



TN 162735

**CONSTRUCTION OF SERVICE STATION FOR REFUELLING OF TERMINAL
EQUIPMENT, MALTA FREEPORT TERMINALS, BIRŻEBBUĠA**

PROJECT DESCRIPTION STATEMENT



Version 1: January 2016



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Quality Assurance

Construction of Service Station for Refuelling of Technical Equipment Project Description Statement January 2016

Report for: **Malta Freeport Terminals Ltd**

Revision Schedule

Rev	Date	Details	Written by:	Checked by:	Approved by:
00	Jan 2016	Submission to Client	Rachel Decelis Consultant	Ellis McCullough Senior Planning Consultant	Adrian Mallia Managing Director

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INTRODUCTION

1. This Project Description Statement (PDS) describes a proposal to construct a service station for the refuelling of technical equipment and the vehicle fleet at the Malta Freeport Terminals (MFT), Birżebbuġa (see site location map - **Figure I**). The proposal also includes facilities for the washing, maintenance and general servicing of the equipment / vehicles.
2. The project is proposed by Malta Freeport Terminals Ltd, who is hereinafter referred to as 'the applicant'; the project is hereinafter referred to as 'the Scheme'.
3. The current MFT equipment and vehicle fleet includes approximately 140 tug masters and trailers, 40 vans / mini-buses, and 16 reach stackers. This equipment / vehicles will make use of the Scheme. The mobile Rubber Tyred Cranes (RTGs) will not use the refuelling facility; the RTGs will continue to be refuelled by bowser.

BACKGROUND

4. On 24th June 2015, the applicant submitted a Full Development Permit application "To remove existing container block-stow and demolish existing slab; proposed construction of service station for refuelling of terminal equipment" (Tracking Number 162735). On 15th September 2015, the Malta Environment and Planning Authority (MEPA) issued a Screening Letter, requesting that the applicant submit a "Project Description Statement which may lead to an Environmental Impact Assessment".
5. On 18th September 2015, the applicant was issued with a Clearance Letter for the Scheme from the Regulator for Energy and Water Services (REWS), specifically for "the design of a Petroleum-filling Station (Commercial Site) under SL 545.22 and an Autogas Filling Station under BL 545.20".

OBJECTIVES OF THE SCHEME

6. As described by the applicant, the aim of the Scheme is to improve the overall efficiency of MFT operations, in the context of facilitating the improved maintenance and sustainability of the MFT technical equipment and vehicle fleet, as well as improving such facilities in line with current environmental standards.

ALTERNATIVE SITE SELECTION

7. The Scheme is located within the MFT complex and is intended to improve refuelling, washing and maintenance / servicing facilities required for the MFT technical equipment and vehicle fleet; all terminal equipment is licensed and insured to work only within the boundary of the MFT complex. As such, no alternative sites were considered by the applicant. However, there were a number of different locations within the MFT complex investigated for the Scheme. The proposed site, on the southeastern perimeter on Terminal I, was chosen by the applicant having regard to the optimum operation of the MFT, taking account of the internal traffic routes, proximity to the main entrance to the complex, and the health and safety of employees and visitors.

Figure 1: Location of the Scheme Site



INDICATIVE ONLY - Not to be used for direct interpretation

DESCRIPTION OF THE SCHEME

LOCATION OF THE SCHEME SITE

8. As mentioned, the Scheme site is located within the MFT complex, located on the southeastern boundary of the complex, on Terminal 1, approximately 380 m from the main entrance to the complex (see **Figure 1** above). The MFT is located within the Birżebbuġa Local Council administrative area.

CHARACTERISTICS OF THE SCHEME SITE

9. The Scheme site covers an area of approximately 5,000 m². The majority of the site is currently used for container storage. AC repairs also take place on the site, and there is an engineering wash bay located in the eastern corner which is specifically used for washing the underside of equipment / vehicles; as mentioned below, this facility is to be retained.
10. The Scheme site is flat throughout, having cross falls; all floor drains flow through an oil separator. The whole of the area is hard-surfaced. There are no physical boundaries to the site. Images of the Scheme Site as it is currently are included as **Figure 2**.
11. The Scheme site is accessed from Triq Kalafrana (also known as South Road), which takes access from Triq Ħal Far, an arterial road that forms part of the TEN-T European road network.

DESCRIPTION OF THE GENERAL SURROUNDINGS

Land Uses

12. A land use survey of the area surrounding the Scheme site is illustrated in **Figure 3**.
13. The area immediately surrounding the Scheme site comprises exclusively industrial uses, including the MFT itself (a transshipment logistics facility); Oiltanking Malta Ltd, a facility for the storage of oils, chemicals, gases and dry bulk, which is located to the south / southwest of the Scheme site; and MedServ Malta, an oil and gas integrated logistics facility, located to the east of the Scheme site.
14. To the west of the MFT complex, the land use is predominantly agricultural, a mix of well-tended arable land and livestock farms, generally small holdings defined by rural laneways and rubble walls.
15. There are a number of commercial uses located just outside the northwest corner of the MFT complex, including manufacturing premises (construction industry related) and a boat storage yard. The Department of Civil Aviation (DCA) telecommunications station is also located in this area.
16. The settlement of Birżebbuġa lies to the north / northwest of the Scheme site. The predominant land use in the area closest to the Scheme site is residential. In addition to private residences, there is a 3-star hotel (on the coastline at Pretty Bay), and a

number of properties, particularly along the coast, are used as tourist accommodation and as second homes in the summer months. In addition to the seasonally-occupied accommodation, the area includes a relatively significant number of vacant, abandoned properties, predominantly residential properties.

17. Civic facilities in the area include the Birzebbuga Local Council premises, the Police Station, a health care centre and various social / political clubs. There are two chapels (St Joseph's Chapel and St George's Chapel) located in the area. Commercial activity in Birzebbuga takes the form of bars, restaurants and cafés; there are two banks and a number of retail outlets in the area.
18. The widely-used Birzebbuga promenade extends all along the coast, from Il-Qajjenza in the north to the MFT in the south. Open spaces and areas for public congregation along the promenade include children's play areas, sports facilities and bathing areas; the sandy beach at Pretty Bay is a regional attraction, and bathing is common elsewhere all along the rocky shore, particularly to the north of Pretty Bay and stretching to Il-Qajjenza.

