



Assets | Engineering | Environment | Noise | Spatial | Waste

Waste Management Plan

Lots 2813 and 2817 Cnr Camborne Parkway & Brackley Way,
Butler

Prepared for Axiom Properties Ltd

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Executive Summary

Axiom Properties Ltd is currently seeking Development Approval (DA) for the proposed commercial development at Lots 2813 and 2817 Cnr Camborne Parkway & Brackley Way, Butler (the Proposal).

To satisfy the conditions of the DA the City of Wanneroo (the City) requires a Waste Management Plan (WMP) to be submitted that will identify how waste is to be stored and collected from the Proposal. Axiom Properties Ltd has engaged Talis Consultants to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method for the Proposal is provided in the below table.

Proposed Waste Collection Summary

Bin Storage Area	Number/size of Refuse Bins	Number/size of Recycling Bins	Collection Frequency	Collection
1	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
2	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
3	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
4	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
5	2 x 1,100L	1 x 360L	Twice each week	Private Contractor
6	4 x 1,100L	1 x 1,100L	Twice each week	Private Contractor
7	2 x 1,100L	1 x 1,100L	Twice each week	Private Contractor
8	2 x 1,100L	1 x 360L	Twice each week	Private Contractor
9	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
10	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
11	1 x 1,100L	1 x 360L	Twice each week	Private Contractor
12	1 x 1,100L	2 x 360L	Twice each week	Private Contractor
13	2 x 1,100L	1 x 1,100L	Twice each week	Private Contractor
14	1 x 1,100L	2 x 360L	Twice each week	Private Contractor
15	1 x 1,100L	2 x 360L	Twice each week	Private Contractor
16	1 x 1,100L	1 x 1,100L	Twice each week	Private Contractor
17	1 x 1,100L	1 x 1,100L	Twice each week	Private Contractor

The private contractor's rear lift waste collection vehicle will enter the Proposal's carpark in forward gear and service bins directly from the Bin Storage Areas, utilising the dedicated service areas, twice each week. Once servicing is complete the private contractor's waste collection vehicle will exit the Proposal in forward gear.

A building manager will oversee the relevant aspects of waste management at the Proposal.



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1 Introduction

Axiom Properties Ltd is seeking development approval for the proposed commercial development located at Lots 2813 and 2817 Cnr Camborne Parkway & Brackley Way, Butler (the Proposal).

To satisfy the conditions of the development application the City of Wanneroo (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Axiom Properties Ltd has engaged Talis Consultants (Talis) to prepare this WMP to satisfy these conditions.

The Proposal is bordered by Brackley Way to the north, Exmouth Drive to the east, Butler Boulevard to the south and Camborne Parkway to the west, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage all waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal should be designed to:

- Adequately cater for the anticipated quantities of waste and recyclables to be generated;
- Provide suitable Bin Storage Area including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

2 Waste Generation

The following sections show the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated quantities of refuse and recyclables were based on the number of tenancies at the Proposal. The Proposal consists of the following commercial tenancies:

- 13 Showrooms (T1-T11 & T13) – 9,953m²;
- 1 Gym (T12) – 2,000m²;
- 2 Retail Shops (T14-T15) - 561m²;
- 2 Car Service Centres (T16 & T17) – 680m²; and
- 1 Car Wash (T18) – 200m².

The Car Wash (T18) has been excluded from waste generation calculations as it is expected that this tenancy will generate nominal amounts of refuse and recyclables and will have its own smaller bins (120L-240L) distributed amongst the cleaning vacuum bays. These bins will be available to users of the Car Wash tenancy and bins will be collected onsite by a private contractor, as required.

2.2 Waste Generation Rates

The anticipated quantities of refuse and recyclables for the Proposal were based upon the Western Australian Local Government Association's (WALGA) *Commercial and Industrial Waste Management Plan Guidelines* (2014) and the City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2017).

2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required. The waste generation volumes for refuse and recyclables adopted for this study are shown in Table 2-1. It is anticipated that the Proposal will generate a total of 33,612L of refuse and 12,711L of recyclables each week.

Table 2-1: Estimated Waste Generation

Commercial Tenancies	Operating Days	Total Area (m ²)	Waste Generation Rate (L/week)	Waste Generation (L/Week)
Refuse				
Showroom	7	9,953	40	27,868
Gym	7	2,000	10	1,400
Retail Shops	7	561	50	1,964
Car Service Centre	7	680	50	2,380
Total				33,612
Recyclables				
Showroom	7	9,953	10	6,967
Gym	7	2,000	10	1,400
Retail Shops	7	561	50	1,964
Car Service Centre	7	680	50	2,380
Total				12,711

3 Waste Storage

To ensure that waste is managed appropriately at the Proposal, it is important to allow for sufficient space to accommodate the required quantity of bins within the Bin Storage Areas. The procedure and bins to be used in these areas are described in the following sections.

3.1 Internal Bins

The Proposal will have a minimum of two bins to facilitate the separate disposal of refuse and recycling within each commercial tenancy. The bins will be transferred by tenants, staff/cleaners, or their authorised representative, to the respective Bin Storage Area and be deposited into the appropriate bin.

3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 3-1: Typical Bin Dimensions

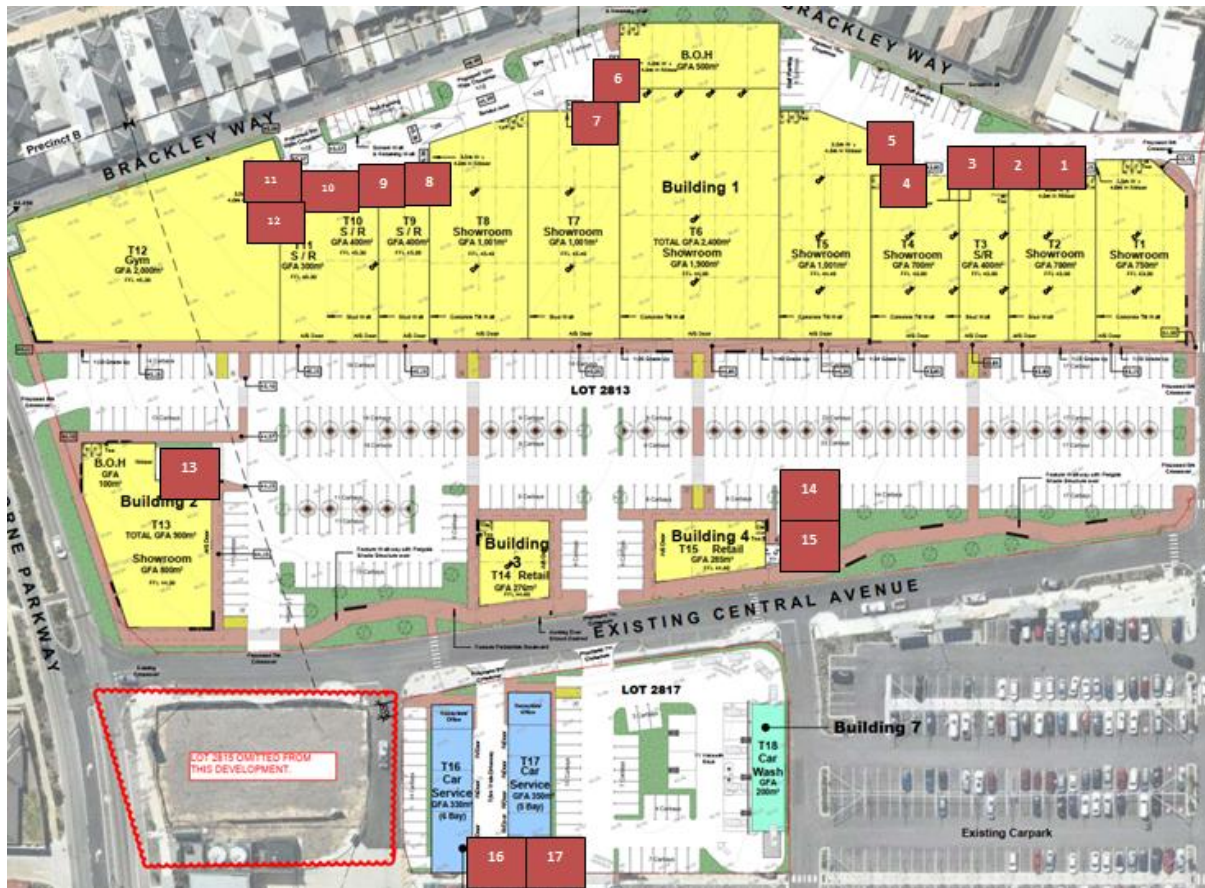
Dimensions	Bin Sizes			
	240L	360L	660L	1,100L
Depth (mm)	730	848	780	1070
Width (mm)	585	680	1260	1240
Height (mm)	1060	1100	1200	1300
Area (mm ²)	427	577	983	1327

Reference: SULO Bin Specification Data Sheets

3.3 Bin Storage Areas

The Proposal contains seventeen Bin Storage Areas, as shown in Diagram 3-1. The following sections illustrate the bin requirements for each Bin Storage Area.

