Landscape Character & Visual Assessment

Buckland Park

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Prepared for:
Walker Corporation
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1. Introduction

The report relates to the Buckland Park proposal, located approximately 32km north of the Adelaide CBD and 14km north of Elizabeth. The Buckland Park proposal is a joint venture of the Walker Corporation and Daycorp.

The site is approximately 1340 hectares located between Virginia and Port Gawler, within the City of Playford (see Figure 1).

Figure 1 Site locality map (not to scale)
The site is bounded by Port Wakefield Road to the east, the Gawler River to the north, Cheetham Salt Limited to the west and arable horticultural land to the south. The site is approximately 5km from the Port Vincent Gulf coastline, with Port Adelaide and Outer Harbour a distant visible landmark to the south west.

It is anticipated that the proposal will comprise of 12,000 residential allotments with a range of densities with the average size of allotment to be approximately 500m². Associated mixed use precincts will support the proposal with a range of schools and employment and retail precincts forming a diverse, sustainable community. Furthermore, the proposal includes a network of open space for connectivity, recreation, stormwater management and ecological sustainable environments for fauna and flora habitat. The proposed master plan is illustrated in Figure 2.

*Figure 2 Master plan Buckland Park*

This report will elaborate on the visual amenity of the locality with reference to the existing landscape character, land use, degree of visual complexity and scale of existing built form in the surrounding visual context.
2. Methodology

The preliminary stages of the assessment encompassed a literature review of the following documents:

- Buckland Park Master Plan
- City of Playford Development Plan consolidated 7th August 2008
- Existing land use

The second stage involved a site assessment. The assessment was conducted on the 25\textsuperscript{th} February 2009 to clarify the landscape character and potential visual effects of the proposal. To define the extent of the predicted visual locality a hand held Global Positioning System (GPS) was used to certify the potential viewshed and also to provide reference information on elevation of the potential visual observation of points along Port Wakefield Rd and surrounding publicly accessible locations to the north, south, east and west within a 5km radius.

The potential extent to which the proposal will be seen from the surrounding landscape region was determined by using a Global Positioning System (GPS) which provides accuracy to approximately 4 to 5 metres. During the field assessment, using the GPS, the location and visual extent of the proposal was recorded and plotted as Waypoints using latitude and longitude with a reference grid datum of GDA 1984.

The extent of the visual effect is discussed in section 4 of this report.

Following the site assessment, GPS coordinates were mapped and supported by a photographic survey which illustrates the visual effect. The photographic survey supports the discussion on the existing landscape character.
3. Context and Landscape Character

Landscape Context

The site is located at Buckland Park, west of Port Wakefield Rd and Virginia, and to the south of Port Gawler. It is located within the City of Playford and the existing development policy areas are illustrated in Figure 3.

Figure 3 Context plan
The site is located within the Horticulture West Zone.

This character zone is distinguished by open rural areas, market gardens, vineyards, orchards and open paddocks. These areas are supported by greenhouses, packaging sheds and residential rural living. The Gulf St Vincent is approximately 5km to the west of the site.

To the south, west and south west are areas of more intensive extractive land use, associated with Jeffries demonstration farm and composting facility and Cheetham salt pans. The salt pans are used to concentrate seawater through a series of gravity fed evaporation ponds ultimately resulting in salt being harvested and stockpiled. The process uses ground and mains water to create saturated brine which is pumped to Osborne where it is processed into Soda Ash. This environment is relatively stable providing habitat and food for a wide variety of birds. Buckland Park Lake is located to the north of Cheetham and forms an associated visual element to the salt pans.

Further to the west is a large expanse of coastal mangrove and estuaries associated with the Gawler River and local drainage swales. This policy area is designated as Metropolitan Open Space (Recreation). The character is defined by the low lying saltbush and samphire and dense mangroves closer to the coastal edge. Part of this coastal environment has been designated as Port Gawler Conservation Park, providing protection to a diverse arrangement of flora and fauna habitat.

To the south east of the site directly adjacent to Park Road is a recreational area used for the State Shooting Park (Office for Recreation and Sport) which provides 20 free pistol bays, 10 sets of turning targets and 2 skeet layouts. The shooting range has periphery fencing and a vegetation buffer limiting views into the site.