Natural and Cultural Heritage

19. There are a number of important environmental designations in area around the Scheme site (see **Figure 4**).
20. The coastal strip from the MFT to Ħal Far is designated as a Special Area of Conservation (SAC), as part of the Rđum tan-Nofsinhar Coastal Cliffs system (GN 877/03), and as a Special Protection Area (SPA), and hence forms part of the Natura 2000 network. With the exception of the area occupied by Fort Bengħisa, this coastal strip is also scheduled as an Area of Ecological Importance (AEI) – Level 2 and Level 3 in part (GN 400/96). The coastal cliffs from the MFT to Ħal Far are also designated as an Area of High Landscape Value (AHLV) – GN 400/96
21. There is a small Bird Sanctuary (LN 41/03) located within the DCA telecommunications station.
22. The early 20th Century Fort Bengħisa is located adjacent to the southwest of the Scheme Site. The Fort is a scheduled Grade I historic property (military architecture). There are Roman remains, scheduled as a Class A archaeological site, located just outside of the MFT complex, on its southwest corner.

Figure 2: Images of the Scheme Site as Existing





Figure 3: Surrounding Land Uses

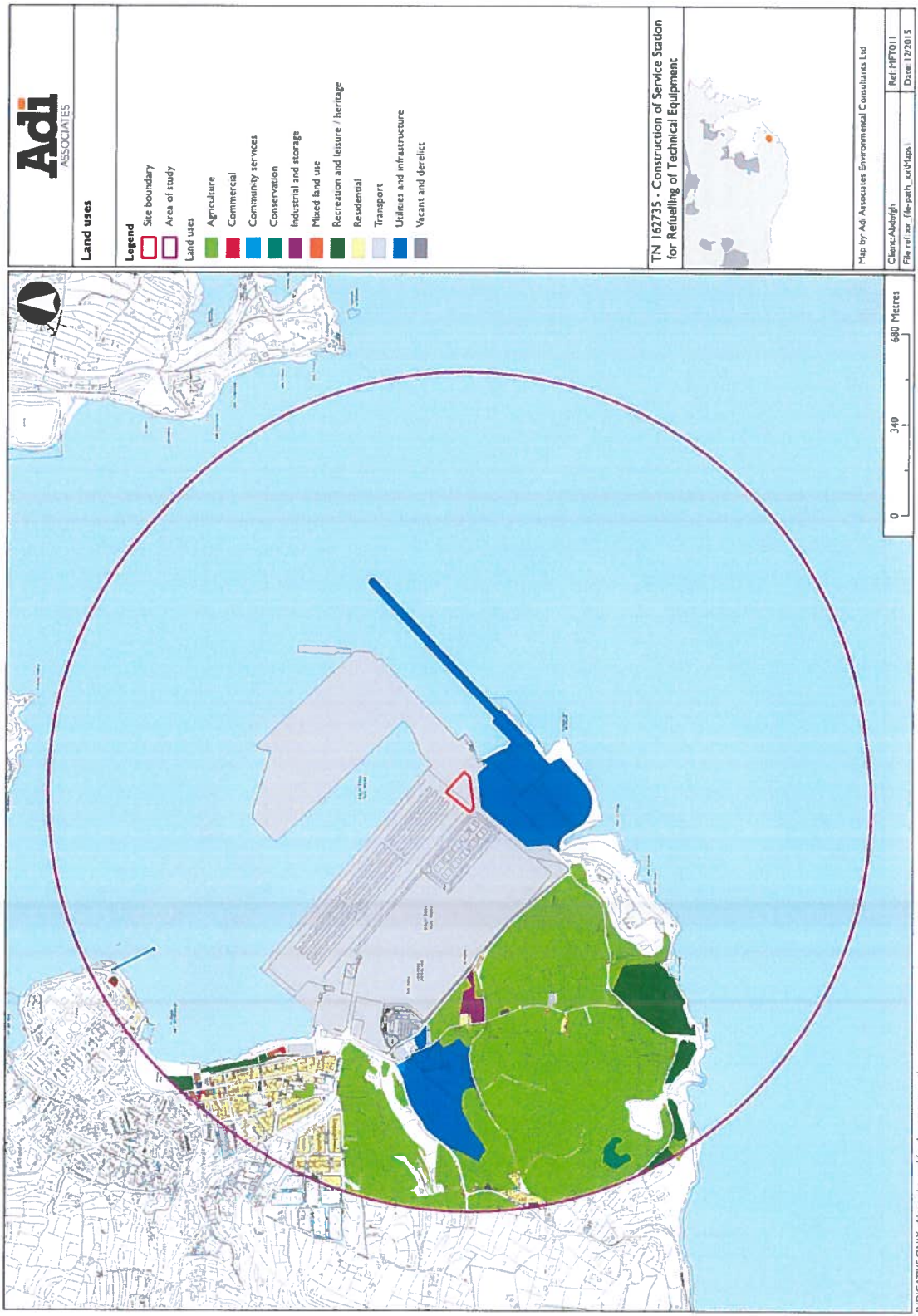
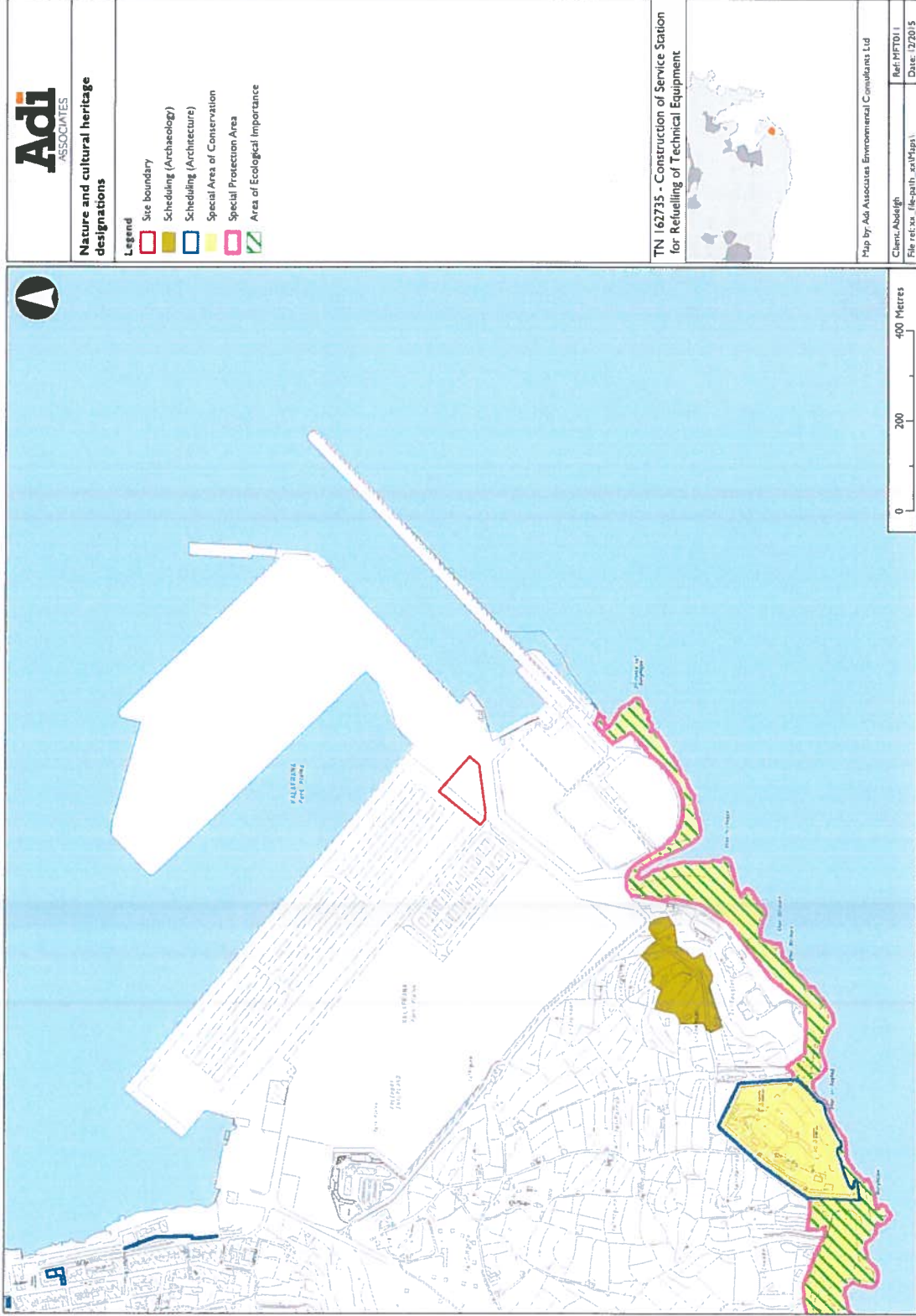


