

Development Plan Amendment

By the Council

Marion Council

Recreation/Community Development Plan Amendment

The Amendment

For Approval

Approved by the Minister responsible for the administration of the
Development Act 1993 pursuant to Section 25 (18), of the
Development Act 1993.



Minister's Signature

Date..... 21 NOV 2017

| Amendment Instructions Table | | | | | |
|---|------------------|--|---|-------------------------------|--|
| Name of Local Government Area: City of Marion | | | | | |
| Name of Development Plan: Marion Council Development Plan | | | | | |
| Name of DPA: Recreation/Community Development Plan Amendment | | | | | |
| <p><i>The following amendment instructions (at the time of drafting) relate to the Council Development Plan consolidated on 28 April 2016.</i></p> <p><i>Where amendments to this Development Plan have been authorised after the aforementioned consolidation date, consequential changes to the following amendment instructions will be made as necessary to give effect to this amendment.</i></p> | | | | | |
| Amendment Instruction Number | Method of Change | Detail what is to be replaced or deleted or detail where new policy is to be inserted. | Detail what material is to be inserted (if applicable, i.e., use for <u>Insert</u> or <u>Replace</u> methods of change only). | Is Renumbering required (Y/N) | Subsequent Policy cross-references requiring update (Y/N) if yes please specify. |
| COUNCIL WIDE / GENERAL SECTION PROVISIONS (including figures and illustrations contained in the text) | | | | | |
| Amendments required (Yes/No): No | | | | | |
| ZONE AND/OR POLICY AREA AND/OR PRECINCT PROVISIONS (including figures and illustrations contained in the text) | | | | | |
| Amendments required (Yes/No): Yes | | | | | |
| Open Space Zone | | | | | |
| 1. | Delete | Immediately following Principle 6 Land Division | All text under Precinct Specific Provisions – relating to Precinct 7 Hallett Cove Recreation | N | N |
| New Community Zone | | | | | |
| 2. | Insert | Immediately following 'Commercial Zone' | The content of Attachment A (new Community Zone) | N | N |
| TABLES | | | | | |
| Amendments required (Yes/No): No | | | | | |
| MAPPING (Structure Plans, Overlays, Enlargements, Zone Maps, Policy Area & Precinct Maps) | | | | | |
| Amendments required (Yes/No): Yes | | | | | |
| Map Reference Tables | | | | | |
| 3. | Insert | Within Zone Maps heading, immediately following the Commercial listing | Community Zone within column 1 and Mar/3, Mar/5, Mar/6, Mar/7, Mar/8, Mar/12, Mar/13, Mar/14, Mar/15 and Mar/16 in column 2 | N | N |

**Recreation/Community Development Plan Amendment
Marion Council
Amendment Instructions Table**

| | | | | | |
|---------------|---------|---|---|---|---|
| 4. | Insert | Within Policy Area Maps heading, immediately following Coastal Policy Area 21 | Recreation Policy Area 22 within column 1 and Mar/3, Mar/5, Mar/6, Mar/7, Mar/8, Mar/12, Mar/13, Mar/14 Mar/15 and Mar/16 in column 2 | | |
| 5. | Delete | Within Precinct Maps | References to Precinct 7 Hallett Cove Recreation within column 1 and Mar/15, Mar/16 in column 2 | | |
| Map(s) | | | | | |
| 6. | Replace | Council Index Map | With the content of Attachment B | N | N |
| 7. | Replace | Zone Maps Mar/3, Mar/5, Mar/6, Mar/7, Mar/8, Mar/12, Mar/13, Mar/14, Mar/15 and Mar/16 | With the content of Attachment C | N | N |
| 8. | Replace | Policy Area Maps Mar/3, Mar/5, Mar/6, Mar/7, Mar/8, Mar/12, Mar/13, Mar/14, Mar/15 and Mar/16 | With the content of Attachment D | N | N |

ATTACHMENT A

Community Zone

Community Zone

Refer to the [Map Reference Tables](#) for a list of the maps that relate to this zone.

OBJECTIVES

- 1 A zone accommodating community, educational, recreational and health care facilities for the general public's benefit.
- 2 Development that is integrated in function and provides a coordinated base to promote efficient service delivery.
- 3 Development that contributes to the desired character of the zone.

DESIRED CHARACTER

The zone caters for a range of community land uses and public facilities including public recreation, community centres, sporting areas and passive landscaped spaces that fulfil a need within the community. Land uses and activities within the zone will be of a scale and function that is appropriate within the locality and will not negatively affect adjacent zones through, for example, excess noise or traffic generation.

Development will achieve and maintain a high level of presentation to public roads through incorporation of high quality structures, fencing, landscaping, and the screening of waste, service and storage areas.

Development will enhance the functionality, shared and adaptable use of the sites and utilise crime prevention design techniques, including lighting and building materials that deter and minimise the occurrence of vandalism and anti-social behaviour.

Open spaces within the zone will be well maintained to uphold a high level of amenity and to contribute to a safe and functional zone for community use.

The zone comprises twelve existing and functioning sites, which are owned by the Council and located throughout the Council area. Facilities include two community centres (Glandore Community Centre and Trott Park Neighbourhood Centre) and ten recreation facilities. All of the recreation facilities are located within the **Recreation Policy Area 22**, and are comprised of the Cove Sports and Community Club, Edwardstown Soldiers Memorial Recreation Ground, Glandore Oval, Marion Outdoor Swimming Centre, Marion Sports and Community Club, Marion Sports and Leisure Centre, Mitchell Park Sports and Community Club, Morphettville Park Sporting Club Inc., Capella Drive Reserve, Glade Crescent Reserve.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

- 1 The following forms of development are envisaged in the zone:
 - child care centre
 - community centre
 - consulting room
 - educational establishment
 - emergency services facility
 - hall
 - health facility
 - library
 - office associated with community service
 - place of worship
 - public administration office

- recreation area
 - recreation centre
 - reserve
 - theatre
 - welfare institution.
- 2 A shop or group of shops, except where located in **Recreation Policy Area 22**, should only be developed where the total gross leasable area is 250 square metres or less.
- 3 Development listed as non-complying is generally inappropriate.
- 4 Development should not be undertaken if it would inhibit or prejudice the integrated development of land within the zone for further community and institutional uses.

Form and Character

- 5 Development should not be undertaken unless it is consistent with the desired character for the zone.

Recreation Policy Area 22

Refer to the [Map Reference Tables](#) for a list of the maps that relate to this policy area.

OBJECTIVES

- 1 A policy area accommodating sporting, entertainment, cultural and recreational activities and associated spectator and administrative facilities.
- 2 Development of integrated recreational areas and facilities that accommodate a range of activities accessible to the community.
- 3 Buildings, facilities and car parks located and designed to blend in with existing or additional trees, vegetation and landscaping.
- 4 Development that contributes to the desired character of the policy area.

DESIRED CHARACTER

Facilities located within the policy area include Cove Sports and Community Club, Edwardstown Soldiers Memorial Recreation Ground, Glandore Oval, Marion Outdoor Swimming Centre, Marion Sports and Community Club, Marion Sports and Leisure Centre, Mitchell Park Sports and Community Club, Morphettville Park Sporting Club Inc., Capella Drive Reserve and Glade Crescent Reserve.

These facilities vary in the activities provided and scale of built form present on site. Increases in population densities and the changing diversity and needs of the community will require these facilities to be upgraded into more integrated, accessible and high quality multipurpose sports and community hubs. These hubs will include both active and passive recreational activities and be designed to cater for the community's sports and community activity requirements.

Redevelopment should result in improvements to the landscape and recreation value of these facilities and provide greater integration with the surrounding area.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

- 1 The following forms of development are envisaged in the policy area:
 - car parking
 - clubroom associated with a sports facility
 - community centre
 - community hall
 - educational establishment
 - entertainment, cultural and exhibition facility
 - indoor and outdoor recreation facility
 - lighting for night use of facilities
 - meeting hall
 - office associated with community or recreation facility
 - playground
 - shop or groups of shops ancillary to recreation development
 - showground
 - sports ground and associated facility
 - special event
 - spectator and administrative facilities ancillary to recreation development
 - swimming pool.

- 2 A shop or group of shops should only be developed where:
 - (a) it is ancillary to recreation and sport development
 - (b) the total gross leasable area is 100 square metres or less.

Form and Character

- 3 Development should not be undertaken unless it is consistent with the desired character for the policy area.

Land Division

- 4 No additional allotments should be created wholly or partly within the policy area.

PROCEDURAL MATTERS

Complying Development

Complying developments are prescribed in Schedule 4 of the *Development Regulations 2008*.

Non-complying Development

Development (including building work, a change in the use of land, or division of an allotment) for the following is non-complying:

| Form of development | Exceptions |
|--|---|
| Amusement machine centre | |
| Crematorium | |
| Dwelling | Except where associated with and ancillary to community or recreation facilities. |
| Fuel depot | |
| Hospital | |
| Horticulture | |
| Industry | |
| Intensive animal keeping | |
| Land division where located within the Recreation Policy Area 22 | Except where no additional allotments are created partly or wholly within the policy area. |
| Motel | |
| Major public service depot | |
| Motor repair station | |
| Nursing home where located in the Recreation Policy Area | |
| Office | Except where associated with and ancillary to community or recreation facilities. |
| Petrol filling station | |
| Residential flat building | |
| Road transport terminal | |
| Service trade premises | |
| Shop or group of shops | Except where one of the following applies: <ul style="list-style-type: none"> (a) the gross leasable area is 250 square metres or less and where located outside the Recreation Policy Area 22 (b) the gross leasable area is 100 square metres or less and where located within the Recreation Policy Area 22. |
| Stock sales yard | |
| Stock slaughter works | |

| Form of development | Exceptions |
|---|---|
| Store | Except where ancillary to and in association with an existing or approved land use or activity. |
| Telecommunications facility | |
| Warehouse | |
| Waste reception, storage, treatment or disposal | |
| Wrecking yard | |

Public Notification

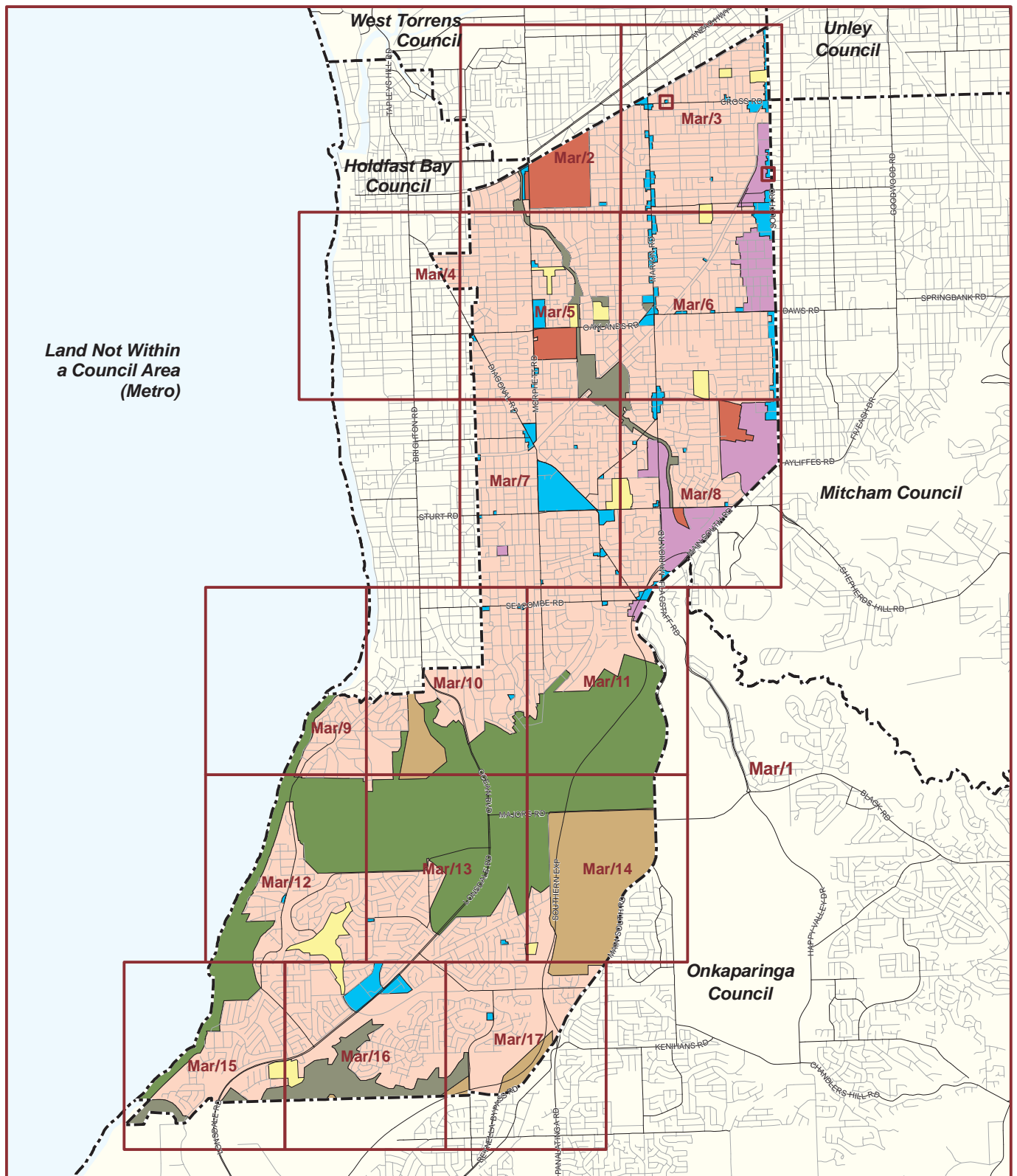
Categories of public notification are prescribed in Schedule 9 of the *Development Regulations 2008*.

Further, the following forms of development (except where the development is non-complying) are designated:

| Category 1 | Category 2 |
|--|-----------------------|
| Store ancillary to and in association with an existing or approved land use or activity | All other development |
| Office ancillary to and in association with an existing or approved land use or activity | |
| Public conveniences | |
| Shelters | |

ATTACHMENT B

Council Index Map



For the purposes of the Development Plan unless otherwise clearly indicated, the zone/policy area/precinct boundaries depicted on or intended to be fixed by Maps Mar/1 to Map Mar/18 inclusive shall be read as conforming in all respects (as the case may require) to the land division boundaries, to the centre line of roads or drain reserves or to the title boundaries, or to imaginary straight lines joining the positions defined by survey or by the measurements shown on the said maps against which the said zone/policy area/precinct boundaries are shown or otherwise indicated.