Diagram 3-1: Bin Storage Areas



3.3.1 Bin Storage Area 1

Bin Storage Area 1 will accommodate the following tenancies:

- Showroom T1 – 750m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 1 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-2, Bin Storage Area 1 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-2: Bin Requirements for Bin Storage Area 1

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	2,100	5	3	2	1
Recycling	525	2	1	1	1

The configuration of these bins within Bin Storage Area 1 is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.2 Bin Storage Area 2

Bin Storage Area 2 will accommodate the following tenancies:

- Showroom T2 – 700m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 2 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-3, Bin Storage Area 2 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-3: Bin Requirements for Bin Storage Area 2

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,960	5	3	2	1
Recycling	490	2	1	1	1

The configuration of these bins within Bin Storage Area 2 is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.3 Bin Storage Area 3

Bin Storage Area 3 will accommodate the following tenancies:

- Showroom T3 – 400m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 3 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-4, Bin Storage Area 3 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-4: Bin Requirements for Bin Storage Area 3

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,120	3	2	1	1
Recycling	280	1	1	1	1

The configuration of these bins within Bin Storage Area 3 is shown in Figure 3. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 3 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.4 Bin Storage Area 4

Bin Storage Area 4 will accommodate the following tenancies:

- Showroom T4 – 700m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 4 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-5, Bin Storage Area 4 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-5: Bin Requirements for Bin Storage Area 4

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,960	5	3	2	1
Recycling	490	2	1	1	1

The configuration of these bins within Bin Storage Area 4 is shown in Figure 4. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 4 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.5 Bin Storage Area 5

Bin Storage Area 5 will accommodate the following tenancies:

- Showroom T5 – 1001m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 5 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-6, Bin Storage Area 5 has been sized to accommodate:

- Two 1,100L refuse bins; and
- One 360L recycling bin.

Table 3-6: Bin Requirements for Bin Storage Area 5

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	2,803	6	4	3	2
Recycling	701	2	1	1	1

The configuration of these bins within Bin Storage Area 5 is shown in Figure 4. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 4 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.6 Bin Storage Area 6

Bin Storage Area 6 will accommodate the following tenancies:

- Showroom T6 – 2400m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 6 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-7, Bin Storage Area 6 has been sized to accommodate:

- Four 1,100L refuse bins; and
- One 1,100L recycling bin.

Table 3-7: Bin Requirements for Bin Storage Area 6

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	6,720	14	10	6	4
Recycling	1,680	4	3	2	1

The configuration of these bins within Bin Storage Area 6 is shown in Figure 5. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 5 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.7 Bin Storage Area 7

Bin Storage Area 7 will accommodate the following tenancies:

- Showroom T7 – 1001m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 7 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-8, Bin Storage Area 7 has been sized to accommodate:

- Two 1,100L refuse bins; and
- One 1,100L recycling bin.

Table 3-8: Bin Requirements for Bin Storage Area 7

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	2,803	6	4	3	2
Recycling	701	2	1	1	1

The configuration of these bins within Bin Storage Area 7 is shown in Figure 5. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 5 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.8 Bin Storage Area 8

Bin Storage Area 8 will accommodate the following tenancies:

- Showroom T8 – 1001m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 8 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-9, Bin Storage Area 8 has been sized to accommodate:

- Two 1,100L refuse bins; and
- One 360L recycling bin.

Table 3-9: Bin Requirements for Bin Storage Area 8

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	2,803	6	4	3	2
Recycling	701	2	1	1	1

The configuration of these bins within Bin Storage Area 8 is shown in Figure 6. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 6 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.9 Bin Storage Area 9

Bin Storage Area 9 will accommodate the following tenancies:

- Showroom T9 – 400m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 9 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-10, Bin Storage Area 9 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-10: Bin Requirements for Bin Storage Area 9

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,120	3	2	1	1
Recycling	280	1	1	1	1

The configuration of these bins within Bin Storage Area 9 is shown in Figure 6. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 6 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.10 Bin Storage Area 10

Bin Storage Area 10 will accommodate the following tenancies:

- Showroom T10 – 400m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 10 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-11, Bin Storage Area 10 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-11: Bin Requirements for Bin Storage Area 10

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,120	3	2	1	1
Recycling	280	1	1	1	1

The configuration of these bins within Bin Storage Area 10 is shown in Figure 7. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 7 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.11 Bin Storage Area 11

Bin Storage Area 11 will accommodate the following tenancies:

- Showroom T11 – 300m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 11 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-12, Bin Storage Area 11 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 360L recycling bin.

Table 3-12: Bin Requirements for Bin Storage Area 11

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	840	2	2	1	1
Recycling	210	1	1	1	1

The configuration of these bins within Bin Storage Area 11 is shown in Figure 8. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 8 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.12 Bin Storage Area 12

Bin Storage Area 12 will accommodate the following tenancies:

- Gym T12 – 2000m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 12 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-13, Bin Storage Area 12 has been sized to accommodate:

- One 1,100L refuse bin; and
- Two 360L recycling bins.

Table 3-13: Bin Requirements for Bin Storage Area 12

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,400	3	2	2	1
Recycling	1,400	3	2	2	1

The configuration of these bins within Bin Storage Area 12 is shown in Figure 8. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 8 represents the maximum requirements

assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.13 Bin Storage Area 13

Bin Storage Area 13 will accommodate the following tenancies:

- Showroom T13 – 900m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 13 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-14, Bin Storage Area 13 has been sized to accommodate:

- Two 1,100L refuse bin; and
- One 1,100L recycling bin.

Table 3-14: Bin Requirements for Bin Storage Area 13

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	2,520	6	4	2	2
Recycling	630	2	1	1	1

The configuration of these bins within Bin Storage Area 13 is shown in Figure 9. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 9 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.14 Bin Storage Area 14

Bin Storage Area 14 will accommodate the following tenancies:

- Retail T14 – 276m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 14 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-15 Bin Storage Area 14 has been sized to accommodate:

- One 1,100L refuse bin; and
- Two 360L recycling bins.

Table 3-15: Bin Requirements for Bin Storage Area 14

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	966	3	2	1	1
Recycling	966	3	2	1	1

The configuration of these bins within Bin Storage Area 14 is shown in Figure 10. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 10 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.15 Bin Storage Area 15

Bin Storage Area 15 will accommodate the following tenancies:

- Retail T15 – 285m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 15 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-16, Bin Storage Area 15 has been sized to accommodate:

- One 1,100L refuse bin; and
- Two 360L recycling bins.

Table 3-16: Bin Requirements for Bin Storage Area 15

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	966	3	2	1	1
Recycling	966	3	2	1	1

The configuration of these bins within Bin Storage Area 15 is shown in Figure 10. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 10 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.16 Bin Storage Area 16

Bin Storage Area 16 will accommodate the following tenancies:

- Car Service T16 – 330m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 16 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-17, Bin Storage Area 16 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 1,100L recycling bin.

Table 3-17: Bin Requirements for Bin Storage Area 16

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,155	3	2	1	1
Recycling	1,155	3	2	1	1

The configuration of these bins within Bin Storage Area 16 is shown in Figure 11. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 11 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.3.17 Bin Storage Area 17

Bin Storage Area 17 will accommodate the following tenancies:

- Car Service T17 – 350m².

To ensure sufficient area is available for storage of the bins, the amount of bins required for Bin Storage Area 17 was modelled utilising the bin sizes in Table 3-1 and assuming collection of refuse and recyclables twice each week from the Proposal’s Service Area.

Based on the results shown in Table 3-18, Bin Storage Area 17 has been sized to accommodate:

- One 1,100L refuse bin; and
- One 1,100L recycling bin.

Table 3-18: Bin Requirements for Bin Storage Area 17

Waste Stream	Waste Generation (L/week)	Number of Bins Required			
		240L	360L	660L	1,100L
Refuse	1,225	3	2	1	1
Recycling	1,225	3	2	1	1

The configuration of these bins within Bin Storage Area 17 is shown in Figure 11. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 11 represents the maximum requirements assuming two collections each week of refuse and recyclables. Increased collection frequencies would reduce the required number of bins.

3.4 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Areas;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of rows of bins;

- Doors to the Bin Storage Areas should be self-closing and vermin proof;
- Doors to the Bin Storage Areas must be wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage that identifies what items are and are not accepted in the refuse and recyclable bins;
- Undercover where possible and be designed to not permit stormwater to enter into the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins to be reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by the building manager during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

4 Waste Collection

A private contractor will service the Proposal by collecting refuse and recyclables from the tenancies respective Bin Storage Areas, as shown in Diagram 3-1.

The private contractor's waste collection vehicle will enter the Proposal's carpark in forward gear and service bins directly from the Bin Storage Areas, utilising the dedicated service areas, twice each week. Private contractor's staff transfer bins to and from the collection vehicle from the bin storage areas during servicing. Once servicing is complete the private contractor's waste collection vehicle will exit the Proposal in forward gear.

The private contractor will be provided with key/PIN code access to the Bin Storage Areas and security access gates to facilitate servicing, if required.

Servicing of bins onsite will reduce the noise generated in the area during collection. In addition, it will remove the need for bins on the street, maintaining the amenity of the area and removing the requirement for a lay down area to temporarily store bins on the verge before the collection vehicle arrives.

The ability of waste collection vehicles to access the Proposal will be assessed by a traffic engineers and will be included within their Traffic Impact Assessment.

4.1 Bulk and Speciality Waste Collection

Any bulk waste material will be removed from the Proposal as it is generated and will be the responsibility of the individual tenancies. Adequate space will be allocated throughout the Proposal for placement of cabinets/containers for collection and storage of specialty wastes that are unable to be disposed of within the bins. Specialty wastes may include items such as:

- Refurbishment wastes from fitouts;
- Batteries;
- E-wastes;
- White goods/appliances;
- Cleaning chemicals; and
- Commercial light globes

Bulk wastes and specialty wastes will be removed from the Proposal as sufficient volumes have been accumulated to warrant disposal. Bulk and specialty waste collection will be monitored by the building manager who will organise their transport to the appropriate waste facility, as required.

