Government of **Western Australia**
Development Assessment Panels

Southern Joint Development Assessment Panel Agenda

Meeting Date and Time: 10 August 2015; 9:30am
Meeting Number: SJDAP/1
Meeting Venue: Department of Planning
140 William Street, Perth

Attendance

DAP Members

Ms Stacey Towne (Presiding Member)
Ms Sheryl Chaffer (Deputy Presiding Member)
Mr Anthony Casella (Specialist Member)
Cr Veronica Fleay (Local Government Member, Shire of Kojonup)
Cr Ian Pedler (Local Government Member, Shire of Kojonup)
Cr Peter McCleery (Local Government Member, Shire of Capel)
Cr Greg Norton (Local Government Member, Shire of Capel)

Officers in attendance

Mr Phil Shephard (Shire of Kojonup)
Ms Michelle Dennis (Shire of Kojonup)
Mr Kim Muste (Shire of Capel)

Department of Planning Minute Secretary

Mr Sean O'Connor

Applicant/s and Submitters

Mr Torben Soerensen (GD Pork Holdings)
Mr Andre van der Westhuizen (McDonald's Australia Ltd)
Mr Simon Wilkes (Urbis)
Ms Megan Gammon (Urbis)
Mr Ray Haeren (Urbis)

Members of the Public

Nil

1. Declaration of Opening

The Presiding Member declares the meeting open and acknowledges the past and present traditional owners and custodians of the land on which the meeting is being held.

2. Apologies

Nil

3. Members on Leave of Absence

Nil

4. Noting of Minutes

Note the Minutes of the South-West JDAP meeting No.19 held on the 5 May 2015 and the Great Southern JDAP meeting No.15 held 16 June 2015.

5. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

6. Disclosure of Interests

Nil

7. Deputations and Presentations

7.1 Mr Andre van der Westhuizen (McDonald's Australia Ltd) presenting for the application at Item 9.1. The presentation will support the recommendation for approval.

8. Form 1 - Responsible Authority Reports – DAP Application/s

8.1

Property Location:	Lot 10 Crapella Road, Boscabel
Application Details:	Piggery expansion
Applicant:	Torben Soerensen – Managing Director GD Pork Holdings Pty Ltd
Owner:	GD Pork Holdings Pty Ltd
Responsible authority:	Shire of Kojonup
DoP File No:	DAP/15/00829

9. Form 2 – Responsible Authority Reports - Amending or cancelling DAP development approval

9.1

Property Location:	Lot 6023 Norton Promenade, Dalyellup (Previously Lot 9028 prior to subdivision clearance)
Application Details:	Take-Away Food Outlet
Applicant:	McDonalds Australia Limited C/o Urbis
Owner:	Dalyellup Beach Pty Ltd
Responsible authority:	Shire of Capel
DoP File No:	DAP/15/00773

10. Appeals to the State Administrative Tribunal

11. General Business / Meeting Closure

Minutes of the South-West Joint Development Assessment Panel

Meeting Date and Time: 5 May 2015; 1:30pm
Meeting Number: SWJDAP/19
Meeting Venue: Department of Planning
140 William Street, Perth

Attendance

DAP Members

Mr Ian Birch (Presiding Member)
Ms Stacey Towne (Deputy Presiding Member)
Mr John Ellis (Specialist Member)
Cr Greg Norton (Local Government Member, Shire of Capel) *via teleconference*
Cr Siddhartha Baxi (Local Government Member, Shire of Capel) *via teleconference*

Officers in attendance

Mr Kim Muste (Shire of Capel) *via teleconference*

Department of Planning Minute Secretary

Mr Sean O'Connor

Applicants and Submitters

Mr Simon Wilkes (Urbis)
Ms Marieka Van Den Berg (Urbis)
Mr Simon Woodacre (McDonalds Australia Limited)
Mr Andre' Van Der Westhuizen (McDonalds Australia Limited)

Members of the Public

Nil

1. Declaration of Opening

The Presiding Member, Mr Ian Birch declared the meeting open at 1:44pm on 5 May 2015 and acknowledged the past and present traditional owners and custodians of the land on which the meeting was being held.

The Presiding Member announced the meeting would be run in accordance with the *Development* Assessment *Panel Standing Orders 2012* under the *Planning and Development (Development Assessment Panels) Regulations 2011*.

The Presiding Member advised that the meeting is being audio recorded in accordance with Section 5.16 of the Standing Orders 2012; No Recording of Meeting, which states: *'A person must not use any electronic, visual or audio*

recording device or instrument to record the proceedings of the DAP meeting unless the Presiding Member has given permission to do so.' The Presiding Member granted permission for the minute taker to record proceedings for the purpose of the minutes only.

2. Apologies

Nil

3. Members on Leave of absence

Nil

4. Noting of minutes

Minutes of the South-West JDAP meeting No.18 held on 19 March 2015 were noted by DAP members.

5. Declaration of Due Consideration

All members declared that they had duly considered the documents.

6. Disclosure of interests

Nil

7. Deputations and presentations

7.1 Mr Simon Woodacre (McDonald's Australia Ltd) presenting for the application at Item 8.1. The presentation will support the Shire of Capel's recommendation and available to answer questions from the panel. Mr Woodacre together with the other attendees responded to various questions from the panel members.

8. Form 1 - Responsible Authority Reports – DAP Application/s

8.1

Property Location:	Lot 9028 Norton Promenade, Dalyellup
Application Details:	Take-Away Food Outlet
Applicant:	McDonalds Australia Limited C/o Urbis
Owner:	Dalyellup Beach Pty Ltd
Responsible authority:	Shire of Capel
DoP File No:	DAP/15/00723

REPORT RECOMMENDATION / PRIMARY MOTION

Moved by: Ms Towne **Seconded by:** Mr Ellis

With the agreement of the mover and seconder, a correction was made to accompanying plans 'DA02 (amended as received 2nd April 2015)' to read; 'DA02 - Revision C (amended as received 2nd April 2015).'

That the South-West Joint Development Assessment Panel resolves to:

Approve DAP Application reference No. 15/00723 and accompanying plans DA02 - Revision C (amended as received 2nd April 2015), DA03, DA04, DA05, DA06, DA07 in accordance with Clauses 8.3 and 8.10.1 of the Shire of Capel Town Planning Scheme No.7, subject to the following conditions:

General Conditions:

1. This approval is for Planning Consent only and is valid for two (2) years from the date of the decision. If the approved development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.

2. The approved development shall be undertaken and fully implemented in accordance with the approved plan(s).

3. A separate application for Planning Consent for Advertising signage is required.

Prior to Commencement of Development Conditions:

4. Before development commences a shared access way and crossover (corresponding to Internal Road #1 as notated on the approved plans DA2) shall be designed, approved by the Shire of Capel, constructed and covered by a registered Easement in Gross on the certificate of title. The design and location of the shared access way and crossover shall include finished ground levels and drainage that demonstrate suitable shared access arrangements and vehicle manoeuvrability for the development.

5. A site plan showing finished ground levels, pavement levels and finished floor levels is to be submitted for assessment and approval by the Shire Capel prior to submission of a Building Permit application. The finished ground levels shall conform to the overall earthworks design levels for the subdivision by which proposed Lot 6023 is to be created.

6. A Landscape Plan is to be submitted for assessment and approval by the Shire of Capel prior to commencement of development. The Landscaping Plan is to be implemented and maintained for the life of the development and shall include:
    - A paved pedestrian path between the northern façade of the building and car parking bays.
    - A paved pedestrian path within the landscaped area on the western boundary.
    - Landscaping of the site and adjoining road verge on Tiffany Centre between the property boundary and existing pedestrian path shall be consistent with the Dalyellup District Centre Landscape Master Plan.

7. A schedule of materials colours and finishes is to be submitted with the Building Permit application for assessment and approval by the Shire of Capel.

8. A Stormwater Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

9. A Daily Operation Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application, and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

10. A Construction Management Plan is be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

11. All off-street parking and access thereto shall comply with Australian Standard 2890.1 to the satisfaction of the Shire of Capel. Construction plans shall be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

Prior to Occupation/Use of Development Conditions:

12. A Waste Management and Recycling Plan is to be submitted for assessment and approval prior to occupation of the premises and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

13. The installation of outdoor lighting shall be in accordance with the requirements of the Australian Standard AS 4282-1997: 'Control of the Obtrusive Effects of Outdoor Lighting".

14. The provision of 38 car parking bays (inclusive of two (2) waiting car parking bays and one (1) disabled car parking bay) and vehicle manoeuvring areas being constructed, drained, marked out and maintained to the satisfaction of the Shire of Capel for the life of the development. Where parking spaces adjoin pedestrian paths wheel stops shall be provided.

15. Bicycle parking bays at the rate of 1 per 200m2 GLA designed to comply with Australian Standard 2890.3 are to be provided on site clear of any vehicular carriageways. Details of the bicycle parking shall be submitted to the Shire of Capel for assessment and approval prior to construction commencing.

Advice Notes:

1. The design and construction of the required shared access way with Easement in Gross is required to provide vehicular access to the development site. Part Lot 9028 is subject to conditional subdivision approval WAPC Ref: 149334 where the subdivider is proposed to construct the required shared access way with Easements in Gross and upon doing so the Planning Consent condition would be fulfilled.

2. The Landscape Plan is to detail the following:

    a. Those areas to be reticulated.
    b. Verge Treatments.
    c. Species Types and numbers.
    d. Lighting to pathways, communal space and parking areas.
    e. Outdoor furniture, bin enclosures and pavement treatments.
    f. Measures to be taken to ensure that trees and shrubs planted will thrive and be maintained in a healthy state for the life of the development.
    g. Pedestrian path linkages.

3. The Stormwater Management Plan is to detail the following:

    a. Catchments, flow paths, water quality improvement measures, area calculations and design criteria demonstrating that all stormwater from a 1year ARI can be retained on site and infiltrated.
    b. Overflows from soak wells and/ or rain gardens are to enter the road pipe network by a direct piped lot connection with a capacity for a 10year ARI.
    c. Events beyond a 10year ARI are to be directed to the road by overland flow.
    d. Mosquito breeding control measures where stormwater infrastructure is likely to result in standing water that will provide breeding habitat.

4. Stormwater drainage levels should have regard to the invert level of a pipe connection for stormwater to be directed to the public road drainage pipe network. The Stormwater Management Plan should be in accordance with Shire of Capel information sheet “Specifications for Stormwater” and incorporate the principles and guidelines set out in the WAPC Guidelines for Better Urban Water Management and the Department of Water Stormwater Management Manual for Western Australia.

5. Proposed Lots 6020, 6021, 6022 and 6023 have been supplied with a 225mm diameter pipe connection to the Shire’s stormwater system. The 1st 10mm of stormwater flow must be detained onsite with the remainder flowing to the Shire drainage system via a Gross Pollutant Trap. For proposed Lot 6023 the minimum height of overland flows exiting the site must be 7.64 AHD.

6. The Construction Management Plan is to detail how the following matters are to be managed:

    a. Access to and from the site;
    b. The delivery of materials and equipment to the site;
    c. The storage of materials and equipment on the site;
    d. Other matters likely to impact on surrounding properties;
    e. The parking arrangements for contractors and subcontractors;
    f. Management of construction waste; and
    g. Dust mitigation.

7. The Waste Management Plan is to address the following:

    a. The location of bin storage areas and bin collection areas;
    b. The number, volume and type of bins, and the type of waste to be placed in the bins. This is to include measures that will support recycling:
    c. Management of the bins and the bin storage areas, including cleaning, rotation, moving bins to and from the bin collection areas and actions to contain and clean any spillage of waste or other materials; and
    d. Frequency of bin collections.

8. The carpark standards applied to proposed Lots 6020, 6021, 6022 and 6023 have been assessed as requiring user class classification 3A in accordance with Australian Standard AS/NZS 2890.1. The Class 3A option of 2.6m x 5.4m bays with aisle width of 6.6m has been applied to the proposed lots and subject land.

9. In relation to signage:

    a. Requirements for an application for approval of Advertising signage are set out in Clause 7.12 of Town Planning Scheme No 7 and the Shire of Capel Signs Local Law 2001.
    b. Signage is to comply with the Dalyellup District Centre Signage Strategy and Dalyellup District Centre Detailed Area Plan No.1.

10. In relation to Building:

    a. Compliance with the Building Act 2011, Building Regulations 2012 and the Building Code of Australia will be required. Advice should be sought from a registered building surveying contractor in order to obtain the appropriate certificates for building permit and occupancy permit applications.

    b. If the project requires Fire Hydrants, the sites water pressure and flow test results will need to be established at the point of proposed water main access.

    c. AS 2419 covers installation details and minimum required pressure and flow rates for fire hydrants. If minimum requirements cannot be obtained at the point of supply, the design of pumps and tanks would need to be considered.

11. In relation to Environmental Health Advice:

    a. Compliance with the AS 4674-2004 will be required to meet the requirements of the National Food Safety Standards 3.2.3.
    b. Compliance with the Environmental Protection (Noise) Regulations 1997 is required.
    c. Contact Council's Health Services to obtain the Food Act 2008 Food Business Notification/Registration Form.

12. A Sustainability Implementation and Outcomes Plan is in the process of being prepared for the Dalyellup District Centre as a requirement of the Dalyellup District Centre Outline Development Plan. This plan will encourage landowners of commercial premises, business proprietors and/or tenants to consider and implement a range of sustainability initiatives and practices. The applicant is encouraged to consider sustainable development initiatives including the Sustainability Implementation and Outcomes Plan when it is available. Notwithstanding this, the applicants are invited to demonstrate sustainability measures that will be incorporated into the project.

The applicants are encouraged to provide a number of bicycle parking bays in excess of Australian Standard 2890.3

AMENDING MOTION

Moved by: Ms Towne **Seconded by:** Cr Baxi

To amend condition 3 to read:

3. This approval does not include proposed signage. A separate application for Planning Consent for Advertising signage is required.

REASON: For clarity.

The Amending Motion was put and CARRIED UNANIMOUSLY.

AMENDING MOTION

Moved by: Ms Towne **Seconded by:** Mr Birch

To amend the heading of Conditions 4 to 11 to read:

Prior to Commencement of Development or Application for Building Permit Conditions:

REASON: For clarity.

The Amending Motion was put and CARRIED UNANIMOUSLY.

AMENDING MOTION

Moved by: Ms Towne **Seconded by:** Mr Ellis

To amend condition 4 to read:

4. Before any other development commences a shared access way and crossover (corresponding to Internal Road #1 as notated on the approved plans DA2) shall be designed, approved by the Shire of Capel, constructed and covered by a registered Easement in Gross on the certificate of title. The design and location of the shared access way and crossover shall include finished ground levels and drainage that demonstrate suitable shared access arrangements and vehicle manoeuvrability for the development.

REASON: For clarity.

The Amending Motion was put and LOST (2 / 3).
For: Ms Towne and Mr Ellis
Against: Mr Birch, Cr Baxi and Cr Baxi

AMENDING MOTION

Moved by: Ms Towne **Seconded by:** Mr Birch

To amend condition 15 to read:

15. A minimum of 4 bicycle parking bays at the rate of 1 per 200m2 GLA designed to comply with Australian Standard 2890.3 are to be provided on site clear of any vehicular carriageways. Details of the bicycle parking shall be submitted to the Shire of Capel for assessment and approval prior to construction commencing.

REASON: For clarity.

The Amending Motion was put and CARRIED UNANIMOUSLY.

AMENDING MOTION

Moved by: Ms Towne **Seconded by:** Mr Birch

To amend Advice Note 10(c) to read:

c. AS 2419 covers installation details and minimum required pressure and flow rates for fire hydrants. If minimum requirements cannot be obtained at the point of supply, the design of pumps and tanks would need to be considered. This may require further planning consent.

REASON: For clarity that installation of tanks would require planning consent.

The Amending Motion was put and CARRIED UNANIMOUSLY.

PRIMARY MOTION (AS AMENDED)

That the South-West Joint Development Assessment Panel resolves to:

Approve DAP Application reference No. 15/00723 and accompanying plans DA02 - Revision C (amended as received 2nd April 2015), DA03, DA04, DA05, DA06, DA07 in accordance with Clauses 8.3 and 8.10.1 of the Shire of Capel Town Planning Scheme No.7, subject to the following conditions:

General Conditions:

1. This approval is for Planning Consent only and is valid for two (2) years from the date of the decision. If the approved development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.

2. The approved development shall be undertaken and fully implemented in accordance with the approved plan(s).

3. This approval does not include proposed signage. A separate application for Planning Consent for Advertising signage is required.

Prior to Commencement of Development or Application for Building Permit Conditions:

4. Before development commences a shared access way and crossover (corresponding to Internal Road #1 as notated on the approved plans DA2) shall be designed, approved by the Shire of Capel, constructed and covered by a registered Easement in Gross on the certificate of title. The design and location of the shared access way and crossover shall include finished ground levels and drainage that demonstrate suitable shared access arrangements and vehicle manoeuvrability for the development.

5. A site plan showing finished ground levels, pavement levels and finished floor levels is to be submitted for assessment and approval by the Shire Capel prior to submission of a Building Permit application. The finished ground levels shall conform to the overall earthworks design levels for the subdivision by which proposed Lot 6023 is to be created.

6. A Landscape Plan is to be submitted for assessment and approval by the Shire of Capel prior to commencement of development. The Landscaping Plan is to be implemented and maintained for the life of the development and shall include:
    - A paved pedestrian path between the northern façade of the building and car parking bays.
    - A paved pedestrian path within the landscaped area on the western boundary.
    - Landscaping of the site and adjoining road verge on Tiffany Centre between the property boundary and existing pedestrian path shall be consistent with the Dalyellup District Centre Landscape Master Plan.

7. A schedule of materials colours and finishes is to be submitted with the Building Permit application for assessment and approval by the Shire of Capel.

8. A Stormwater Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

9. A Daily Operation Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application, and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

10. A Construction Management Plan is be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

11. All off-street parking and access thereto shall comply with Australian Standard 2890.1 to the satisfaction of the Shire of Capel. Construction plans shall be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

Prior to Occupation/Use of Development Conditions:

12. A Waste Management and Recycling Plan is to be submitted for assessment and approval prior to occupation of the premises and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

13. The installation of outdoor lighting shall be in accordance with the requirements of the Australian Standard AS 4282-1997: 'Control of the Obtrusive Effects of Outdoor Lighting".

14. The provision of 38 car parking bays (inclusive of two (2) waiting car parking bays and one (1) disabled car parking bay) and vehicle manoeuvring areas being constructed, drained, marked out and maintained to the satisfaction of the Shire of Capel for the life of the development. Where parking spaces adjoin pedestrian paths wheel stops shall be provided.

15. A minimum of 4 bicycle parking bays at the rate of 1 per 200m2 GLA designed to comply with Australian Standard 2890.3 are to be provided on site clear of any vehicular carriageways. Details of the bicycle parking shall be submitted to the Shire of Capel for assessment and approval prior to construction commencing.

Advice Notes:

1. The design and construction of the required shared access way with Easement in Gross is required to provide vehicular access to the development site. Part Lot 9028 is subject to conditional subdivision approval WAPC Ref: 149334 where the subdivider is proposed to construct the required shared access way with Easements in Gross and upon doing so the Planning Consent condition would be fulfilled.

2. The Landscape Plan is to detail the following:

    a. Those areas to be reticulated.
    b. Verge Treatments.
    c. Species Types and numbers.
    d. Lighting to pathways, communal space and parking areas.
    e. Outdoor furniture, bin enclosures and pavement treatments.
    f. Measures to be taken to ensure that trees and shrubs planted will thrive and be maintained in a healthy state for the life of the development.
    g. Pedestrian path linkages.

3. The Stormwater Management Plan is to detail the following:

    a. Catchments, flow paths, water quality improvement measures, area calculations and design criteria demonstrating that all stormwater from a 1year ARI can be retained on site and infiltrated.
    b. Overflows from soak wells and/ or rain gardens are to enter the road pipe network by a direct piped lot connection with a capacity for a 10year ARI.
    c. Events beyond a 10year ARI are to be directed to the road by overland flow.
    d. Mosquito breeding control measures where stormwater infrastructure is likely to result in standing water that will provide breeding habitat.

4. Stormwater drainage levels should have regard to the invert level of a pipe connection for stormwater to be directed to the public road drainage pipe network. The Stormwater Management Plan should be in accordance with Shire of Capel information sheet “Specifications for Stormwater” and incorporate the principles and guidelines set out in the WAPC Guidelines for Better Urban Water Management and the Department of Water Stormwater Management Manual for Western Australia.

5. Proposed Lots 6020, 6021, 6022 and 6023 have been supplied with a 225mm diameter pipe connection to the Shire’s stormwater system. The 1st 10mm of stormwater flow must be detained onsite with the remainder flowing to the Shire drainage system via a Gross Pollutant Trap. For proposed Lot 6023 the minimum height of overland flows exiting the site must be 7.64 AHD.

6. The Construction Management Plan is to detail how the following matters are to be managed:

    a. Access to and from the site;
    b. The delivery of materials and equipment to the site;
    c. The storage of materials and equipment on the site;
    d. Other matters likely to impact on surrounding properties;
    e. The parking arrangements for contractors and subcontractors;
    f. Management of construction waste; and
    g. Dust mitigation.

7. The Waste Management Plan is to address the following:

    a. The location of bin storage areas and bin collection areas;
    b. The number, volume and type of bins, and the type of waste to be placed in the bins. This is to include measures that will support recycling:
    c. Management of the bins and the bin storage areas, including cleaning, rotation, moving bins to and from the bin collection areas and actions to contain and clean any spillage of waste or other materials; and
    d. Frequency of bin collections.

8. The carpark standards applied to proposed Lots 6020, 6021, 6022 and 6023 have been assessed as requiring user class classification 3A in accordance with Australian Standard AS/NZS 2890.1. The Class 3A option of 2.6m x 5.4m bays with aisle width of 6.6m has been applied to the proposed lots and subject land.

9. In relation to signage:

    a. Requirements for an application for approval of Advertising signage are set out in Clause 7.12 of Town Planning Scheme No 7 and the Shire of Capel Signs Local Law 2001.
    b. Signage is to comply with the Dalyellup District Centre Signage Strategy and Dalyellup District Centre Detailed Area Plan No.1.

10. In relation to Building:

    a. Compliance with the Building Act 2011, Building Regulations 2012 and the Building Code of Australia will be required. Advice should be sought from a registered building surveying contractor in order to obtain the appropriate certificates for building permit and occupancy permit applications.

    b. If the project requires Fire Hydrants, the sites water pressure and flow test results will need to be established at the point of proposed water main access.

    c. AS 2419 covers installation details and minimum required pressure and flow rates for fire hydrants. If minimum requirements cannot be obtained at the point of supply, the design of pumps and tanks would need to be considered.

11. In relation to Environmental Health Advice:

    a. Compliance with the AS 4674-2004 will be required to meet the requirements of the National Food Safety Standards 3.2.3.
    b. Compliance with the Environmental Protection (Noise) Regulations 1997 is required.
    c. Contact Council's Health Services to obtain the Food Act 2008 Food Business Notification/Registration Form.

12. A Sustainability Implementation and Outcomes Plan is in the process of being prepared for the Dalyellup District Centre as a requirement of the Dalyellup District Centre Outline Development Plan. This plan will encourage landowners of commercial premises, business proprietors and/or tenants to consider and implement a range of sustainability initiatives and practices. The applicant is encouraged to consider sustainable development initiatives including the Sustainability Implementation and Outcomes Plan when it is available. Notwithstanding this, the applicants are invited to demonstrate sustainability measures that will be incorporated into the project.

The applicants are encouraged to provide a number of bicycle parking bays in excess of Australian Standard 2890.3

The Primary Motion (as amended) was put and CARRIED UNANIMOUSLY.

9. Form 2 – Responsible Authority Reports - Amending or cancelling DAP development approval

Nil

10. Appeals to the State Administrative Tribunal

Nil

11. General Business / Meeting Close

There being no further business, the presiding member declared the meeting closed at 2:16pm.

Minutes of the Great Southern Joint Development Assessment Panel

Meeting Date and Time: Tuesday 16 June 2015; 9.00am
Meeting Number: GSJDAP/15
Meeting Venue: City of Albany Council Chambers
102 North Road, Yakamia

Attendance

DAP Members

Mrs Stacey Towne (Acting Presiding Member)
Mr Ian Birch (Alternative Deputy Presiding Member)
Mr Patrick Dick (Specialist Member)
Mayor Dennis Wellington (Local Government Member, City of Albany) *via teleconference*

Officers in attendance

Ms Ivin Lim (Department of Planning)
Mr Tom Wenbourne (City of Albany)
Mr Jan Van Der Mescht (City of Albany)

Local Government Minute Secretary

Ms Jennifer Cobbold (City of Albany)

Applicants and Submitters

Mr Joe Algeri (Altus Planning & Appeals) *via teleconference*
Mr Sam Cuscuna (Cuscana Nominees Pty Ltd)

Members of the Public

Six Members of the Public were in attendance.

1. Declaration of Opening

Due to the absence of the Presiding Member and in accordance with section 2.4.1 of the Standing Orders 2012, the Deputy Presiding Member Ms Stacey Towne took the chair and declared the meeting open at 9.15am on 16 June 2015. The Deputy Presiding Member acknowledged the past and present traditional owners and custodians of the land on which the meeting was being held.

The Deputy Presiding Member announced the meeting would be run in accordance with the *Development* Assessment *Panel Standing Orders 2012* under the *Planning and Development (Development Assessment Panels) Regulations 2011*.

The Deputy Presiding Member advised that in accordance with Section 5.16 of the Standing Orders 2012; *'A person must not use any electronic, visual or audio recording device or instrument to record the proceedings of the DAP meeting unless the Presiding Member has given permission to do so.'* The Deputy Presiding Member granted permission for the minute taker to record proceedings for the purpose of the minutes only.

2. Apologies

Mr David Gray (Presiding Member)
Ms Carolyn Dowling (Local Government Member, City of Albany)

3. Members on Leave of absence

Nil

4. Noting of minutes

Minutes of the Great Southern JDAP meeting No.14 held on 21 November 2014 were noted by DAP members.

5. Declaration of Due Consideration

All members declared that they had duly considered the documents.

6. Disclosure of interests

Member/Officer	Report Item	Nature of Interest
Mr David Gray	10.1	Indirect Pecuniary
Mr Terry Tyzack	10.1	Indirect Pecuniary

Mr Gray and Mr Tyzack hold shares in Woolworths which is a tenant for the proposed application at Item 10.1.

In accordance with section 6.3.1 of the Standing Orders 2012, the Deputy Presiding Member determined that the members listed above, who had disclosed a Pecuniary Interest, would not be permitted to participate in the discussion or voting on the items.

In accordance with Section 2.4.6 of the Code of Conduct 2011, DAP members participated in a site visit for the application at Item 10.1 prior to the DAP Meeting.

7. Deputations and presentations

7.1 Mr Joe Algeri (Altus Planning & Appeals) addressed the DAP for the application at Item 10.1. Mr Joe Algeri answered questions from the panel.

The presentation at Item 7.1 was heard prior to the application at Item 10.1

7.2 Mr Dominic Cuscuna (Cuscuna Nominees Pty Ltd) addressed the DAP for the application at Item 10.1. Mr Dominic Cuscuna answered questions from the panel.

The presentation at Item 7.2 was heard prior to the application at Item 10.1

8. Form 1 - Responsible Authority Reports – DAP Application

Nil

9. Form 2 – Responsible Authority Reports - Amending or cancelling DAP development approval

Nil

10. Appeals to the State Administrative Tribunal

10.1

Property Location:	206 (Lot 508) Lower King Road, Bayonet Head, WA 6330
Application Details:	Retrospective Application for Shop (Shopping Centre – Supermarket and Specialty Shops)
Applicant:	Mr Sam Cuscuna
Owner:	Cuscuna Nominees Pty Ltd
Responsible authority:	City of Albany
DoP File No:	DAP/14/00648

REPORT RECOMMENDATION/PRIMARY MOTION

Moved by: Mr I Birch **Seconded by:** Mayor D Wellington

With the agreement of the mover and seconder, the first line of the recommendation was amended from "That the Great Southern Joint Development Assessment Panel resolves to:" to "That the Great Southern Joint Develoment Assessment Panel, pursuant to section 31 of the State Adminsitrative Tribunal Act 2004 in respect of SAT application DR 439 of 2014, resolves to:" in order to comply with administrative requirements.

That the Great Southern Joint Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal* Act 2004 in respect of SAT application DR 439 of 2014, resolves to:

Approve revisions to DAP Application reference DAP/14/00648 and accompanying plans Drawing Nos. A00.002 Rev.14, A00.020 Rev.8, A00.200 Rev.10, A00.201 Rev.9, BHSC-01 Rev.F, A06.006, A07.807 Rev.4, C-027 Rev.1, C-028 Rev.1, A07.810, A07.816 and SK001-R4 in accordance with Clause 10.3 of the City of Albany Local Planning Scheme No.1, subject to the following conditions:

Conditions – (elements in bold are for information and are not part of the condition)

1. This decision constitutes planning approval only and is valid for a period of two (2) years from the date of approval. **(Not subject of this reconsideration)**

2. Unless otherwise varied by a condition of approval or a minor amendment to the satisfaction of the City of Albany, all development shall occur and be maintained in accordance with the stamped approved plans dated 16 June, 2015. **(Requested to be deleted, but City of Albany advocates retention)**

3. Unless otherwise varied by a condition of this approval, the additional works/alterations hereby approved shall be carried out/completed by 1 July, 2015, unless otherwise agreed in writing by the City of Albany. **(Not subject of this reconsideration, but the City of Albany will agree a reasonable time extension)**

4. The additional painting on the northern elevation as illustrated in Formworks plan A00-201 Rev.9 shall be implemented within six (6) months from the date of this approval. The painting shall be maintained in good condition thereafter with its condition reassessed every five (5) years or other such period as may be agreed in writing by the City of Albany. **(Combination and modification of former conditions 4 & 5)**

5. The vehicular intersection with Bayonet Head Road shall be modified and implemented as per plan SK.001 Bayonet Head Road Junction – Proposal R4 dated 29/05/2015 within four (4) months of this approval. **(Combination and modification of former conditions 6 & 7)**

   Advice relating to Condition 5:
   The extension to the existing traffic island must consist of a raised kerbed backfilled island.
   The design of the island will not permit all as of right vehicles to exit to the east. The developer assumes all responsibility and liability for the constraints this design places on the operation of the development.

6. The car bays, the pedestrian crossing, the footpath and associated balustrade shall be modified and/or implemented as per the details of Formworks plan A07.816 dated 10 March 2015 within four (4) months of this approval. **(Modification of former condition 8)**

7. Notwithstanding the submitted detail, all roof mounted infrastructure (plant, walkways and handrails etc) shall be suitably screened to a minimum height of the tallest item of plant, in accordance with details to be submitted to and approved in writing by the City of Albany. Once approved, the screening shall be installed and maintained to the satisfaction of the City of Albany. **(Not subject of this reconsideration – former condition 9)**

8. Notwithstanding the submitted detail, bicycle parking facilities for a minimum of 11 bicycles shall be provided onsite. **(former condition 10 – requested to be deleted, but the City of Albany advocates retention)**

9. A public art work commission to reflect or enhance local cultural identity is required as part of the development hereby approved. The art work commission value shall be approximately $80,000. Exact details of the public art feature and location shall be submitted to and approved in writing by the City of Albany within six (6) months of the date of this decision and the art work shall be installed to the satisfaction of the City of Albany within twelve (12) months of the date of this decision. **(Former condition 11 – requested to be modified, but City of Albany advocates retention)**

10. Signs shall not be erected on the lot without the prior approval of the City of Albany and any sign or advertisement shall be maintained in good repair to the satisfaction of the City of Albany. **(Not subject of this reconsideration – former condition 13)**

11. The loading and unloading of goods shall occur entirely within the site and be undertaken in a manner so as to cause minimum interference with other vehicular traffic. **(Not subject of this reconsideration – former condition 14)**

12. No goods or materials shall be stored, either temporarily or permanently, in the parking or landscape areas or in access driveways, unless otherwise agreed in writing by the City of Albany. **(Not subject of this reconsideration – former condition 15)**

13. Any lighting device shall be positioned and shielded so as not to cause any direct, reflected or incidental light beyond the property boundaries, in accordance with Australian Standard AS4282/1997. **(Not subject of this reconsideration – former condition 16)**

14. All landscaped areas shall be maintained as per the approved landscaping plan/s to the satisfaction of the City of Albany. **(Not subject of this reconsideration – former condition 17)**

15. The parking areas shall be illuminated when they are in use, or may be sought to be used by patrons during hours of darkness, to the satisfaction of the City of Albany. **(Not subject of this reconsideration – former condition 18)**

16. The development hereby approved shall not prejudicially affect the amenity of the neighbourhood by, but not limited to, the emission of noise, vibration, smell, smoke or dust. **(Not subject of this reconsideration – former condition 19)**

Advice Notes

1. Development is required to comply with all relevant Health regulations; particular regard should be paid to those matters outlined on the attached 'Environmental and Health Conditions'.