Council Index Map

ATTACHMENT C

Zone Map Mar/3

Zone Map Mar/5

Zone Map Mar/6

Zone Map Mar/7

Zone Map Mar/8

Zone Map Mar/12

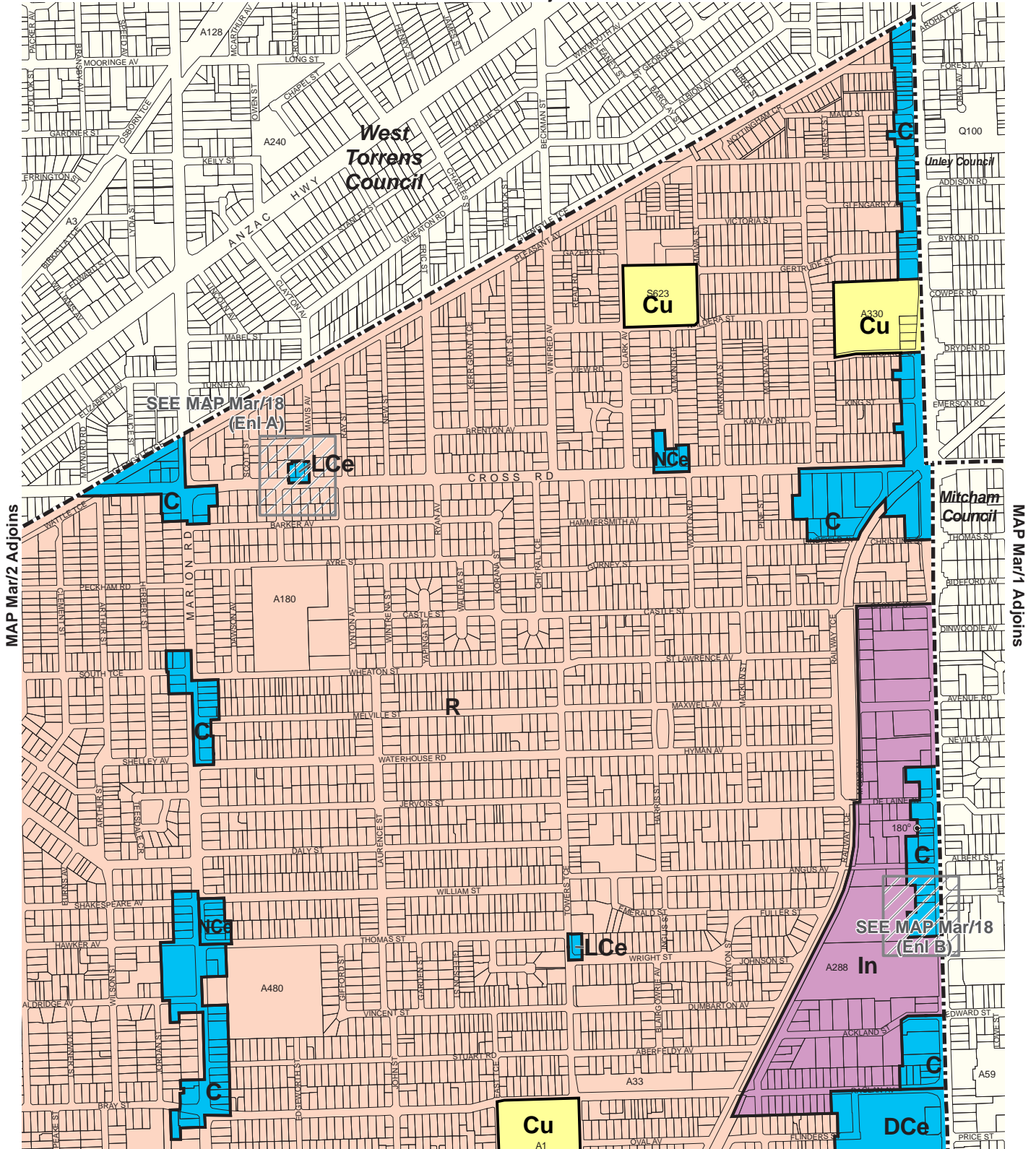
Zone Map Mar/13

Zone Map Mar/14

Zone Map Mar/15

Zone Map Mar/16

MAP Mar/1 Adjoins



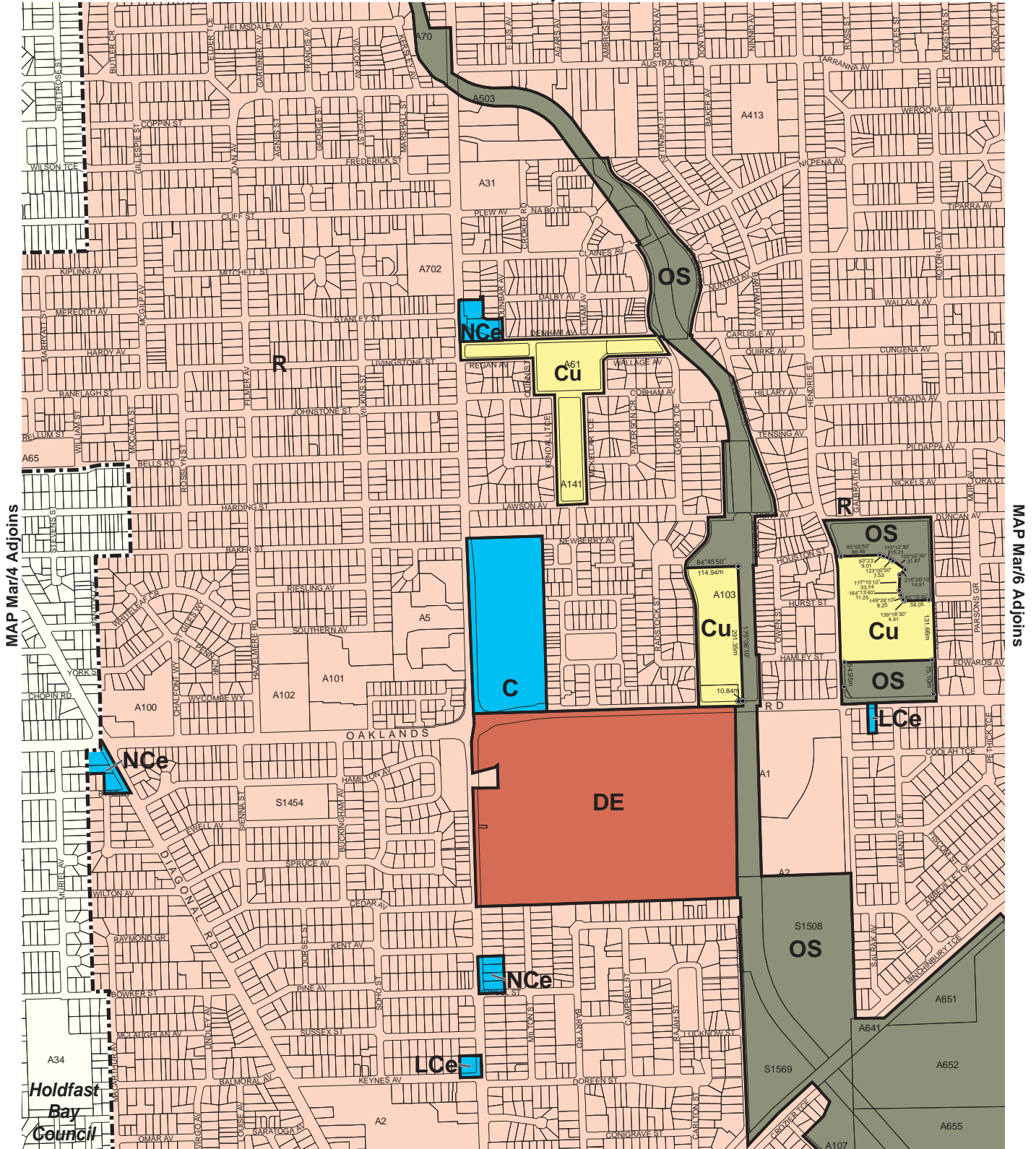
See enlargement map for accurate representation.
Lamberts Conformal Conic Projection, GDA94

- Zones**
- Commercial
 - Community
 - District Centre
 - Industry
 - Local Centre
 - Neighbourhood Centre
 - Residential
 - Zone Boundary
 - Development Plan Boundary

Zone Map Mar/3

MARION COUNCIL

MAP Mar/2 Adjoins



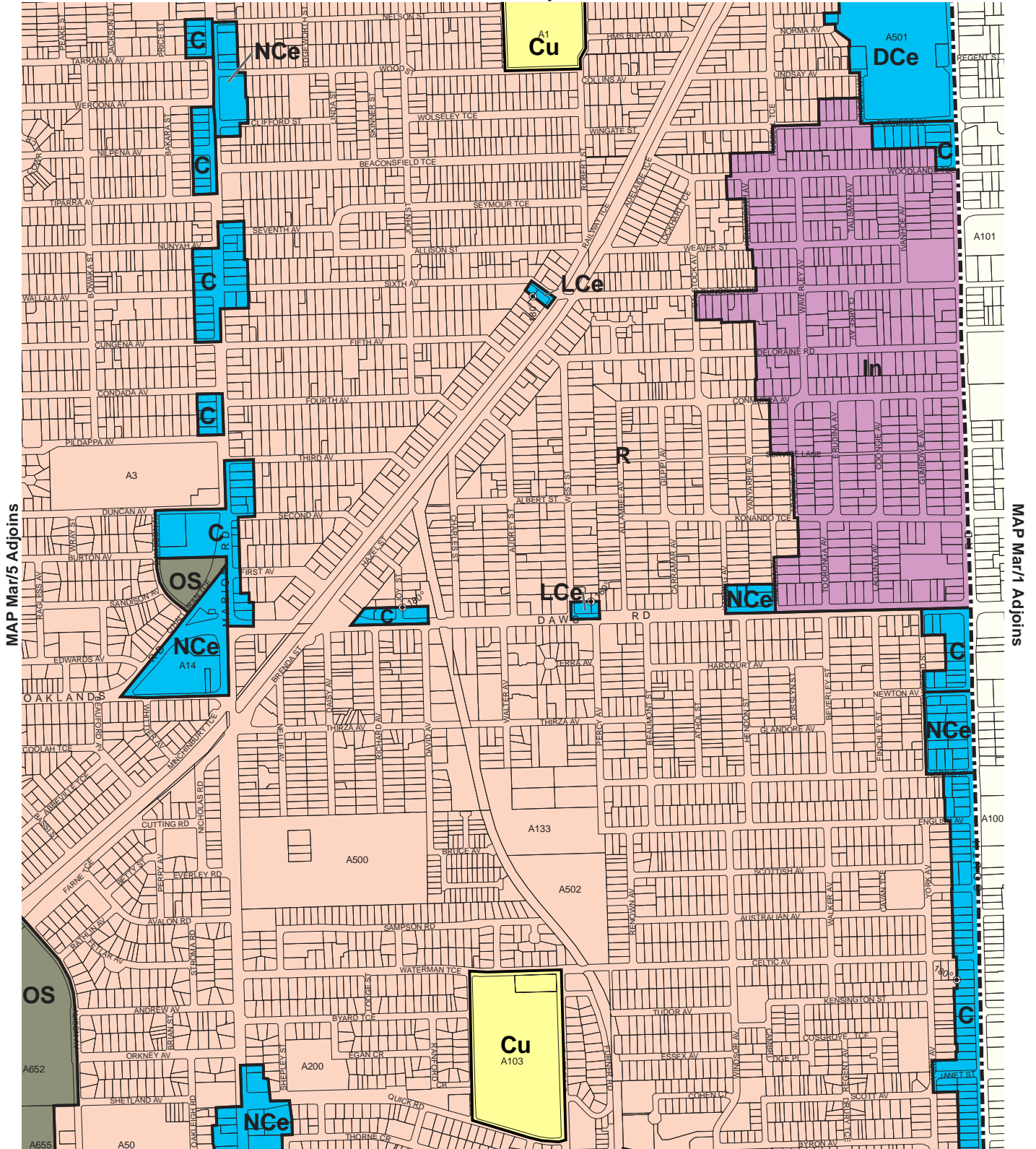
Lamberts Conformal Conic Projection, GDA94

- Zones**
- C** Commercial
 - Cu** Community
 - DE** Defence Establishment
 - LCe** Local Centre
 - NCe** Neighbourhood Centre
 - OS** Open Space
 - R** Residential
 - Zone Boundary**
 - Development Plan Boundary**

Zone Map Mar/5

MARION COUNCIL

MAP Mar/3 Adjoins



Lamberts Conformal Conic Projection, GDA94

Zones

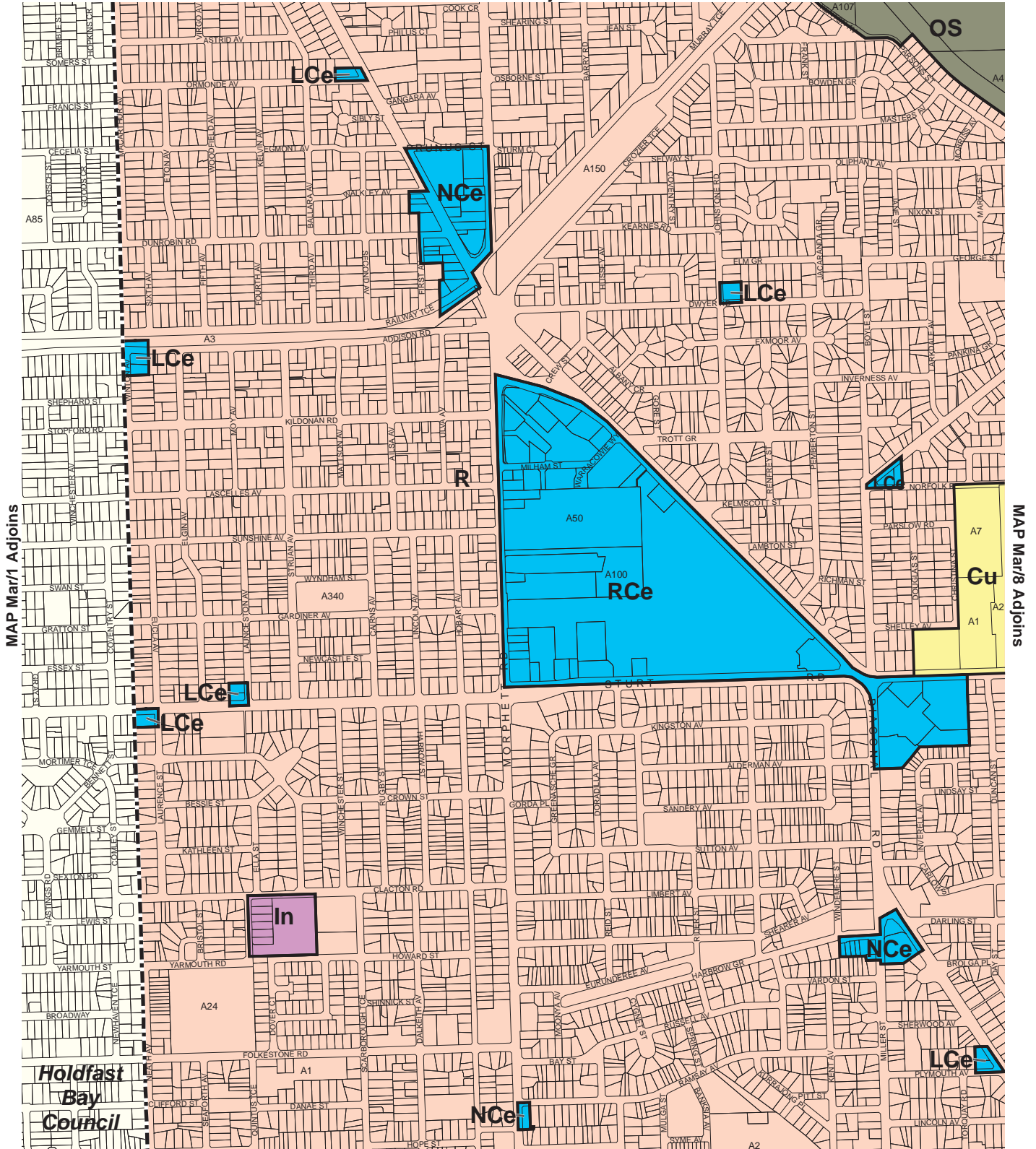
- C Commercial
- Cu Community
- DCe District Centre
- In Industry
- LCe Local Centre
- NCe Neighbourhood Centre
- OS Open Space
- R Residential
- Zone Boundary
- Development Plan Boundary



Zone Map Mar/6

MARION COUNCIL

MAP Mar/5 Adjoins



MAP Mar/10 Adjoins

MAP Mar/11 Adjoins

Lamberts Conformal Conic Projection, GDA94

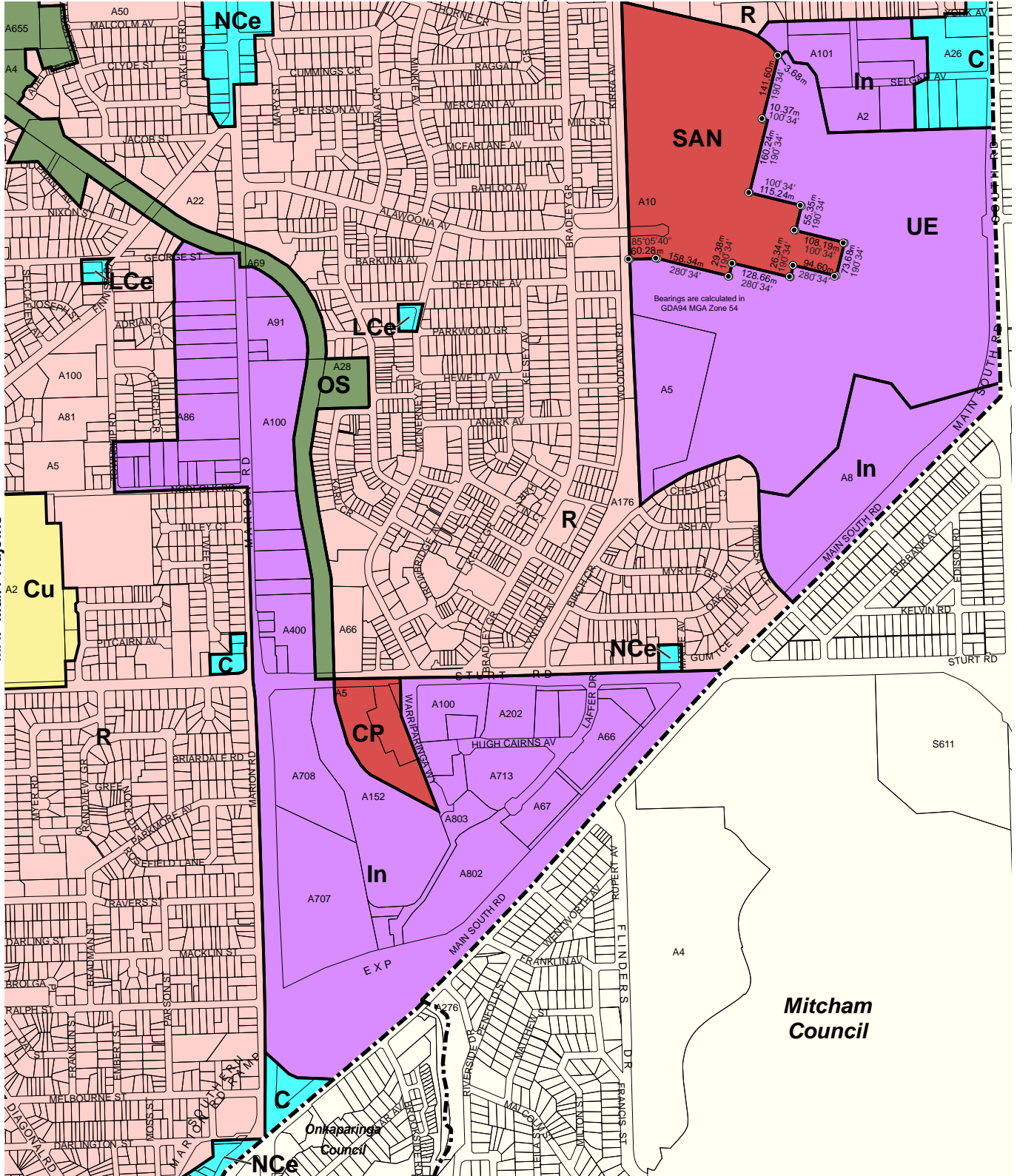
Zones

- Cu** Community
- In** Industry
- LCe** Local Centre
- NCe** Neighbourhood Centre
- OS** Open Space
- RCe** Regional Centre
- R** Residential
- Zone Boundary**
- Development Plan Boundary**

Zone Map Mar/7

MARION COUNCIL

MAP Mar/6 Adjoins



Lamberts Conformal Conic Projection, GDA94

Zones

- CP** Caravan and Tourist Park
- C** Commercial
- Cu** Community
- In** Industry
- LCe** Local Centre
- NCe** Neighbourhood Centre
- OS** Open Space
- R** Residential
- SAN** Suburban Activity Node
- UE** Urban Employment

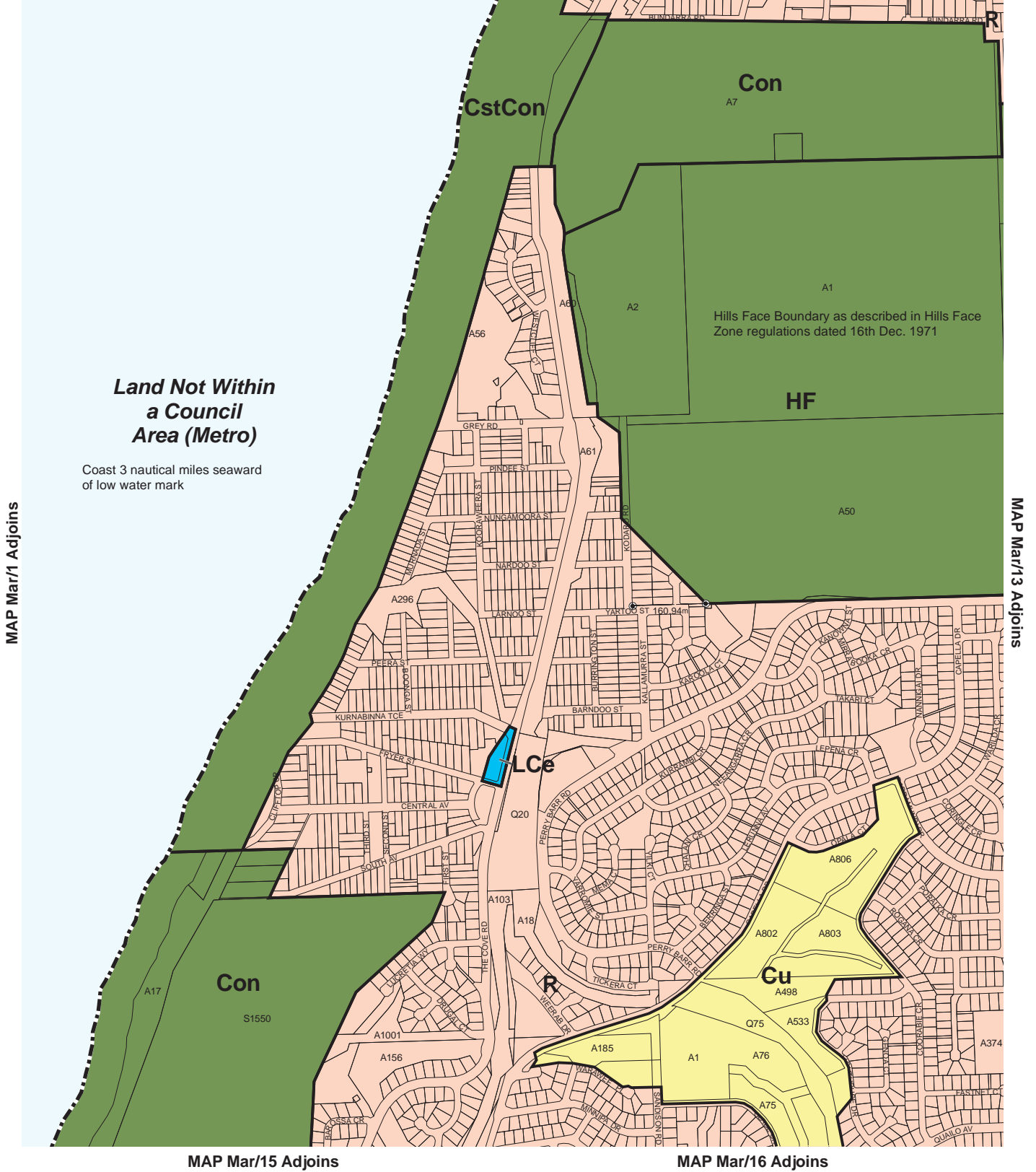
- Zone Boundary**
- Development Plan Boundary**

