

PROJECT

Bedford Passage

CLIENT

Mode Best Builders Ltd.

QUOTE NUMBER

Q5764-01-Rev00



PROJECT
DEWATERING

A member of  HÖLSCHER

DESIGN

SUPPLY

SUPPORT

BEDFORD PASSAGE - DEWATERING ENQUIRY

SUMMARY

Project Dewatering Ltd (PDL) thank you for your invitation to offer advice and costs on a dewatering system to reduce groundwater levels to allow the construction of the capping beam, cantilever wall and associated basement excavations in stable, safe conditions.

With respect to this quotation, please note the following points:

1. We suggest the installation of a hybrid dewatering system consisting of wellpoints for the basement 2 capping beam and deepwells for the basement 1 and basement 2 dewatering. See fig. 1 below.
2. As the excavation progresses for basement 2, a nominal amount of over bleed would be present at the interface of the more permeable SAND and GRAVEL layers with the underlaying CLAY. The deepwell will be installed internal to the secant pile walls and can then be used as sumps and clean groundwater fed into deepwells.
3. For the purpose of this quotation, we have provided a set of attendances we require from the client which are normally readily available on an active construction site. Our attendances are outlined further below. If you would like PDL to revisit our proposal to include any of the assumed attendances, please let me know.
4. Since the beginning of 2018 the EA require that, effectively all, dewatering activities require an abstraction permit unless the abstracted water is discharged directly to a soakaway. This is in addition to, and not to be confused with, any discharge permits for the project. There are two types of abstraction permit, a temporary one which only lasts 28 days and cannot be renewed (this takes one month to obtain), or a longer term permit which can last for up to several years (and therefore likely covers all dewatering time periods). However, this longer term permit takes at least 12 weeks to obtain. It is a criminal offence to abstract groundwater without the required permit. As such it is important that you and/or your client leave sufficient time to allow for obtaining such permits. PDL can help with the application process if required.

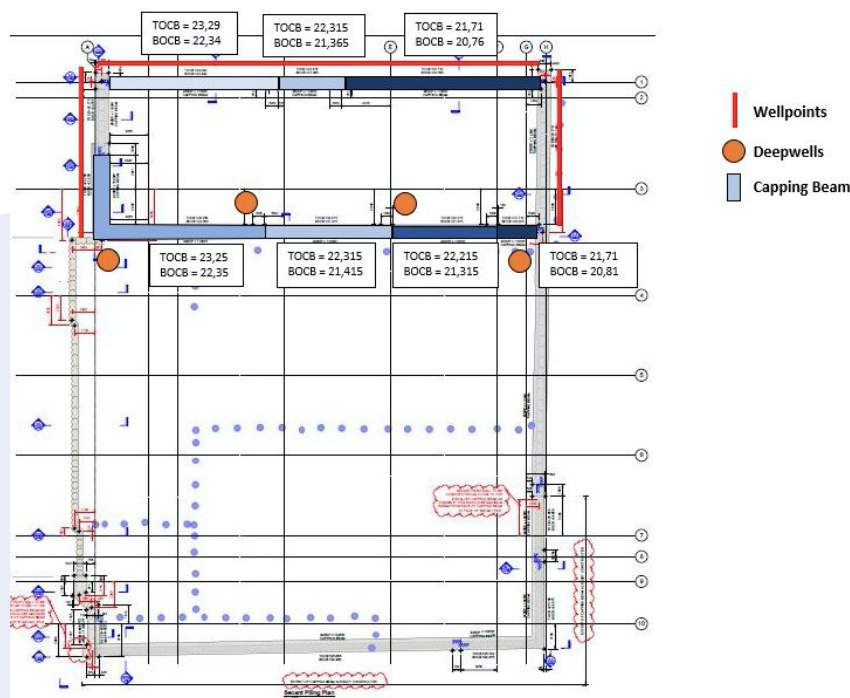


Figure 1. Indicative wellpoint and deepwell locations

INTRODUCTION

The client has requested a system to assist with the groundwater control for excavation below the standing groundwater table for a new building.

