 - PANORAMA

Camera Lens
Height From Ground
1.75m

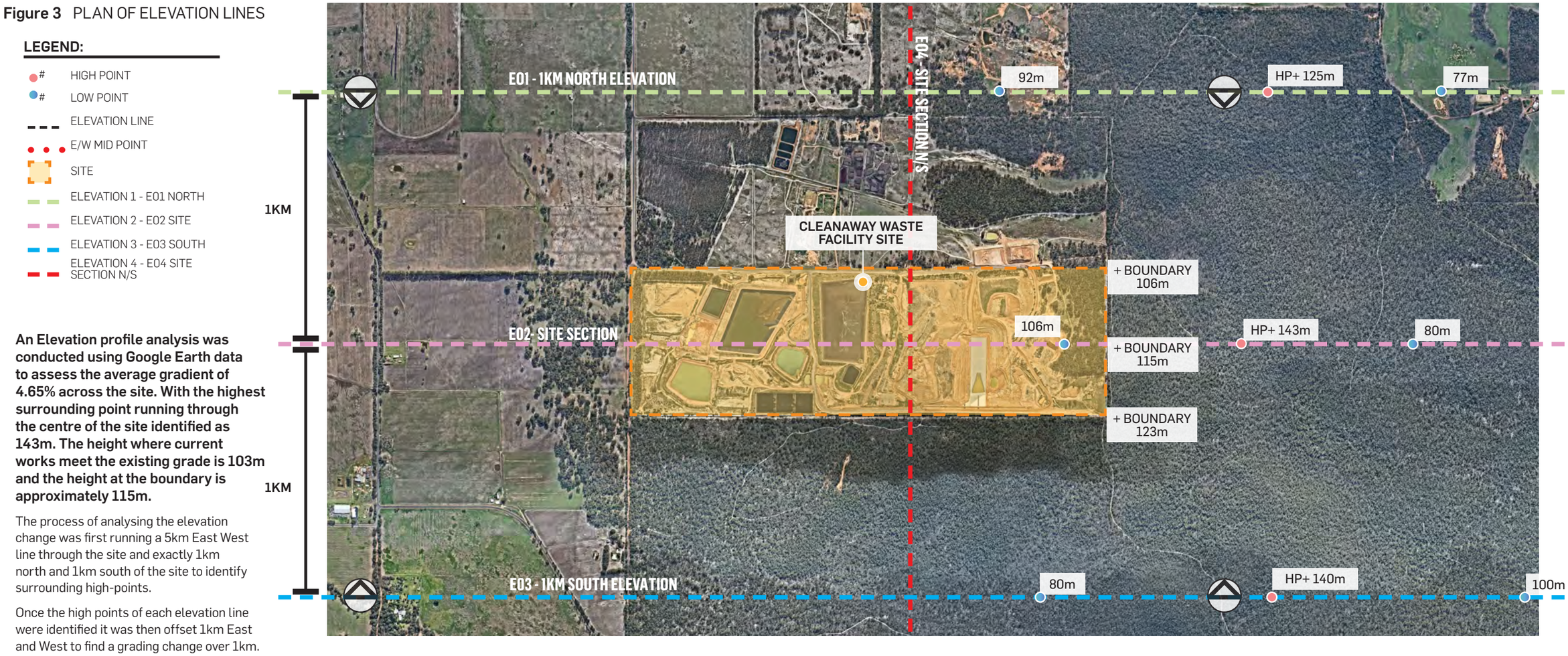
Camera Lens Focal Length
(full frame equivalent)
35mm

PANORAMA (CONTEXT ONLY)

1.0 ELEVATION PROFILES

1.1 ASSESSMENT OF ELEVATIONS

Figure 3 PLAN OF ELEVATION LINES



An Elevation profile analysis was conducted using Google Earth data to assess the average gradient of 4.65% across the site. With the highest surrounding point running through the centre of the site identified as 143m. The height where current works meet the existing grade is 103m and the height at the boundary is approximately 115m.

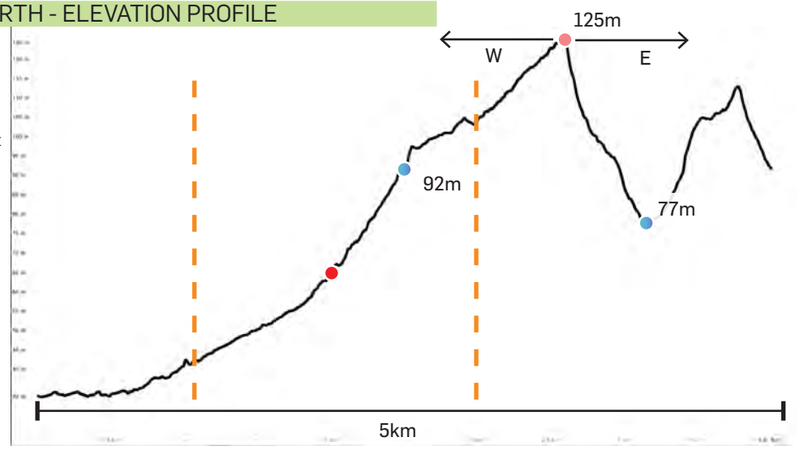
The process of analysing the elevation change was first running a 5km East West line through the site and exactly 1km north and 1km south of the site to identify surrounding high-points.