MAP Mar/1 Adjoins



Zone Map Mar/8



MAP Mar/9 Adjoins



Lamberts Conformal Conic Projection, GDA94



Zones

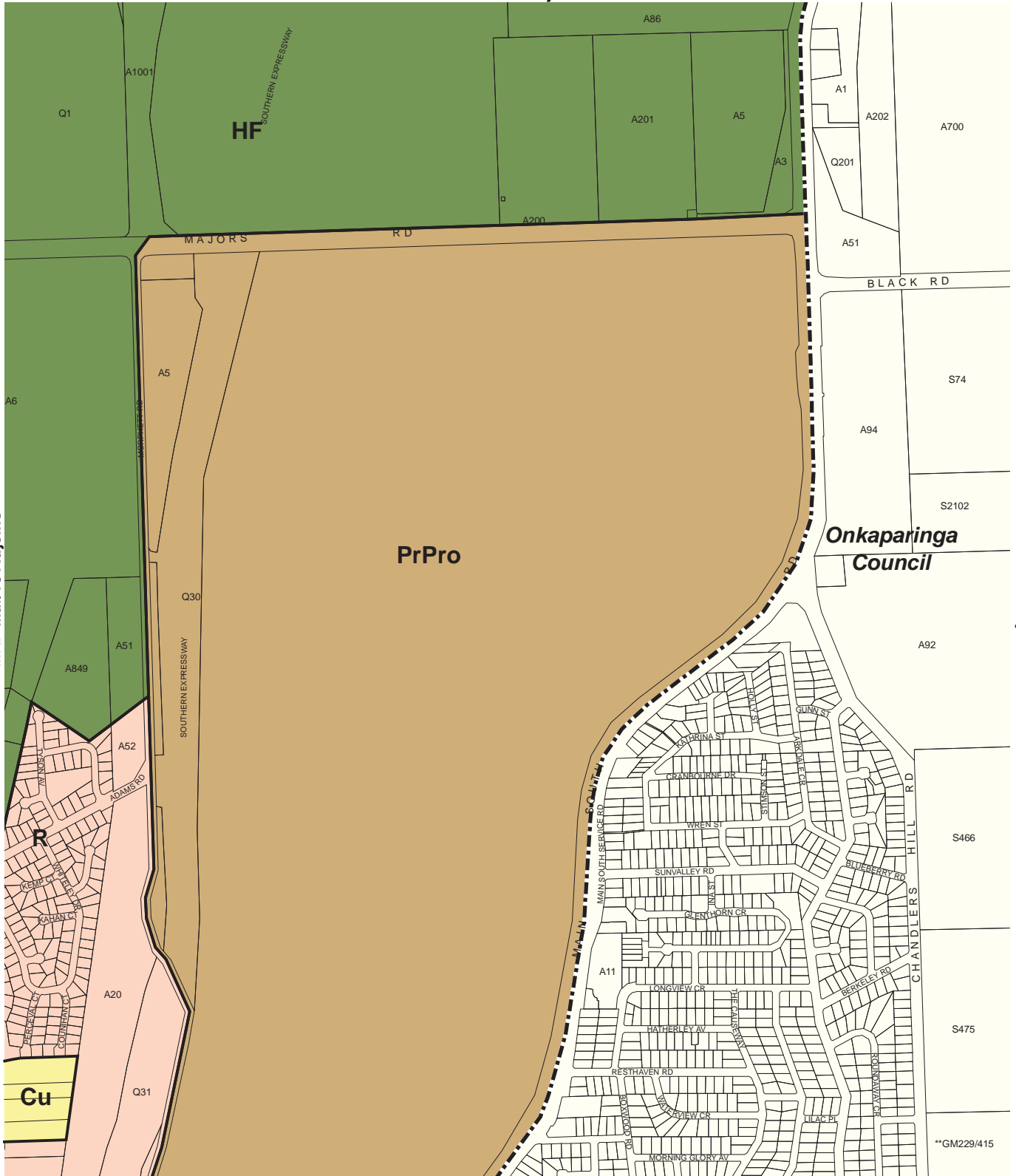
- | | |
|---|---------------------------|
| CstCon | Coastal Conservation |
| Cu | Community |
| Con | Conservation |
| HF | Hills Face |
| LCe | Local Centre |
| R | Residential |
|  | Zone Boundary |
|  | Development Plan Boundary |

Zone Map Mar/12

MARION COUNCIL

| | |
|-------|----------------------|
| Cu | Community |
| HF | Hills Face |
| LCe | Local Centre |
| MinEx | Mineral Extraction |
| NCE | Neighbourhood Centre |
| R | Residential |
| | Zone Boundary |

MARION COUNCIL



Zones

- Community
- Hills Face
- Primary Production
- Residential
- Zone Boundary
- Development Plan Boundary

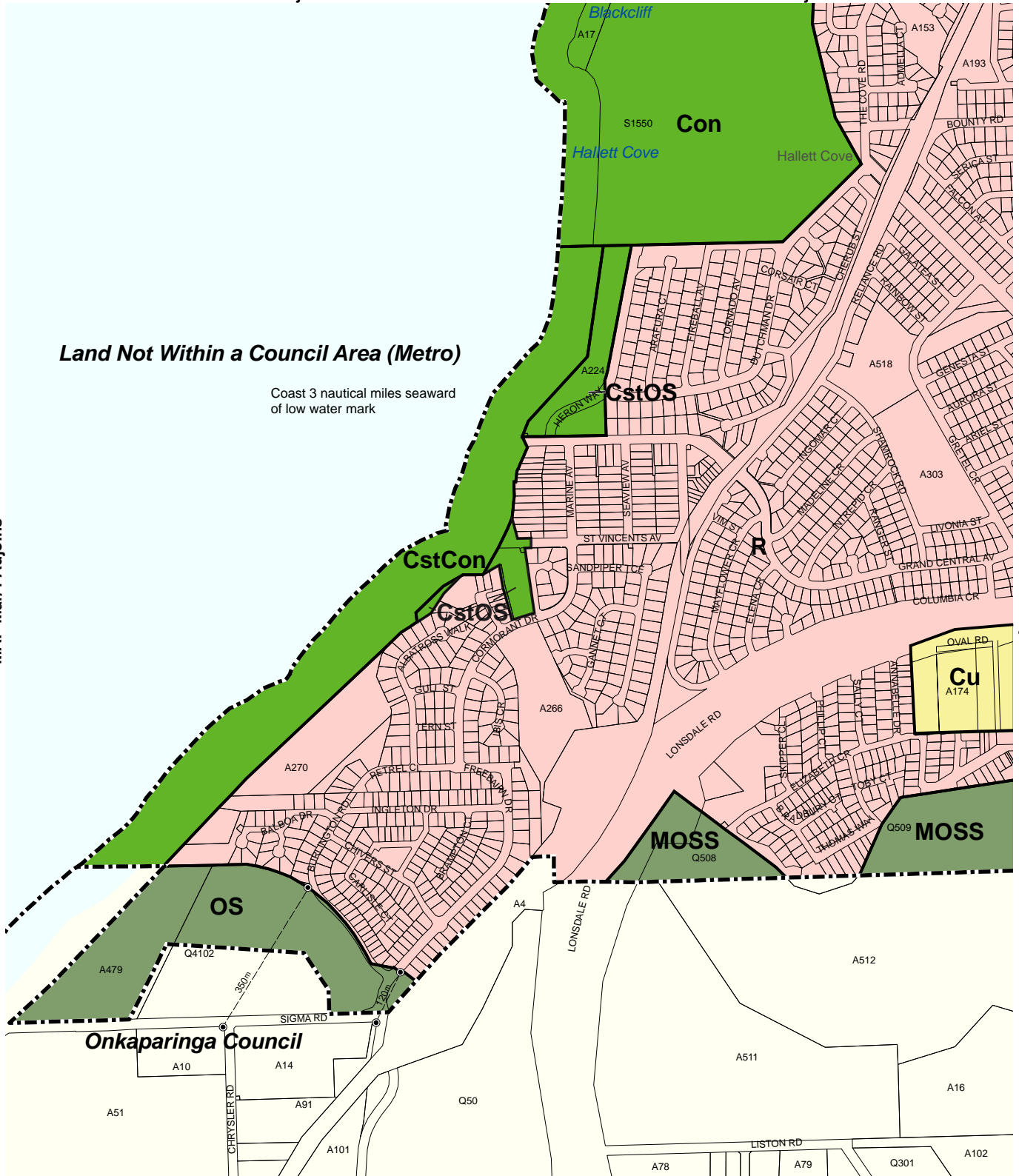
Zone Map Mar/14

MAP Mar/1 Adjoins

MAP Mar/12 Adjoins

MAP Mar/1 Adjoins

MAP Mar/16 Adjoins



Lamberts Conformal Conic Projection, GDA94

- Zones**
- CstCon** Coastal Conservation
 - CstOS** Coastal Open Space
 - Cu** Community
 - Con** Conservation
 - MOSS** Metropolitan Open Space System
 - OS** Open Space
 - R** Residential
 - Zone Boundary**
 - Development Plan Boundary**



Zone Map Mar/15

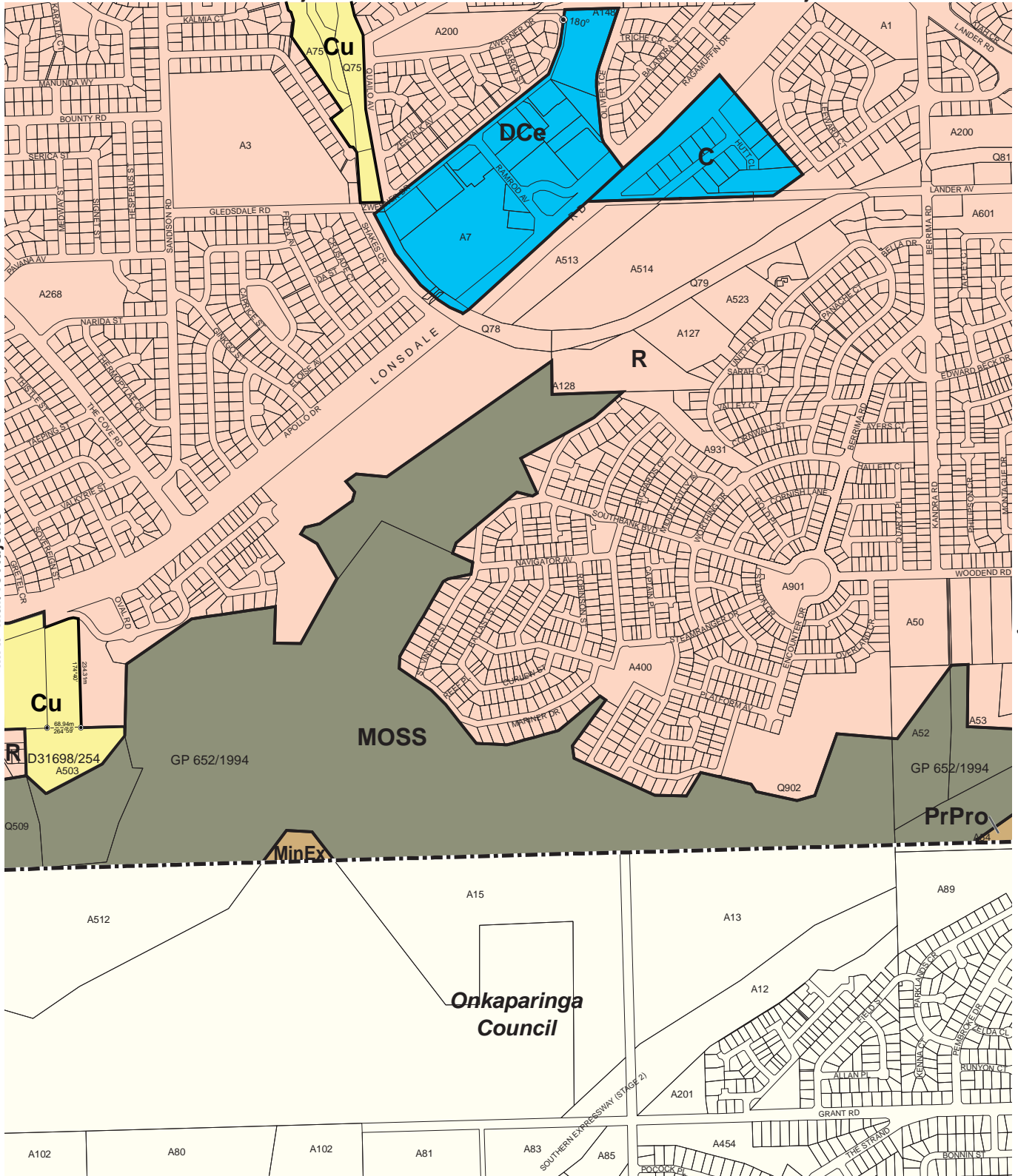
MARION COUNCIL

MAP Mar/12 Adjoins

MAP Mar/13 Adjoins

MAP Mar/15 Adjoins

MAP Mar/17 Adjoins



MAP Mar/1 Adjoins

Lamberts Conformal Conic Projection, GDA94

Zones

- C** Commercial
- Cu** Community
- DCe** District Centre
- MOSS** Metropolitan Open Space System
- MinEx** Mineral Extraction
- OS** Open Space
- PrPro** Primary Production
- R** Residential
- Zone Boundary**
- Development Plan Boundary**



Zone Map Mar/16

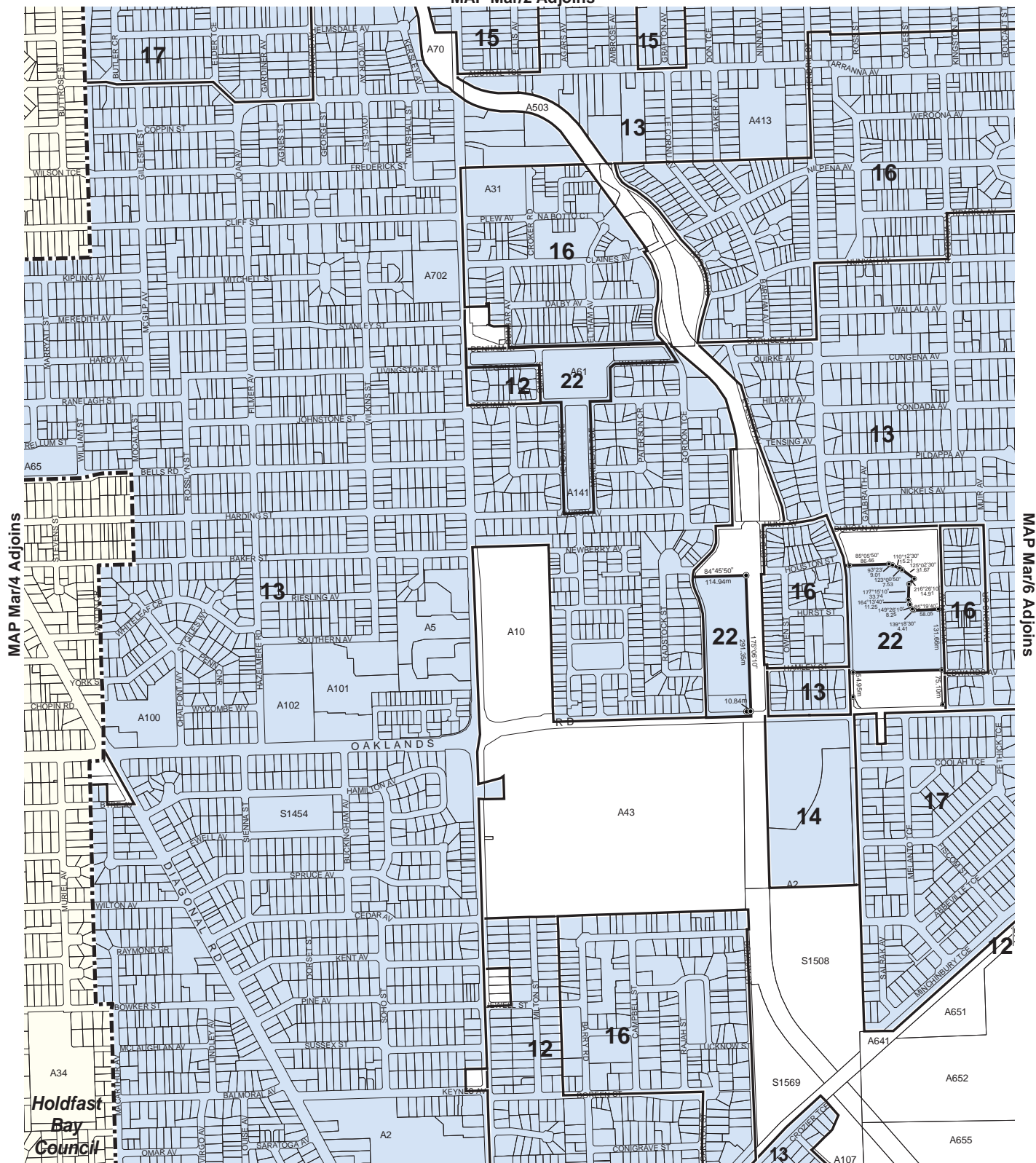
MARION COUNCIL

ATTACHMENT D

Policy Area Map Mar/3
Policy Area Map Mar/5
Policy Area Map Mar/6
Policy Area Map Mar/7
Policy Area Map Mar/8
Policy Area Map Mar/12
Policy Area Map Mar/13
Policy Area Map Mar/14
Policy Area Map Mar/15
Policy Area Map Mar/16

MARION COUNCIL

MAP Mar/2 Adjoins



MAP Mar/7 Adjoins

Lamberts Conformal Conic Projection, GDA94

Policy Area

- 12 Medium Density
- 13 Northern
- 14 Oaklands Park
- 15 Racecourse
- 16 Regeneration
- 17 Residential Character
- 22 Recreation



