



[Redacted]

As discussed, Image has adjusted the location of the Waste Water Treatment Plant spray field so it now sits to the west of the Atlas Project Accommodation Camp. The primary reason for this move was to;

- Increase the size of the spray area to align with WQPN22; and.
- Move the spray field away from the Geomorphic Wetlands Cervantes South (DBCA).

The Prescribed Premises boundary has been revised to reflect this change in size and location of the spray field (Figure 2). Relevant spatial data has been provided as Attachment 1.

The size of the spray field has been increased as a result of revised irrigation area calculations that apply WQPN22 effluent values. This has resulted in an increase to the required spray field area from 1.23 ha to 2.99 ha.

A Section 43A amendment to the Proposal currently being assessed under Part IV of the EP Act was approved by the Environmental Protection Authority on 19 January 2024. This amendment included changes to the Development Envelope to allow for a larger area to the west of the camp for the spray field. The revised Development Envelope aligns with the revised Prescribed Premises boundary.

Figure 3 shows the revised indicative location of the plant and spray field. Figure 4 and 5 show technical drawings of the spray field arrangement which have been adjusted as part of this revision.

If you have any questions regarding the below information please contact [Redacted]  
[Redacted]

[Redacted]

|

- Attachments
- Attachment 1: Spatial data**
  - Attachment 2: Revised irrigation area calculations**









Pipe corridor connecting spray field to infrastructure (can be shifted within the infrastructure or spray area as required)

436555

100000

Water Supply Bore

Spray Field can be located anywhere within this area

Infrastructure and Camp area

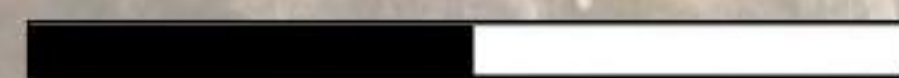
304775

307045

SPRAY AREA: 32,400m<sup>3</sup>  
FENCED AREA: 36,100m<sup>3</sup>

362731

0 100 200 m



A	12.09.23	FIRST ISSUE	JS	NF	NF
B	11.10.23	LAYOUT UPDATED	JS	DD	RW
C	07.02.24	SPRAYS UPDATED BASED OFF NEW AREA AVAILABLE	JS	DD	GS

ISSUE	DATE	REVISION	DRN	CHK	APPD	ISSUE	DATE	REVISION	DRN	CHK	APPD
810											

TRISTAR WATER SOLUTIONS PTY LTD  
56 PEEL ROAD  
D'CONNOR  
WA 6163  
TEL: (08) 9331 6133  
FAX: (08) 9331 6233  
EMAIL: SALES@TRISTARWATER.COM.AU  
WWW.TRISTARWATER.COM.AU

