

Project Number: CRMMS 020
Project Name: East Rhyl Coastal Defence

BALFOUR BEATTY UK

CONSTRUCTION METHODOLOGY

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A. Document revision record

Issue	Date	Description of amendment
03	21.08.2018	Updated contents page; Review section 3.3- delivery routes to site; update summary of bulk construction and edit table 2; update figure 5; add figure 15- removal of existing groynes; add figure 19- typical excavation profile/section of work when construction the toe; add figure 20- re-use of the excavated material and protection of the new rock toe during construction; add section 4.10- Maintenance of standard of protection (SoP) during removal of old wall and placement of new; add section 6.2- promenade closure and public re-routing; update section 5.2- noise and vibration monitoring; update section 5.3- air quality management; update section 5.5- fuel/chemical storage.
04	04.12.2018	Update transport routes to site. Remove reference to two options. Section 3.3, fig 4; Add additional information on site compound entrance off Marine Drive- add figure 12a.
05	09.03.2020	Update with am to discharge pre-commencement conditions set out in Statement of Decision 45/208/1197/PF

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1. Scope

East Rhyl on the coast of Denbighshire, North Wales is currently protected by way of a variety of different coastal defences, of which the vertical concrete seawalls have overtopped significantly in during notable flood events occurred in 1990 and 2013. These flood events caused significant damage and disruption to the residential and commercial properties located behind the existing defences. The current sea defence structure remains exposed to the potential for further deterioration.

An upgraded sea defence scheme has now been developed to improve coastal resilience in the area. The project will involve the construction of rock revetment structure with improvements to the existing seawall height. The original outline construction methodology (OCMS) produced outlined the construction of this new sea defence with an aim to inform the consenting process for the construction phase of the project. This document has now been reviewed to address pre-commencement conditions 1, 2, 3 and 4 as detailed in Certificate of Decision 45/2018/1197/PF. Pre- Commencement conditions 5, 6, 7 and 8 are addressed in the Contractor's Project Management Plan (PMP) which include Health and Safety, Quality, Sustainability and Construction Phase plans.

2. Introduction

2.1 Regulatory framework and planning conditions

Pre- commencement conditions 1 to 8 are given below (numbered as per Certificate of Decision);

Ref.	Description	Contractor response
1	<i>Development to which this permission relates shall be begun no later than 25 April 2024</i>	1. Refer to works programme, appendix 1
2	<i>The development hereby permitted shall be carried out in strict accordance with details shown on the following submitted plans and documents unless specified as otherwise within any other condition pursuant to this permission.</i>	2. Scope of original drawings remains unchanged, appendix 9 contains the drawings register to be used for the project.
3	<i>Notwithstanding the submitted details, no works in connection with the siting, design, construction of the means of access to the site including a method to prevent the parking of vehicles within the proposed visibility splay shall be undertaken without the written approval of the local Planning Authority to the detailing thereof. The approved works shall be completed prior to the commencement of the development hereby permitted.</i>	3. Section 184 application complete and accepted, see appendix 5
4	<i>No works in connection with the development hereby approved shall be permitted to commence until the written approval of the local planning authority has been obtained to a detailed construction method statement.</i> <i>The statement shall provide details of:</i>	
	<i>a Work programme and working hours, including timings of deliveries</i>	4a. See section 3.2 and appendix 1
	<i>b The location and general arrangements of the construction compounds and storage areas and measures to reinstate the land following completion of the works</i>	4b. See section 4.2, 4.17
	<i>c The arrangements for the parking of vehicles of site operatives and visitors</i>	4c. See section 4.2
	<i>d The proposed routing of delivery vehicles, and directional signing along public roads where necessary</i>	4d. Proposed routes as stated will be communicated to all suppliers into site.

