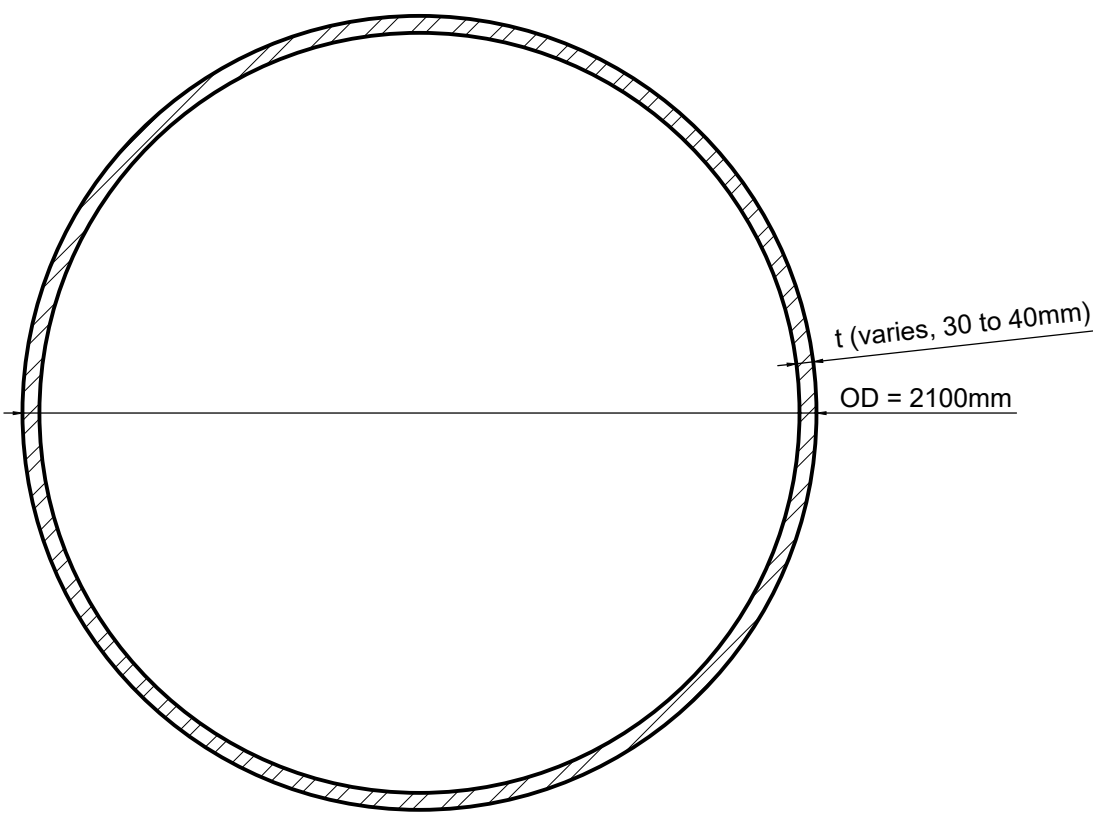
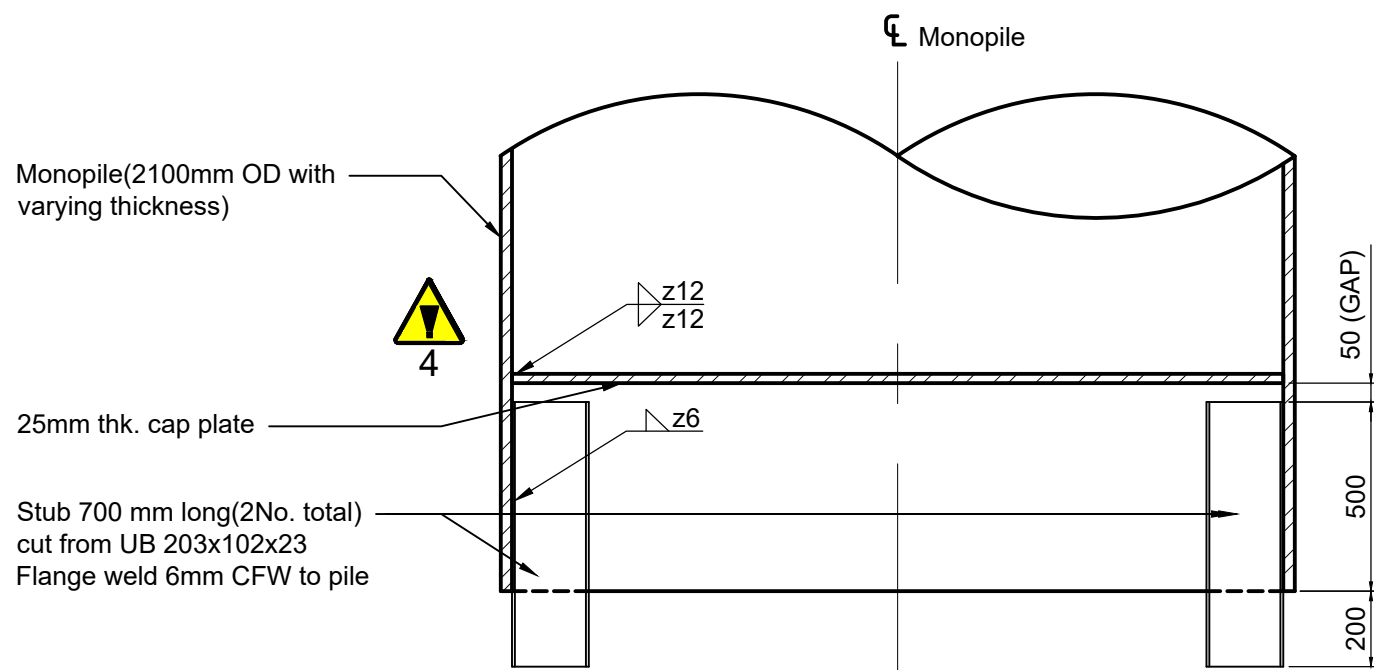