PROJECT DEWATERING LTD

Project Dewatering are part of the Europe's market leading dewatering contractor, Hölscher Wasserbau GmbH. This arrangement allows our clients to benefit from access to an extensive fleet of modern specialised dewatering equipment, including a stock of over 1200 pumps. Project Dewatering provide experienced local staff and knowledge of UK ground conditions and groundwater control projects.

SITE INFORMATION

ANTICIPATED GROUND CONDITIONS

The supplied site investigation data (ref. Site Investigation Report, document reference: 19/3355 - FR 01, dated 13/03/2020) indicates the following stratification as per boreholes BH5.

Unit	Top of stratum [mOD]	Base of Stratum [mOD]	Thickness [m]
MADE GROUND	GL (26.7)	21.2	5.5
*GRAVEL to gravelly SAND (Lynch Hill Gravel Member)	21.2	20.3	0.9
Slightly sandy silty CLAY (London Clay formation)	20.3	1.7	18.6
Very stiff silty CLAY (Lambert Group)	1.7	unproven	unproven
End of BH	-8.8mOD (35mbgl)		

* This layer varies in thickness (up to approximately 3m deep) as presented in other BH logs.

Data from site indicates groundwater to vary between 5.2mbgl and 6.2mbgl. A design groundwater level from the client was indicated as 3.9mbgl.

PROJECT DEWATERING

CONSTRUCTION INFORMATION

Mode Best builders Ltd. require dewatering for the following construction:

Capping beam (section of capping beam below 22.8mOD.

	Capping beam
Top of Capping Beam (mOD)	22.8 to 21.710
Maximum excavation depth of Capping Beam (mOD)	20.76
Depth (m)	0.825 to 0.95
Linear length (m)	81

Basements:

	Basement 1	Basement 2
Ground level [mOD]	26.7	26.7
Size [m]	39 x 47	38 x 12.5
Perimeter [m]	172	101
Lowest Formation Level [mOD]	21.7	17.89
Lowest Formation Level [mbgl]	6	8.81

PROPOSED INSTALLATION

PDL offer the installation of deep well dewatering system.

This is outlined below:

	Capping beam	Basement 1	Basement 2
No. of wells	43	2	2
Spacings	1,5	n/a	n/a
Installation level	Ground level (26,7mOD) or lower	Ground level (26,7mOD) or lower	Ground level (26,7mOD) or lower
Depth [m]	Up to 6m	Up to 10m	Up to 10m
Installation method	Augering and jetting	CP rig	CP rig

Once the system is installed and commissioned, we would provide handover training for the site team to manage the system on a day to day basis. We would typically attend site fortnightly to carry out system maintenance, or as instructed in response to a need for modifications and repairs.

PROGRAMME

An indicative programme for the works is summarised below.

Activity	Total Duration
Notice prior to mobilisation from agreement of subcontract	Typically, 2 weeks
Installation and commission of system	2 to 3 weeks

ATTENDANCES AND SERVICES

In producing this quotation PDL have made assumptions about the standard attendances which are to be provided or arranged by the Client. If required, Project Dewatering would consider revising our quotation to include some or all of the items specified in the table below.