Figure 4: Natural and Cultural Heritage Designations



THE SCHEME

23. The Scheme takes the form of a refuelling facility for MFT technical equipment and its vehicle fleet. It is intended to install diesel EN 590 and AD-BLU storage and dispensing facilities. Autogas storage and LPG dispensing facilities may also be installed, and hence these facilities are being taken forward in the application as part of the Scheme. Currently, no MFT equipment / vehicles run on autogas, but there are longer-term plans to make provision for the use of autogas.
24. Washing, maintenance and general servicing facilities for the MFT technical equipment and vehicle fleet will also be provided as part of the Scheme.
25. The detailed drawings of the Scheme are included as **Appendix I**; the proposed layout plan is illustrated in **Figure 5**. The Scheme is described in detail below.

Fuel Storage Area

26. There will be five over ground, double-skin storage tanks holding a volume of 30,000 L each (cumulative total storage of 150,000 L). Four tanks will hold diesel EN 590; one will hold the additive AD-BLU. The tanks will be equipped with an interstitial leak detection system.
27. The tanks will be located within a bund, raised and anchored to the ground with non-corrosive straps. The bottom structure of bund will be constructed from sulphate resisting concrete; the side walls will take the form of a brick wall. The bund will be lined in a fuel resistant self-healing geo-textile membrane, and will be able to contain 37,500 L (equating to 25% of the total fuel capacity), in the event of a spill from the tanks.
28. The underground and above ground pipe work for fuel transfer will take the form of double wall polyethylene, and a continuous interstitial monitoring device will be installed to detect leakages.
29. An automatic tank gauge system and overspill prevention valves will be installed on the tanks.
30. In the event of installing the autogas facility, two above ground storage tanks will be installed, to supply six dispensers. These bulk vessels will be approximately 4 m x 1.2 m diameter, having a maximum capacity of 8,000 litres of LPG each (cumulative total LPG storage of 16,000 litres). The ground beneath the tanks will be concreted and levelled accordingly. Open mesh, or palisade-type fencing, of approximately 1.8 m height, will enclose the tanks. Bollards, appropriately marked for visibility, will be installed to further protect the vessels.
31. The LPG storage tanks will be constructed having regard to BS 5500:1994 (or appropriate equivalent standard in compliance with the LPG Code of Practice A1:2010). Each tank will be equipped with a fixed maximum liquid level device or maximum level fill stop valve to prevent overfilling.

32. All electrical equipment within the autogas storage and dispenser area will be ATEX certified.
33. The entire fuel storage area, as well as the refuelling area (both liquid fuel and LPG), will be under the cover of an open-sided, light-weight steel canopy, with a maximum height of 8.91 m.

Refuelling Area

34. There will be six liquid fuel dispensers, together with six dispensers supplying LPG (all dispensers will be MSA EN 13617-1 compliant). The fuel dispensers will supply EN 590 and AD-BLU, as mentioned. The dispensers will dispense the diesel and AD-BLU separately.
35. The flow rates from the fuel dispensers will range from 45 to 130 L/min (for the high flow diesel dispensers). Fuel sumps will be installed under each dispenser, for the containment of fuel. The fuel dispensers will be installed on a kerb, with a height of not less than 300 mm.
36. The dispensers will be fitted with a suction system, and emergency stop buttons will also be available to stop the fuel supply in the event of an emergency.
37. There will be no vapour recovery mechanism on the fuel dispensers or storage tanks, since no unleaded petrol will be supplied.
38. There will be two single-storey buildings in the Refuelling Area, described as an 'electrical room' and an 'operator room / IT room'. As mentioned, the whole of the refuelling area, as well as the fuel storage area, will be under the cover of an open-sided, light-weight steel canopy, with a maximum height of 8.91 m.