2. All development is required to comply with the Building Regulations and the Building Code of Australia.

3. Although the design for the dual-use path to the north of the Lower King Road vehicular access complies with appropriate path standards, this section of path was designed as part of the flood mitigation and protection measures for the development. The City's preference is for this path to be continued at level until it meets the rising natural ground level to the north. Should the developer choose to ignore this advice and not maintain this level, it would be against their own engineering advice, which suggests that they are exposing their development to flooding in a major storm event and do so entirely at their own risk.

AMENDING MOTION

Moved by: Mr I Birch **Seconded by:** Mayor D Wellington

That Condition 9. be replaced to read:

"A public art work commission to reflect or enhance local cultural identity is required as part of the development hereby approved. The art work commission value is to be

a minimum of $60,000. The "Driftwood" Artwork Concept by Stuart Green dated 26 April 2015 is, subject to being certified by a suitably qualified structural engineer as demonstrating compliance with the Building Codes of Australia, approved and to be installed by 29 February 2016."

REASON: The artwork is a good example of functional art by a highly accredited artist and is located with good public access within the mall area.

The Amending Motion was put and CARRIED UNANIMOUSLY.

AMENDING MOTION

Moved by: Ms S Towne **Seconded by:** Mr I Birch

That Condition 3 be amended to read:

"Unless otherwise varied by a condition of this approval, the additional works/alterations hereby approved shall be carried out/completed by 29 February, 2016, unless otherwise agreed in writing by the City of Albany."

REASON: To enabe the applicant a reasonable time to complete the works.

The Amending Motion was put and CARRIED UNANIMOUSLY.

AMENDING MOTION

Moved by: Ms S Towne **Seconded by:** Mr P Dick

That Condition 5 be amended:

The advice note in Italics be removed from Condition 5 and become **Advice Note** No. 4

REASON: This wording was intended to be an advice note, rather than a condition of approval.

The Amending Motion was put and CARRIED UNANIMOUSLY.

PRIMARY MOTION (AS AMENDED)

That the Great Southern Joint Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal* Act 2004 in respect of SAT application DR 439 of 2014, resolves to:

Approve revisions to DAP Application reference DAP/14/00648 and accompanying plans Drawing Nos. A00.002 Rev.14, A00.020 Rev.8, A00.200 Rev.10, A00.201 Rev.9, BHSC-01 Rev.F, A06.006, A07.807 Rev.4, C-027 Rev.1, C-028 Rev.1, A07.810, A07.816 and SK001-R4 in accordance with Clause 10.3 of the City of Albany Local Planning Scheme No.1, subject to the following conditions:

Conditions

1. This decision constitutes planning approval only and is valid for a period of two (2) years from the date of approval.

2. Unless otherwise varied by a condition of approval or a minor amendment to the satisfaction of the City of Albany, all development shall occur and be maintained in accordance with the stamped approved plans dated 16 June, 2015.

3. Unless otherwise varied by a condition of this approval, the additional works/alterations hereby approved shall be carried out/completed by 29 February, 2016, unless otherwise agreed in writing by the City of Albany.

4. The additional painting on the northern elevation as illustrated in Formworks plan A00-201 Rev.9 shall be implemented within six (6) months from the date of this approval. The painting shall be maintained in good condition thereafter with its condition reassessed every five (5) years or other such period as may be agreed in writing by the City of Albany.

5. The vehicular intersection with Bayonet Head Road shall be modified and implemented as per plan SK.001 Bayonet Head Road Junction – Proposal R4 dated 29/05/2015 within four (4) months of this approval.

6. The car bays, the pedestrian crossing, the footpath and associated balustrade shall be modified and/or implemented as per the details of Formworks plan A07.816 dated 10 March 2015 within four (4) months of this approval.

7. Notwithstanding the submitted detail, all roof mounted infrastructure (plant, walkways and handrails etc) shall be suitably screened to a minimum height of the tallest item of plant, in accordance with details to be submitted to and approved in writing by the City of Albany. Once approved, the screening shall be installed and maintained to the satisfaction of the City of Albany.

8. Notwithstanding the submitted detail, bicycle parking facilities for a minimum of 11 bicycles shall be provided onsite.

9. A public art work commission to reflect or enhance local cultural identity is required as part of the development hereby approved. The art work commission value is to be a minimum of $60,000. The “Driftwood” Artwork Concept by Stuart Green dated 26 April 2015 is, subject to being certified by a suitably qualified structural engineer as demonstrating compliance with the Building Codes of Australia, approved and to be installed by 29 February 2016.

10. Signs shall not be erected on the lot without the prior approval of the City of Albany and any sign or advertisement shall be maintained in good repair to the satisfaction of the City of Albany.

11. The loading and unloading of goods shall occur entirely within the site and be undertaken in a manner so as to cause minimum interference with other vehicular traffic.

12. No goods or materials shall be stored, either temporarily or permanently, in the parking or landscape areas or in access driveways, unless otherwise agreed in writing by the City of Albany.

13. Any lighting device shall be positioned and shielded so as not to cause any direct, reflected or incidental light beyond the property boundaries, in accordance with Australian Standard AS4282/1997.

14. All landscaped areas shall be maintained as per the approved landscaping plan/s to the satisfaction of the City of Albany.

15. The parking areas shall be illuminated when they are in use, or may be sought to be used by patrons during hours of darkness, to the satisfaction of the City of Albany.

16. The development hereby approved shall not prejudicially affect the amenity of the neighbourhood by, but not limited to, the emission of noise, vibration, smell, smoke or dust.

Advice Notes

1. Development is required to comply with all relevant Health regulations; particular regard should be paid to those matters outlined on the attached 'Environmental and Health Conditions'.

2. All development is required to comply with the Building Regulations and the Building Code of Australia.

3. Although the design for the dual-use path to the north of the Lower King Road vehicular access complies with appropriate path standards, this section of path was designed as part of the flood mitigation and protection measures for the development. The City's preference is for this path to be continued at level until it meets the rising natural ground level to the north. Should the developer choose to ignore this advice and not maintain this level, it would be against their own engineering advice, which suggests that they are exposing their development to flooding in a major storm event and do so entirely at their own risk.

4. Advice relating to Condition 5: The extension to the existing traffic island must consist of a raised kerbed backfilled island.
   The design of the island will not permit all as of right vehicles to exit to the east.
   The developer assumes all responsibility and liability for the constraints this design places on the operation of the development.

The PRIMARY MOTION (as Amended) was put and CARRIED UNANIMOUSLY.

11. General Business / Meeting Close

The Presiding Member reminded the meeting that in accordance with Standing Order 7.3 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.

There being no further business, the Deputy Presiding Member declared the meeting closed at 10.05am.

Ms Stacey Towne Stacey Towne
Acting Presiding Member, Great Southern JDAP

Government of Western Australia
Development Assessment Panels

Form 1 - Responsible Authority Report

(Regulation 12)

Property Location:	Lot 10 Crapella Road, Boscabel
Application Details:	Piggery expansion
DAP Name:	Great Southern JDAP
Applicant:	Torben Soerensen – Managing Director GD Pork Holdings Pty Ltd
Owner:	GD Pork Holdings Pty Ltd
LG Reference:	DB.BDA.8
Responsible Authority:	Shire of Kojonup
Authorising Officer:	Insert Department of Planning Authorising Officer name and/or title details
Department of Planning File No:	DAP/15/00829
Report Date:	8 July 2015
Application Receipt Date:	17 June 2015
Application Process Days:	60 Days
Attachment(s):	1: Aerial Image of Lot 10 Crapella Road, Boscabel. 2: Aerial Image of Location of Piggery and Kojonup and Boscabel. 3: Certificate of Title for Lot 10 Crapella Road, Boscabel. 4: GD Pork Kojonup Farm Expansion Planning Approval Application Document April 2015 and Appendix 1 - 4. 5: GD Pork Kojonup Piggery Expansion Environmental Management Plan. 6: Site Plan General Layout Drawing No. A00-00A (January 2015). 7: Finisher Shed Drawings A01-01 & A01-02 (May 2015). 8: Feed Mill Shed Drawing A02-01 (May 2015). 9: 10Tp/h Mash Mill Layout Edition 6 (2/03/14). 10: WTP Plant Production of Electricity and Heat from Animal Sewage & Manure Installed Power 380kW General Views (13/04/2015) & General Layout (01/04/2015).

Officer Recommendation:

That the Great Southern JDAP resolves to:

Approve DAP Application reference DAP/15/00829 for the proposed expansion of the existing piggery (intensive agriculture) at Lot 10 Crapella Road, Boscabel in accordance with Clause 6.3 of the Shire of Kojonup Town Planning Scheme No. 3, subject to the following conditions:

1. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the 4 year period, the approval shall lapse and be of no further effect.
2. Development shall be in accordance with the attached stamped approved plans (date stamped ???????? to be completed for DAP meeting date) being:
    - Site Plan General Layout Drawing No. A00-00A (January 2015);
    - Finisher Shed Drawings A01-01 & A01-02 (May 2015);
    - Feed Mill Shed Drawing A02-01 (May 2015);
    - 10Tp/h Mash Mill Layout Edition 6 (2/03/14); and
    - WTP Plant Production of Electricity and Heat from Animal Sewage & Manure Installed Power 380kW General Views (13/04/2015) & General Layout (01/04/2015).
3. All uncontaminated stormwater runoff from buildings and roadways being drained into the stormwater basins on the property to the satisfaction of the Shire of Kojonup.
4. A Landscaping Plan being prepared and implemented to the satisfaction of the Shire of Kojonup. The Landscaping Plan shall show location, species and size of trees and shrubs to be planted along the southern property boundary and in the south-west corner of the property between the ponds/waste treatment plant and Albany Highway to assist screen these developments from direct view from outside the property.
5. The loading and unloading of stock and goods to and from the premises shall be carried out entirely within the site.
6. Implementation of the submitted attached Environmental Management Plan Document to the satisfaction of the Shire of Kojonup.
7. The new crossover onto Crapella Road shall be located, designed and constructed to the satisfaction of the Shire of Kojonup.
8. Arrangements being made to the satisfaction of the Shire of Kojonup for the disposal of solid waste from the dwellings and other piggery sources not able to be disposed of in the waste digester (eg household rubbish, office rubbish, chemical drums).
9. A Fire Management Plan to be prepared and implemented to the satisfaction of the Shire of Kojonup in conjunction with the Department of Fire and Emergency Services.
10. Lighting devices are to be positioned and shielded so as not to cause any direct, reflected or incidental light to encroach beyond the property boundaries, in accordance with Australian Standard AS4282/1997.
11. All waste water run-off from machinery, plant and equipment wash-down shall be drained into a treatment system to the satisfaction of the Shire of Kojonup.

Advice Notes

Please be advised of the following:

a) Where approval has lapsed, development is not to occur without the further approval of the relevant authority having first been obtained.
b) Planning approval should not be construed as an approval to commence works as a separate Building Permit is also required.
c) All on-site sewerage systems will require approval from the Department of Health.
d) It is an offence to clear native vegetation without the authority of a permit from the Department of Environment Regulation unless the clearing is exempt from

a permit. It is recommended to liaise with the Department of Environment Regulation in relation to whether a clearing permit or exemption applies.

e) The works and operations will require Works Approval and Licensing from the Department of Environment Regulation prior to any activities commencing.

Alternate Recommendation:

Nil provided.

Background:

Property Address:		Lot 10 Crapella Road, Boscabel
Zoning	MRS:	n/a
	TPS:	Rural
Use Class:		intensive agriculture
Strategy Policy:		n/a
Development Scheme:		n/a
Lot Size:		57.1098ha
Insert Existing Land Use:		Piggery, workshop, office, feed storage silos, staff accommodation dwelling
Value of Development:		$14.5 million

The property has an existing piggery that was established in 1997 and approved by the Shire in 1999. The applicants purchased the property in November 2007 and continued operations.

The Shire of Kojonup most recently approved an expansion of the piggery in January 2012 subject to conditions. Since that time, the applicant has revised and changed their plans for the expansion and has now submitted this application for consideration.

Details: outline of development application

The proposal is seeking planning consent to expand the existing piggery as outlined in the attached plans. The expansion will include:

- 9 new piggery sheds.
- New silos and feed mill.
- New waste treatment plant.
- New 36,000m² evaporation pond.
- New 6,400m² stormwater detention basin.
- New staff accommodation house.

The expansion will increase the standard pig unit numbers from 11,820 to 28,368 within the piggery. The expansion also includes a waste treatment plant and associated evaporation pond and stormwater detention basin. The waste treatment plant will treat the solid and liquid wastes and produce electricity for reuse on-site and fertilizer/soil improver for use on crops.

Legislation & policy:

<u>Legislation</u>

Planning and Development Act 2005
Shire of Kojonup Town Planning Scheme No. 3 – Parts III 'Zones', Part V 'Development Requirements' and Part VI 'Planning Consent'.

Environmental Protection Act 1986
The proposal is a prescribed premises under the *Environmental Protection Regulations 1987* and the proponent must hold a Works Approval (for construction) and a Licence (for operation).

Health Act 1911
The *Shire of Kojonup Health Local-Laws 2000* have been adopted and the proposal requires approval under this Local Law.

State Government Policies

EPA Guidance for the Assessment of Environmental Factors (in accordance with EP Act 1986): Separation Distances between Industrial and Sensitive Land Uses' No. 3 June 2005.

WAPC State Planning Policy No. 4.1 'State Industrial Buffer Policy'.

Local Policies

There are no local planning policies that apply to the proposal.

Consultation:

Public Consultation

Nil consultation required under Scheme.

Consultation with other Agencies or Consultants

The applicant has consulted with the Department of Environment Regulation, Department of Agriculture and Food and Shire of Kojonup in preparing the application.

An on-site inspection of the present operations and proposed expansion was undertaken by the Development Services Coordinator and Town Planner from the Shire of Kojonup and Agribusiness Development Officer (Pat Page) from the Department of Agriculture and Food on Tuesday 3 March 2015.

The applicant provided a briefing on the existing operations and proposed expansion to the Shire of Kojonup Councillors and Senior Staff members on 7 April 2015.

Planning assessment:

The piggery is located approximately 20km north of the main Kojonup townsite at the intersection of Albany Highway and Crapella Road and 3.5km east of the undeveloped minor Boscabel townsite.

The property is 57.1 hectares in area and largely cleared with some isolated pockets of remnant vegetation. No clearing of remnant vegetation is proposed. There are some areas of landscaping that have been developed as a condition of the existing planning consent approval. Some areas of this landscaping will be removed as part of the development and the applicant has committed to undertake additional landscaping to replace these areas upon completion of the development.

The site is relatively flat with a minor depression in the middle of the site associated with a drainage line that exits the property to the north. The soil types is sandy gravel and the applicant advises that groundwater levels taken from existing bores indicates groundwater between 5-10m below ground level with some likely perched groundwater below 2m in the existing salt pan area on the property.

The property has access/egress to Crapella Road (unsealed road with open drains) which is a local road under the care and control of the Shire of Kojonup. Crapella Road connects to Albany Highway which is a State Road under the care and control of Main Roads WA. The expansion proposes a new access/egress point to Crapella Road approximately 220m west of the existing service access/egress point. The applicant advises the expansion will increase the truck movements on Crapella Road from 460 loads/year to 912 loads/year and will be spread evenly over the full year.

The piggery currently utilises 2 bores for water supply and the applicant advises the expansion will require an increase in water usage from 20,000m³/year to 55,000m³/year. The property is not within a proclaimed or drinking water supply catchment area and the applicant advises that no licence from the Department of Water is required. The applicant has committed to locating 2 monitoring bores immediately west of the new evaporation pond.

The existing house on the lot is used for piggery staff accommodation. The applicant advises the new dwelling will consist of a 4 bedroom single person quarters to house the additional 4 employees required. The location of staff permanently on–site is considered an advantage to the operation of the piggery.

The land is zoned Rural under the Shire of Kojonup Town Planning Scheme No. 3 and a piggery is consistent with the definition of intensive agriculture under the Scheme (Schedule 1 Interpretations). The Zoning Table (Table 1) includes intensive agriculture land uses as an 'AA' discretionary land use class within the Rural zone, which means that the Council may, at its discretion, permit the use (c.3.3.2).

The property has been used as a piggery for some 18 years and has been expanded over this time. GD Pork Holdings Pty Ltd has operated the piggery at this site since 2007 without complaint to the Shire (of any of the known impacts of noise, odour and dust) and the Shire considers the site to be well managed by the operators. The applicant advises that the proposal has been designed to comply with the Australian Pork Limited *National Environmental Guidelines for Piggeries* (2nd edition revised 2011) which is best practice for the industry.

The use of all land within the Rural zone must be consistent with the objectives for the zone (c.3.2.7) as follows:

(a) The zone shall consist of predominantly rural uses.

(b) To protect land from urban uses that may jeopardise the future use of that land for other planned purposes which are compatible with the zoning.

(c) To protect the land from closer development which would detract from the rural character and amenity of the area.

(d) To prevent any development which may affect the viability of a holding.
(e) To provide for limited commercial accommodation opportunities in a rural environment consistent with the Council's policy for 'Farmstay', 'Bed and Breakfast Accommodation' and 'Chalet' facilities.

The piggery expansion is considered to be consistent with objectives (a), (c) and (d) above.

The Scheme does not have any specific provisions relating to intensive agriculture and/or piggery uses/developments in the Rural zone.

Any development (c.5.4) shall conform to the requirements for that use specified in Table II - Development Table. As there is no specific requirements specified for intensive agriculture uses, the Council must determine the relevant requirements to comply with having regard to the predominant use and objectives of the Rural zone (c.5.4.1).

Table II sets out standards for setbacks, plot ratio, landscaping and car parking and the proposal and relevant development standards are discussed below:

Setbacks
The existing piggery is setback:
- 750m from Albany Highway in the north-east corner at the rear of the property;
- Approximately 40m from the nearest adjoining property boundary; and
- Approximately 2km from the closet farm dwellings, not forming part of the applicant's farm.

The 9 new piggery sheds will be 101.5m long x 13m wide with a 2.4m wall height and constructed with steel framing and concrete floor and clad with 'surfmist' coloured colorbond metal sheeting. They will be setback:
- 550m from Albany Highway (between the existing piggery sheds and Albany Highway);
- Approximately 150m from the nearest adjoining property boundary; and
- More than 2.2km from the closet farm dwellings, not forming part of the applicant's farm.

The new feed mill building will be 20m wide x 24m long with a wall height of 6.2m and constructed with steel framing and concrete floor and clad with 'surfmist' coloured colorbond metal sheeting. The building will have an adjacent 32m² office/control room area and concrete apron constructed to allow for 23 silos (from 27 – 220t) to be located around the building. This part of the proposal will be setback:
- 800m from Albany Highway (to the south of the existing piggery sheds) and at the rear of the property;
- Approximately 15m from the nearest adjoining property boundary; and
- Approximately 2.25km from the closet farm dwellings, not forming part of the applicant's farm.

The new waste treatment plant will be constructed within a building approximately 60m wide x 60m long with a wall height of 6m and constructed of steel frames and concrete floor and clad with 'surfmist' coloured colorbond metal sheeting. The building will be setback:
- Approximately 400m from Albany Highway (to the south of the property);
- Approximately 150m from the nearest adjoining property boundary; and

- Approximately 2km from the closet farm dwellings, not forming part of the applicant's farm.

The new evaporation pond will be approximately 360m long x 100m wide with a depth of 1.5m (pond wall 0.75m above ground level). It will be clay lined to prevent leaching to groundwater and designed into 2 compartments. The pond will be setback:

- Approximately 350m from Albany Highway;
- 30m from the nearest adjoining property boundary; and
- Approximately 2km from the closet farm dwellings, not forming part of the applicant's farm.

The new stormwater detention basin will be approximately 80m wide by 80m long with a depth of 3m (pond wall 0.75m above ground level) and designed to contain a 1 in 20 year winter rainfall event and will be setback:

- 300m from Albany Highway (to the south of the property);
- Approximately 200m from the nearest adjoining property boundary; and
- Approximately 2km from the closet farm dwellings, not forming part of the applicant's farm.

These setbacks are considered appropriate in this instance and consistent with other similar developments in the rural zone/areas of the Shire of Kojonup.

The new staff accommodation dwelling is to be collocated with the existing staff accommodation dwelling and will be setback:

- 200m from Albany Highway (to the west);
- 100m from Crapella Road;
- Approximately 470m from the southern adjoining property boundary;
- Approximately 750m from the eastern adjoining property boundary; and
- Approximately 400m from the piggery buildings.

Residential development within the Rural zone must comply with the setback requirements for the R2 residential planning code (c.5.7.3(d)). The proposed setbacks exceed the 20m front setback, and 10m side/rear setbacks stipulated in the R-Codes.

Plot Ratio

The existing piggery buildings have a plot ratio of 0.020 and this will rise to 0.026 with the proposed expansion.

Landscaping

The existing operations required landscaping to be undertaken on parts of the property as a condition of the planning approval granted by the Shire of Kojonup in 2012.

The applicant has advised that some areas of this landscaping will need to be removed to provide for the expansion and has committed to replacing these tress following completion of the construction works.

It is recommended that additional landscaping be undertaken along the southern property boundary and in the south-west corner of the property between the ponds/waste treatment plant and Albany Highway to assist screen these

developments from direct view from outside the property. The applicant has advised verbally that they accept this request.

Car Parking
All loading/unloading and parking currently occurs within the property and whilst the proposed expansion will increase the number of vehicles visiting the site, this situation will not change. The existing parking areas can accommodate any increase required.

Buffer Area
The EPA Guidelines require the following generic separation distance for intensive piggeries:

Industry	Description of Industry	DoE Licence Impacts or Registration category	Key Government agencies for advice or approvals	Code of Practice/ environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gas	Noise	Odour	Dust	Risk	
Piggery – intensive, - 5000 pigs or more - 500 – 5000 pigs - 50 – 500 pigs - Less than 50 pigs	premises on which pigs are fed, watered and housed in indoor pens	√ (2, 69)	Dept of Agriculture & Food, Department of Water, Local Government	Dept of Agriculture & Food – Guidelines for new and existing piggeries (May 2000)		√	√			5000 for piggeries with more than 5000 pigs. 3500 for piggeries with 500 – 5000 pigs. 2000 for piggeries with 50 – 500 pigs. 500 for piggeries with less than 50 pigs.

The piggery complies with these requirements. As noted above, the piggery has operated without complaint to the Shire of any of the known impacts of noise, odour and dust and is considered to be well managed.

The applicants have made an application to the Department of Environment Regulation for Works Approval. The Department can refer any proposal that needs a Works Approval, Licence or Registration to the EPA if they determine the proposal has potential to cause significant environmental impacts. The Works Approval and Licence will assist ensure the proposal is constructed and operated in an acceptable manner to reduce potential for pollution and/or community harm.

New Entry Point onto Crapella Road
The applicants seek approval for a new additional main entrance to the property off Crapella Road and would improve traffic movements within the site.

The new crossover shall be designed and constructed to the satisfaction of the Shire of Kojonup.

Site Management
Piggeries by their nature of operations have the potential to create emissions including dust and odour. These impacts are controlled by various pieces of legislation such as the *Environmental Protection Act* and *Soil and Land Conservation Act* etc.

The application has included an Environmental Management Plan prepared by the applicants that details how the operations will be managed to reduce potential for off-site impacts to occur. The applicant has indicated that the Environmental Management Plan has been developed in accordance with the Australian Pork Limited *National Environmental Guidelines for Piggeries* (2nd edition revised 2011). These guidelines outline best practice management for Australian piggeries.

As noted above, the applicants have made an application to the Department of Environment Regulation for Works Approval and this and the subsequent Licence will assist ensure the proposal is constructed and operated in an acceptable manner to reduce potential for pollution and/or community harm.

Options/Alternatives

Nil.

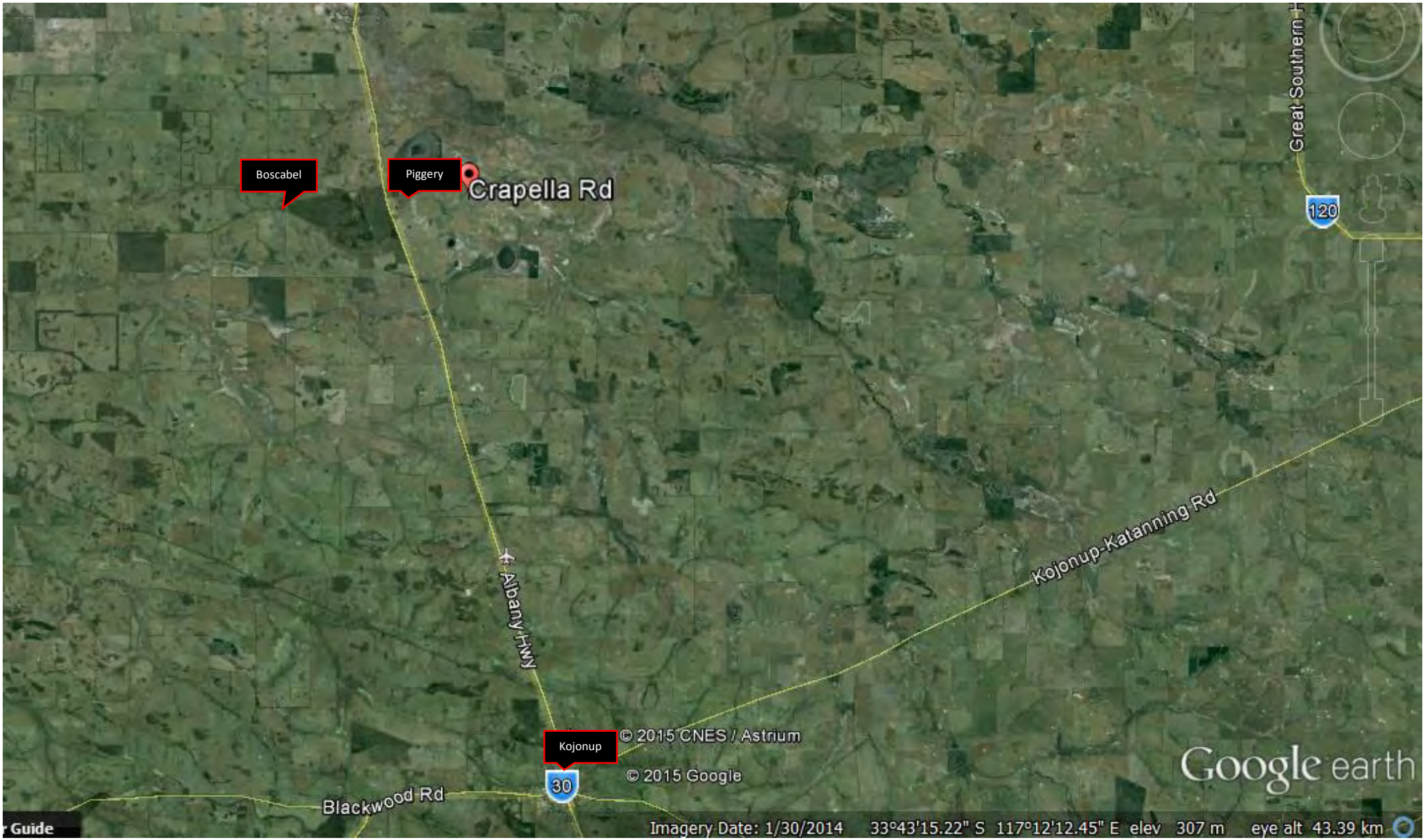
Council Recommendation:

Nil.

Conclusion:

The proposed expansion of the piggery is considered to be consistent with requirements of the Shire of Kojonup Town Planning Scheme No. 3 and should be approved subject to conditions.

Attachment 1: Aerial Image of Lot 10 Crapella Road, Boscabel (outlined in red)



Attachment 2: Aerial Image of Piggery location from Kojonup and Boscabel

WESTERN AUSTRALIA

REGISTER NUMBER	
10/P23562	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	12/2/2008

RECORD OF CERTIFICATE OF TITLE

VOLUME 2173 FOLIO 889

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 10 ON PLAN 23562

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

G D PORK HOLDINGS PTY LTD OF 13 CAMFIELD STREET, EATON
(T K413177) REGISTERED 17 DECEMBER 2007

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. *L194482 MORTGAGE TO BANK OF WESTERN AUSTRALIA LTD REGISTERED 7.1.2010.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2173-889 (10/P23562).
PREVIOUS TITLE: 2173-888.
PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AREA: SHIRE OF KOJONUP.

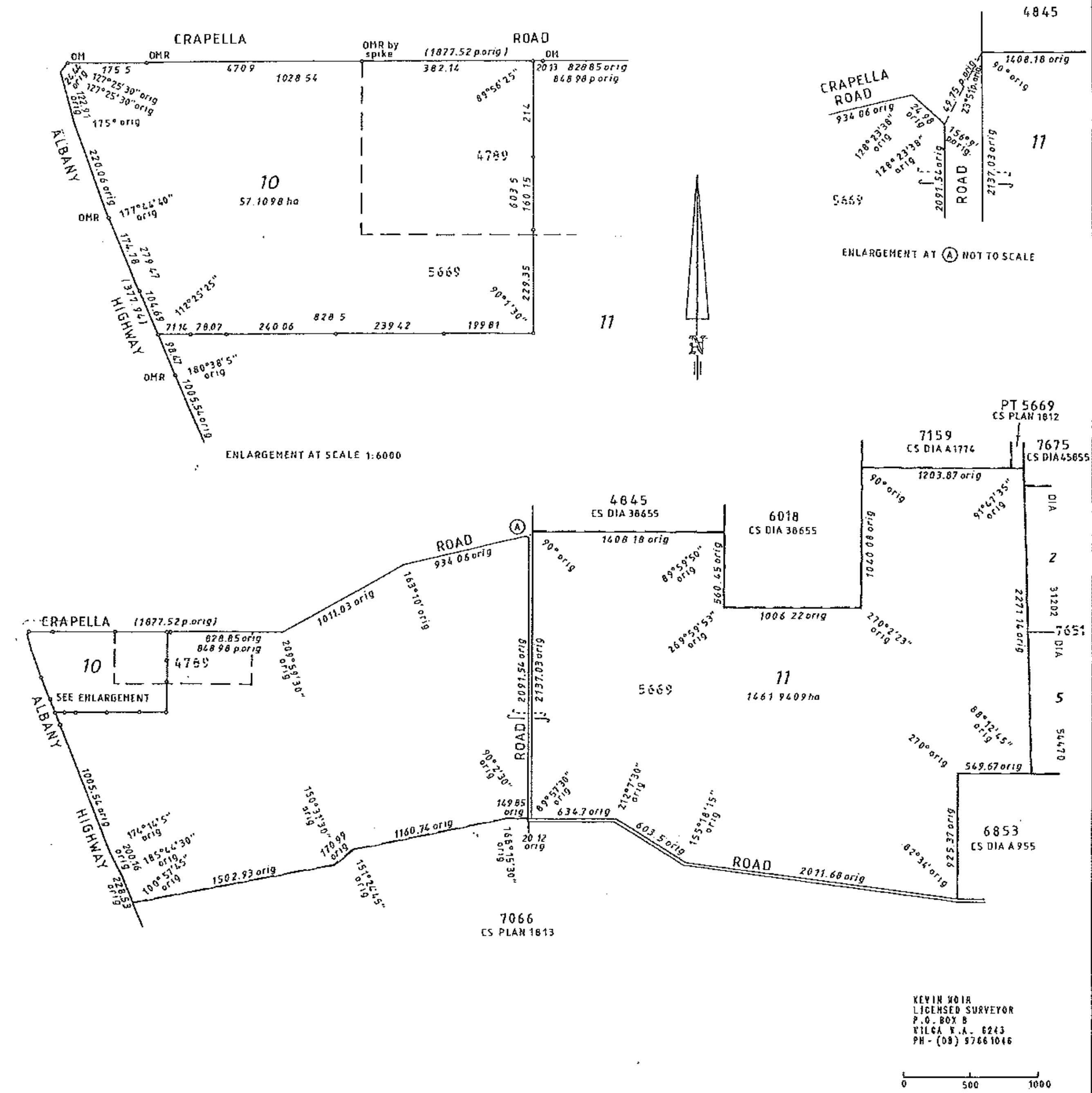
NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING L194482

LAND DESCRIPTION	ON	CERTIFICATE OF TITLE	FIELD BOOK	TOTAL AREA
KOJONUP LOCATION 4789 & PT LOT 1 OF KOJONUP LOCATION 5669	PLAN 8272 DIAGRAM CS 53814 INDEX BOSCABEL(25) SE & SW PUBLIC	VOLUME 1506 FOLIO 003 1110 842	79442	1519 0507ha

PLAN 23562

LOCAL AUTHORITY: SHIRE OF KOJONUP
LOCALITY: BOSCABEL

LIMITED IN DEPTH TO 60.96 METRES



SURVEYOR'S CERTIFICATE - REG 54

I K.J MOIR hereby certify that this plan is a correct representation of the survey and/or calculations from measurements recorded in the field book lodged for the purposes of this plan and that it complies with the relevant written law(s) in relation to which it is lodged.