Once the high points of each elevation line were identified it was then offset 1km East and West to find a grading change over 1km.

Figure 4 E01 - 1KM NORTH - ELEVATION PROFILE

LEGEND:

- # HIGH POINT
- # LOW POINT (1km from East and West of High Point)
- MID POINT
- SITE EXTENTS



E - 1KM EAST	NUMBER
RISE	48m
RUN	1000m
GRADE	4.8%
ANGLE	2.748 °

RATIO: 1/20.8

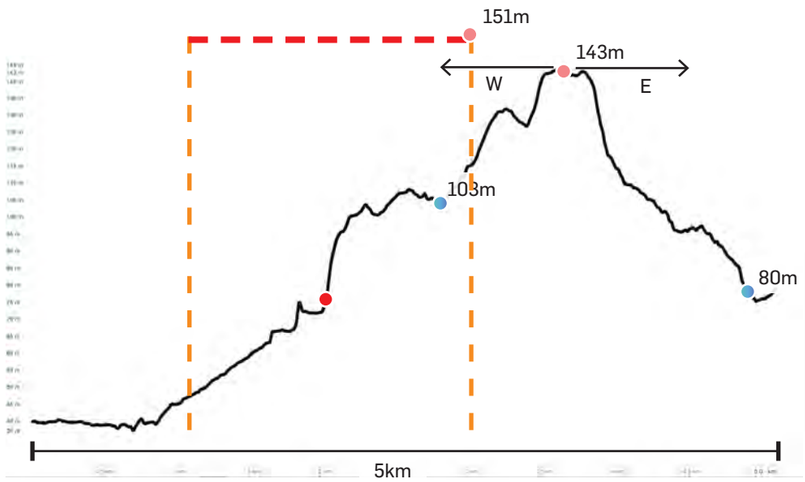
W - 1KM WEST	NUMBER
RISE	33m
RUN	1000m
GRADE	3.3%
ANGLE	1.89°

RATIO: 1/30.3

Figure 5 E0 2 - SITE SECTION - ELEVATION PROFILE

LEGEND:

- # HIGH POINT
- # LOW POINT (1km from East and West of High Point)
- MID POINT
- SITE EXTENTS
- CLEANAWAY PROPOSAL 151AHD



E - 1KM EAST	NUMBER
RISE	63m
RUN	1000m
GRADE	6.3%
ANGLE	3.605 °

RATIO: 1/15.9

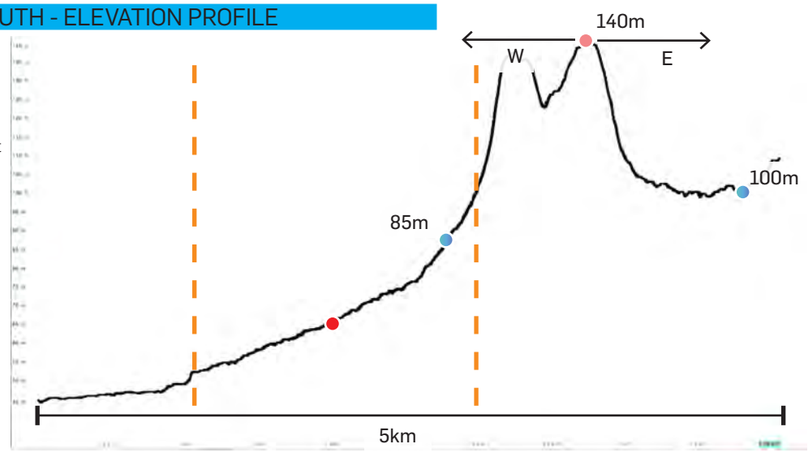
W - 1KM WEST	NUMBER
RISE	40m
RUN	1000m
GRADE	4%
ANGLE	2.2906 °

RATIO: 1/25

Figure 6 E03 - 1KM SOUTH - ELEVATION PROFILE

LEGEND:

- # HIGH POINT
- # LOW POINT (1km from East and West of High Point)
- MID POINT
- SITE EXTENTS



