

DART+ West Railway Order

26.09.2023

Dublin City to Maynooth and M3 Parkway

Impact on Gowan Group Limited

23088-TNT-XX-XX-RP-T-00001



TENT ENGINEERING

**Site Address:**

Mill Lane,  
Ashtown Grove,  
Navan Road,  
Dublin 15

**Client:**

Gowan Group Limited

**Office Address:**

Tent Engineering Ltd.  
32 Francis Street  
Dublin, D08 NN96, IE



# Contents

1 Executive Summary	3
2 Description of the Gowan Group Lands	4
3 DART+ West & Impact on Gowan Group	7
4 Construction Related Impacts	10
5 Changes required to the permanent scheme to facilitate ongoing successful operation	11
6 Conclusion	12
7 Appendix	13

## Revision and Review

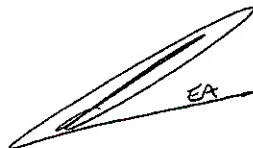
This report has been prepared for the sole benefit, use and information of the client. The liability of Tent engineering with respect to the information contained in this report will not extend to any third party.

### REVISION(S)

Rev.	Description	Date
P01	1st issue	26.09.2023
P02	2nd Issue	02.10.2023

### AUTHOR(S)

Edward Heukers Co-founder | Director



### REVIEWER(S)

Name
Diarmuid Healy Co-founder, Director
BEng (Hons) MIEI CEng MStructE FStructE



Office Address  
Tent Engineering Ltd  
32 Francis Street  
Dublin 8, D08 NN96, IE



# 1 Executive Summary

We, Tent Engineering, have been appointed by Gowan Group Limited, a well-established and highly successful business located adjacent to the Navan Road and Mill Lane. Our client's highly utilized land is consumed as part of upgrade works in the proposed DART+ West Railway order - Dublin City to Maynooth and M3 Parkway.

In this report, we have conducted a thorough assessment of the impact that the alterations to facilitate the DART+ West will have on the existing operations of Gowan Group Lands. Our analysis aims to identify the current functioning of the Gowan Group facility and its interactions with the surrounding road network. Additionally, we highlight the anticipated negative effects of the planned improvement works, emphasizing that without fundamental changes, both during construction and as built, to accommodate the Gowan Group on-site operations, the business will suffer severe disruption in its successful operation.

Given the business's high requirements for car parking/car storage related to the car sales activities conducted at this facility, we present evidence in this report indicating a high probability of a sudden decrease in customer numbers during the construction phase and also at completion. This decline is expected due to the potential disturbances caused by the upgrade works, meaning our client's inability to carry stock on the premises for customers to view and test and also customers' difficulty in simply accessing the site.

Furthermore, this report acknowledges that lands owned and leased by Gowan Group are subject to both temporary and permanent acquisition. We have determined that the impact on the business resulting from these acquisitions will be significant. We have set out alternative options for the DART+West team to explore.

In summary, our study demonstrates that the proposed DART+ project will severely impact the existing facility, leading to a decrease in customer numbers. Therefore, it is crucial to address these issues and make necessary adjustments to mitigate the adverse effects on the Gowan Group operations.

Fig 1.0 - Site location in relation with the existing road network





## 2 Description of the Gowan Group Lands

The car sales and showroom offered from this location have been continuously provided for over 23 years. Currently, the facility employs a total of over 35 staff members.

While we acknowledge that the proposed schemes will improve transportation options for businesses along the route, it is essential to consider the unique nature of this motor sales business and their requirements for sufficient space to store high-value items in a secure location while also giving customers immediate access to test this stock. Our client's business is dependent on customers being able to get a "look and feel" of their potential future car and visit the premises for precisely this activity. Reducing the number of cars on the lot will directly diminish our client's ability to generate sales. In addition, very few customers will visit the showroom via public transport as the existing car owners are looking to upgrade or trade in their vehicles. Their existing vehicle is often needed for inspection to calculate the trade in value.

The facility currently has 413 external designated number of parking spaces used for storage of cars as well as customer parking. It can be seen from the layout that lands are highly utilized. Our clients' demand for lands is such that they are currently leasing lands to help increase the number of cars on the facility. The prospect of reducing the size of lands is considered detrimental to their business. The existing parking facility is already at capacity, leaving no room for a reduction in parking facilities. To better understand the parking arrangement and its significance, please refer to Figure 2, which illustrates the parking layout, access arrangements, and the crucial role the surrounding roads play in the successful operation of the existing facility.

Additionally, it is important to note that Mill Lane, which currently operates as a cul-de-sac and generates no through traffic, is heavily relied upon by the business for the movement and temporary parking of vehicles. While this arrangement is informal, it emphasizes the highly intensive land use of their Gowan Group facility.

The lane way is heavily utilised by Gowan group at the times of loading and unloading of car transportation lorries.

Refer to fig 2.1 which details this activity. This is an activity which is both regular and essential for the successful operation of the business and an activity that they have been able to conduct in all years of operation at this site via Mill Lane. Bringing this activity into the facility will result in a significant loss of car spaces, as detailed in drawing 23088-TNT-XX-00-DR-T-90013. The truck will no longer be able to reverse onto the quite cul de sac thus it will need to perform a turning movement in the yard.

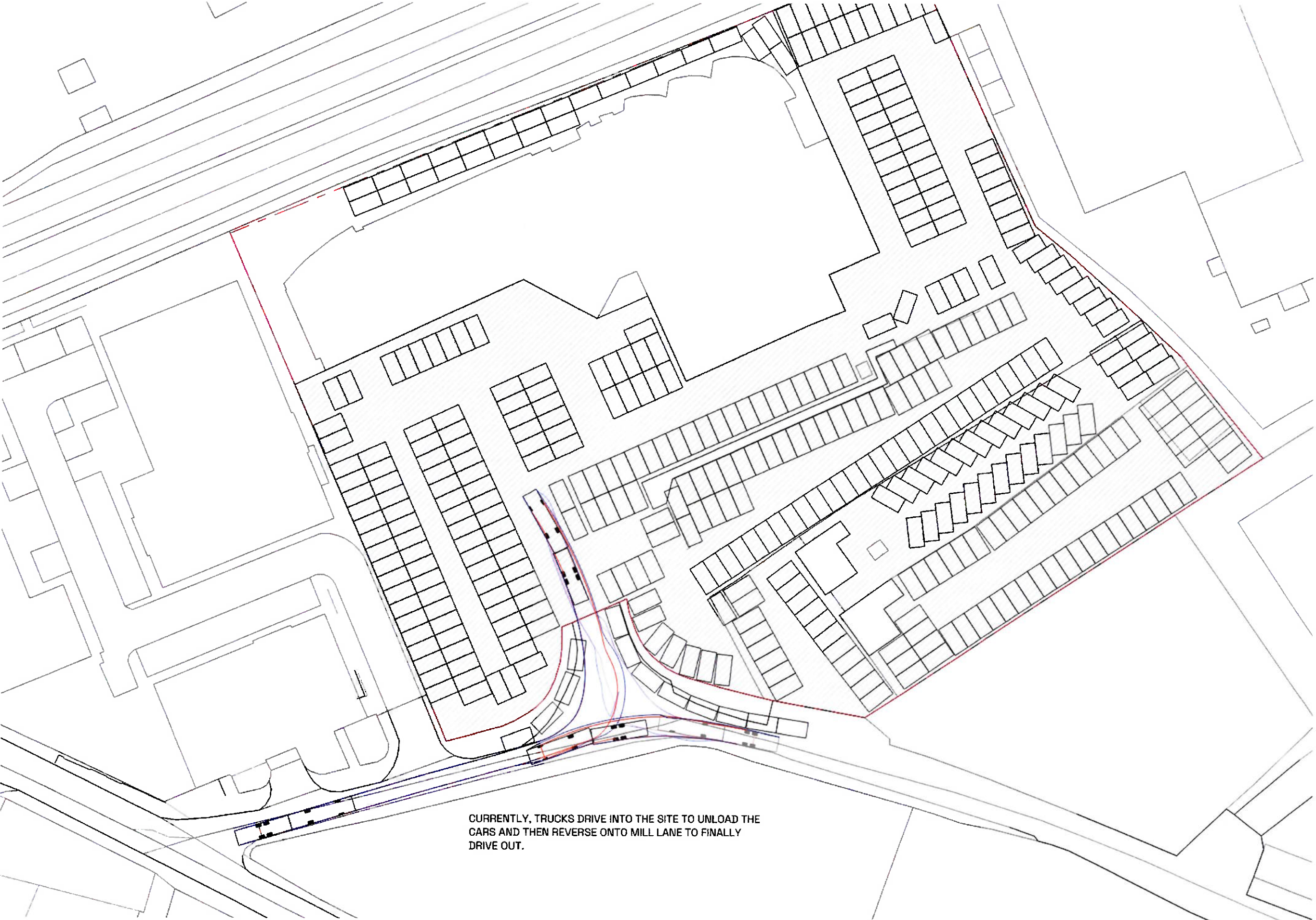
This change alone will result in the loss of up to 37 parking spaces. In addition, the facility will store a number of customer's cars which are in for service as well as store a number of courtesy cars for clients to take away. This activity places a strong demand on the available parking spaces. Any reduction in parking will be detrimental to the overall on-site operations. As can be seen from the image below it is sometimes the case that up to 12 temporary spaces will be used only when the yard is at maximum capacity to facilitate the operations.