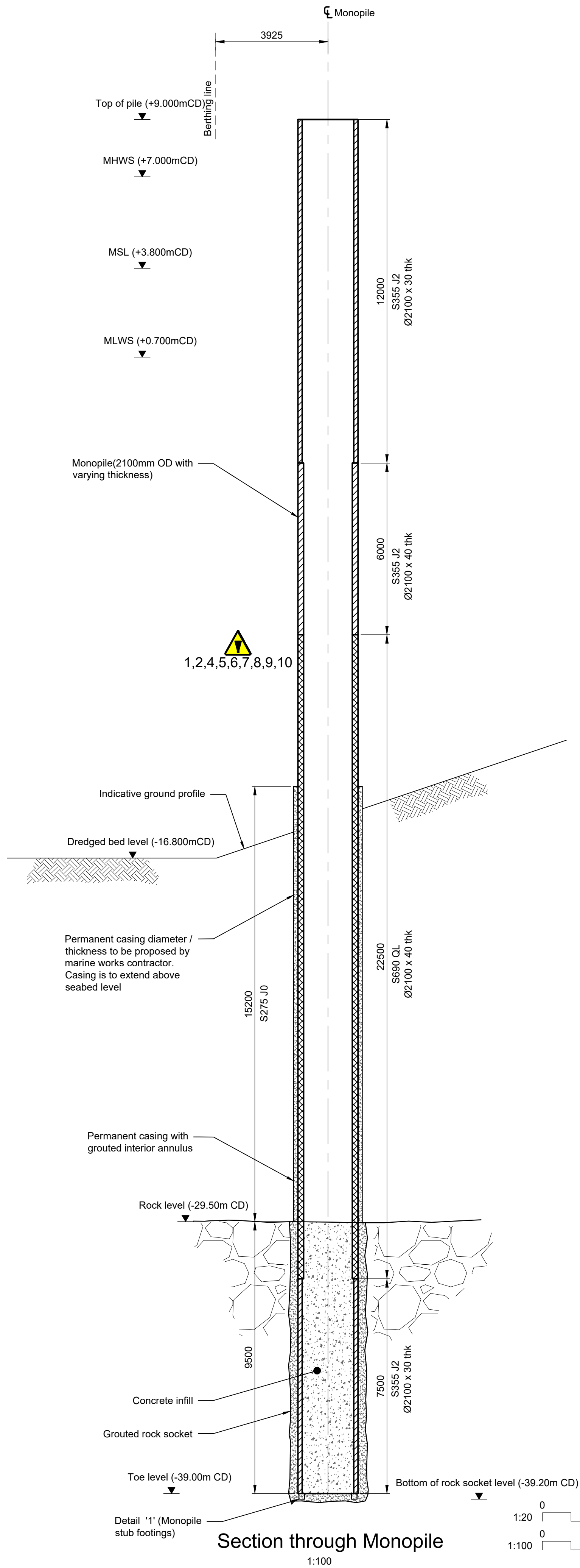
Typical Monopile Section

1:20



Detail 1

1:20

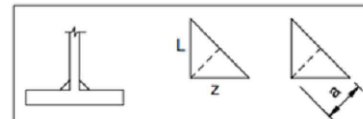


Section through Monopile

1:100

Notes

- All dimensions are in millimetres unless noted otherwise.
- Do not scale any items or information from this drawing set.
- The steelwork dimensions are for a mean temperature of 15°C. This is consistent with the average sea water temperature in Milford Haven in August (anticipated time of installation).
- It is the responsibility of the Contractor to ensure that fabrication drawings are in compliance with the design drawings. Any differences to the details shown in the drawings should be reported immediately to the Designer.
- All steelwork to be to Execution Class EXC2 to BS EN 1090-2: 2018.
- Steelwork grades to be:
 - Pile segments (top & bottom): S355J2+N to BS EN 10025-2:2019
 - Pile segments (intermediate): S690QL to BS EN 10025-6:2019+A1:2022
- Corrosion allowances were considered in the design as sacrificial thicknesses for each exposed face. The relevant corrosion allowances were taken from Table 4.2 of the UK National Annex to BS EN 1993-5:2007, for a design working life of 50-years.
- All welded connection of the steelwork shall be shop-welded, on-site welding shall be avoided. All welds shall be self-cleaning and shed water.
- Weld symbols are in accordance with BS EN ISO 2553:2013 System A.
- Fillet welds are shown by leg length.



- All fillet welds shall be continuous on both sides of the joint unless shown otherwise.
- Position of the monopile's shop welded splices to be proposed by the Contractor to suit available plate sizes. The splices shall be full penetration butt welds. The position and type of splice are to be referred to the Designer for acceptance.
- Any additional welds that the fabricator may wish to use (e.g. to secure lifting devices) shall be subject to the approval of the Designer.
- The fabricator may propose alternative weld details to those indicated provided that they offer equivalent or better strength. The alternatives shall not be used unless agreed by the Designer.