E - 1KM WEST	NUMBER
RISE	40m
RUN	1000m
GRADE	4%
ANGLE	2.2906 °

RATIO: 1/25

W - 1KM WEST	NUMBER
RISE	55m
RUN	1000m
GRADE	5.5%
ANGLE	3.148 °

RATIO: 1/18.2

1.2 EAST WEST ELEVATION

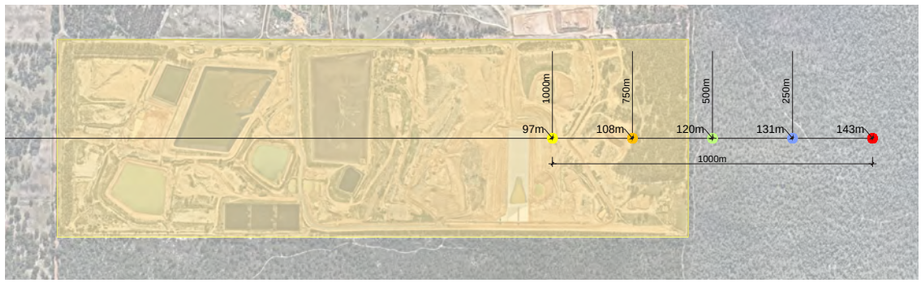
Projecting the natural topography from the identified highpoint into the site and using a batter grade percentage of 4.65% the height of the proposed landfill will be approximately 97m.

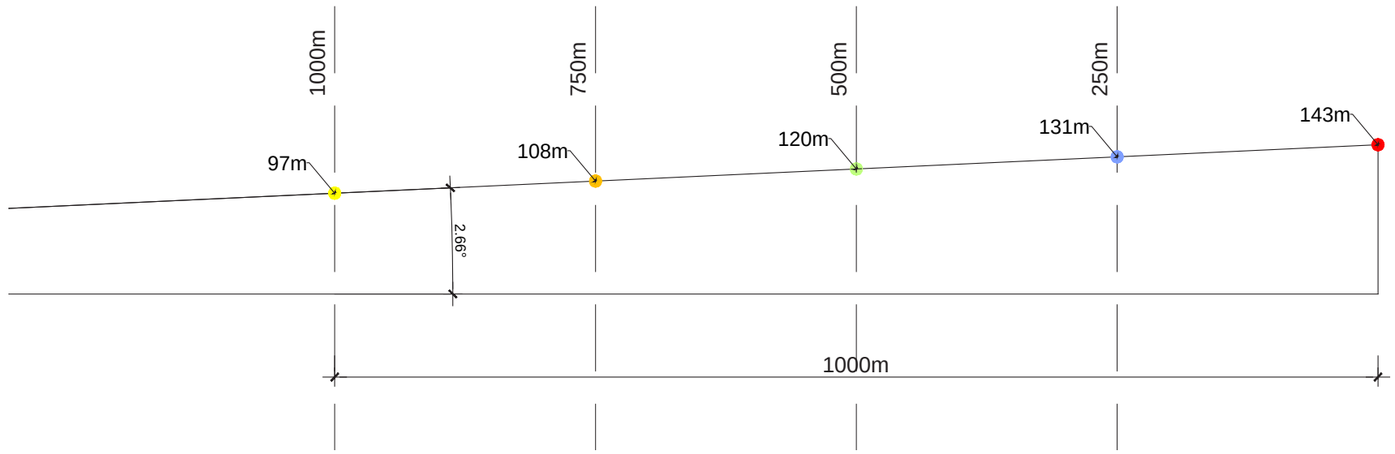
This average slope can be expressed as a 1/21.5 grade ratio.

AVERAGE GRADE:
1/21.5

LEGEND

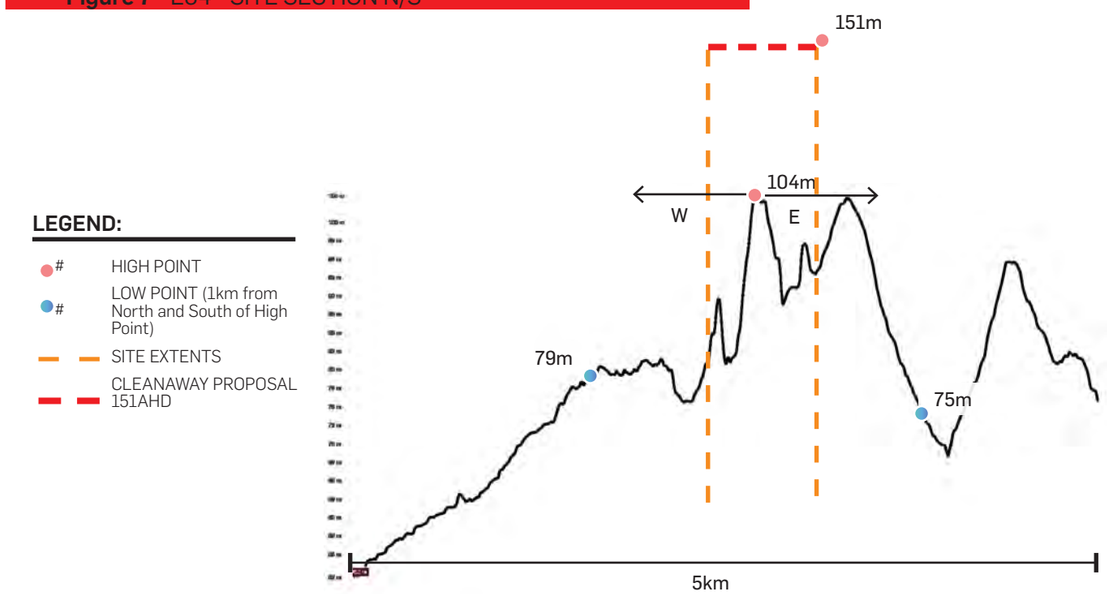
- HIGHEST POINT
- 250m FROM HIGHEST POINT
- 500m FROM HIGHEST POINT
- 750m FROM HIGHEST POINT
- 1km FROM HIGHEST POINT
- SITE - LOT 2 BANSKIA STREET