Fig 2.0 - Description of the existing facility





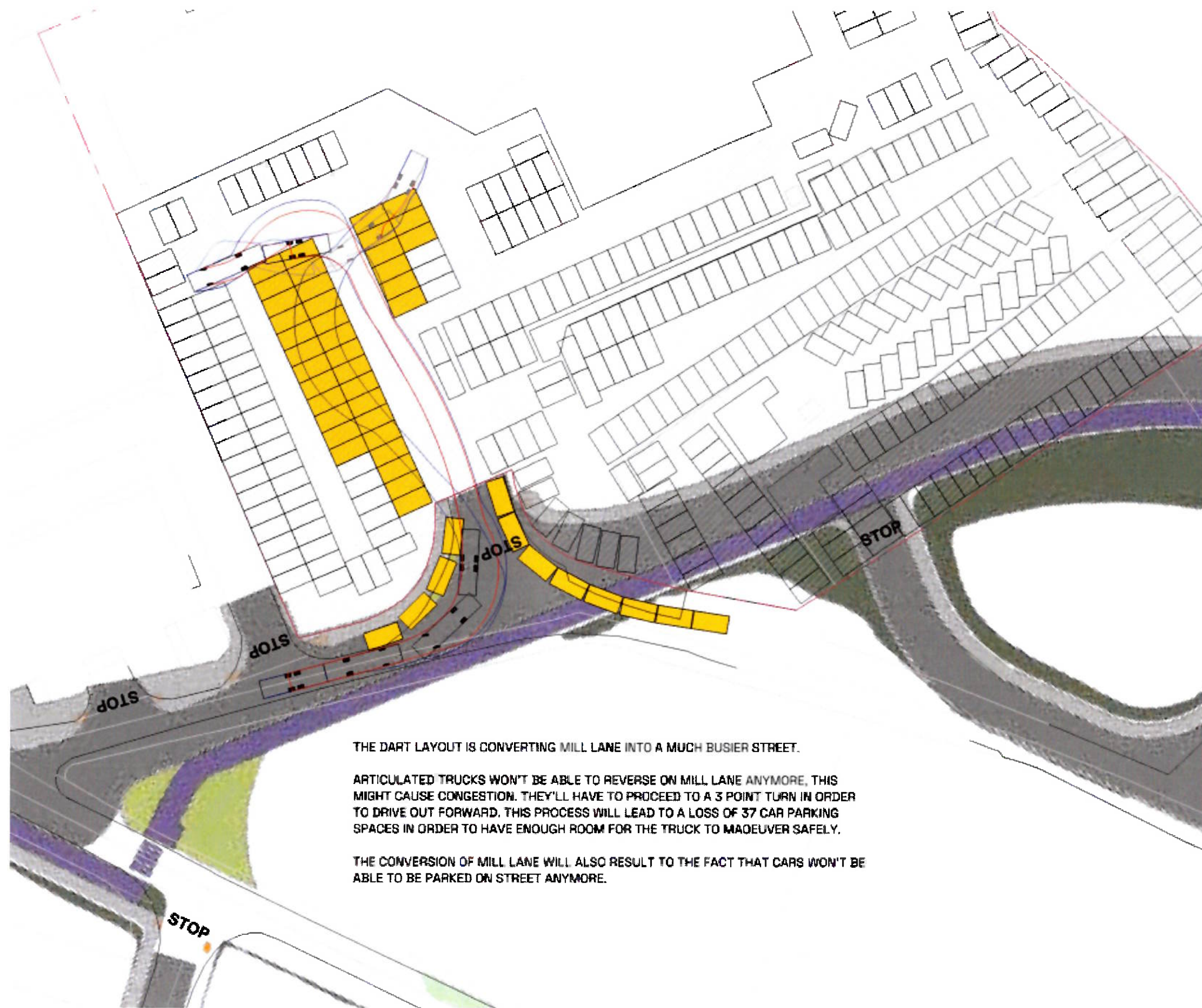
Fig 2.1 - Description of the existing facility Car Delivery Truck off loading - Existing Situation



CURRENTLY, TRUCKS DRIVE INTO THE SITE TO UNLOAD THE CARS AND THEN REVERSE ONTO MILL LANE TO FINALLY DRIVE OUT.



Fig 2.2 - Description of the existing facility Car Delivery Truck off loading - with Mill Lane as proposed





### 3 DART+ West & Impact on Gowan Group

Our site location was identified along this scheme at the City end of the route, as shown in Fig. 3.0.

For the purpose of assessing the impact on our site location, the highlighted area in red was investigated.

Figure 3.1 provides a visual representation of the proposed changes to the access and 3.2 demonstrates the knock on loss of on-site parking for our client

It is imperative to recognize the heavy reliance of the facility on the existing car parking/storage arrangement, which is already operating at full capacity. Any alteration to the land available will have severe implications for the facility's ability to maintain its on site operations and existing customer experience.