- Refer to the Designer's Hazard Elimination Management Record (DHEMR) 114551-MMD-ZZ-XX-RP-C-0003, which states hazards, their risks and mitigation measures, expected at this stage. The following significant hazards have been identified and have been noted according to their Hazard Reference No. in the DHEMR.



Residual Risk Assessment
Wherever possible, risk is designed-out of this proposal during the design process. Where this is not possible, the risk will be minimised and any residual significant risk will be noted and indicated by the hazard symbol.

- Working over water
- Working over tidal water
- Hot works (i.e. welding)
- Ground contaminants and unexploded ordnance (UXO)
- Transportation of monopile
- Instability of monopile during installation
- Clash with existing piles
- Reduced clearance to loading platform
- Ground conditions and geotechnical parameters

Key to symbols

Centerline
Outer Diameter

Silt/Sand
Bedrock
Grouted Rock Socket
Concrete infill
Steel grade S355 J2
Steel grade S690 QL

Reference drawings

114551-MMD-ZZ-XX-DR-C-0001-General Arrangement - Plan & Location Sheet 1 of 2
114551-MMD-ZZ-XX-DR-C-0002-General Arrangement - Section & Elev. Sheet 2 of 2
114551-MMD-ZZ-XX-DR-C-0102-Monopile Oversleeve Details
114551-MMD-ZZ-XX-DR-C-0103-Platform Details Sheet 1 of 2
114551-MMD-ZZ-XX-DR-C-0104-Platform Details Sheet 2 of 2
114551-MMD-ZZ-XX-DR-C-0105-Ladder Details
114551-MMD-ZZ-XX-DR-C-0106-Walkway End Details
114551-MMD-ZZ-XX-RP-C-0003-Designer's Hazard Elimination Management Record.

P03	20.03.2024	JR	Amended Notes. Pile infill.	JPF	KL
P02	02.02.2024	SS	Minor Amendments	JPF	RT
P01	31.01.2023	SS	First Issue	JPF	RT
Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD
2 Callaghan Square
Cardiff
CF10 5BT
United Kingdom
T +44 (0)29 2046 7800
F +44 (0)29 2046 7801
W mottmac.com

Client
Valero Pembrokeshire Oil Terminal Ltd
Main Road
Waterston, Milford Haven
Pembrokeshire
SA73 1DR

Title
Valero Berthing Dolphin Replacement
Berthing Dolphin 7
Monopile Build-up

Designed	J. Rees	JR	Eng check	J. Fernandes	JPF
Drawn	S. Sahoo	SS	Coordination	J. Fernandes	JPF
Dwg check	R. Jones	RJ	Approved	R. Teixeira	RT

Scale at A1	Status	Rev	Security
As Shown	CON	P03	STD

Drawing Number
114551-MMD-ZZ-XX-DR-C-0101