Policy Area Map Mar/5

- Policy Area Boundary
- Development Plan Boundary

MARION COUNCIL

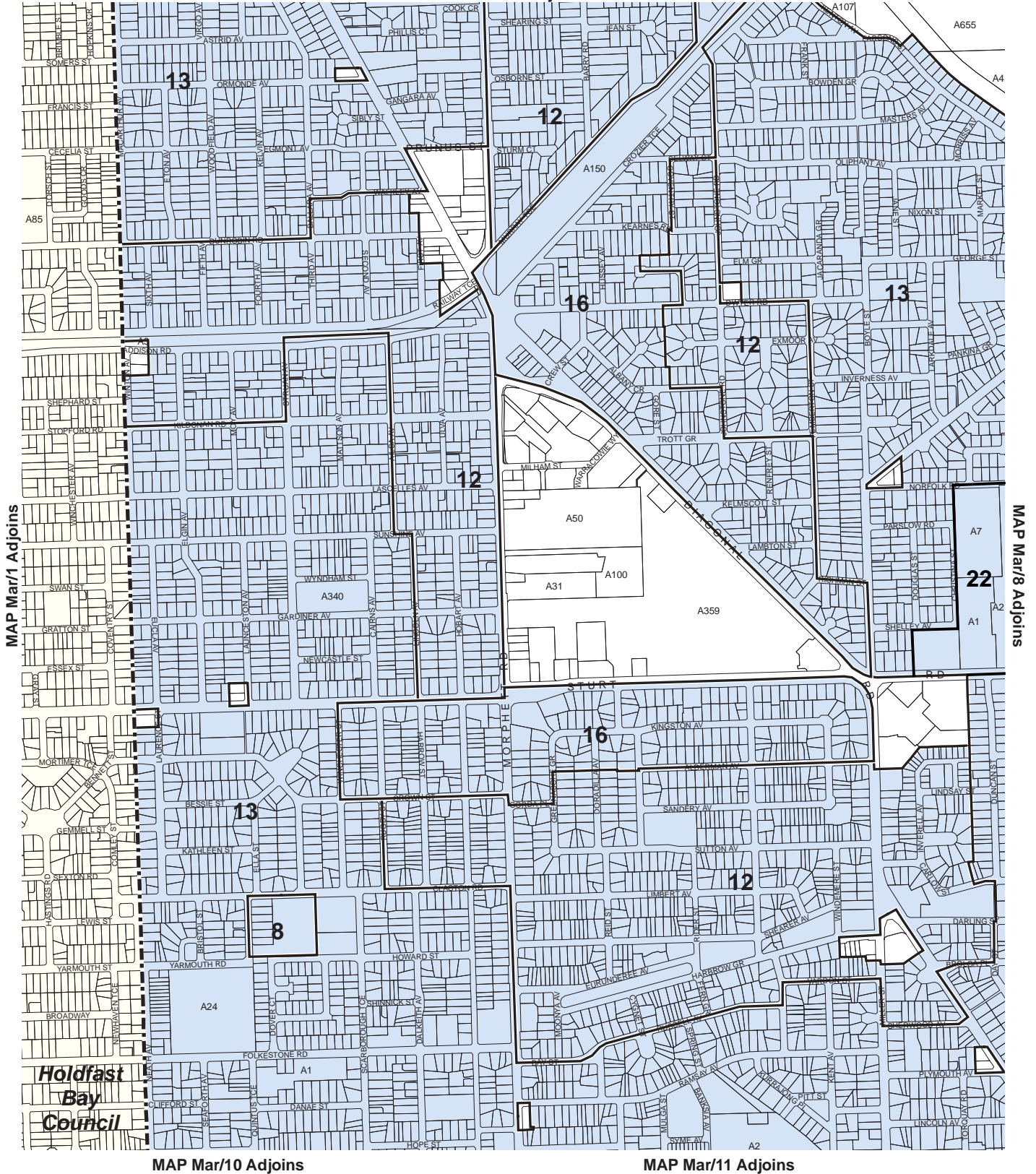
Policy Area Map Mar/6

 Policy Area Boundary

 Development Plan Boundary

MARION COUNCIL

MAP Mar/5 Adjoins



Lamberts Conformal Conic Projection, GDA94

Policy Area

- 12 Medium Density
- 13 Northern
- 16 Regeneration
- 8 Winery
- 22 Recreation



Policy Area Map Mar/7

- Policy Area Boundary
- Development Plan Boundary

MARION COUNCIL

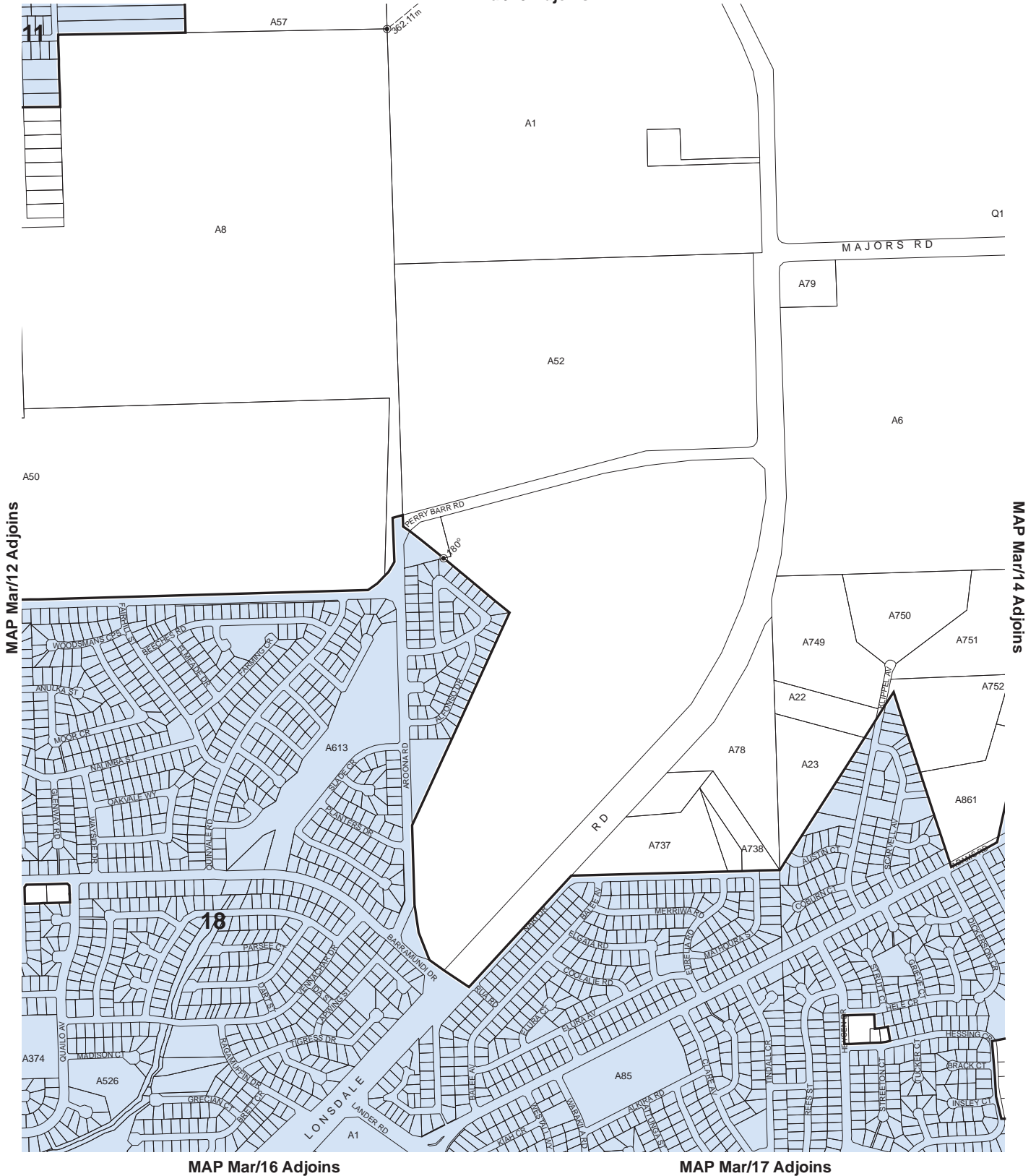
The map displays the Mitcham Council area, which is divided into several numbered regions (1, 2, 3, 4, 6, 7, 12, 13, 16, 22) and color-coded areas (blue, yellow, green). Key streets include George St, Main South Rd, and Stuart Rd. The map also shows the location of Mitcham Council and its surrounding areas.

Map Mar/1 Adjoins

Mitcham Council

MARION COUNCIL

MAP Mar/10 Adjoins



MAP Mar/16 Adjoins

MAP Mar/17 Adjoins

Lamberts Conformal Conic Projection, GDA94

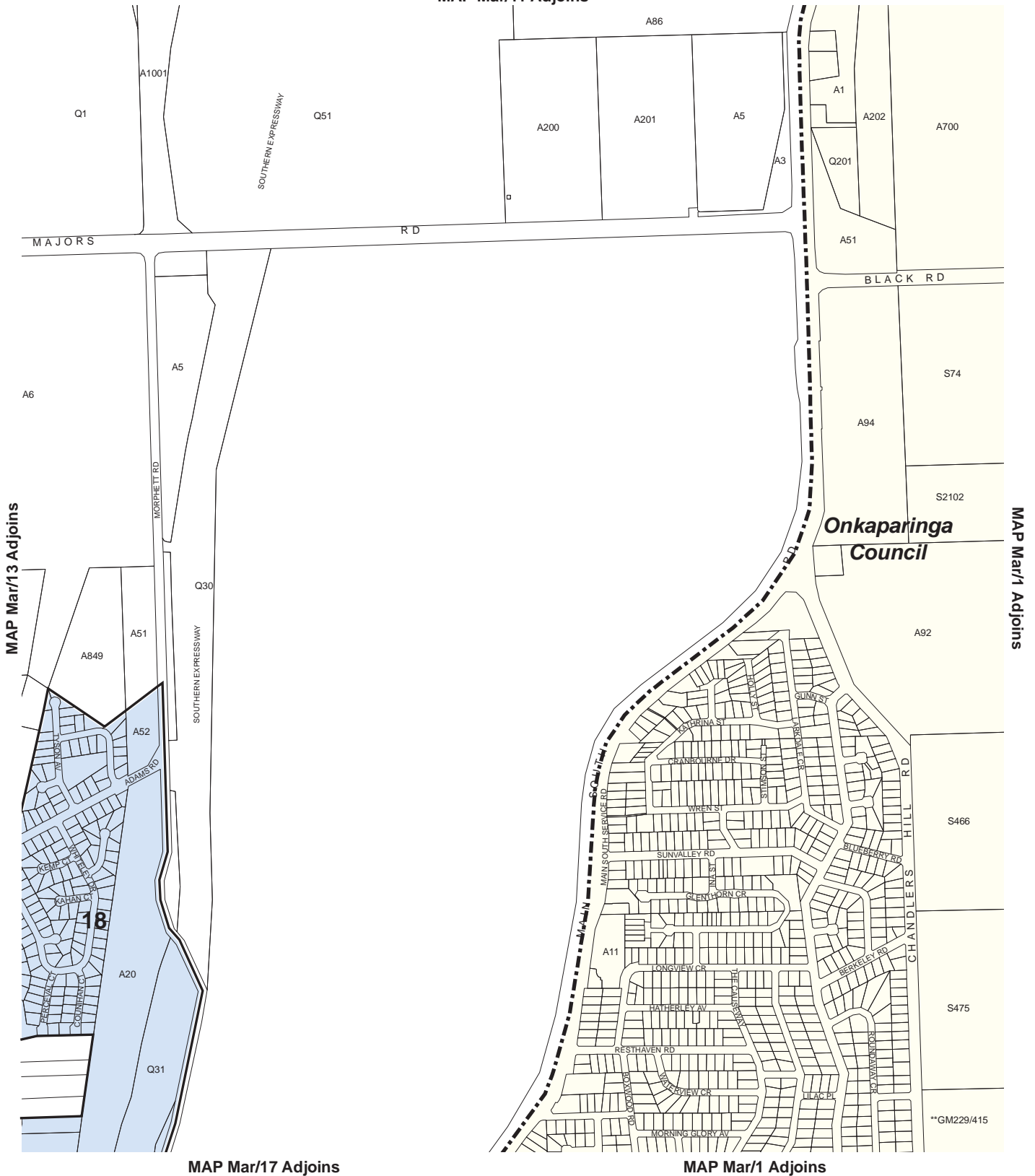
Policy Area

- 11 Hills
- 18 Southern



Policy Area Map Mar/13

MAP Mar/11 Adjoins



Lamberts Conformal Conic Projection, GDA94

Policy Area
18 Southern

- Policy Area Boundary
- Development Plan Boundary

MARION COUNCIL

Policy Area Map Mar/14

MAP Mar/12 Adjoins



| Policy Area | |
|-------------|---------------------|
| 9 | Hallett Cove Buffer |
| 11 | Hills |
| 18 | Southern |
| 20 | Worthing Mine |
| 21 | Coastal |
| 22 | Recreation |



 Policy Area Boundary

 Development Plan Boundary

MARION COUNCIL

MAP Mar/13 Adjoins

MARION COUNCIL

Marion Council

**Recreation/Community
Development Plan Amendment**

Summary of Consultation and Proposed Amendments (SCPA) Report

Table of Contents

| | |
|---|-----------|
| Introduction..... | 1 |
| Consultation | 1 |
| Consultation Process..... | 1 |
| Public Notification | 1 |
| Public and Agency Submissions..... | 2 |
| Public Submissions | 2 |
| Agency Submissions | 2 |
| Review of Submissions and Public Meeting..... | 3 |
| Additional Matters and Investigations..... | 3 |
| Additional Consultations | 6 |
| Timeframe Report | 6 |
| CEO's Certification..... | 6 |
| Summary of Recommended Changes to the Amendment following Consultation | 6 |
| Attachment A – Summary and Response to Public Submissions | 9 |
| Attachment B – Summary and Response to Public Meeting Submissions..... | 21 |
| Attachment C – Timeframe Report..... | 23 |
| Attachment D – Schedule 4A Certificate..... | 24 |
| Attachment E – Schedule 4B Certificate..... | 25 |
| Attachment F – Additional Matters and Investigations..... | 27 |

Introduction

This report is provided in accordance with Section 25(13) of the Development Act 1993 to identify matters raised during the consultation period and any recommended alterations to the amendment. The report also provides details of the consultation process undertaken by Council.

The SCPA Report should be read in conjunction with the consultation version of the DPA. Where relevant, any new matters arising from the consultation process are contained in this Report.

The Amendment reflects the recommendations of Council contained in this Report.

Consultation

Consultation Process

Statutory consultation with agencies and the public was undertaken in accordance with DPA process B (consultation approval not required) and in accordance with Section 25(6) of the Development Act 1993; Regulations 10 and 11 of the Development Regulations 2008; and the agreed Statement of Intent.

The following Local Member(s) of Parliament were consulted on the DPA:

1. David Speirs, member for Bright
2. Annabel Digance, Member for Elder
3. Duncan McFetridge, Member for Morphet
4. Corey Wingard, Member for Mitchell

No comments were received.

The consultation period ran from 22 February 2017 to 19 April 2017.

Public Notification

Notices were published in the 'The Advertiser', 'Coast City Weekly' and the Government Gazette on 22 February 2017.

The DPA documents were also on display at Council's service centres, libraries and Council's web site. An information brochure was posted out to owners of land situated adjacent to the facilities covered in the

DPA. A copy of the DPA was forwarded to the Department of Planning, Transport and Infrastructure on 22 February 2017.

Public and Agency Submissions

Public Submissions

Fourteen (14) public submissions were received. Key issues raised in the submissions are summarised as follows:

- (a) Wish to know the future plans for the Capella Reserve and Glade Crescent Reserve
- (b) What additional types of activities/buildings will the new zone allow
- (c) Further development on reserves leading to increased noise and traffic
- (d) No need to rezone to Community/Recreation Zone
- (e) Rezoning will make it easier to develop inappropriate land uses
- (f) Better for applications for new uses to follow current more difficult assessment path under the Residential Zone
- (g) Surrounding properties will be devalued
- (h) Will rezoning restrict public access to the reserve
- (i) Will rezoning encourage use of facility from beyond a local catchment
- (j) Concerned about impacts on surrounding residential areas
- (k) Rezoning should not result in loss of significant trees and green space

A report on each submission (summary, comments, and action taken in response to each submission) is included in **Attachment A**.

Agency Submissions

Three (3) responses were received from agencies. Key issues raised in the responses are summarised as follows:

Department of Planning Transport & Infrastructure (DPTI)

- (a) DPTI will be guided on agency specific issues by the agencies

- (b) The DPA should establish clear and logical links between the investigations and proposed policy changes
- (c) Suggested improvements to the wording of the Desired Character Statement of the zone and associated policy area
- (d) A number of mapping edits and/or updates will be required prior to lodging of final document

Environment Protection Authority (EPA)

Further investigations to occur in relation to:

- (a) Interface issues (particularly potential air and noise impacts) between the Cove Sports and Community Club and the nearby Reynella quarry
- (b) Potential landfill gas risks arising from the former council refuse facility identified on land occupied by the Marion Sports and Community Club.

Office for Recreation and Sport (ORS)

- (a) The ORS are supportive of Council's proposal to rezone a number of recreation grounds and community centres to more appropriately support future developments envisaged at the sites.

Review of Submissions and Public Meeting

Copies of all submissions were made available for public review from 20 April 2017 to 1 May 2017 on the Council website and at the Council offices.

Two (2) submitters requested to be heard, and therefore a public meeting was held on 1st May 2017. A copy of the proceedings and a summary of verbal submissions made at the public meeting are included in **Attachment B**.

Additional Matters and Investigations

The following additional matters were identified, and the following investigations conducted after the consultation process:

Environment Protection Authority (EPA) – (Refer to separate document - Summary and Response to Agency Submissions)

- (a) Interface issues (particularly potential air and noise impacts) between the Cove Sports and Community Club and the nearby Reynella quarry

Existing residential areas in the suburbs of Hallett Cove (south and east of Lonsdale Road) and Sheidow Park are located approximately 400 metres from the boundary of the Mineral Extraction Zone (MEZ) at their nearest points. *(refer to aerial photograph in **Attachment F**)*

The Cove Sports and Community Centre (the subject land) is currently zoned Open Space Zone and partly Residential Zone. Recreational uses (BMX, soccer, football and netball) have been undertaken at the site for many years.

The boundary of the site will not change from that currently covered by the Open Space Zone and part Residential Zone. The current/proposed zone boundary is/would be located approximately 400 metres from the MEZ at its closest point.

Therefore, the buffer distance between the subject site and the MEZ is consistent with that currently maintained between the nearby residential areas and the MEZ.

It is anticipated that if the 400-metre distance is an appropriate buffer for residential uses it should also be appropriate for recreational type uses.

Other industrial type uses to the south on Liston Road, Lonsdale are located much closer to the residential area than they are to the Open Space/Community Zone boundary (600m vs 900m).