Washing Area

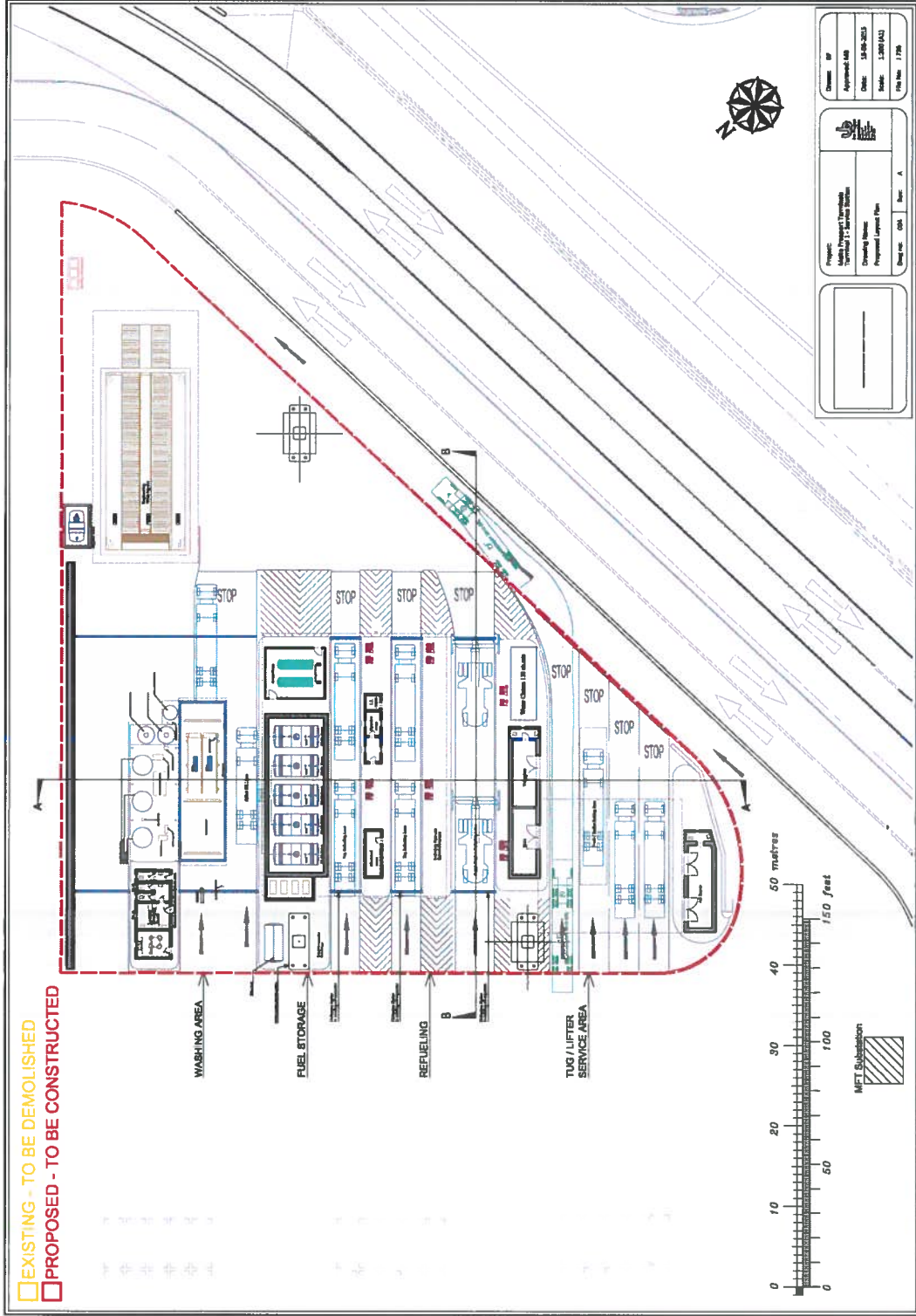
39. The washing area is intended for use by MFT equipment / vehicles. It will take the form of a full automated power wash facility. The washing area will be under the cover of a hipped-roofed, open-sided, light-weight steel canopy, with a maximum height of 6.24 m.
40. There will also be an adjacent single-storey building, a flat-roofed structure; this is described as a 'general services handyman area', having sanitary facilities and a restroom.

Tug / Lifter Service Area

41. The service area is intended to service MFT equipment / vehicles. The area will be under the cover of an open-sided, light-weight steel canopy, with a maximum height of 8.91 m.
42. There will be two single-storey buildings in the Service Area, described as an 'AC repair' and as a 'store / vulcaniser,' respectively. The former building will be used for maintenance of vehicles' air-conditioning systems, whereas the latter will be used for tyre replacement.



Figure 5: Scheme Layout



Access

43. The Scheme Site lies within the MFT complex, as mentioned. The site is located approximately 380 m from the main vehicular entrance to (and exit from) the MFT complex at its closest point. Fuel road tankers will access the site through the main vehicular entrance, from / onto Triq Kalafrana (also known as South Road). Triq Kalafrana is accessed from Triq Ħal Far.
44. Within the MFT complex, equipment / vehicles will access the Scheme using the existing demarcated traffic routes; there is an established one-way traffic system in operation on Terminal I.

Services

45. All the necessary electricity (grid, including sub-station) and water (mains water) services are already available on site to serve the Scheme.
46. There is no sewerage network available to accommodate the Scheme. Details of the disposal arrangements for foul water are described below. There will be a cesspit (9 m³ capacity) in the area beneath the 'general services handyman building', to serve the new sanitary facilities in this building. This cesspit will be impermeable and ventilated, and will be emptied by bowser to a WSC-authorized discharge point at intervals.
47. There is existing lighting on site, in the form of two high towers (33 lux); there are no plans to add to the external lighting. New lighting will illuminate the area beneath the canopies (at night).

Operational Safety

48. In addition to the safety measures already described, there will be a number of additional operational measures employed to minimise environmental risk and ensure the health and safety of those working on and around the site. Spill kits will be available to clean up any fuel spills / leaks. Additionally, the Scheme includes measures to reduce the likelihood and consequences of a fire / explosion, including a lightning protection system, flame arrestors for vent pipe work, and an overhead canopy to the fuel storage / dispensing area, manufactured using fire-retardant material. An automatic fire detection and alarm system will also be installed, and fire-fighting equipment consisting of dry powder and foam extinguishers will also be available.

RESOURCES

Raw Materials

49. The main raw materials to be used in construction of the Scheme, and their estimated volumes, are shown in **Table 1**.
50. The main raw materials to be used in operation of the Scheme, and their estimated annual volumes, are shown in **Table 2**.