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| <p>e The location of areas designed for the loading, unloading and storage of plant and materials</p> <p>f The location and detailing of fencing, hoardings and other means of enclosure around and within the site</p> <p>g Pollution prevention and control measures, including measures to mitigate water pollution</p> <p>h Dust management plan</p> <p>i Noise management and abatement plan</p> <p>j External lighting and measures to reduce light spill and glare</p> <p>k The piling methods and measures to mitigate noise and vibration</p> <p>l A scheme for recycling/disposing of waste resulting from demolition and construction works</p> <p>m Measures to remove and prevent the spread of non-native invasive species encountered during the construction phase</p> <p>n Measures to manage sediment and mud mobilisation in sea water arising from construction activities to ensure bathing water remain free from contamination</p> <p>o Communications protocol setting out procedures form communicating with the local community throughout the construction phase, the management of complaints and the role of the community liaison officer.</p> | <p>Construction warning signs will be erected immediate to the site entrance. See accepted site routes, section 3.4 and appendix 4. Site compound will be used for this purpose; see section 4.2.</p> <p>See section 4.2</p> <p>See section 5. A separate project sustainability plan has been produced (submitted as part of pre-commencement discharge documentation) See section 5 and appendix 10.</p> <p>See section 4.8 in relation to piling and section 5.2, appendix 11</p> <p>See appendix 12.</p> <p>See section 4.8</p> <p>Refer to Project sustainability plan</p> <p>Refer to Project sustainability plan</p> <p>Work measures as described in this document along with controls set out in Project sustainability plan, Project Management plan, Construction phase plan, Project quality plan</p> <p>Communication arrangements and site specific roles explained in the Construction phase plan. Project Sustainability has been produced addressing the points raised here.</p> |
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| <p>5 No works in connection with the development hereby shall be permitted to commence until the written approval of the local Planning Authority has been obtained to a final Construction Environmental Management Plan, based on the Outline Construction Environmental Management Plan (Final Report dated December 2018 received 20 December 2018) and which shall clearly set out the role of the Ecological Clerk of Works throughout the construction phase. The construction works shall then be carried out strictly in accordance with the approved details.</p> <p>6 No development shall be permitted to commence until the written approval of the Local Planning Authority has been obtained to details of an environmental compliance audit process for the development. The development shall then be carried out in accordance with the approved</p> | <p>Project Sustainability has been produced addressing the points raised here.</p> |
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details.

- 7 No development shall be permitted to commence until details of a programme of archaeological mitigation works in accordance with a written scheme of investigation, have been submitted to and approved in writing by the Local Planning Authority. The development shall then be implemented strictly in accordance with the approved details and an electronic copy of the report and resulting archive shall be submitted to the local planning authority within three months of completion of archaeological works.
- 8 All planting comprised in the approved details of landscaping shall be carried out no later than the first planting season following the completion of development. Should any plants fail within a period of five years from the date of planting, dead material shall be removed and replanted/ re-seeded with the same species of a similar size in the next planting season.

Pre-commencement condition already discharged.

Noted. Point incorporated in the Project sustainability plan.

2.2 Background

This outline construction methodology document summarises the principle work activities to take place during construction of the East Rhyl Sea Defence scheme. This document seeks to clarify the activities involved in completing the two main stages of the construction process, which will be:

- Site mobilisation and
- Main Construction phase

The works associated under these two headings are:

Stage	Scope	Earliest commencement date
2.2.1 Site mobilisation (no works will take place on the beach under this works scope)	Mobilisation into Marine Drive Compound, inclusive of creating access off main road Access to and protection of top promenade from Marine Drive compound to Splashpoint Mobilisation of satellite compound at Garford road. BB to adopt policy that no access will be permitted from Garford road into site for the duration of the project.	April 2020
2.2.2 Main construction phase	All shoreside construction activity All promenade construction activity, including demobilisation and rehabilitation of the site on completion.	24 June 2020

3. Programme, resource and logistics

3.1 Programme

A works programme is included in appendix 1; the headlines to this is as follows:

Description	Date
Mobilisation- Marine Drive Compound	April 2020
Mobilisation- Garford Road	June 2020
Main Construction- Golf course works	October 2020 to March 2020
Main Construction- Shoreside works	July 2020 to June 2021
Main Construction- Promenade works	March 2021 to May 2022
Main Construction- Finishing works	October 2021 to July 2022
Main Construction- Demobilisation	May 2022 to May 2022
Main Construction- Planned completion	Dec 2022

Table 1

3.2 Working times

Advance consultation has taken place with Philip Caldwell at Denbighshire Council Planning and Public Protection Services with an aim to progress a Section 61 (Control of Pollution Act 1974) application. A copy of this correspondence is included in appendix 2. This application has been informed by the following anticipated site working hours;