Description
Provision of all permissions, including discharge consents, permits and abstraction licence from relevant authorities. PDL would especially draw your attention to the recent requirement to obtain a bespoke permit for most dewatering projects.
Suitable access and parking for our vehicles, plant and equipment by wheeled and tracked vehicles within the site boundary (including access for the drilling equipment over the installed sheet pile wall around the shaft perimeter).
Setting out of the well locations/ to ensure work do not clash; clearance of all underground/overhead services and hard standing and cohesive upper strata; issue of Permit to Dig.
Adequate disposal point for pumped groundwater and any treatment if required
Site management including welfare facilities in accordance with legislation, security, lighting, hoardings, fencing and barriers
360 degree excavator plus operator for installation of dewatering system
Lifting facilities for loading and unloading of equipment and moving materials on site.
Adequate protection of our installations, equipment and pipework from other site activities. This includes suitable ducting and road crossings where required.
Water supply to the installation location (50mm min at mains pressure)
Provision of diesel fuel throughout the installation and pumping phase
Continuity of work
Site waste disposal including general waste and spoil/arising

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QUOTATION DATE | 07/10/2021



**PROJECT
DEWATERING**

A member of  **HÖLSCHER**

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Call us now on **01473 658807**
or email us at **enquiries@project-dewatering.co.uk**



APPENDIX 1

CASE HISTORIES

PROJECT DEWATERING

Previous relevant projects include:

Project	Date	Client	Description
Gayton School (<i>relatively local, similar work</i>)	2020	Kier	Installation of deep well system to dewater chalk for building foundations.
The Old War Office (<i>previous work with Toureen</i>)	2019-2020	Toureen	Installation of drilled wellpoints for active dewatering of building foundations.
Humus Tank Installation RAF Lakenheath	2012-2013	Forkers LTD	Installation of wellpoints to allow the successful installation of tanks in stable dry working conditions.
Dewatering Wells RAF Lakenheath	2000	Fitzpatrick Contractors LTD	Drilled 8 wells to dewatering interceptor cofferdam.

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APPENDIX 2

TERMS AND CONDITIONS

SERVICE PERFORMANCE AND PAYMENT CONDITIONS OF PROJECT DEWATERING LIMITED

In the event that no alternative terms and conditions are provided, the following terms and conditions apply to this tender and subsequent contract that may be entered into.

I. GENERAL

- (1) All offers, orders and performances of Project Dewatering Limited (hereinafter: PDL) as the contractor shall be based on our following conditions and any separate contractual agreements. Deviating conditions of the customer shall not become part of the contract even after acceptance of the order.
- (2) The conditions apply equally to contracts where the principal place of business of the customer is within Great Britain and to "international contracts" unless the context or these Conditions otherwise provide. For the purpose of these conditions the term "international contract" shall be defined as a contract where the principle place of business of the customer is in a country other than Great Britain notwithstanding the fact that the works may be produced and delivered in different countries or in the same country; or where the works are to be produced at any place outside of mainland Great Britain.
- (3) Unless otherwise stated PDL's offer remains open for acceptance for a period of 30 days.
- (4) A contract shall be entered into by written order confirmation of PDL – in the absence of a special agreement.
- (5) If there are any deviations of the order confirmation from the offer or the order, the written order confirmation of the general terms and conditions of PDL shall be essential unless this considerably deviates from the offer or the order and unless objected to within 10 days of dispatch of the order confirmation.
- (6) PDL reserves property and copyrights in samples, cost estimates, settlements, and similar information of a physical kind - also in electronic form. They must only be made accessible to third parties with the express and written consent of PDL.