A disused silo located on the Jeffries demonstration farm is a dominant visual element. The silo is elevated above what is a denuded flat landscape with limited topographic or vegetative features. The silo is located approximately 350m to the south of the site boundary.

To the east approximately 2km across Port Wakefield Road is the small township of Virginia. Virginia is characterised by a mixture of rural residential living, greenhouses and horticultural practices to the periphery and a small commercial, retail precinct along Old Port Wakefield Road. There is no visual connection between Virginia and the Buckland Park site.

Port Wakefield Road forms a major transportation link to the north of Adelaide, providing connections for freight. This infrastructural form delineates the rural living context of Virginia to the east and more intensive horticultural practices.

Forming the site’s northern boundary is the Gawler River, meandering in an east west direction. The river corridor is designated as Metropolitan Open Space (MOSS) recreation, providing a buffer of vegetation and open space, creating a defined character zone.

The proposal as illustrated in the Master Plan is consistent with the significance of the Gawler River corridor and the objectives of the MOSS (recreation) Zone.

Port Gawler is located approximately 2km to the north of the site, located at the intersection of Port Gawler Rd and Brownes Rd and is characterised by a small array of rural dwellings and associated farming equipment.

The environmental context of Buckland Park is changing to an extent where it is becoming more appropriate to consider the area for urban purposes. Some of the driving forces behind this rationale are:

- Relocation of the 7RAR Battalion with 1,200 personnel from Darwin to facilities at Edinburgh Defence Precinct, creating a significant demand for housing to the north of Adelaide.
- Construction of the Northern Expressway (NEXY). This will improve accessibility to the northern suburbs of Adelaide and surrounding regions.
- A decline in Metropolitan land stocks and housing affordability.

The Northern Expressway (NEXY) development is located to the south and east of the site, traversing to the south of Virginia. The road corridor will consist of a wide road reserve and overpass structures providing new visual elements within the regional landscape. The proposal will not be visible from the NEXY road corridor due to distance.
Referring to Conner Holmes (2008), the site is located within the Horticultural West and MOSS (recreation) zones of the City of Playford. The proposal does not comply with the principles and objectives of these zones as they currently documented. Subject to the proposal receiving approval from the Governor, a Development Plan Amendment (DPA) will be required. The DPA will seek to reclassify land parcels with a combination of zones reflecting the intended use of the land (as outlined in Figure 2). New principles need to be prepared for these zones which seek and to protect existing landuse so that coexistence with the proposal can be achieved.

The MOSS (Recreation) Zone will be retained and extended to include a network of open space.

The DPA investigations report will consider visual amenity and specific landscape character preservation.
Regional Landscape Character (2-5km radius of proposal)
(Refer to Appendix A for land use character zones)

The dominant landscape character is defined by a mixture of intensive grazing, horticultural practices and regimented, structured paddocks and greenhouses. The land is relatively flat with limited topographic features. The uniformity of the landscape diminishes the scenic amenity of the landscape.

Due to the low lying and flat landscape character, expansive views are experienced to the south of the site towards Port Adelaide and Outer Harbour. The scale of the shipping cranes provides a backdrop to a distant industrial character.

Infrastructural forms are scattered throughout the landscape, with major vertical and horizontal scaled elements such as transmission lines being collocated to road corridors, specifically Port Wakefield Road. The various scales of transmission lines (66kv and 11kv lines) aligned to various orientations, provides complexity to the skyline whilst traversing along road corridors. Some isolated visual elements are present in the form of a telecommunication tower and the disused silo located within Jeffries demonstration farm.

Figure 4 Greenhouses    Figure 5 Jeffries silo to the distance

Port Wakefield Road represents a major interstate transportation corridor in a north south orientation with an easement of approximately 60metres. The road corridor provides fragmented views with existing verge plantings filtering the depth of visual field. Located along Port Wakefield Rd are numerous tertiary roads which typically have development of greenhouses or isolated rural dwellings at the intersections.