To enable day to day planning the following work patterns are expected:

Reference	Description of work	Working time
1	All work subject to beach access	Due to location in the tide, this work will take place around the daily tidal window as the access is permitted once the tide is out. It is therefore inevitable for these works to be irregular and more in sync with the tidal patterns along this coastline.
2	Promenade works	These works will take place during regular working hours of 07.00 to 19.00.
3	Site mobilisation works	These works will take place during regular working hours of 07.00 to 19.00.
4	Supply of materials to tidal works from storage compounds	As this is linked to the supply of tidal work activities it is envisaged that these works will take place in synchrony with the tidal patterns as noted in bullet 1.

Table 2- Working hours

3.3 Resource

The project is procured through the SCAPE public-sector partnership under the National Civil Engineering and Infrastructure framework. SCAPE mirrors Balfour Beatty's (BB) recognition of how we identify and address social, environmental and economic concerns on our projects. Apart from a target to deliver our projects on time and on budget, we share a notable focus on people and suppliers through our SCAPE key performance indicators (KPI's). To this end we have a key focus on;

- local supplier and local labour spend
- SME engagement and spend
- Fair payment

A variety of opportunities are presented through the technical build complexity of the project, as such it offers a combination of a very limited scope in terms of coastal specialism (intertidal works) and a more general civil engineering approach to the works outside the intertidal zone. The project would offer opportunity to a varied group

of suppliers and subcontractors. Technical compliance, quality requirements and availability will dictate the radius of the project resource footprint.

BB envisage a peak permanent staff contingent of 15 white collar and 35 blue collar workers during the delivery of the scheme. This excludes visiting service contractors and deliveries to site.

Accommodation of the staff is elaborated in section 4.2 and the proposed construction plant for the core construction activities are listed in Appendix 3.

3.4 Delivery routes to site



Figure 1- Principal access route to site from A55

Two site routes have now been discussed and agreed with Denbighshire Planning and Protection, Highways Development Control Engineer.

One principal route for access to site from the A55 North Wales Expressway were identified and agreed during the initial planning application. This principal route assumes exit off the A55 at Junction 27 on the A525, then left onto Ffordd Abergele. Continue to St. Asaph Avenue, take a right turn here towards Kinmel Bay. Connect with the A548 which becomes Foryd road (right turn) and then carry on along West Parade, then East Parade until marine drive which will take you to the project location.

This route is considered as the principal supply artery into site from the A55 as this avoids Rhyl town centre as far as is practically possible by due to the westerly direction. The site routes will be communicated to site contractors at an early stage of engagement.

Should the primary route into site be disrupted through planned or unplanned events then traffic shall adhere to diversions put in place by DCC highways or relevant Authority on the day or the period this may apply.