Fig 3.0 - DART+West Scheme

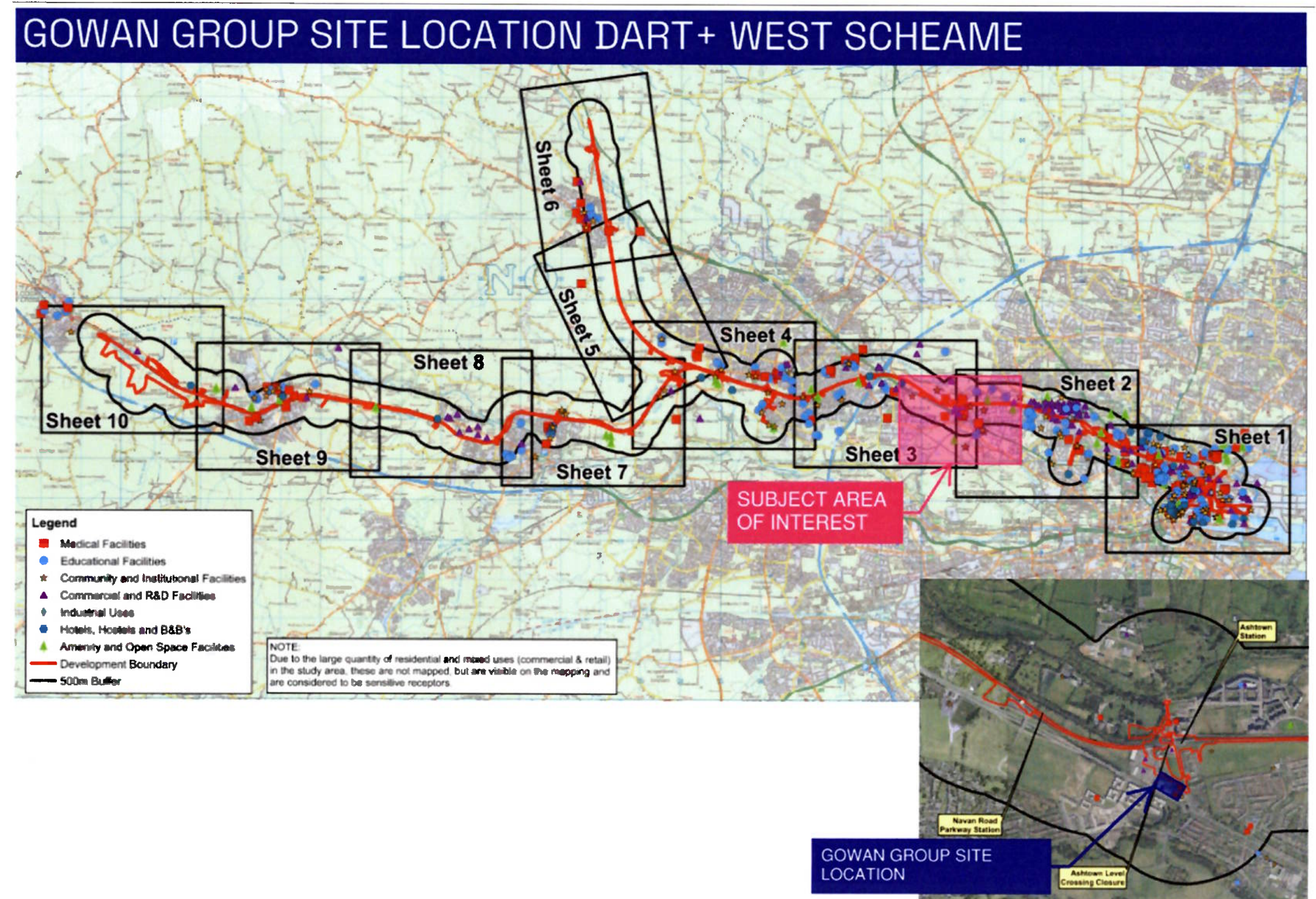




Fig 3.1 - Land take associated with the scheme

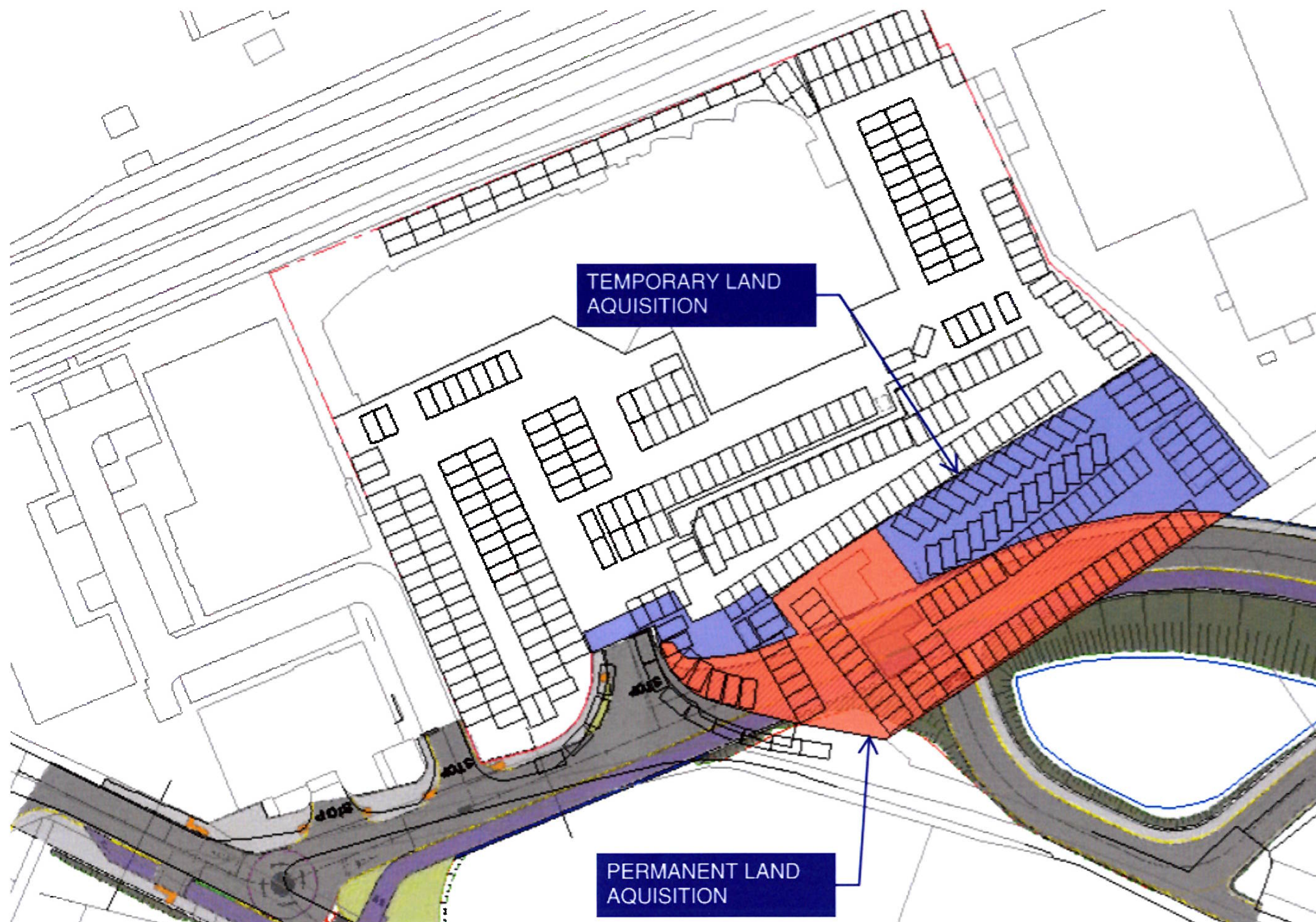
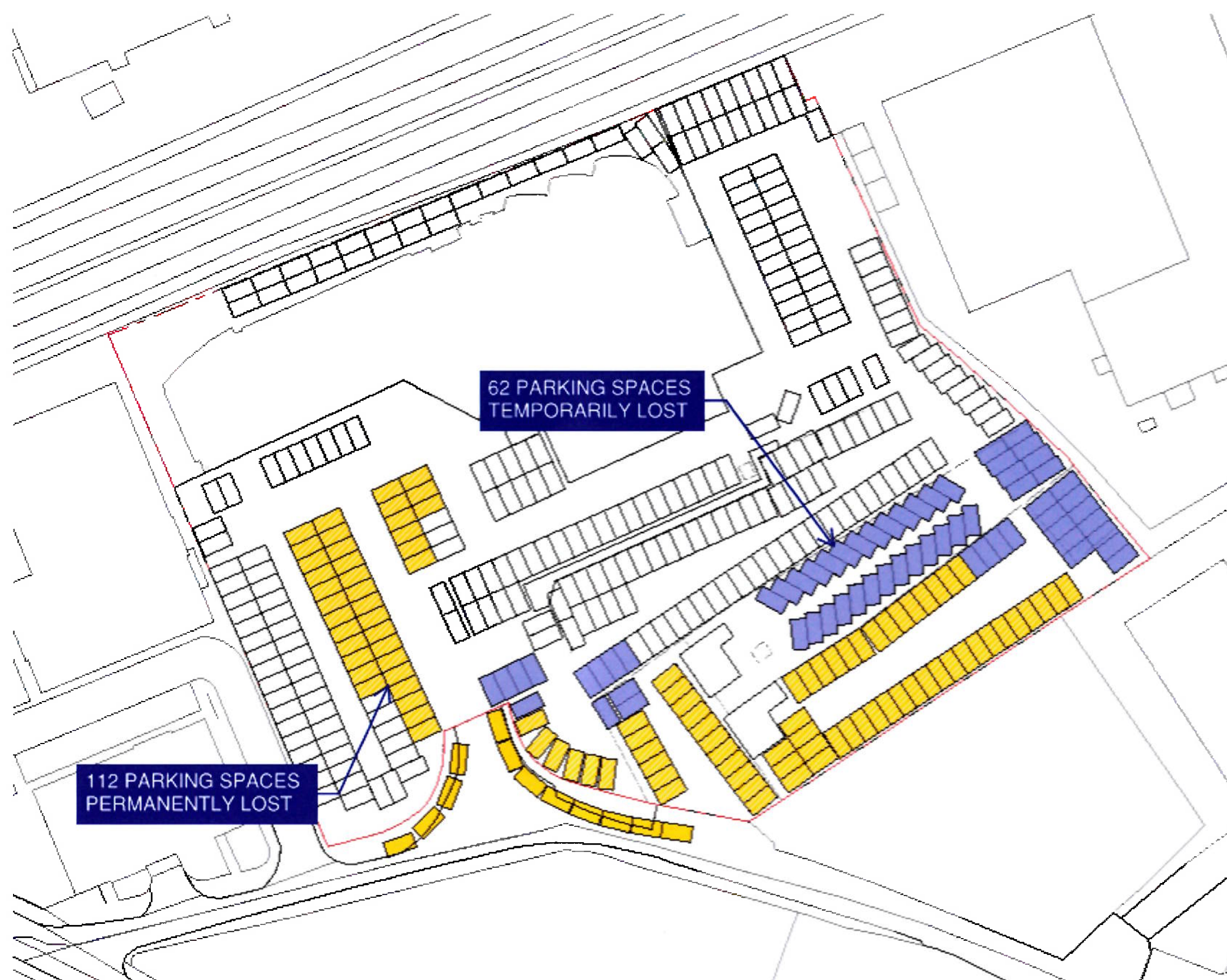




Fig 3.2 - Lost car spaces associated with the scheme





## 4 Construction Related Impacts

Our client urgently requires detailed information regarding the construction management plan, which should outline the expected extent of noise and dust, as well as temporary access arrangements for customers. Until this information is received, our client remains highly concerned about the severe impact the construction phase will have on their revenues and their ability to operate during this time. There is a significant risk of experiencing a substantial reduction in customers who may become frustrated with the difficulties of accessing the facility during the prolonged construction period.

It is important to note that the adjacent equine facility has ample space available, which could act as a compound for the construction phase. It appears efforts have been made to avoid any impact on this facility. This is despite the fact it is highly unlikely this business will be able to remain operational during the construction phase due to the health and safety of riders and the welfare of horses.

Horses are highly sensitive animals with acute senses, and construction activity can have a significant impact on their well-being. It would be challenging, if not impossible, to operate a riding school adjacent to the construction project.

**Noise Sensitivity:** Horses have incredibly sensitive hearing, and loud construction noises such as heavy machinery, drilling, and banging can be distressing for them. The sudden and loud sounds associated with construction can startle horses, causing them to become anxious or fearful.

**Vibrations:** Construction activities often produce ground vibrations, which can be unsettling for horses. Horses can feel even minor vibrations through their hooves, and prolonged exposure to this can lead to stress and discomfort.

**Dust and Debris:** Construction sites generate dust and debris, which can pose respiratory problems for horses. The inhalation of dust particles can irritate their airways and lead to coughing or other respiratory issues.

**Altered Environment:** The presence of construction equipment, barriers, and the disruption of the surrounding landscape can alter the familiar environment of a riding school. Horses thrive on routine and can become agitated when their surroundings change dramatically.

**Traffic and Movement:** Road works projects typically involve increased traffic, detours, and changes in traffic patterns. Horses are creatures of habit, and changes in traffic and road conditions can be unsettling. It can be dangerous to have horses near busy construction zones where vehicles may not expect their presence.

**Stress and Behavior Changes:** Horses are known to react to stress by exhibiting behavior changes. Increased stress levels due to construction activity can lead to undesirable behavior, such as spooking, bolting, or refusing to cooperate during riding lessons.

**Safety Concerns:** Safety is paramount when working with horses. Construction sites can pose safety risks to both the animals and riders. Horses may become unpredictable or anxious, making it challenging to ensure the safety of riders and instructors.

**Accessibility Issues:** Construction projects often result in road closures, detours, or limited access to nearby areas. This can make it difficult for clients, riders, and staff to reach the riding school, potentially causing disruptions to the school's operations.

In summary, horses are sensitive creatures, and their well-being and the safety of riders are paramount concerns when operating a riding school. The disturbances and stress caused by construction activity, including noise, vibrations, dust, and changes in their environment, can make it extremely challenging to run a riding school adjacent to a road works project. Special considerations and precautions must be taken to ensure the welfare of the horses and the safety of all involved. It is highly likely this facility cannot remain in operation; thus, it is most logical to locate the compound on these lands.

Figure 5.0 sets out the location of the equine facility relative to the Gowan Group operations. We feel the temporary land acquisition should be located on the lands of the stables adjacent. The temporary land take will paralyze the Gowan business by making parking, delivery of vehicles, and customer sales near impossible. Our client stands to lose substantial revenue, far in excess of that generated by the stables. As set out in section 2 the stables will be unlikely to operate due to the noise, dust ect.

Fig 5.0 - Location of Equine Facility in close proximity to construction work





## 5 Changes required to the permanent scheme to facilitate ongoing successful operation

Figure 6.0 illustrates the necessary changes our client requires to ensure smooth operations. Failing to address these modifications may result in highly negative visitor experiences, which pose a real risk of a drop in customer numbers and in turn revenue. Our client cannot accept this for any duration during construction.

The key benefits of this proposal are:

### Elimination of priority junction/direct access onto the road

The DART+ West proposed layout results in four entrances/Priority junctions off the proposed new road. Two of these entrances are within very close proximity to the roundabout and have the potential to create confusion and, in turn, a traffic hazard. The proposed layout consolidates the three entrances into a single access onto the new road. This move see the traffic hazard associated with the car park entrance immediately adjacent to the roundabout being removed.

### Relocation of the proposed round about

The roundabout is pushed further north towards the Martin Savage Park Entrance. The existing Mill Lane access to Ashtown Road is closed off and redirected to the new roundabout. The remaining section of Mill Lane is maintained as a cul-de-sac at each end, allowing for ease of access and egress for all businesses that currently have direct access off Mill Lane.

### Realignment of the proposed rail crossing road

The proposed road links from this revised roundabout location to the rail/canal crossing as per the DART+ West crossing point. This alignment means no land take from Gowan and indeed more usable land for Burke's.

### New Entrance to Burke's Land

This improved layout also alters the entrance to Burke's land. In the DART+ West as-proposed layouts, this involves the creation of a new dedicated and costly road bridge. In the suggested improved proposed layout, access is via a road built immediately adjacent to the railway line. The crossing will be at existing ground level. This land take will be significantly reduced due to no ramp-up or ramp-down requirements. The costs will be substantially reduced because the foundation will be in place at this part to support the road deck. The only extra cost is the structural deck for the bridge, which will be significantly less expensive than an entirely new bridge. This proposed change appears to be safer, less expensive, and results in less total land take, as is evident from the suggested augmentation of the layout.