LICENSED SURVEYOR — DATE 30-5-1999

SURVEYOR'S CERTIFICATE - COMPILED

I ... hereby certify that this compiled plan -
(a) is a correct and accurate representation of the survey(s) of the subject land; and
(b) is in accordance with the relevant law in relation to which it is lodged.

LICENSED SURVEYOR — DATE

APPROVED BY
WESTERN AUSTRALIAN PLANNING COMMISSION

FILE 107260
FOR CHAIRMAN
DATE 25/6/1999

EARLY PLAN U
LODGED
DATE 3.6.99
FEE PAID $253
ASSESS No 236188

TYPE OF VALUATION
FULL AUDIT
LEGAL COMPONENT AK N60
DOCKET PLAN/DIAGRAM 23456
CERTIFIED CORRECT
F.S.C. No

SCALE 1:20000
ALL DISTANCES ARE IN METRES

IN ORDER FOR DEALINGS
SUBJECT TO
FOR INSPECTOR OF PLANS & SURVEYS 28.6.99 DATE
APPROVED 24.9.99
APPROVED
INSPECTOR OF PLANS & SURVEYS DATE

DOLA

OFFICE OF TITLES
PLAN
23562

Kojonup Farm Expansion

Planning Approval Application

April 2015

GD Pork Holdings Pty Ltd as trustee for GD Pork Unit Trust owns Lot 10 Crapella Road, Boscapel.

The site is currently used as an extensive pig farm.

GD Pork wishes to expand the operation on this site and turn it into an intensive piggery. Due to the size of the investment this Planning Approval Application has been lodged through the DAP process.

The expansion project is also dependent on granting of a works approval from Department of Environment and Regulation. A Works Approval Application has been applied for simultaneously.

This application has been put together by the proponent with assistance from Department of Agriculture (DAFWA) and private consultants.

GD Pork currently holds a planning approval for 9 more extensive sheds for the site (app. 2,800m2 and app. 4,000 more pigs) which have not yet been utilised. This new application (if approved) will override the existing application and the will be no practical need for utilising the existing application

The existing planning approval from the Shire of Kojonup was subject to a landscape plan including planting of trees along property boundaries and across the centre of the property for screening. These trees have been planted and where some of them will be in the way of the proposed new infrastructure (in the centre of the property) we plan to replace them with more trees around the proposed new infrastructure

Please find attached:

- Form 1 for lodging with DAP
- Site plan drawing
- Drawings of proposed new piggery sheds (one drawing as all 9 proposed sheds are similar)
- Drawings of auxiliary infrastructure
- Environmental Management Plan (EMP)
- Appendices to Environmental Management Plan

For questions or further information please don't hesitate to contact us.

Sincerely

Torben Soerensen

Managing Director, GD Pork

0438940045

torben@gdpork.com.au

www.gdpork.com.au

GD Pork Kojonup piggery expansion

Environmental Management Plan

Contact

Torben Soerensen
Managing Director

GD PORK

GD Pork Pty Ltd
PO Box 600, Pinjarra, WA 6208
phone +61 438 940 045 **fax** +61 8 9534 1165

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1. Overview

This is a proposal for the expansion of the GD Pork Kojonup piggery located at lot 10 Crapella Road, Boscabel. This site and operation are owed by GD Pork Holdings Pty Ltd and GD Pork Pty Ltd.

The piggery will be used as a grower unit for GD Pork's state wide piggery operation. The piggery will incorporate 36 extensive sheds (existing) and 9 new conventional indoor sheds (utilising a pull plug system) with a total capacity of 28,368 SPU. Pigs will arrive at the piggery at 8kg and leave at 100kg. Piggery manure (spent straw bedding and liquid effluent) will be treated in a waste treatment plant (WTP) which will also generate electricity for the piggery. All new infrastructure will be built on impermeable concrete pads.

The piggery will require 55,000m^3 water per year.

The site is located well away from sensitive land uses and environmental features.

The expansion is expected to cost $14.5 million and construction is expected to take 7 months.

The proposal complies substantially with the National Environmental Guidelines for Piggeries (2nd edition revised) and the existing extensive piggery has not generated any odour or other environmental problems.

See Appendices 2 and 3 for a consolidated summary of the waste management system.

Picture 1. **Lot 10 Crapella Rd, Boscabel (Source: Google Earth)**

2. Description of site

2.1 Production overview

Piglets arriving at the piggery are unloaded at the pig reception facility outside the perimeter fence of the site.

Picture 2. **Pig reception facility**

Weaners up to 40kg will be housed in the existing extensive sheds and moved to the conventional indoor sheds as finishers. Weaners up to 40kg are fed dry feed from feeders. Dry feed will be delivered from the feed mill to the shed by a feed trailer. Finishers will be fed liquid feed from troughs. The feed will be delivered from the liquid feed mixing room via an enclosed pipe system.

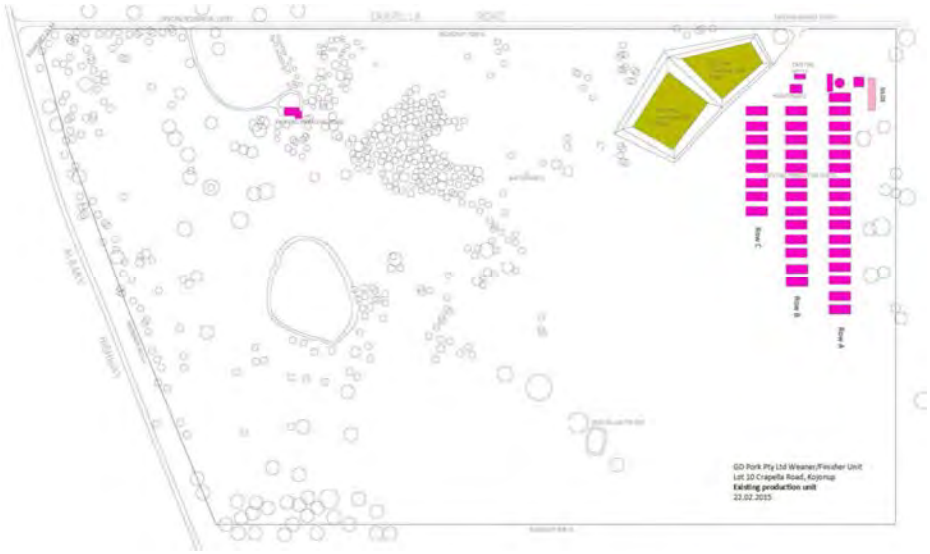
Pigs leaving for the abattoir are loaded onto trucks from the new sheds via a loading ramp between shed number 6 and 7.

See Appendix 1 for a detailed description of existing production.

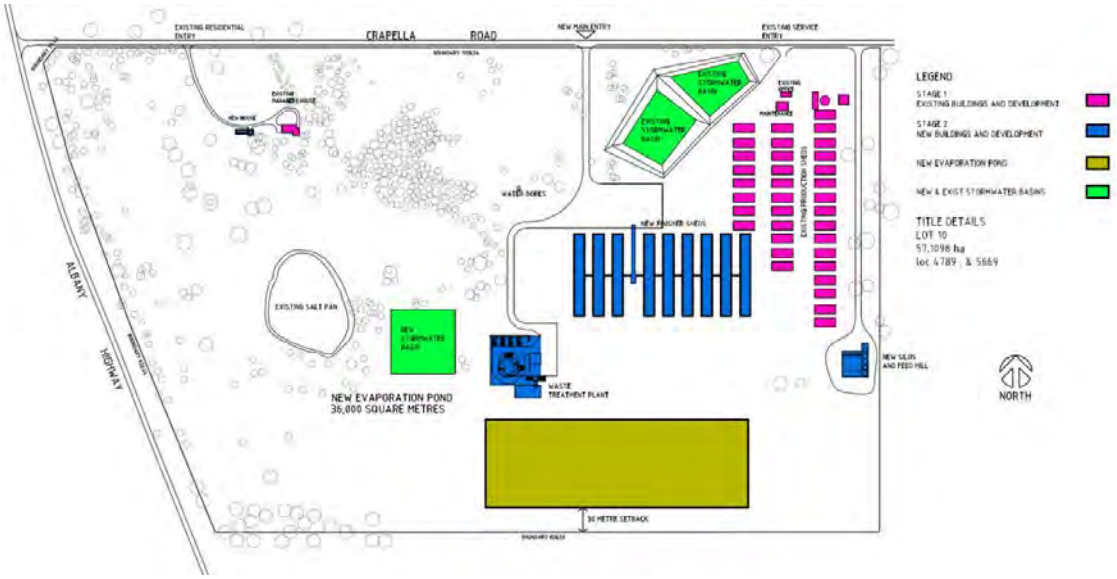
2.2 Infrastructure

The following sketches show current and proposed site infrastructure.

Sketch 1 (not in scale). **Site plan existing production facilities lot 10, Crapella Road, Boscabel**



Sketch 2 (not in scale). **Existing (purple) and planned expansion (blue) unit**



Existing infrastructure includes:

- Pig reception (arrival) facility

- 36 existing extensive sheds

Each shed is 26m x 12m.

- Feed silos and abattoir loading facility

These will not continue to be used after the new ones are built except as contingency.

- Storm water ponds

These will continue to be used even after the new one is built.

- Managers house

New infrastructure includes:

- New roads

New internal gravel roads will be added as indicated in sketch 2.

- 9 finisher sheds

9 standard colorbond Surfmist buildings each 13.0 m wide and 101.5 m long (measured inside) placed North-South and connected with a 2.5 m wide passage (18 fully separated sections) as shown on sketch 2. Each section contains a total of 36 pens in 2 rows each 6.0 m deep and 2.75 m broad.

- New feed mill and liquid feed shed facilities

The equipment for preparing the liquid feed will be placed in a shed North of the passage between 6th and 7th finisher shed as indicated in sketch 2.

New silos and a feed mill will be constructed south of the existing silos and extensive sheds as shown on sketch 2. Equipment will be place inside a shed and on a 200mm thick concrete floor. The feed mill includes

- weighbridge and grain intake placed adjacent to shed
- 1,400 tonne of grain and meal storage silos placed adjacent to shed
- A 10 tonne per hour grinder placed inside the shed
- Minerals and vitamins dosing system placed inside the shed
- A mixer placed inside the shed
- 297 tonne of ready-made feed silos placed adjacent to shed
- A control room

- Waste treatment plant and associated infrastructure

The waste treatment facility will consist of anaerobic digester tank, pumps, separator, concrete hardstand etc. See Appendix 3 for more information about the waste treatment plant and associated infrastructure.

- New abattoir loading facilities

New abattoir delivery facilities of same type as existing will be constructed North of connection between finisher shed 6 and 7 as indicated in sketch 2.

- More employee housing consisting of one single mens quarter with 4 bedrooms

- Wastewater evaporation pond

The evaporation pond has a capacity of 33,725 m^3 and a surface area of 36,000m^2. The evaporation pond is shown at the bottom right hand corner of sketch 2. See appendix 4 for more detail.

- New stormwater pond

A new storm water pond is proposed next to the WTP. The pond will have a capacity of 13,598 m^3 and a surface area of 6,400 m^2. See sketch 2

Infrastructure with a changed use includes:

- Entrance

A new extra entrance will be established from Crapella Road.

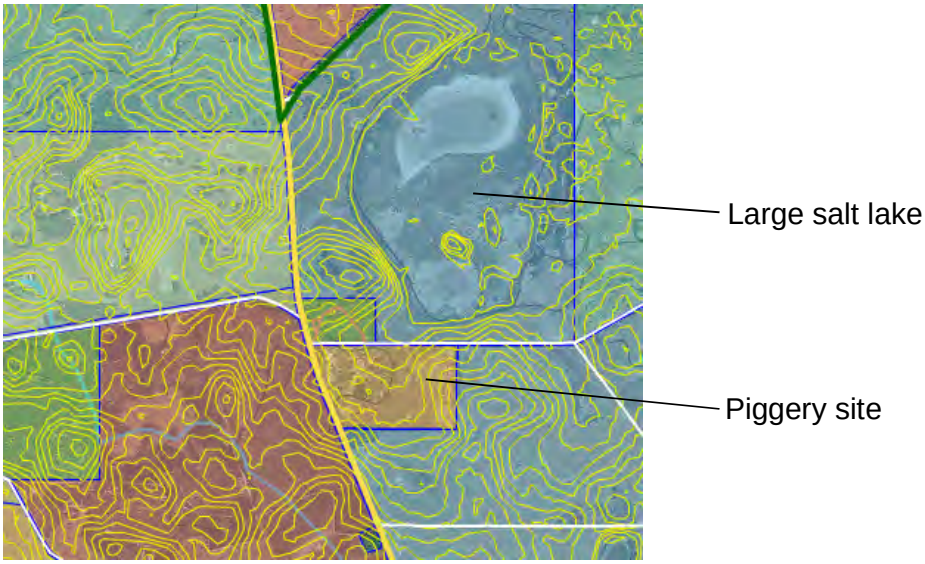
3. Water pollution control

3.1 Siting and land availability

The property is 57ha.

Two thirds of the site is flat. Buildings will be located on the remaining third of the site that slopes gently North West (they will therefore be positioned slightly higher than the waste management facility).

The site is very likely above the 1 in 100 year flood level as it is located 8m above large nearby salt lake, as show in the picture below.



Picture 4. **Topography of surrounding site show unlikeliness of flooding**

There is a smaller salt lake 500m North of the indoor sheds (125m from the enclosed WTP).

Bore data from 270m North of the site indicates groundwater at 5.29m below ground level. Data from other nearby bores indicates that there is likely to be permanent groundwater under the site at somewhere between 5m and 10m below ground level. There is also likely to be shallow perched groundwater at up to 2m below ground level in lower slope landscape positions.

The site is in a predominately cleared agricultural area and is not in proximity to any environmentally sensitive areas.

The soil type is sandy gravel.

3.2 Shed or pen design

The new finisher sheds will have a fully slatted concrete floor and outer wall with an insulated ceiling.

3.3 Clean water diversion

Clean rainwater will be harvested from between and off the roof of sheds and directed to a stormwater dam before it is reused. Water will be captured using strategically placed concrete drains and sand traps.

3.4 Deceased animals

Dead animals will be brought to the to the waste treatment plant, shredded and added. See Appendices 2 and 3 for more information about quantities of waste, the waste treatment facility and associated infrastructure.

3.5 Manure and waste treatment

After expansion, the piggery will produce both spent straw bedding (from the extensive sheds) and liquid effluent. Both solids and liquid effluent will be treated in the waste treatment plant (WTP).

Liquid effluent will be collected from the new finisher sheds via a pull-plug system and directed to a covered concrete sump in 300mm PVC pipes before being added to the WTP. The liquid effluent management system is a closed system.

Spent deep litter (along with deceased animals) will be taken to the WTP's concrete solid waste receival site before also being added to the WTP.

The WTP outputs water (which will be directed to an evaporation pond) and solids (which will be taken off site).

In the unlikely event the WTP is not able to process the waste, the contingency plan will be put in place (Appendix 5).

See Appendices 2 and 3 for more information about quantities of waste, the waste treatment facility and associated infrastructure.

3.6 Wastewater management (not including slurry)

Wastewater sources include wash down water, spilt drinking water and contaminated run-off. Waste water from the pig reception facility and all new finisher sheds will travel in closed 300m PVC pipes into the same concrete collection sump as the liquid effluent before being added to the WTP. See Appendices 2 and 3 for more information about quantities of waste, the WTP and associated infrastructure. Greywater from the onsite employee accommodation facility will be treated by onsite effluent disposal system to be constructed in accordance with Shire of Kojonup requirements.

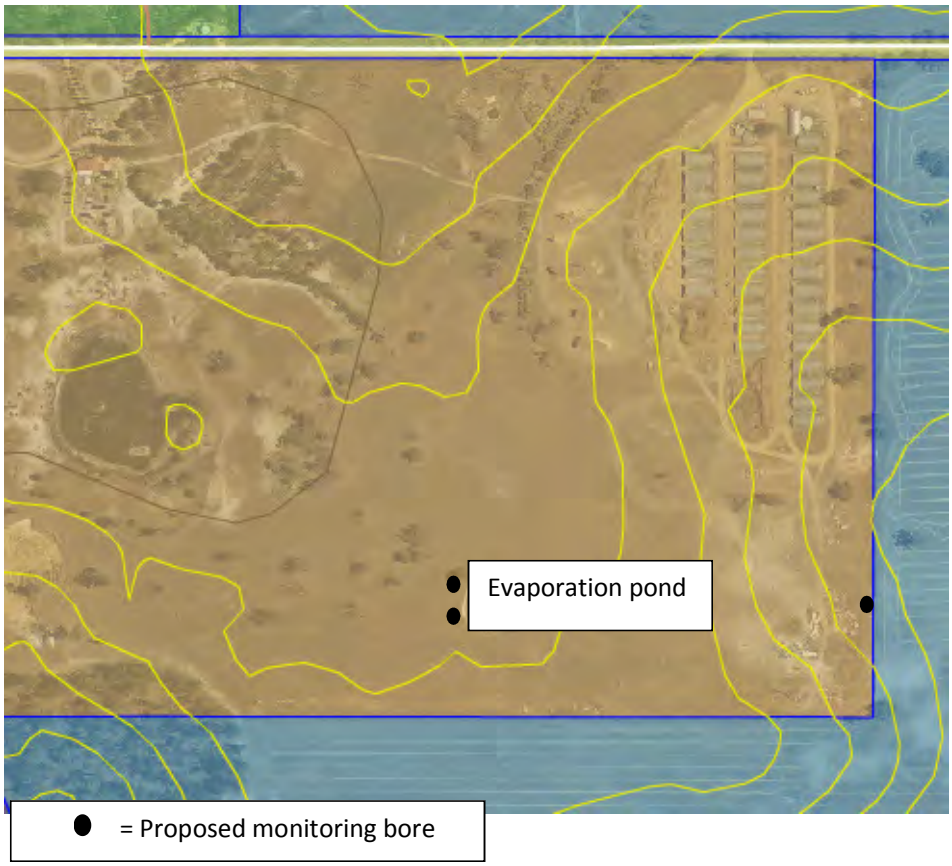
3.7 Evaporation pond

The evaporation pond has a capacity of 33,725 m^3 and a surface area of 36,000 m^2 and includes a 0.5m freeboard. The pond will be split in 2 compartments to allow checking pond liner integrity should it be needed.

The pond is designed to hold a one in 20 year winter rainfall event however should it be shown to be too small, recovered heat from the WTP generators can be used to heat the water to hasten evaporation.

The evaporation pond will be lined with 300mm of compacted clay to achieve a permeability standard of 1 $x10^{-9}$m/s.

The proposed location of groundwater monitoring bores is shown below.



Sketch 3. **Proposed location of groundwater monitoring bores**

See Appendix 4 for more details on the evaporation pond.

4. Community amenity protection

4.1 Separation distance

The distance to sensitive receptors is well within the conservative S-factor set out in the National Environmental Guidelines for Piggeries (2nd edition revised). The recommended separation distances are calculated using model 1.

Sensitive receptor	S factor recommend distance	Actual distance
Rural dwelling	1.5km	2.3km
Rural residential	2.0km	None actual to mention
Town site	3.3km	> 17km

The proposal comfortably meets separation distance recommendations.

4.2 Odour

Odour sources is limited to the sheds because the WTP is a closed system and treated water that goes to evaporation pond is odour less. However, the proposal meets the S factor separation distance recommendations under model 1 and the use of the WTP as a waste treated facility is anticipated to reduce the smell from pig manure and effluent by 90% compared to a conventional system.

The new finisher sheds will be ventilated using a combined tunnel/curtain ventilation air cooling system.

All sheds will be cleaned out and the new sheds will be washed and disinfected between each batch of pigs before new pigs arrive.

A complaints register will be kept to monitor odour impacts.

4.3 Noise

Pigs in original sheds will be continued to be fed in the current method. Pigs in new indoor sheds will be fed 4 times per day from a trough. All pigs will be able to access feed simultaneously which will reduce noise.

Production machinery will be operated manually during the hours of 6am to 6pm. The arrival and departure of delivery trucks will also be restricted to these times (except when animal welfare requires pigs to be moved during cooler times).

All traffic including heavy vehicles will arrive via Albany Highway onto Crapella Road.

A complaints register will be kept to monitor noise impacts.

4.4 Dust

The feed mill will be shedded. Buffer distances for odour and noise will also contain dust pollution.

4.5 Traffic

There will be an increased amount of traffic from trucks into the site. With milling the feed onsite traffic consisting of trucks delivering feed from Perth will stop. Instead trucks with grain will arrive from the local area. The traffic volume is spread evenly through the year as grain will arrive as we need and not only during harvest.

The total traffic numbers are mentioned in Appendix 2.

Other issues

5.1 Remnant vegetation

There is no clearing required.

5.2 Hazardous materials storage

Potentially hazardous materials include herbicides, veterinary chemicals, disinfectants, insecticides and rodenticides. Only minimal amounts of these materials will be stored on site at any one time. Approximate volumes include 60L of herbicides, disinfectants and insecticides and 40 kg of rat poison. All potentially hazardous materials will be stored in well-constructed, clean and safe chemical storage and handling facilities with concrete floors. These facilities will be locked and only accessible by suitably trained staff.

5.3 Contingency plans

See Appendix 5.

5.4 Biosecurity

The Kojonup piggery is not in proximity to any other piggeries.

In the event of a disease outbreak, GD Pork will follow the DAFWA Livestock Biosecurity Factsheet (current at 17 April 2013).

5.5 Site significance

The Kojonup piggery expansion will not affect any areas of heritage, archaeological or cultural significance.

Other inputs

6.1 Labour supply

The Kojonup piggery expansion will increase the number of employees at the facility from 4 to 8. Employees will be housed on-site.

6.2 Energy supply

The expanded piggery will require 900 000 kwh/annum of electricity. Power will be sourced from the onsite WTP generators and used to operate the feed mill, feeding machines, ventilation and lights. The heat recovered from the engine will be used to heat the process tank of the waste treatment system.

6.3 Water supply

The expanded piggery will require 55,000m^3 of water per annum. This will be sourced from the 2 existing on site groundwater bores which will be supplemented with captured rainwater. As the farm is located in a Department of Water 'unproclaimed' area, no water licence is needed.

Appendix 1- Existing production

Description of pig housing sheds:

• Pig housing sheds are - as shown in below picture 1 from row A - a straw based system on 100 mm water impermeable concrete flooring and all sheds are covered with tarp
• Sheds have 1 m high walls on both sides and part of West end water impermeable connected to the floor.
• Middle part of West end is closed by 1 m high moveable concrete blocks for cleaning purpose
• Upper part of West end can in cool weather be closed by top mounted curtains
• In warm weather climate inside shed can be partly regulated with water sprinklers placed below top of shed
• In East end of sheds there are a 5 m long concrete repos in full wide of sheds with 6 eating places feeder in the middle of repos and drinking facilities placed on outer wall in each side (total of 10 drinking bawls per shed) - details in picture 2
• Feeders are filled with tractor and feeding trailer as shown in picture 3
• Between each batch sheds are cleaned out (picture 4) and floor sprayed with lime in a water solution for disinfection purpose before new pigs are inserted.

Picture 1. Interior of shed in row A and B

Picture 2. Feeder and drinkers in shed row A and B

Picture 3. Feeding equipment

Picture 4. Cleaning and manure moving equipment

Production flow:

Weaner period (8 kg to 30 kg):

Every week (normally Thursdays) around 500 pigs, 4 weeks old (8 kg), are inserted in the production unit by cleaned and disinfected truck.

At arrival they receive needed vaccinations/precaution, assorted after their size and inserted in a cleaned and disinfected shed in row C.

As shown in picture 5, sheds in row C differ from row A and row B with a longitudinal division of the shed in 2 parts each giving place for 250-275 weaners for an 8 weeks period from 8 kg to 30 kg. As shown from the picture there are 2 feeders in each of 8 sheds in row C.

Picture 5. Shed for weaners row C

In weaner period pigs are fed with 2 different type of dry feed according to their weight/age composed of tasteful ingredients to assure that pigs very fast will learn to eat.
Feeders are permanently containing feed and pigs can eat as much they want and as often they want which means there are no struggle and noise at feeding time as there are no specific feeding time.
Each day every pig is checked if they get sufficient feed and water and if any types of illness occur. Ill pigs are treated according to veterinarian prescription, and if they need special care they are moved to shed A15 designed as recover of ill pigs.
After 7.5 weeks in weaner section (row C) pigs are moved to grower section (row B) and shed is cleaned and disinfected before next batch arrive.

Grower period (30 kg to 65 kg):
Each shed receive 250-275 pigs all kept together as they come from row C.
In grower period pigs are fed with feed specially fulfilling the demand for 30-65 kg growers to give optimal feed conversion plus maximal weight gain and meat content in carcass.
Also feeders containing feed for growers are permanently containing feed and pigs can eat as much they want and as often they want which means there are no struggle and noise at feeding time as there are no specific feeding time.
Daily check procedures as described for weaners.
After 5-6 weeks in grower sheds in row B pigs are moved to finisher sheds in row A.
Empty sheds are cleaned before next batch is inserted.

Finisher period (65 kg to 100 kg):
Each shed receive the pigs from row B, all kept together as they come from row B
In finisher period pigs are fed with feed containing lower amount of nutrients compared to grower feed as finishers have lower nutrient demand than growers to give optimal feed conversion plus maximal weight gain and meat content in carcass.
Also in finisher period feeders are permanently containing feed and pigs can eat as much they want and as often they want which means there are no struggle and noise at feeding time as there are no specific feeding time.
Daily check procedures as described for weaners and growers.
At a weight of approximately 100kg - visually assessed – pigs are moved to loading facilities to be prepared for abattoir.

Appendix 2- Piggery inputs and outputs fact summary

Table 1	**Units**	**Existing production**	**Production after expansion**
Standardized Production Size	Standard Pig Units	**11,820**	**28,368**
Input:			
Weaners received	numbers/year	26,200	75,000
weaners	tonne/year	210	600
Feed	tonne/year	5,800	16,900
Dry matter	tonne/year	5,200	15,200
Total nitrogen (N)	tonne/year	160	475
Phosphorus (P)	tonne/year	300	870
Potassium (K)	tonne/year	365	1,070
Water, total	cubic metre/year	20,000	55,000
Straw bales (2.4mx1.2mx1.2 m)	bales/year	2,000	1,250
Straw	tonne/year	1,000	625
Electricity	kWh per year	50,000	900,000
Output:			
Finishers delivered to abattoir	numbers/year	22,600	71,000
Live weight, finishers to abattoir	tonne/year	2,300	7,100
Meat	tonne/year	1,600	4,900
Deceased animals	tonne/year	50	126
Dry matter	tonne/year	25	53
Deep litter manure	tonne/year	4,254	2,924
Deep litter manure dry matter	tonne/year	1,404	965
Slurry	tonne/year	-	31,505
Slurry dry matter	tonne/year	-	1,922
Nutrients from manure, slurry and deceased animals			
Dry matter	tonne/year	1,429	2,940
Total nitrogen (N)	tonne/year	48	179
Phosphorus (P)	tonne/year	17	53
Potassium (K)	tonne/year	57	130
Trucks and heavy vehicle transportations:			
Weaners (15 tonne HR truck)	loads/year	52	104
Feed/grain transports (50 tonne truck)	loads/year	145	550
Straw transports (50 tonne truck)	loads/year	35	22
Deep litter manure/WTP fertilizer (50 tonne truck)	loads/year	100	12
Finishers, abattoir (25 tonne truck)	loads/year	110	200
Others (25 tonne truck)	loads/year	18	24
Total transports	**loads/year**	**460**	**912**

Table 2. GD Pork FUTURE water consumption and slurry production in NEW FULLY SLATTED SHEDS*)

Background actual GD Pork figures*):	70,931	finishers

Production system	Fully slatted	Source
Growth period	**40-100 kg**	
Average number of on farm heads	11,595	GD Pork
Finishers per year, 40-100 kg	70,931	GD Pork
Feed consumption, 1000 Feed Units per year	11,704	GD Pork
Drinking water, m^3 per year	30,757	AUS
Wasted drinking water, m^3 per year	4,614	DK
Water for wash of stables, m^3 per year	1,773	DK
Total water consumption, m^3 per year	**37,144**	**DK**
Water consumption per produced animal, litre	524	
Water consumption per head, litre per day	8.8	
Water from feed conversion, m^3 per year	7,022	DK
Evaporation from animals and stables, m^3 per year	-11,704	DK
Gain in animals, m^3 per year	-2,880	DK
Water in waste (6.1 % DM) from fully slatted sheds, m^3 per year	**29,583**	**DK**
Total waste from fully slatted sheds, m3 per year	**31,505**	**DK**

*)Expected future GD Pork production figures inserted in "Yearly production, water consumption and amount of waste based on norms given in DJF-report number 36. Husdyrbrug, Danmarks JordbrugsForskning, 2001, updated 2014".

Water consumption and produced amount of waste can differ very much from norms, but will normally be within +/- 25 %.

The Danish Agricultural Advisory Centre, Department of Pig Production, Sept. 2003, ERN

Source: Hanne Damgaard Poulsen (ed): Norms for animal manure - 2014, 33 pages (Danish language) http://anis.au.dk/fileadmin/DJF/Anis/normtal2000.pdf

Table 3. Summary, FUTURE waste production

Input WTP

Deep litter manure, tonne per year:					
Produced weaners per year	73,125	Dry matter:	33.0%	Tonne	**2,924**
Slurry, tonne per year:					
Produced finishers per year	70,931	Dry matter:	6.1%	Tonne	**31,505**
Mortality:					
Dead animals per year	3,950	Dry matter:	42.1%	Tonne	**126**
Total amount of waste, tonne per year					**34,555**

Output from future Kojonup WTP

Corrected for Methane and CO2 production plus biological processes in WTP	
Pressed manure (30% DM), tonne per year	**6,390**
To evaporation pond/reuse, tonne per year	**25,560**

Appendix 3 – Waste Treatment Plant (WTP)

1.1. Description of the process: Technical overview

The livestock waste treatment plant consists of an initial collection tank called the feeding tank. This tank is made of 316L stainless steel and has a total capacity of more than 115m3 and an available capacity of 96m3. The tank is mixed by a suitable machine which is submerged and whose task is to keep the material in the tank homogenized avoiding any stratification.

The power supply system of the digester is composed of a grinding machine and a volumetric pump. The loading system is equipped with recirculation in the load tank, thus the material in the tank can be homogenized and reduced to the desired size by a continuous passage in the shredder.
A lacerating machine is also installed on the supply tank to reduce the deceased animals to an adequate size for mixing. This system also offers the opportunity to reduce the length of the manure fibres if necessary.

Lastly a machine which separates the effluents from the treatment system is installed on the tank. This machine performs a separation of the solid and the liquid. Being installed on the tank rim, it provides the automatic management of the recirculation of the separated solid directly in the system load. This guarantees the maximum recirculation of organic substance into the treatment plant ensuring the minimization of residual gas emissions.

The liquid material is then introduced into the digester. The digester has a diameter of 23m and a total height of 6m. The effective height of 5.3m provides an available volume of 2,492m3 with an estimated total time of retention of 25 days. The digester is also made of stainless steel 316L and is completely insulated to ensure less thermal interaction with the external environment. An elastic gasometrical dome covers the top of the digester ensuring the complete absence of oxygen and the total collection of harmful greenhouse gases developed in the storage phase.
An adequate system of mixing and heating ensures the maintenance of the essential parameters of the process.

A second pump conveys the system effluents to the separator machine that divides the solid from the liquid recirculating part of the solid into the loading system and conveying the rest to an external storage bed. The liquid is piped to the nearby evaporative pond instead.

The solid material is then removed by the operators and stored in an appropriate waterproof concrete bunker that is bounded to collect any spills. This bunker has a total storage capacity of 90 days.

The collected gases are treated and dehumidified until reaching the appropriate limits to allow the use by internal combustion engines for the combined production of electricity and heat.
The collected condensate is conveyed to the existing evaporative tank. The cleaning of the collected gas is carried out bacteriologically in the digester by the controlled introduction of a small amount of oxygen. The waste product is a stabilized salt high in sulfur content which precipitates in the sludge and is extracted from the system with the effluents. The gases are further treated with active carbon to ensure the minimization of impurities harmful to the cogeneration groups.

The electricity produced is completely consumed on site making the system completely independent from the local distribution network.

The heat is in part re-used for the system temperatures control and if necessary conveyed to the evaporation pond to accelerate the process of reduction of the volumes. After the start of the process we will evaluate the idea of reusing the excess heat for groundwater desalination.