The most dominant visual element within this landscape region is the Gawler River open space. The vertical scale of the remnant Eucalypts which align the riverbed provide a backdrop for views from the south and north. The meandering form of this vegetation corridor dissects the landscape providing a natural gateway to those travelling through the landscape and across the river on Port Wakefield Road. The river is ephemeral with limited flow in the summer months.

To the west of the site, there are some glimpsed views of the coast in and around Windamere Estate. The man made levy banks to the salt pans limit the views across the horizontal landscape.

The Site

The dominant landscape character is defined by horticultural practices. The visual character of the site is bounded by the Gawler River corridor to the north. The river corridor provides a dense vegetation buffer, preventing more expansive views to the north or from the north of the proposed site.

The site is denude of visually significant vegetation and has been intensively eroded by horticultural and grazing practices. The landform is flat with the exception of Thompson Creek which represents a dryland swale showing signs of erosion and infill from neighbouring farming practices.

Windamere Estate is adjacent to the site to the west. Windamere has a rural residential dwelling and olive grove. Similarly a property on Buckland Road which bounds the south eastern side of the site has associated olive groves.
4. Potential Visual Effects
(Refer to Appendix B for map of photographic survey Waypoint locations)

Waypoint 001

Travelling to the north along Port Wakefield Road the proposal will not cause any visual intrusion until the intersection of Park Road. At the intersection of Park Road and Port Wakefield Road the existing linear infrastructure of the road corridor and transmission lines provide a scaled reference to urban development. A residential dwelling and orchard are present to the north-west of the intersection. The transmission line aligned to Park Road is described as an 11kv line with vertical scale of approximately 6-10 metres (Figure 6). The pylons form a repetitive visual element to the road corridor. The proposal includes replacement of the 11kv and co-location to a 66kv aligned to the southern verge of Park Road. It is predicted that this will provide a proportionate increase in the visual affects along this road corridor, however this will be contained to a local visual effect. The proposed 66kv transmission line will be twice the vertical scale of the existing pylons. (Refer to Appendix C & D for transmission line alignment and photomontage)

Figure 6 View to the west of Park Rd and Port Wakefield Rd intersection

Two existing transmission lines are aligned parallel to the east of Port Wakefield Road. The scale of the 66kv dominates the skyline with the 11kv line forming a more proportionate scale to scattered vegetation within the verge. The vertical scale is supplement to post top road lighting which is predominantly located adjacent to road intersections.

From this viewpoint future residential areas will not be seen due to the existing orchard of irrigated fruit trees to the property boundary screening views towards the north. The horticultural practice (Lewis Horticulture) extends to the west with associated packing sheds and greenhouses for approximately 500 metres.
To the south of Park Road is the State Shooting Park which is fenced and planted with dense plantings of mallee species to the road verge. There will be limited views of the proposal from the shooting park as the range is predominantly in a north south orientation. Furthermore, to the north of Park Road there is some localised earth mounding which provides a screen to views further north towards the site (Figure 8).

Adjacent to the State Shooting Park is an isolated telecommunication tower which provides a vertical visual element and landmark within the local landscape zone, from distances of 1-2km to the north (Figure 9). The tower provides reference to an urban context.
Figure 8 Left hand side is the State Shooting Park; to the left is localised earth mounding preventing views towards the site.

Figure 9 View of telecommunication tower from just west of Waypoint 001.
Waypoint 002

Towards the intersection of Park Road and Tozer Road views are more expansive. In particular, views to the north are across low lying, heavily grazed landscapes with scattered farming equipment and built form associated to horticultural practices (Figure 10). The Gawler River is a dominant visual element to the distant background, forming the extent of the field of view. The foreground to mid ground landscape (0-3km) is uniform in character with limited visual interest. The amenity value would be classified as low. From this viewpoint the proposal will considerably alter the rural/grazed landscape character to an urban context. The master plan illustrates the extension of the MOSS vegetation corridor to the south west of the site. The open space will be intertwined with mixed use precincts. Depending on the extent of landscape vegetation implemented in the scheme the visual amenity may be improved.

Figure 10 Views to the north with localised earthworks adjacent to Park Road.