Comments from Boral - Reynella Quarry *(verbal over the phone)*

- There are still good resources remaining at the quarry
- It has been several years since any extraction has taken place at the quarry
- The site is currently being used for sales only
- In the short term the site will continue operating (perhaps extraction recommencing)
- The long term use of the site for mining operations is currently an unknown
- It is a 'private mine' so extraction can be undertaken up to the boundary of the mineral extraction zone
- The quarry is subject to the Mineral Extractive Lease 1971 which requires a minimum buffer distance of 400 metres between the zone boundary and residential/sensitive uses
- Noise from blasting etc. has to meet the EPA requirements

(b) Potential landfill gas risks arising from the former council refuse facility identified on land occupied by the Marion Sports and Community Club

As part of a “Marion Sports Club Master Plan: Background Report” undertaken in January 2013, Tonkin Consulting were commissioned to prepare an “Environmental Site History” (ESH) prior to a proposed stormwater system upgrade of the site.

A standard ESH investigation was undertaken in accordance with the NEPM and SA EPA requirements to gain an understanding of:

- Current (*at the time*) and historic contaminating activities conducted on the site and adjacent off-site lands
- Current and potential future receptors on and adjacent to the site; and
- Potential exposure pathways

The ESH states that there is anecdotal information from Marion Council staff regarding possible dumping of waste material at the northern end of the football oval within a significant excavation (pug hole?) identified in a 1949 aerial photograph. There is also potential contamination from the storage and use of miscellaneous chemicals and raw materials associated with former greenhouses and agricultural uses.

The ESH concludes that several potentially compete source, pathway and receptor scenarios exist. It was recommended that:

- if any material is proposed to be excavated for relocation, intrusive soil investigation and chemical laboratory analysis be undertaken.
- an Environmental Management Plan be developed (if required)

Much of the subject site has been covered by one means or another (turfed sports fields, buildings/structures and bitumized car parking areas) The northern area of the site, where it is believed the filling of waste material occurred, is currently used as a gravelled car parking area.

The current land uses of the site are not changing as a result of the rezoning. Any future development and/or changes to land use (particularly if excavation is required) will have regard to the potential risk of contamination as part of the development assessment process.

SCPA Report

Principle 19 under 'Site Contamination' within the 'Hazards' module of the General Section of the Marion Council Development Plan provides sufficient strength to enable appropriate assessment of future development in relation to site contamination.

Council will undertake further investigations regarding contamination, and in particular, landfill gas, when and if required.

No action is required as part of the DPA process

A copy of additional investigations and documents is provided in **Attachment F**

Additional Consultations Refer to Comments from Boral - Reynella Quarry within 'Additional Matters and Investigations' above.

Timeframe Report

A summary of the timeframe of the DPA process relative to the agreed Statement of Intent timetable is located at **Attachment C**.

Delay(s) occurred because:

- (a) Public Consultation process took longer to set-up than anticipated
- (b) Mapping for Amendment took longer than anticipated
- (c) Resourcing was prioritised for another DPA (Housing Diversity DPA)

CEO's Certification

The consultation process has been conducted and the final amendment prepared in accordance with the requirements of the Act and Regulations as confirmed by the CEO's Certifications provided in **Attachment D** (Schedule 4A Certificate) and **Attachment E** (Schedule 4B Certificate).

Summary of Recommended Changes to the Amendment following Consultation

The following is a summary of the changes recommended to the Amendment following consultation and in response to public submissions and/or agency comments:

- (a) Amendments made to the wording of the proposed 'Community Zone' and associated 'Recreation Policy Area' Desired Character Statements as recommended by DPTI

- (b) Amendments made, where required, to the wording of the policy within the Zone/Policy Area as recommended by DPTI
- (c) A number of edits and/or updates made to the relevant mapping as recommended by DPTI

Attachment A – Summary and Response to Public Submissions

Report on each public submission received (including summary, comments and action taken in response)

| Sub No. | Name and Address | Submission Summary | Comment | Council Response |
|---------|--|---|---|--|
| | Capella Reserve | | | |
| 1. | Di Fury 22 Coorabie Crescent Hallett Cove | <ul style="list-style-type: none"> • Please inform me of the proposed development plans for the Capella Reverse and Glade Crescent Reserve? <ul style="list-style-type: none"> – redevelopment of the current club rooms and/or additional proposed buildings) – expansion or additional carparking | <ul style="list-style-type: none"> • Proposed amendment relates to the rezoning of the subject sites and the types of uses appropriate within the proposed zone. • What will or may be developed on a particular site would be considered under the development assessment process • Flood lights on Capella Reserve have been approved (publicly notified) and are under construction • Development of a precinct plan for Capella Reserve was endorsed by Council 28 Feb 2017 | <ul style="list-style-type: none"> • No change required • Respondent made aware of the situation (as per dot points under 'Comment') |
| 2. | Joanne Bell / Mike King 16 Lighthouse Drive Hallett Cove | <ul style="list-style-type: none"> • The new rezoning plan appears to be in conflict with the Council's commitment to a soccer club, as the rezoning appears to be directed at a community and recreational atmosphere. | <ul style="list-style-type: none"> • Rezoning to Community/Recreation Policy Area will provide further support for the use of the land by the soccer club. The list of envisaged uses and policy associated with the zone/policy area reflects the types of uses that could | <ul style="list-style-type: none"> • No change required |

| | | | | |
|--|--|---|--|--|
| | | <ul style="list-style-type: none"> • We would like to know what the future plans are for Capella Drive Reserve. • What exactly does the rezoning entail (in regards to buildings, fences, whether any of the land around the reserve will be sold off for residential housing or businesses?) | <p>go in that zone. Not all sites are appropriate or intended for such uses. There are 12 sites being considered; some may be appropriate for certain uses and other not so.</p> <ul style="list-style-type: none"> • Other than the uses currently undertaken at Capella Drive the only other use currently being considered is the development of a precinct plan for Capella Reserve which will incorporate further consideration to the future directions for the tennis courts, play space and toilet block at Nannigai Reserve. (endorsed by Council at 28 February 2017 General Council Meeting) • Please refer to dot point above. There are no intentions to sell off the reserve land for residential or commercial uses. It should be noted however that the current residential zoning provides greater support for residential uses to occur. • Rezoning the land to Community Zone will not in itself create any of the issues mentioned. However, any future changes to the use of the reserve – if any (refer to second dot point) would require consideration of the three issues raised. • It is understood that the reserve and uses of that reserve already exists. However, current planning policy recognises that there is a more appropriate zone and associated policy for such facilities to be located. A number of other Councils have | |
|--|--|---|--|--|

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|----|---|--|--|--|
| | | <ul style="list-style-type: none"> • What your intention will be for the noise, increased traffic and parking if Capella Drive Reserve becomes a community zone? • As the Capella Reserve does not appear to be in breach of any current zoning laws why do you propose to change it? In our opinion, it is totally unnecessary to change the zoning for this area, as it is not a dedicated sports area with facilities like the Cove Sports Hub! • We would like council to leave the Capella Drive Reserve off the DPA | undertaken a similar rezoning process and included the Community Zone within their respective Development Plans. | |
| 3. | T & A Williams 15 Lighthouse Drive Hallett Cove | <ul style="list-style-type: none"> • object to rezoning of this land for following reasons: • Increased noise • Carte blanche for council to expand (tennis courts/clubrooms/carparks etc) • Further reduction of open space for wildlife - flora and fauna | <ul style="list-style-type: none"> • Rezoning the land to Community Zone will not in itself create any of the issues mentioned. • Other than the uses currently undertaken at Capella Drive the only other use currently being considered is the development of a precinct plan for Capella Reserve which will incorporate further consideration to the future directions for the tennis courts, play space and toilet block at Nannigai Reserve. (endorsed by Council at 28 February 2017 General Council Meeting) • Removal and replacement of trees is not an issue covered by this DPA. Council's | <ul style="list-style-type: none"> • No change required |

| | | | | |
|----|---|---|---|--|
| | | <ul style="list-style-type: none"> Also, there seems to be a lack of consideration by the council for the residents close to the reserve.... e.g. removal of olive trees but dead trees not removed (fire hazard) and no substitutes replanted. | Open Space Services will be advised of the matter. | <ul style="list-style-type: none"> No change required |
| 4. | <p>Iris Hobart</p> <p>1 Rogana Crescent</p> <p>Hallett Cove</p> | <ul style="list-style-type: none"> Could you please let me know in layman's terms what the differences are in the old zoning and the proposed new zoning. I am keen to know what will now be allowed on the Reserve once new plan comes into effect. | <ul style="list-style-type: none"> Capella Reserve and most of Councils other large reserves/recreation facilities are covered under the Residential Zone. Whilst this zone allows for small scale, local recreational uses it does not provide appropriate support for some of the activities currently being undertaken at Council's larger existing facilities or improvements to those facilities. The larger reserves/recreation facilities generally involve formalised team sports. A soccer training facility is located in Capella Reserve. The proposed Community Zone better reflects the activities taking place at the various facilities covered by the amendment. The only approved works for Capella Reserve is the soccer-training flood lighting, which is currently being installed. | <ul style="list-style-type: none"> No change required |

Attachment A — Summary and Response to Public Submissions

Attachment A — Summary and Response to Public Submissions

| | | | | |
|--|--|--|---|--|
| | | <ul style="list-style-type: none"> • I am also keen to find out what future plans are for the Reserve | <ul style="list-style-type: none"> • Other than the uses currently undertaken at Capella Drive the only other use currently being considered is the development of a precinct plan for Capella Reserve, which seeks further consideration to the future directions for the tennis courts, play space and toilet block at Nannigai Reserve. (endorsed by Council at 28 February 2017 General Council Meeting) • Noted • Noted | |
| | | <ul style="list-style-type: none"> • Council's reply has covered my concerns for Capella Reserve. | | |

| | | | | |
|----|---|---|--|--|
| | | <ul style="list-style-type: none"> • Seen many improvements to the reserve, however, some of the trees now obstruct my view. | | |
| | Glade Crescent Reserve | | | |
| 5. | <p>Brett Mitchell</p> <p>32 Caswell Drive</p> <p>Hallett Cove</p> | <ul style="list-style-type: none"> • Concerned about the potential rezoning of the Glade Crescent Reserve. • The playground recently constructed there includes a Flying Fox, which, while attracting people of all ages, correlates to greater noise by users of this device and therefore interfering with the quiet amenity of those in nearby houses in Caswell Drive. • Rezoning to 'Community' will likely lead to more infrastructure in the reserve, increasing traffic in Caswell Drive and again, impacting on the peaceful amenity of residents living very close to this Reserve. • I ask that the Council remove Glade Crescent Reserve from this DPA. | <ul style="list-style-type: none"> • Glade Crescent Reserve and most of Councils other large reserves / recreation facilities are currently covered under the Residential Zone. Whilst the Residential Zone allows for small scale, local recreational uses it does not provide appropriate support for some of the activities currently being undertaken at Council's larger existing facilities or improvements to those facilities. The proposed Community Zone better reflects the activities taking place at the various facilities covered by the proposed zoning amendment. • Rezoning the land to Community Zone will not in itself create any of the issues mentioned. • A masterplan for Glade Crescent underwent public consultation and then Council approval several years ago where issues such as parking and noise would have been taken into consideration as part of this process. • A number of stages, including the playground and at least one of the wetlands are complete. Revegetation, tree planting, a number of the trails and | <ul style="list-style-type: none"> • No change required |

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|----|--|--|---|--|
| | | | the remaining wetland/s are to be constructed over time. | |
| 6. | David Perry 46 Caswell Drive, Hallett Cove | <ul style="list-style-type: none"> Concerned that a sporting facility would/could be built next to his property | <ul style="list-style-type: none"> As 5. above Due to the dimensions of that part of the reserve adjacent his property it is unlikely that there would be sufficient space for any type of formalised sporting facility. | <ul style="list-style-type: none"> No change required |
| 7. | Bang The Table Team Address unknown | <ul style="list-style-type: none"> What exactly, will be the likely impact to Glade Crescent Reserve? i.e. new buildings, new infrastructure? What guarantees does the Council provide to residents living close by, that there will be no increase to traffic and noise coming from the Reserve area? | As 5. above | <ul style="list-style-type: none"> No change required |
| | Glandore Oval/Community Centre | | | |
| 8. | Stephen Smith 35 Churchill Avenue Glandore | <ul style="list-style-type: none"> What is the effect of the rezoning on us? Confused about the reasons for the amendment What do the 4 terms (zones) really mean? What future recreational/community type facilities are there? (e.g. can a | <ul style="list-style-type: none"> Most of Councils large reserves / recreation facilities are currently covered under the Residential Zone. Whilst the Residential Zone allows for small scale, local recreational uses it does not provide appropriate support for some of the activities currently being undertaken at Council's larger existing facilities or improvements | <ul style="list-style-type: none"> No change required |

| | | | | |
|--|--|--|--|--|
| | | <p>hockey club put in an artificial pitch with more lights)</p> <ul style="list-style-type: none"> • Will this mean the council can redevelop the site by adding more buildings or demolishing buildings? • Does this mean the council can change the use of the site? • If so, what types of changes can council do to the sites? • Does it make it easier for South Road to be widened to take some of the Glandore oval site? • Does it mean councils will encourage other groups to use the sites when they have no connection with this suburb or community? • So far everything is in "council speak" and not in plain English. • Questioned the need for rezoning – better for applications for new uses to follow current more difficult assessment path (Residential Zone) • Concerned that rezoning would enable inappropriate uses to be located at Glandore Oval/Community Centre • Concerned about rose garden | <p>to those facilities. The proposed Community Zone better reflects the activities taking place at the various facilities covered by the proposed zoning amendment.</p> <ul style="list-style-type: none"> • There are no current plans for Glandore Oval. Council's intention is for it to remain for recreational uses (football/cricket/netball/tennis). There is little room available for any other large-scale sporting facilities to occur on the site. That being said, minor changes to existing facilities may be possible if required (e.g. cricket nets etc.) | |
| | | | <ul style="list-style-type: none"> • Rezoning will have no effect on the rose garden • A cemetery is an envisaged form of development within the SA Planning Policy Library's version of the | |

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|--|--|--|---|---|
| | | <ul style="list-style-type: none"> • Questioned the inclusion of a number of non-complying uses within new zone (i.e. cemetery) | <p>Community Zone. This is not considered appropriate within Council's community/recreation facilities. The list of non-complying uses will be given further consideration.</p> <ul style="list-style-type: none"> • Noted | <ul style="list-style-type: none"> • The list of non-complying uses will be given further consideration. |
| | | <ul style="list-style-type: none"> • Council has an appalling record in maintaining this suburb. Trees have not been replaced when they die, car parking at restricted times at ovals is not monitored, weeds are not removed from council property etc. You will understand our deep suspicion of the planned changes. | | <ul style="list-style-type: none"> • Comments to be forwarded to appropriate departments of Council |

Marion Council

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|-----|--|---|---|--|
| | | | | |
| | Marion Sports & Community Club | | | |
| 9. | Anne Hughes (<i>on behalf of mother</i>) 4 Christina Street ? Marion | <ul style="list-style-type: none"> • Can you clarify exactly what the changes are, and the differences between the zones | <ul style="list-style-type: none"> • A reply was sent with a link to the DPA document and a brochure that summarised the proposal and the consultation process. | <ul style="list-style-type: none"> • No change required |
| | | | | |
| | Morphettville Park | | | |
| 10. | Jose Power 3 Dennis Street Morphettville | <ul style="list-style-type: none"> • What types of extra uses could these changes facilitate? • This is a totally residential area with houses facing the reserves, with no buffer zones at all • There is no room for screening trees or bushes as the boundary of the oval comes right to the edge of the reserve • Opposed to the proposed change of zoning for Morphettville Park | <ul style="list-style-type: none"> • A reply was sent with a brochure that summarised the proposal and the consultation process and a link to the DPA document. • Most of Councils large reserves / recreation facilities are currently covered under the Residential Zone. Whilst the Residential Zone allows for small scale, local recreational uses it does not provide appropriate support for some of the activities currently being undertaken at Council's larger existing facilities or improvements to those facilities. The proposed Community Zone better reflects the activities taking place at the various facilities covered by the proposed zoning amendment. • There are no current plans for Morphettville Park Oval. | <ul style="list-style-type: none"> • No change required |

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|-----|---|--|---|--|
| | | | <ul style="list-style-type: none"> • Rezoning the land to Community Zone will not in itself result in any land use changes | |
| | | | | |
| | General Comments | | | |
| 11. | Anna Petts 34 Pine Avenue Warradale | <ul style="list-style-type: none"> • I'd like significant trees to be protected, and adequate green corridors for wildlife and general well-being! | <ul style="list-style-type: none"> • Noted • Beyond the scope of the DPA | <ul style="list-style-type: none"> • No change required |
| 12. | Nadjia Osterstock 45 Addison Road Warradale | <ul style="list-style-type: none"> • I would like Council to ensure that any rezoning is not for the purpose of, or likely to result in, the removal of significant trees or the loss of green space to more built development. | <ul style="list-style-type: none"> • Noted • Not the intention of the DPA | <ul style="list-style-type: none"> • No change required |
| 13. | SC Address unknown | <ul style="list-style-type: none"> • Council needs to apply the following to any site under consideration. • We need to retain open spaces, increase vegetation and encourage all in the community to take care of significant trees for the good of all, not carelessly remove them. • Children need space to be active and to enjoy nature around them and have the opportunity to experience this close to home. | <ul style="list-style-type: none"> • Noted • Beyond the scope of the DPA | <ul style="list-style-type: none"> • No change required |

Marion Council

Recreation/Community Development Plan Amendment

Attachment A — Summary and Response to Public Submissions

| | | | | |
|--|--|--|--|--|
| | | <ul style="list-style-type: none">• All in the community benefit for being able to see trees through their windows and hear birds nesting at dusk. | | |
|--|--|--|--|--|

Attachment B – Summary and Response to Public Meeting Submissions

Two (2) submitters requested to be heard, and therefore a public meeting was held on 1 May 2017.

| Sub No. | Name of Respondent | Summary of Verbal Submission/Issues Raised | Council Response |
|---------|--|---|---|
| 1. | Joanne Bell / Mike King 16 Lighthouse Drive Hallett Cove | <p>We have some concerns about the rezoning of Capella Drive Reserve, as it appears to make it a lot easier for council to develop the reserve into a sporting hub. We do not wish the rezoning to go ahead, due to fears that the following may occur.</p> <ul style="list-style-type: none"> Existing court order for Capella Reserve may be able to be overridden without any public consultation The surrounding properties will be devalued as they are next to a sporting complex Club rooms will be built and the alcohol ban will be lifted, as club rooms and sporting venues are often rented out for private and club functions Carnivals and major sporting events will be played General public will no longer be able to use the area for recreational activities If there is any development, there will be further increase of traffic and noise Any future development will lead to further vandalism and drug use in the area, which has already increased since the lights were installed | <ul style="list-style-type: none"> The list of envisaged uses and policy associated with the Community Zone/Recreation Policy Area reflects the types of uses that could go in such a zone. Not all sites are appropriate or intended for such uses. There are 12 sites being considered; some may be appropriate for certain uses and others not so. Other than the uses currently undertaken at Capella Drive the only other use currently being considered is the development of a precinct plan for Capella Reserve, which will incorporate further consideration to the future directions for the tennis courts, play space and toilet block at Nannigai Reserve. (endorsed by Council at 28 February 2017 General Council Meeting) Rezoning the land to Community Zone will not in itself create or alter any of the issues/matters mentioned. However, any future changes to the use of the reserve – if any, would require consideration of the issues raised. The reserve and a number of associated uses/facilities at the reserve already exists. However, current planning policy recognises that there is a more appropriate zone and associated policy for such facilities to be located. A |