- **IDENTIFIED GRADE WITHIN THE EPCAD LANDSCAPE AND VISUAL ASSESSMENT IS AN OBSERVED GRADE OF 1:28**
- **SURROUNDING COMMON SLOPE - OBSERVED GRADE 1:21.5**
- **SURROUNDING GENTLE SLOPE - OBSERVED GRADE 1:40**
- **SURROUNDING STEEP SLOPES (LIMITED EXAMPLES IDENTIFIED IN VALLEYS) - OBSERVED GRADE 1:6**
- **CURRENT CLEANAWAY PROPOSED LANDFILL BATTER GRADE - <1:3.5**
- **SUGGESTED BATTER GRADE - 1:6**
- **SUGGESTED MAXIMUM HEIGHT OF LANDFILL TO BE 130M AHD**

Figure 7 E04 - SITE SECTION N/S



E - 1KM WEST	NUMBER
RISE	29m
RUN	1000m
GRADE	2.9%
ANGLE	1.661 °

RATIO: 1/34.5

W - 1KM WEST	NUMBER
RISE	25m
RUN	1000m
GRADE	2.5%
ANGLE	1.432 °

RATIO: 1/40

2.0 REVIEW COMMENTS

2.1 VISUAL IMPACT OF LANDFILL

Whilst the degree to which the Banksia Road landfill is visible from certain vantage points can be quantified, the degree to which the viewers will be impacted is influenced by an individual's perceptions of the site.

The subject site, and current works are viewable from a variety of locations surrounding the site including on surrounding roads, local residences, the town of Dardanup and distance views available from the City of Bunbury.

The view of the works currently impacts the rural landscape character of the viewshed. Views to the site from the north, and west, take in the rolling topography, rising to the east with a backdrop of dense remnant vegetation. The barren nature of the landfill and light yellow sands contrasts with the surrounding dark green remnant vegetation of the conservation.

Dust plumes may be visible in high wind events particularly with the open face of the landfill fronting the direction of the prevailing wind.

The current proposal demonstrated within the Cleanaway landscaping plan will be rehabilitated with a range of native grasses shrubs and tree species. The intent is to ensure the western batter slopes of the landfill will be planted with native trees, shrubs and grasses to provide a visual screen and reduce the visual impact of the landfill topography by blending into the surrounding Dardanup Conservation Park vegetation.

2.1.1 REHABILITATION

The proposed rehabilitation measures are outlined in the Cleanaway rehabilitation and closure plan and Cleanaway landscaping plan. These measures may assist in softening the appearance of the landfill, however coverage is limited with native grasses-only covering vast sections of the landfill.

- The proposed rehabilitation measures are as yet unproven on site.
- Rehabilitation of a landfill cell/phase takes place within 6 months after disposal in that cell or phase has been completed.
- The initial cell is identified to commence capping in February 2023.
- Proposed vegetation may struggle to establish or develop to full height in the exposed conditions.
- Proposed vegetation may struggle to establish on a steep 1 in 3.5 Batter.

2.1.2 PROPOSED BATTER GRADE

The cleanaway rehabilitation and closure plan identifies a batter grade of 1 in 3.5m

Urbis undertook a topographical analysis of the existing landforms surrounding the landfill site and observed the natural surrounding slopes. Observations include:

- The shallowest slopes observed were 1:40 grade slopes
- A 1:20 grade was common in the topography of the hills in the surrounding area
- The steepest slopes (identified in valleys) - were 1:6 grade slopes.

The steep 1:3.5 Batters identified in the proposal will contrast greatly with the surrounding undulating slopes which are commonly 1:20. As such if developed to a height of 151m AHD the landfill will stand out as an odd feature rather than blend into the surrounding landscape as is the identified intent of the Cleanaway landscaping plan.

In order to ensure the visual impact of the developing and remediated landfill is maintained provide an acceptable outcome Urbis recommend the external batters of the landfill be constructed at a maximum 1:6 grade.