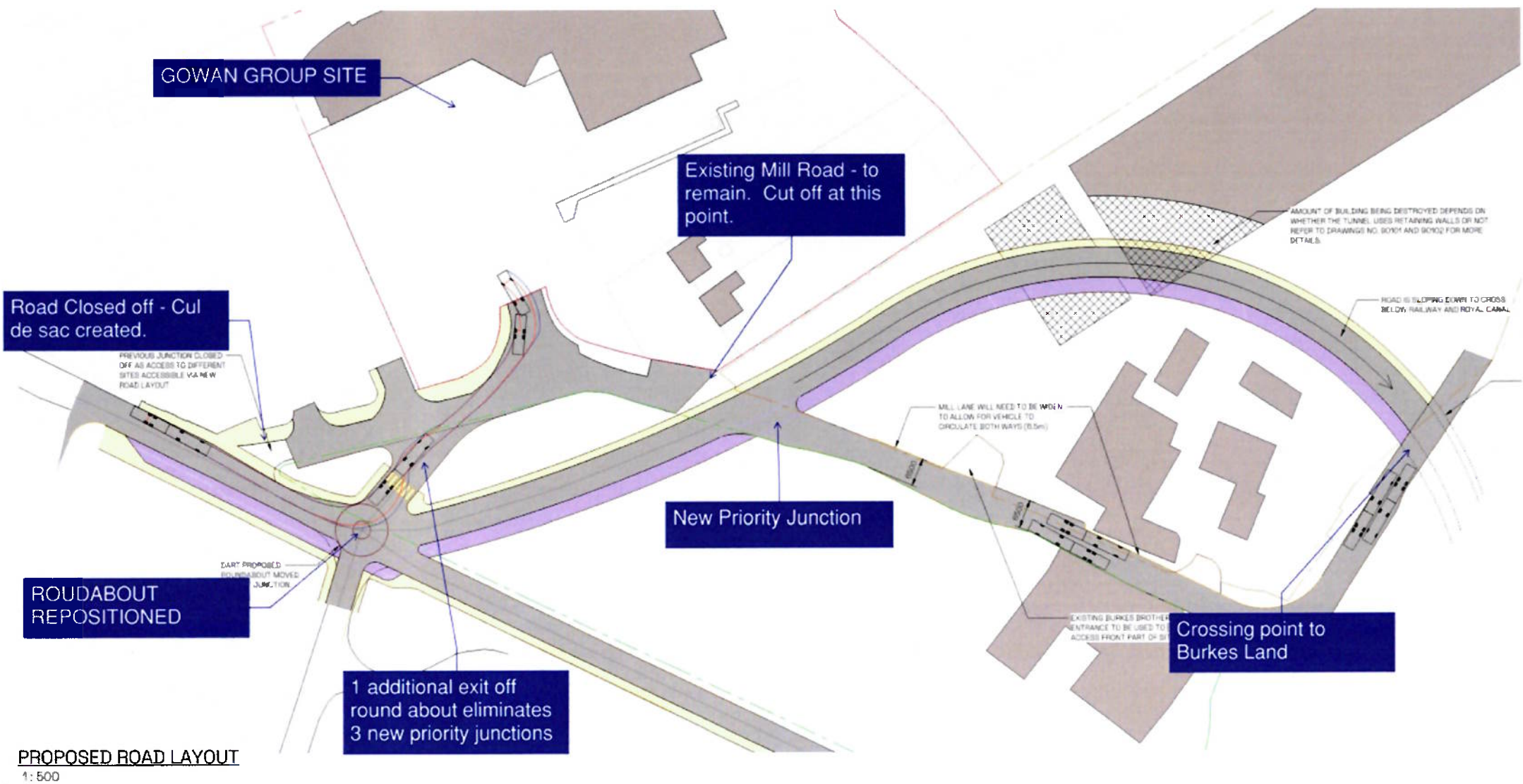
Fig 6.0 - Changes required to permanent scheme

A variation on this layout is shown in Figure 7.1. This utilizes a larger degree of retaining walls as opposed to open-cut slopes to deal with the cut required to bring the road under the rail line. This increase in the use of retaining walls leads to a substantial reduction in land take required. The land take is as follows.

	EXISTING SITE AREA	DART+ WEST PROPOSED LAND TAKEN	TENT PROPOSED LAND TAKEN	TENT PROPOSED LAND TAKEN (RETAINING WALL OPTION)
GOWAN GROUP	13,000m	1,500m	0m²	0m²
BURKES BROTHERS	17,500m	4,000m²	4,000m²	2,500m²
ASHTOWN STABLES	11,000m	500m²	2,500m²	2,500m²

For both options, the stables are certainly being impacted significantly more than the as-proposed DART+ scheme. However, for reasons surrounding horse sensitivity to noise and vibrations as set out in Section XX, it is unclear if this business has a future in these lands zoned as 'high technology' following the completion of the works.

See table below which sets out the comparison in land take among each option





## 6 Conclusion

In this report, we have conducted a comprehensive assessment of the impact that the proposed alterations for both during and after construction will have on the existing operations of the Gowan Group business. Our analysis thoroughly examined the current operations of the facility, emphasizing the importance of on-site parking and its interaction with the surrounding road network.

Furthermore, we have highlighted the anticipated negative effects of the planned improvement works, underscoring the need for fundamental changes to accommodate the Gowan Group on-site operations and prevent severe disruptions to their successful functioning. Given the high land use demands of the car sales activities conducted at this facility, we have identified a high probability of a sudden decrease in customer numbers during the construction phase and when the works are completed.

To adequately assess the potential disruptions faced during the scheduled construction phase, we have requested evidential construction management plans from the relevant authorities. These plans will enable our client to fully evaluate the extent of the disruption and devise strategies to mitigate its impact. These plan should take consideration of the on going access of a car transportation lorry and the successful unloading/loading of this vehicle.

Our evaluation concludes that the impact on the business resulting from these acquisitions will be highly significant. As a result, we have highlighted the need for fundamental changes to the scheme to ensure the continued operation of the facility.

In summary, our study demonstrates that the proposed DART+ West project will severely impact the existing facility, leading to a decrease in customer numbers. It is therefore crucial to address these issues and make necessary adjustments to mitigate the adverse effects on Gowan Group facility.



# 7 Appendix

23088-TNT-XX-00-DR-S-90000	EXISTING SITE
23088-TNT-XX-00-DR-T-90001	EXISTING SITE - CAR TRACKING 1
23088-TNT-XX-00-DR-T-90002	EXISTING SITE - CAR TRACKING 2
23088-TNT-XX-00-DR-T-90003	EXISTING SITE - CAR TRACKING 3
23088-TNT-XX-00-DR-T-90004	EXISTING SITE - CAR TRACKING 4
23088-TNT-XX-00-DR-T-90005	PROPOSED RAILWAY ORDER LAYOUT
23088-TNT-XX-00-DR-T-90006	PROPOSED RAILWAY ORDER LAYOUT - CAR TRACKING 1
23088-TNT-XX-00-DR-T-90012	EXISTING CAR DELIVERY VEHICLE OFF LOAD AND TURNING
23088-TNT-XX-00-DR-T-90013	PROPOSED RAILWAY ORDER LAYOUT CAR DELIVERY VEHICLE OFF LOAD AND TURNING
23088-TNT-XX-00-DR-T-90100	PROPOSED REVISED ROAD LAYOUT
23088-TNT-XX-00-DR-T-90101	LAND TAKE ANALYSIS WITH AUTOTRACKING 1
23088-TNT-XX-00-DR-T-90102	LAND TAKE ANALYSIS WITH AUTOTRACKING 2



LEGEND

GOWAN GROUP SITE BOUNDARY

BURKES BROTHER SITE BOUNDARY

BURKES BROTHER SITE RENTED BY GOWAN GROUP

ASHTOWN STABLES SITE BOUNDARY

EXISTING BUILDING

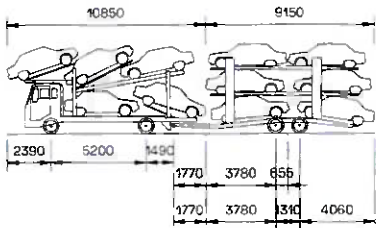
EXISTING ROAD

- Notes:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.

3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

4. FOR GENERAL NOTES REFER TO DRAWING.



CAR TRANSPORTER:

OVERALL LENGTH:	20,000m
OVERALL WIDTH:	2,500m
OVERALL BODY HEIGHT:	4,884m
MIN. BODY GROUND CLEARANCE:	0,185m
MAX TRACK WIDTH:	2,500m
LOCK-TO-LOCK TIME:	6,00s
WALL TO WALL TURNING RADIUS:	10,500m

NOTE:  
APPROX. GOWAN GROUP SITE SIZE: 13,000 m²  
APPROX. CAR PARKING SPACE: 8000 m²

NOTE:  
APPROX. BURKES BROTHERS SITE SIZE: 17,500 m²

NOTE:  
APPROX. ASHTOWN STABLES SITE SIZE: 11,000 m²

EXISTING SITE  
1:500

PO1 ISSUED FOR PLANNING	AC	26.09.23
REV	DESCRIPTION	BY DATE
STATUS	PLANNING	

TENT ENGINEERING

PROJECT	GOWAN GROUP
TITLE	EXISTING SITE
SCALE AT A1	As indicated
DATE	SEP 23
DRAWN	Author
CHECKED	Checker
DRAWING NO.	23088-TNT-XX-00-DR-T-90000 PO1





**AUTOTRACKING 1**  
1:500

**Notes:**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

**LEGEND**

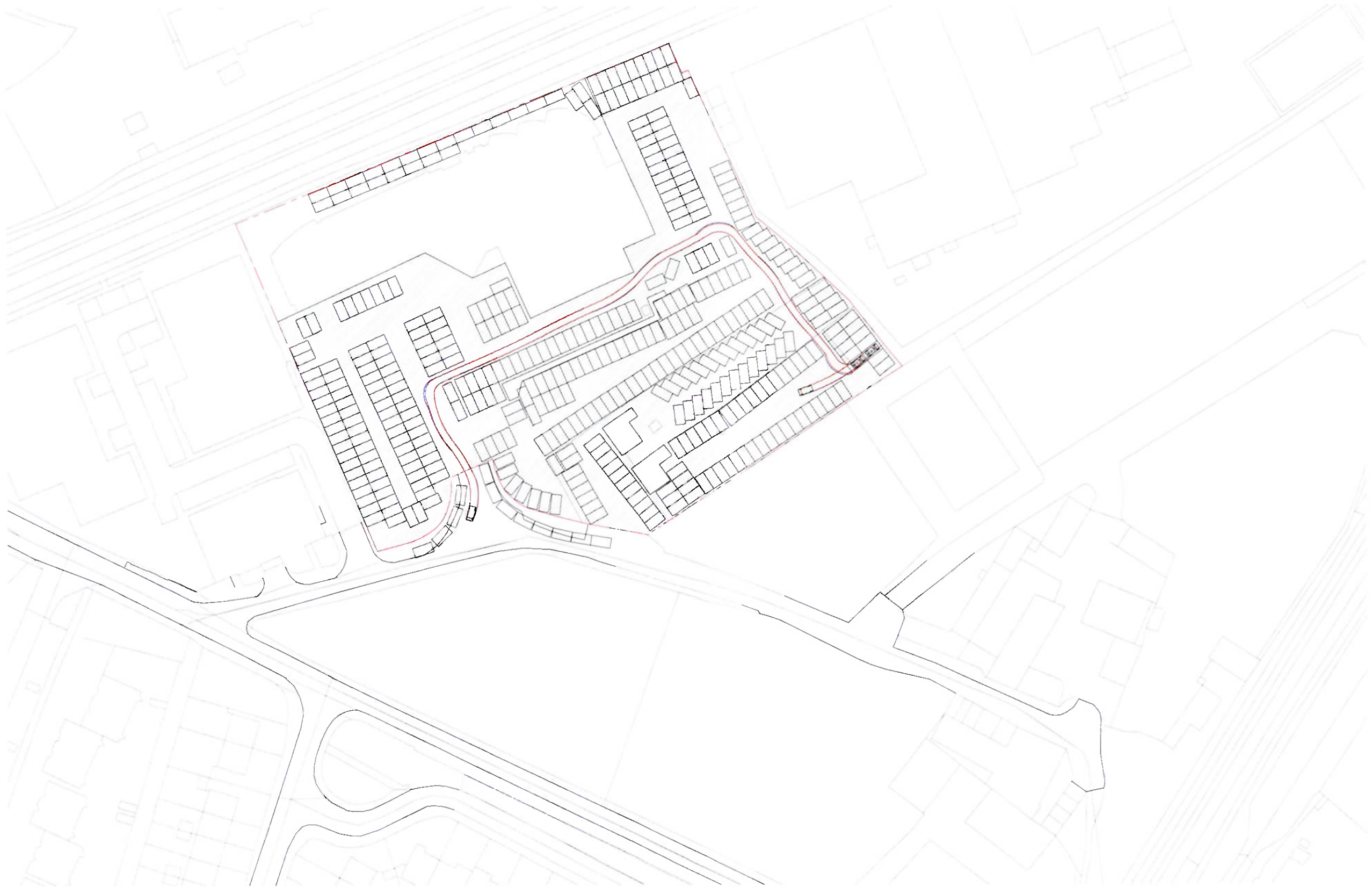
- GOWAN GROUP SITE BOUNDARY
- BURKES BROTHER SITE BOUNDARY
- ASHTOWN STABLES SITE BOUNDARY
- EXISTING BUILDING
- BUILDING TO BE DEMOLISHED
- EXISTING ROAD
- PROPOSED NEW ROAD
- PERMANENT LAND LOST
- TEMPORARY LAND LOST