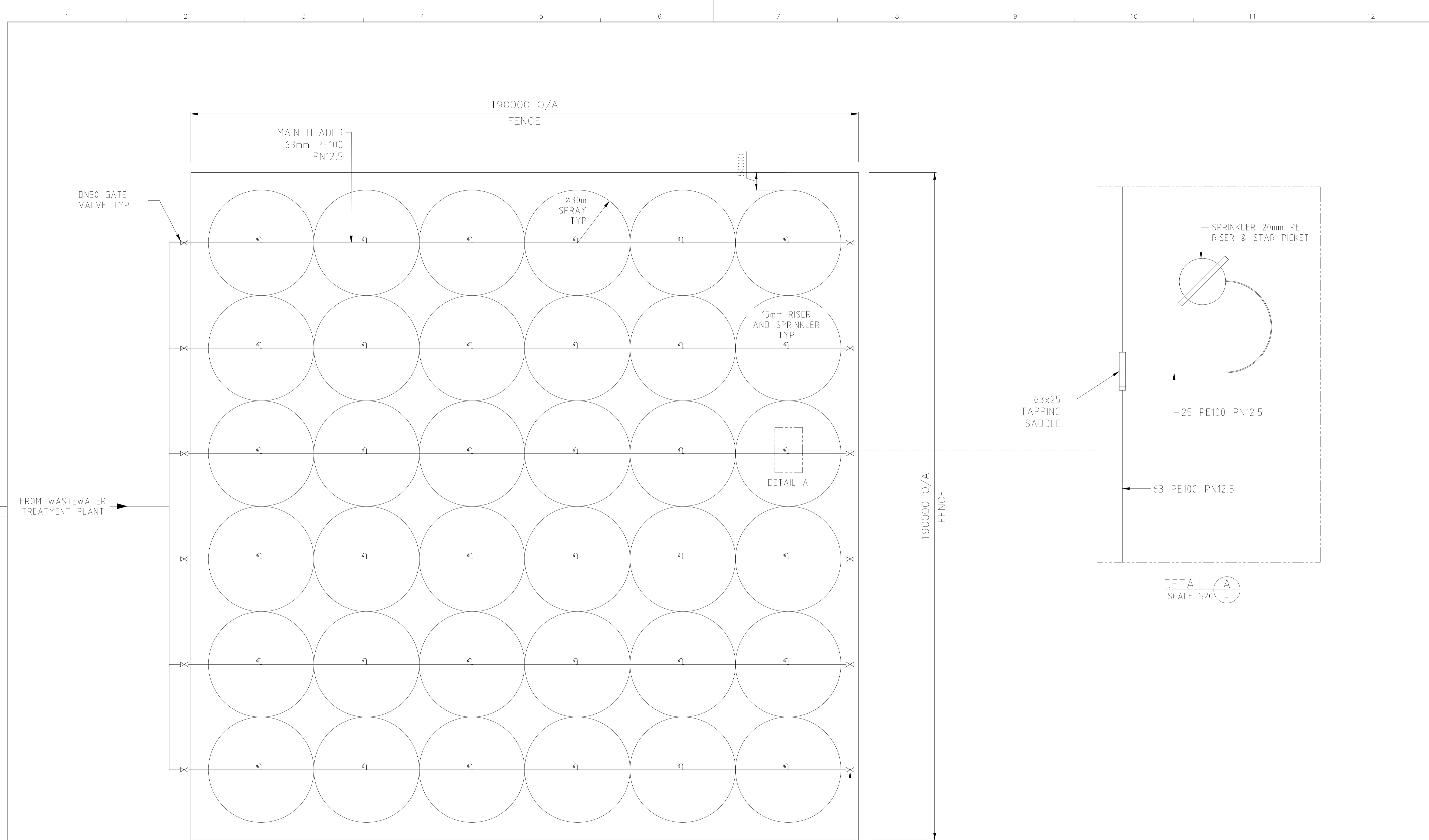


PROJX IMAGE RESOURCES  
ATLAS PROJECT  
82EP (14.76kL/day) SBR WWTP (PLUS RO REJECT)  
SPRAYFIELD LOCATION  
PROJECT P1370 PLAN P1370-M-205  
SCALE NTS

ORIGINAL SHEET SIZE  
A1

ISSUE  
C





SPRAY IRRIGATION AREA: 32,400m<sup>2</sup>  
 TOTAL FENCED AREA 36,100m<sup>2</sup>

ISSUE	DATE	REVISION	DRN	CHK	APPD	ISSUE	DATE	REVISION	DRN	CHK	APPD
A	11.04.23	FIRST ISSUE		YR	JS	AW					
0	09.06.23	IFC		YR	JS	AW					
1	11.10.23	SPRAYFIELD AREA SHAPE MODIFIED		YR	DD	RW					
2	07.02.24	SPRAYFIELD UPDATED TO NEW AREA AVAILABLE		JS	DD	GS					

ISSUE	DATE	REVISION	DRN	CHK	APPD

TRISTAR WATER SOLUTIONS PTY LTD  
 56 PEEL ROAD  
 O'CONNOR  
 WA 6163  
 TEL: (08) 9331 6133  
 FAX: (08) 9331 6233  
 EMAIL: SALES@TRISTARWATER.COM.AU  
 WWW.TRISTARWATER.COM.AU