2.1.3 RECOMMENDED MAXIMUM HEIGHT

The proposed additional height of the landfill and steep grade of batters will result in a landfill site that contrasts with the surrounding undulating landscape. The landfill is currently clearly visible from a distance and will become more so if developed to a height of 151m AHD.

Current height - 117m AHD

At a maximum height of 117m AHD and following successful rehabilitation measures the finished topography of lot 2 would be integrate with the conservation park and would visually have a minimal visual impact. Our elevation analysis outlines that a landfill site at this height would sit comfortably with the surrounding topography and would be difficult to discern from the broader landscape when complete.

Cleanaway proposal - 151m AHD

The Cleanaway proposal for a landfill with a capped height of 151m ahd would appear out of place within the surrounding undulating slopes. This height would significantly elevate the landfill above the surrounding topography. In addition the steep 1:3.5 Batters required to achieve the height would read as a constructed mound within the natural undulation. While successful rehabilitation of the site may lessen the visual impact, the proposed landfill will appear as an obtrusive element in the landscape.

The proposed additional height of the landfill and steep grade of batters will result in a landfill site that contrasts with the surrounding undulating landscape.

The landfill is currently clearly visible from a distance and will become more so if developed to a height of 151m AHD.

If developed to a height of 151m AHD the landfill will stand out as an odd feature rather than blend into the surrounding landscape as is the identified intent of the Cleanaway Landscaping Plan.

Recommended maximum height - 130m AHD

Urbis undertook a topographical analysis of the landforms surrounding the Cleanaway site and suggests that the final landfill form be constructed with batters no steeper than 1 in 6.

The 1 in 6 grade provides an achievable balance between the landfill requirement and the stated goal of blending with the surrounding contours. Should this grade be adopted a capped landfill of 130m AHD is achievable. The EPCAD VIA has prepared models of the landfill at this height and the resultant rehabilitated landform will appear as a localised variation in topography.

At a maximum height of 130m the topography will better blend into the surrounding Dardanup Conservation Park vegetation helping to reduce the visual impact of the landfill.

3.0 REVIEW COMMENTS

3.1 COMMENTS

The following section contains excerpts taken from the Cleanaway visual Impact assessment - EPCAD Banksia Road Landfill Site - Landscape and Visual Assessment - 29th March 2021. Urbis comments in response to the VIA are provided in bold.

EXECUTIVE SUMMARY

_The incremental implementation of the proposal includes the staged delivery of rehabilitation landscape works.

- **Rehabilitation works are yet to commence and appear insufficient in screening the view as the landfill site develops.**

_The modelling suggesting this takes the form of a localised variation in topography.

- **The EPCAD modelling illustrates a rehabilitated landfill at 130m AHD which could be viewed as a localised variation in topography. The EPCAD modelling illustrates the proposal at 151m AHD will appear out of place within the surrounding landscape.**

_Incremental staged creation of elevated topography, will be combined with the staged planting of vegetation.

- **It appears that the landfill site has been underway for some time however the staged rehabilitation of the site does not appear to be progressing together with the landfill in order to sufficiently screen the landfill progress.**

_As such it is not considered that the proposals will represent an obtrusive element in views during the works.

- **Works are currently underway and the landfill does appear to be an obtrusive element within the landscape. the light coloured sand contrast sharply with the surrounding dark vegetation.**

_Existing works at the subject site are discrete. The surrounding vegetation and landforms combine to restrict views.

- **The surrounding vegetation and landforms combine to restrict views to the east and south only.**

_Existing works at the subject site are discrete. The surrounding vegetation and landforms combine to restrict views.

- **The surrounding vegetation and landforms combine to restrict views to the east and south only.**

_As filling progresses, the planting will mature. As the scale and height of the new landform increases the landscape planting will ameliorate effects.

- **This does not appear to be the case as the rehabilitation is to commence 6 month after cell completion.**

_The long timeframe to completion in 2051 suggests that changes in the views will not be rapid but a progression.

- **The town and viewing locations surrounding the landfill are likely to change dramatically in that timeframe.**
- **The timeframe to complete the landfill to 128mahd plus capping would mean the construction and rehabilitation is completed over a shorter timeframe. EPCAD advise (subject to the required approvals), from approximately May 2023 through to May 2041.**

PHOTO LOCATIONS

- **The photo view locations selected by Cleanaway and represented in the EPCAD VIA are predominantly focused on Crooked Brook Road. It appears many of the visual receptors identified by the Shire and illustrated in the Approved Local Development Plan have been overlooked.**
- **Photo locations have been updated to capture the broader impacts including those on key tourist destinations/travel routes such as within the Ferguson Valley wine region and Crooked Brook Forest.**

CONTEXT ANALYSIS

_Greater Bunbury Region Scheme (2014)

- **provide a distinctive rural landscape setting for the urban areas and accommodate carefully planned rural developments;**

_Greater Bunbury Strategy (2013)