The cogeneration groups provide a noise impact reduced to 70dBA at 7m. The whole system guarantees a noise impact reduced to 70dBA at 7mt less the operating machines used once a day for the loading of the feeding tank.

1.2. Description of the Biological process

The methanogen process, or anaerobic fermentation (i.e. in the absence of oxygen), takes place within the digester through the activity of bacteria that crush the more complex organic molecules, resulting in the formation of simple molecules, such as CH4, CO2 , H2O, H2S, etc.

The material exiting from the digesters can be sent to the separation station to obtain a liquid phase and a solid phase.

The material undergone the treatment of anaerobic digestion has a reduced content of the organic substance by about 60% compared to the initial input.

Furthermore, the organic material of the digestate is stabilized.

The slurry thus treated are effectively stable and odourless and therefore readily usable by plants because mineralized and homogenized in the content of N-P-K.

At the end of digestion, the nutrients (nitrogen and phosphorus) are kept substantially unchanged. They are not removed via biochemical pathway except for the bacterial synthesis needs, which do not involve significant reductions.
The waste treatment plant also provides better sanitation to the community, thanks to the removal of odours and bacteria in the separated solids that is exported off site. Furthermore it guarantees a limited environmental impact than conventional energy production systems.

The benefits derived from the application of anaerobic digestion and collection of the obtained biogas is as follows:

- reduction of ammonia emissions
- reduction of greenhouse gases
- reduction of odorous gases
- controlled stabilization of sewage before their agronomic use

In addition to energy recovery, the convenience of this system must be evaluated on the basis of the physic-chemical characteristics of the effluent; during the anaerobic digestion, in fact, solid substances are liquefied and there is a potential reduction of these, due to the transformation of the readily degradable carbon compounds to methane and carbon dioxide. Also a transformation of organic nitrogen into ammonia occurs.

The effluent is stabilized and deodorized, it obtains a considerable reduction of the organic matter content, BOD, COD, total solids and volatile. However, it maintains intact its content of fertilizing elements, remaining in this way, excellent fertilizer for crops and soil improver.

For a careful evaluation of the characteristics of such material is essential to carry out analysis in a laboratory both on the input material and the outlet material coming from the digesters. It is indispensable to control the actual level of organic material degradation and therefore ensure the system maximum potential related to biogas production. Only relative changes of dry and organic matter occur, nitrogen is transformed into ammonia but does not undergo significant decreases in quantitative terms. The dry and so organic material are transformed into biogas.

There is no production of waste or other byproducts inside of the waste treatment plant.
The cover system also captures the fermentation gases that contain a small percentage of hydrogen sulfide and ammonia, in addition to the main components (methane and carbon dioxide),as well as traces of other well noticeable malodorous compounds, such as mercaptans and volatile fatty acids. This results in an effective odour control.

Input material:

-Solid and liquid

SLURRY	Tonne/year	31,505
MANURE	Tonne/year	2,924
DECEASED ANIMALS	Tonne/year	126

Inlet material	Dry matter content %	S.S. (dry matter content)	Losted S.S. transformed into Biogas	Mass loss estimated average
94.7 tonne/day	8.5 %	8.1 tone/day	2.8 tonne/day	3.1 tonne/day

Outlet:

-Solid and liquid (from digester)

Digestate (effluent materials)	Dry matter content %	S.S. (dry matter content)	Water content	Biogas density
87.5 tonne/day	5.6 %	4.9 tonne/day	82,6 tonne/day	1.25

-Solid and liquid (from separator)

74.1 m3 digested/day	Solid fraction	Liquid fraction
Distribution	20%*	80%*
Tonne/day	17,5	70,0
Dry matter content, %	30%*	2%*
Dry matter, tonne/day	5,3	1.4

*There will be some variation depending on the final machine set up and environment conditions.

Gas:

Expected production	Equivalent methane CH4	Electricity production	Electricity production
2476 Nm3 biogas /day*	1614 Nm3/day	6200 kW/day**	258kW/hour

*Biogas expected composition:
CH4: 55-60%
CO2 + CO: 40-45%
H2S: 0.1%
Other gases
**The engine's electrical efficiency is 0.4

Engine exhaust gas (each unit):

Exhaust gas temperature	°C	457 (200 with recovery system on)
Exhaust gas volume	Nm3/h	3.650
	kg/h	4.910
Combustion air volume	Nm3/h	3.766
	kg/h	4.868

Exhaust gas composition (*)		
Nitrogen oxide (Nox)	mg/Nm3	<450
Carbon oxide (CO)	mg/Nm3	<500
Ultra small particolate (PST)	mg/Nm3	<10
COT	mg/Nm3	<150
(*) exhaust gas 5% O2		

Appendix 4 - Pond details

Evaporation Pond size Kojonup farm		
Evaporation pond internal dimensions		
Depth ex freeboard	1	m
Freeboard	0.5	m
Length at crest	360	m
Width at crest	100	m
Internal Batter	2.5	:1
Surface area	36,000	m2
Internal capacity	33,725	m3
Evaporation pond foot print		
Width of crest	3	m
External batter	3	:1
Height of pond wall above ground level	0.75	m
Length of pond outside at ground level	370.5	m
Width of pond outside at ground level	110.5	m
Total foot print of evaporation pond	40,940	m2

New Storm Water Dam Kojonup farm		
Storm water run off area (New buildings and roads	31,825	m2
Winter rainfall (1 in 20 year event)	343.6	mm
Winter output (May to August)	10,935	m3
Storm water pond internal dimensions		
Depth ex freeboard	2.5	m
Freeboard	0.5	m
Length at crest	80	m
Width at crest	80	m
Internal Batter	2.5	:1
Surface area	6,400	m2
Internal capacity	13,598	m3
Winter rainfall inflow (1 in 20 year event)	2,199	m3
Total winter inflow	13,134	m3
Net spare capacity in Storm water dam in winter	464	m3

Storm water dam foot print		
Width of crest	3	m
External batter	3	:1
Height of pond wall above ground level	0.75	m
Length of pond outside at ground level	90.5	m
Width of pond outside at ground level	90.5	m
Total foot print of storm water dam	8,190	m2

The following water balance for the evaporation pond is based on monthly balances using the following:

- Highest 1 in 20 year winter rainfall data every year.
- Median figures for evaporation
- 0.85 PAN factor

The data shows that in 20 years with 1 in 20 year winter rainfall every winter the pond does not overflow. (noted by “Closing Storage volume available” being a positive figure)

Evaporation Ponds Kojonup with 1 in 20 year winter rainfall figures and mean evaporation and PAN factor 0.85

Year 1

January PAN	0.85
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,167
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	33,167
Closing Storage Volume Available	31,796
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	31,796
Closing Storage Volume Available	25,350
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	25,350
Closing Storage Volume Available	20,766
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	20,766
Closing Storage Volume Available	18,139
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	18,139
Closing Storage Volume Available	16,505
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	16,505
Closing Storage Volume Available	19,828
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	19,828
Closing Storage Volume Available	21,152
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	21,152
Closing Storage Volume Available	23,251
Storage Change (m3)	2,099

Year 2

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	23,251
Closing Storage Volume Available	27,486
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	27,486
Closing Storage Volume Available	30,646
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	30,646
Closing Storage Volume Available	32,561
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	32,561
Closing Storage Volume Available	32,003
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	32,003
Closing Storage Volume Available	30,632
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	30,632
Closing Storage Volume Available	24,186
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	24,186
Closing Storage Volume Available	19,601
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	19,601
Closing Storage Volume Available	16,975
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	16,975
Closing Storage Volume Available	15,341
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	15,341
Closing Storage Volume Available	18,664
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	18,664
Closing Storage Volume Available	19,988
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	19,988
Closing Storage Volume Available	22,087
Storage Change (m3)	2,099

Year 3

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	22,087
Closing Storage Volume Available	26,322
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	26,322
Closing Storage Volume Available	29,481
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	29,481
Closing Storage Volume Available	31,397
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	31,397
Closing Storage Volume Available	30,838
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	30,838
Closing Storage Volume Available	29,468
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	29,468
Closing Storage Volume Available	23,022
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	23,022
Closing Storage Volume Available	18,437
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	18,437
Closing Storage Volume Available	15,811
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	15,811
Closing Storage Volume Available	14,177
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	14,177
Closing Storage Volume Available	17,500
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	17,500
Closing Storage Volume Available	18,824
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	18,824
Closing Storage Volume Available	20,923
Storage Change (m3)	2,099

Year 4

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	20,923
Closing Storage Volume Available	25,158
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	25,158
Closing Storage Volume Available	28,317
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	28,317
Closing Storage Volume Available	30,233
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	30,233
Closing Storage Volume Available	29,674
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	29,674
Closing Storage Volume Available	28,304
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	28,304
Closing Storage Volume Available	21,858
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	21,858
Closing Storage Volume Available	17,273
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	17,273
Closing Storage Volume Available	14,647
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	14,647
Closing Storage Volume Available	13,013
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	13,013
Closing Storage Volume Available	16,336
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	16,336
Closing Storage Volume Available	17,660
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	17,660
Closing Storage Volume Available	19,759
Storage Change (m3)	2,099

Year 5

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	19,759
Closing Storage Volume Available	23,994
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	23,994
Closing Storage Volume Available	27,153
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	27,153
Closing Storage Volume Available	29,068
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	29,068
Closing Storage Volume Available	28,510
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	28,510
Closing Storage Volume Available	27,140
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	0
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	-1,199
Opening Storage Volume Availab	27,140
Closing Storage Volume Available	28,339
Storage Change (m3)	1,199

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	0
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	-1,239
Opening Storage Volume Availab	28,339
Closing Storage Volume Available	29,578
Storage Change (m3)	1,239

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	0
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	-1,620
Opening Storage Volume Availab	29,578
Closing Storage Volume Available	31,198
Storage Change (m3)	1,620

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	31,198
Closing Storage Volume Available	29,564
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	29,564
Closing Storage Volume Available	32,888
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	32,888
Closing Storage Volume Available	34,211
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	34,211
Closing Storage Volume Available	33,725
Storage Change (m3)	-486

Year 6

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,725
Storage Change (m3)	0

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	33,725
Closing Storage Volume Available	33,167
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	33,167
Closing Storage Volume Available	31,796
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	31,796
Closing Storage Volume Available	25,350
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	25,350
Closing Storage Volume Available	20,766
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	20,766
Closing Storage Volume Available	18,139
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	18,139
Closing Storage Volume Available	16,505
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	16,505
Closing Storage Volume Available	19,828
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	19,828
Closing Storage Volume Available	21,152
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	21,152
Closing Storage Volume Available	23,251
Storage Change (m3)	2,099

Year 7

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	23,251
Closing Storage Volume Available	27,486
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	27,486
Closing Storage Volume Available	30,646
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	30,646
Closing Storage Volume Available	32,561
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	32,561
Closing Storage Volume Available	32,003
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	32,003
Closing Storage Volume Available	30,632
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	30,632
Closing Storage Volume Available	24,186
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	24,186
Closing Storage Volume Available	19,601
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	19,601
Closing Storage Volume Available	16,975
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	16,975
Closing Storage Volume Available	15,341
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	15,341
Closing Storage Volume Available	18,664
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	18,664
Closing Storage Volume Available	19,988
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	19,988
Closing Storage Volume Available	22,087
Storage Change (m3)	2,099

Year 8

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	22,087
Closing Storage Volume Available	26,322
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	26,322
Closing Storage Volume Available	29,481
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	29,481
Closing Storage Volume Available	31,397
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	31,397
Closing Storage Volume Available	30,838
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	30,838
Closing Storage Volume Available	29,468
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	29,468
Closing Storage Volume Available	23,022
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	23,022
Closing Storage Volume Available	18,437
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	18,437
Closing Storage Volume Available	15,811
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	15,811
Closing Storage Volume Available	14,177
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	14,177
Closing Storage Volume Available	17,500
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	17,500
Closing Storage Volume Available	18,824
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	18,824
Closing Storage Volume Available	20,923
Storage Change (m3)	2,099

Year 9

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	20,923
Closing Storage Volume Available	25,158
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	25,158
Closing Storage Volume Available	28,317
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	28,317
Closing Storage Volume Available	30,233
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	30,233
Closing Storage Volume Available	29,674
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	29,674
Closing Storage Volume Available	28,304
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	28,304
Closing Storage Volume Available	21,858
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	21,858
Closing Storage Volume Available	17,273
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	17,273
Closing Storage Volume Available	14,647
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	14,647
Closing Storage Volume Available	13,013
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	13,013
Closing Storage Volume Available	16,336
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	16,336
Closing Storage Volume Available	17,660
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	17,660
Closing Storage Volume Available	19,759
Storage Change (m3)	2,099

Year 10

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	19,759
Closing Storage Volume Available	23,994
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	23,994
Closing Storage Volume Available	27,153
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	27,153
Closing Storage Volume Available	29,068
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	29,068
Closing Storage Volume Available	28,510
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	28,510
Closing Storage Volume Available	27,140
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	27,140
Closing Storage Volume Available	20,694
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	20,694
Closing Storage Volume Available	16,109
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	16,109
Closing Storage Volume Available	13,482
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	13,482
Closing Storage Volume Available	11,849
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	11,849
Closing Storage Volume Available	15,172
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	15,172
Closing Storage Volume Available	16,496
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	16,496
Closing Storage Volume Available	18,595
Storage Change (m3)	2,099

Year 11

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	18,595
Closing Storage Volume Available	22,830
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	22,830
Closing Storage Volume Available	25,989
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	25,989
Closing Storage Volume Available	27,904
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	27,904
Closing Storage Volume Available	27,346
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	27,346
Closing Storage Volume Available	25,976
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	25,976
Closing Storage Volume Available	19,530
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	19,530
Closing Storage Volume Available	14,945
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	14,945
Closing Storage Volume Available	12,318
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	12,318
Closing Storage Volume Available	10,685
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	10,685
Closing Storage Volume Available	14,008
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	14,008
Closing Storage Volume Available	15,332
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	15,332
Closing Storage Volume Available	17,431
Storage Change (m3)	2,099

Year 12

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	17,431
Closing Storage Volume Available	21,666
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	21,666
Closing Storage Volume Available	24,825
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	24,825
Closing Storage Volume Available	26,740
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	26,740
Closing Storage Volume Available	26,182
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	26,182
Closing Storage Volume Available	24,812
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	24,812
Closing Storage Volume Available	18,365
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	18,365
Closing Storage Volume Available	13,781
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	13,781
Closing Storage Volume Available	11,154
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	11,154
Closing Storage Volume Available	9,521
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	9,521
Closing Storage Volume Available	12,844
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	12,844
Closing Storage Volume Available	14,167
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	14,167
Closing Storage Volume Available	16,267
Storage Change (m3)	2,099

Year 13

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	16,267
Closing Storage Volume Available	20,502
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	20,502
Closing Storage Volume Available	23,661
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	23,661
Closing Storage Volume Available	25,576
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	25,576
Closing Storage Volume Available	25,018
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	25,018
Closing Storage Volume Available	23,647
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	23,647
Closing Storage Volume Available	17,201
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	17,201
Closing Storage Volume Available	12,617
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	12,617
Closing Storage Volume Available	9,990
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	9,990
Closing Storage Volume Available	8,356
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	8,356
Closing Storage Volume Available	11,680
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	11,680
Closing Storage Volume Available	13,003
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	13,003
Closing Storage Volume Available	15,102
Storage Change (m3)	2,099

Year 14

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	15,102
Closing Storage Volume Available	19,338
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	19,338
Closing Storage Volume Available	22,497
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	22,497
Closing Storage Volume Available	24,412
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	24,412
Closing Storage Volume Available	23,854
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	23,854
Closing Storage Volume Available	22,483
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	22,483
Closing Storage Volume Available	16,037
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	16,037
Closing Storage Volume Available	11,453
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	11,453
Closing Storage Volume Available	8,826
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	8,826
Closing Storage Volume Available	7,192
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	7,192
Closing Storage Volume Available	10,515
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	10,515
Closing Storage Volume Available	11,839
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	11,839
Closing Storage Volume Available	13,938
Storage Change (m3)	2,099

Year 15

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	13,938
Closing Storage Volume Available	18,173
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	18,173
Closing Storage Volume Available	21,332
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	21,332
Closing Storage Volume Available	23,248
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	23,248
Closing Storage Volume Available	22,690
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	22,690
Closing Storage Volume Available	21,319
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	21,319
Closing Storage Volume Available	14,873
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	14,873
Closing Storage Volume Available	10,288
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	10,288
Closing Storage Volume Available	7,662
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	7,662
Closing Storage Volume Available	6,028
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	6,028
Closing Storage Volume Available	9,351
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	9,351
Closing Storage Volume Available	10,675
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	10,675
Closing Storage Volume Available	12,774
Storage Change (m3)	2,099

Year 16

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	12,774
Closing Storage Volume Available	17,009
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	17,009
Closing Storage Volume Available	20,168
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	20,168
Closing Storage Volume Available	22,084
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	22,084
Closing Storage Volume Available	21,525
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	21,525
Closing Storage Volume Available	20,155
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	20,155
Closing Storage Volume Available	13,709
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	13,709
Closing Storage Volume Available	9,124
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	9,124
Closing Storage Volume Available	6,498
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	6,498
Closing Storage Volume Available	4,864
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	4,864
Closing Storage Volume Available	8,187
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	8,187
Closing Storage Volume Available	9,511
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	9,511
Closing Storage Volume Available	11,610
Storage Change (m3)	2,099

Year 17

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	11,610
Closing Storage Volume Available	15,845
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	15,845
Closing Storage Volume Available	19,004
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	19,004
Closing Storage Volume Available	20,920
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	20,920
Closing Storage Volume Available	20,361
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	20,361
Closing Storage Volume Available	18,991
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	18,991
Closing Storage Volume Available	12,545
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	12,545
Closing Storage Volume Available	7,960
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	7,960
Closing Storage Volume Available	5,334
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	5,334
Closing Storage Volume Available	3,700
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	3,700
Closing Storage Volume Available	7,023
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	7,023
Closing Storage Volume Available	8,347
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	8,347
Closing Storage Volume Available	10,446
Storage Change (m3)	2,099

Year 18

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	10,446
Closing Storage Volume Available	14,681
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	14,681
Closing Storage Volume Available	17,840
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	17,840
Closing Storage Volume Available	19,755
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	19,755
Closing Storage Volume Available	19,197
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	19,197
Closing Storage Volume Available	17,827
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	17,827
Closing Storage Volume Available	11,381
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	11,381
Closing Storage Volume Available	6,796
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	6,796
Closing Storage Volume Available	4,169
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	4,169
Closing Storage Volume Available	2,536
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	2,536
Closing Storage Volume Available	5,859
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	5,859
Closing Storage Volume Available	7,183
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	7,183
Closing Storage Volume Available	9,282
Storage Change (m3)	2,099

Year 19

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	9,282
Closing Storage Volume Available	13,517
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	13,517
Closing Storage Volume Available	16,676
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	16,676
Closing Storage Volume Available	18,591
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	18,591
Closing Storage Volume Available	18,033
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	18,033
Closing Storage Volume Available	16,663
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	16,663
Closing Storage Volume Available	10,216
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	10,216
Closing Storage Volume Available	5,632
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	5,632
Closing Storage Volume Available	3,005
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	3,005
Closing Storage Volume Available	1,372
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	1,372
Closing Storage Volume Available	4,695
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	4,695
Closing Storage Volume Available	6,019
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	6,019
Closing Storage Volume Available	8,118
Storage Change (m3)	2,099

Year 20

January	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	19.1
Rainfall (m3)	688
Total Inflow (m3)	2,818
Evaporation (mm)	229.4
Evaporation (m3)	7,053
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	7,053
Inflow -Outflow (m3)	-4,235
Opening Storage Volume Availab	8,118
Closing Storage Volume Available	12,353
Storage Change (m3)	4,235

February	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	10.9
Rainfall (m3)	392
Total Inflow (m3)	2,522
Evaporation (mm)	184.8
Evaporation (m3)	5,681
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	5,681
Inflow -Outflow (m3)	-3,159
Opening Storage Volume Availab	12,353
Closing Storage Volume Available	15,512
Storage Change (m3)	3,159

March	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	20
Rainfall (m3)	720
Total Inflow (m3)	2,850
Evaporation (mm)	155
Evaporation (m3)	4,765
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,765
Inflow -Outflow (m3)	-1,915
Opening Storage Volume Availab	15,512
Closing Storage Volume Available	17,427
Storage Change (m3)	1,915

April	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	33.2
Rainfall (m3)	1,195
Total Inflow (m3)	3,325
Evaporation (mm)	90
Evaporation (m3)	2,767
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,767
Inflow -Outflow (m3)	558
Opening Storage Volume Availab	17,427
Closing Storage Volume Available	16,869
Storage Change (m3)	-558

May	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.2
Rainfall (m3)	1,051
Total Inflow (m3)	3,181
Evaporation (mm)	58.9
Evaporation (m3)	1,811
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,811
Inflow -Outflow (m3)	1,370
Opening Storage Volume Availab	16,869
Closing Storage Volume Available	15,499
Storage Change (m3)	-1,370

June	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	153.2
Rainfall (m3)	5,515
Total Inflow (m3)	7,645
Evaporation (mm)	39
Evaporation (m3)	1,199
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,199
Inflow -Outflow (m3)	6,446
Opening Storage Volume Availab	15,499
Closing Storage Volume Available	9,052
Storage Change (m3)	-6,446

July	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	102.6
Rainfall (m3)	3,694
Total Inflow (m3)	5,824
Evaporation (mm)	40.3
Evaporation (m3)	1,239
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,239
Inflow -Outflow (m3)	4,585
Opening Storage Volume Availab	9,052
Closing Storage Volume Available	4,468
Storage Change (m3)	-4,585

August	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	58.8
Rainfall (m3)	2,117
Total Inflow (m3)	4,247
Evaporation (mm)	52.7
Evaporation (m3)	1,620
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	1,620
Inflow -Outflow (m3)	2,627
Opening Storage Volume Availab	4,468
Closing Storage Volume Available	1,841
Storage Change (m3)	-2,627

September	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	47.7
Rainfall (m3)	1,717
Total Inflow (m3)	3,847
Evaporation (mm)	72
Evaporation (m3)	2,214
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	2,214
Inflow -Outflow (m3)	1,634
Opening Storage Volume Availab	1,841
Closing Storage Volume Available	208
Storage Change (m3)	-1,634

October	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	25.9
Rainfall (m3)	932
Total Inflow (m3)	3,062
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-3,323
Opening Storage Volume Availab	208
Closing Storage Volume Available	3,531
Storage Change (m3)	3,323

November	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	29.6
Rainfall (m3)	1,066
Total Inflow (m3)	3,196
Evaporation (mm)	147
Evaporation (m3)	4,519
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	4,519
Inflow -Outflow (m3)	-1,324
Opening Storage Volume Availab	3,531
Closing Storage Volume Available	4,854
Storage Change (m3)	1,324

December	
Storage Surface Area m2	36,000
Wastewater Inflow (m3/month)	2,130
Rainfall (mm)	59.9
Rainfall (m3)	2,156
Total Inflow (m3)	4,286
Evaporation (mm)	207.7
Evaporation (m3)	6,386
Seepage (m3)	0
Irrigation (m3)	0
Total Outflow (m3)	6,386
Inflow -Outflow (m3)	-2,099
Opening Storage Volume Availab	4,854
Closing Storage Volume Available	6,954
Storage Change (m3)	2,099

Appendix 5- Contingency Plans

Table 1 Contingency measures

Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Waste Treatment Plant (WTP) *Whole system.*	Daily visual check of the entire WTP system intact with optimal function. Quality of methane gas measured daily Methane gas production metered and recorded daily	Any failure or malfunction in the plant e.g.: - blower fails - back up flare fails - leak in pipes - gas generator fails	Farm Manager to be notified immediately. Stop pumping waste into digester until further notice. Organise immediate repair of failed component (a list of suitable contractors/ service providers and their contact details is displayed in farm office). Normal routine of flushing effluent from sheds to collecting pit will for storage purpose be continued. Maintenance records of WTP are kept as part of farm QA system.	Use the capacity of collecting pit and maintain normal routine of flushing from sheds to collecting pit as long as possible (to avoid storing effluent under sheds longer than normal routine). There is enough holding capacity in the sump pit for three days effluent production and in sheds for another 30 days (effluent level levelled).	Transport effluent of farm in tankers. (Estimated 81 m^3 per day of effluent would require four semi tanker trucks for removal).

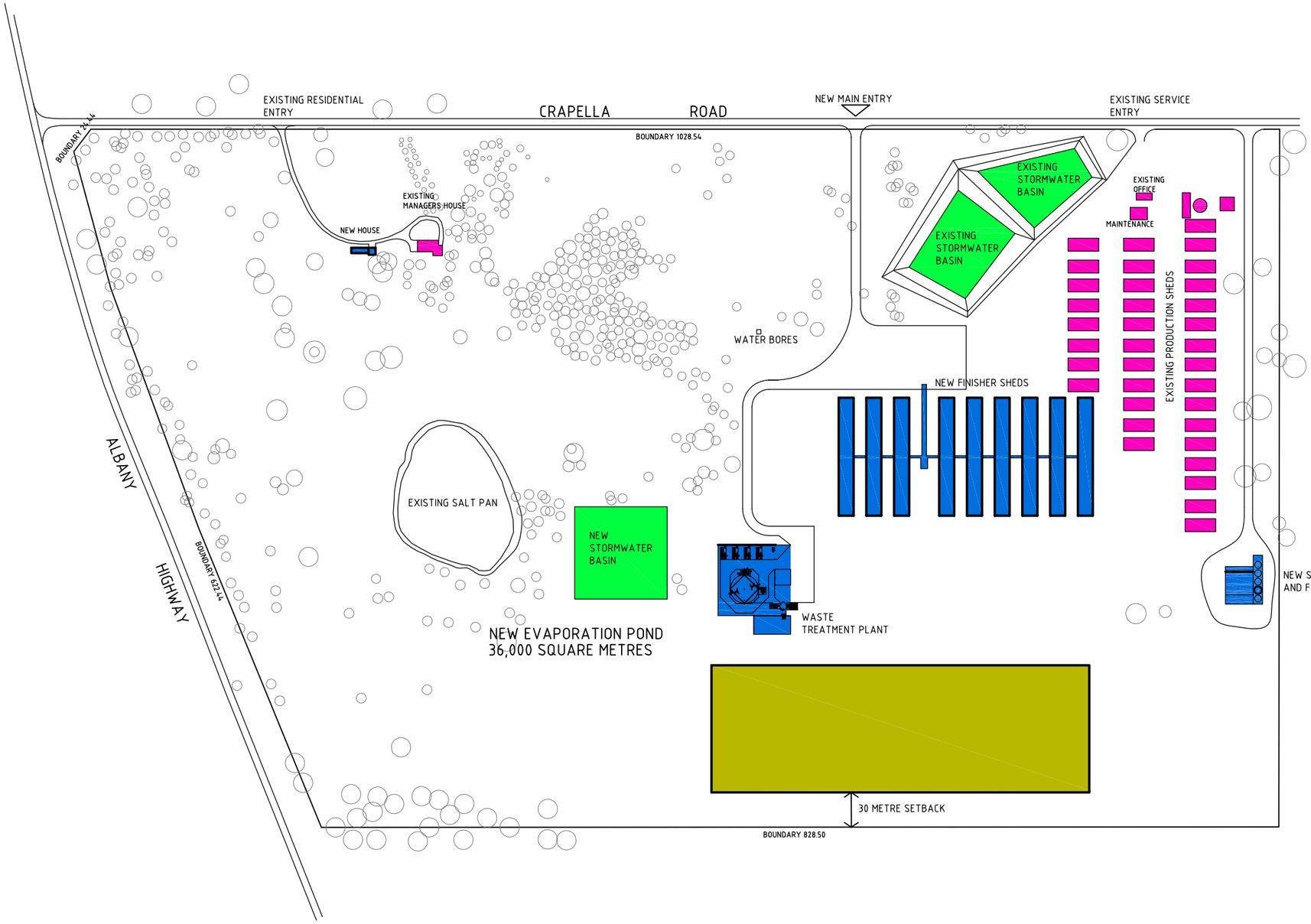
Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Mixing of effluent and dry material from sump pit/concrete area to Waste Treatment Plant (WTP)	At regular daily basis a number of effluent pits in sheds will be "pulled" when they are 80-90 % filled. It will give a continuous inflow through PVC pipes into the covered collecting pit just outside WTP. Effluent (slurry), deep litter manure and shredded dead animals will on demand be mixed and pumped by manually operated pump be pumped in digester tank in WTP. There will be no long term storage of effluent in sheds, and WTP collecting pit will be permanently covered which means that odour is contained as much as possible even while collecting pit is mechanically stirred.	Leak/break in effluent pipe. Effluent pump break down.	Contact Farm Manager. Manually turn of effluent pump. Organise repair of effluent pipe/and or pump. Utilise spare effluent pump until pump is fixed.	The sump pit can be used to store the effluent from the shed pits for up to three days capacity or until the issue is rectified. Should the issue go beyond three days effluent can be stored in the sheds, as a last resort. There is minimum 30 days of storage capacity in pits under sheds if the content is levelled.	Transport effluent of farm in tankers. (Estimated 81 m^3 per day of effluent would require four semi tanker trucks for removal).

Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Ventilation system of new finisher sheds (no forced ventilation in originally sheds) *Sheds are ventilated by an automatic ventilation system called 'tunnel ventilation'. Fans in one end of the shed pull air from the other end of the shed. The temperature is then lowered by the addition of water resulting in evaporative cooling.*	The system operates automatically based on inside and outside air temperature and will step in fans according to cooling required. As such on a cold day with still wind condition when there is most risk of odour travelling beyond property boundary there will only be one fan operating and odour from shed will be absent. Ventilation system computer to send alarm to mobile phone when trigger temperature reached.	Alarm from ventilation computer	Contact Farm Manager. Ventilation system adjustment needs to be determined by Managing Director and/or Farm Manager to ensure no impact on the welfare of livestock. Repair and change of broken components to take place	n/a	n/a

Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Cleaning of sheds after emptying and before new animals arrive.	Cleaning will be undertaken using high pressure water cleaners with a pressure in excess of 3000 psi and a rate of 21 litres per minute. As clean water is used there is no additional odour associated with this practice. When the piggery is operating normally there is up to two sheds being pressure washed weekly. Before pressure washing all remaining effluent is flushed out of the sheds like normal flushing of pits.	Any above mentioned trigger points that are relevant to flushing out the effluent ("pulling the pits") before washing must be adhered prior to commencing pressure cleaning. There is no risk of odour from the actual pressure washing.	n/a	n/a	n/a
Damage to housing sheds resulting in compromised management.	If a shed is significantly damaged in such a way that management impacting the environment is compromised the DER will be consulted and if necessary livestock will be temporarily vacated from the shed and relocated The damage will be repaired before re-stocking.	Structural or mechanical damage resulting in impact on animals and/or surroundings.	Destocking of pigs	n/a	n/a

Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Power Outage *Ventilation and effluent pumping systems are dependent on electricity*.	The site will have a diesel back-up generator with automatic change over switch. In the event of power failure back- up generator will activate automatically. The back-up diesel generator will be maintained and checked once every week including topping up diesel and oil. The generator will be fully serviced every six months. A power failure will be simulated weekly to ensure that the contingency system works.	Power failure and back-up generator failure.	Contact Farm Manager. Hire generator for use while back-up generator is repaired.	If no hire generator is available. The back-up generator from other GD Pork site can be brought in temporarily.	n/a
Education of Staff	All staff will be trained in all aspect of pig production relevant for GD Pork, Kojonup branch. They will be trained in good management practices such as housing, feeding, health check and treatment, cleaning, washing, maintenance of equipment, ventilation and contingency responses in respect to odour management.	New personnel to GD Pork, Kojonup branch. When changes occur in management procedure or contingency plans.	All new personnel to be trained in all type of management and contingency procedures. All existing staff to be advised of any changes to management and contingency plans.	n/a	n/a

Area/Section	Management Action	Trigger Point	Action	Contingency 1	Contingency 2
Complaints Register	All complaints to GD Pork, Kojonup branch received in respect to any type of management will be logged on a complaints register and investigated. Where corrective actions are possible, GD Pork will ensure these are undertaken.	Any complaint received in respect to any type of inconveniency caused to surroundings from GD Pork, Kojonup branch. Consecutive complaints (i.e. more than one valid complaint in 24 hours).	Complaint will be logged and investigated. Corrective action taken where possible. Communication will be undertaken with the complainant to identify the time and severity of the issue to ensure the problem is identified and addressed. A follow up with the complainant will be undertaken to ensure they are satisfied with the response and if not what options are available to address the concerns.	n/a	n/a



LEGEND

STAGE 1
EXISTING BUILDINGS AND DEVELOPMENT

STAGE 2
NEW BUILDINGS AND DEVELOPMENT

NEW EVAPORATION POND

NEW & EXIST STORMWATER BASINS

TITLE DETAILS
LOT 10
57.1098 ha
loc 4789 , & 5669

REV.	DATE	AMENDMENT/ISSUE
A	29.08.14	ISSUED FOR COMMENT

REV.	DATE	AMENDMENT/ISSUE

JEFF FREEMAN ARCHITECTS

GD PORK

APPROVED BY:_____

GD PORK
CRAPELLA ROAD
KOJONUP

DRAWING TITLE
SITE PLAN GENERAL LAYOUT

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APPROVED	JF			
SCALE AS SHOWN @ A1		DATE JANUARY 2015		DRAWING No. A00-00 A
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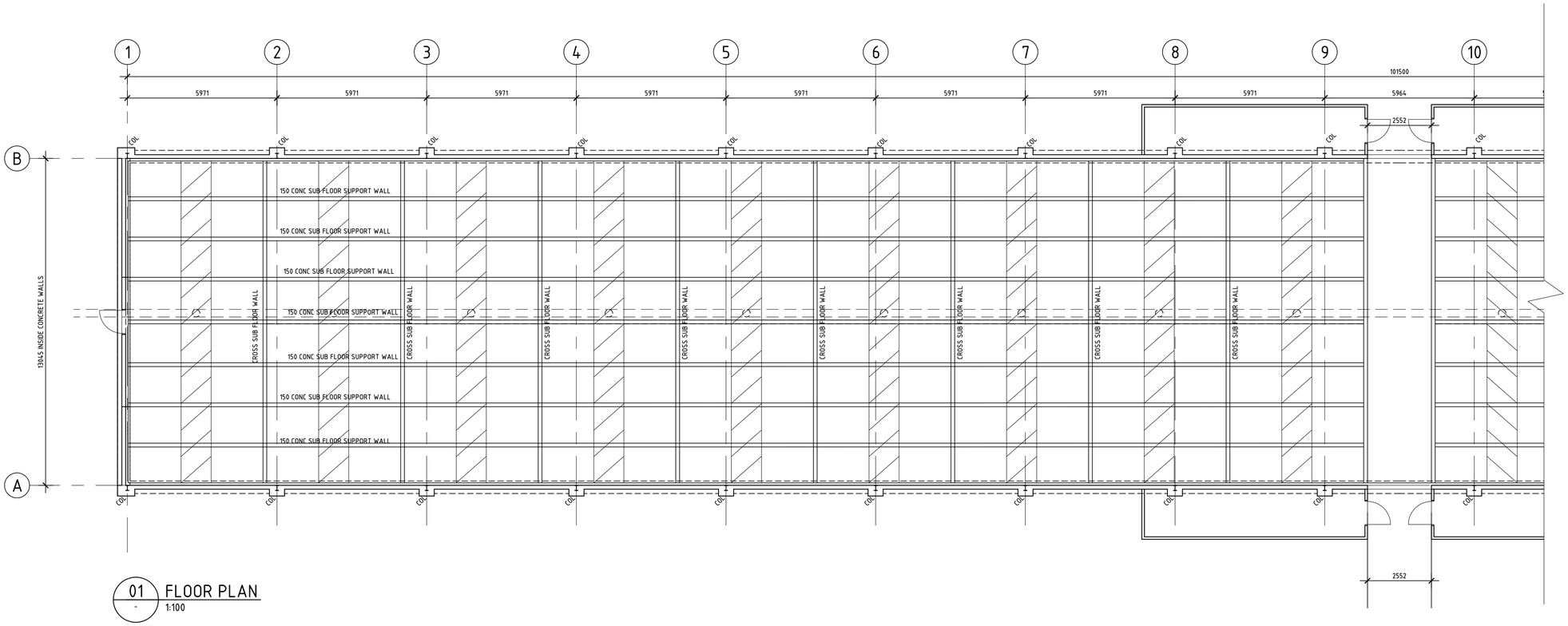

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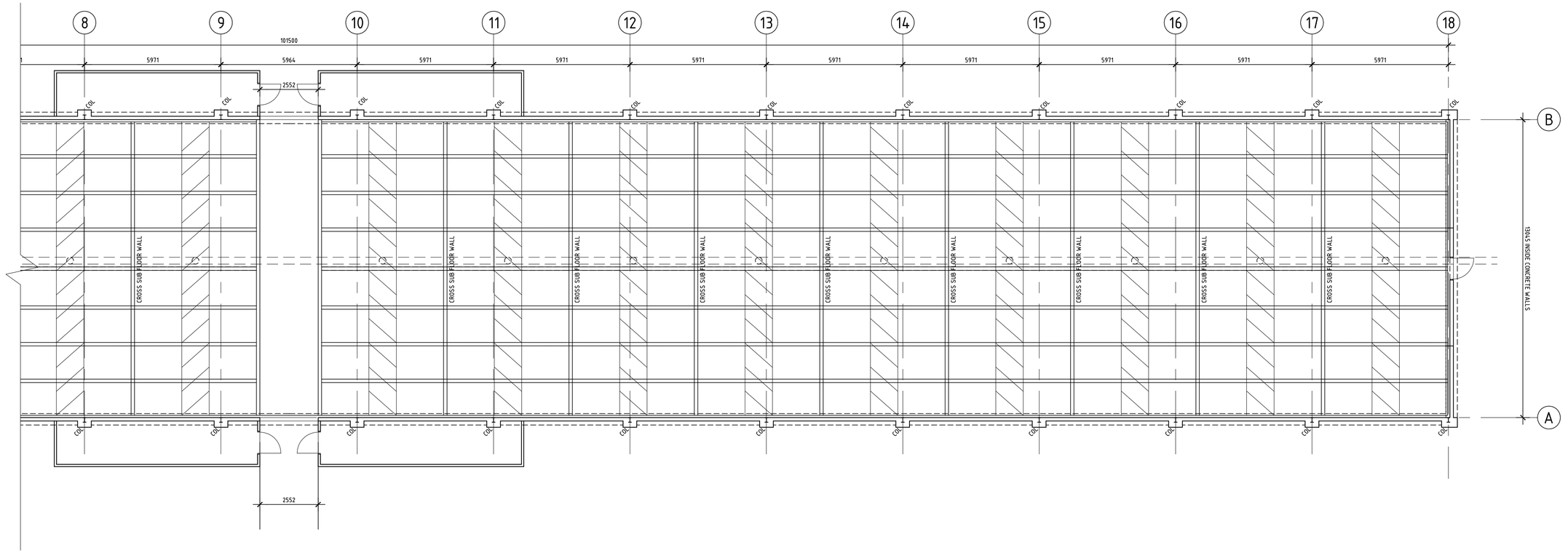

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GD PORK

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GD PORK
KOJONUP

DRAWING TITLE
FINISHER SHED

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CHECKED	SF				
APPROVED	JF				
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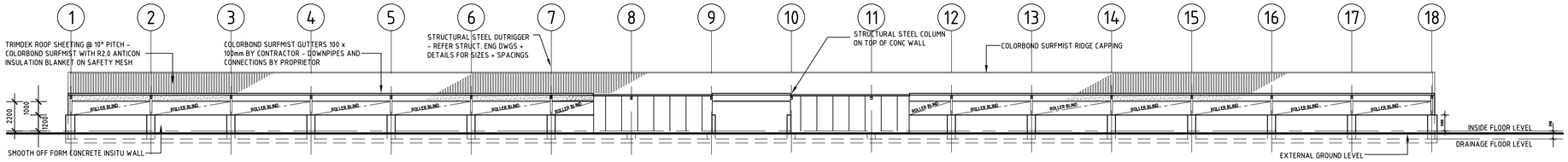

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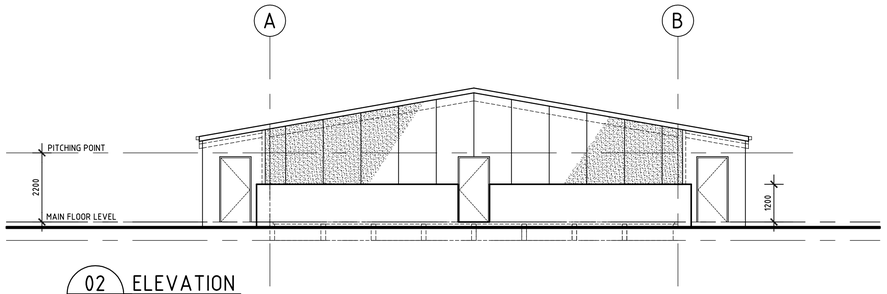

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GD PORK

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GD PORK
KOJONUP

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FINISHER SHED

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APPROVED	JF				
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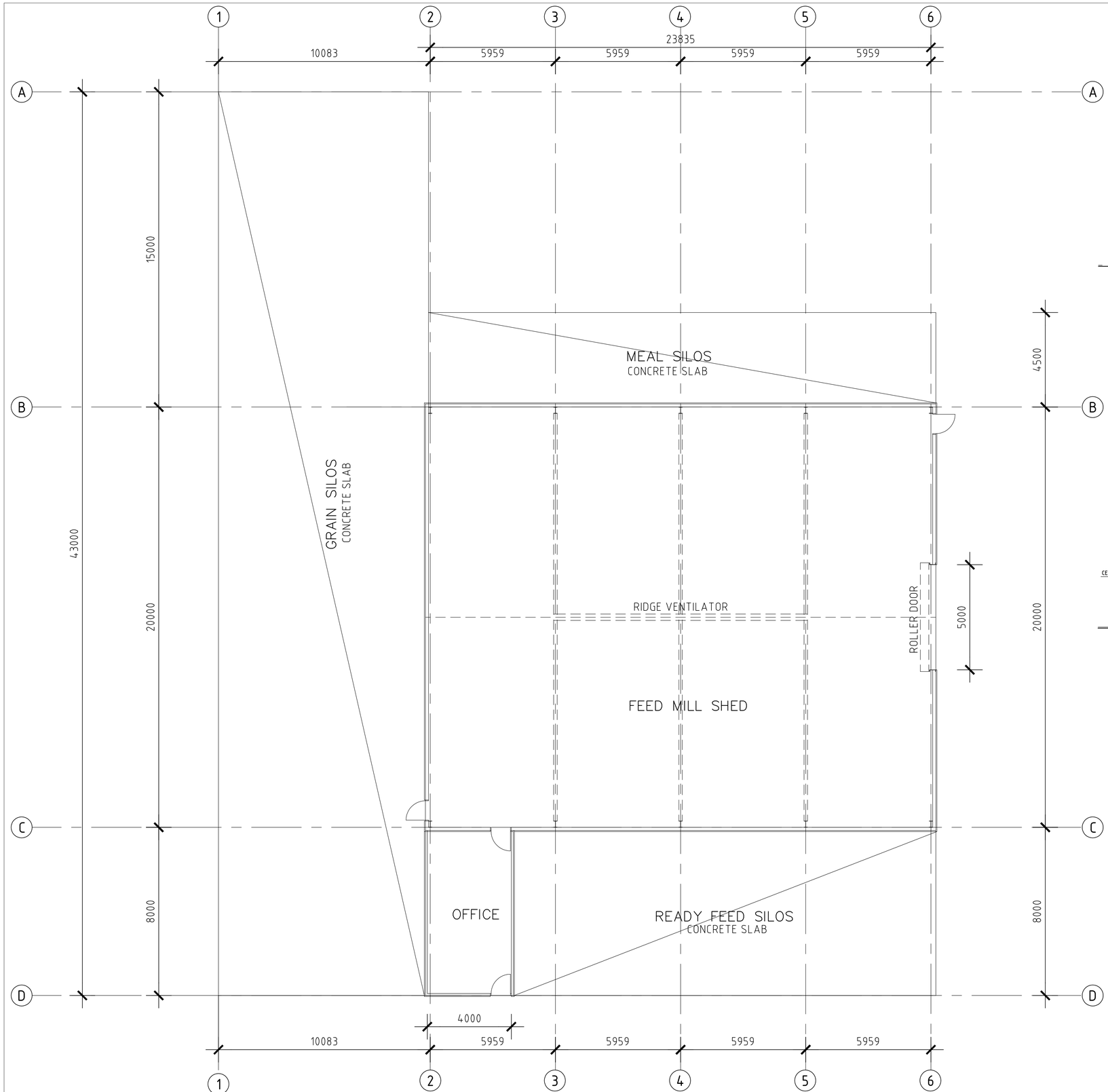

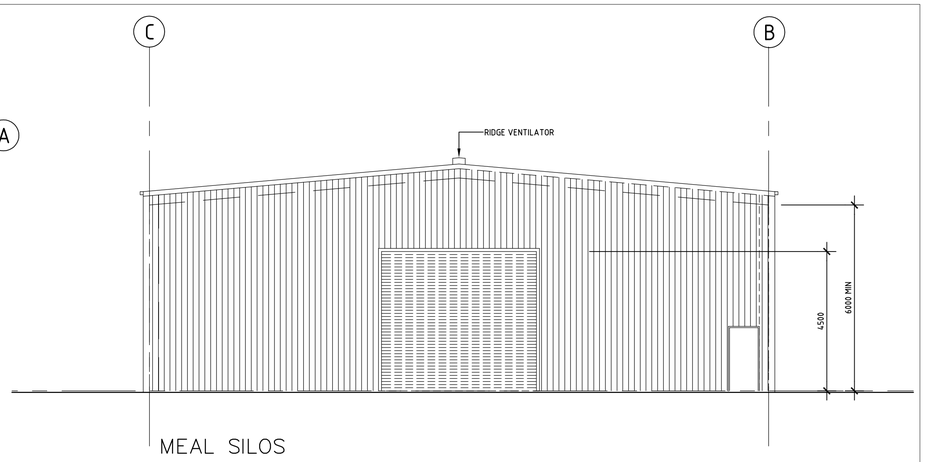

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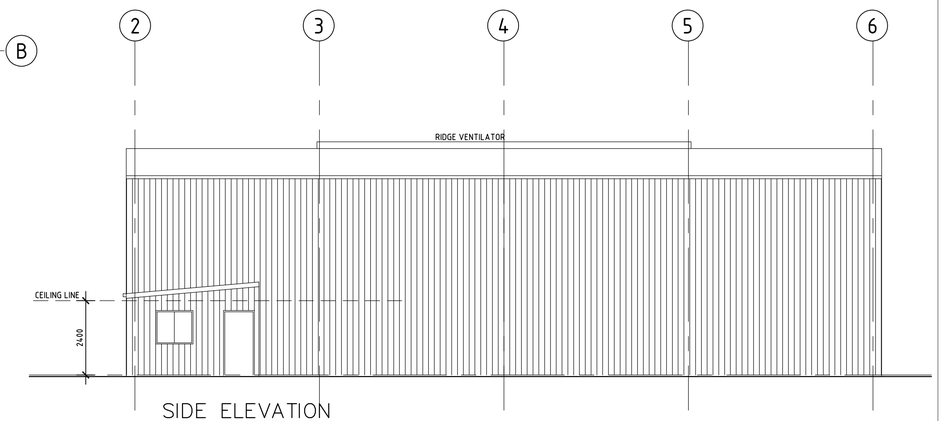

SIDE ELEVATION

REV.	DATE	AMENDMENT/ISSUE

REV.	DATE	AMENDMENT/ISSUE

JEFF FREEMAN ARCHITECTS

GD PORK

APPROVED BY: _____

GD PORK
KOJONUP

DRAWING TITLE: FEED MILL SHED

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CHECKED	SF			
APPROVED	JF			
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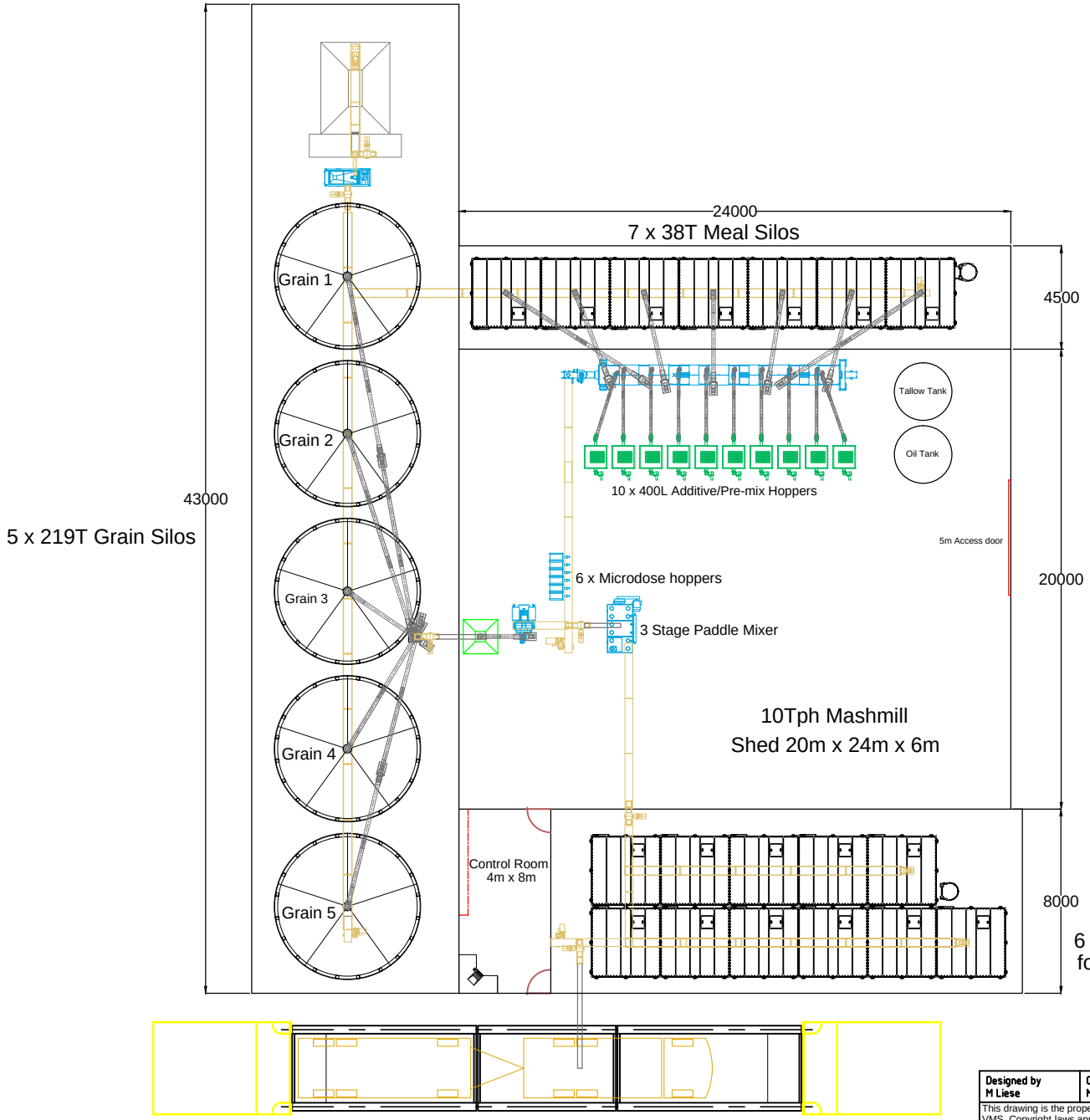

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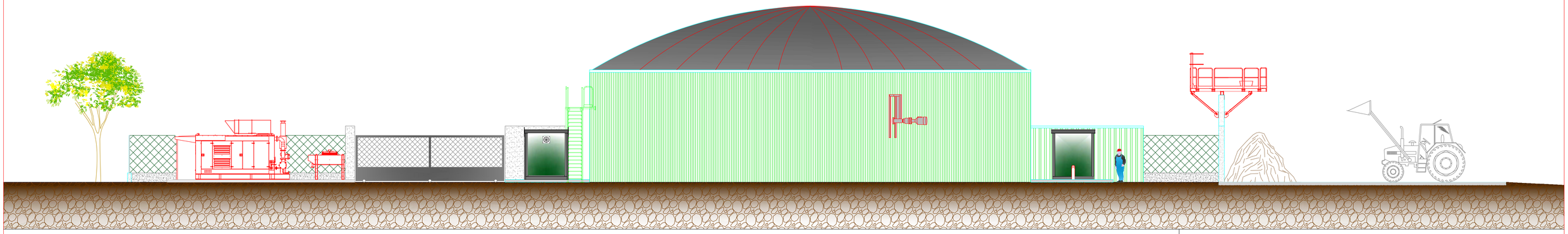
SKIOLD & VMS

10Tp/h Mash Mill Layout

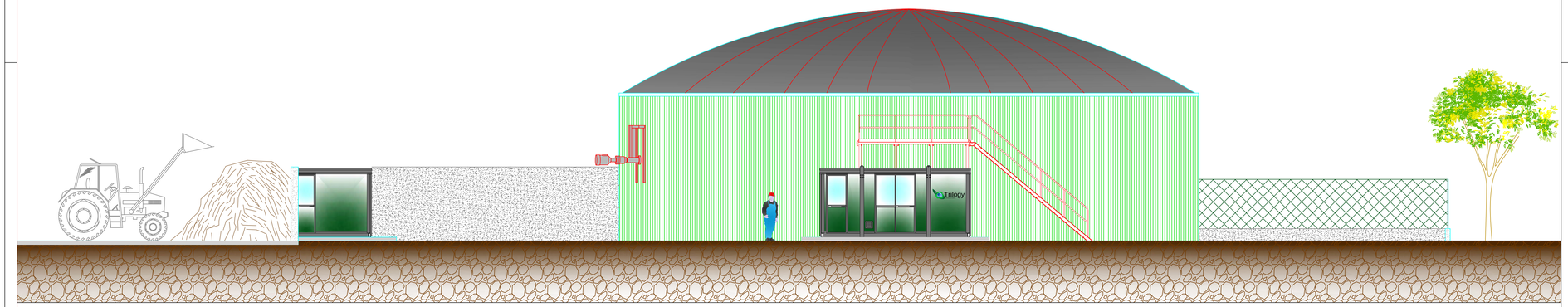
GD Pork Feedmill

Edition	Sheet
6	1/1

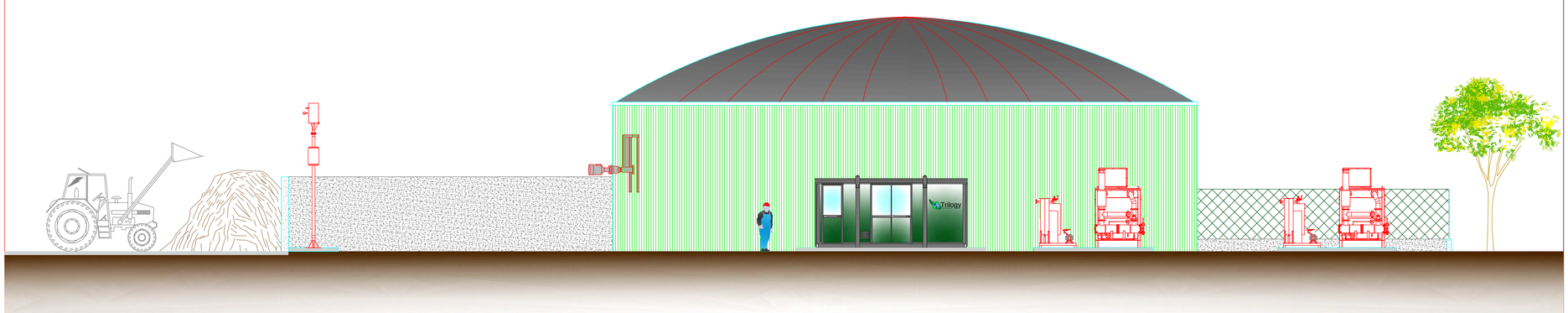
VIEW A



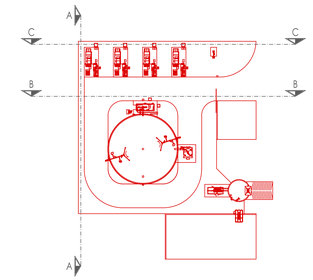
VIEW B



VIEW C



WTP PLANT



TRILOGY
Renewable Energy

www.rtrilogyenergy.com.au - info@trilogyenergy.com.au
3/6 Kent Way, Malaga WA 6090
P: (618) 92488969

WTP PLANT

PRODUCTION OF ELECTRICITY AND HEAT
FROM ANIMAL SEWAGE & MANURE
INSTALLED POWER: 380 kW

CUSTOMER:	GD PORK
SITE:	
1/1	GENERAL VIEWS

PRELIMINARY DESIGN
THIS COPY IS ONLY INDICATIVE

TO START FOR THE DESIGN OF PROJECT EXECUTIVE AND 'MUST RETURN THIS DESIGN for acceptance FULL OF TECHNICAL SOLUTIONS AND THE PROVISION OF MATERIALS
Supplied by us.

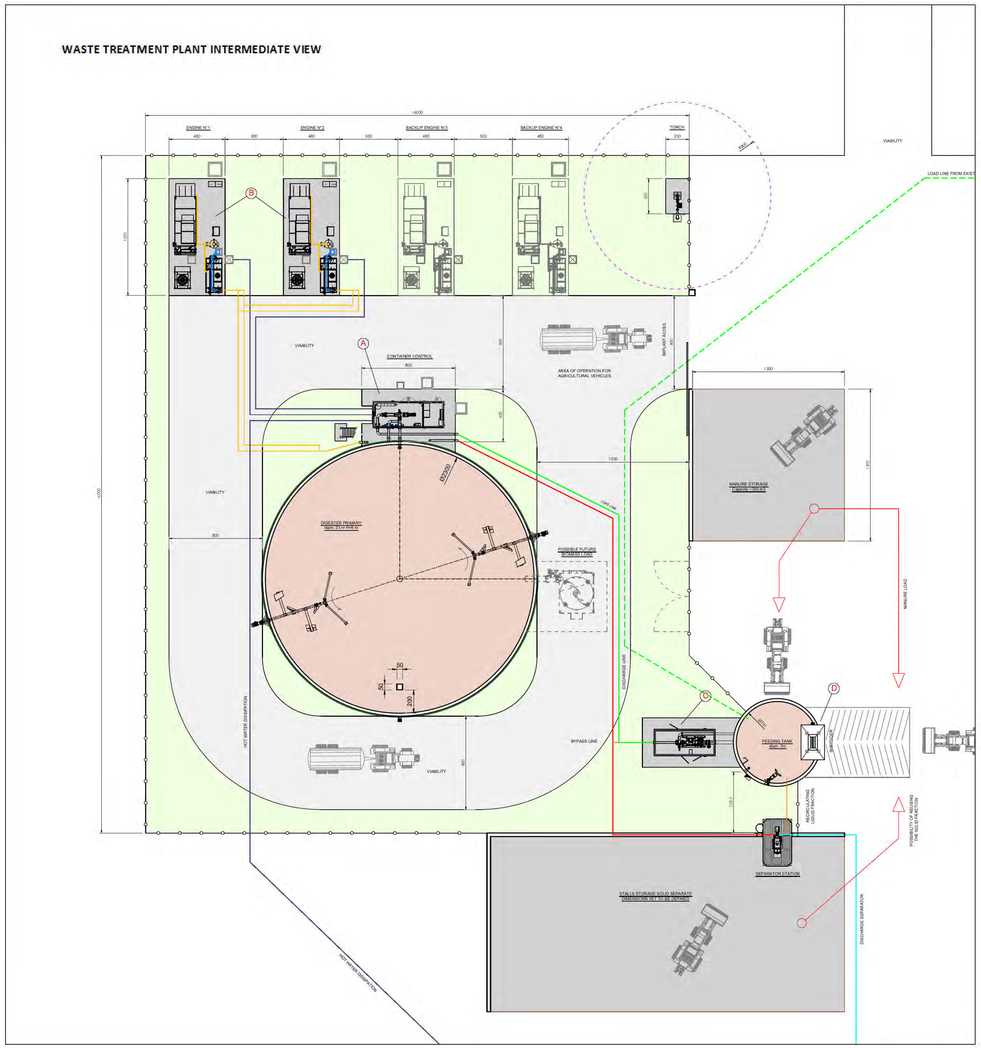
ANY MODIFICATION REQUEST MUST BE SHOWN IN RED ON THIS DESIGN.
THE FAILURE TO RETURN A TIGHT TURN OF MAIL AT THE COMPANY .....
.....
WILL 'CAUSE OF SUSPENSION DESIGN ON HOLD
CONFIRMATION BY THE CLIENT

DATE _____ SIGNATURE _____

REVISION	DESCRIPTION	DRAWER	DATE

1:100			Z.	13/04/2015
SCALE	ORDER	FILE	DRAWER	DATE

WASTE TREATMENT PLANT INTERMEDIATE VIEW



DESIGN

ANY QUANTITY " OTHER THAN THOSE DESCRIBED IN YOUR AGREEMENT RESULTING FROM THE EXECUTIVE DESIGNS
THOSE ACTUALLY DELIVERED , ORIGIN TO GIVE EXTRA CHARGE AS A CONTRACT
THE CLIENT AND ' OBLIGATION TO ADVISE THE TIME FOR CHANGES TO THE PROJECT AGREEMENT SIGNED FOR ACCEPTANCE ,
TO AVOID PROBLEMS AND ASSEMBLY PLANT TYPE , ANY ADDITIONAL COSTS CAUSED BY ANY FAILURE
COMMUNICATION OPTION WILL BE CHANGED TO THE BUYER
THE CONTRACTOR SHALL PROVIDE THE APPOINTMENT OF A CUSTOM DESIGNER AND DIRECTOR OF ITS OWN WORK ,
RESPONSIBLE TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW
ALL UNITS AND DIMENSIONS ON PAPERS ARE IN INCHES UNLESS OTHERWISE INDICATED

ASSEMBLY

THE CLIENT AND ' OBLIGATION TO ADVISE THE AVAILABILITY OF CONSTRUCTION 25 BORKING DAYS BEFORE THE COMPLETION
WORKS AGAINST HIM LISTED BELOW (UNLESS OTHERWISE SPECIFIED IN THE CONTRACT) :

- DIGESTERS
- INSULATED COVER WOODEN THE DIGESTERS
- LOCAL PUMPS
- FOUNDATIONS AND DUMP LOAD PLATFORM FOR BIOMASS
- LOCAL ENGINES
- POSSIBLE AUDIENCE FOR CONTAINER COGENERATOR
- FUEL TANK (ONLY IF PROVIDED FOR BY THE TYPE OF DRIVE) INSTALLED IN THE DEFINTIVE
MUST ALSO BE PROVIDED FOR THE DATE OF COMMENCEMENT
- ROAD ' TRANSIT AREAS AND INSTALLATION AVAILABLE SO EASY AND SAFE BY MEANS OF WORK
TRANSPORT AND LIFTING AND ' CLEAR OF IMPEDIMENTS UNDERGROUND OR AIRCRAFT
- AVAILABILITY " ASSEMBLY AREA CLEARED OF IMPEDIMENTS ;
- AVAILABILITY " SAFETY IN THE PREMISES AFFECTED BY PLANTS
- TOILET FACILITIES AVAILABLE TO THE STAFF AT ASSEMBLY
- AVAILABILITY " OF LIFTING EQUIPMENT FOR THE DISCHARGE OF MATERIAL ON TO AGREE WITH ROTA GUIDO SRL
- AVAILABILITY " ELECTRICAL CONNECTION WITH POWER IS AVI FOR THE PHASES OF ASSEMBLY AND TESTING EQUIPMENT INSTALLED
- WATER SUPPLY IN THE LOCAL ENGINES
- AVAILABILITY " OF CORRUGATED FOR CONDUITS ELECTRIC (UNDERGROUND
- MEANS AND LABOR FOR EXCAVATION AND LINES PLANT BACKFILLING
- S.I.M. TELEPHONE COMMUNICATION CARD FOR VOICE + DATA
- # 1 ANALOG TELEPHONE CONNECTION ON STUD ISDN (NT1- PLUS) FOR EACH ENGINE INSTALLED , OR
A SINGLE INTERNET ROUTER WITH SUPPLIED # 1 STATIC ADDRESS FOR EACH ENGINE INSTALLED
TRILOGY RENEWABLE ENERGY RESERVES THE RIGHT " TO CHECK ONCE RECEIVED THE COMMUNICATION OF THE ABOVE :
- THE COMPLIANCE OF WORKS CARRIED OUT TO YOUR PROJECT EXECUTIVE
- THE STATE OF PROGRESS
- ACTUAL VALUES AND PRACTICABILITY THE YARD
- TO POSTPONE THE BEGINNING OF WORK WHEN THEY WERE NOT FULFILLED THE CONDITIONS REQUIRED
ALSO RESERVES DURING ALL PHASES OF ASSEMBLY ;
- THE OPPORTUNITY " TO TEMPORARILY SUSPEND THE ASSEMBLY OPERATIONS WHEN BEING LESS
THE ABOVE TERMS AND CONDITIONS
- THE RIGHT TO BE ABLE TO ACCESS THE SITE OF ITS STAFF WITH EVEN IN THE ABSENCE OF THE CLIENT
AND POSSIBLY NO COMMUNICATION
THE CLIENT AND ' RESPONSIBILITY TO INFORM THE PROBLEMS OF CONSTRUCTION OR CONSTRUCTION
THAT MAY CAUSE THE PREVENTION AND EASY ASSEMBLY PLANT SAFETY
REMAINS TO THE CUSTOMER THE TEMPORARY CUSTODY AND PROTECTION OF MATERIALS AND EQUIPMENT
FROM THE TIME OF DELIVERY WITH ACCEPTANCE IN THE YARD