II. PRICE, PAYMENT; VARIATIONS AND ADJUSTMENTS OF CONTRACT PRICE

- (7) The offers of PDL shall always be subject to confirmation. The contract price shall be based upon the Bill of Quantities as attached by PDL to the offer. Unless otherwise agreed, the price will be subject to re-measurement based upon the quantities of work actually undertaken by PDL. The contract price does not make allowance for any main contractor discount or for retention.
- (8) Prices shall be plus the respective arising statutory VAT. Pricing shall be in pound sterling (£). If any other currency has been agreed on, all changes to the exchange rate of the foreign currency and pound sterling arising after the date of the order confirmation that are to the detriment of PDL shall be imposed on customer.
- (9) PDL shall be entitled to interim payments on a monthly basis for work carried out up to the end of the applicable month. On or about the end of each calendar month, PDL shall issue an application for payment to the customer setting out the value of work completed to the end of the month, including variations and any other entitlements to additional payment arising under or out of the Contract, less any amounts previously paid. The customer shall provide PDL with its valuation and amount proposed to be paid not later than 5 days from receipt of PDL's application for payment. In the absence of this, the amount applied for shall be deemed the amount properly due. PDL shall thereafter issue an invoice for the amount due. The final date for payment shall be 30 days from the date of the invoice.
- (10) After completion of the works, PDL shall issue a final account to the customer, setting out the final value of the works, including variations and any other entitlements to additional payment arising under or out of the contract, less amounts previously paid. The customer shall provide PDL with its valuation and amount proposed to be paid not later than 14 days from receipt of PDL's final account. PDL shall thereafter issue an invoice for the amount due. The final date for payment shall be 30 days from the date of the invoice.
- (11) The customer shall not be entitled to withhold payment after the final date for any payment unless it has issued a valid withholding notice not later than 21 days before the final date for payment specifying each ground for withholding and the amount attributable to it and providing full and proper substantiating evidence in support of each ground and the amount attributed to it. Any withholding notice that is issued may be challenged by PDL on its merits.
- (12) PDL shall be entitled to interest and debt recovery costs for late payment of any interim or final payment at rates calculated in accordance with the Late Payment of Commercial Debts (Interest) Act 1998 as amended by the Late Payment of Commercial Debts Regulations 2002.
- (13) If PDL gains knowledge of any circumstances regarding the customer's creditworthiness after conclusion of the contract that considerably endanger execution of the contract, PDL may refuse the services subject to it until the customer pays the compensation or provides collateral.
- (14) The right to retain payments or to set off against counter-claims shall only be due to the customer where his counter-claims are undisputed or have been legally validly determined.
- (15) The Customer may issue instructions requiring a variation to the works, including addition, omission, substitution, alteration, change in quality, quantity, dimension, level or line. No such instruction shall vitiate or invalidate the contract. PDL shall be entitled to additional payment for complying with such instructions as follows:
 - a. Where the offer includes a bill of quantities, the offer rates shall form the basis for valuation where the instructed

work is of similar character to, and executed in similar conditions as, items contained in the bill of quantities.

- b. Where there is no bill of quantities in the offer or there are no rates that are applicable, PDL shall be entitled to a valuation by application of fair rates and prices to the actual time and materials taken or used to carry out the instructed work. The valuation of such instructions shall be added to or deducted from the contract price as is applicable.
- (16) If adverse physical conditions or artificial obstructions are encountered that could not be foreseen by an experienced drilling contractor, PDL shall be entitled to additional payment for the additional cost and expense incurred which shall be added to the contract price. Such unforeseen conditions or obstructions include, but are not limited to, artesian water or toxic, inflammable, explosive or hazardous materials.
- (17) Customer shall pay for reinstatement of all unavoidable damage caused by PDL's Works or caused gaining access to the works valued in accordance with the valuation provisions of Section II (9) of these Conditions and added to the contract price.
- (18) PDL shall be entitled to payment for any additional cost or expense incurred as a consequence of not having been provided with details of the Pre-Construction Information Pack, Health and Safety File or any other relevant site-specific safety information prior to entering into the contract which shall be added to the contract price.