PROJECT	P1370	PLAN		ISSUE	2
SCALE	1:250				
P1370-M-203					

ORIGINAL SHEET SIZE  
**A1**



ISSUE	DATE	REVISION	DRN	CHK	APPD	ISSUE	DATE	REVISION	DRN	CHK	APPD
A	01.06.23	FIRST ISSUE	YR	JS	AW						
0	09.06.23	IFC	YR	JS	DD						
1	11.10.23	TITLE BLOCK UPDATE	YR	DD	RW						
2	07.02.24	SPRAYS UPDATED BASED OFF NEW AREA AVAILABLE	JS	DD	GS						

ISSUE	DATE	REVISION	DRN	CHK	APPD

TRISTAR WATER SOLUTIONS PTY LTD  
 56 PEEL ROAD  
 O'CONNOR  
 WA 6163  
 TEL: (08) 9331 6133  
 FAX: (08) 9331 6233  
 EMAIL: SALES@TRISTARWATER.COM.AU  
 WWW.TRISTARWATER.COM.AU



PROJX IMAGE RESOURCES  
 ATLAS PROJECT  
 82EP (14.76m<sup>3</sup>/day) SBR w/WTP  
 PIPING & INSTRUMENTATION DIAGRAM SHEET 3 OF 3  
 PROJECT P1370 PLAN  
 SCALE NTS  
 P1370-P-103  
 ISSUE 2

ORIGINAL SHEET SIZE  
 A1

## IRRIGATION AREA CALCULATIONS

Project:	Image Resources
Project No:	P1370
Date:	7/02/2024
Author:	DD



### A. Irrigation Area Calculation

1.0 Description	Value	Unit	Comments
Number of Person	82	EP	
Hydraulic Load	250	LPD	
Total Daily Flow	20.5	m <sup>3</sup> /day	
RO Reject Volume	9	m <sup>3</sup> /day	

2.0 Nitrogen Calculation			
Effluent N, mg/l criteria	30	mg/l	Insert design effluent TN
Effluent N discharge, daily	0.615	kgN/day	
Effluent N discharge, annum	224.475	kgN/year	
Reject N, mg/l criteria	0.1	mg/l	Insert RO Reject TN
Reject N discharge, daily	0.0009	kgN/day	
Reject N discharge, annum	0.33	kgN/year	
Disposal area load limit	180	kgN/hectare/year	Refer to table below
Area required	1.248908333	hectare	
Area required	12,489	m <sup>2</sup>	Please note that this is just the disposal area and is also subject to a 5m spray drift buffer and sprinkler configuration
Area Footprint (L)	112	m	
Area Footprint (W)	112	m	

3.0 Phosphorus Calculation			
Effluent P, mg/l limit	8	mg/l	Insert design effluent TP
Effluent P discharge, daily	0.164	kgP/day	
Effluent P discharge, annum	59.86	kgP/year	
Disposal area load limit	20	kgP/hectare/year	Refer to table below
Area required	2.993	hectare	
Area required	29,930	m <sup>2</sup>	Please note that this is just the disposal area and is also subject to a 5m spray drift buffer and sprinkler configuration
Area Footprint (L)	173	m	
Area Footprint (W)	173	m	

Notes:  
No Phosphorous  
in the Reject Water

### B. Irrigation Area Soil Loading Data

Characteristics of Irrigated Soils	Vulnerability to eutrophication	Vulnerability Category	Maximum Inorganic Nitrogen (as N)	Maximum Reactive Phosphorus (as P)
			Application Rate (kg/ha/yr)	Application Rate (kg/ha/yr)
Course grained soils	Significant <sup>b</sup>	A	140	10
Sands or gravels	Low <sup>c</sup>	B	180	20
Fine grained soils	Significant <sup>b</sup>	C	300	50
Loams, clays, peat rich sediment	Low <sup>c</sup>	D	480	120