P01 ISSUED FOR PLANNING		RB	26.09.23
REV	DESCRIPTION	BY	DATE
STATUS		PLANNING	



PROJECT		GOWAN GROUP	
TITLE		EXISTING SITE - CAR TRACKING 1	
SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH
DRAWING NO		23088-TNT-XX-00-DR-T-90001	
REVISION		P01	



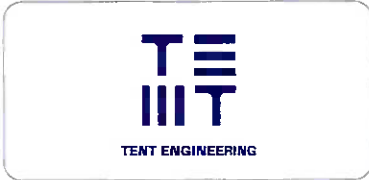


**AUTOTRACKING 2**  
1:500

- Notes:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING.

LEGEND	
	GOWAN GROUP SITE BOUNDARY
	BURKES BROTHER SITE BOUNDARY
	ASHTOWN STABLES SITE BOUNDARY
	EXISTING BUILDING
	BUILDING TO BE DEMOLISHED
	EXISTING ROAD
	PROPOSED NEW ROAD
	PERMANENT LAND LOST
	TEMPORARY LAND LOST

PO1	ISSUED FOR PLANNING	RB	26.09.23
REV	DESCRIPTION	BY	DATE
STATUS		PLANNING	



PROJECT		GOWAN GROUP	
TITLE		EXISTING SITE - CAR TRACKING 2	
SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH
DRAWING NO		REVISION	
23088-TNT-XX-00-DR-T-90002		PO1	





**AUTOTRACKING 3**  
1: 500

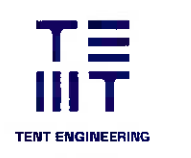
**Notes:**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

**LEGEND**

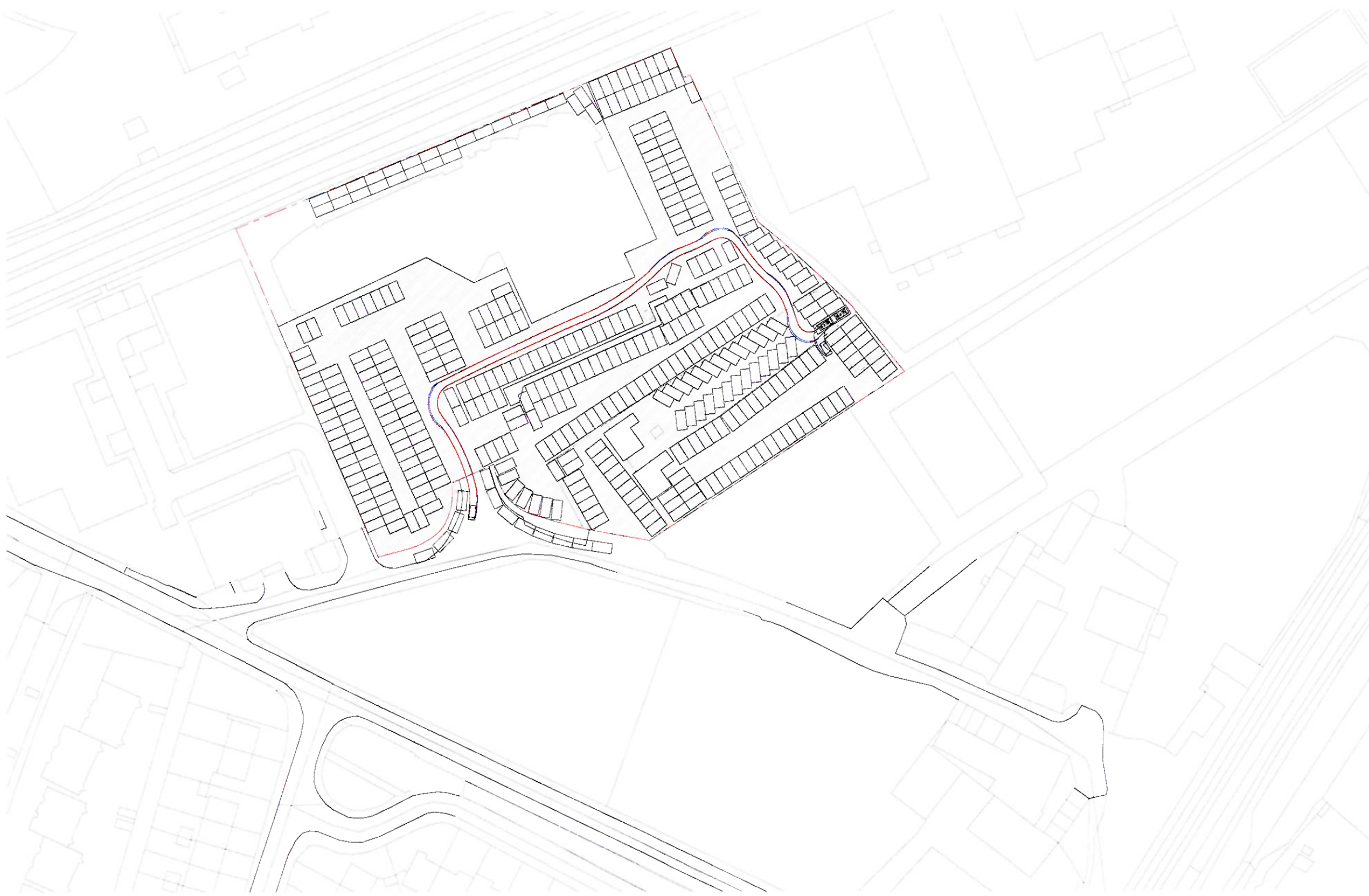
- GOWAN GROUP SITE BOUNDARY
- BURKES BROTHER SITE BOUNDARY
- ASHTOWN STABLES SITE BOUNDARY
- EXISTING BUILDING
- BUILDING TO BE DEMOLISHED
- EXISTING ROAD
- PROPOSED NEW ROAD
- PERMANENT LAND LOST
- TEMPORARY LAND LOST

PM1	ISSUED FOR PLANNING	RB	28 09 23
REV	DESCRIPTION	BY	DATE
STATUS: PLANNING			



PROJECT: GOWAN GROUP			
TITLE: EXISTING SITE - CAR TRACKING 3			
SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH
DRAWING NO: 23088-TNT-XX-00-DR-T-90003 PM1			





**AUTOTRACKING 4**  
1:500

**Notes:**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.


3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

4. FOR GENERAL NOTES REFER TO DRAWING.

**LEGEND**

- GOWAN GROUP SITE BOUNDARY
- BURKES BROTHER SITE BOUNDARY
- ASHTOWN STABLES SITE BOUNDARY
- EXISTING BUILDING
- BUILDING TO BE DEMOLISHED
- EXISTING ROAD
- PROPOSED NEW ROAD
- PERMANENT LAND LOST
- TEMPORARY LAND LOST

P01	ISSUED FOR PLANNING	RE	26.03.23
REV	DESCRIPTION	BY	DATE
STATUS		PLANNING	



TENT ENGINEERING

PROJECT

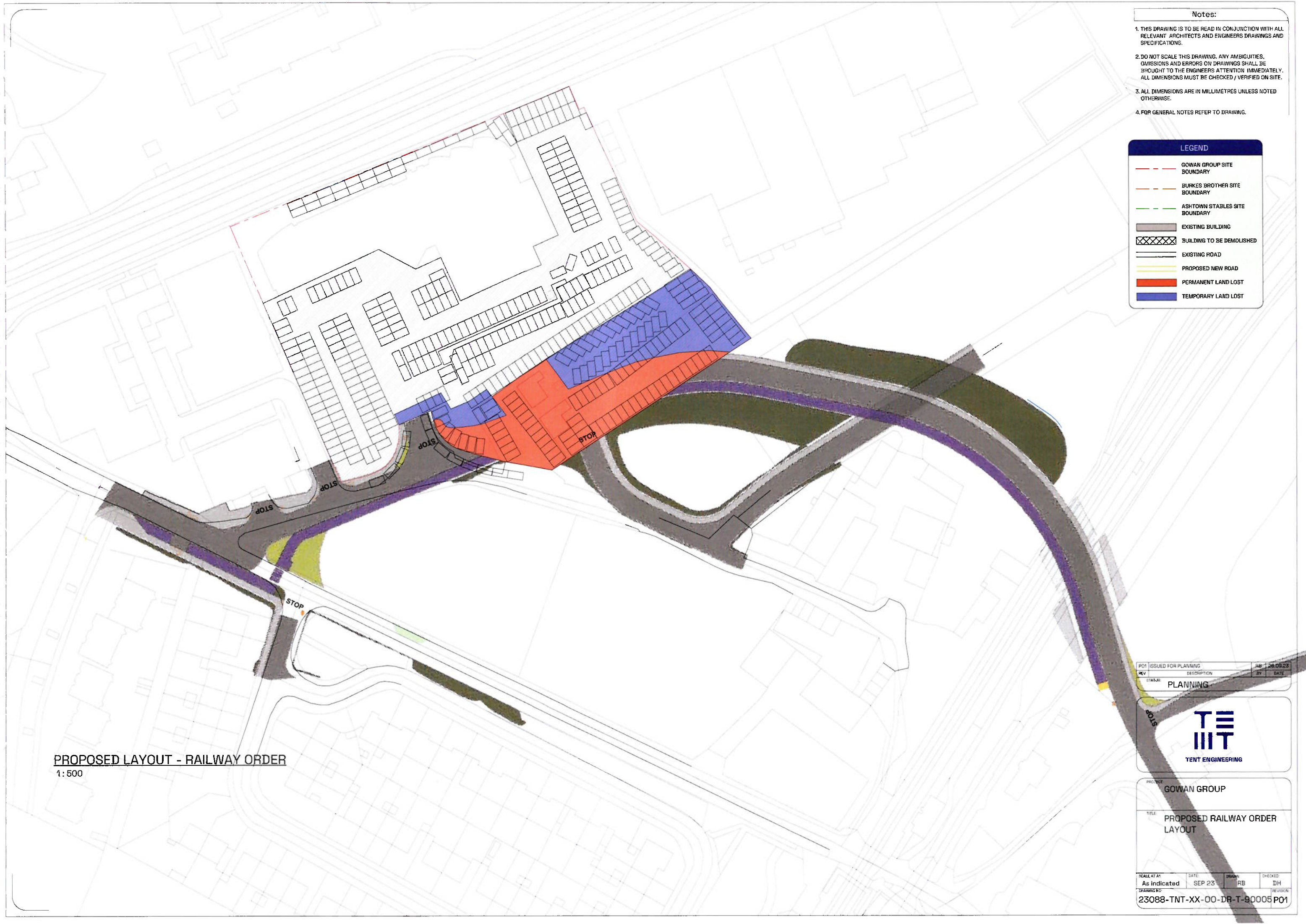
GOWAN GROUP

TITLE

EXISTING SITE - CAR TRACKING 4

SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH
DRAWING NO		REVISION	
23088-TNT-XX-00-DR-T-90004 P01			






- Notes:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING.