Marion Council

Recreation/Community Development Plan Amendment

Attachment B – Summary and Response to public Meeting Submissions

| | | | |
|--|--|---|---|
| | | <p>We did not build or buy our homes to be next door to a sporting complex as we were told by Council that it was only ever going to be a recreational reserve.</p> <p>If any development went ahead leading to a property devaluation, would the council be prepared to pay compensation to the owners of those homes?</p> <p>We do not live in other council areas therefore the council needs to be transparent in informing us exactly their intentions for the rezoning, if you are not able to do this then the current zoning needs to stay in place</p> | <p>number of other Councils have undertaken a similar rezoning process and included the Community Zone within their respective Development Plans.</p> <p>Beyond the scope of the DPA</p> <p>Beyond the scope of the DPA</p> <p>Noted – explained above</p> <p>• No changes required</p> |
|--|--|---|---|

Attachment C – Timeframe Report

SCPA Timeframe Report: Process B – without consultation approval / 1 Step

The SOI was agreed by the Minister and Council on 26 October 2016

| Key steps | Period agreed to in SOI | Actual time taken | Reason for difference (if applicable) |
|---|-------------------------|-------------------|--|
| Investigations conducted and DPA prepared | 12 weeks | 17 weeks | Set-up of consultation process took longer than anticipated |
| Agency and public consultation period (report on any delays incurred by agencies) | 8 weeks | 8 weeks | -(concluded 19 April 2017) |
| Public Hearing held, submissions summarised and DPA amended in accordance with Council's assessment of submissions. <i>Summary of Consultations and Proposed Amendments</i> submitted to Minister for approval. | 12 weeks | 24 weeks | Resourcing was prioritised for another DPA (Housing Diversity DPA) |

Attachment D – Schedule 4A Certificate

Schedule 4a Certificate

CERTIFICATION BY COUNCIL'S CHIEF EXECUTIVE OFFICER

DEVELOPMENT REGULATIONS 2008

SCHEDULE 4A

Development Act 1993 – Section 25 (10) – Certificate - Public Consultation

CERTIFICATE OF CHIEF EXECUTIVE OFFICER THAT A DEVELOPMENT PLAN AMENDMENT (DPA) IS SUITABLE FOR THE PURPOSES OF PUBLIC CONSULTATION

I **Adrian Skull**, as Chief Executive Officer of Marion Council, certify that the Statement of Investigations, accompanying this DPA, sets out the extent to which the proposed amendment or amendments-

- (a) accord with the Statement of Intent (as agreed between the Marion Council and the Minister under section 25(1) of the Act) and, in particular, all of the items set out in Regulation 9 of the *Development Regulations 2008*; and
- (b) accord with the Planning Strategy, on the basis that each relevant provision of the Planning Strategy that related to the amendment or amendment has been specifically identified and addressed, including by an assessment of the impacts of each policy reflected in the amendment or amendments against the Planning Strategy, and on the basis that any policy which does not fully or in part accord with the Planning Strategy has been specifically identified and an explanation setting out the reason or reasons for the departure from the Planning Strategy has been included in the Statement of Investigation; and
- (c) accord with the other parts of the Development Plan (being those parts not affected by the amendment or amendments); and
- (d) complement the policies in the Development Plans for adjoining areas; and
- (e) satisfy the other matters (if any) prescribed under section 25(10)(e) of the *Development Act 1993*.

The following person or persons have provided advice to the council for the purposes of section 25(4) of the Act:

David Melhuish, Senior Policy Planner, Marion Council

Steve Hooper, Manager Development and Regulatory Services, Marion Council

DATED this 13th day of February 2017


.....
Chief Executive Officer

Attachment E – Schedule 4B Certificate

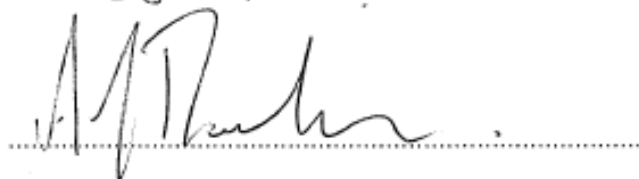
Schedule 4B—Certificate—section 25(14)(b)

Certificate of chief executive officer that an amendment to a Development Plan is suitable for approval

I, Abby Dickson, as Acting Chief Executive Officer of City of Marion, certify, in relation to the proposed amendment or amendments to Marion Council Development Plan as last consolidated on 28 April 2016, referred to in the report accompanying this certificate—

- (a) that the Council has complied with the requirements of section 25 of the Development Act 1993 and that the amendment or amendments are in a correct and appropriate form; and
- (b) in relation to any alteration to the amendment or amendments recommended by the Council in its report under section 25(13)(a) of the Act, that the amendment or amendments (as altered)—
 - (i) accord with the Planning Strategy, on the basis that each relevant provision of the Planning Strategy that relates to the amendment or amendments has been specifically identified and addressed, including by an assessment of the impacts of each policy reflected in the amendment or amendments against the Planning Strategy, and on the basis that any policy which does not fully or in part accord with the Planning Strategy has been specifically identified and an explanation setting out the reason or reasons for the departure from the Planning Strategy has been included in the report of the Council; and
 - (ii) accord with the other parts of the Development Plan (being those parts not affected by the amendment or amendments); and
 - (iii) complement the policies in the Development Plans for adjoining areas; and
 - (iv) satisfy the other matters (if any) prescribed under section 25(14)(b)(ii) of the Development Act 1993; and
- (c) that the report by the Council sets out a comprehensive statement of the reasons for any failure to complying with any time set for any relevant step under section 25 of the Act; and
- (d) that the following person or persons have provided professional advice to the Council for the purposes of section 25(13)(a) of the Act: David Melhuish, Senior Policy Planner, City of Marion

Date: 28-9-17.



Acting Chief Executive Officer

Attachment F – Additional Matters and Investigations

Cove Sports & Community Club – proximity to Reynella Quarry



Cove Sports & Community Club
 – proximity to Reynella Quarry

About this Document
 This map has been created for the purpose of showing basic information only. It is not intended to be used for any other purpose. The City of Marion does not warrant the accuracy of the information shown on this map. This information is provided for private use only.

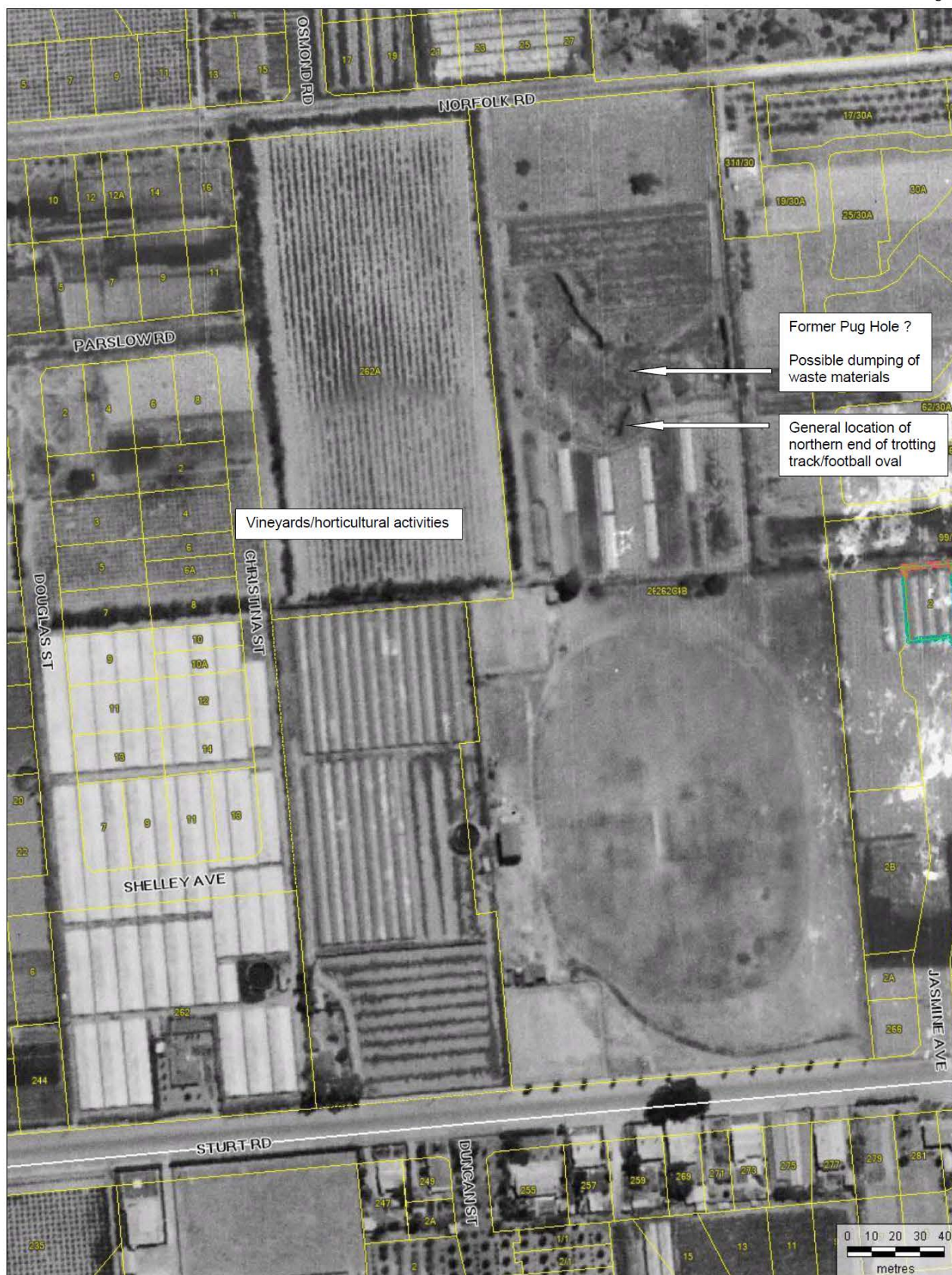
Disclaimer
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| About this Document | Disclaimer |
|--|---|
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Marion Sports and Community Club – 1949 - Potential Contamination





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Marion Sports and Community Club – 2017 – Potential Contamination



Previous Pug Hole
Possible dumping of
waste materials

12. Environmental Site History

Introduction

Background

Torkin Consulting (Torkin) was commissioned by Swanbury Penglase to prepare an Environmental Site History (ESH) for 264 Sturt Road and 22 Norfolk Road, Marion SA 5043 (the site), prior to the proposed stormwater system upgrade of the site.

A site plan is provided in Figure 11.

Objectives and Scope of Work

The objectives of this investigation are to identify the risk to potential receptors of current or historic potentially contaminating activities conducted at the site, or adjacent off-site lands, with an ESH report.

A standard ESH investigation was undertaken in accordance with the National Environment Protection (Assessment of Site Contamination) Measure (NEMPA) and current South Australian Environment Protection Authority (SA EPA) requirements² to gain an understanding of:

- Current and historic contaminating activities conducted on the site and adjacent off-site lands;
- Current and potential future receptors on and adjacent to the site; and
- Potential exposure pathways.

The investigations incorporated a review of the following available information:

- Any documentation available from local council in reference to the site;
- Property details;
- Selected historical aerial photographs of the site;
- Site services plans available from council and utility providers;
- Government records e.g. permits, licenses, approvals, complaints, incident reports (SA EPA Section 7 search and Work Place Services records);
- Historical information from council records;
- Anecdotal information from current and former owners, if available;
- Zoning information;
- Certificates of title and title history (Lands Title Office);
- Review of local geology and hydrogeology from published documents and the Department of Environment, Water and Natural Resources (DEWNR) Waterconnect online databases; and
- Site inspections to assess site features, current site and neighbouring uses, vegetation health and cover, soil staining, amongst others.

The information gained is presented in a summary report describing the potential contamination activities associated with the site including the formulation of preliminary Conceptual Site Models (CSMs), which will define any potentially complete source, pathway, receptor scenarios identified at the site.

- 1 NEPC (1996) The National Environment Protection (Assessment of Site Contamination) Measure (NEMPA), National Environment Protection Council, December 1999.
- 2 SA EPA (2009) Site Contamination: Guidelines for the Assessment and Remediation of Groundwater Contamination, February 2009
- 3 Department of Environment, Resources and Natural Resources URL: <https://www.waterconnect.sa.gov.au/GO/Details/default.aspx>



Figure 11: Site Plan

Site Inspection
A site inspection walkover was undertaken by Tonkin personnel on 30 November 2012 a photographic record of key observations is provided in Appendix B. As the site is large in area, the whole site is divided into north-east corner, north west corner, east, south east corner, south-west corner, Marion Club and west. A summary of the observations made during this inspection is provided below.

North-west (Sports field)
This part of the sports field is the northern extension of the approximately 300m long field that begins from the north of the Sturt Road car park to Norfolk Road. The north and west face of the field is bounded by fencing with a pedestrian access way on the north-west corner of the site. A double side entry pit (SEPW) was found close to the pedestrian access in the north-west corner and there is a concrete slab slightly to the south of the SEPW. There is vegetation and gum trees along the north of the sports field and up to the western face of the adjoining Basketball SA building on the east of the site. The condition of the vegetation on the north appears to be reasonably healthy with suspected lack of sunlight due to the western wall of the Basketball SA building causing the shrubs on the west appear stressed. Four dugouts were noted along the west of the long field with the smaller ones made of wood and iron and a main one almost entirely constructed from iron. The condition of the grass on the field is reasonably good.

North-east (Basketball SA and tennis courts)
Basketball SA is located on Norfolk Road and is separated from the tennis courts by the access way into the bitumen and gravel car park. The building is made of corrugated iron, wood and Hebel brick the inside of the building could not be viewed at the time of the site inspection. North of Norfolk Road is mainly residents with the Marion RSL and Bowls Club located opposite to the tennis courts. Observations were made that use (potentially) irrigation may be or has previously been undertaken on this adjacent site evidenced by a sign which states 'bore water being used' within the RSL park. The car park of the Basketball SA grounds is part bitumen and part gravel. The tennis club building is mainly brick, but due to thick vegetation and limited access, the condition of the building is unknown. On the east of the fencing around the tennis club, there appears to be concrete pad in the ground with concrete edge all around the fencing (refer to site diagram). Along the east fence there are overhead cables. There is a pump house located to the south-west of the tennis club building and an old stable which appears to be still in used and a locked shed adjacent to it. Between the shed and the score board there is another shed (possibly a pump house) with a pipe outlet. The gravel car park is bounded on the north by the bitumen track and the south by the northern end of Sturt oval. The main Sturt oval (football oval) has a trots track on outer perimeter which consists mainly of a sandy gravel.

There are two stockpiles on the gravel car park, to the north of the football oval. There is a stockpile of approximately 2m by 2m of unclear fill which consists of plastic, large pieces of concrete, unknown fill material and sand. Adjacent to the west of this stockpile is a fence-off stockpiling area of clean fill and clean gravel with piles of stormwater pipes, PVC pipes and electrical pit covers. Generally the gravel car park is slightly higher than the adjoining field. There was also a history of contaminated fill dumping around the vicinity of the old stable, pump station (to the south of the stable) and score board (anecdotal information).

East
The east of the site is bounded by residential and Jasmine Ave. The site generally falls toward the south with some uneven ground in the open space parks. The difference in land elevation is made more obvious with retaining walls around the perimeter of the residential boundary to the north-east with allowances for stormwater outlets in the wall (refer to site diagram). This is possibly why the ground immediately adjacent to the stormwater outlets is relatively soft.

Site Information
The sites under investigation are No. 262-264 Sturt Road and 22 Norfolk Road Marion SA 5043.

Table 21 Site Details

| | |
|---------------------------------|--|
| Site Address | No. 262-264 Sturt Road and 22 Norfolk Road Marion SA 5043 |
| Current Owner(s) | The Corporation of The City of Marion |
| Current Certificate of Title(s) | Volume 5491 Folio 469 Volume 5794 Folio 420 Volume 6063 Folio 665 Volume 6063 Folio 666 |
| Parcel / Plan | D7 883/A1 D147234/A100 D7 883/A2 D31/A7 |
| Council Zoning | Residential |
| Current Land Use | Marion Sports and Community Club, Basketball SA and Sturt Oval |
| Proposed Land Use | Marion Sports and Community Club, Basketball SA and Sturt Oval |
| Land Area (approximate) | 98,740m ² |

Zoning

The current zoning of the site according to The City of Marion Development Plan4, consolidated 19 January 2012, is Residential Use. The objective of the Residential Use development is to provide, a safe, convenient, pleasant and healthy living environment that meet the needs and preferences of the community. The area should also have an increased mix in the range and number of dwelling types available within urban boundaries to cater for changing demographics, particularly smaller household sizes and supported accommodation. This area should also have higher dwelling densities in areas close to centres, public and community transport and public open spaces and regeneration of selected areas identified at zone and/or policy area levels. Part of the objective of residential development is to provide affordable housing and housing for seniors provided in appropriate locations. Forms of development envisaged for the zone are affordable housing, domestic outbuilding in association with a dwelling, Domestic structure, dwelling, dwelling addition, small scale non-residential uses that serve the local community, for example, child care facilities, health and welfare services, open space, primary and secondary schools, recreation areas, shops, offices or consulting rooms and supported accommodation. No residential developments such as shops, schools and consulting rooms should be of a nature and scale that serves the needs of the local community. Is consistent with the character of the locality and does not detrimentally impact on the amenity of nearby residents.

It should be noted that the current land use of the site is not proposed to change from the Marion Sport and Community Club facility which is an open space recreational area to a residential use in the near future.

Regional Setting

The site is located between Sturt Road and Norfolk Road, within the suburb of Marion, approximately 15km from Adelaide CBD. The site is approximately 20m north of the Marion City Council on Sturt Road and is nestled in a residential area. The rest of the area surrounding the site is primarily residential and light industrial along east of Norfolk Road. The location of the site is shown in Figure 11. The geographical coordinates for the site are Latitude: 35° 0' 54.2262" S and Longitude: 138° 33' 11.6594" E. Potentially sensitive receptors are the surrounding residential areas.