- **Ensure that development occurs in a way that safeguards and enhances the existing environmental, biodiversity and scenic assets.**
- **Ensure the sustainable management of natural resources and the protection of rural landscape, particularly when viewed from public areas such as regional road**
- **existing environment is protected and enhanced and characteristics that define rural land are also recommended to be retained.**

_Shire of Dardanup Local Planning Scheme No.3

- **To provide for a wide variety of productive farming activities, ranging from broad-acre grazing to horticulture, which are compatible with the capability of the land and retain the rural character and amenity of the locality.**

_City of Bunbury Local Planning Scheme No. 8. (2018)

- **To provide for the maintenance or enhancement of specific local rural character.**

LANDSCAPE CONTEXT

This location is at the very northern extent of the Whicher Scarp. This Whicher Scarp forms a sickle shaped landform unit that extends from near Burekup in the north, where it meets the Darling Scarp, to the south-west of Dunsborough where it meets the granites of the Leeuwin-Naturaliste Ridge.

- **The EPA has recognised the importance of the Whicher Scarp and published the Environmental Protection Bulletin No 6, The Natural Values of the Whicher Scarp in December 2013. The focus is on the flora and fauna but also recognises that the overall landform is distinct being a sickle formation extending over a large region.**

TOPOGRAPHY

_Lot 2 Banksia Road, has a gentle slope from east to west. The land is approximately 45m above sea level, rising to approximately 118m above sea level.

_The average slope, according to available google earth information, is 3.6%. Refer to Figure 5: Topography of the Site.

- **3.6% slope relates to a grade of approximately 1:28. The proposed grade of 1:3.5 represents a 29% slope.**

_Based on the landscape assessment of the area, this classification reflects the locations ability to accommodate change discreetly within the broader landscape due to the local landforms and woodland restricting open views to the location.

- **Our photographical analysis has identified many open views to the landfill site from the surrounding area.**

DISTRICT LANDSCAPE AREA

The dominant elements that comprise the district landscape character can be summarised as;

_Rolling topography, rising to the east Darling Range;

_Flat plain to the west of subject site extending to the coast;

_A matrix of large lots containing various uses from residential, hobby style farming, viticulture and industrial;

_These lots range from fully vegetated to fully cleared;

_Large blocks of retained vegetation exist in Reserves and Regional Parks;

_Land is divided into properties and paddocks by low post and wire or post and rail fences (visually permeable);

_Built form of a very low density with occasional punctuating low buildings;

_Wide vehicular carriageways with remnant mature vegetation within road reserves.

REPRESENTATIVE VIEWS

_The main viewing experiences are from roads whilst in a vehicle. There are few stationary opportunities for views. Public views are generally from the road corridors and obliquely to the direction of travel.

- **The landfill is vast and can be view from a wide range of locations within the town and surrounding roads/properties.**

VEGETATION

_Proposed works as outlined in this report, will require the clearing of mature remnant vegetation on site. The longer term filling of the eastern 200m extent of the site, has remnant trees that will be removed to facilitate grading.

- **It is unclear if this vegetation removal has been represented on the photomontage images provided by Cleanaway.**

LANDSCAPE AND VISUAL MITIGATION MEASURES

_The Development will be re vegetated with grassland and woodland as per Figure 10a - 10d Landscape Rehabilitation Proposal. Native tree and plant species have been selected to match the existing landscape character.

- **It is unclear which of the species listed in the Landscape Rehabilitation Proposal are selected for planting within Zone 3 Native Woodland. We assume the species are limited to Acacia flagelliformis (1.6M), Acacia lasiocarpa (0.5 TO 2M) and Acacia pulchella (1.5M).**
- **Alternative options are likely to grow too high and risk causing damage to the capping above fill.**

- **The limited selection of species will:**

1. **reduce the ability for the proposed blending of the landfill;**
2. **appear as a different different shade of green than surrounding woodland;**
3. **are not long lived; and**
4. **may require irrigation to establish survive summer conditions.**

KEY VIEWS

_There are no key viewing locations that allow a broad open view of the site. The proposed landform to a total height of 149 AHD plus capping, will still only be observed in glimpsed locations.

- **A broad open view can be witness from many of the surrounding properties, roads - refer Photo Simulations 1, 2, 4, 5, 6, 7, 8, 9, 10, 13, and 15.**

_There are no roads that align to present a view in direct line of sight.

- **A section of Crooked Brook Road between Twomey Road and Banksia Road aligns with the landfill.**

_The site, and it's inherent colour are not dissimilar to the colour palette of the surrounding landscape.

- **The colour of the site is currently quite dissimilar to the surrounding landscape.**

VISUAL MANAGEMENT OBJECTIVES

_As the site presently exists as an operational tip site and may be observed from locations within the landscape character units Rural Coastal Plain, Forest and Industry, the visual management objective considered appropriate for the development is best practice siting and design with a preferred objective to blend with its visual landscape setting. The site is not seen from the Rural Hills LCU and the objective here should be not evident.