LEGEND	
<span style="color: red;">---</span>	GOWAN GROUP SITE BOUNDARY
<span style="color: orange;">---</span>	BURKES BROTHER SITE BOUNDARY
<span style="color: green;">---</span>	ASHTOWN STABLES SITE BOUNDARY
<span style="background-color: grey; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	EXISTING BUILDING
<span style="background-color: white; border: 1px solid black; display: inline-block; width: 15px; height: 10px; border-style: dashed;"></span>	BUILDING TO BE DEMOLISHED
<span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span>	EXISTING ROAD
<span style="background-color: yellow; border-bottom: 1px solid black; display: inline-block; width: 20px;"></span>	PROPOSED NEW ROAD
<span style="background-color: red; display: inline-block; width: 15px; height: 10px;"></span>	PERMANENT LAND LOST
<span style="background-color: blue; display: inline-block; width: 15px; height: 10px;"></span>	TEMPORARY LAND LOST

PROPOSED LAYOUT - RAILWAY ORDER  
1: 500

P01 ISSUED FOR PLANNING		RB	28.09.23
REV	DESCRIPTION	BY	DATE
STATUS: PLANNING			



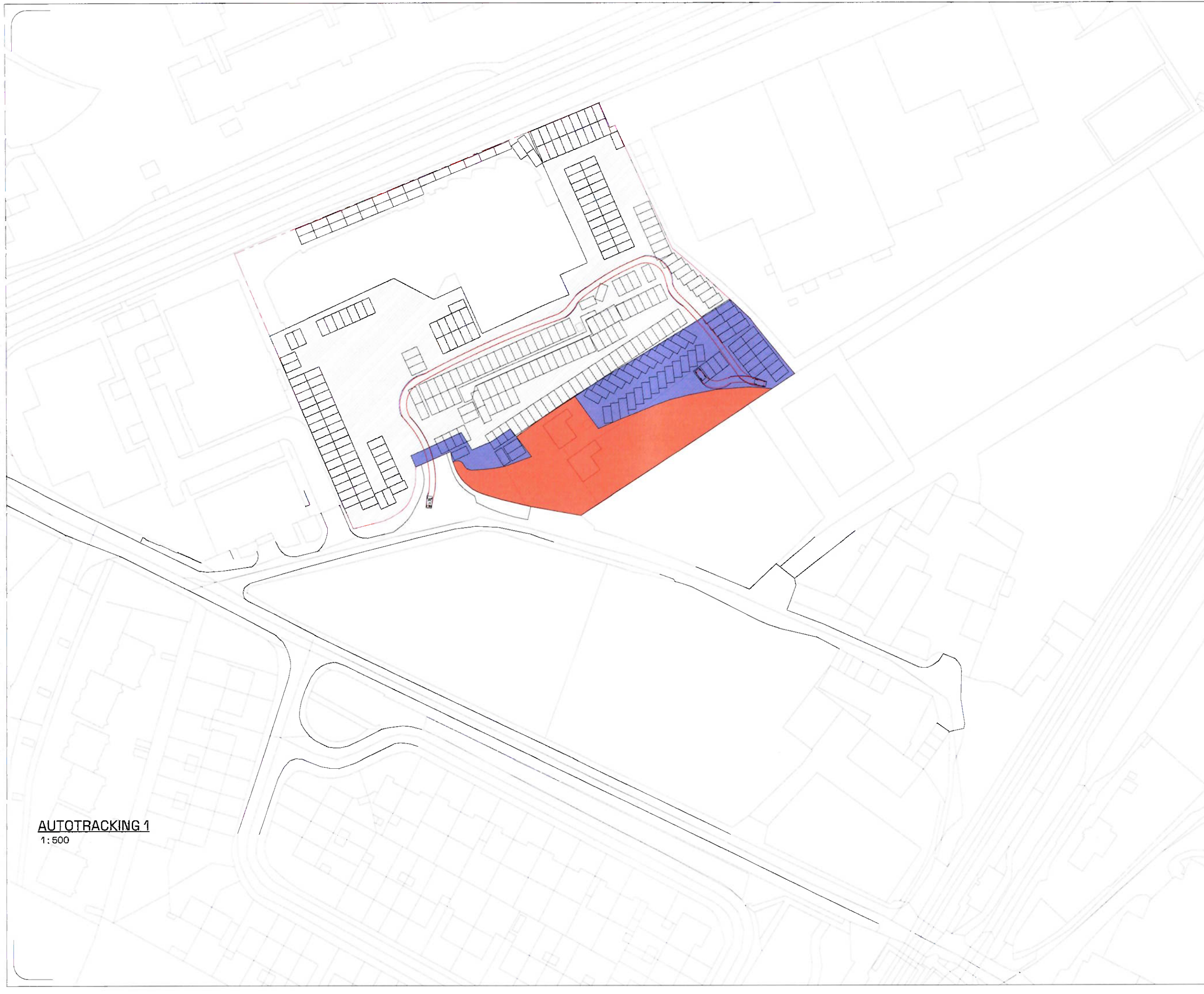
TENT ENGINEERING

PROJECT: GOWAN GROUP			
TITLE: PROPOSED RAILWAY ORDER LAYOUT			

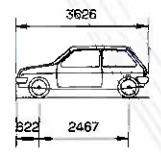
SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH

DRAWING NO: 23088-TNT-XX-00-DR-T-90005 P01





- Notes:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING.



**SMALL CAR (2006):**

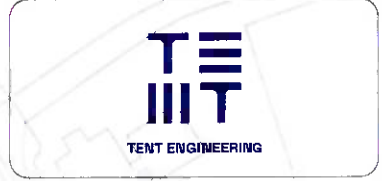
OVERALL LENGTH:	3.626m
OVERALL WIDTH:	1.688m
OVERALL BODY HEIGHT:	1.414m
MIN. BODY GROUND CLEARANCE:	0.233m
MAX TRACK WIDTH:	1.621m
LOCK-TO-LOCK TIME:	4.00s
WALL TO WALL TURNING RADIUS:	5.330m

**LEGEND**

- GOWAN GROUP SITE BOUNDARY
- BURKES BROTHER SITE BOUNDARY
- ASHTOWN STABLES SITE BOUNDARY
- EXISTING BUILDING
- XXXXXXXXXX BUILDING TO BE DEMOLISHED
- EXISTING ROAD
- PROPOSED NEW ROAD
- PERMANENT LAND LOST
- TEMPORARY LAND LOST

**AUTOTRACKING 1**  
1:500

PO1	ISSUED FOR PLANNING	RB	25.09.23
REV	DESCRIPTION	BY	DATE
STATUS:	PLANNING		

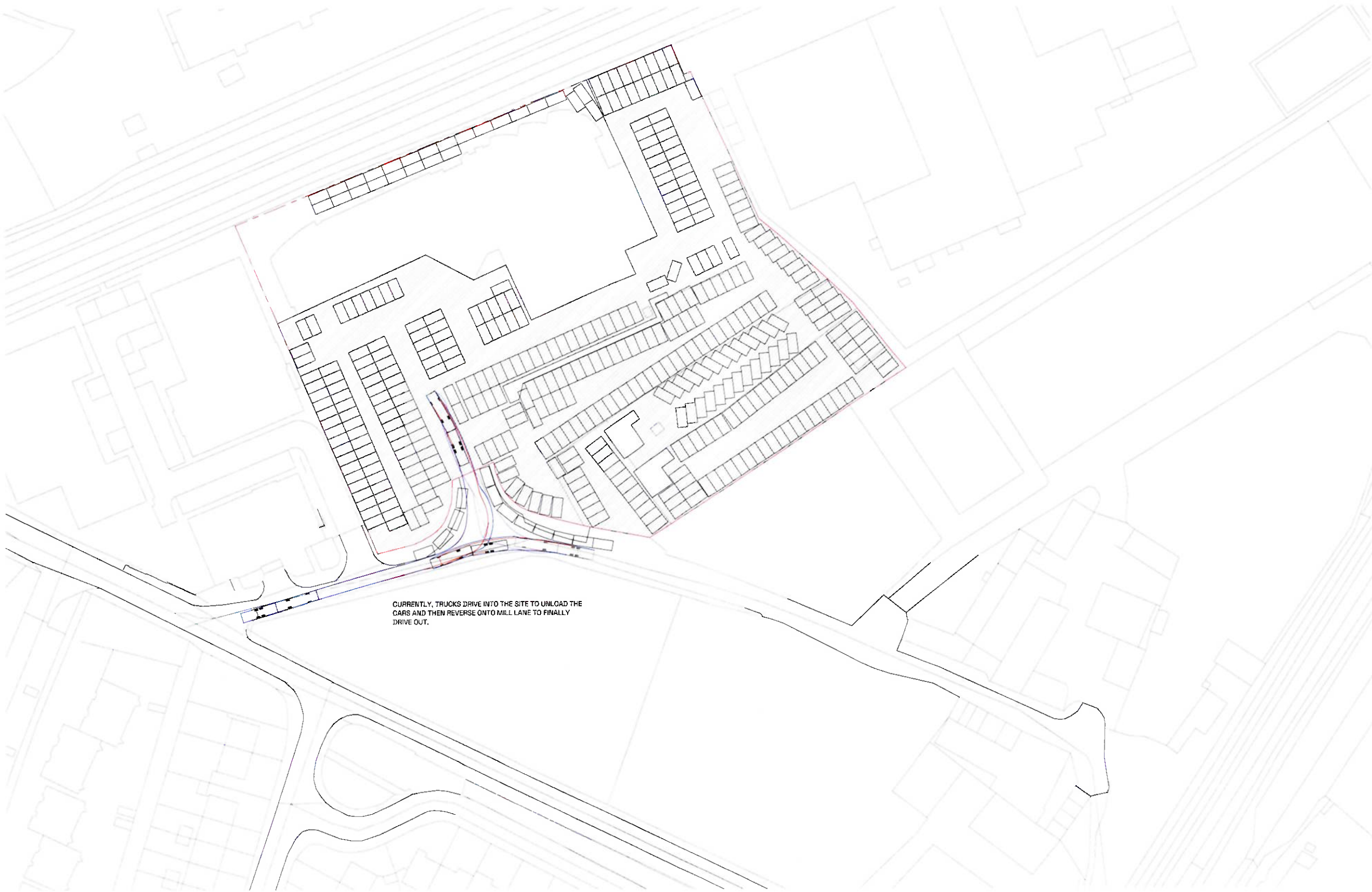


**PROJECT**  
GOWAN GROUP

**TITLE**  
PROPOSED RAILWAY ORDER  
LAYOUT WITH  
AUTOTRACKING 1

SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	RB	DH
DRAWING NO:	23088-TNT-XX-00-DR-T-90006		
	PO1		