Waypoint 003

This viewpoint is located further north of Waypoint 002 along Buckland Road. Buckland Road forms a boundary to the site. The view represents the character of the landscape from the residential dwelling (Figure 11). The view towards the site will be significantly altered by the proposals urban elements. The current view is described as a uniform dry land scene with limited vertical scale to the foreground within the paddocks to the west. The presence of some scattered mallee scrub and eroded swale and mounding to the verge of Buckland Road does provide some screening, however the landscape amenity value would be considered low (Figure 12).
Figure 11 Residential dwelling on Buckland Road.

Figure 12 View towards the west from the residence.
Waypoint 004

The visual effect from this viewpoint is similar to Waypoint 003. The landscape to the south of the site is uniform and heavily degraded with limited value. Views to the south east from the site are towards the State Shooting Park, telecommunications tower and the Adelaide Hills to the background (Figure 13).

Figure 13 Views from the site across arable land towards the State Shooting Park

Waypoint 005

Views from within the southern quadrant of the site represent the heavily degraded agricultural landscape with expansive views. Introduced plant species and saltbush occupy a percentage of the groundcover treatments. The industrial fabric of Port Adelaide is a distant backdrop. The landscape value would be classified as low (Figure 14). The proposal’s master plan illustrates an open space vegetated corridor within this location which would provide an improvement to the amenity of the landscape, with the additional benefit of filtering views towards the urban fabric.
Waypoint 006

Further to the west is Waypoint 006. This viewpoint is located at the western corner of the site and provides views towards the Gulf St Vincent. The visual character is similar to the surrounding degraded land use; however there are some definitive variances with the salt pans and ocean to the background (Figure 15). The presence of water bodies improves the visual quality of the landscape views in this direction. The proposal will have a slight to moderate effect on this view, with the urban residential form encasing and screening views. However the proposal will mainly be located to the north-west which will separate the visual receptor and coastal view from the dominance of the proposed urban context. The transitional zone between the new urban areas and the salt pans will be an important consideration in the management of this existing view.
Waypoint 007

This viewpoint is located to the north east of the site at the intersection of Port Wakefield Road and Port Gawler Road. The view towards the site is screened by the dense vegetation corridor associated to the Gawler River. There will be limited to no visual effects associated with the proposal from this location. The landscape character of this locality possesses slightly more aesthetic value due to the degree of existing remnant vegetation and layered visual complexity which provide a sense of mystery. The scattered Eucalypts to paddocks in the foreground is offset with the Gawler River vegetation belt to the background. The retention of the Gawler River vegetation corridor will provide a significant screen between the proposal and locations to the north east, preventing any potential visual effects from this location (Figure 16).
Figure 16 Views towards the site from the intersection of Port Wakefield Rd and Port Gawler Rd.

Figure 17 Views towards the site with intensively harvested land to the foreground.
Waypoint 008

Further to the east of Port Gawler is Waypoint 008. This viewpoint is characterised by low lying saltbush and samphire and water bodies with the Gawler River a distant backdrop. Views to the north of this viewpoint are of salt pans which represent a low lying water body with man made levy banks (Figure 18). Buckland Park Lake provides a visual reference to the adjacent salt pans. There will be no visual impact to the character of this locality. Buckland Park Lake represents a wetland of visual interest. This landscape character zone provides a medium to high level of amenity. The natural forms of the water bodies, coupled with the presence of wildlife provides scenic amenity (Figure 19). Due to the extent and density of vegetation associated to the water bodies and Gawler River, the proposal will have no visual impact from this locality.

*Figure 18 Views of salt pans to the north*
Waypoint 009

The viewpoint is located at the entrance to the Port Gawler Conservation Park. The landscape character towards the site is the same as Waypoint 008. Adjacent to the south of this viewpoint is a coastal stretch of mangroves which provide a dense canopy structure containing views to the local estuaries. This area is of environmental significance. There will be no visual effects of the proposal from this area.