III. PERFORMANCE

- (1) The scope of the obligations shall result from the written order confirmation of PDL. Documents such as brochures, catalogues, drawings, figures, descriptions and technical data as well as samples, weight and size indications shall be non-binding unless PDL has accepted them in writing in the order confirmation or otherwise.
- (2) Unless otherwise stated in the offer PDL has not allowed for the protection of nearby watercourses. Any works, plant, delays etc. to do this would be chargeable.
- (3) Unless otherwise stated in the offer, PDL shall carry out and complete the Works in a reasonable time. PDL shall generally work 08:00 to 18:00 hours during weekdays including statutory breaks. Weekend working if required will be subject to agreement with customer.
- (4) The customer shall inform PDL in writing when the works are complete in accordance with the contract. In the absence of this, completion in accordance with the contract shall be deemed to be the date upon which PDL demobilises from the site.
- (5) If non-compliance with any agreed performance time is due to force majeure, curfews, political riot, terrorist attacks, labour disputes or other events that are not subject to the area of influence of PDL, the performance time shall extend appropriately. If the performance term extends by more than 3 months by this, both contracting partners shall have the right to declare termination of the contract.
- (6) If the performance or acceptance of the works is delayed for reasons due to the customer's fault, it shall be charged with the costs arising from the delay, starting one month after notification of acceptance.

IV. ACCEPTANCE

- (1) If the customer does not accept any works offered or delivered to him, PDL may set a grace period of 4 weeks for acceptance for the customer. After the end of the period, PDL shall have the right to declare termination of the contract and/or demand damages. Notwithstanding the option of documenting a higher damage, the damages claims shall amount to at least 15% of the agreed price.
- (2) If PDL intends to test its works prior to completion to ensure it meets any contractual requirements it shall give the customer the opportunity to attend such tests. The results from such tests shall be recorded and a copy provided to the customer.

V. OBLIGATIONS OF THE CUSTOMER

The obligations of customer include:

- (1) Except where otherwise provided in the offer, customer shall be responsible for ensuring all notices, permits, permissions, licences and fees – including abstraction licences and permits to discharge the groundwater – are given or paid by any Act of Parliament or any Regulation of Bye-Law of any local or other statutory authority in relation to the design construction and completion of the Works and by the rules and regulations of all public bodies and companies whose property rights are or may be affected in any way by the Works.
- (2) PDL will not accept any liability arising from failure to present such licences to the authorities when required to do so. PDL are able to advise and assist with applying for such licences / permits for the dewatering activities if required. PDL also have experience in liaising with regulatory bodies such as the Environment Agency.
- (3) Once the dewatering systems are installed and commissioned the customer is responsible to carry out daily checks of the plant.

VI. WARRANTY CLAIMS AND DAMAGES

For any defects of material and title of the performance, PDL shall act as follows under exclusion of any further claims, and subject to Section VII (2) and (3) of these conditions:

Any permanent equipment supplied by PDL, including but not limited to borehole pumps, data loggers and control panels and the like, are supplied with the relevant manufacturer's standard warranty only. Any costs associated with removing or replacing such goods

under the warranty period, which have failed due to no direct fault of PDL, will be met by the customer. PDL shall not be responsible for any losses or expenses incurred by customer as a consequence of defects in equipment supplied.