5 Waste Management

A building manager will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Ensure all tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenant behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality Waste Management and assist tenants with its removal, as required;
- Regularly engage with tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the appointed private contractor to ensure efficient and effective waste service is maintained.

6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently large Bin Storage Areas for refuse and recyclables based on the anticipated waste generation rates and a suitable configuration of bins. This indicates that satisfactorily designed Bin Storage Areas have been provided and collection of refuse and recycling bins can be completed from the Proposal.

The private contractor's waste collection vehicle will enter the Proposal's carpark in forward gear and service bins directly from the Bin Storage Areas, utilising the dedicated service areas, twice each week. Once servicing is complete the private contractor's waste collection vehicle will exit the Proposal in forward gear.

A building manager will oversee the relevant aspects of waste management at the Proposal.



Figures

Figure 1: Locality Plan

Figure 2: Bin Storage Area 1 & 2

Figure 3: Bin Storage Area 3

Figure 4: Bin Storage Area 4 & 5

Figure 5: Bin Storage Area 6 & 7

Figure 6: Bin Storage Area 8 & 9

Figure 7: Bin Storage Area 10

Figure 8: Bin Storage Area 11 & 12

Figure 9: Bin Storage Area 13

Figure 10: Bin Storage Area 14 & 15

Figure 11: Bin Storage Area 16 & 17



LEGEND

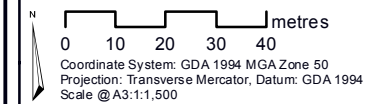
- Site Boundary
- Cadastre

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LOCALITY
 Lots 2813 and 2817
 Corner Camborne Parkway
 and Brackley Way
 Butler WA 6036

Axiom Properties Ltd

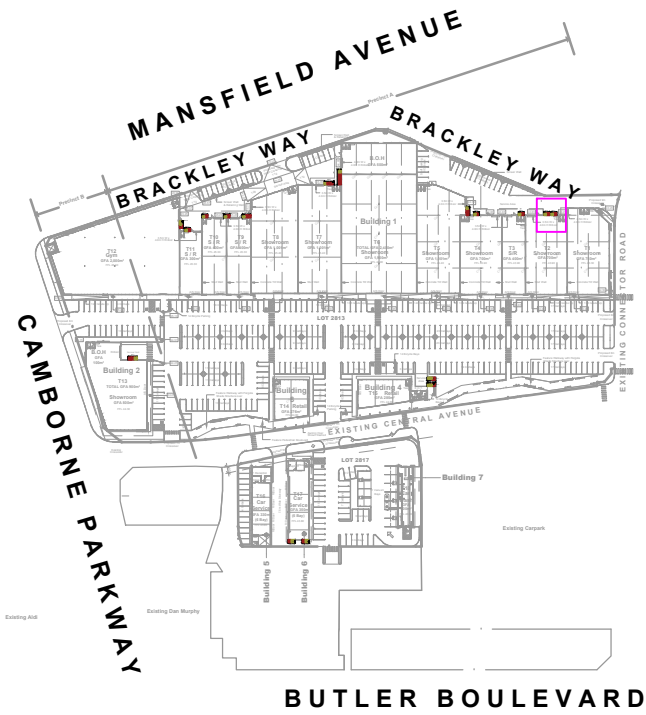


Prepared: F Walker	Date: 27/06/2019
Checked: J Wroe	Project No: TW19037
Reviewed: R Hayton	Revision: A



Figure 01

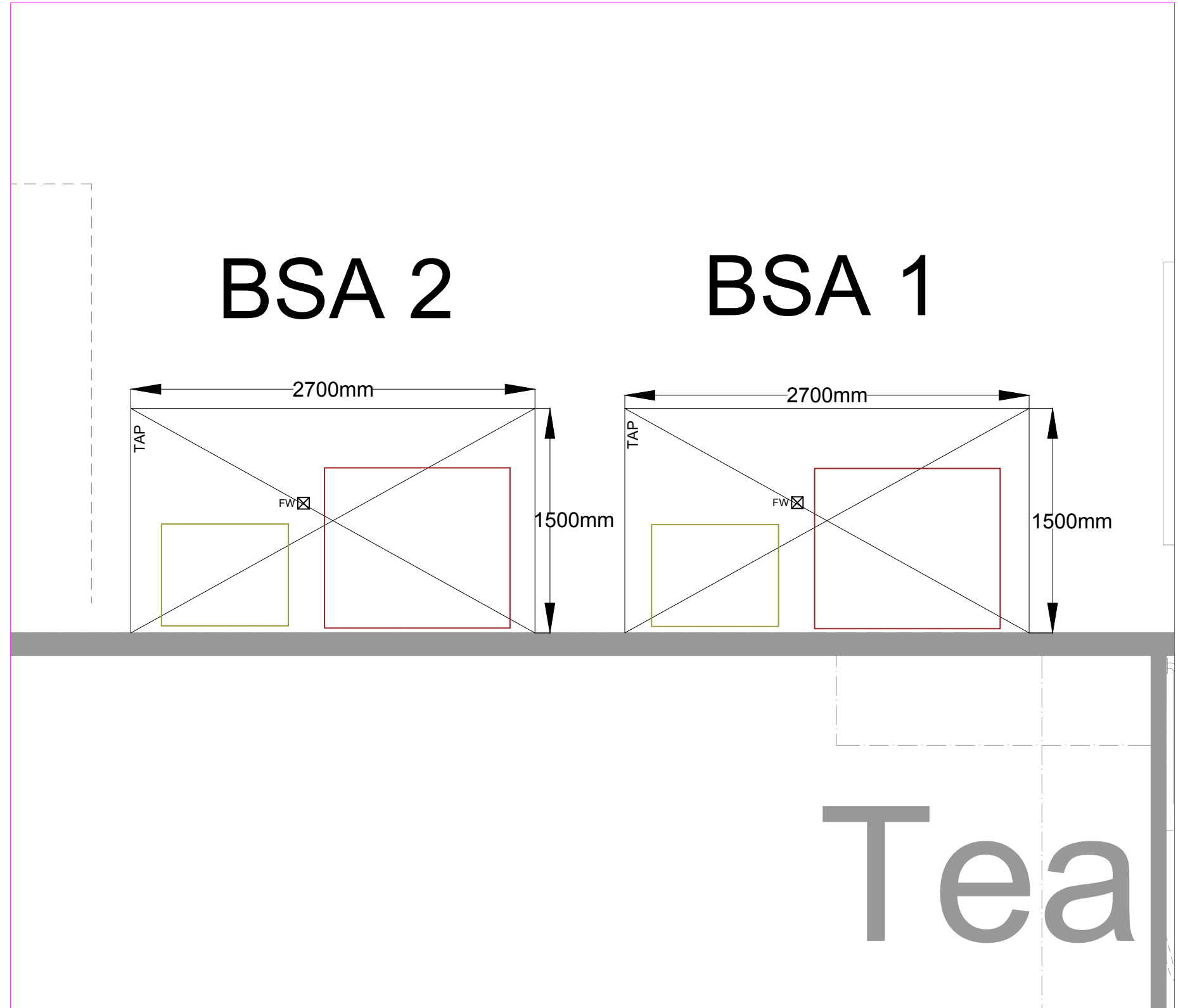
BIN STORAGE AREA 1 & 2



Legend:

Bin Storage Area 1 & 2

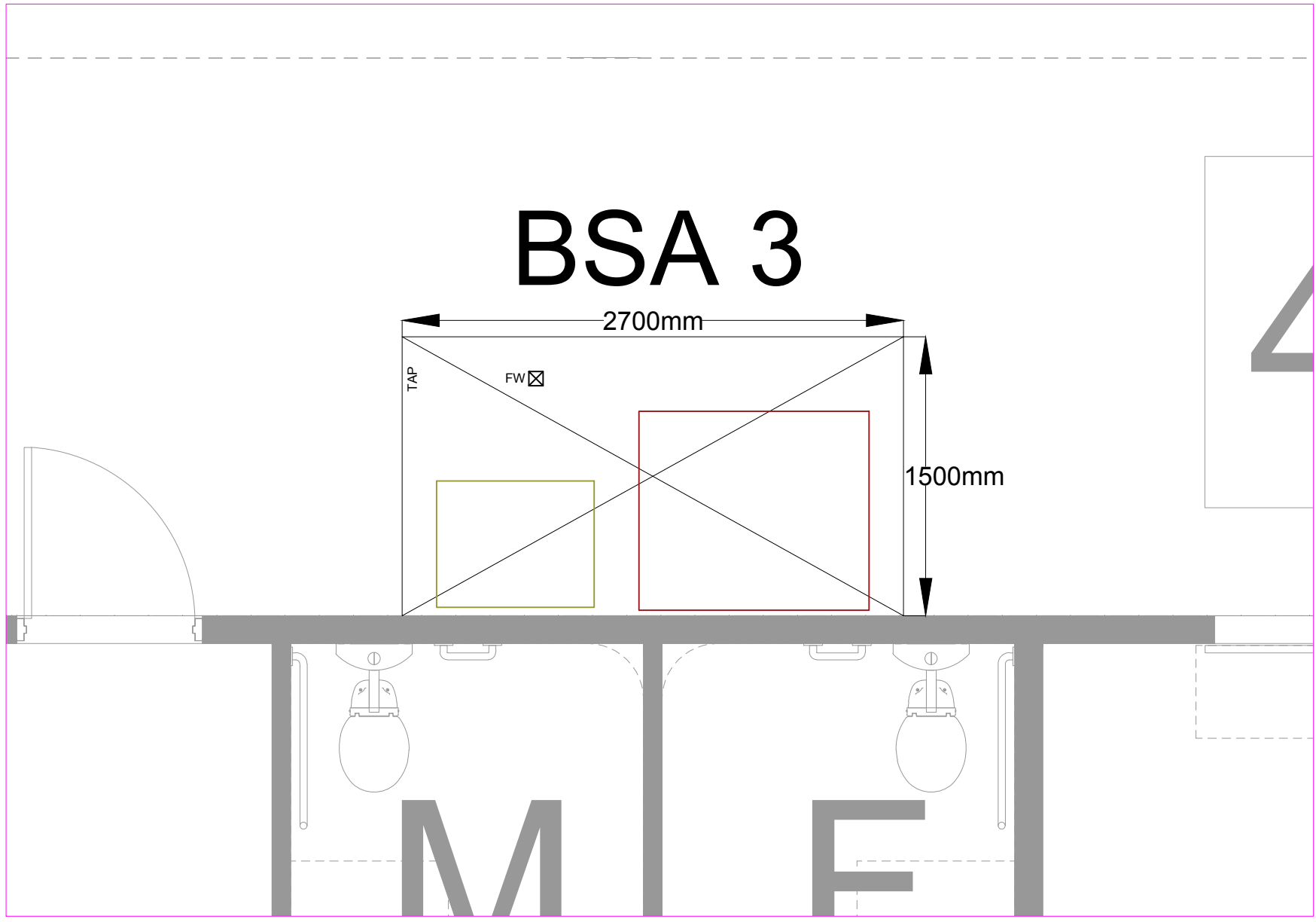
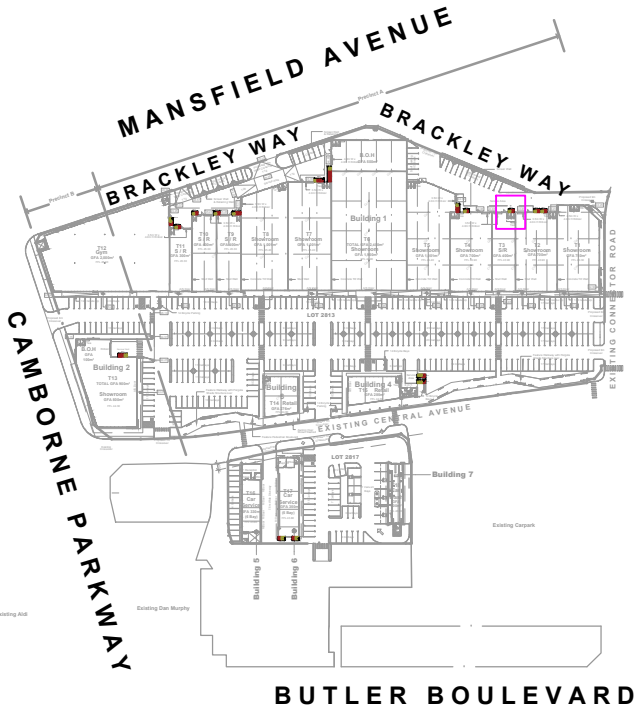
- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)



NOTES		No.	Date	By	App.
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A	28/06/19	RH	JW	FIRST ISSUE	JW
No.	Date	By	App.	Amendment / Issue	App.

Drawn by:	RH	Job No:	TW19039
Checked by:	JW	File No:	TW19039DWG001
Approved by:	JW	Fig. No:	002
Scale:	NTS	Rev:	A
Date:	28/06/19		

BIN STORAGE AREA 3

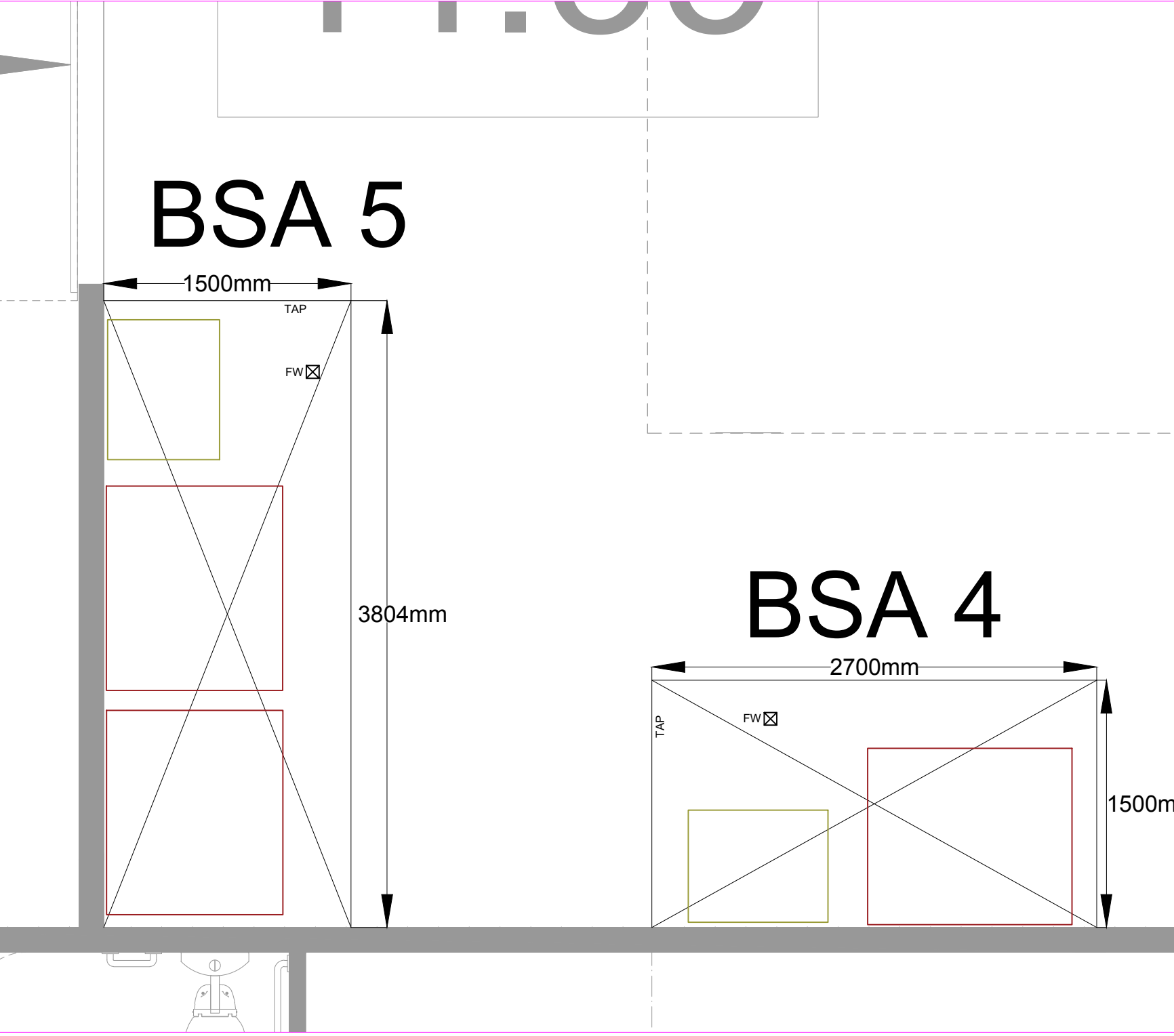
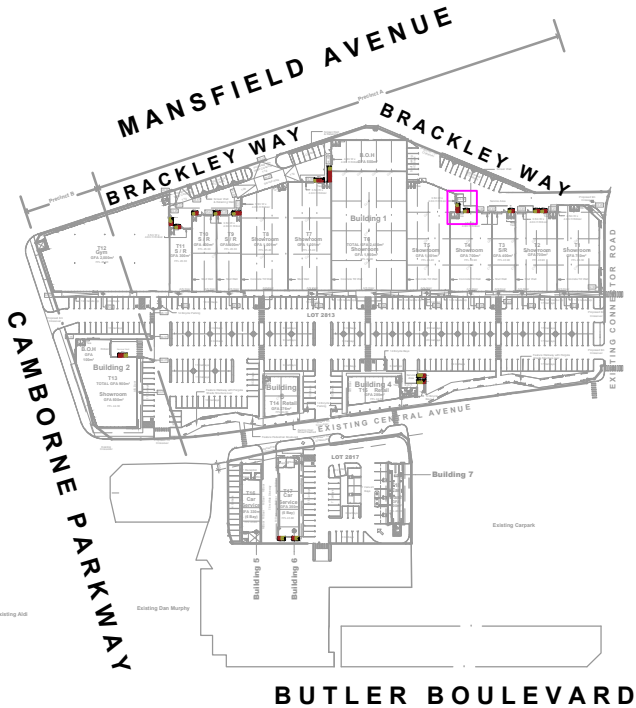


Legend:

Bin Storage Area 3

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

BIN STORAGE AREA 4 & 5



Legend:

Bin Storage Area 4

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

Bin Storage Area 5

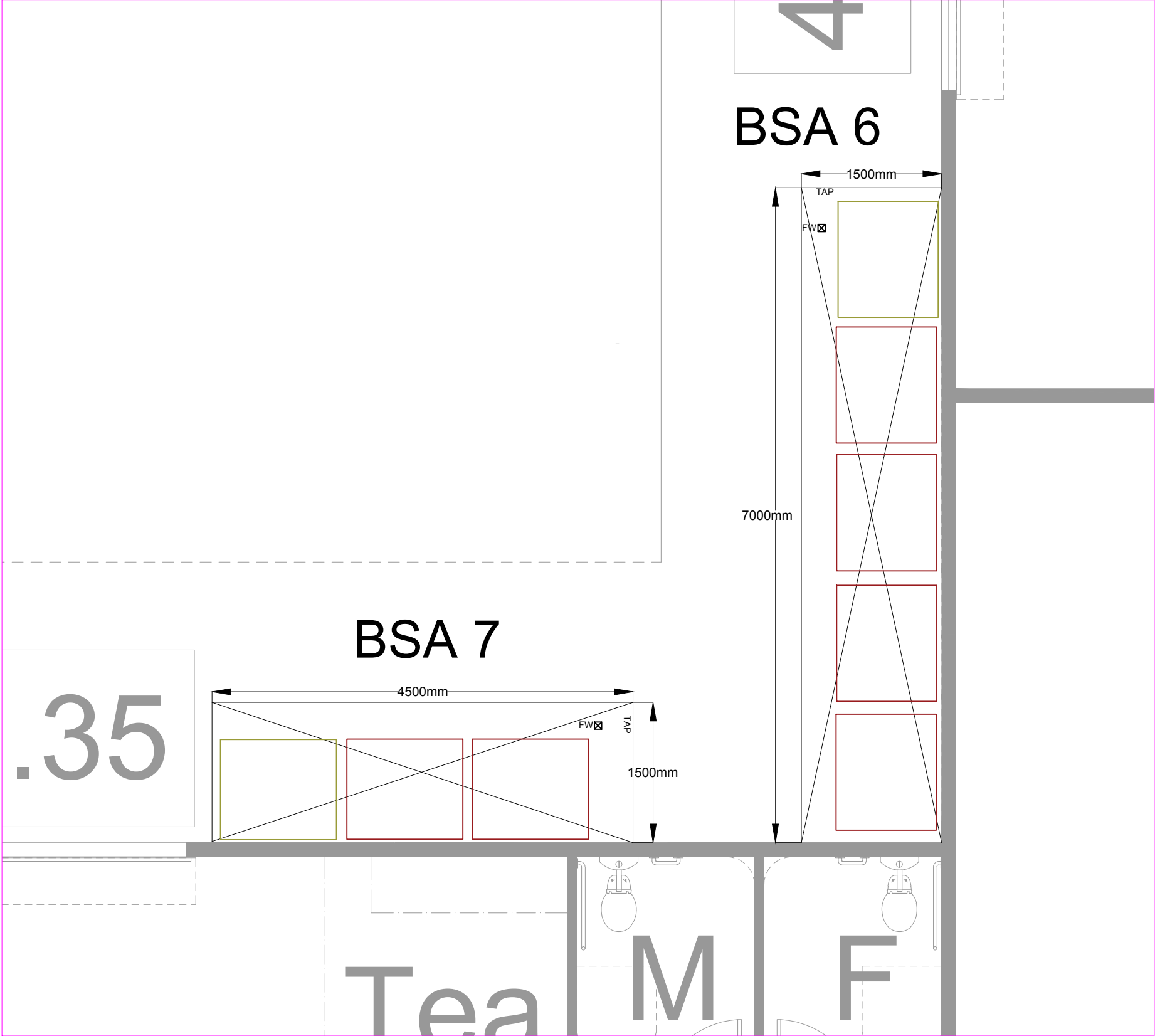
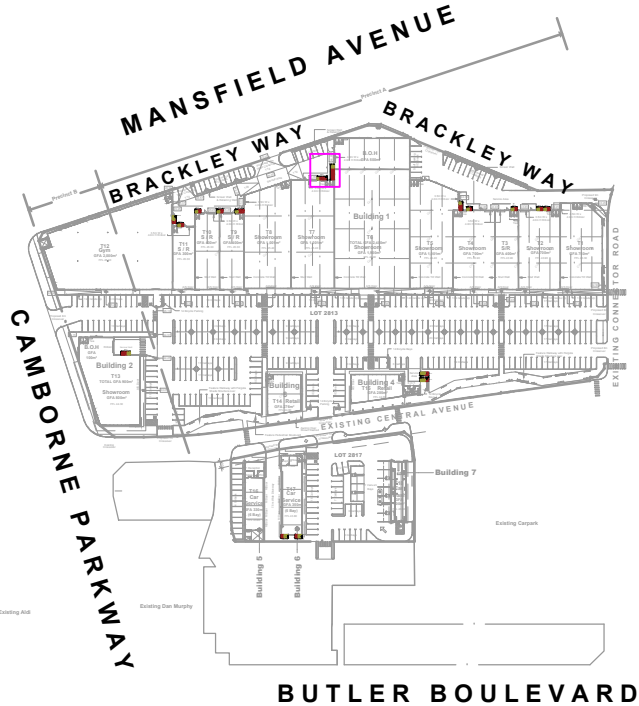
- 2 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

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A	28/06/19	RH JW	JW
		CHANG CNR	App.

Project:	Title:
Lots 2813 and 2817 Cnr Camborne Parkway & Brackley Way, Butler	Bin Storage Area 4 & 5

Drawn by:	RH	Job No:	TW19039
Checked by:	JW	File No:	TW19039DWG003
Approved by:	JW	Fig. No:	004
Scale:	NTS	Rev:	A
Date:	28/06/19		

BIN STORAGE AREA 6 & 7



Legend:

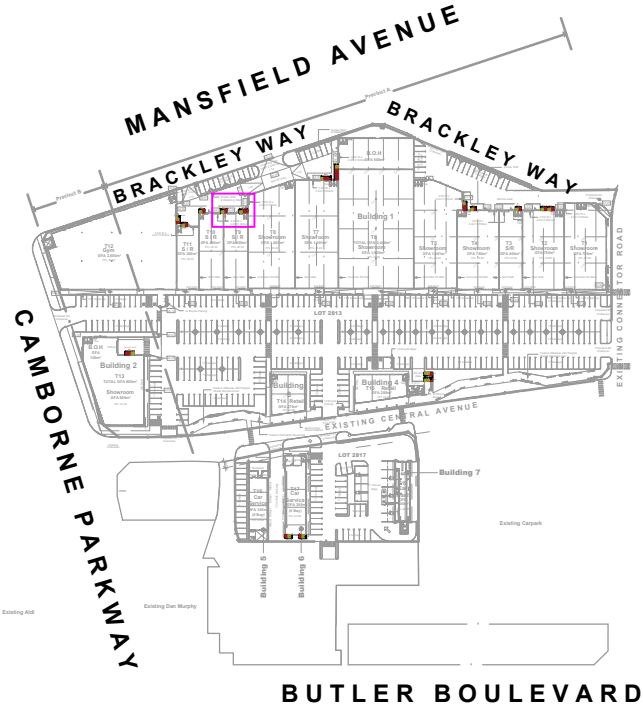
Bin Storage Area 6

- 4 x 1100L refuse (1070mm x 1240mm)
- 1 x 1100L recycling (1070mm x 1240mm)

Bin Storage Area 7

- 2 x 1100L refuse (1070mm x 1240mm)
- 1 x 1100L recycling (1070mm x 1240mm)

BIN STORAGE AREA 8 & 9



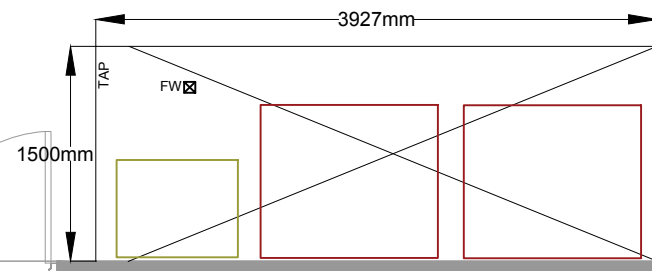
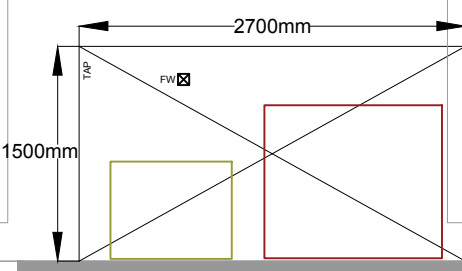
& Retaining Wall

45.35

BSA 9

BSA 8

45.25



Dis

3.5m W x

Legend:

Bin Storage Area 8

- 2 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

Bin Storage Area 9

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

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ASSET MANAGEMENT
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Level 1 660 Newcastle Street,
Leederville WA 6007
PO Box 454, Leederville WA 6903