4 Department of Planning, Transport and Infrastructure (DPTI) (2012) Development Plan, Marion Council, Consolidated - 19 January 2012

Regional and Specific Hydrogeology

A search for regional groundwater information in a 2km radius from the site via an online search of the DEWNR 'Waterconnect' database was conducted. The results of this search indicated that there were 385 wells within approximately 2km of the site. The search was refined to 0.5km due to the large number of wells and the results of this search indicated that there were 24 wells within approximately 0.5km of the site. The figure provided in Appendix J shows the location and identification of the wells within 0.5km of the site. The wells represent a variety of uses, including domestic wells, irrigation, industrial, monitoring and investigation. A summary of the on and off-site wells are provided in Appendix J. Seven wells (unit number 6627-6234, 6627-1682, 6627-1162, 6627-1683 and 6627-7780) were noted to exist on the target allotments.

| Unit No | Depth (m) | Date | Fire open date | Casing Diameter | Purpose | Status | SWL | RWSL | Water Level Date | Title | plan | parcel |
|-----------|-----------|------------|----------------|-----------------|---------|--------|-------|-------|------------------|-------------|----------|--------|
| 6627-1680 | - | - | 27/04/1949 | - | - | - | - | - | - | CT 5491 469 | D31 | A.7 |
| 6627-1681 | 68.58 | 28/07/1970 | 28/07/1970 | 127 | - | - | 20.42 | 11.65 | 28/07/1970 | CT 5491 327 | F7883 | A.2 |
| 6627-1682 | 91.44 | 10/12/1958 | 4/03/2002 | - | IRR | BKF | 26.7 | 5.6 | 4/03/2002 | CT 5491 327 | F7883 | A.2 |
| 6627-1683 | 73.15 | 7/07/1970 | 7/07/1970 | - | - | ABD | 20.42 | 12.09 | 7/07/1970 | CT 1002 33 | D9158 | A.21 |
| 6627-6234 | 71 | 10/04/1981 | 10/04/1981 | 117 | - | - | 25.89 | 2.24 | 7/05/2070 | CT 5491 469 | F147 234 | A100 |
| 6627-7780 | 22 | 30/10/1987 | 30/10/1987 | 150 | DRN | OPR | 12.7 | 16.91 | 13/11/1987 | CT 5491 469 | D31 | A.7 |
| 6627-1162 | 15 | 20/07/2005 | 20/07/2005 | - | - | - | 10 | 22.08 | 20/07/2005 | CT 5491 327 | F7883 | A.2 |

Of the 7 identified bores within the site, unit number 6627-1680 is shown to be located at the centre of the allotment and was last opened in 1949 and has little information regarding its current status. Well with unit numbers 6627-1681, 6627-1162, 6627-1682 and 6627-1683 are located along the eastern boundary of the site and information gathered suggests that units 6627-1682 and 6627-1683 have been backfilled and abandoned respectively. Wells with units numbers 6627-1681 and 6627-1162 are still potentially operational and would most probably be located in the vicinity of the observed groundwater bore and pump sheds. Unit number 6627-7780 which is situated in the north western corner of the site indicates that it was used for drainage purposes and was operational at the last water level measurement in 1987. There was no evidence of a well in the location reported; however there was stormwater infrastructure in this area. Unit number 6627-6234 is located in the south-west of the site adjacent to the croquet club and is thought to be located within the pump shed which feed the water tank in this area, there are little details regarding the status of the well since measurement on the 20th July 2005.

Surface Water

The nearest surface water body is a wetland on Science Park, approximately 600m south east of the site. Site surface water has been noted to pool on-site.

Underground Infrastructure

A Dial Before You Dig (DBYD) search was conducted to assist with identifying underground services located on or nearby the site. Asset owners identified in this search include: SA Water, Telstra, Council, ETSA and Nextgen. A summary of services are included in Table 2.4 below. A copy of the search enquiry, including the resultant service location plans can be viewed in Appendix D.

| Table 2.4 DBYD Summary | |
|------------------------|---|
| Utility | Description |
| SA Water | DBYD information highlights cathodic protection which runs from approximately the north western corner of the football oval off-site to the west along Parslow Rd. This may suggest that there is underground infrastructure in the vicinity as well as the easement which is noted on the certificate of title. Along Norfolk road there are water meters, water main, water hydrants, GIP, gravity pipe network and maintenance holes. On Sturt Road there is a 250mm cast iron concrete lined in situ and water main reticulation system, water hydrants, GIP, gravity pipe, maintenance holes and water meters. |
| Telstra | There are Telstra owned communication network cables under Sturt Road and Norfolk Road. |
| Council | There is a proposed council owned fibre optic link connecting the administrative centre to the depot. On Norfolk Road there is a 450mm storm water concrete pipe underground and a 675mm storm water concrete pipe under Sturt Road. |
| ETSA | On Norfolk Road there are power poles adjacent to No 22 Norfolk Road. Along Sturt Road there are a series of light columns. |
| Nextgen | Within the site itself there are a few transformers cubicles and customers supply points on the south of the site and in close proximity to Sturt Road. There is also an easement which is noted on the certificate of title which runs north from Sturt Rd which may indicate current or proposed underground infrastructure. |
| | Nextgen has a communication network cable on the north side of Sturt Road. There is also an easement which is noted on the certificate of title which runs north from Sturt Rd which may indicate current or proposed underground infrastructure. |

West (Croquet Club)

The Marion Croquet Club is located to the west of the main site entrance of Sturt Road. There is an above ground (presumably potable water) tank at the east corner of the site and surrounded by pump house and a shed. There is pedestrian access from the car park which opens to Christina Street on the west. A gas meter is located in the vegetated area to the north of the blumen car park compound. On Sundays when the field is open to vehicular access, entry into the site is via a vehicle entry gate close to the gas meter. The vehicular entrance is located adjacent to a large concrete slab to the east of the gate. A fire hydrant is located closer to the club house along the east of the gate.

Surrounding Land Use

The land uses surrounding the north, south, east and west of site are as below.

North

The north of the site is bounded by Norfolk Road. There are a few residents along Norfolk Road and the Marion RSL and Bowling Club is located directly opposite the tennis courts. Further east of Norfolk Road consists of residential and light industries such as fabricator, an abandoned warehouse, a metal fabricator and a mechanic on the north side of Norfolk Road and residential on the south of the road.

East

The area directly to the east of the site consists of mainly residential dwellings.

South

South of Sturt Road is mainly residential area with Marion City Council located close to the intersection of Diagonal Road and Sturt Road.

West

The area directly adjacent to the west of the site is mainly residential dwellings and Christina St which runs north south directly adjacent to the site.

Regional Geology

The geology of the site consists of alluvial flat deposits which from the Recent, Tertiary Quaternary period of Cainozoic age. A geological map of the site and surrounding area is provided in Appendix C.

South-east (Lawn Bowling Club 1)

The frontage of 262-264 Sturt Road has two lawn bowling clubs. For ease of discussion, the clubs will be separated into lawn bowling club 1 (on the south east) and lawn bowling club (on the south west).

The lawn bowling club on the south east is a reasonably older establishment compared to the one located immediately south west. The east of the site is bounded by a small park and a resident. Access into the gravel car park of the lawn bowl is entry via Jasmine Avenue. This lawn bowling club is the smaller of the two with 3 sheds and a club building directly on the north of the lawns. There is a small old brick shed, a larger metal and corrugated iron shed and a large metal shed. The club building is reasonably sized and is made of brick and is suspected to be built approximately 40 years ago from aerial photography and similar to the smallest shed. It is unknown if these buildings have been constructed with any asbestos containing materials as was common with buildings constructed in the 1960s and 1970s. The roof stormwater for the building appears to discharge directly to the surround ground, as evident by the layout of the downpipes and pooling of water on the ground

South-west (Lawn Bowling Club 2)

There are two metal sheds within the compound of lawn bowling club 2. These sheds are located adjacent to the main club house. From the site inspection it has been observed that one of the shed is used to store flammable liquid as evident with existence of 'flammable liquid' sign in the shed. The main building is located directly opposite to the new Marion Club Centre. This building is mainly brick with an older wing at the front, adjacent to the lawns. At the rear of the building there is a metal cage enclosure for air-conditioning unit and generator with a metal sheet over the generator.

Marion Club

Marion Club is separated into a new wing on the south and old wing on the north. The main, newer building is mainly club amenities such as restaurant and function room. There is an ETSA chamber on the south of the new club house. The older part of the club house at the north is mainly players change room with a storage shed at ground level. This part of the clubhouse also has an upper level open deck that overlooks the adjacent fields. There is a series of natural gas water heating systems at the ground level of the older wing which is enclosed in metal enclosure. There is also a thoroughfare that opens up to Sturt Oval. A children playground is located to the north of the clubhouse.

| Date | Scale | Survey / photo | Comments |
|------------|---------|----------------|---|
| 9/1/1963 | 1:14000 | 133A/557 | Sturt Oval has been relocated further north on the site to make way for what appears to be the current lawn bowls greens to the south of the oval. There are two structures (probably the club houses) between the oval and the lawn bowls greens on the east and west of the oval. Sturt oval has taken the outline and dimension of the current oval with a clear ring of track surrounding the oval. There is an additional building on site in the location of current Marion Sports and Community Club. On the north of the site there appears to be the outline of the tennis courts and the tennis club building. Tennis courts look to be natural materials either grass or clay courts however this is difficult to determine. No indication of the stable, shed or pump house. The basketball stadium has been built and is similar in dimensions to present day. The playing field along the western boundary is cleared. There appears to be a building in the vicinity of the current croquet club however croquet playing fields have not been established. The areas directly north of this building are still used for agricultural activities. The surrounding area has experienced significant development with lands to the west of the site being developed with more dense residential development compared to 1659. The lands on the east are now more populated with residential buildings. Land uses to the north include additional residential buildings and two additional bowling greens and a building across Norfolk road. To the north east along Marion Road there appears to be several larger sized buildings and industrial works such as a processing plant and a gasometer. There is a fifth lawn bowls green located to the west of the existing four along the Sturt Road boundary. Trees which have been planted to the south of the oval which were evident in 1969 have grown into mature significant trees. Construction of the upgraded Marion Sports and Community Club looks to be underway to the north of the existing structures the outlines of the basic foundations and current footprint is recognisable. The tennis courts are more prominent with a hard court covering which most likely is bitumen based with hard court painted covering as evidenced by markings in this colour photograph. A score board on the north-east of the oval is present along with the presence of the stables and pump house. The croquet club house appears to have been removed from the croquet lawns compound with no indication of the outlines of the greens. The area surrounding what used to be the croquet lawns are no longer used as farming land. There is a significant increase of residential development on the west, east, north and south. The current outline of the areas surrounding Marion RSL and Bowling Club is clearly defined. Surrounding land use is in general continued residential development and the development of Marion Shopping Centre to the west. |
| 6/09/1989 | 1:20000 | 409/128 | The overall condition of the site remains unchanged since 1979. There is clear outline of car parking area accessed from Sturt Road. From the aerial photograph this car park appears to be still unsealed. On the croquet lawn the establishment of a building similar in dimension to the current croquet club. The field to the west of Sturt Oval is well defined with indication of healthy well maintained oval and surrounding trees. The rest of the area surrounding the site has been predominantly developed with residential dwellings. |
| 28/10/2002 | 1:10000 | 6108/246 | The condition of the site has remained relatively unchanged. The car parks are sealed and the tennis courts look to have been re-surfaced. The further renovations to the Marion Club have yet to take place. No indication of the children's playground to the north of the Marion Sporting and Community Club is evident. The last remaining large allotment of land to the east of the site is undergoing development with clear outlines of road and subdivision of the entire allotment. |

Historical Information
Lands Titles Information
A detailed history of the subject land titles was obtained from a search of the Lands Titles Office database and is attached in Appendix E.

Notable historical ownership of the subject land parcels include William Alfred Hersey, John Douglas Parslow and Malcolm Henry Edgar Parslow who are gardeners and farmer and owned land parcels CT 6063/665, 6063/666 and 549/1469. These lands were owned by gardeners and a farmer from 1935 to early 1950's. Land parcel CT 5794/420 was owned by a group of gardeners (Donald James Hersey, Trevor Robert Hersey, Colin Wilfred Hersey and Stanley George Hersey) from 1966-1969. Prior to this there John Hight bricklayer and builder was in control of the site from near the turn of the century until 1934. A Certificate of Title (CT) history tree of the land titles office search is included in Appendix E.

Historical Aerial Photography
Aerial photographs dated 1949, 1959, 1969, 1979, 1989 and 2002 were inspected in order to assess land use changes over time. In both the subject site and adjacent land. Copies of all the historical aerial photographs are included in Appendix F.

Details of the aerial photographs inspected during this investigation are summarised below in Table 3.1.

Table 3.1 Summary of Aerial Photography

| Date | Scale | Survey / photo | Comments |
|-----------|---------|----------------|--|
| 10/1/1949 | 1:15840 | 7/19 | Most of the land in the area consists of large parcels with a majority of the land being used for farming activities. The undefined outline of a much smaller Sturt oval can be seen in the vicinity of its current location; however Sturt oval in 1949 is closer to Sturt Road and significantly smaller. Christina Street at the west of the site does not exist and the site is bounded on the north and south by roads (similar alignment to Sturt Road and Norfolk Road). Most of the lands within the site are used for farming activities with what appears to be outline of greenhouses on the north of Sturt Oval. Further north of the greenhouses is a large area which looks to be a significant excavation which extends from the eastern boundary at the time to approximately the centre of the current boundary of CT 6063/665A allotment 2. Surrounding land use: South: Land immediately south of Sturt Road is mainly farmland with a few houses along Sturt Road, opposite to Sturt Oval. North: Immediately north is more land being used by farming activities as evident with rows of uniform vegetation plantings. East: The area to the east is mainly agricultural lands. West: Very little residents with most of the land being used for agricultural activities. Diagonal Road is well established. The outline of Sturt oval is more defined and well established with a clear oval outline. The land to the north of the Sturt oval appears to be cleared and the excavation identified in the 1949 aerial photo is filled. There is still some vegetation in a small area at the north-east corner of the site. The rest of the site is still being used predominantly for agricultural activities. There appears to be a building on the south-west corner of Sturt oval. Land surrounding the site is still mainly being used for farming activities and agricultural use. Major parts of the lands to the east of Diagonal Road are developed with residential allotments extending upward toward the north-west corner of the site. Some of the lands to the west of the site boundary have clear outline of residential buildings on relatively large allotments. |
| 3/1/1959 | 1:16500 | 325/9367 | |

Dangerous Goods Search
An enquiry was made to Safework SA to ascertain whether any registered dangerous goods were stored or distributed from the site.
Information received on the 12 December 2012 from Safework SA indicated that there was no license for dangerous substances found for the subject address.

This information is provided in Appendix G.

EPA Section 7 Search

A search of SA EPA records under Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 and Regulations 1995 was conducted to identify particulars relating to environmental protection affecting the site. The results indicate no particulars of mortgages, charges and prescribed encumbrances affecting the land have been recorded.

A copy of the SA EPA Section 7 searches is included in Appendix H.

Council Section 7 Search

A council section 7 search pursuant to Section 180 of the Local Government Act 1999 and Section 12 of the Land and Business (Sale and Conveyancing) Act 1994, and Regulations 1995 was conducted to identify particulars relating to liabilities existing on the site.

No conditions were noted to apply to the site with the exception of the Metropolitan Adelaide Road Widening Plan which shows a possible requirement for a strip of land up to 4.5 meters in width from a portion of the Sturt Road frontage. Notices regarding development approval in the land are held by a number of stakeholders outside of the council including:

- Electricity Infrastructure & Statutory Easements which exist on each land parcel;
- Land Tax & Regulations which exist on each land parcel;
- Animal & Pest Control Regulations
- Natural Resources Act – specifically the taking of underground water.

A copy of the local council searches is included in Appendix H.

Interview Information

No interview information was gathered in relation to the site. Tonkin was however informed by staffs of Marion Council who have been in service for a significant number of years of the possible dumping of waste material in the vicinity of the stables to the north of the football oval.

Contaminants of Potential Concern

The site is currently operating as a sports facility with a number of buildings and sporting fields. There has been no intrusive investigation undertaken during this initial phase of works or information regarding any past environmental investigations (if undertaken) made available. Based on information gathered as part of this investigation a list of contaminants of potential concern attributable to past and current site uses and practices include (but may not necessarily be limited to):

- Heavy Metals including arsenic, barium, cadmium, chromium, copper, lead, mercury, manganese, magnesium, nickel and zinc – associated with pesticides and herbicides, paints, burning and incineration activities and imported fill present at the site;
- Petroleum Hydrocarbons including Polycyclic Aromatic Hydrocarbons (PAH), Phenolics, Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX) – associated with fuels, lubricants, solvents and the bitumen pavement;
- Herbicides and Pesticides – associated with agricultural and viticultural activities;
- Pesticides including organochlorine pesticides (OCP) and organophosphorus pesticides (OPP) – associated with agricultural, viticultural and land management activities;
- Polychlorinated Biphenyls – associated with electrical transformers and coolants;
- Nutrients – associated with municipal waste burial;
- Asbestos – associated with current and demolished buildings and/or associated with imported fill materials.

Preliminary Conceptual Site Models

Preliminary CSMs have been formulated utilising available information gathered as part of this investigation to determine the presence of plausible exposure pathways and hence the presence of significant risk to susceptible receptors such as humans, ecosystems and the built environment. For a significant or identifiable risk to exist an exposure pathway must be present which requires each of the following to be identified:

- The presence of substances that may cause harm (source);
- The presence of a receptor which may be harmed at an exposure point (receptor); and
- The existence of means of exposing a receptor to the source (exposure route).

In the absence of a plausible exposure pathway there is no risk. Therefore, the presence of measurable concentrations of contaminants does not automatically imply that the site will cause harm. In order for this to be the case a plausible exposure pathway must be present allowing a source to adversely affect a receptor. The nature and importance of both receptors and exposure routes, which are relevant to any particular site, will vary according to its characteristics, intended end-use and its environmental setting.

Potential Sources

Potential site specific sources of contamination to the allotments are that of:

- Unknown status of fill materials across the site which may have been derived or have been imported from an unknown origin, specifically the filling of the significant excavation identified in the 1949 aerial photograph;
- Potential contaminants of concern within bitumen which covers sections of the site;
- Electrical transformer(s) associated with powering the Sports & Community Club and lighting;
- Asbestos from the demolition of previously existing structures;
- Use of herbicides/ pesticides for land maintenance;
- Use of the site for illegal dumping;
- Storage of miscellaneous chemicals and raw materials associated with greenhouses and agricultural land use;

Potential off site sources of contamination to the site are that of:

- Former agricultural farming activities of the surrounding properties

Potential Exposure Routes

The main exposure routes relevant for all of the subject sites that could be feasible in terms of the proposed end use of the sites are as follows:

- On and off-site migration through granular ground by water or gas media, via disused drains, service trenches, pipe work and backfilled service trenches and excavations;
- Direct contact with impacted soil, groundwater and/or surface water;
- Via hand to mouth activities resulting in ingestion of impacted soil, groundwater and/or surface water;
- Ingestion of contaminated food grown in contaminated soil and/or has contact to contaminated groundwater and/or surface water;
- Vapour migration from soil and/or groundwater;
- Airborne migration of dust or soil particles leading to inhalation and/or ingestion;

Potential Receptors

Based on the potential sources of contamination identified at the site to date, the following key site-specific potential receptors may be considered for this site:

- Local ecosystems via surface water run off into stormwater and/or groundwater beneath the site as a result of infiltration and leaching of potential contaminants within in filled materials.
- Future site workers, including (but not limited to) construction, excavation and maintenance workers via ingestion and direct contact with impacted soil and/or groundwater, surface water and inhalation of generated gases/vapours;
- Current or future users of groundwater on or in the site vicinity;
- General public through contact with surface water;
- Future users of soil waste generated from site constructions activities; and
- Site neighbours and/or workers in nearby businesses.

Plausible Exposure Pathways

On the basis of the available information and risk evaluation undertaken to date, the key possible exposure pathways with the CSMs are provided in the following tables.