Table 1: Estimated Raw Materials for Construction

Materials	Volume
Bricks (hollow concrete blocks)	1,835 m ²
Concrete	1,085 m ³
Pre-cast concrete slabs	57 m ²
Sand	6 m ³
Steel (structure)	62,750 kg
Mesh reinforcement	3,975 m ²
Aluminium	34 m ²
Geo-textile	2,830 m ²

Table 2: Estimated Raw Materials to be used in Operation

Materials	Annual Volume
Diesel EN 590	10,000 m ³
AD-BLU	400 m ³
Autogas (LPG)	Dependent on extent of conversion of vehicles / machinery to LPG
Detergent	18,000 L
Hydraulic oils and lubricants	40,000 L
AC gas	104 cylinders

51. Diesel, AD-BLU and autogas will be stored in dedicated storage tanks, as described earlier. Bulk detergent, hydraulic oils and lubricants will be stored in the MFT main stores; only quantities for daily use will be kept on the Scheme site.

Energy

52. As mentioned, electricity supply is available to serve the development (grid, including on-site sub-station). The estimated power requirement is 26 kW and the estimated annual electricity consumption for the Scheme is 9,500 kWh.

Water

53. There is mains water supply available to serve the Scheme, as mentioned. It is estimated that the daily water consumption will be in the range of 2.5 m³.
54. The Scheme includes construction of a water cistern, with a capacity of 120 m³. Rainwater will be collected in this cistern. The collected rainwater will be reserved for fire emergencies.

Waste Management

Construction Phase

55. Waste generated during construction will primarily consist of excavation waste, from the excavation of the existing concrete base slab and underlying gravel. It is envisaged that there will be approximately 1,665 m³ of excavated material generated. This may include contaminated material. The waste will be appropriately disposed of, in accordance with the current regulations.
56. There will be relatively little waste generated from the construction itself. There may be steel and aluminium off cuts, residue inert building material (like broken concrete blocks), and residue timber, as well as domestic waste generated by the workers. When the mechanical, electrical and finishing works begin, other wastes will likely include plastic conduit, copper wires covered in plastic, off cuts of steel supporting rods and cable trays, ceramic tiles, paper and plastic bags for materials, aluminium off cuts, broken glass items, and gypsum soffit ceiling parts.

Operational Phase

57. The types of wastes that will be produced during the operation of the Scheme will include oily waste from the separators, tyres, AC cylinders, and municipal solid waste. Annual estimates are as illustrated in **Table 3**.

Table 3: Estimated Annual Operational Waste Volumes

Waste Types	Annual Volume
Oily waste from the separators	45 m ³
Oily rags from maintenance	2,037 kg
Tyres	170 t
AC cylinders	104 cylinders
Municipal solid waste	2,000 kg

58. In all circumstances the removal of oily waste will be carried out in accordance with the *Waste Management (Waste Oils) Regulations 2002*. Oily waste will be stored separately and removed by licensed hazardous waste contractors engaged by the operator, in accordance with the relevant regulations. The empty AC cylinders will be collected by the contracted AC supplier.
59. Municipal solid waste will include packaging waste (e.g. plastic, glass, metal, cartons, and paper) and kitchen waste, including waste oil. This separated waste will be disposed of in the segregated skips, at the waste disposal facilities already available within the MFT complex. Waste from these facilities will be separated and disposed of by licensed waste contractors engaged by the operator, and in accordance with the relevant regulations.

Wastewater and Surface Water Management

60. There is an existing oil separator on site, located on the eastern corner adjacent to the engineering wash bay. This is MSA EN 858-1 compliant and of Class I type, designed to ensure that discharges of hydrocarbons do not exceed 5 ppm (parts per million). It is proposed to install a second separator in the Washing Area (MSA EN 858-2 compliant / Class I type). A By-pass tank will also be installed (again adjacent to the engineering wash bay); this will operate as a silt trap, in order not to overload the interceptor.
61. Wastewater from the Washing Area will be treated through the new Class I separator and reused (for washing). Excess treated water from the new separator will drain to the sea; it will have been filtered up to 5ppm, as mentioned.
62. Sanitary water will be discharged to a cesspit (9 m³ capacity) located beneath the general services handyman building.
63. Surface water run-off will be collected and filtered into gutters and silt traps laid out across the site and connected to the Class I separators.

Construction Timing

64. The estimated duration of the construction phase of the Scheme is envisaged to be between 5 - 6 months, including site clearance, excavation and laying of the new ground slabs, construction, and commissioning.

Machinery

65. The machinery that will be required during construction of the Scheme is envisaged to comprise the following:
- Excavators;
 - Wheel shovels;
 - Mobile cranes;
 - Tipper trucks; and
 - Ready mix concrete trucks.

Hours of Operation

66. The Scheme is envisaged to operate seven days a week over 24 hours, and all year round, with the exception of the days when the MFT is on shut-down (1st January, 1st May, 15th August, and 25th December).

Employment

67. The Scheme is expected to employ between 20 – 30 personnel during construction. When the Scheme comes into operation, it is envisaged that there will be 6 – 10 persons working at the facility.

POTENTIAL ENVIRONMENTAL IMPACTS

68. Environmental impacts can be negative as well as positive and their assessment is important so as to better define the effects that a proposal may have on its receiving environment. Although a detailed impact assessment is usually undertaken through the EIA process, the need for an EIA is however dependent on the screening of the likely impacts. At this stage in the process, a preliminary list of the potential environmental impacts of the Scheme can be identified. The list identifies only those impacts that may be significant.

69. The potential impacts of the Scheme are considered to be:

- ***Impacts on air quality, arising from construction and the operation of the Scheme.***

It is expected that there will be some dust generated during excavation; however, given the scale, duration and nature of the construction, these potential impacts are likely to be short term, temporary and localised. The construction period, including commissioning, is expected to be between five to six months, and there will be relatively minimal excavation (for foundations and wastewater infrastructure only). With proper adherence to the current construction site regulations, and with the appropriate mitigation measures in place, it is expected that dust impact during construction will be limited.

The Scheme doesn't involve the storage of petrol products; hence there will be limited VOC emissions. Notwithstanding this, the closest residential sensitive receptors are located approximately 1,200 m from the Scheme Site. Increased emissions from operational traffic as a result of the Scheme are also unlikely (see below).

- ***Waste impacts, arising from the construction and operation of the Scheme.***

A relatively small amount of material will be excavated (approximately 1,665 m³), comprising material making up the existing concrete base slab and underlying gravel. Potentially, some of this material may be contaminated (with motor oils and lubricants). The waste material will be disposed of at an authorised waste management facility, in accordance with regulations. A Construction Management Plan addressing waste management will be in place.