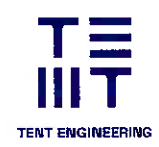
CURRENTLY, TRUCKS DRIVE INTO THE SITE TO UNLOAD THE CARS AND THEN REVERSE ONTO MILL LANE TO FINALLY DRIVE OUT.

**EXISTING SITE - TRUCK UNLOADING PROCESS**  
1:500

Notes:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

PO1	ISSUED FOR PLANNING	AC	26.09.23
REV	DESCRIPTION	BY	DATE
STATUS		PLANNING	

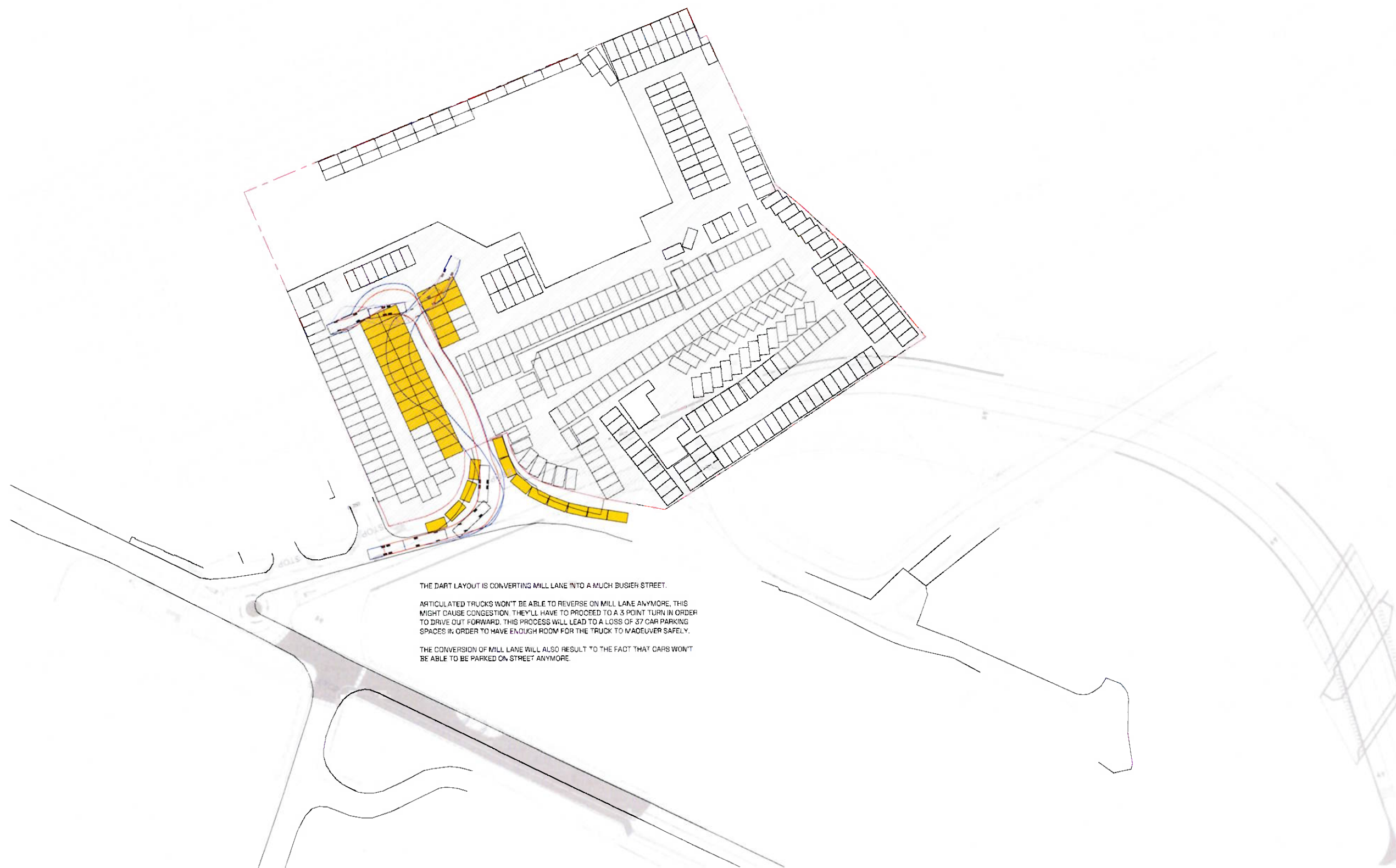


PROJECT				GOWAN GROUP	
TITLE					
EXISTING CAR DELIVERY OFFLOAD					
SCALE AT A1		DATE		DRAWN	
1:500		SEP 23		AC	
CHECKED				DH	
DRAWING NO:				REVISION	
23088-TNT-XX-00-DR-T-90012				PO1	



Notes:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION. IMMEDIATELY ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.



**DART PROPOSED LAYOUT - TRUCK UNLOADING PROCESS**  
1:500

PO2	ISSUED FOR PLANNING	AC	02.10.23
PO1	ISSUED FOR PLANNING	AC	26.09.23
REV	DESCRIPTION	BY	DATE
STATUS: PLANNING			

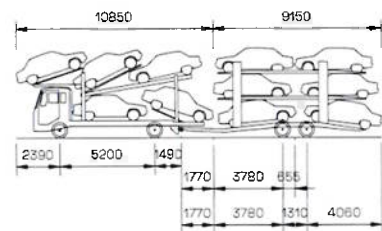


PROJECT: GOWAN GROUP

TITLE: PROPOSED RAILWAY ORDER  
LAYOUT CAR DELIVERY  
VEHICLE OFFLOAD

SCALE AT A1	DATE	DRAWN	CHECKED
1:500	SEP 23	Author	Checker
DRAWING NO.	REVISION		
23088-TNT-XX-00-DR-T-90013	PO2		



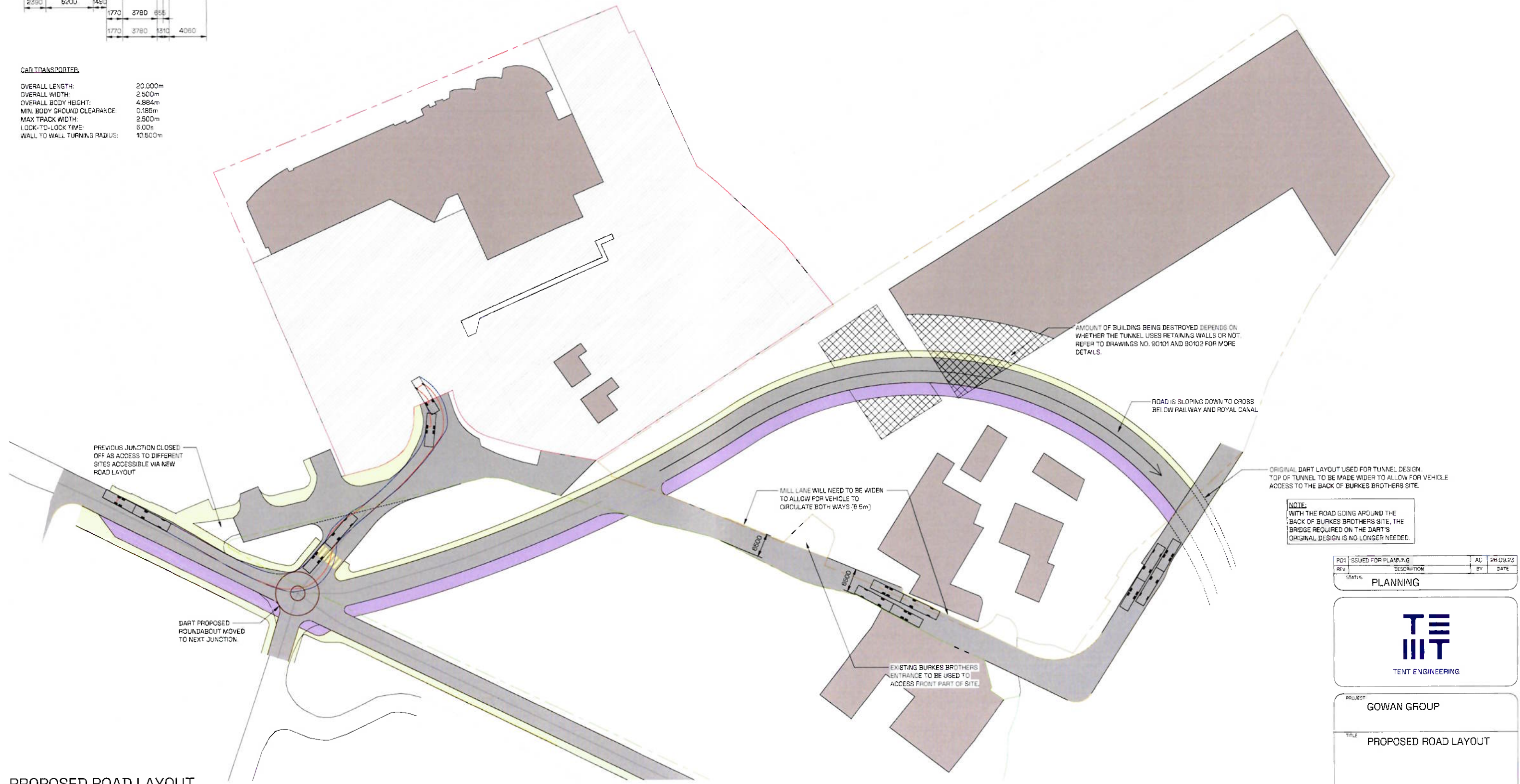


**CAR TRANSPORTER:**

OVERALL LENGTH: 20.000m  
 OVERALL WIDTH: 2.500m  
 OVERALL BODY HEIGHT: 4.884m  
 MIN. BODY GROUND CLEARANCE: 0.185m  
 MAX TRACK WIDTH: 2.500m  
 LOCK-TO-LOCK TIME: 6.00s  
 WALL TO WALL TURNING RADIUS: 10.500m

LEGEND	
<span style="color: red;">---</span>	GOWAN GROUP SITE BOUNDARY
<span style="color: orange;">---</span>	BURKES BROTHER SITE BOUNDARY
<span style="color: green;">---</span>	ASHTOWN STABLES SITE BOUNDARY
<span style="background-color: #808080; border: 1px solid black;"></span>	EXISTING BUILDING
<span style="background-color: #cccccc; border: 1px solid black;"></span>	BUILDING TO BE DEMOLISHED
<span style="border-bottom: 1px solid black;"></span>	EXISTING ROAD
<span style="background-color: #808080; border: 1px solid black;"></span>	PROPOSED NEW ROAD
<span style="background-color: #800080; border: 1px solid black;"></span>	PROPOSED CYCLING LANE
<span style="background-color: #90EE90; border: 1px solid black;"></span>	PROPOSED PEDESTRIAN PATH


- Notes:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS
  2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING.