Client: Axiom Properties Ltd

No.	Date	By	Amendment / Issue	App.
A	28/06/19	RH, JW	FIRST ISSUE	JW

Project: Lots 2813 and 2817 Cnr
Camborne Parkway & Brackley
Way, Butler

Title: Bin Storage Area 8 & 9

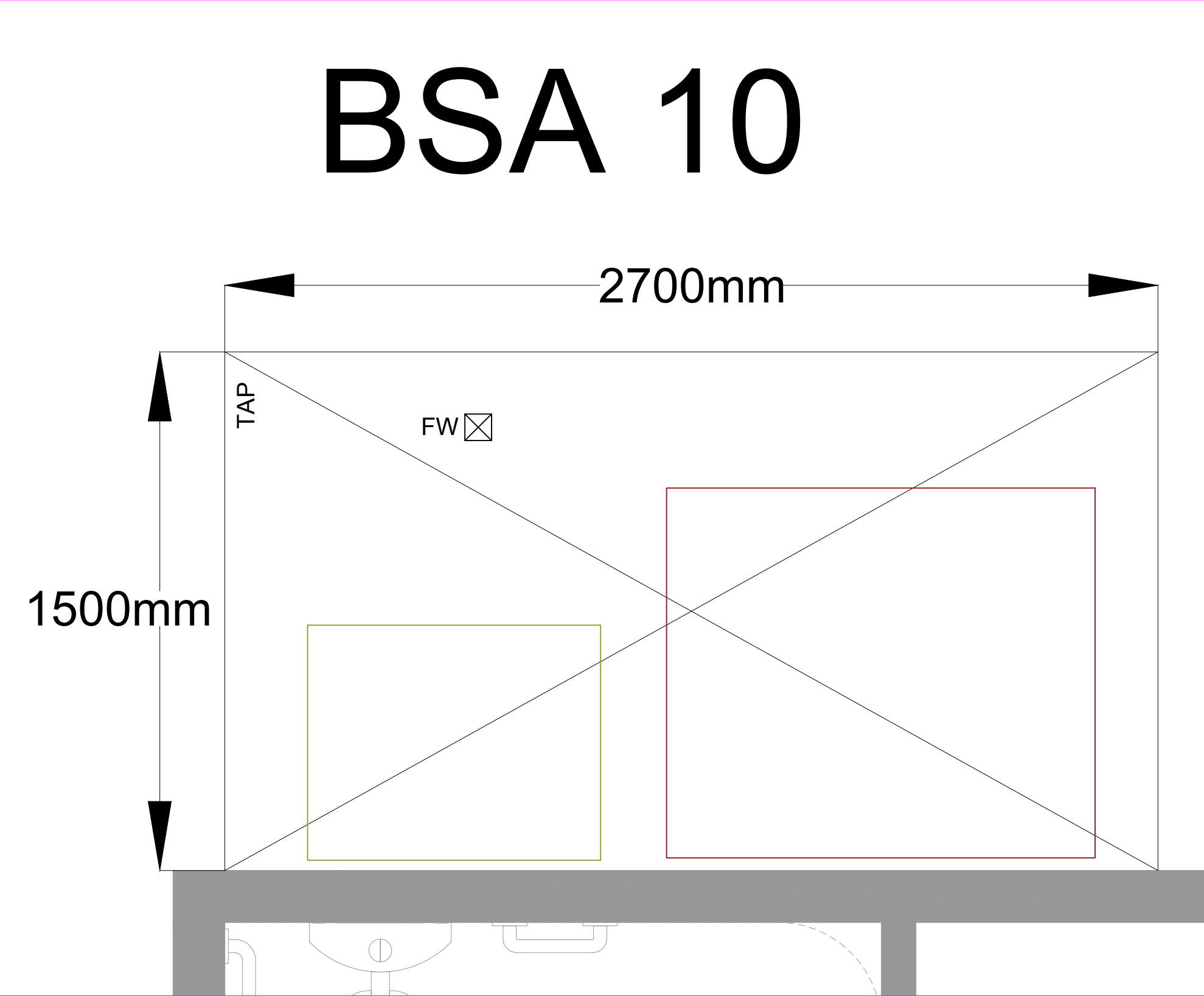
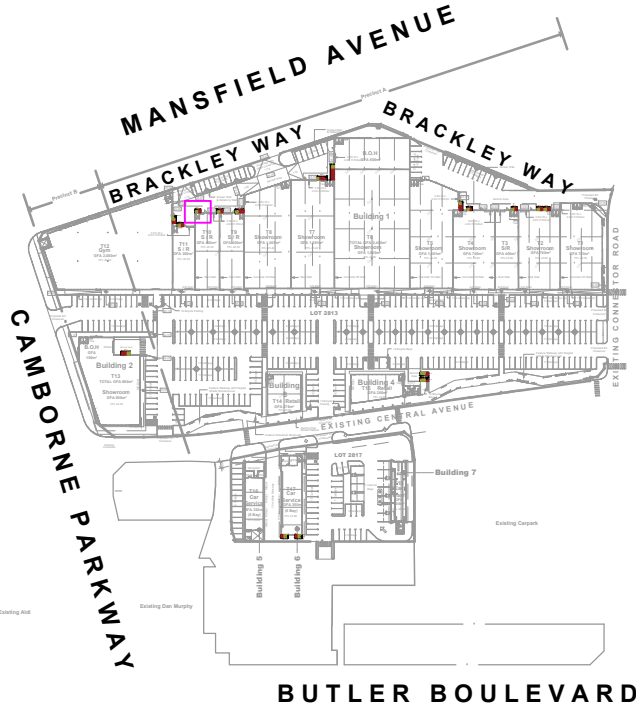
Drawn by:	RH	Job No:	TW19039
Checked by:	JW	File No:	TW19039DWG005
Approved by:	JW	Fig. No:	006
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BIN STORAGE AREA 10

BSA 10

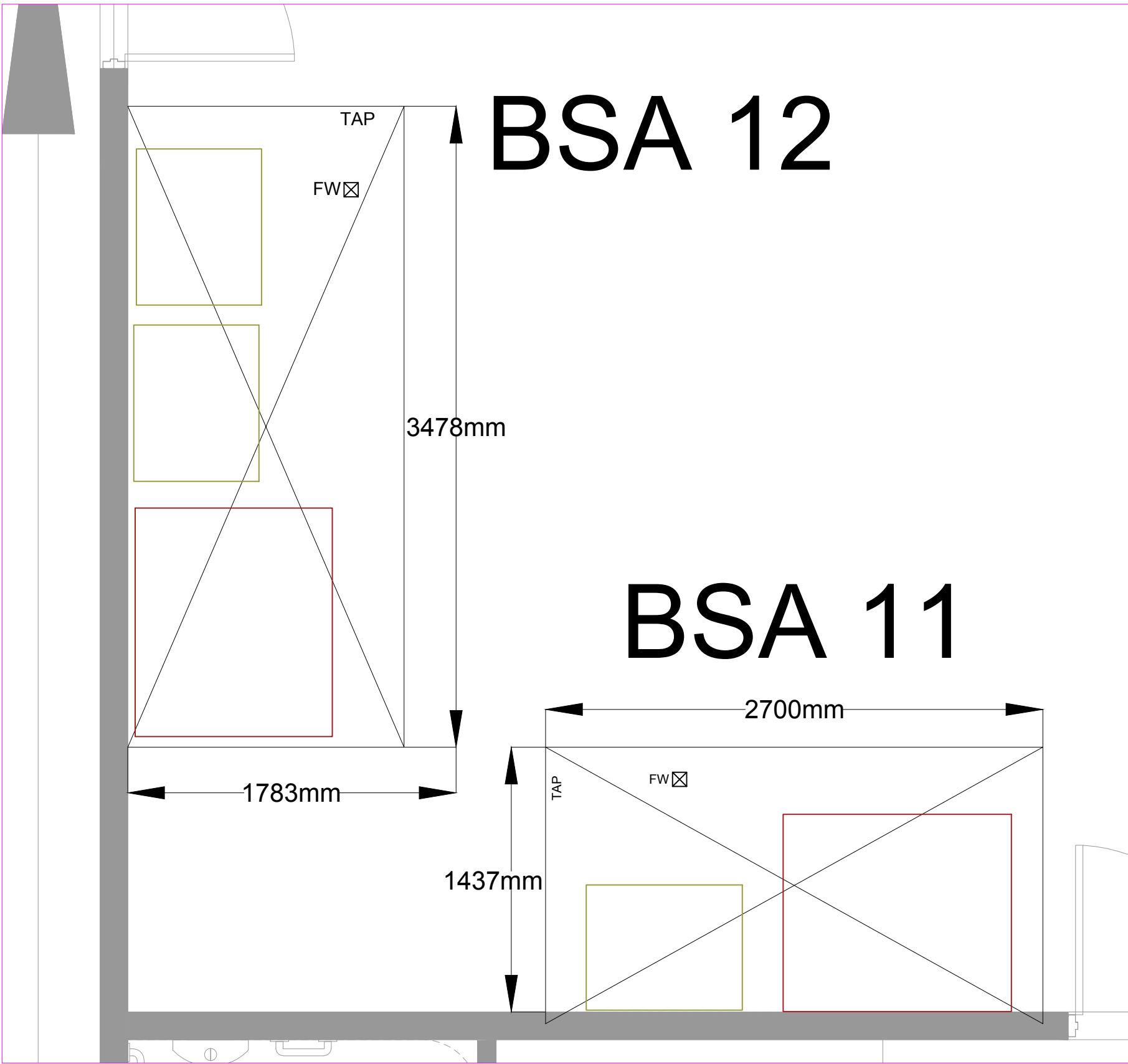
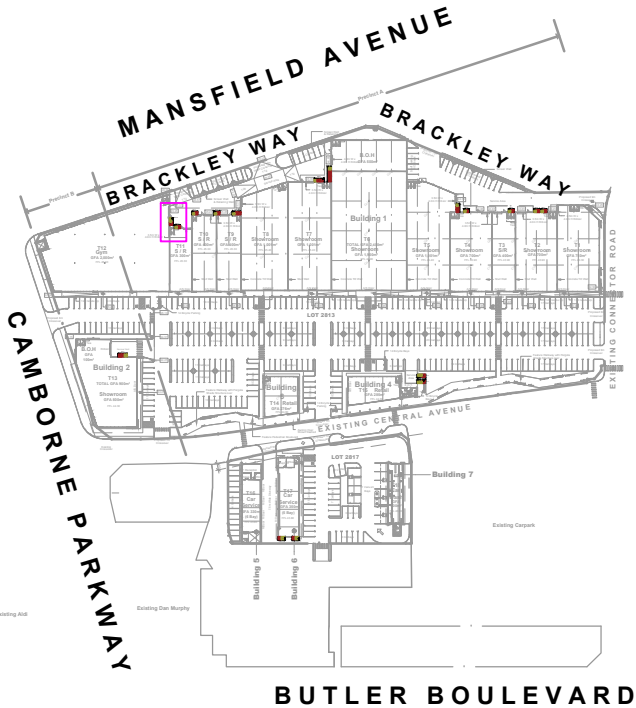