Table 41 Preliminary Conceptual Site Model

| Possible Exposure Pathway # | Hazard / Source of Contamination | Key Areas Affected | Potential Transport Mechanisms and Exposure Routes | Key Receptors |
|-----------------------------|---|---------------------------------|--|---|
| 1 | Heavy metals, Petroleum Hydrocarbons, PCBs asbestos, herbicides termiticides and pesticides | Surface soils and fill material | Direct contact, ingestion, inhalation, migration (via volatilisation, dust, surface water infiltration, groundwater) | Humans, sub-surface soils, groundwater and surface water ecosystems |
| 2 | Heavy metals, Petroleum Hydrocarbons, PCBs, herbicides termiticides and pesticides | Groundwater | Direct contact, ingestion, inhalation, migration (via volatilisation) | Humans, groundwater and surface water ecosystems |

| | |
|---|---|
| <p>Conclusions</p> <p>Based upon the information gathered as part of the investigation at Marion Sports and Community Club the Preliminary CSM's developed for the site has indicated that several potentially compete source, pathway, receptor scenarios exist.</p> <p>In order to further assess the potentially compete exposure pathways as identified in the Preliminary CSM's the following recommendations are made:</p> <ul style="list-style-type: none">▪ Undertake intrusive soil investigation and chemical laboratory analysis of any material proposed to be excavated for relocation to the surface on-site or removed off-site.▪ Development of an Environmental Management Plan (EMP) to address health and safety requirements, soil management and monitoring requirements (if any) and ongoing management (if required).▪ In the event that a soil investigation identifies soil contamination at depth on-site there may be a requirement to monitor the extracted groundwaterwater to investigate the plausible exposure pathway of contamination to groundwater. <p>All conclusions, findings and recommendations presented in this report must be read in conjunction with the 'Statement of Limitations' included in Section 6 of this report.</p> | <p>Statement of Limitations</p> <p>Tonkin Consulting has prepared this Environmental Site History report to provide an assessment of the likely contamination risks.</p> <p>The report is based on our interpretation of information gathered during our investigations, undertaken in accordance with good professional practice and current requirements. The results of this process are set out in this report and any conclusions we have made must be considered in this light.</p> <p>The scope of the investigations is in general accordance with current standards applied by the relevant authority at the date of the report. It must be recognised that standards for environmental performance are regularly reviewed and the results indicated in the report should therefore be reviewed in the light of changing standards.</p> <p>A qualified person should always be contacted to advise on any matters involving the Interpretation of an Environmental Site Report.</p> <p>This report was prepared for the client, on the basis of agreed parameters. Tonkin Consulting takes no responsibility for any reliance a third party places on this report or any of its conclusions. If a third party wants to determine the environmental conditions of the site the services of an appropriately qualified expert should be retained.</p> |
|---|---|

Excerpt from 'The History of Marion on the Sturt' by Alison Dolling – 1981 – relating to the brickmaking industry and creation of pug holes

South Road, a jawbreaker, elevator and 6-foot trommel operated by a 20 h.p. motor powered from the mains of the Adelaide Electric Supply Company.

At the same time (1927) the Local Government Department's quarries and crushing plant on *Perry Barr Farm* (Section 249) had just been equipped with a new unit aimed to increase output by 60 per cent (not to mention 100 per cent increase in dust hazard). It was independently driven by an 80 h.p. electric motor, with a Perry jawcracker (twenty-four by nine inches) and a Jacques jawcrusher (twenty-four by six inches), for crushing.

The Local Government Department had currently contracted with Allan Sheidow of *Perry Barr Farm* to supply their plant with 30,000 cubic yards of stone, 10,000 of which came from a disused quarry on his property known as Hynes (on Section 469), half a mile from the Hallett Cove railway siding on the Willunga line. It had been opened in 1924 for the Local Government Department and from a cutting thirty-five feet long and forty feet wide, with a twenty-five foot face, Hynes obtained 5,000 cubic yards of solid limestone. During Sheidow's contract six men worked on the old quarry for two months, clearing the top burden and drilling and blasting up the bottoms from which most of the stone was taken for use on bituminous roads. Like the men at Tapleys Hill quarry they were mostly Maltese, one of them affectionately remembered as Maltese Charlie, with enough English to charm rather than obstruct.

To facilitate the handling of stone the Local Government Department connected the mile between the quarry and the crushing plant mill with a light narrow-gauge railway equipped with side-tipping trucks of a cubic yard capacity and two Fordson tractors with flanges adapted to rail haulage. Even so, the stone had to be carted across the Willunga railway line by horse and dray and loaded by hand on to the tramway. It was laborious work and hardly advanced in methods from those used by the miners at the Hallett Cove mine nearly eighty years earlier.

Of the earlier buildings which remain in the district those at the old mine site are probably the most impressive and most harmoniously related to their environment. The rocks which have been wrested from the surrounding hillsides testify to the strength, skill and endurance of all those who work in stone.

BRICKMAKERS OF MARION

In his reminiscences written not long before he died in 1908, Henry Shearing related how in the 1850s he set out from the family home at Hindmarsh towards Glenelg in search of suitable clay for brickmaking.

As his father George was one of the first brickmakers in the colony, the name Shearing had soon become identified with the Hindmarsh area and with the brickmaking matches held there in the 1860s by the South Australian Brickmakers' Society.

By the time Henry branched out on his own he knew enough about his trade to reject the clay he tested at Glenelg, and to walk on to Brighton through scrub-covered sand-hills alive with 'thousands of crows'.

281

Orangery at Sturt Creek to the *Flagstaff Hotel*, was bought by Ira Adams for £1,000. The quarry was later worked by Thomas Parsons, H. Emmett & Sons and the Council, who in the 1930s paid royalties to Mrs Adams for stone quarried for building and flagging purposes.

Quarry production was also affected by the building slump during World War II. The Darlingstone quarry on Sections 123, 124 and 125, formerly known as Culver's and later as Edwards', dropped its output from 70 tons, worth £105 in 1939, to 40 tons, worth £20 in 1940.

In the 1970s bluestone acquired renewed status together with a rising demand for old houses incorporating its use. Among such houses still standing in the Marion district are Hamilton's *Well* homestead, *Ballara Park*, *Bleak House* and *Peach Grove*. At O'Halloran Hill, *Stanelane* on a rise just south of Christ Church, and *Webbly* on Majors Road, opposite Glenthorne C.S.I.R.O. Field Station, are well preserved. The now demolished *Glenthorne* homestead appears from photographs to have been a mixture of bluestone and limestone: its slate entrance steps were typical of pioneering building, as were the flagged basement of *Oaklands* and the massive slate hearthstones and roofing of *Cobham Hall*, near Morphettville, and the *Flagstaff Hotel* of the 1860s.

In the Brighton-Marino vicinity housing drew on stone from the same series as the Tapleys Hill formation, though of a slightly younger geological age group, which nearer the coast is characterized by a greater proportion of limestone than occurs around Tapleys Hill.

An extensive quarry (250 by 200 by 40 feet) supplying such stone, was that worked by Dwyer and Warner in 1923 in the Seaview Downs area (Section 189). The stone was widely used for public and private buildings within and outside the district: the Roman Catholic church at Semaphore and additions to the buildings of Sacred Heart College, Somerton Park, are two examples. This same quarry produced 71½ tons of building slate when reworked in 1955 by Mr R. McConnell and three casual labourers, after which it was closed down for good.

South of Seaview Downs the limestone formations characteristic of this area were much used in the making and upkeep of district roads. The quarry of most significance in this respect was on A. C. Pocock's property, *Glenfield*, (Section 519 E), near Reynella.

It had its beginnings in the 1890s, and according to a detailed report in 1904 by Professor W. Howchin (Geology Department, University of Adelaide), it was the most important quarry operating in the Field River (Hallett Creek) limestones. As such, it was one of the quarries which served the Brighton Cement Works, as did Thomas Cain's *Brier Burn Farm* quarry in the same locality.

After a long period of disuse *Glenfield* was reopened in 1924 and worked in three sections, producing in the following year 6,000 cubic yards of broken stone. The average output was 130 tons a week and even more when a new magazine was installed in 1927. Stones quarried between 1932 and 1937, amounted to 49,440 tons, valued at £10,188. The machinery used by the nine men employed on the quarry included a crushing plant erected near the

280



Henry Shearing, 1871. Photograph S.A.A.

At Brighton he found clay well suited to his purpose and set up business in what is now Cecelia Street, behind a vineyard (presumably David Sutherland's whose Section 180 adjoined Section 207 on which the brick kiln was located).

In 1857 Shearing's name appears in the Brighton Council rate assessment book as having a total of 17 acres, and his brother George 3 acres on the same Section.

In the same year Charles Latin of Marion was also listed as having a brick-kiln, 1 acre and a tent; in 1877 his son Philip worked a kiln on Section 117, for which he paid £8 in rates. It was a hardy life also inherited by his son Alf, who had some of his brickmaking experience at the Blackwood brick-yards walking there daily from Marion through the scrub.

In the 1865 assessments another brick-yard is listed under the name of Isaac Smith, occupier of a cottage and 3 acres on Section 151 (Morphettville) owned by John Morphett. But it was around Marion that the clay proved the most productive, and already by 1840 a Mr Sergeant (presumably of *Log House Farm*), was offering 25,000 Marion bricks for sale.

The bricks were used, as Henry wrote:

to supply Glenelg, Brighton and other places inland for some time prior to the Victorian gold rush. Then all trace in building material came to a standstill. You could ride for a week and not hear the sound of a trowel.

Henry too, downed tools and set off for the gold-fields, but after a few months he returned to Brighton and eventually moved to Marion. Here he began brickmaking on the corner of Township and Norfolk Roads close to the site of the future Methodist Church. As one of the original trustees of

this church Shearing was ecumenical enough in outlook to donate the first 200 bricks for the building of the Marion Roman Catholic Church, St Ann's. A stone's throw from this church a sample of his workmanship is still to be seen in the brick-capped wall of his old home at 38 Nixon Street, where he was Marion's first postmaster. Combining generosity with free publicity, he also donated 1,000 bricks for the building of the first Marion Council Office and Hall.

His son John carried on the brickworks before setting up a chaff and wood business, while his son Gilbert turned from chaff milling to brickmaking. The pugholes have since been reclaimed for occupation by warehouses situated directly opposite the former Thredgold home and family brickworks which covered the area of the present R.S.L. Bowling Green (previously a Council rubbish tip).

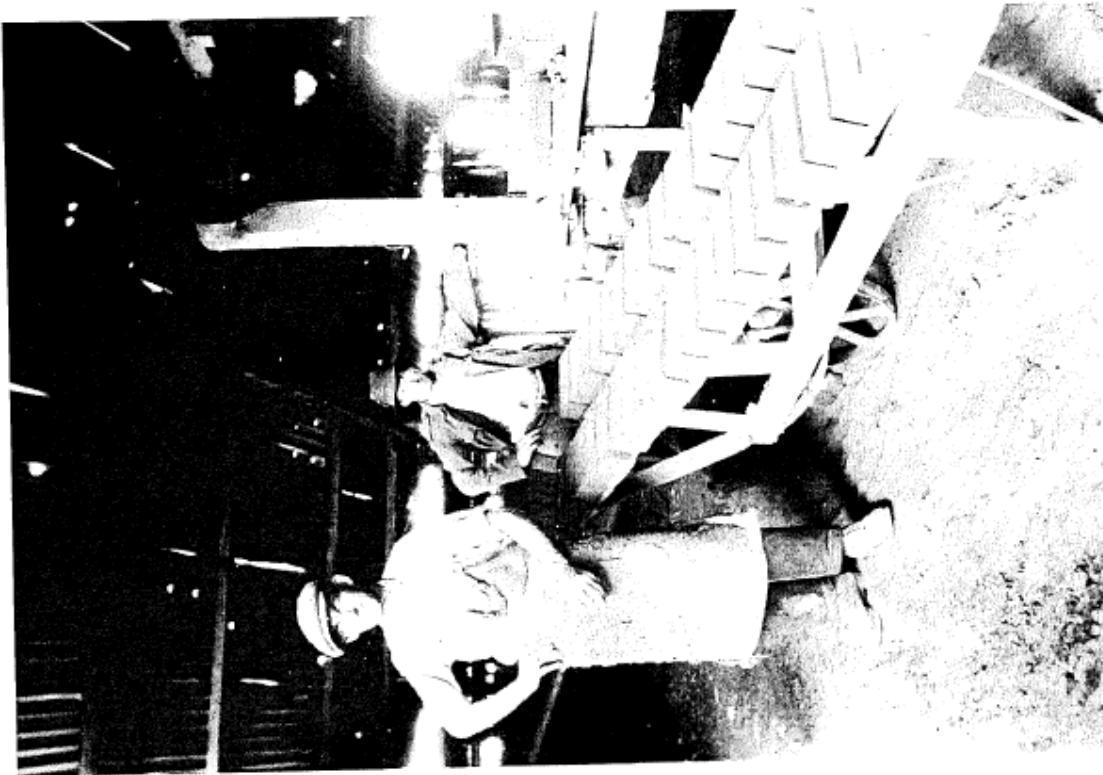
Unlike the Shearing family, the Thredgold pioneer, Charles, was a shoemaker from Northamptonshire, England, who migrated on the *Duchess of Devonshire* in the 1840s. When he was first listed in the rate assessment book in the late 1870s as owner of a brick-kiln, brickmakers were earning 13s for every 1,000 bricks 'on the back'. Thredgold's son Thomas and grandson Alf both joined the brickmaking fraternity wearing 'coats' or leather guards on their hands as they handled bricks or shoved eight-foot lengths of timber into the kilns. Much of the wood was carted by bullock teams from Kangarilla and surrounding areas, and conservationists may well blanch at the thought of 200 tons of reserve wood stacked at a brick-yard, in addition to forty tons consumed weekly by two kilns. Later oil replaced wood for burning.

Another family of brickmakers was the Boots, whose Kentish forbears had made bricks for generations. Charles Boots emigrated with his wife Charlotte in the *Lady Lilford* in 1839, and before settling in Marion, he opened brickworks on a site later occupied by the Walkerville Brewery.

His son Thomas and grandsons George and Charles junior, operated a square kiln near George Street, Marion, and when they sold to Robert William Wade ('Old Bill') he added a dome kiln. It was a family industry

Brick manufactured at Wade's brickyards, Marion.





Bricks ready for firing at Wade's kilns. Marion bricks were noted for their quality and durability.



Wade's brickyard, Marion, 1913. In the 1880s brickyards were also operated by Robert Henry Wade at Shepherd's Hill (35 acres, Section 1050).

combining the skills of John Henry Wade, his son Robert Henry and Old Bill's sons, Agin William and Clifton. The last two carried on the trade until they sold to the Metropolitan Brickworks in 1927 when building was at a low ebb at the beginning of the Depression.

At their peak before World War I, Wade's employed eight assistants working from 7 a.m. to 5 p.m. at the rate of between 5s to 7s a day. Among them were Tom Shepley and Arthur Scarborough who made all bricks by hand turning out about 1,000 sandstock bricks a day.

Tom Hurley of Marion remembers that during the Depression he worked in a pughole for 10s a day with Tom Shepley who stood on long muddy ledges hacking out pug with a crow-bar or pick. Among other more comfortable memories were the midnight suppers brought from the domestic hearth for the men keeping watch all night through. Sometimes they worked for twenty hours without a break, stoking the kilns with heavy lengths of wood to maintain the requisite temperature for firing bricks over a period of two or three days.

Although the process of firing bricks called for a very sophisticated technique, the basic technology in every phase of brickmaking was much as it

had been almost 100 years before. Pug was raised in trucks by a winch from a small railway at the bottom of the pughole (from forty-fifty feet deep). From the trucks it was tipped into the pug-mill which was operated by a horse plodding around all day in a giddy treadmill motion.

Brickmakers kept horses not only for the mill but also for carting bricks by trolley to 'the jobs' at Seaciff, Brighton, Edwardstown, Glenelg and further afield. Later the horse and trolley were replaced by a lorry of such make as the Chevrolet which carried 600 bricks a load.

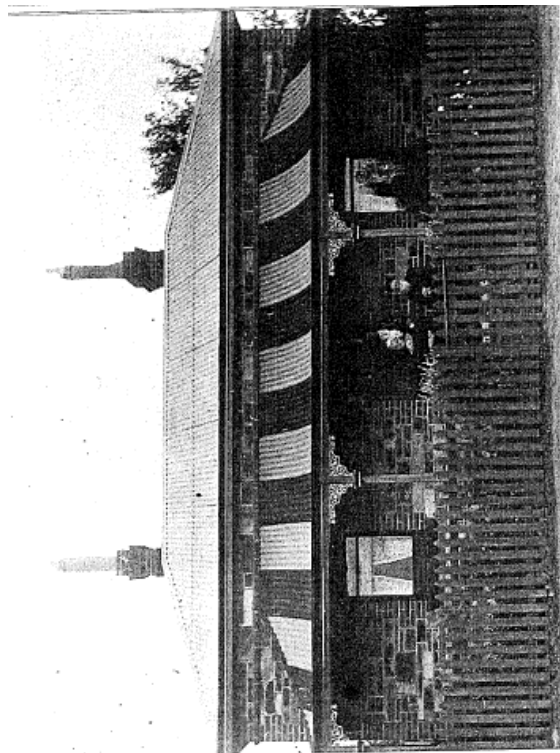
Two other brickmaking names were those of Best and Dorling. William Herbert Best operated *Elmwood* brick-yards on Section 119 (now part of the Sturt Primary School grounds), until it was taken over in 1939 by Keane and Cracknell. The Dorlings had been making bricks in the district since 1867 when James worked for Henry Shearing. In 1882 Ephraim George Dorling began working the area south of the present railway crossing on Diagonal Road.

This was the north-west corner of Section 143 which Dorling leased from Sturt storekeeper, Adolphus Attersoll, the conditions of the lease being that it:

be used as a brickyard for a term of five years at a Rental of One shilling for every thousand bricks made. The said Ephraim George Dorling also agrees to lay out sixty (£60) on building kilns and sheds and sinking well for use of the yard.

In 1892 the land was transferred to Dorling and on his death in 1907, the property passed to his widow, Susan, who sold it to George Hamilton in 1912. The pughole was later worked by Gus Margitich, and when unearthed in 1978 during roadway alterations it was found to have been used as a rubbish dump. After its use as a pughole his family grew oranges and almonds on the site, although they did not try growing bananas as had earlier been

Wade's pughole, George Street, now converted into a children's playground.



Adolphus Attersoll at home on Sturt Road.

Photograph S.A.A.

suggested by pioneers William Haines of Tea Tree Gully and Thomas Magarey of Enfield.

Now all the pugholes have been filled in and used for other purposes, after 100 years in the exercise of this ancient trade, with appropriately enough, Henry Shearing's grandson Gil, still turning out bricks in the 1950s.

Among the surviving memorials to the craftsmanship of the Marion brickmakers are the former Sturt Primary School, a row of cottages in Township Road, built by William Alfred Hersey for his workmen, and the Bethesda Christian Centre (formerly *Grassfield*, the home of Harold Rivaz and family). Another example is the brickwork of Dr Richie Gun's home in Boyle Street which combines with local freestone of an earlier period, when the property was called *Wyndham* and owned by Lucy Hawker and her nephew Clarence Hawker.

With the disappearance of these highly skilled artisans Marion lost forever their specialised knowledge and the distinctive terms of their trade with 'his gear and tackle and trim'.