During operation, the Scheme will generate hazardous and non-hazardous waste, in the form of oily waste, tyres, AC cylinders, and municipal solid waste, respectively. The waste will be stored appropriately on site prior to collection, collected by authorised waste carriers, and deposited at authorised facilities for recycling or disposal. As is currently the practice at the MFT, the consignment note permit system will be employed for the transfer of hazardous waste.

- **Traffic impacts, both during construction and during the operation of the Scheme.**

The construction works envisaged are relatively moderate in scale and duration, as mentioned. Given this, together with the scale and nature of the traffic generated by the MFT normal operations, it is unlikely that there will be a significant impact from construction traffic as a result of the Scheme.

The Scheme is unlikely to generate any additional operational traffic; there may be an overall reduction in the number of fuel bowzers to / from the MFT as a result of the Scheme. Currently, MFT vehicles and mobile equipment are refuelled by means of bowser; the Scheme will facilitate the bulk storage of fuel on site thereby reducing the frequency of deliveries by bowser.

- **Environmental Risk, arising from the operation of the Scheme.**

The operation of the Scheme may present environmental risks, including from fuel spillage, air emissions, and risk of fire / explosion. However, as mentioned, air emissions will be minimal; there will be no petrol stored on site, therefore VOC emissions will be limited, as will traffic emissions. There will be a number of mitigation measures in place to reduce environmental risks and major accidents from fuel spillage and fire / explosion.

The Scheme includes a surface water management system to reduce the risk of contamination; spill kits will also be available to clean up any fuel spills / leaks.

Additionally, as mentioned, the Scheme includes measures to reduce the likelihood and consequences of a fire / explosion (including a lightning protection system, flame arrestors for vent pipe work, and an overhead canopy to the fuel storage / dispensing area, manufactured using fire-retardant material). There will also be an automatic fire detection and alarm system installed, and fire-fighting equipment (dry powder and foam extinguishers) will also be available.

- **Impacts arising from construction activities, in relation to noise, vibration, dust, and surface water management.**

Given the scale, duration and nature of the construction, these potential impacts are likely to be short term, temporary and localised.

- **Impacts on landscape and visual amenity.**

The Scheme Site is located within the MFT complex, towards the rear (south) of Terminal I, where the uses in the surrounding area are industrial in nature, including container storage (with Twenty-foot Equivalent (TEU) units stacked in practice some six units high). Given the scale, height and massing of the proposed structures relative to that of the surrounding development / uses, the Scheme is unlikely to result in a significant change in the landscape, or to have a significant impact on visual amenity.

MITIGATION PROPOSALS

70. Potential mitigation measures will include:

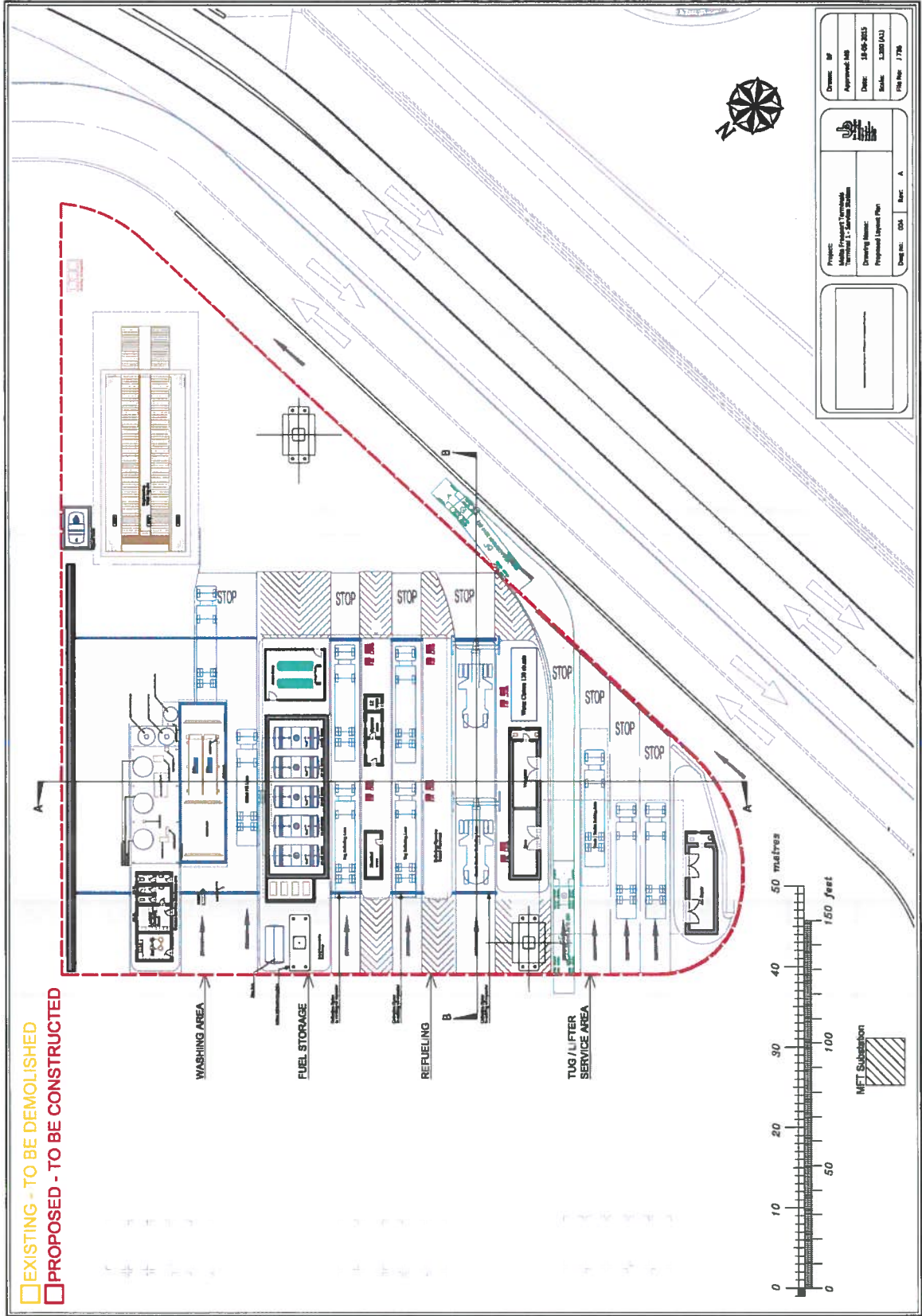
- Careful consideration of the design of the Scheme, including impermeable surfacing, surface water and wastewater management infrastructure in the interest of avoiding contamination and pollution control;
- Careful operational management of the Scheme, in order to manage activities on the site and their potential environmental impacts, including ensuring the adoption of best practice environmental measures throughout the operation of the Scheme;
- Ensuring the adoption of best practice environmental measures throughout demolition, excavation and construction, including the adoption of measures for mitigating potential impacts on air quality, waste management, preventing contamination of surface water, and other potential environmental impacts. These should be addressed in the Construction Management Plan and appropriate monitoring regimes should be set up throughout the excavation and construction phases to mitigate impacts;
- Ensuring compliance with waste management regulations and the adoption of best practice in relation to operational waste management; and
- Regulating the Scheme through an Environmental Permit administered by MEPA's Environmental Permitting and Industry Unit, as well as a licence for the operation of a petroleum filling station and an Autogas filling station from the Regulator for Energy and Water Services.