Legend:

Bin Storage Area 10

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

BIN STORAGE AREA 11 & 12



Legend:

Bin Storage Area 11

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 360L recycling (848mm x 680mm)

Bin Storage Area 12

- 1 x 1100L refuse (1070mm x 1240mm)
- 2 x 360L recycling (848mm x 680mm)

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A	28/06/19	RH JW	FIRST ISSUE	JW

Project: Lots 2813 and 2817 Cnr
Camborne Parkway & Brackley
Way, Butler

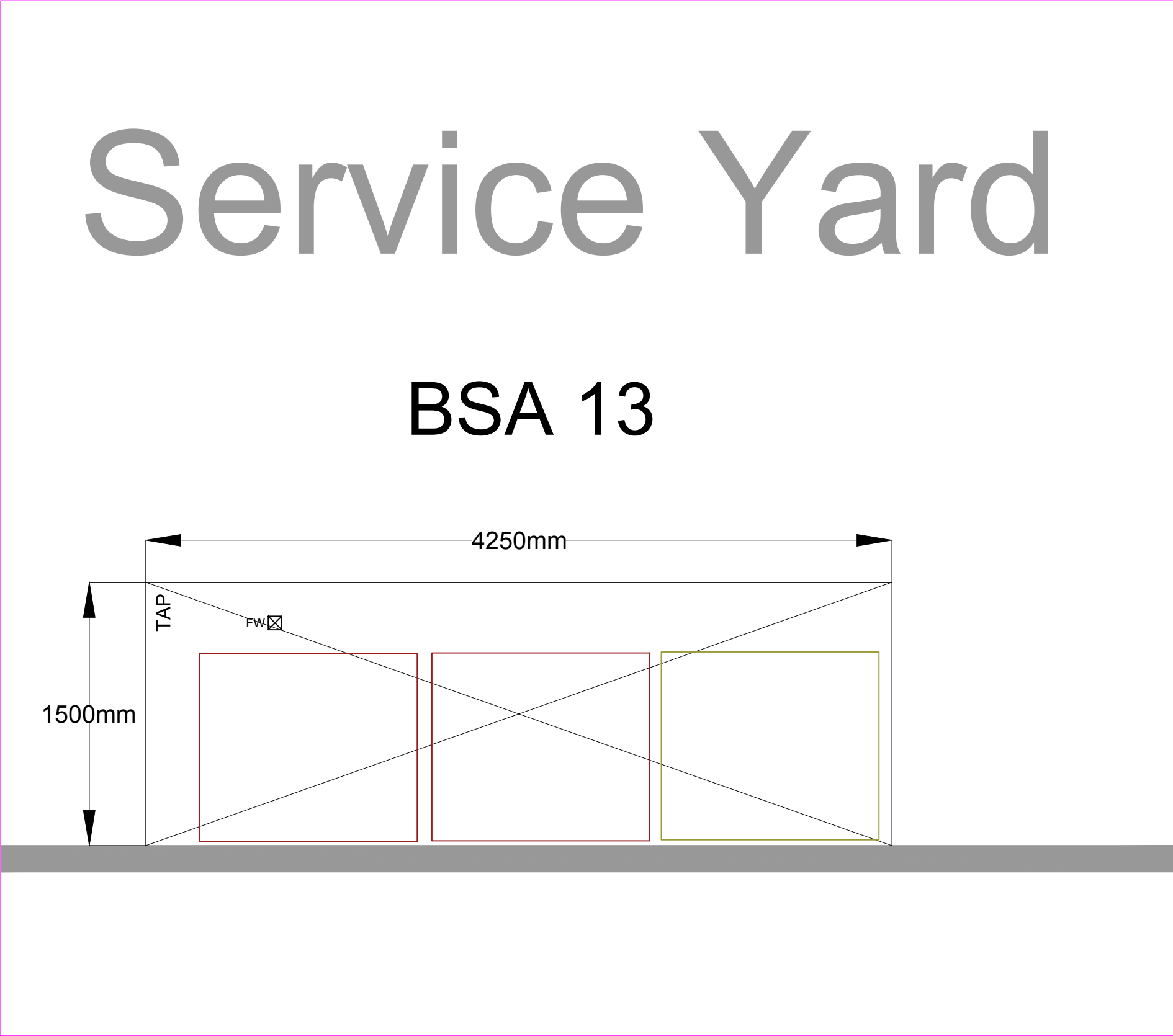
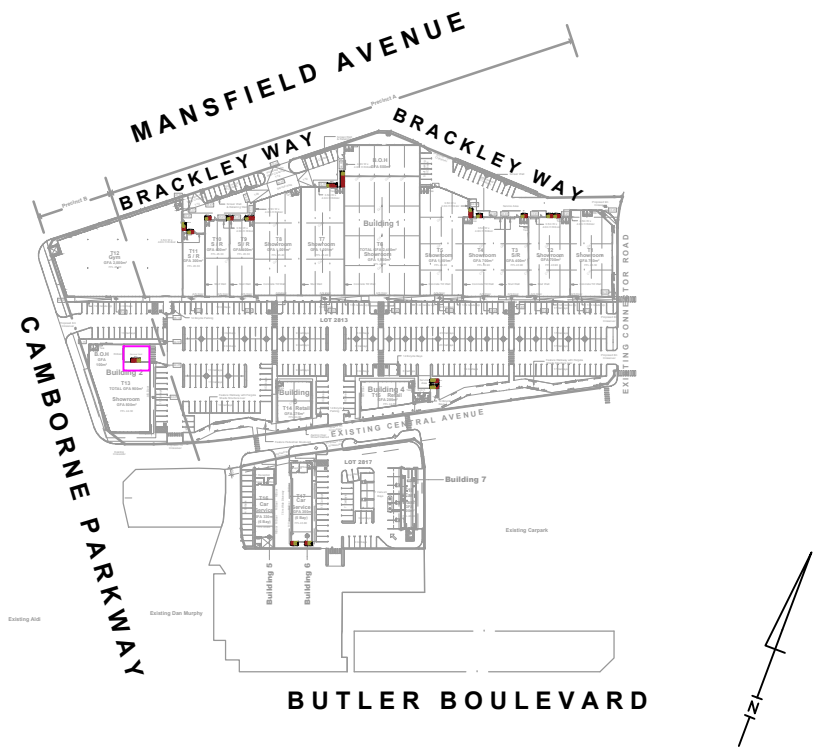
Title: Bin Storage Area 11 & 12

Drawn by:	RH	Job No:	TW19039
Checked by:	JW	File No:	TW19039DWG007
Approved by:	JW	Fig. No:	008
Scale:	NTS	Rev:	A
Date:	28/06/19		