THE CUSTOMER IS A RECOVERY AND DISPOSAL OF PACKAGING WASTE MATERIALS
ON THE SITE AFTER THE PHASES OF ASSEMBLY
THE BUYER IS REQUIRED TO COMPLETE ALL REQUIREMENTS AND PREPARE AT YOUR LOAD ALL WORKS
IN ORDER TO RESPOND TO STANDARD SAFETY AT WORK , THE ROTA GUIDO SRL RESERVE THE RIGHT '
TO SUSPEND THE ASSEMBLY WORK IF YOU WOULD BE LESS THE SAFETY OF ITS TECHNICAL
THE BUYER MUST PROMPTLY TO COMMUNICATE IN WRITING THE ROTA GUIDO SRL ANY SPECIFIC RISKS
EXISTING IN THE SITE OR OTHERWISE NEXT TO THE SAME AS A RISK OF FIRE , THE RISK OF CHEMICAL NATURE , PIPELINES '
GAS , POWER LINES OR UNDERGROUND AIR , GROUND WATER, SOFT GROUND
THE COMPANY TRILOGY RENEWABLE ENERGY RESERVES THE RIGHT " TO FILM OR PICTURES AS FINISHED IN OPERA
FOR THE PURPOSE OF TECHNICAL DOCUMENTATION , AND PROMOTIONAL

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Renewable Energy
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3/6 Kent Way, Malaga WA 6090
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PRODUCTION OF ELECTRICITY AND HEAT
FROM BIOMAS AND ANIMAL MANURE
INSTALLED POWER: 380 kW

CUSTOMER:	GD PORK
SITE:	
1/1	GENERAL LAYOUT

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CONFIRMATION BY THE CLIENT

DATE _____ SIGNATURE _____

REVISION	DESCRIPTION	DRAWER	DATE
1:100		E.	01/04/2015
SCALE ORDER	FILE	DRAWER	DATE

Government of Western Australia
Development Assessment Panels

Form 2 - Responsible Authority Report

(Regulation 17)

Property Location:	Lot 6023 Norton Promenade, Dalyellup (Previously Lot 9028 prior to subdivision clearance)
Application Details:	Take-Away Food Outlet
DAP Name:	South–West JDAP
Applicant:	McDonalds Australia Limited C/o Urbis
Owner:	Dalyellup Beach Pty Ltd
LG Reference:	C5.2.D.99
Responsible Authority:	Shire of Capel
Authorising Officer:	Kim Muste – Senior Strategic Planning Office
Department of Planning File No:	DAP/15/00773
Report Date:	29 July 2015
Application Receipt Date:	25 May 2015
Application Process Days:	65
Attachment(s):	1. Original JDAP Notice of Determination and Approved Development Plans DAP/15/00773 2. Original RAR Report 3. Amended Development Plans DA02 (Rev G), DA03 (Rev D) DA04 (Rev A), DA05 (Rev C and DA06 (Rev B)

Officer Recommendation:

That the South-West JDAP resolves to:

1. **Accept** that the DAP Application reference DAP/15/00773 as detailed on the DAP Form 2 dated 9 June 2015 is appropriate for consideration in accordance with regulation 17 of the *Planning and Development (Development Assessment Panels) Regulations 2011*;

2. **Approve** the DAP Application reference DAP/15/00773 as detailed on the DAP Form 2 date 9 June 2015 and revised accompanying amended plans DA02 (Rev G), DA03 (Rev D) DA04 (Rev A), DA05 (Rev C and DA06 (Rev B) in accordance with the provisions of the Shire of Capel Town Planning Scheme No.7, for the proposed minor amendment to the approved Take-Away Food Outlet at Lot 6023 Norton Promenade, Dalyellup, subject to the following conditions.

   a) Amend Condition 14 to read:

   The provision of 35 car parking bays (inclusive of the two (2) waiting car parking bays and one (1) disabled car parking bay) and vehicle manoeuvring areas being constructed, drained marked out and maintained to the satisfaction of the Shire of Capel for the life of the development. Where parking spaces adjoin pedestrian paths wheel stops shall be provided.

   c) Delete Condition 4 and related advice note

Background:

Property Address:		Lot 6023 Norton Promenade, Dalyellup
Zoning	GBRS:	Urban
	TPS:	Urban Development Zone (Development Precinct 1)
Use Class:		Take-Away Food Outlet
Strategy Policy:		District Centre (under Dalyellup East Local Structure Plan) Retail Centre Core (under Dalyellup District Centre ODP)
Development Scheme:		Shire of Capel Town Planning Scheme No 7
Lot Size:		3,192m^2
Existing Land Use:		Vacant
Value of Development:		$3.1million

The South West JDAP granted conditional Planning Consent for a Take-Away Food Outlet at its meeting held on 5 May 2015.

Refer to Attachment 1 and 2 for the original JDAP determination and approved development plans.

Details: outline of development application:

The applicant submitted amended plans with a covering letter dated 26 June 2015. As a result of queries raised by Shire officers the applicant subsequently submitted the following:

- 06 July 2015, replacement amended plans; and
- 20 July 2015, further modified replacement amended plans (refer to Attachment 3), the subject to this report.

The applicant seeks the following changes to the approved plans:

1. ***Second Blade Wall for Signage*** A second blade wall for signage is proposed at the north western end of the building. This was initially proposed to be 9.43m high. As a result of consultation this blade wall has been reduced to a supported height of 7.919m.

2. ***Originally approved Blade Wall*** The originally approved blade wall at the north western end of the building was initially proposed to be retained at the approved height of 7.875m. Shire advice recommended this blade wall be either deleted or reduced in height to 6.090m to be level with the closest portion of the proposed building elevation. The applicant initially responded by reducing this blade wall in height from 7.875m to 7.255m being level with the maximum building elevation height of 7.255m. As a result of further consultation the applicant further reduced this blade wall to 6.090m as recommended by Shire officers to comply with DAP1 in respect of only permitting a single prominent feature for corporate branding.

3. ***Minor internal changes to accommodate a Burger Bar*** Minor changes are proposed to the internal layout to accommodate a separate “Burger Bar’ adjoining the proposed kitchen area. The ‘Burger Bar’ is outlined to be a new offer to McDonalds dine-in customers.

To accommodate floor space for the 'Burger Bar' the internal walls to the Terrace, Playplace, Party Room and Corral have been moved. *Table 1* as provided by the applicant details proposed changes in internal floor areas and confirms the total seating remains unchanged. This modification is supported.

TABLE 1 – FLOOR AREA MODIFICATIONS

	APPROVED PLANS GLA	AMENDED PLANS GLA
Building:	485m^2	505m^2
Corral:	40m^2	33m^2
Terrace:	44m^2	38m^2
Playland:	51m^2	44m^2
Total GLA:	620m^2	620m^2
Total Seating:	135	135

4. ***Western Power Transformer site, reduction in two car parking bays and relocation of Disabled Parking Bay*** A western power transformer is required to be located at the north western corner of the site. The location of the transformer is limited by an existing water metre. The applicant seeks a reduction of three car parking bays as a result of the proposed transformer location and to provide for the Disabled parking bay to be retained close to the building entry and recommended by Shire officers. The reduction of three car parking bays is supported.

5. ***Limestone retaining wall:*** A minor limestone retaining wall is proposed on the north eastern corner boundary with a maximum height of 400mm. This minor change is supported in compliance with Scheme requirements with no further Planning assessment comment provided.

6. ***Landscaping changed to paving:*** As required by JDAP Condition 6 - Landscape Plan, a section of landscaping in front of the building façade has been changed to a paved pedestrian path to provide access from the carpark. This required change is supported in compliance with the approval with no further Planning assessment comment is provided.

7. ***Minor Western path link:*** As required by JDAP Condition 6 - Landscape Plan, a paved pedestrian path within the landscaped area on the western boundary has been included to link with required paths along the frontage of proposed adjoining future development. Paving along the western edge of the building has also been extended following advice from Shire officers to provide for increased pedestrian accessibility. These outcomes are supported and no further Planning assessment comment is provided.

Legislation & policy:

Legislation

- Greater Bunbury Region Scheme.
- Shire of Capel Town Planning Scheme No.7 (Scheme).

State Government Policies

- Activity Centres for Greater Bunbury Policy.
- Greater Bunbury Strategy 2013

Local Plans and Policies:

- Dalyellup East Local Structure Plan (DELSP) - The subject land is within a designated District Centre.

- Dalyellup District Centre Outline Development Plan (DDCODP) - The subject land is located within Precinct B Business. Clause 1.5.4 lists Take Away Food Outlet (excluding drive through fast foods) as a "P" Permitted Land Use within Precinct B. The ability for Council to consider a Take Away Food Outlet with a Drive Through facility has been separately addressed by modification to an applicable Detailed Area Plan.

- Dalyellup District Centre Detailed Area Plan No.1 Precincts A, B, and D (East) (DAP1) – DAP1 was adopted by Shire of Capel 16th March 2015 in accordance with clause 1.2.7 of the DDCODP. DAP1 provides for minor modifications to the DDCODP including:

    - A Drive Through facility is permitted in conjunction with Take Away Food Outlets on nominated sites, in variance to clause 1.5.4 of the DDCODP.

    - Measures to ensure the first stage of development and subsequent stages have co-ordinated constructed vehicle access ways with easements and pedestrian access.

    - Not included in the original RAR, Clause 2.2.6 of DAP1 states:

      Notwithstanding any general standards for signage set out in a Signage Strategy for the District Centre ODP Area no pylon sign either freestanding or attached to a building shall be permitted. Signage, including corporate branding emblems or naming panels, for development on separate lots shall be integrated with the architectural design of buildings and shall not attain a height above the elevation of the building greater than equivalent to 30% of the height of the elevation of the building. Where more than one business is contained on a lot in either separate or a common building signage shall be limited to one corporate branding emblem or naming panel per business.

- Dalyellup District Centre Signage Strategy – A signage strategy for the district centre, as a seriously entertained document was been in development for some time and was approved on the 3 June 2015 pursuant to clauses 1.2.10 and 1.3.6.1g) of the DDCODP. The signage strategy includes the following requirements applicable to the amended blade wall.

    - Section *4.2 - Mandatory Requirements* of the strategy details the following relevant mandatory requirement consistent with DAP1:

        d. *Signage, including corporate branding emblems or naming panels, shall be integrated with the architectural design of buildings and shall not attain a height above the elevation of the building greater than the equivalent to 30% of the height of the elevation of the building.*

    - Section *5.2.1 Freestanding Pylon Sign* details the potential for a single freestanding pylon sign to be located on private land on the opposite corner of Tiffany Centre and Norton Promenade (not the subject land). To provide context for the proposed blade wall, section 5.2.1 includes the following requirements for the pylon sign:

        b) The sign shall be no higher than 9m above natural ground level and shall be in the form consistent with the image contained in the signage strategy.

        c) The sign shall only be permitted to advertise the District Centre and a range of individual businesses.

        d) Advertising of only one single business will not be permitted.

    - Section *5.2.2 – Signage affixed to Building façade and Roofs* includes the following:

        h) *Signage that protrudes above a façade and/or roofline will generally not be supported. Any protruding signage shall be subject to the following:*

            § *Generally be limited to a maximum of one protruding sign per building or group of tenancies within a building.*

            § *Illuminated protruding façade or roof signage shall not be visually obtrusive from nearby residential and/or short stay development.*

Subdivision Approval:

- As detailed in the Original RAR, Lot 9028 is subject to subdivision approval (WAPC Ref:149334) that will create 4 freehold lots including a separate Lot 6023 for the proposed development. As of July 2015 subdivision works have been completed and titles issued for the resultant lots.

- Vehicle access for the proposed development (and Lot 6023) is to be provided as follows:

- In accordance with DAP1 direct vehicle access to Norton Promenade and Tiffany Circle is not permitted.
- A shared access way along the southern boundary of Lot 6023 has been constructed.
- A shared access way within proposed adjoining Lot 6022 is required and has now been constructed.

Consultation:

Public Consultation
As a Permitted Land Use no public consultation was required to process the amended plans.

Consultation with other Agencies or Consultants
Consultation with agencies was not necessary or required.

Consultation occurred with the applicant in June and July that resulted in refinements to the submitted amended plan and provision of additional information as detailed within the Planning assessment.

Planning assessment:

Lot number
For accuracy the report refers to the subject land as Lot 6023 Norton Promenade as an applicable subdivision of the original land (Lot 9028) detailed in the original RAR has been progressed to the issue of titles.

Modification to originally approved blade wall
DAP1 and the Signage Strategy are clear that only one naming panel for corporate branding/signage (in this case described as a blade wall) shall be integrated with the architectural design of buildings and shall not attain a height above the elevation of the building greater than the equivalent to 30% of the height of the elevation of the building.

The proposed blade wall on the north western corner of the building was originally supported and approved at a height of 7.875m in accordance with the above requirement. Two blade walls for corporate signage do not comply with DAP1 or the intent of the Signage Strategy and would set an undesirable precedent for the proliferation of large dominant signage within an emerging district centre.

It is clear that the proposed second north eastern blade wall is preferred by the proponent as it faces westward towards Bussell Highway and is likely to be more visible to potential passing trade. To achieve this outcome the original north western blade wall was recommended by Shire officers to be deleted or reduced in height to 6.090m so that it does not protrude above the height of the closest portion of building elevation, where it could then be interpreted to form part of the building.

The applicant initially responded by reducing the blade wall in height from 7.875m to 7.255m being level with the maximum building elevation height of 7.255m. As a result of further Shire officer recommendations the applicant submitted a subsequent amended plan the subject of this report reducing the height of the approved blade wall to 6.09m. The Shire's basis for this outcome is as follows:

- The applicant has demonstrated a preference for the blade wall towards the north eastern corner of the building to be the dominant more architectural visible feature for corporate branding and signage;

- As submitted, the applicant has effectively proposed a second blade wall that does not comply with DAP1 requirements unless the original is deleted or reduced in height as now submitted;

- At 7.255m the blade all would have been more dominant and be a second protruding feature for signage that is higher than the 6.090m building elevation closest to where the blade wall is located;

- A second protruding blade wall is inconsistent with the provisions of DAP for a single architecturally integrated corporate branding panel and would set an undesirable precedent for the proliferation of large dominant signage within an emerging district centre;

- A reduction in height of the original approved blade wall to 6.09m is considered a reasonable compromise for a more integrated lower blade wall for signage that does not protrude above the predominant building elevation of 6.090m where the blade wall is located;

- The blade wall is attached to the Terrace entry area that has a roof height of 3.620m. At 6.09m the blade wall would still protrude above the height of the Terrace roof by 2.47m providing ample visibility and opportunities for signage; and

- Placed in context, a 6.09m blade wall is the equivalent of 2 storeys high and would be located within an unobstructed position when viewed from Norton Promenade.

Second Blade wall for signage

The applicant has interpreted that DAP1 provides the ability to achieve a blade wall that is 30% higher than the maximum height of the building. The western elevation of the building from where the proposed second blade wall will be most visible is 20.15m long and 6.090m high. Of the 20.12m length of the western elevation, approximately 7.1m, or 35.2%, is 7.255m high. This 7.255m higher portion of the building is associated with the Playplace area and is setback approximately 16m from the western façade. Similarly, the majority of the northern and primary front elevation of the building is 30.960m long and 6.090m high. Of the 30.960m length of the front elevation only 7.5m or 24.2% is 7.255m high.

Notwithstanding the potential to attain a maximum blade wall high of 9.43m, where integrated into the design and building elevation, in this instance the applicant was recommended that the north eastern proposed blade wall be reduced in height from 9.43m to 7.917m, or 30% higher than the elevation of the building in the location of the feature, for the following reasons:

- A blade wall height of 9.43m is not considered to be appropriately integrated into the architectural design of the building due to its height above the predominant elevation where it is positioned,

- A blade wall at 9.43m high it is an increase in the predominant height of the western elevation by 54.8% (6.090m to 9.43m), and

- DAP1 provides for a blade wall to be 30% higher than the elevation of the building. In this case, this is applied to the predominant height where the feature is located. This provides for a blade wall height of 7.917m.

The applicant responded by reducing the height of the blade wall from 9.43m to 7.917m as recommended by Shire officers.

Minor internal changes to accommodate a 'Burger Bar'
As demonstrated by *Table 1*, the proposed minor internal changes to accommodate a Burger Bar do not change the Gross Leasable Area or proposed seating capacity whereby no addition or amended conditions are required.

Western Power Transformer site, reduction in two car parking bays and relocation of Disabled Parking Bay
The need to accommodate a Western Power Transformer site is acknowledged and supported.

A reduction in 3 car parking bays to accommodate the transformer site and to maintain the location of the disabled car parking bay close to the building entry is supported.

The parking assessment within the original RAR detailed (as a guide) a requirement for 34 car parking bays. 38 car parking pays were approved and a reduction of 3 car parking bays still demonstrates compliance with the assessed minimum requirement for 34 bays.

JDAP Condition 4 and related advice note
Condition 4 was required as construction of a shared accessway on adjoining proposed Lot 6022 to provide vehicle access to the subject development site was not yet constructed as a separate condition of subdivision approval. The required accessway for vehicle access has been constructed and the subdivision cleared to the issue of titles. As a result Condition 4 and the related advice note can be deleted due to fulfilment of the condition.

Conclusion:

Consultation with the applicant resulted in modifications to the amended plans in accordance with Shire officer recommendations.

The amended plans submitted 20 July 2015 are recommended for approval with minor adjustment to the conditions of approval.

Government of **Western Australia**
Development Assessment Panels

LG Ref: C5.2.D.199
DoP Ref: DAP/15/00773
Enquiries: Development Assessment Panels
Telephone: (08) 6551 9919

Mr Simon Wilkes
Urbis
Level 1/55 St Georges Terrace
Perth WA 6000

Dear Mr Wilkes

South-West JDAP – Shire of Capel – DAP Application C5.2.D.199
Lot 9028 Norton Promenade, Dalyellup
Take-Away Food Outlet

Thank you for your application and plans submitted to the Shire of Capel on 16 March 2015 for the above development at the above mentioned site.

This application was considered by the South-West Joint Development Assessment Panel at its meeting held on 5 May 2015, where in accordance with the provisions of the Shire of Capel Town Planning Scheme No.7, it was resolved to approve the application as per the attached notice of determination.

Should the applicant not be satisfied by this decision, a DAP Form 2 application may be made to amend or cancel this planning approval in accordance with Regulation 17 of the Development Assessment Panel Regulations 2011.

Please be advised that there is a right of review by the State Administrative Tribunal in accordance with Part 14 of the *Planning and Development Act 2005*. An application must be made within 28 days of the determination in accordance with the *State Administrative Tribunal Act 2004*.

Should you have any enquiries in respect to the conditions of approval please contact Mr Kim Muste at the Shire of Capel on (08) 9727 0222.

Yours sincerely

Sean O'Connor

DAP Secretariat

11/05/2015

Encl. DAP Determination Notice
Approved plans

Cc: Mr Kim Muste
Shire of Capel
kmuste@capel.wa.gov.au

Planning and Development Act 2005

Shire of Capel Town Planning Scheme No.7

South-West Joint Development Assessment Panel

Determination on Development Assessment Panel Application for Planning Approval

Location: Lot 9028 Norton Promenade, Dalyellup
Description of proposed Development: Take-Away Food Outlet

In accordance with Regulation 8 of the *Development Assessment Panels Regulations 2011*, the above application for planning approval was **granted** on 5 May 2015, subject to the following:

Approve DAP Application reference No. 15/00723 and accompanying plans DA02 - Revision C (amended as received 2nd April 2015), DA03, DA04, DA05, DA06, DA07 in accordance with Clauses 8.3 and 8.10.1 of the Shire of Capel Town Planning Scheme No.7, subject to the following conditions:

General Conditions:

1. This approval is for Planning Consent only and is valid for two (2) years from the date of the decision. If the approved development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.

2. The approved development shall be undertaken and fully implemented in accordance with the approved plan(s).

3. This approval does not include proposed signage. A separate application for Planning Consent for Advertising signage is required.

Prior to Commencement of Development or Application for Building Permit Conditions:

4. Before development commences a shared access way and crossover (corresponding to Internal Road #1 as notated on the approved plans DA2) shall be designed, approved by the Shire of Capel, constructed and covered by a registered Easement in Gross on the certificate of title. The design and location of the shared access way and crossover shall include finished ground levels and drainage that demonstrate suitable shared access arrangements and vehicle manoeuvrability for the development.

5. A site plan showing finished ground levels, pavement levels and finished floor levels is to be submitted for assessment and approval by the Shire Capel prior to submission of a Building Permit application. The finished ground levels shall conform to the overall earthworks design levels for the subdivision by which proposed Lot 6023 is to be created.

Postal address: Locked Bag 2506 Perth WA Street address: 140 William Street Perth WA 6000
Tel: (08) 6551 9919 Fax: (08) 6551 9961 TTY: 6551 9007 Infoline: 1800 626 477
daps@planning.wa.gov.au www.planning.wa.gov.au
ABN 35 482 341 493

6. A Landscape Plan is to be submitted for assessment and approval by the Shire of Capel prior to commencement of development. The Landscaping Plan is to be implemented and maintained for the life of the development and shall include:
    - A paved pedestrian path between the northern façade of the building and car parking bays.
    - A paved pedestrian path within the landscaped area on the western boundary.
    - Landscaping of the site and adjoining road verge on Tiffany Centre between the property boundary and existing pedestrian path shall be consistent with the Dalyellup District Centre Landscape Master Plan.

7. A schedule of materials colours and finishes is to be submitted with the Building Permit application for assessment and approval by the Shire of Capel.
8. A Stormwater Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

9. A Daily Operation Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application, and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

10. A Construction Management Plan is be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

11. All off-street parking and access thereto shall comply with Australian Standard 2890.1 to the satisfaction of the Shire of Capel. Construction plans shall be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

Prior to Occupation/Use of Development Conditions:

12. A Waste Management and Recycling Plan is to be submitted for assessment and approval prior to occupation of the premises and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

13. The installation of outdoor lighting shall be in accordance with the requirements of the Australian Standard AS 4282-1997: 'Control of the Obtrusive Effects of Outdoor Lighting".

14. The provision of 38 car parking bays (inclusive of two (2) waiting car parking bays and one (1) disabled car parking bay) and vehicle manoeuvring areas being constructed, drained, marked out and maintained to the satisfaction of the Shire of Capel for the life of the development. Where parking spaces adjoin pedestrian paths wheel stops shall be provided.

15. A minimum of 4 bicycle parking bays at the rate of 1 per 200m2 GLA designed to comply with Australian Standard 2890.3 are to be provided on site clear of any vehicular carriageways. Details of the bicycle parking shall be submitted to the Shire of Capel for assessment and approval prior to construction commencing.

Advice Notes:

1. The design and construction of the required shared access way with Easement in Gross is required to provide vehicular access to the development site. Part Lot 9028 is subject to conditional subdivision approval WAPC Ref: 149334 where the subdivider is proposed to construct the required shared access way with Easements in Gross and upon doing so the Planning Consent condition would be fulfilled.

2. The Landscape Plan is to detail the following:

    a. Those areas to be reticulated.
    b. Verge Treatments.
    c. Species Types and numbers.
    d. Lighting to pathways, communal space and parking areas.
    e. Outdoor furniture, bin enclosures and pavement treatments.
    f. Measures to be taken to ensure that trees and shrubs planted will thrive and be maintained in a healthy state for the life of the development.
    g. Pedestrian path linkages.

3. The Stormwater Management Plan is to detail the following:

    a. Catchments, flow paths, water quality improvement measures, area calculations and design criteria demonstrating that all stormwater from a 1year ARI can be retained on site and infiltrated.
    b. Overflows from soak wells and/ or rain gardens are to enter the road pipe network by a direct piped lot connection with a capacity for a 10year ARI.
    c. Events beyond a 10year ARI are to be directed to the road by overland flow.
    d. Mosquito breeding control measures where stormwater infrastructure is likely to result in standing water that will provide breeding habitat.

4. Stormwater drainage levels should have regard to the invert level of a pipe connection for stormwater to be directed to the public road drainage pipe network. The Stormwater Management Plan should be in accordance with Shire of Capel information sheet “Specifications for Stormwater” and incorporate the principles and guidelines set out in the WAPC Guidelines for Better Urban Water Management and the Department of Water Stormwater Management Manual for Western Australia.

5. Proposed Lots 6020, 6021, 6022 and 6023 have been supplied with a 225mm diameter pipe connection to the Shire’s stormwater system. The 1st 10mm of stormwater flow must be detained onsite with the remainder flowing to the Shire drainage system via a Gross Pollutant Trap. For proposed Lot 6023 the minimum height of overland flows exiting the site must be 7.64 AHD.

6. The Construction Management Plan is to detail how the following matters are to be managed:

    a. Access to and from the site;
    b. The delivery of materials and equipment to the site;
    c. The storage of materials and equipment on the site;
    d. Other matters likely to impact on surrounding properties;
    e. The parking arrangements for contractors and subcontractors;
    f. Management of construction waste; and
    g. Dust mitigation.

7. The Waste Management Plan is to address the following:

    a. The location of bin storage areas and bin collection areas;
    b. The number, volume and type of bins, and the type of waste to be placed in the bins. This is to include measures that will support recycling:
    c. Management of the bins and the bin storage areas, including cleaning, rotation, moving bins to and from the bin collection areas and actions to contain and clean any spillage of waste or other materials; and
    d. Frequency of bin collections.

8. The carpark standards applied to proposed Lots 6020, 6021, 6022 and 6023 have been assessed as requiring user class classification 3A in accordance with Australian Standard AS/NZS 2890.1. The Class 3A option of 2.6m x 5.4m bays with aisle width of 6.6m has been applied to the proposed lots and subject land.

9. In relation to signage:

    a. Requirements for an application for approval of Advertising signage are set out in Clause 7.12 of Town Planning Scheme No 7 and the Shire of Capel Signs Local Law 2001.
    b. Signage is to comply with the Dalyellup District Centre Signage Strategy and Dalyellup District Centre Detailed Area Plan No.1.

10. In relation to Building:

    a. Compliance with the Building Act 2011, Building Regulations 2012 and the Building Code of Australia will be required. Advice should be sought from a registered building surveying contractor in order to obtain the appropriate certificates for building permit and occupancy permit applications.

    b. If the project requires Fire Hydrants, the sites water pressure and flow test results will need to be established at the point of proposed water main access.

    c. AS 2419 covers installation details and minimum required pressure and flow rates for fire hydrants. If minimum requirements cannot be obtained at the point of supply, the design of pumps and tanks would need to be considered.

Postal address: Locked Bag 2506 Perth WA Street address: 140 William Street Perth WA 6000
Tel: (08) 6551 9919 Fax: (08) 6551 9961 TTY: 6551 9007 Infoline: 1800 626 477
daps@planning.wa.gov.au www.planning.wa.gov.au
ABN 35 482 341 493

11. In relation to Environmental Health Advice:

    a. Compliance with the AS 4674-2004 will be required to meet the requirements of the National Food Safety Standards 3.2.3.
    b. Compliance with the Environmental Protection (Noise) Regulations 1997 is required.
    c. Contact Council's Health Services to obtain the Food Act 2008 Food Business Notification/Registration Form.

12. A Sustainability Implementation and Outcomes Plan is in the process of being prepared for the Dalyellup District Centre as a requirement of the Dalyellup District Centre Outline Development Plan. This plan will encourage landowners of commercial premises, business proprietors and/or tenants to consider and implement a range of sustainability initiatives and practices. The applicant is encouraged to consider sustainable development initiatives including the Sustainability Implementation and Outcomes Plan when it is available. Notwithstanding this, the applicants are invited to demonstrate sustainability measures that will be incorporated into the project.

The applicants are encouraged to provide a number of bicycle parking bays in excess of Australian Standard 2890.3

Where an approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) of the *Development Assessment Panel Regulations 2011*.

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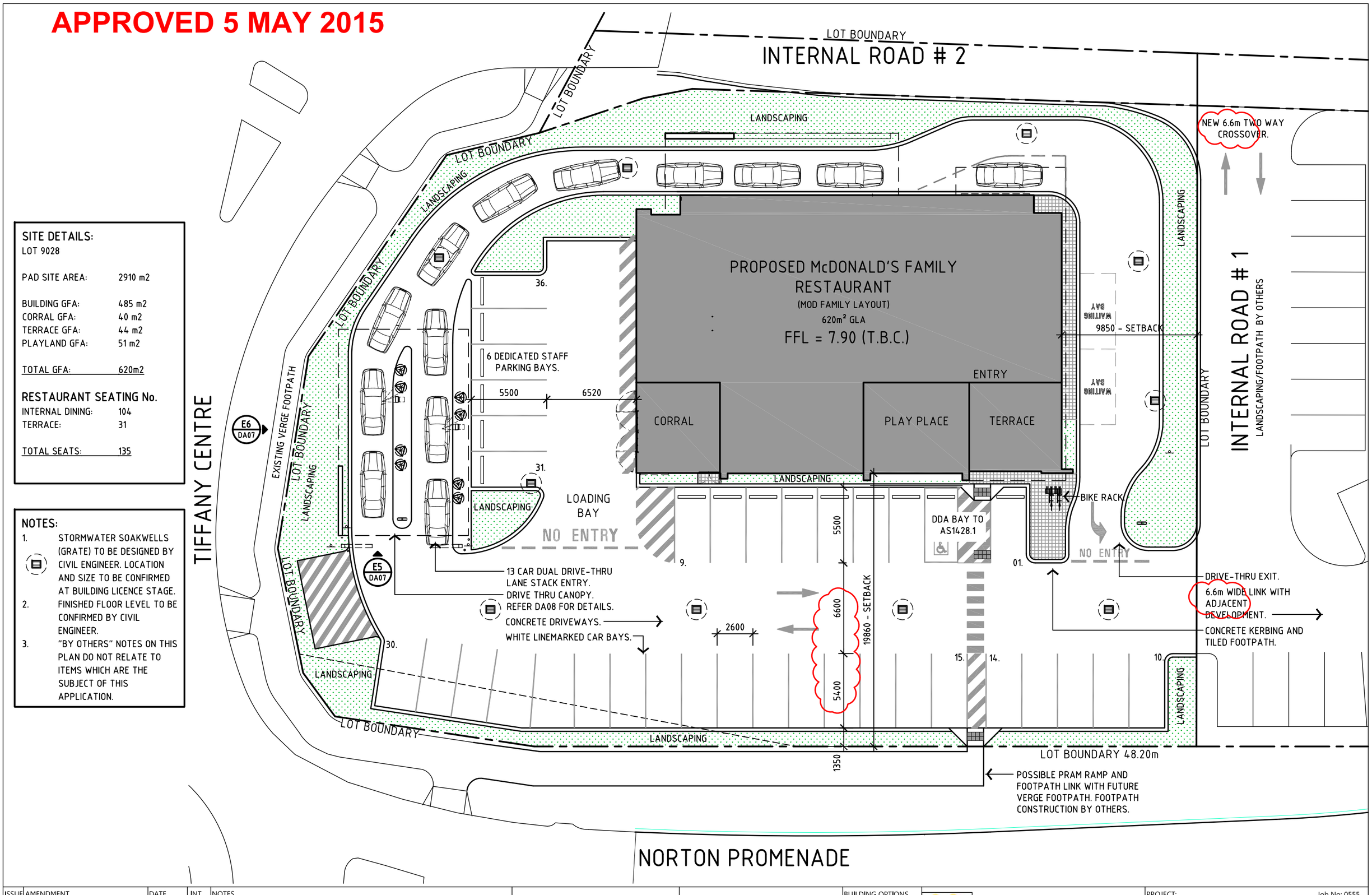
DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015



SITE DETAILS:
LOT 9028

PAD SITE AREA:	2910 m2
BUILDING GFA:	485 m2
CORRAL GFA:	40 m2
TERRACE GFA:	44 m2
PLAYLAND GFA:	51 m2
TOTAL GFA:	620m2

RESTAURANT SEATING No.