VII. LIABILITY AND DISCLAIMER

- (1) If the produced works cannot be used by the customer as intended due to fault of PDL as a consequence of omitted or defective execution or suggestions and consultation before or after conclusion of the contract, or due to violation of other contractual secondary obligations, the rules under Section VI and Section VII (2), (3), (4), (5), (6), (9) and (10) shall apply accordingly under exclusion of any other claims of the customer.
- (2) For damage not arising to the produced works directly, no matter the legal reason, PDL shall only be liable
 - a. for wilful intent,
 - b. at gross negligence of the owner/bodies, executive employees or servants,
 - c. for culpable violation of life, body and health,
 - d. for defects that PDL has maliciously concealed or the absence of which it represented.
- (3) At culpable violation of contractual obligations, including default, the liability of PDL shall be limited to the direct average damage typical for the contract that was foreseeable according to the type of the works.
- (4) Liability of PDL for violations of obligations due to slight negligence of its statutory representatives or servants shall be excluded. This exclusion of liability shall not apply to any liability due to damage from the violation of life, body or health. Furthermore, the exclusion of liability shall not apply if the violation of obligations was due to the violation of any main performance obligations of PDL or any other essential contractual obligations; in this case, liability shall, however, be limited to the foreseeable damage that is typical for the contract. Essential contractual obligations shall be such obligations that characterise performance of the contract and the compliance with which customer may trust in. The exclusion of liability shall further not apply if PDL has maliciously concealed the defect.
- (5) Dewatering activities may result in the settlement, upheaval or drying out of strata both within and around the area being dewatered, which could cause damage to adjacent structures including property foundations. Dewatering of the site may also result in negative environmental impacts on surface water bodies or protected spaces such as wetlands. PDL will not accept liability for any damage that may result from the dewatering activities.
- (6) The dewatering proposal PDL are offering is based on information provided as well as theoretical formulae for the strata to be dewatered and PDL's experience of similar ground conditions. Unless investigative pumping trials are carried out, the proposed design must be accepted as based on PDL's best assessment of the expected ground conditions at the time of offering.
- (7) The customer may wish to commission a study to investigate the possible effect of the dewatering on the surrounding area before its works commence. PDL can provide a suite of services to identify impacts and to help mitigate and monitor the effects of the dewatering activities.
- (8) The customer shall be responsible for any loss or damage to PDL's temporary works, plant, tools, equipment or other property belonging to or provided by PDL, its servants or agents and to any materials or goods whether directly or indirectly caused by any negligence, breach of duty, omission or default of customer, any person for whom customer is responsible or any person who is responsible to customer's employer or client.
- (9) PDL's aggregate liability arising out of or related to the contract whether arising out of or related to breach of contract, tort (including negligence) or otherwise shall in no event, exceed two (2) times the aggregate amounts paid or payable to PDL pursuant to the applicable order confirmation.
- (10) The limitation of liability set forth in Section VII (9) above shall not apply to (i) liability resulting from PDL's gross negligence or wilful misconduct and (ii) death or bodily injury resulting from PDL's negligent acts or omissions.

VIII. LIMITATION

Any claims of the customer - no matter the legal reason - shall expire within 12 months of the performance.

IX. APPLICABLE LAW AND PLACE OF JURISDICTION

- (1) Any legal relationships between the supplier and the customer shall be subject to the laws of England exclusively, under exclusion of the rules on conflict of laws.
- (2) Either party may refer any dispute or difference that arises under or in connection with the Contract for adjudication by service of a Notice of Adjudication. The adjudication shall be commenced and conducted under, and the parties shall be bound by, the provisions of Part I of the Schedule to the Scheme for Construction Contracts (England and Wales) Regulations 1998, which are incorporated into these Terms and Conditions by reference. The decision of the adjudicator shall be binding on the parties unless and until the dispute or difference is finally determined by legal proceedings or agreement. For the avoidance of doubt, this adjudication provision applies irrespective of whether the Contract is a Construction Contract within the meaning of sections 104 to 107 of the Housing Grants, Construction and Regeneration Act 1996.
- (3) Subject to Section IX (4) the parties irrevocably agree that the courts of England are to have exclusive jurisdiction for the purpose of hearing and determining any suit, action or proceedings and/or to settle any disputes arising out of or in any way relating to the contract or its formation or validity ("proceedings") and for the purpose of enforcement of any judgment against its property or assets.

- (4) Nothing in this section shall (or shall be construed so as to) limit the right of PDL to take proceedings against the customer in the courts of any country in which the customer has assets or in any other court of competent jurisdiction nor shall the taking of proceedings in any one or more jurisdictions preclude the taking of proceedings in any other jurisdiction (whether concurrently or not) if and to the extent permitted by applicable law.

X. OTHER PROVISIONS

- (1) These terms and conditions are without prejudice to any other rights or remedies that PDL may possess.
- (2) If any provision in these terms and conditions is or becomes invalid, the remaining provisions shall remain valid. Any invalid provisions shall be replaced by such valid ones that come as close as possible to the economically intended content. This shall apply accordingly where there are any gaps.