- **Suggest the restoration and enhancement management objective is also applied. Areas in which this objective would apply comprise visually degraded sites or features that require rehabilitation, or enhancement to improve the visual character of the landscape.**

RESTORATION AND/OR ENHANCEMENT

- **Existing and/or proposed developments may help re-establish the characteristics of the landscape that are valued by the community through effective assessment and management of proposed changes.**

- **Examples of strategies to meet this objective**

1. Borrow from the existing natural character in the visual landscape and help restore degraded landscapes wherever possible to plan any potential changes to the landscape.
2. restore or enhance an existing development so that it blends with the surrounding visual landscape, or is not evident in the landscape.
3. Restore and enhance established travel routes.
4. Use planting to screen visually degraded views.

CONCLUSION

_Generally views to the site from the greater surrounding landscape are only achievable from a distance within 4km to the north, northwest, west and south-west. Although views are available at a greater distance, for example from high ground in Bunbury 19 kilometers away, visual impacts will not be significant.

- **Views to the landfill are available beyond 4km such as those witnessed within the Town of Dardanup.**

_There are comprehensive rehabilitation and planting schemes which will be managed and implemented in unison with the staged works. The new landscaping will continue to grow and establish as the works reach ultimate completion. The primary visual impact prior to established planting is likely to be ongoing works including vehicular movements.

- **The works have been underway for some time however it appears the rehabilitation efforts have been unable to maintain progress and develop in unison with the staged works.**

_Typically any views of the site from the south are from Crooked Brook Road. This vehicle corridor has no pedestrian infrastructure. It is traversed in vehicles. Pull over opportunities are irregular and informal in nature.

- **Crooked brook road has the potential as a tourist route with destination sites such as Crooked Brook Wines, the Crooked Brook Forrest Walking Trail, Dardanup Conservation Park as well as providing access to attractions on Ferguson Road. Typically site seeing passengers travelling in a vehicle will be highly aware of the ir surroundings and are likely to take in the view of their surroundings.**

_Views from the public realm within the Dardanup township are limited, due to the distance, but also due to the areas of vegetation between the township and the subject site. Most notably is the screening vegetation located on the west and north-west of the subject site.

- **Views are accessible from Dardanup. Refer views 1, 14, and 15.**

_Existing works at the subject site are discrete. These works do not currently adversely impact the broader landscape character.

- **This landscape character is described as open pasture land and woodland. The landfill presents as a scar in the woodland landscape with the light coloured sand cutting through deep green forest.**
- **A broad open view can be witnessed from many of the surrounding properties, and roads. Works are not discrete and views remain present to the West and North West.**

_The incremental implementation of the proposal includes the staged delivery of rehabilitation landscape works. As filling progresses, the planting will mature.

- **This is not greatly apparent from the viewing locations surrounding the site.**
- **The landfill will be discernible due to the steep contours of the batters - and will look out of place within the undulating topography.**
- **Rehabilitation works are yet to commence and appear insufficient in screening the view as the landfill site develops. works do not commence until after cell completion. Rehabilitation works have not been proven to be successful.**

_Dardanup town itself has both formal parking and formal footpaths, which provide for limited views towards the subject site.

- **Dardanup town is expanding with development of parcels of land to the South which will open additional views to site**
- **There are many viewing opportunities within the town and surrounding road network.**

_The Town of Dardanup is the nearest community. It has distant views from the public realm and it can be inferred that there may be distant views from some private residences.

- **There are many properties that surround the landfill development including those situated within the Townsite that currently have a view of the Landfill.**
- **There are many mid-ground viewing opportunities within the town and surrounding road network.**

_At a distance, it is hard to discern the existing works from the broader landscape. As such, it is likely, that the proposed works will also be difficult to discern from the broader landscape when complete as the resultant landform and vegetation will be in character with the area.

- **The Landfill is evident from a distance due to the contrast in colour between the light coloured sand and dark surrounding native vegetation. The proposed worked will also be identifiable due to the large increase in height and steep batters of the proposal, both of which are uncommon in the surrounding landscape.**
- **The landfill can be viewed clearly from distant viewpoints in the City of Bunbury. The landfill site is easy to pick up as it contrasts strongly with the surrounding dark green vegetation of the woodland.**

_Current works, visually, have a minimal visual impact on the interface with the adjacent conservation park.

- **Due to limited rehabilitation planting/screening the current works create a visual impact on the character of the surrounding area and adjacent conservation park.**

_The proposed works will not change this minimal visual impact, and long term plans to rehabilitate the subject site, will further decrease any visual impacts.

- **The existing works create a visual impact on the surrounding character.**
- **Modelling demonstrates the increased height of the proposal will look out of place in the surrounding landscape.**

_As such it is not considered that the proposals will represent an obtrusive element in views during the works.