INTERNAL DINING:	104
TERRACE:	31
TOTAL SEATS:	135

NOTES:

1. STORMWATER SOAKWELLS (GRATE) TO BE DESIGNED BY CIVIL ENGINEER. LOCATION AND SIZE TO BE CONFIRMED AT BUILDING LICENCE STAGE.
2. FINISHED FLOOR LEVEL TO BE CONFIRMED BY CIVIL ENGINEER.
3. "BY OTHERS" NOTES ON THIS PLAN DO NOT RELATE TO ITEMS WHICH ARE THE SUBJECT OF THIS APPLICATION.

ISSUE	AMENDMENT	DATE	INT
A	BUILDING LOCATION	24.03.15	AJJ
B	INTERNAL ROAD LOCATION	31.03.15	AJJ
C	INTERNAL ROAD WIDTH INCREASED	02.04.15	AJJ

NOTES.

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BUILDING OPTIONS

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NDG NATIONAL DEVELOPMENT GROUP

STATUS PLANNING APPLICATION

SERIES	REF.	
MOD_FAMILY	01	○ UNMODIFIED MASTER DRAWING ● PROJECT SPECIFIC DRAWING

PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

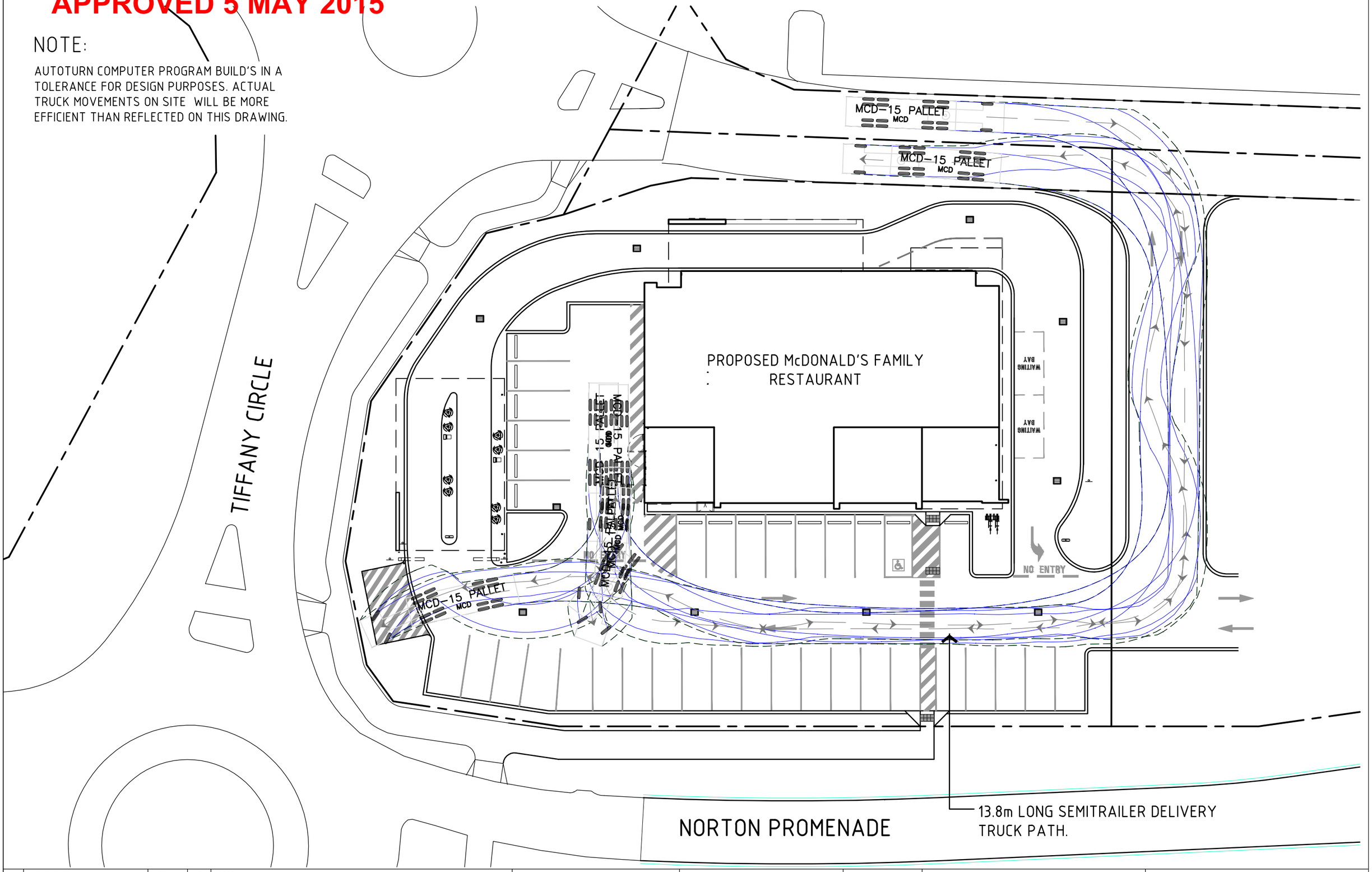
TITLE : SITE PLAN

DRAWN	CHECKED	SCALE	DWG. NO.	REV.
AJJ	--	1:250	DA02	C

DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015

NOTE:

AUTOTURN COMPUTER PROGRAM BUILD'S IN A TOLERANCE FOR DESIGN PURPOSES. ACTUAL TRUCK MOVEMENTS ON SITE WILL BE MORE EFFICIENT THAN REFLECTED ON THIS DRAWING.



ISSUE	AMENDMENT	DATE	INT
-	-	-	-

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STATUS PLANNING APPLICATION

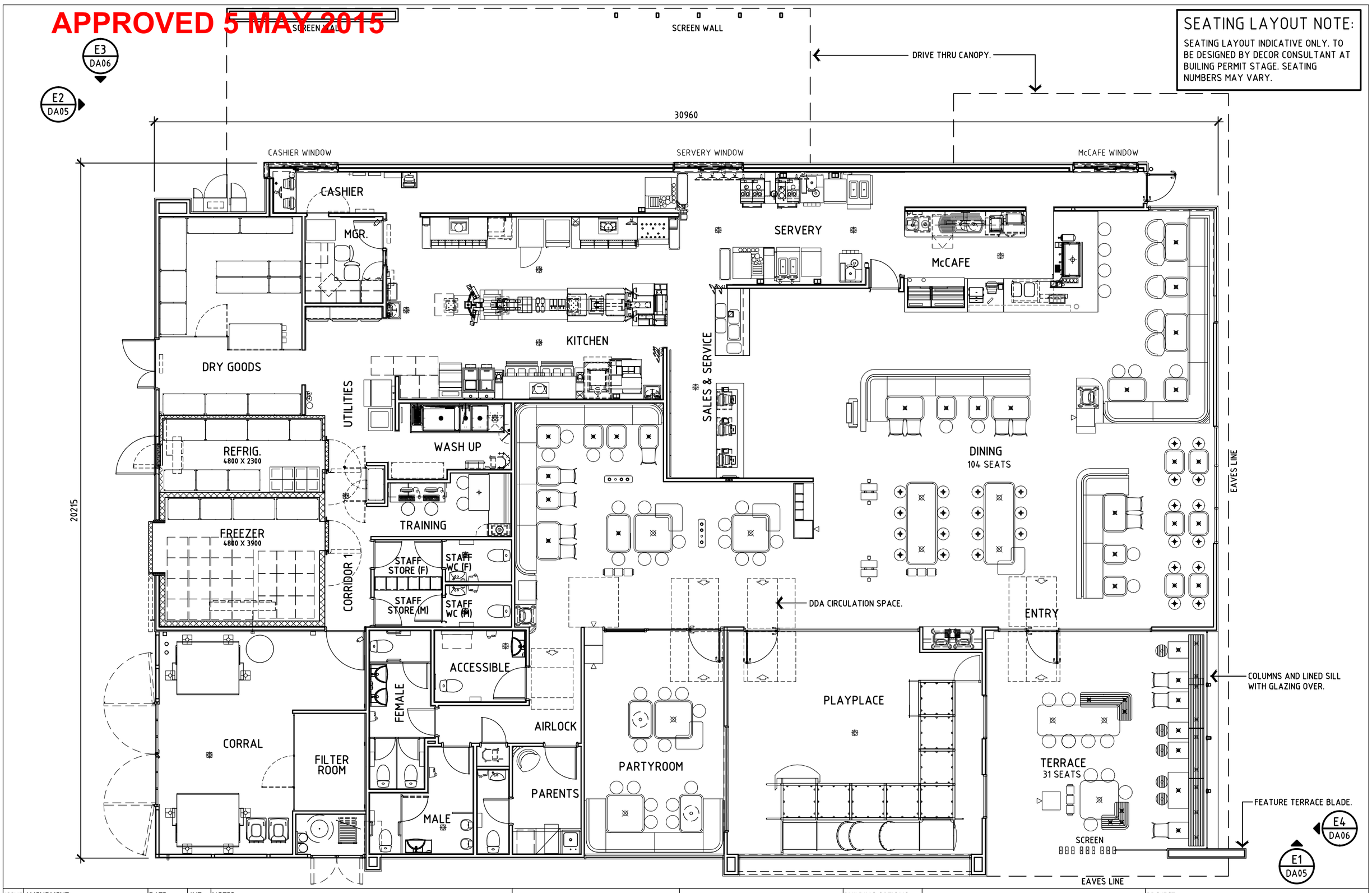
SERIES	REF.	
MOD_FAMILY	01	○ UNMODIFIED MASTER DRAWING ● PROJECT SPECIFIC DRAWING

PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

TITLE : DELIVERY TRUCK PATH

DRAWN	CHECKED	SCALE	DWG. NO.	REV.
RCP	AJJ	1:300	DA03	-

DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015



SEATING LAYOUT NOTE:

SEATING LAYOUT INDICATIVE ONLY. TO BE DESIGNED BY DECOR CONSULTANT AT BUILING PERMIT STAGE. SEATING NUMBERS MAY VARY.

ISSUE	AMENDMENT	DATE	INT
-	--	--.--.----	--

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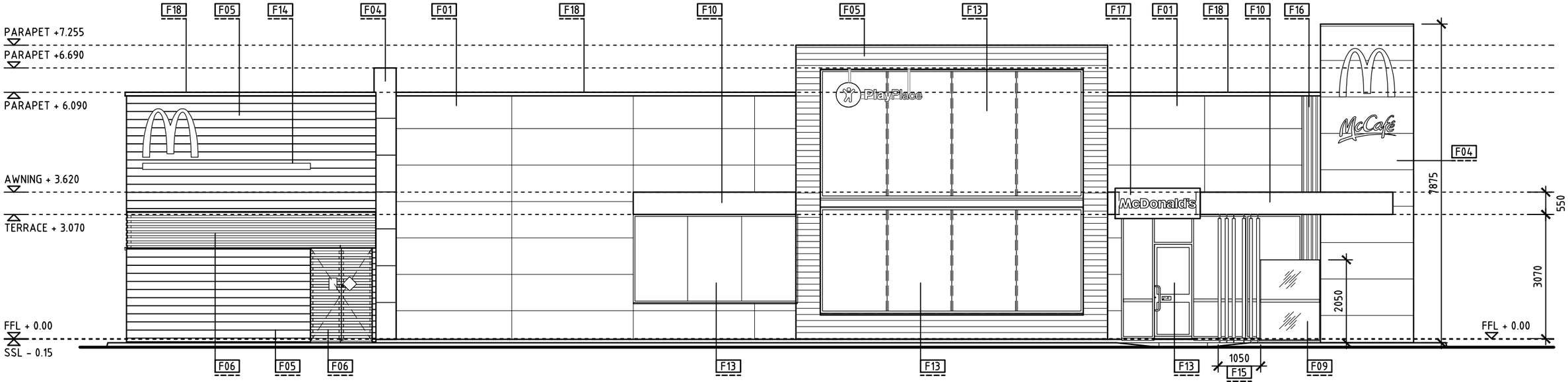
PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

STATUS PLANNING APPLICATION

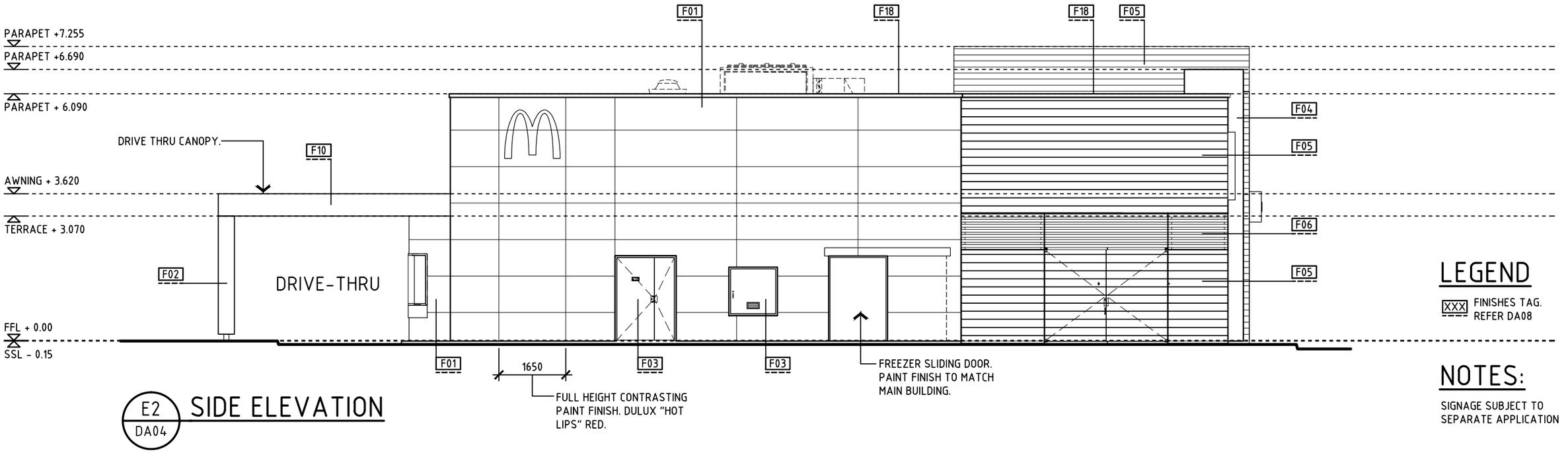
TITLE : FLOOR PLAN

SERIES	REF.		DRAWN	CHECKED	SCALE	DWG. NO.	REV.
MOD_FAMILY	01	UNMODIFIED MASTER DRAWING / PROJECT SPECIFIC DRAWING	AJJ	--	1:100	DA04	-

DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015



E1 / DA04 FRONT ELEVATION



E2 / DA04 SIDE ELEVATION

LEGEND

XXX FINISHES TAG. REFER DA08

NOTES:

SIGNAGE SUBJECT TO SEPARATE APPLICATION

ISSUE	AMENDMENT	DATE	INT
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STATUS PLANNING APPLICATION

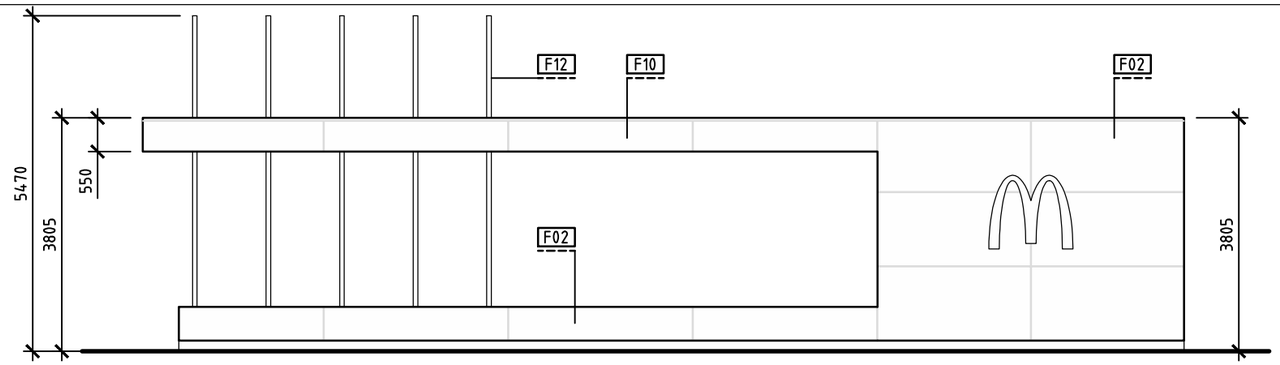
SERIES MOD_FAMILY | REF. 01 | UNMODIFIED MASTER DRAWING | PROJECT SPECIFIC DRAWING

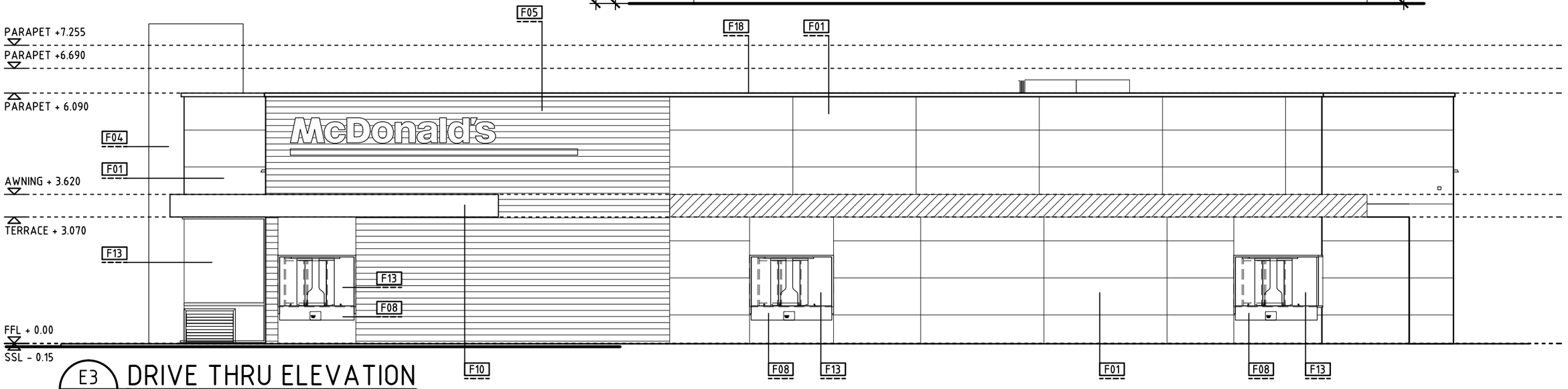
PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

TITLE : FRONT AND SIDE ELEVATIONS E1 AND E2

DRAWN	CHECKED	SCALE	DWG. NO.	REV.
--	--	1:100	DA05	-

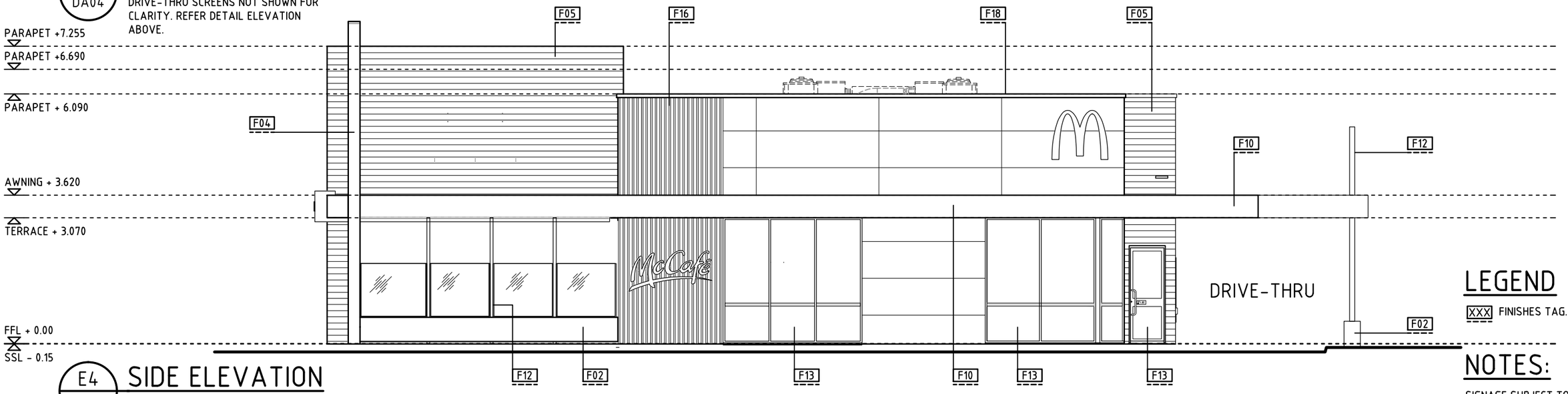
DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015





E3 / DA04 DRIVE THRU ELEVATION

DRIVE-THRU SCREENS NOT SHOWN FOR CLARITY. REFER DETAIL ELEVATION ABOVE.



E4 / DA04 SIDE ELEVATION

LEGEND

XXX FINISHES TAG.

NOTES:

SIGNAGE SUBJECT TO SEPARATE APPLICATION

ISSUE	AMENDMENT	DATE	INT
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STATUS PLANNING APPLICATION

SERIES MOD_FAMILY | REF. 01

UNMODIFIED MASTER DRAWING
PROJECT SPECIFIC DRAWING

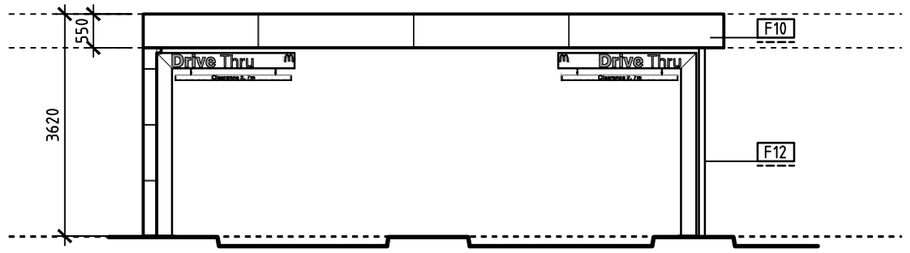
PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

TITLE : SIDE AND DT ELEVATIONS E3 AND E4

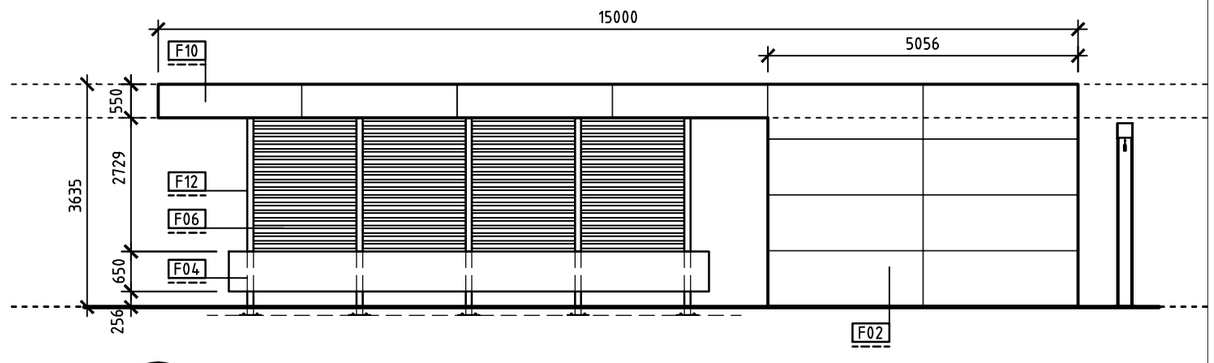
DRAWN	CHECKED	SCALE	DWG. NO.	REV.
--	--	1:100	DA06	-

DEVELOPMENT ASSESSMENT PANELS
APPROVED 5 MAY 2015

TAG	AREA	DESCRIPTION	COLOUR
F01	MAIN BUILDING WALLS, DRIVE THRU WALLS (REFER ELEVATION FOR EXTENT OF ALT. COLOUR).	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	DULUX COLOUR: WAYWARD GREY PG1G8.
F02	DRIVE THRU FEATURE/SCREEN WALL.	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	DULUX COLOUR: VIVID WHITE PCWB4/PW1H9.
F03	GOODS ENTRY DOOR AND FREEZER HATCH.	METAL LINED DOOR WITH PAINT FINISH.	DULUX COLOUR: WAYWARD GREY PG1G8.
F04	TERRACE BLADE WALLS, ORDER CANOPY SCREEN SILL AND CORRAL BLADE	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	EXTERIOR GRADE TO MATCH DULUX COLOUR: McDONALD'S RED (HOT LIPS) R189, G0, B22.
F05	CORRAL WALLS/GATES AND PLAY PLACE WALLS.	DECOWOOD 200mm SHADOLINE UA6478 ALUMINIUM WEATHER-BOARD POWDERCOAT FINISH.	NATURAL CASUARINA
F06	CORRAL WALL BATTENS, C02 / HELIUM ENCLOSURE DOORS AND ORDER CANOPY SCREEN.	POWDERCOATED ALUMINIUM DECOWOOD SLATS -65x16x1.2 RHS	NATURAL CASUARINA
F07	DRIVE THRU COLUMNS EXPOSED STEELWORK.	STEEL FRAMING TO STRUCTURAL ENGINEER'S DETAIL.	EXTERIOR GRADE TO MATCH DULUX COLOUR: McDONALD'S RED (HOT LIPS) R189, G0, B22.
F08	DRIVE THRU BOOTH BENCH TOP/TURN DOWN AND WINDOW TRIM.	STONE.	BLACK STONE
F09	TERRACE	ALUMINIUM FRAMED WITH 10mm THICK GLAZING	NATURAL ANODISED FRAMES
F10	TERRACE AND DRIVETHRU CANOPY FASCIAS AND DRIVE THRU WALL	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	DULUX COLOUR: VIVID WHITE PCWB4/PW1H9.
F12	TERRACE AND DRIVE THRU CANOPY EXPOSED STEELWORK.	STEEL FRAMING TO STRUCTURAL ENGINEER'S DETAIL.	DULUX COLOUR: BLACK
F13	ALUMINIUM WINDOW AND DOOR FRAMES.	PREFABRICATED ALUMINIUM FRAMING.	NATURAL FINISH CLEAR ANODISED
F14	SIGNAGE ACCENT STRIP.	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	EXTERIOR GRADE TO MATCH DULUX COLOUR: McDONALD'S RED (HOT LIPS) R189, G0, B22.
F15	TERRACE SCREEN	POWDERCOATED ALUMINIUM DECOWOOD	NATURAL ANODISED FRAMES
F16	BUILDING PARAPET WALLS	POWDERCOATED ALUMINIUM DECOWOOD	NATURAL ANODISED FRAMES
F17	TERRACE FASCIA	COMPRESSED FIBRE CEMENT WITH APPLIED FINISH.	EXTERIOR GRADE TO MATCH DULUX COLOUR: McDONALD'S RED (HOT LIPS) R189, G0, B22.
F18	MAIN BUILDING PARAPET CAPPING, DOWNPIPES AND OVERFLOW PIPES.	ZINCALUME	DULUX COLOUR TO MATCH WALL BEHIND/BELOW.



E5 / DA02 C.O.D. FRONT ELEVATION



E6 / DA02 C.O.D. SIDE ELEVATION

LEGEND

XXX FINISHES TAG. REFER DA08

NOTES:

SIGNAGE SUBJECT TO SEPARATE APPLICATION

ISSUE	AMENDMENT	DATE	INT
-	--	--.--.----	--

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BUILDING OPTIONS

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PROJECT:	Job No: 0555
PROPOSED McDONALD'S RESTAURANT LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA	
STATUS PLANNING APPLICATION	
TITLE : EXTERNAL FINISHES AND DT SCREENING	

SERIES	REF.		DRAWN	CHECKED	SCALE	DWG. NO.	REV.
MOD_FAMILY	01	UNMODIFIED MASTER DRAWING / PROJECT SPECIFIC DRAWING	--	--	1:50	DA07	-

Government of Western Australia
Development Assessment Panels

Form 1 - Responsible Authority Report
(Regulation 12)

Property Location:	Lot 9028 Norton Promenade, Dalyellup
Application Details:	Take-Away Food Outlet
DAP Name:	South –West JDAP
Applicant:	McDonalds Australia Limited C/o Urbis
Owner:	Dalyellup Beach Pty Ltd
LG Reference:	C5.2.D.99
Responsible Authority:	Shire of Capel
Authorising Officer:	Kim Muste – Senior Strategic Planning Office
Department of Planning File No:	DAP/15/00723
Report Date:	24th April 2015
Application Receipt Date:	16 March 2015 Amended Plan DA2 received 2nd April 2015
Application Process Days:	60 Days
Attachment(s):	1. Dalyellup District Centre Outline Development Plan 2. Dalyellup District Centre Detailed Area Plan No.1 Precinct A, B &D (East) 3. Development Plans DA01 (location plan) to DA07 inclusive and 7 graphic design renderings (not numbered)

Recommendation:

That the South-West Joint Development Assessment Panel resolves to:

Approve DAP Application reference No. 15/00723 and accompanying plans DA02 (amended as received 2nd April 2015), DA03, DA04, DA05, DA06, DA07 in accordance with Clauses 8.3 and 8.10.1 of the Shire of Capel Town Planning Scheme No.7, subject to the following conditions:

General Conditions:

1. This approval is for Planning Consent only and is valid for two (2) years from the date of the decision. If the approved development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.

2. The approved development shall be undertaken and fully implemented in accordance with the approved plan(s).

3. A separate application for Planning Consent for Advertising signage is required.

Prior to Commencement of Development Conditions:

4. Before development commences a shared access way and crossover (corresponding to Internal Road #1 as notated on the approved plans DA2) shall be designed, approved by the Shire of Capel, constructed and covered

by a registered Easement in Gross on the certificate of title. The design and location of the shared access way and crossover shall include finished ground levels and drainage that demonstrate suitable shared access arrangements and vehicle manoeuvrability for the development.

5. A site plan showing finished ground levels, pavement levels and finished floor levels is to be submitted for assessment and approval by the Shire Capel prior to submission of a Building Permit application. The finished ground levels shall conform to the overall earthworks design levels for the subdivision by which proposed Lot 6023 is to be created.

6. A Landscape Plan is to be submitted for assessment and approval by the Shire of Capel prior to commencement of development. The Landscaping Plan is to be implemented and maintained for the life of the development and shall include:
   - A paved pedestrian path between the northern façade of the building and car parking bays.
   - A paved pedestrian path within the landscaped area on the western boundary.
   - Landscaping of the site and adjoining road verge on Tiffany Centre between the property boundary and existing pedestrian path shall be consistent with the Dalyellup District Centre Landscape Master Plan.

7. A schedule of materials colours and finishes is to be submitted with the Building Permit application for assessment and approval by the Shire of Capel.

8. A Stormwater Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

9. A Daily Operation Management Plan is to be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application, and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

10. A Construction Management Plan is be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

11. All off-street parking and access thereto shall comply with Australian Standard 2890.1 to the satisfaction of the Shire of Capel. Construction plans shall be submitted for assessment and approval by the Shire of Capel prior to submission of a Building Permit application.

Prior to Occupation/Use of Development Conditions:

12. A Waste Management and Recycling Plan is to be submitted for assessment and approval prior to occupation of the premises and thereafter the plan shall be implemented at all times to the satisfaction of the Shire of Capel.

13. The installation of outdoor lighting shall be in accordance with the requirements of the Australian Standard AS 4282-1997: 'Control of the Obtrusive Effects of Outdoor Lighting".

14. The provision of 38 car parking bays (inclusive of two (2) waiting car parking bays and one (1) disabled car parking bay) and vehicle manoeuvring areas being constructed, drained, marked out and maintained to the satisfaction of the Shire of Capel for the life of the development. Where parking spaces adjoin pedestrian paths wheel stops shall be provided.

15. Bicycle parking bays at the rate of 1 per 200m2 GLA designed to comply with Australian Standard 2890.3 are to be provided on site clear of any vehicular carriageways. Details of the bicycle parking shall be submitted to the Shire of Capel for assessment and approval prior to construction commencing.

Advice Notes:

1. The design and construction of the required shared access way with Easement in Gross is required to provide vehicular access to the development site. Part Lot 9028 is subject to conditional subdivision approval WAPC Ref: 149334 where the subdivider is proposed to construct the required shared access way with Easements in Gross and upon doing so the Planning Consent condition would be fulfilled.

2. The Landscape Plan is to detail the following:

    a. Those areas to be reticulated.
    b. Verge Treatments.
    c. Species Types and numbers.
    d. Lighting to pathways, communal space and parking areas.
    e. Outdoor furniture, bin enclosures and pavement treatments.
    f. Measures to be taken to ensure that trees and shrubs planted will thrive and be maintained in a healthy state for the life of the development.
    g. Pedestrian path linkages.

3. The Stormwater Management Plan is to detail the following:

    a. Catchments, flow paths, water quality improvement measures, area calculations and design criteria demonstrating that all stormwater from a 1year ARI can be retained on site and infiltrated.
    b. Overflows from soak wells and/ or rain gardens are to enter the road pipe network by a direct piped lot connection with a capacity for a 10year ARI.
    c. Events beyond a 10year ARI are to be directed to the road by overland flow.
    d. Mosquito breeding control measures where stormwater infrastructure is likely to result in standing water that will provide breeding habitat.