BIN STORAGE AREA 13

Service Yard

BSA 13

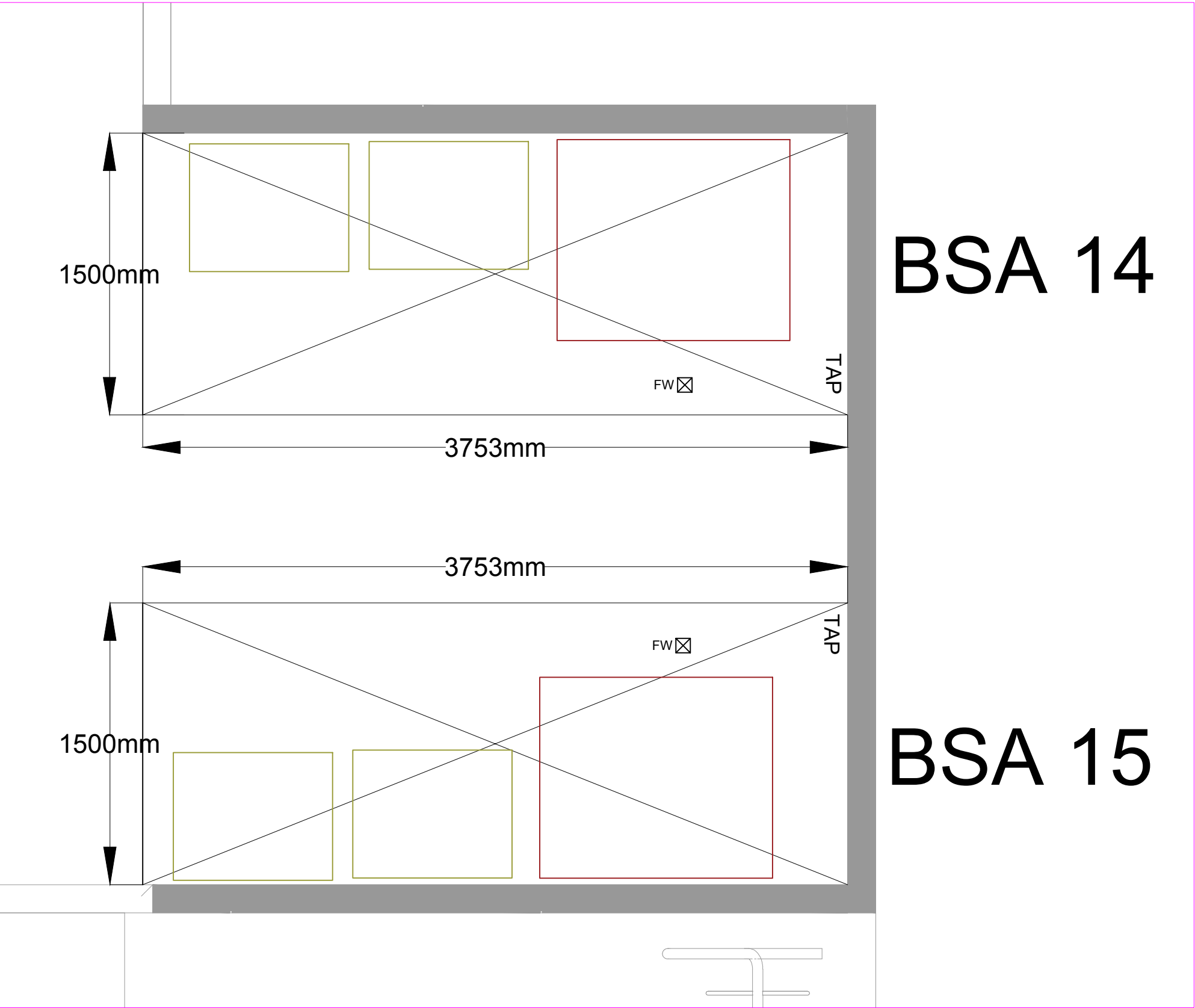
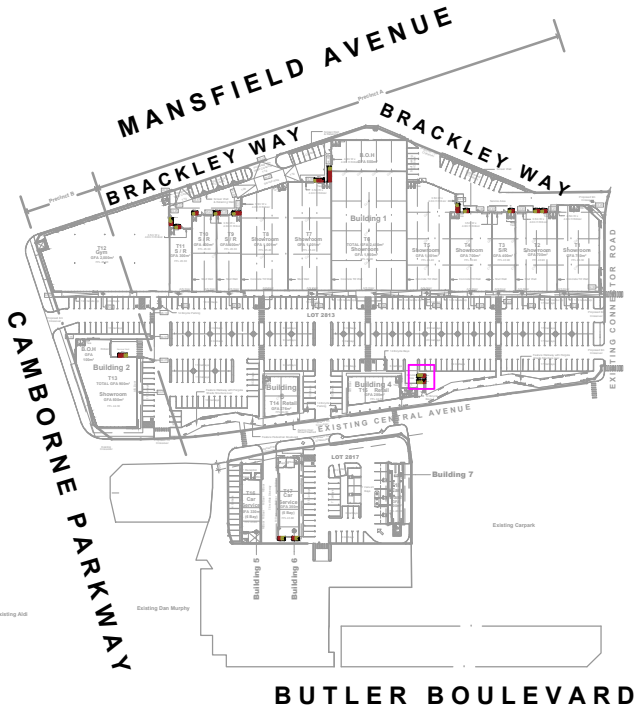


Legend:

Bin Storage Area 13

- 2 x 1100L refuse (1070mm x 1240mm)
- 1 x 1100L recycling (1070mm x 1240mm)

BIN STORAGE AREA 14 & 15



BSA 14

BSA 15

Legend:

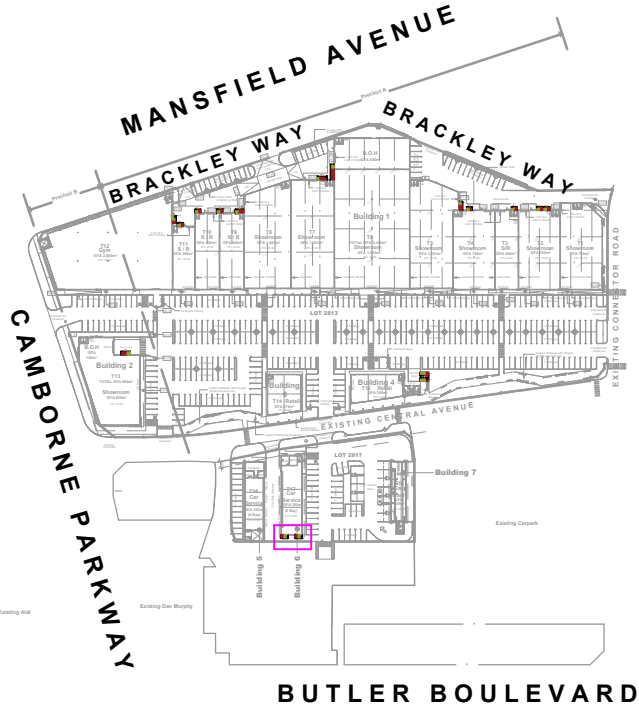
Bin Storage Area 14

- 1 x 1100L refuse (1070mm x 1240mm)
- 2 x 360L recycling (848mm x 680mm)

Bin Storage Area 15

- 1 x 1100L refuse (1070mm x 1240mm)
- 2 x 360L recycling (848mm x 680mm)

BIN STORAGE AREA 16 & 17



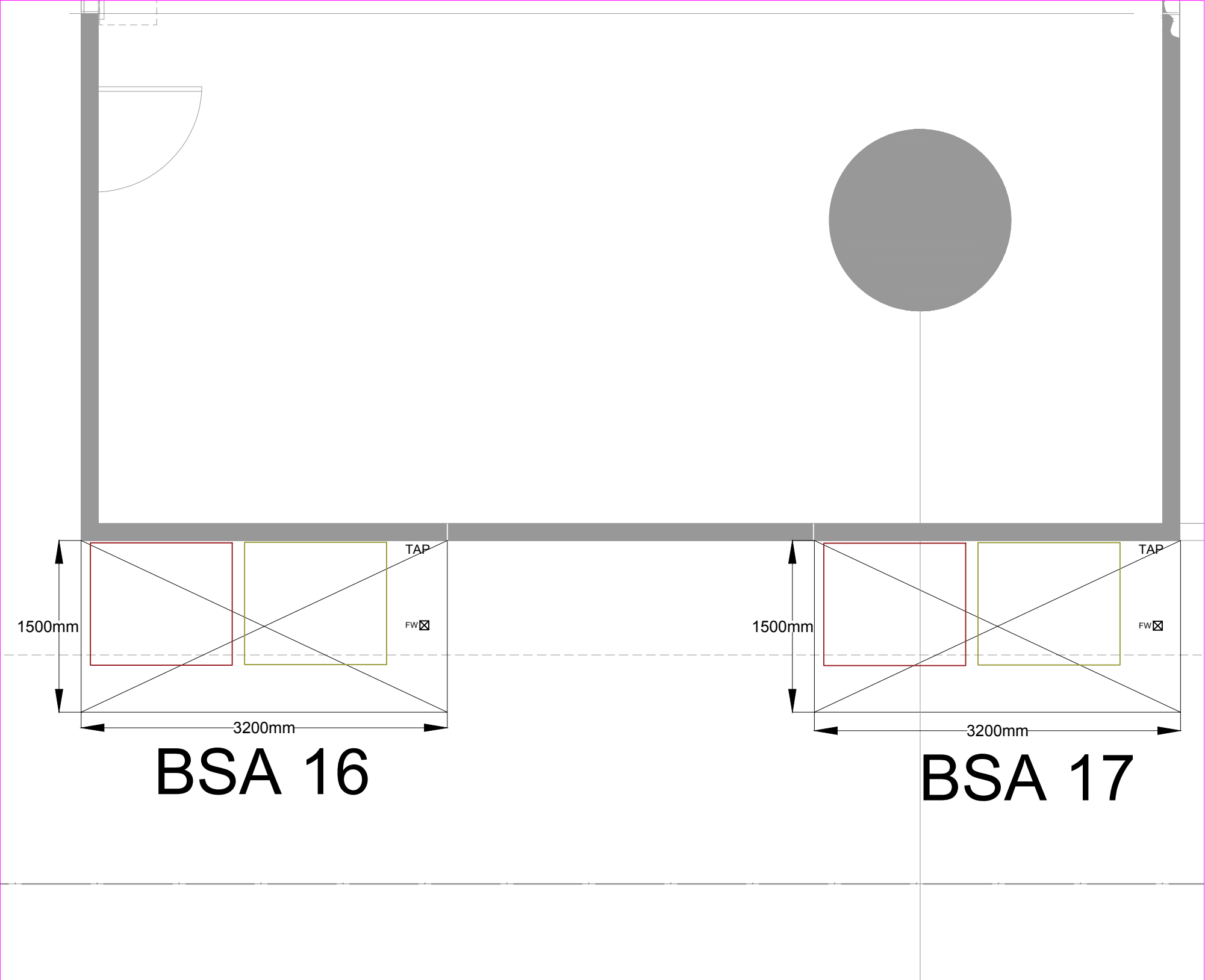
Legend:

Bin Storage Area 16

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 1100L recycling (1070mm x 1240mm)

Bin Storage Area 17

- 1 x 1100L refuse (1070mm x 1240mm)
- 1 x 1100L recycling (1070mm x 1240mm)



BSA 16

BSA 17

Talis Consultants

**Level 1, 604 Newcastle Street,
Leederville,
Western Australia 6007**

**PO Box 454,
Leederville,
Western Australia 6903**

Phone: 1300 251 070

Email: info@taliconsultants.com.au