- **The current works appear as an obtrusive element due to a lack of rehabilitation /screening. The proposed height increase will further increase this impact as the landfill develops.**

_As with other locations in the district landscape, due to the siting of the development site, if a viewer was unaware of what they were viewing, it would appear as if it was an open field or pasture. In addition, the site's colour at this distance allows it to sit within the context of the landscape.

- **The landfill is evident from a distance due to the contrast in colour between the light coloured sand and dark surrounding native vegetation. The proposed worked will also be identifiable due to the large increase in height and steep batters of the proposal, both of which are uncommon in the surrounding landscape.**

_Views are obtainable from the new development Roseland, located to the south of Dardanup. These views are obtained through breaks in vegetation and across flat pasture lands. From these locations, the distance means that an observer would have to have knowledge of the location or it would appear as another open field or pasture at a higher elevation. The site's colour and sighting within the landscape, mean it sits within the context of the landscape when view from the north-west.

- **There are many properties that surround the landfill development including those situated to the south of the townsite that currently have a view of the Landfill.**
- **At 151M AHD the landform will appear unnatural landform, particularly due to the steepness of proposed batters.**

SUMMARY OF LANDSCAPE AND VISUAL IMPACTS

_In the long term, the proposed top of cell height, height of 149m AHD and a finished landform after capping, of approximately 151m AHD form a slightly higher skyline from some views to the approved 130m AHD finished landform. This will be observed as an integral part of the rural landscape.

- **A landfill completed to a height of 151M AHD as illustrated in the EPCAD report will appear as an unnatural landform, particularly in the context of the surrounding scarp.**

_In the long term, the works will be revegetated with woodland plants, and will not be discernible from the wider landscape. The grassland rehabilitation will form an open paddock similar in character to many areas of the contextual rural landscape.

- **The landfill will be rehabilitated with grasses and short lived low growing shrubs only. It is likely that there will be challenges in establishment of the chosen species. the form and colour of the species will appear noticeable adjacent to the established bushland.**

_The majority of viewing opportunities are from public roads. The roads have speed limits of 50km/h to 110km/h. The Development is located generally obliquely to the direction of travel.

- **The landfill will be rehabilitated with grasses and short lived low growing shrubs only. It is likely that there will be challenges in establishment of the chosen species. the form and colour of the species will appear noticable adjacent to the established bushland.**

_Dardanup town itself has both formal parking and formal footpaths, which provide for limited views towards the subject site.

- **There are many viewing opportunities within the town and surrounding road network.**

EPCAD Banksia Road Landfill Site - Landscape and Visual Assessment - 29th March 2021

EPCAD PHOTOMONTAGES

Location 03 - 151M AHD

- 151M Landform and Planting at 100% Completion - Modelling appears to show mound without coverage. Is this grassland vegetation and can it be screened?

Location 04

- Limited value in selecting this location for photomontage.

Location 06 - 130M AHD

- The 130M Landform and Planting at 100% looks integrated however may be flat at its highpoint.
- At 130M with successful rehabilitation the landform could appear as a localised variation in the surrounding landscape.

Location 06 - 151M AHD

- 151M landform is described as a prominent within the landscape as early as at 25% completion.
- At 50% completion the 151m landform is described as a prominent variation to skyline.
- AT 100% completion the 151m landform is described as a localised hill however appears to stand out clearly within the surrounding undulating landscape.
- This landform is not common within the surrounding scarp. Suggest it will not be difficult to discern from the broader landscape as listed earlier in the conclusion

Location 11 - 130M AHD

- 130M landform is described at 25% completion is described as a sandy brown colour which will be seen as contrasting depending on the season. Vegetation can be seen emerging at 50% completion.
- At 130M with successful rehabilitation the landform could appear as a localised variation in the surrounding landscape.

Location 11 - 151M AHD

- 151M landform is described at 25% appears excessively steep within the surrounding undulating landscape and does not read as a minor height variation.
- At 50% completion the 151m landform is described as a localised higher skyline element and the level changes are not so abrupt (in comparison to the 25% completion model). The form and colour of this constructed landform continue to appear out of place within the surrounding landscape.
- At 75% and 100% completion the landfill is broadened but continues to appear out of place and does not blend well with the lower surrounding hills from this perspective.

Location 20 - 130M AHD

- Without rehabilitation the landform at 25% and 50% looks out of place within the landscape.
- The 130M landform and planting at 100% looks integrated however may be too flat at its highpoint.
- Suggest altering the batter grade and reducing the area of fill at the highpoint.
- At 130M with successful rehabilitation the landform could appear as a localised variation in the surrounding landscape.

Location 20 - 151M AHD

- The 151m landform at 25% appears out of place due to the height and steepness of the batter compared to surrounding landscape.
- As the landform develops to 50% and on to 100% it becomes a dominant feature in the landscape.

Location 21

- Limited value in selecting this location for photomontage.

Location 34

- Limited value in selecting this location for photomontage.

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