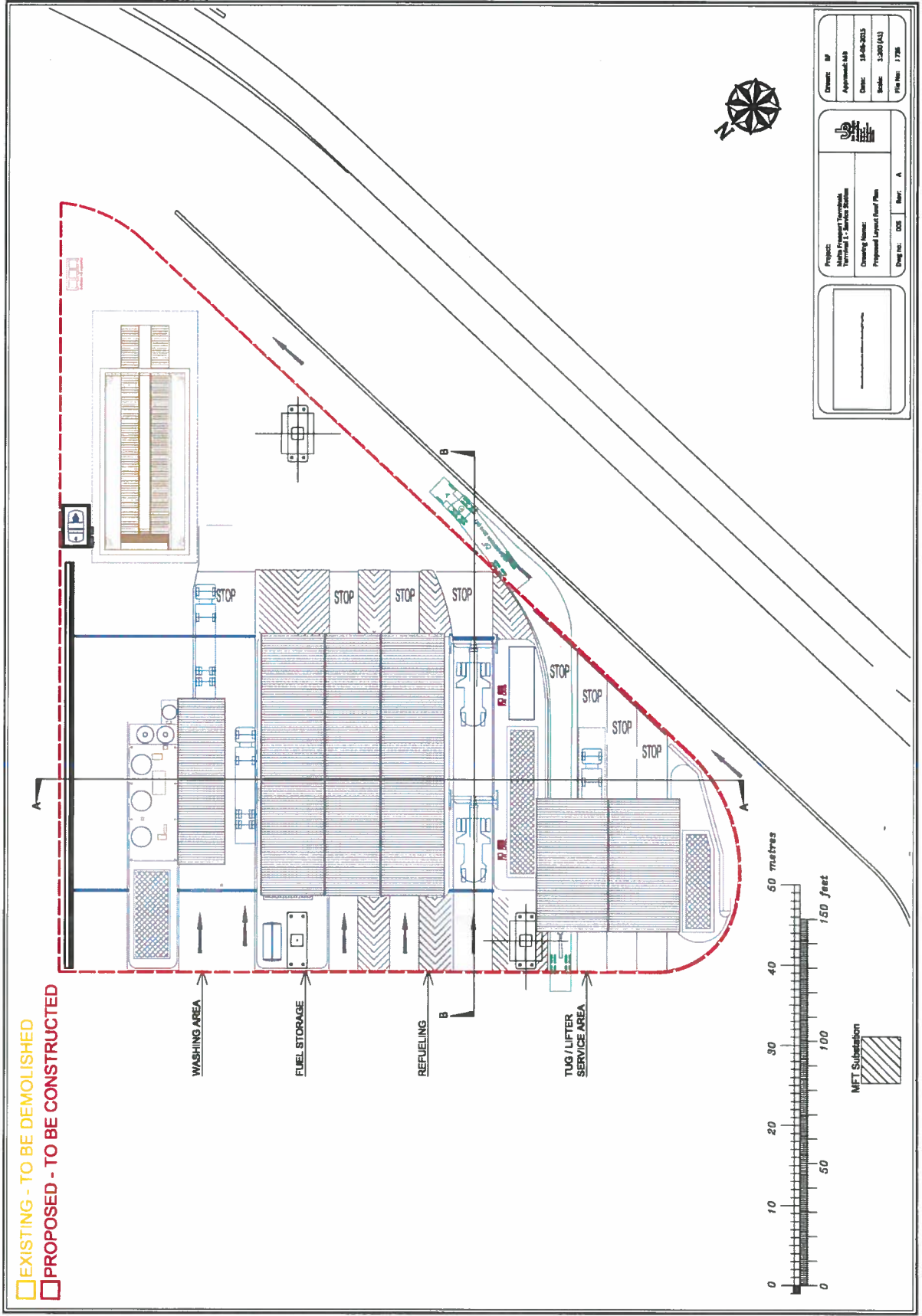


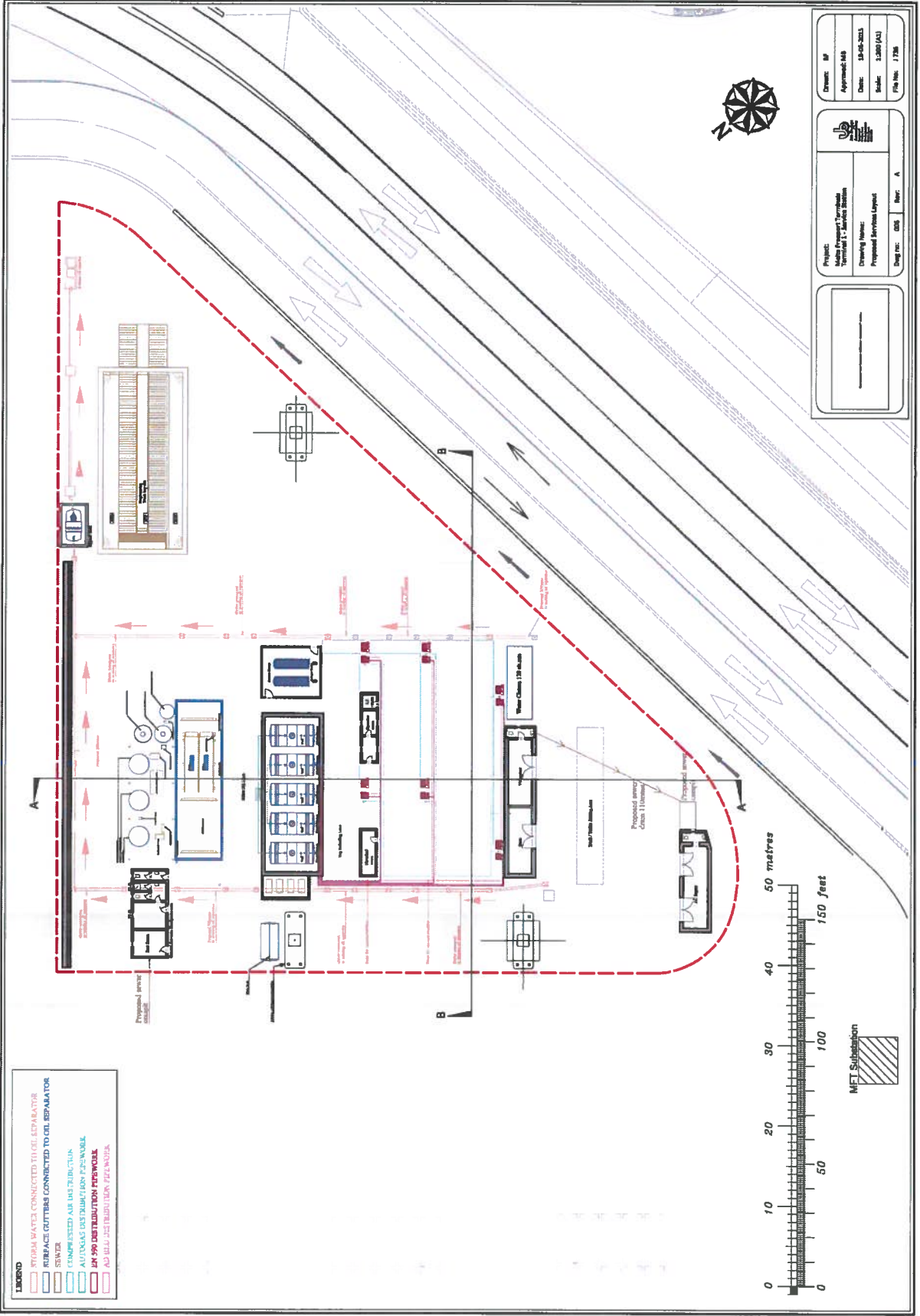
APPENDICES

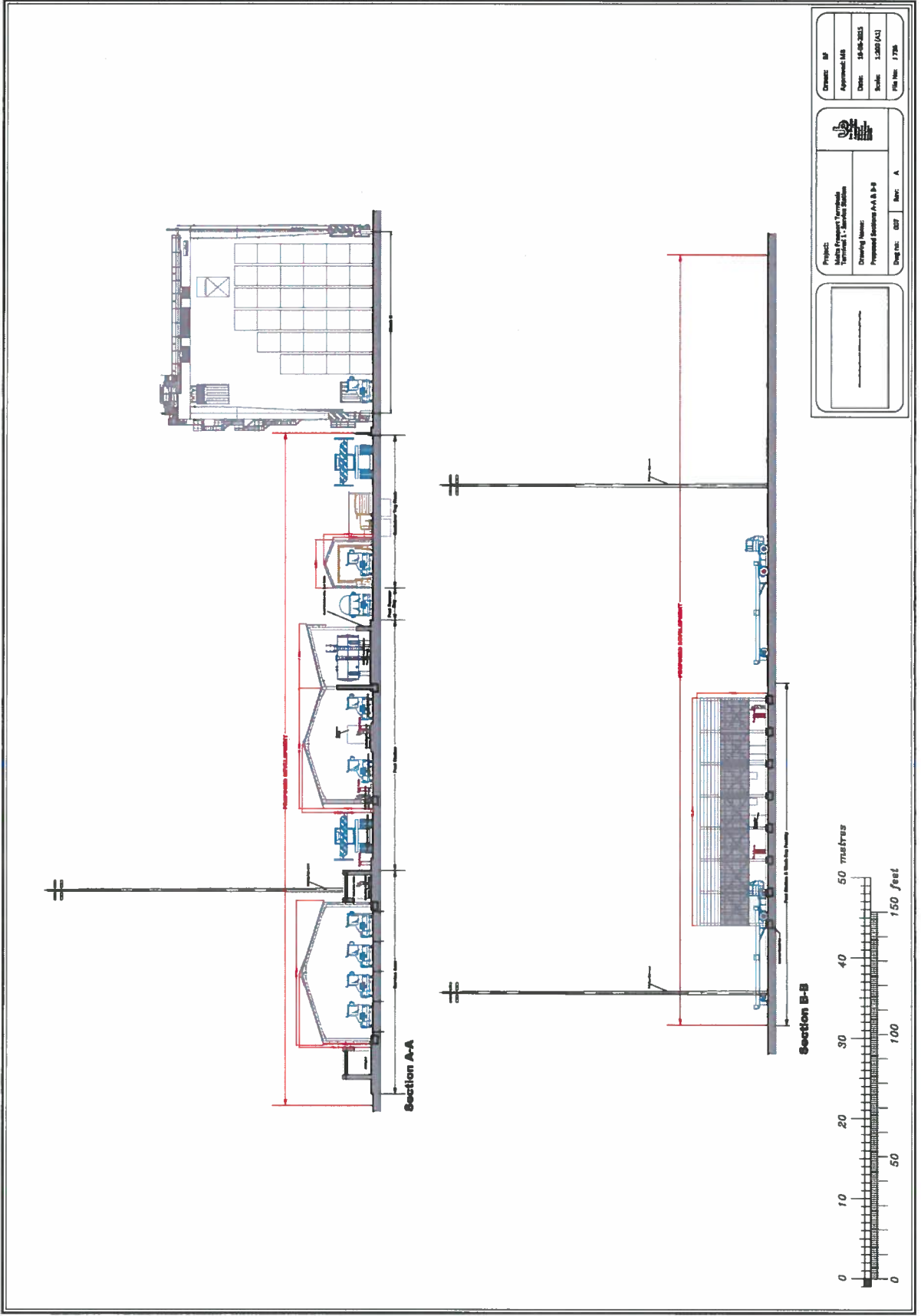


Appendix I: Scheme Drawings









	
Project: Harvard University Harvard University Harvard University Harvard University	
Drawing Name: Proposed Sections A-A & B-B	
Drawing No.: 027	Rev.: A
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Drawn By:	Date:
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