**PROPOSED ROAD LAYOUT**  
 1:500

REV	DESCRIPTION	BY	DATE
P01	ISSUED FOR PLANNING	AC	26.09.23

STATUS: **PLANNING**



**TENT ENGINEERING**

PROJECT: **GOWAN GROUP**

TITLE: **PROPOSED ROAD LAYOUT**

SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	AC	DH

DRAWING NO: **23088-TNT-XX-00-DR-T-90100** P01



	EXISTING SITE AREA	DART - WEST PROPOSED TENT LAND TAKEN	TENT PROPOSED LAND TAKEN	TENT PROPOSED LAND TAKEN (RETAINING WALL OPTION)
GOWAN GROUP	13,000m	1,500m	0m²	0m²
BURKES BROTHERS	17,500m	4,000m²	4,000m²	2,500m²
ASHTOWN STABLES	11,000m	500m²	2,500m²	2,500m²

LEGEND

GOWAN GROUP SITE BOUNDARY

BURKES BROTHER SITE BOUNDARY

ASHTOWN STABLES SITE BOUNDARY

EXISTING BUILDING

BUILDING TO BE DEMOLISHED

EXISTING ROAD

PROPOSED NEW ROAD

PERMANENT LAND LOST

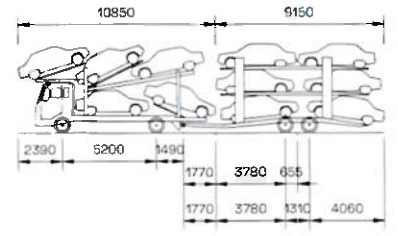
TEMPORARY LAND LOST

- Notes:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.

3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

4. FOR GENERAL NOTES REFER TO DRAWING.



CAR TRANSPORTER:

OVERALL LENGTH: 20,000m  
OVERALL WIDTH: 2,500m  
OVERALL BODY HEIGHT: 4,884m  
MIN. BODY GROUND CLEARANCE: 0.165m  
MAX TRACK WIDTH: 2,500m  
LOCK-TO-LOCK TIME: 6.00s  
WALL TO WALL TURNING RADIUS: 10,500m



NOTE:  
APPROX. GOWAN GROUP SITE SIZE: 13,000 m²  
APPROX. CAR PARKING SPACE: 5000 m²  
CAR PARKING SPACE AREA PERMANENTLY LOST: 0 m²  
CAR PARKING SPACE TEMPORARY LOST: 0 m²  
PERCENTAGE OF COMBINED LAND LOST: 0 %

NOTE:  
EMBANKMENT ON 1 SIDE AND RETAINING WALL ON THE OTHER SIDE.  
ORIGINAL APPROX. BURKES BROTHERS SITE SIZE: 17,500 m²  
APPROX. PERMANENT LAND LOST: 4,000 m²  
PERCENTAGE OF LAND LOST: 23%

NOTE:  
ORIGINAL APPROX. ASHTOWN STABLES SITE SIZE: 11,000 m²  
APPROX. PERMANENT LAND LOST: 2,500 m²  
PERCENTAGE OF PERMANENT LAND LOST: 22%

NOTE:  
THE ASHTOWN STABLES WILL UNLIKELY BE OPERATIVE DURING THE PROCESS OF THE WORKS HAPPENING HERE. THEREFORE, USING THEIR LAND AS TEMPORARY COMPOUND SHOULD NOT DISRUPT ANY BUSINESS.  
APPROX LAND AVAILABLE FOR TEMPORARY COMPOUND: 5000 m²  
PERCENTAGE OF COMBINED LAND LOST: 68%

NOTE:  
WITH THE ROAD GOING AROUND THE BACK OF BURKES BROTHERS SITE, THE BRIDGE REQUIRED ON THE DART'S ORIGINAL DESIGN IS NO LONGER NEEDED.

PROPOSED LAYOUT  
1: 500

PO1 ISSUED FOR PLANNING	AC	26.06.23
REV	DESCRIPTION	By DATE
STATUS	PLANNING	

TENT ENGINEERING

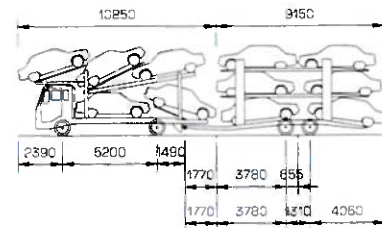
PROJECT				GOWAN GROUP			
TITLE				LAND TAKE ANALYSIS WITH AUTOTRACKING 1			
SCALE AT A1		DATE		DRAWN		CHECKED	
As indicated		SEP 23		AC		DH	
DRAWING NO.				REVISION			
23088-TNT-XX-00-DR-T-90101				PO1			



	EXISTING SITE AREA	DART - WEST PROPOSED TENT PROPOSED LAND TAKEN	TENT PROPOSED LAND TAKEN	TENT PROPOSED LAND TAKEN (RETAINING WALL OPTION)
GOWAN GROUP	13,000m <sup>2</sup>	1,500m <sup>2</sup>	0m <sup>2</sup>	0m <sup>2</sup>
BURKES BROTHERS	17,500m <sup>2</sup>	4,000m <sup>2</sup>	4,000m <sup>2</sup>	2,500m <sup>2</sup>
ASHTOWN STABLES	11,000m <sup>2</sup>	500m <sup>2</sup>	2,500m <sup>2</sup>	2,500m <sup>2</sup>

LEGEND	
	GOWAN GROUP SITE BOUNDARY
	BURKES BROTHER SITE BOUNDARY
	ASHTOWN STABLES SITE BOUNDARY
	EXISTING BUILDING
	BUILDING TO BE DEMOLISHED
	EXISTING ROAD
	PROPOSED NEW ROAD
	PERMANENT LAND LOST
	TEMPORARY LAND LOST

- Notes:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS
  2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION. IMMEDIATELY ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING.



#### CAR TRANSPORTER

OVERALL LENGTH: 10 250mm  
OVERALL WIDTH: 3 150mm  
OVERALL BODY HEIGHT: 4 884mm  
MIN. BODY GROUND CLEARANCE: 0 185mm  
MAX TRACK WIDTH: 2 500mm  
LOCK TO LOCK TIME: 6 00s  
WALL TO WALL TURNING RADIUS: 10 500mm

**NOTE:**  
APPROX. GOWAN GROUP SITE SIZE: 13,000 m<sup>2</sup>  
APPROX. CAR PARKING SPACE: 9000 m<sup>2</sup>  
CAR PARKING SPACE AREA PERMANENTLY LOST: 0 m<sup>2</sup>  
CAR PARKING SPACE TEMPORARY LOST: 0 m<sup>2</sup>

**NOTE:**  
RETAINING WALLS USED ON BOTH SIDE  
ORIGINAL APPROX. BURKES BROTHERS SITE SIZE: 17,500 m<sup>2</sup>  
APPROX. PERMANENT LAND LOST: 2,500 m<sup>2</sup>  
PERCENTAGE OF LAND LOST: 14%

**NOTE:**  
ORIGINAL APPROX. ASHTOWN STABLES SITE SIZE: 11,000 m<sup>2</sup>  
APPROX. PERMANENT LAND LOST: 2,500 m<sup>2</sup>  
PERCENTAGE OF PERMANENT LAND LOST: 22%

**NOTE:**  
THE ASHTOWN STABLES WILL UNLIKELY BE OPERATIVE DURING THE PROCESS OF THE WORKS HAPPENING HERE. THEREFORE, USING THEIR LAND AS TEMPORARY COMPOUND SHOULD NOT DISRUPT ANY BUSINESS.  
APPROX LAND AVAILABLE FOR TEMPORARY COMPOUND: 5000 m<sup>2</sup>  
PERCENTAGE OF COMBINED LAND LOST: 68%

MILL LANE WILL NEED TO BE WIDEN  
TO ALLOW FOR VEHICLE TO  
CIRCULATE BOTH WAYS (6.5m)

ORIGINAL DART LAYOUT USED FOR TUNNEL DESIGN.  
TOP OF TUNNEL TO BE MADE WIDER TO ALLOW FOR VEHICLE  
ACCESS TO THE BACK OF BURKES BROTHERS SITE

**NOTE:**  
WITH THE ROAD GOING AROUND THE  
BACK OF BURKES BROTHERS SITE, THE  
BRIDGE REQUIRED ON THE DART'S  
ORIGINAL DESIGN IS NO LONGER NEEDED

EXISTING BURKES BROTHERS  
ENTRANCE TO BE USED TO  
ACCESS FRONT PART OF SITE

REV	DESCRIPTION	BY	DATE
P01	ISSUED FOR PLANNING	AC	26.09.23
STATUS: PLANNING			



PROJECT: GOWAN GROUP

TITLE: LOST LAND ANALYSIS WITH AUTOTRACKING 2

SCALE AT A1	DATE	DRAWN	CHECKED
As indicated	SEP 23	Author	Checker
DRAWING NO:	23088-TNT-XX-00-DR-T	90102	P01

PROPOSED LAYOUT Copy 1  
1:500





TENT ENGINEERING



AN BORD PLEANAĽA

05 OCT 2023

LTR DATED \_\_\_\_\_ FROM \_\_\_\_\_

LDG- \_\_\_\_\_

ABP- 314232-22

AN BORD PLEANAĽA

05 OCT 2023

LTR DATED \_\_\_\_\_ FROM \_\_\_\_\_

LDG- \_\_\_\_\_

ABP- 314232-22