4. Stormwater drainage levels should have regard to the invert level of a pipe connection for stormwater to be directed to the public road drainage pipe network. The Stormwater Management Plan should be in accordance with Shire of Capel information sheet "Specifications for Stormwater" and incorporate the principles and guidelines set out in the WAPC Guidelines for

Better Urban Water Management and the Department of Water Stormwater Management Manual for Western Australia.

5. Proposed Lots 6020, 6021, 6022 and 6023 have been supplied with a 225mm diameter pipe connection to the Shire's stormwater system. The 1st 10mm of stormwater flow must be detained onsite with the remainder flowing to the Shire drainage system via a Gross Pollutant Trap. For proposed Lot 6023 the minimum height of overland flows exiting the site must be 7.64 AHD.

6. The Construction Management Plan is to detail how the following matters are to be managed:

    a. Access to and from the site;
    b. The delivery of materials and equipment to the site;
    c. The storage of materials and equipment on the site;
    d. Other matters likely to impact on surrounding properties;
    e. The parking arrangements for contractors and subcontractors;
    f. Management of construction waste; and
    g. Dust mitigation.

7. The Waste Management Plan is to address the following:

    a. The location of bin storage areas and bin collection areas;
    b. The number, volume and type of bins, and the type of waste to be placed in the bins. This is to include measures that will support recycling:
    c. Management of the bins and the bin storage areas, including cleaning, rotation, moving bins to and from the bin collection areas and actions to contain and clean any spillage of waste or other materials; and
    d. Frequency of bin collections.

8. The carpark standards applied to proposed Lots 6020, 6021, 6022 and 6023 have been assessed as requiring user class classification 3A in accordance with Australian Standard AS/NZS 2890.1. The Class 3A option of 2.6m x 5.4m bays with aisle width of 6.6m has been applied to the proposed lots and subject land.

9. In relation to signage:

    a. Requirements for an application for approval of Advertising signage are set out in Clause 7.12 of Town Planning Scheme No 7 and the Shire of Capel Signs Local Law 2001.
    b. Signage is to comply with the Dalyellup District Centre Signage Strategy and Dalyellup District Centre Detailed Area Plan No.1.

10. In relation to Building:

    a. Compliance with the Building Act 2011, Building Regulations 2012 and the Building Code of Australia will be required. Advice should be sought from a registered building surveying contractor in order to obtain the appropriate certificates for building permit and occupancy permit applications.

b. If the project requires Fire Hydrants, the sites water pressure and flow test results will need to be established at the point of proposed water main access.

c. AS 2419 covers installation details and minimum required pressure and flow rates for fire hydrants. If minimum requirements cannot be obtained at the point of supply, the design of pumps and tanks would need to be considered.

11. In relation to Environmental Health Advice:

    a. Compliance with the AS 4674-2004 will be required to meet the requirements of the National Food Safety Standards 3.2.3.
    b. Compliance with the Environmental Protection (Noise) Regulations 1997 is required.
    c. Contact Council's Health Services to obtain the Food Act 2008 Food Business Notification/Registration Form.

12. A Sustainability Implementation and Outcomes Plan is in the process of being prepared for the Dalyellup District Centre as a requirement of the Dalyellup District Centre Outline Development Plan. This plan will encourage landowners of commercial premises, business proprietors and/or tenants to consider and implement a range of sustainability initiatives and practices. The applicant is encouraged to consider sustainable development initiatives including the Sustainability Implementation and Outcomes Plan when it is available. Notwithstanding this, the applicants are invited to demonstrate sustainability measures that will be incorporated into the project.

13. The applicants are encouraged to provide a number of bicycle parking bays in excess of Australian Standard 2890.3.

Background:

Property Address:		Lot 9028 Norton Promenade, Dalyellup
Zoning	GBRS:	Urban
	TPS:	Urban Development Zone (Development Precinct 1)
Use Class:		Take-Away Food Outlet
Strategy Policy:		District Centre (under Dalyellup East Local Structure Plan) Retail Centre Core (under Dalyellup District Centre ODP)
Development Scheme:		Shire of Capel Town Planning Scheme No 7
Lot Size:		31.826ha
Existing Land Use:		Vacant
Value of Development:		$3.1million

Site Context

- The application site is within the developing Dalyellup District Centre.

- Comprehensive planning including a Local Structure Plan, Outline Development Plan and Detailed Area Plan are in place to facilitate and guide development within the District Centre.

- A current subdivision approval of the subject land applies that will create four individual freehold lots fronting Norton Promenade, including creation of a separate lot, the subject of the Development Application. The subdivision has yet to be fully constructed and cleared to the issue of titles.

- The main street of the District Centre is nearing completion and a supermarket (Woolworths) with a range of tenancies opened in mid-April 2015.

- The Development Application site area is vacant, devoid of natural vegetation and subject to subdivision works.

Details: outline of development application:

Approval is sought for a Take-Away Food Outlet with a Drive Through facility comprising the following key components:

- Indoor dining area (McDonalds Restaurant) seating 104 persons incorporating Sales and Service counter and Café.
- Covered outdoor terrace eating area seating 31 persons.
- Separate playground and party room.
- Kitchen, preparation and food storage areas.
- Bathroom and toilet facilities.
- Staff facilities including Manager's office.
- Storage area.
- Corral for servicing, waste and storage.
- Dual lane covered Drive-Through facility with associated vehicle queuing/stacking to accommodate 13 cars.

- 38 dedicated car parking bays comprise 30 fixed bays for customers, 2 waiting bays and 6 bays for staff.
- Hours of operation proposed are 24hours a day, seven days a week.
- Landscaping works.
- Access to the proposed development will be from Tiffany centre via internal access ways with easement over adjoining Lot 5001 and existing Lot 9028 (or future proposed lots 6022 and 6023 following the issue of titles related to a current subdivision approval).
- Gross Floor Area (GFA) for the building is 620m^2 in addition to the covered Drive Through facility.

Proposed advertising signage shown on the submitted plans and graphics do not form part of the application.

Legislation & policy:

Legislation

- Greater Bunbury Region Scheme.
- Shire of Capel Town Planning Scheme No.7 (Scheme).

State Government Policies

- Activity Centres for Greater Bunbury Policy.
- Greater Bunbury Strategy 2013

Local Plans and Policies

- Dalyellup East Local Structure Plan (DELSP) - The subject land is within a designated District Centre.

- Dalyellup District Centre Outline Development Plan (DDCODP) - The subject land is located within Precinct B Business. Clause 1.5.4 lists Take Away Food Outlet (excluding drive through fast foods) as a "P" Permitted Land Use within Precinct B. The ability for Council to consider a Take Away Food Outlet with a Drive Through facility has been separately addressed by modification to an applicable Detailed Area Plan.

- Dalyellup District Centre Detailed Area Plan No.1 Precincts A, B, and D (East) (DAP1) – DAP1 was adopted by Shire of Capel 16th March 2015 in accordance with clause 1.2.7 of the DDCODP. DAP1 provides for minor modifications to the DDCODP including:

    - A Drive Through facility is permitted in conjunction with Take Away Food Outlets on nominated sites, in variance to clause 1.5.4 of the DDCODP.
    - Measures to ensure the first stage of development and subsequent stages have co-ordinated constructed vehicle access ways with easements and pedestrian access.

Subdivision Approval:

- Lot 9028 is subject to subdivision approval (WAPC Ref:149334) that will create 4 freehold lots including a separate Lot 6023 for the proposed development. As of April 2015 subdivision works have not been completed or subdivision clearances achieved for the issue of titles.

- Vehicle access to the individual lots (including proposed Lot 6023) is to be via a series of coordinated main and secondary internal shared access ways subject to Easements in Gross to control vehicular movements and provide access to the public road network.

- Vehicle access for the proposed development (and proposed Lot 6023) is to be provided as follows:
    - In accordance with DAP1 direct vehicle access to Norton Promenade and Tiffany Circle is not permitted.
    - A shared access way along the southern boundary of the proposed lot has been constructed.
    - A shared access way within proposed adjoining Lot 6022 is required and has not been constructed. Potential exists that this access way will be constructed prior to determination of the application or prior to the issue of a Building Permit.

Consultation:

- External public consultation or referral to other agencies is not required.

- Relevant to the application, DAP1 was advertised for a period of 28 days from the 6/11/2014 to 5/12/2014 to introduce the permissibility for a Drive Through facility permitted in conjunction with Take-Away Food Outlet on the application site in variation to Clause 1.5.4 of the DDCODP. Only two submissions where received during the DAP1 consultation period and matters raised were addressed via additional and revised clauses in relation to signage and access.

- Pre-lodgement consultation between the applicant and Shire officers occurred resulting in refinements to the building layout, elevations, integrated signage panel, car parking and access way specifications.

Planning assessment:

Land Use Permissibility

A Take Away Food outlet with Drive Through facility is permitted in accordance with DAP1 as a variation to the DDCODP.

Building location

Proposed buildings including the separate covered Drive Through facility are located in general compliance with indicative building locations shown within DAP1.

Built form

Clause 1.3.2.3 of the DDCODP sets out general objectives for Built Form within the District Centre. The application includes elevation drawings and a schedule of materials and colours that confirms acceptable built form, building materials and colours in accordance with the objectives of the DDCODP.

Pedestrian Walkways and Landscaping

In accordance with Clause 1.5.5.2 of the DDCODP:

> *"A covered pedestrian walkway should be provided to the façade of buildings fronting Norton Promenade and to public streets and public car parking areas."*

The application provides for a vegetated landscape bed along a portion of the northern façade of the building that limits pedestrian access from the car park. To improve pedestrian connectivity within the proposed development and to adjoining development the Landscape Plan condition includes requirements for a paved pedestrian path along the northern façade of the building and within the landscaped area along the western boundary of the development site.

Only the main public entry to the building, notated as the "Terrace" is covered. The Terrace area is partially enclosed and provides for outdoor seating in addition to shelter depending on weather conditions. Subject to the additional recommended pedestrian path along the northern façade, this outcome is supported due to the extent of shelter provided.

Clause 7.10(f) of the Scheme requires a minimum 2m wide landscaping strip between car parking areas and adjoining street boundaries. The application provides for a landscaping strip along the Norton Promenade frontage of less than 2m (1.35m) and a section fronting Tiffany Centre of varying width. A development standard variation in accordance with Clause 8.10.1 of the Scheme (Relaxation of Standards) is acceptable to allow frontage landscaping as proposed based on the overall level of landscaping proposed.

Vehicle access

Development approval conditions and advice in relation to construction of shared access ways with Easements in Gross are recommended to ensure provision of vehicle access and coordination of proposed development based on yet to be finalised subdivision requirements.

Parking and vehicle queuing

Relevant DDCODP parking requirements include:

- In accordance with the DDCODP and Scheme the number of car parking bays required for the development is at the discretion of Council.

- Clause 1.3.4 a) General Development Standards states; *…"On street car parking immediately adjoining the site can be included in calculating car parking provision."* As no on street car parking is available immediately adjoining the subject development site, Clause 1.3.4a) does not apply.

- A Parking Management Strategy is to be prepared by the subdivider for the District Centre. As a Parking Management Strategy has yet to be prepared the provision of parking for the proposal is assessed on the merit of the application. As the development site has no frontage to the Main Street and has no abutting on street parking it is expected that the Parking Management Plan will not provide car parking concessions for the site.

Car parking and vehicle queuing provided by the proposal is acceptable based upon:

- As a guide, a Restaurant with a seating capacity of 135 people comparable to that proposed development would require in accordance with Appendix 8 of the Scheme the provision of 34 car parking bays (based on 1 bay per 4 seats).

- The proposal provides 38 dedicated car parking bays comprise 30 fixed bays for customers, 2 waiting bays and 6 bays for staff. This proposed parking provision is in excess of the above guide of car parking 34 bays.

- The dual lane Drive Through provides adequate space for vehicle queuing/stacking to minimise blocking of proposed onsite car parking bays.

- The proposal provides a bike rack for 4 bicycles close to the building entry.

- Amended plan DA2 confirms compliance with Australian Standard AS/NZS 2890.1 user class classification 3A applied to the approved subdivision in order to design the required shared access way system (6.6m width) and associated car parking (5.4m x 2.6m). This approach is supported as an improvement and variation to the Scheme car parking layout standards and as such a development standard variation in accordance with Clause 8.10.1 of the Scheme (Relaxation of Standards) is acceptable as reflected in the recommendation.

Trading Hours

The location of the proposal within a District Centre and on the main access to the centre is appropriate for consideration of extended trading hours. Residents within the District Centre would generally expect a higher and different level of activity and amenity in comparison to more isolated residential development cells.

Land opposite the subject land on the northern side of Norton Promenade is also within the District Centre, proposed for residential and mixed use development in close proximity to Bussell Highway. These proposed mixed use/residential lots fronting Norton Promenade have yet to be created. Identical mixed use/residential lots already created within the District Centre have to date only generated proposals for residential development. This outcome is anticipated to apply to proposed lots opposite the subject land.

A Detailed Area Plan (DAP) covering the proposed mixed use/residential lots directly opposite the subject land is in the process of being developed. Discussions by Shire officers with the subdivider/landowner of this land (currently the same as the subject land) have raised the need for the DAP to include the application of quite house design requirements to reflect the potential for extended trading hours and traffic

noise resulting from development within the district centre. This outcome has yet to be confirmed.

Extended trading hours for the Take Away Food Outlet has the capacity to aid surveillance and security of the proposed premises and surrounding area subject to compliance with the Environmental Protection (Noise) Regulations and a detailed Daily Operations Management Plan as a recommended condition of approval.

Management Plan

The application details that McDonald's prepares detailed management plans for all of its restaurants and an example is provided. A condition is recommended requiring a daily operations management plan to ensure safety, security and amenity for a 24/7 operation is provided.

Sustainability

Clause 1.3.2.5 of the DDCODP sets out guidelines for the achievement of sustainability outcomes and clause 1.3.6.1(g) lists a requirement for the owner (subdivider) of the District Centre land to prepare among other things a Sustainability Outcomes and Implementation Plan prior to subdivision of the land. At the time of preparing this assessment the plan has not been finalised. A related advice note has been recommended to encourage implementation of sustainable development initiatives.

Signage

Signage is to be the subject of a separate application to the Shire. The elevation plans with the application show signage for the development including a section of elevated wall panel for primary signage that is an integral component of the architectural design. In consultation with the applicant this outcome is supported as an alternative to a pylon sign not permitted by DAP1.

Conclusion:

The application demonstrates compliance with the adopted planning framework and is recommended for approval with appropriate conditions to ensure compliant implementation and ongoing operation occurs.

SITE DETAILS:
LOT 9028

PAD SITE AREA:	2910 m2
BUILDING GFA:	505 m2
CORRAL GFA:	33 m2
TERRACE GFA:	38 m2
PLAYLAND GFA:	44 m2
TOTAL GFA:	620m2

RESTAURANT SEATING No.

INTERNAL DINING:	104
TERRACE:	31
TOTAL SEATS:	135

NOTES:
1. STORMWATER SOAKWELLS (GRATE) TO BE DESIGNED BY CIVIL ENGINEER. LOCATION AND SIZE TO BE CONFIRMED AT BUILDING LICENCE STAGE.
2. FINISHED FLOOR LEVEL TO BE CONFIRMED BY CIVIL ENGINEER.
3. "BY OTHERS" NOTES ON THIS PLAN DO NOT RELATE TO ITEMS WHICH ARE THE SUBJECT OF THIS APPLICATION.

LOT BOUNDARY
INTERNAL ROAD # 2
LOT BOUNDARY
LOT BOUNDARY
LANDSCAPING
NEW 6.6m TWO WAY CROSSOVER.
LANDSCAPING
LANDSCAPING
PROPOSED McDONALD'S FAMILY RESTAURANT
(MOD FAMILY LAYOUT)
620m² GLA
FFL = 8.10
ENTRY
CORRAL
PLAY PLACE
TERRACE
WAITING BAY
WAITING BAY
9850 - SETBACK
LOT BOUNDARY
INTERNAL ROAD # 1
LANDSCAPING/FOOTPATH BY OTHERS
33.
6 DEDICATED STAFF PARKING BAYS.
5500
6520
28.
LANDSCAPING
LOADING BAY
NO ENTRY
BIKE RACK
DDA BAY TO AS1428.1
01.
NO ENTRY
8.
5500
6600
19860 - SETBACK
5400
1350
2600
13 CAR DUAL DRIVE-THRU LANE STACK ENTRY.
DRIVE THRU CANOPY.
REFER DA08 FOR DETAILS.
CONCRETE DRIVEWAYS.
WHITE LINEMARKED CAR BAYS.
DRIVE-THRU EXIT.
6.6m WIDE LINK WITH ADJACENT DEVELOPMENT.
CONCRETE KERBING AND TILED FOOTPATH.
10.
9.
LANDSCAPING
NEW TRANSFORMER PAD. DESIGN TO BE CONFIRMED BY WESTERN POWER.
LOT BOUNDARY 48.20m
E6 DA07
E5 DA07
EXISTING VERGE FOOTPATH
LOT BOUNDARY
LANDSCAPING
TIFFANY CENTRE
LOT BOUNDARY
12457
27.
LANDSCAPING
MAX. 400 HIGH LOW LEVEL LIMESTONE RETAINING WALL.
LOT BOUNDARY
LANDSCAPING
POSSIBLE PRAM RAMP AND FOOTPATH LINK WITH FUTURE VERGE FOOTPATH. FOOTPATH CONSTRUCTION BY OTHERS.
NORTON PROMENADE

ISSUE	AMENDMENT	DATE	INT
A	BUILDING LOCATION	24.03.15	AJJ
B	INTERNAL ROAD LOCATION	31.03.15	AJJ
C	INTERNAL ROAD WIDTH INCREASED	02.04.15	AJJ
D	INTERNAL RESTAURANT AREAS	08.05.15	AJJ
E	TRANSFORMER PAD ADDED	18.06.15	AJJ
F	AREAS AS CLOUDED	03.07.15	AJJ
G	CAR PARKING WHERE CLOUDED	17.07.15	AJJ

NOTES.
1. DO NOT SCALE THIS DRAWING.
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3. THIS IS A COMPUTER GENERATED DRAWING . DO NOT AMEND BY HAND.
4. FIGURE DIMENSIONS ARE TO BE USED. CONTACT ARCHITECT FOR CLARIFICATION IF DIMENSIONS ARE NOT CLEAR.
5. ALL DISCREPANCIES AND OMISSIONS ON SITE MUST BE REPORTED TO THE ARCHITECT FOR THEIR COMMENTS OR APPROVAL PRIOR TO COMMENCING WORK.
6. ALL DIMENSIONS ARE IN MILLIMETERS

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BUILDING OPTIONS

McDonald's Australia Limited
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NATIONAL DEVELOPMENT GROUP

STATUS	PLANNING APPLICATION					
SERIES	REF.	○ UNMODIFIED MASTER DRAWING ● PROJECT SPECIFIC DRAWING	DRAWN	CHECKED	SCALE	DWG. NO. / REV.
MOD_FAMILY	01		AJJ	--	1:250	DA02 / G

PROJECT: PROPOSED McDONALD'S RESTAURANT LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA — Job No: 0555
TITLE : SITE PLAN

NOTE:

AUTOTURN COMPUTER PROGRAM BUILD'S IN A TOLERANCE FOR DESIGN PURPOSES. ACTUAL TRUCK MOVEMENTS ON SITE WILL BE MORE EFFICIENT THAN REFLECTED ON THIS DRAWING.

13.8m LONG SEMITRAILER DELIVERY TRUCK ARRIVING AT SITE.

PROPOSED McDONALD'S FAMILY RESTAURANT

ADJACENT DEVELOPEMENT SUBJECT TO SEPARATE APPLICATION

TIFFANY CIRCLE

NORTON PROMENADE

MCD–15 PALLET MCD

NO ENTRY

ISSUE	AMENDMENT	DATE	INT
A	INTERNAL ROAD LAYOUT	24.03.15	AJJ
B	TRUCK EXIT PATH	31.03.15	AJJ
C	SITE LAYOUT	23.06.15	AJJ
D	SITE LAYOUT	17.07.15	AJJ

NOTES.

1. DO NOT SCALE THIS DRAWING.
2. THE DRAWING SHOWS DESIGN INTENT ONLY. ALL DIMENSIONS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION OR PRODUCTION. CONSTRUCTION DETAILS TO BE CONFIRMED BY CONTRACTOR /MANUFACTURER.
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6. ALL DIMENSIONS ARE IN MILLIMETERS

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STATUS PLANNING APPLICATION

SERIES MOD_FAMILY | REF. 01

UNMODIFIED MASTER DRAWING
PROJECT SPECIFIC DRAWING

PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

TITLE : DELIVERY TRUCK PATH

DRAWN	CHECKED	SCALE	DWG. NO.	REV.
RCP	AJJ	1:300	DA03	D

SEATING LAYOUT NOTE:

SEATING LAYOUT INDICATIVE ONLY. TO BE DESIGNED BY DECOR CONSULTANT AT BUILING PERMIT STAGE. SEATING NUMBERS MAY VARY.

E3 DA06

E2 DA05

SCREEN WALL

SCREEN WALL

DRIVE THRU CANOPY.

30960

20215

CASHIER WINDOW

SERVERY WINDOW

McCAFE WINDOW

CASHIER

CORRIDOR 03.

BEVERAGE CELL

McCAFE

AP

MGR.

AP

AP

KITCHEN

AP

DRY GOODS

SALES & SERVICE

3048 3048 3048

AP

REFRIG.
4800 X 2600

WASH UP

BURGER BAR

DINING
104 SEATS

EAVES LINE

TRAINING

3048 3048

FREEZER
4800 X 4470

CORRIDOR 02.

STAFF STORE (F)

STAFF WC (F)

STAFF STORE (M)

STAFF WC (M)

DDA CIRCULATION SPACE.

ENTRY

ACCESSIBLE

MALE

CORRIDOR 01.

COLUMNS AND LINED SILL WITH GLAZING OVER.

CORRAL

FILTER ROOM

FEMALE

PARENTS

PARTYROOM

PLAYPLACE

TERRACE
31 SEATS

SCREEN

FEATURE TERRACE BLADE.

E4 DA06

E1 DA05

EAVES LINE

ISSUE	AMENDMENT	DATE	INT
A	INTERNAL ARRANGEMENTS	08.05.15	AJJ

NOTES.

1. DO NOT SCALE THIS DRAWING.
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NATIONAL DEVELOPMENT GROUP

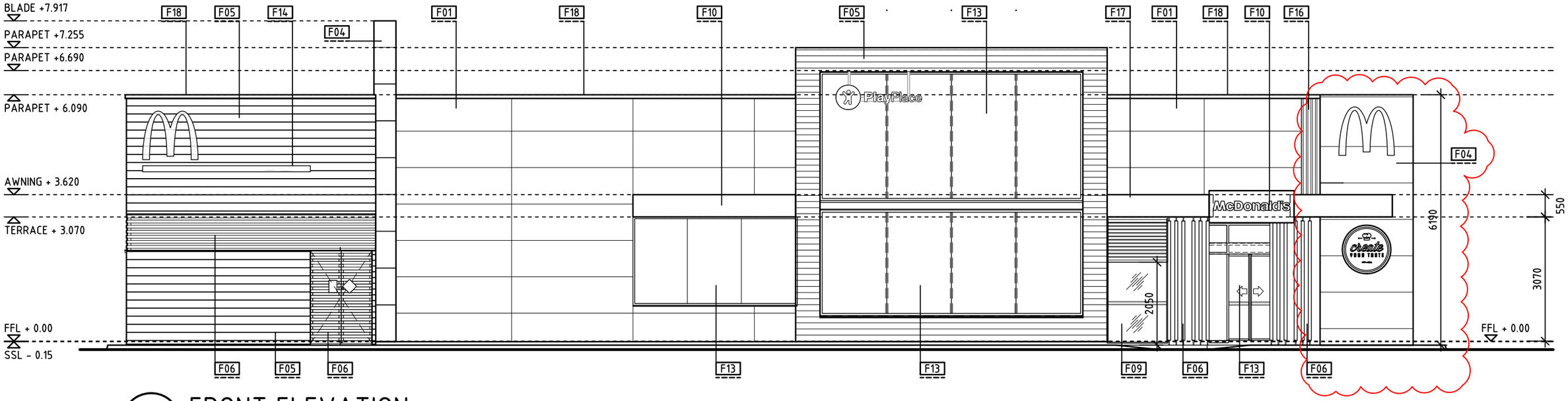
PROJECT: Job No: 0555

PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

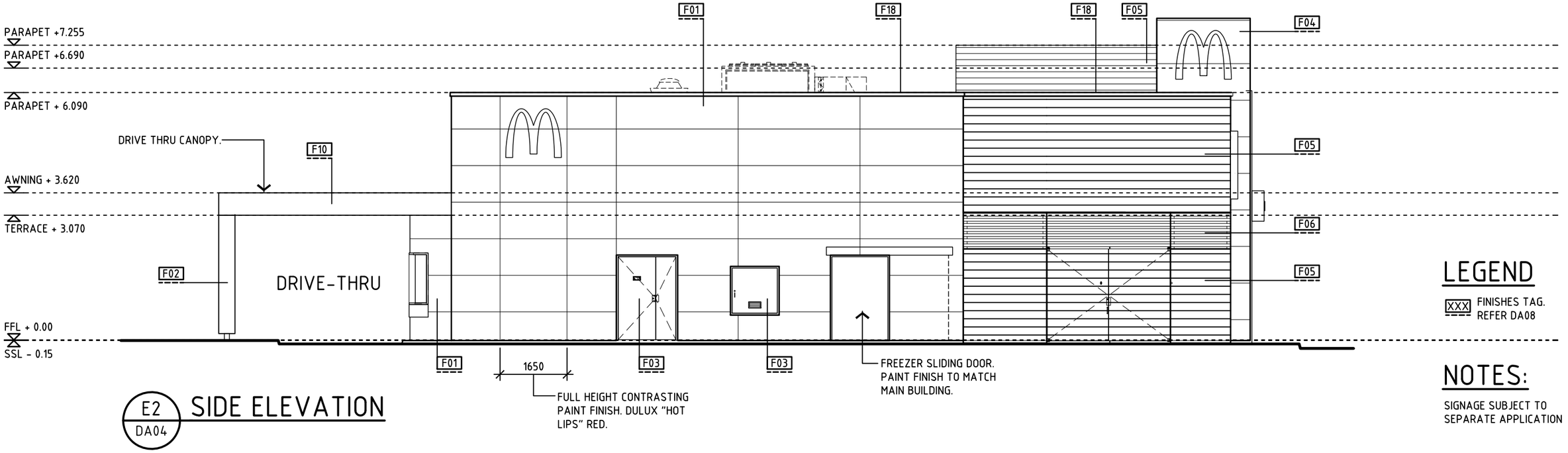
STATUS PLANNING APPLICATION

TITLE : FLOOR PLAN

SERIES	REF.		DRAWN	CHECKED	SCALE	DWG. NO.	REV.
MOD_FAMILY	01	UNMODIFIED MASTER DRAWING PROJECT SPECIFIC DRAWING	AJJ	--	1:100	DA04	A



E1 DA04 **FRONT ELEVATION**



E2 DA04 **SIDE ELEVATION**

LEGEND

XXX FINISHES TAG. REFER DA08

NOTES:

SIGNAGE SUBJECT TO SEPARATE APPLICATION

ISSUE	AMENDMENT	DATE	INT
A	CORRAL FEATURE BLADE	08.05.15	AJJ
B	BLADE HEIGHTS	23.06.15	AJJ
C	TERRACE BLADE HEIGHT	17.07.15	AJJ

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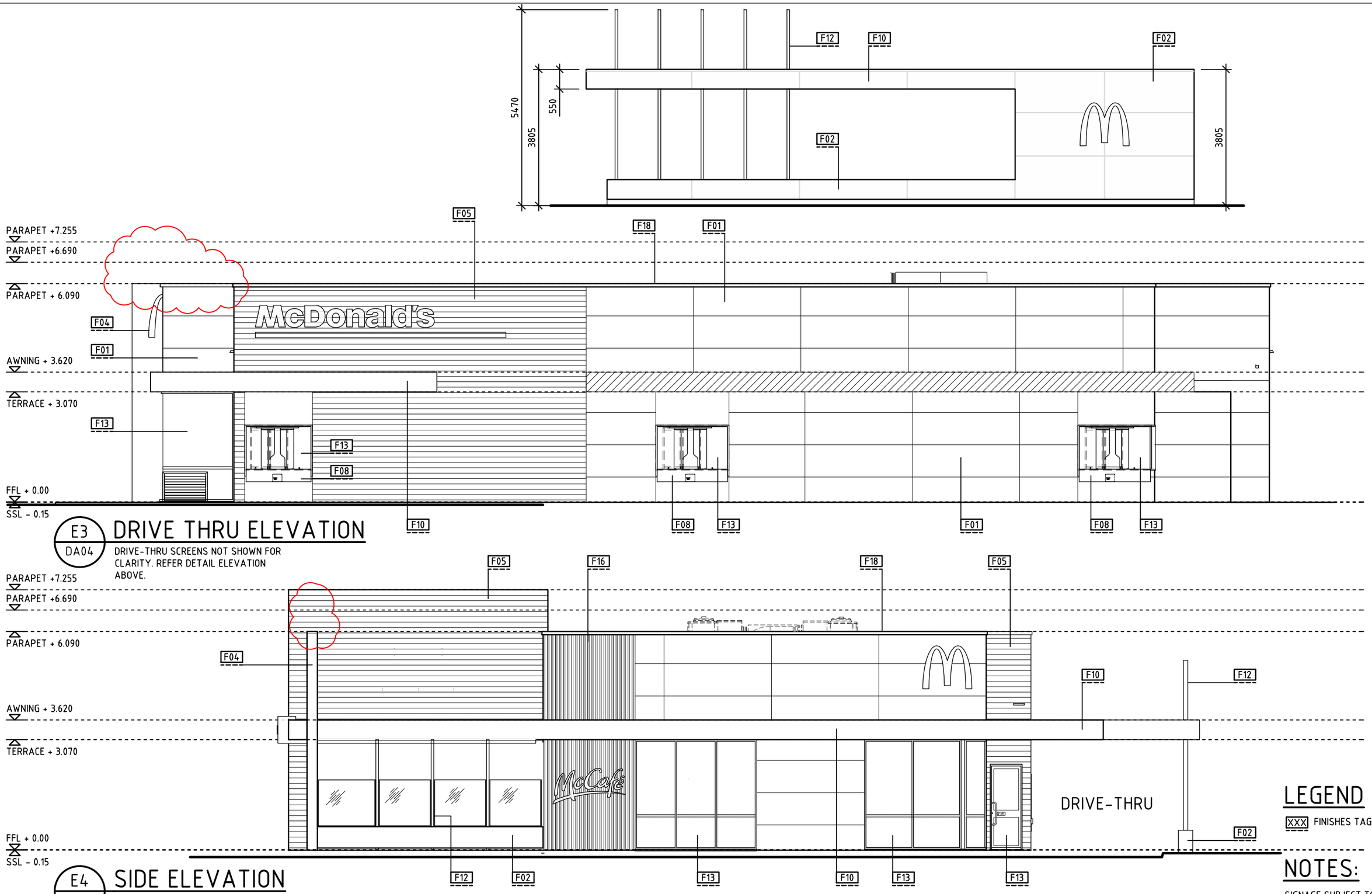
PROJECT: Job No: 0555
PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

STATUS PLANNING APPLICATION
TITLE : FRONT AND SIDE ELEVATIONS E1 AND E2

SERIES	REF.		DRAWN	CHECKED	SCALE	DWG. NO.	REV.
MOD_FAMILY	01	○ UNMODIFIED MASTER DRAWING ● PROJECT SPECIFIC DRAWING	--	--	1:100	DA05	C



LEGEND

XXX FINISHES TAG.

NOTES:

SIGNAGE SUBJECT TO SEPARATE APPLICATION

ISSUE	AMENDMENT	DATE	INT
A	BLADE HEIGHT	23.06.15	AJJ
B	BLADE HEIGHT	17.07.15	AJJ

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STATUS PLANNING APPLICATION

SERIES	REF.	
MOD_FAMILY	01	⬭ UNMODIFIED MASTER DRAWING ⬬ PROJECT SPECIFIC DRAWING

PROJECT: Job No: 0555

PROPOSED McDONALD'S RESTAURANT
LOT 9028 CNR NORTON PROMENADE & TIFFANY CENTRE, DALYELLUP WA

TITLE : SIDE AND DT ELEVATIONS E3 AND E4

DRAWN	CHECKED	SCALE	DWG. NO.	REV.
--	--	1:100	DA06	B