Waypoint 010

This viewpoint is located on Port Wakefield Rd with views into the site. The existing character is open with extensive horticulture. The character in this locality will dramatically change with the creation of the district centre included in the proposals master plan (Figure 20). Furthermore, it is proposed that a major intersection upgrade will be required to the north, creating a new visual element. An existing substation is located adjacent to the intersection location and is screened to a degree by roadside vegetation (Figure 21).
Figure 20 View towards proposed district centre location.

Figure 21 Views to the north along Port Wakefield Rd. The substation is located to the right.
Waypoint 011

The Gawler River corridor is a significant visual element in the regional landscape. It traverses across the landscape in an east westerly direction forming the northern boundary to the site. The river corridor is characterised by large remnant Eucalypt trees which provide a high level of amenity. The width of the corridor varies but is an average of 20-30m. The river is ephemeral and at the time of the field assessment there, was no water flowing. The river itself is described as a steeply incised land form which has signs of erosion. The corridors understorey is heavily infested with weeds. The natural aesthetic value of this area is significant to the local amenity. Port Wakefield Rd crosses over the Gawler River creating a visual gateway to the site. Consequently views of the proposal will only be witnessed from the south of the river. The proposal includes retention of the Gawler River corridor, and its progressive rehabilitation will contribute to an improvement of the regions visual amenity.

Figure 22 View from the north along the river corridor towards the proposed site.

Waypoint 12

To the north of Virginia is a cluster of rural residential dwellings with associated horticultural practices. The dwellings are typically of masonry construction with open views to surrounding horticultural land (Figure 23 & 24). Port Wakefield Road forms a dominant visual element with the frequency of traffic creating a dynamic effect. From this viewpoint there will be some moderate visual effects created by urban development to the north east of the proposal.
Figure 23 Typical view towards the site from rural/residential dwellings

Figure 24 Rural residential dwelling vernacular with views orientated towards the site.
Waypoint 13

Views within the township of Virginia are contained along Old Port Wakefield Road which represents a small commercial/ retail precinct. The streetscape is described by avenue planting of trees and on street parallel parking, traffic management devices and services such as an 11kv transmission line which creates an urban context (Figure 25). There will be no visual effects of the proposal from this locality.

Figure 25 Virginia commercial/ retail precinct

Waypoint 14

The northern urban fringe of Virginia is characterised by a school, community centre and associated recreational open space (oval and tennis courts). This area is screened to the north and west by a dense shelter belt planting of Pinus species. Further to the north views become more panoramic across irrigated horticultural land (Figure 26). The site is located approximately 1.5km to the north east. Views towards the site will be glimpsed with foreground to mid ground vegetation filtering and screening.
Figure 26 Views across horticultural practices towards the site.
5. Conclusions

The Buckland Park proposal represents a significant change to the existing land use. The dominant character of the landscape is horticultural and grazing practices, the amenity of which is relatively low.

The uniformity and intensity of the horticulture degrades the visual landscape. Expansive views to the south limit a sense of scale and visual interest. The lack of topographic variance also attributes to the lack of visual attraction.

Existing road corridors (Port Wakefield Rd) and the proposed expressway (NEXY), introduce infrastructural elements and visual corridors which are transient by nature. As a result the landscape is predominantly viewed through the eyes of a moving occupant.

Urban populations are located approximately 2-3km to the east at Virginia, a small township orientated around a small main street retail, commercial precinct and intensive horticultural practices to the east and west. There will be limited visual effect or character change to the township of Virginia. There will be moderate effect to the northern urban fringe with isolated rural residential dwellings observing a degree of change associated to the proposal.

The major visual element in the landscape region is the Gawler River corridor. This distinctive element provides a shelter belt of vegetation to the northern boundary of the site. Its retention and rehabilitation as part of the proposal will provide screening between the proposal and viewpoints to the north.

Views of the proposal will principally be short distant and from the south to south west, indicating that the extent of the visual effect is limited to a contained viewshed. Consequently the visual effect of the proposal would be seen by a narrow percent of the local community with no identified significant views adversely affected.
Appendix A:
Existing Landuse plan
Visual Assessment
BUCKLAND PARK
25 March 2009, ref 07315_Final_rev1
Appendix B:
Photographic Survey
Appendix C:
Transmission line alignment
Appendix D:
Photomontage of proposed transmission line