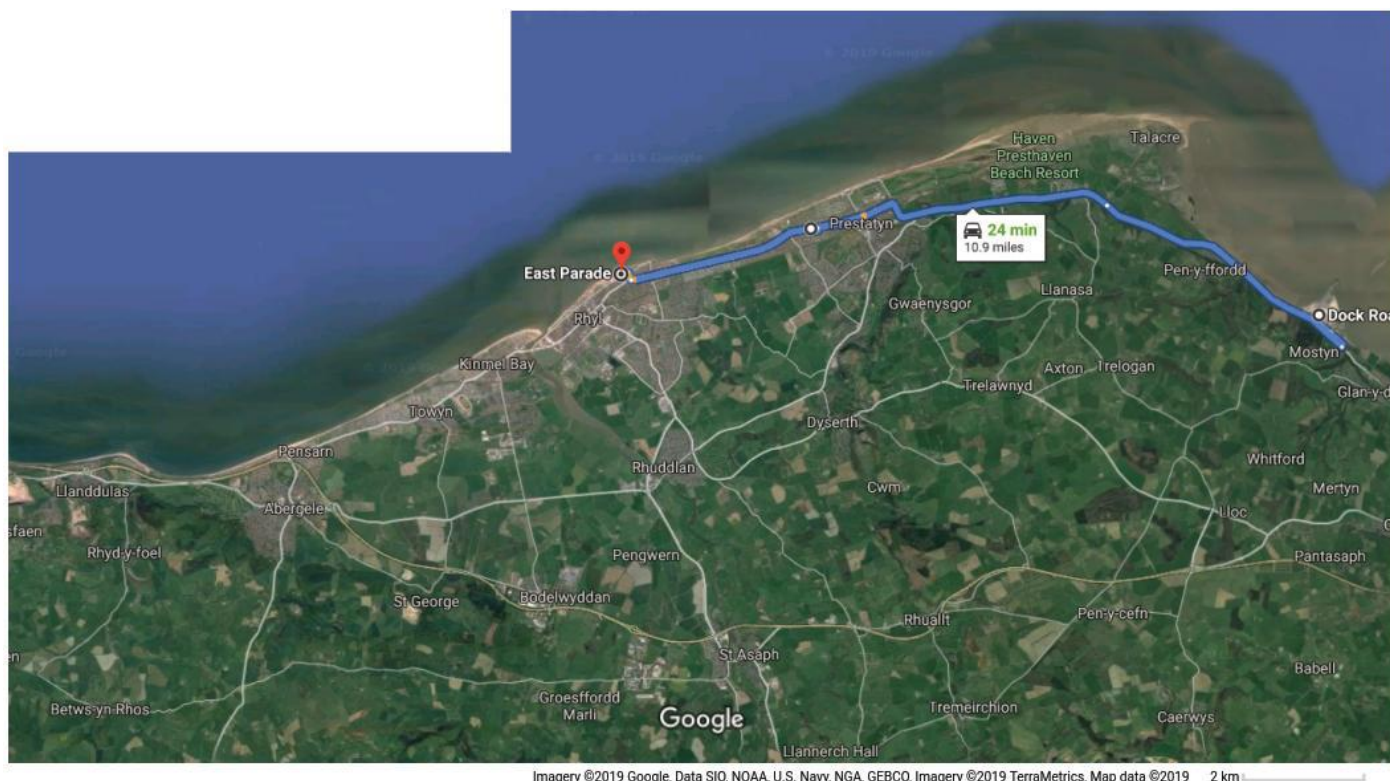


Figure 2- Route between Mostyn Docks and Site

An additional route has now been agreed to facilitate supply of rock armour to site from nearby Mostyn Docks. This route follows the A548 Coast Road from Mostyn Docks into Rhyl, then onto Tynewydd Road and Marine Drive to arrive at the site compound opposite The Royal Alexandra Hospital. See appendix 4 for evidence of the consultation. We anticipate peak usage of this route between July 2020 and October 2020.

Supply routes to the project will be reviewed on a regular basis to ensure outside influences such as new construction projects using the same road network and planned road maintenance works are considered before they occur.

Safety and sustainability leadership will inform our Construction Management Plan and BB will implement measures to ensure;

- Safety
- Safe culture
- Safe vehicles
- Safe drivers
- Sustainability

3.5 Summary of bulk construction materials

Ref.	Description	Quantity	Unit	Likely Origin	
				Outside Wales	Within Wales
1	Rock armour stone 3t to 6t	99600	t	40%	60%
2	Filter layer stone 0.3t to 1t	66120	t	40%	60%
3	Geotextile (HPS14 or similar)	28600	m ²	100%	0%
4	Quarry run core	7000	t	0%	100%
5	Readymixed concrete	2350	m ³	0%	100%
6	Hydraulically bound subbase material	750	m ³	50%	50%
7	Pre-cast concrete wall sections	201	No	100%	0%
8	Pre-cast concrete access step units	63	No	100%	0%
9	Reinforcing steel to concrete (excluding pre-cast elements)	163,000	kg	0%	100%
Weighting				48%	52%

Table 3- Bulk materials anticipated and potential supply split

3.6 Principal construction elements

3.6.1 Site mobilisation

Site mobilisation will take place in advance of the main construction of the permanent works. No works planned under this phase will take place in the tidal zone (figure 3). All work in this case will be dedicated to site readiness to enable commencement of the permanent works.

The work planned during the stage mobilisation are:

- Mobilisation of site compounds at Marine Drive and Garford Road
- Construction of access routes and existing promenade protection

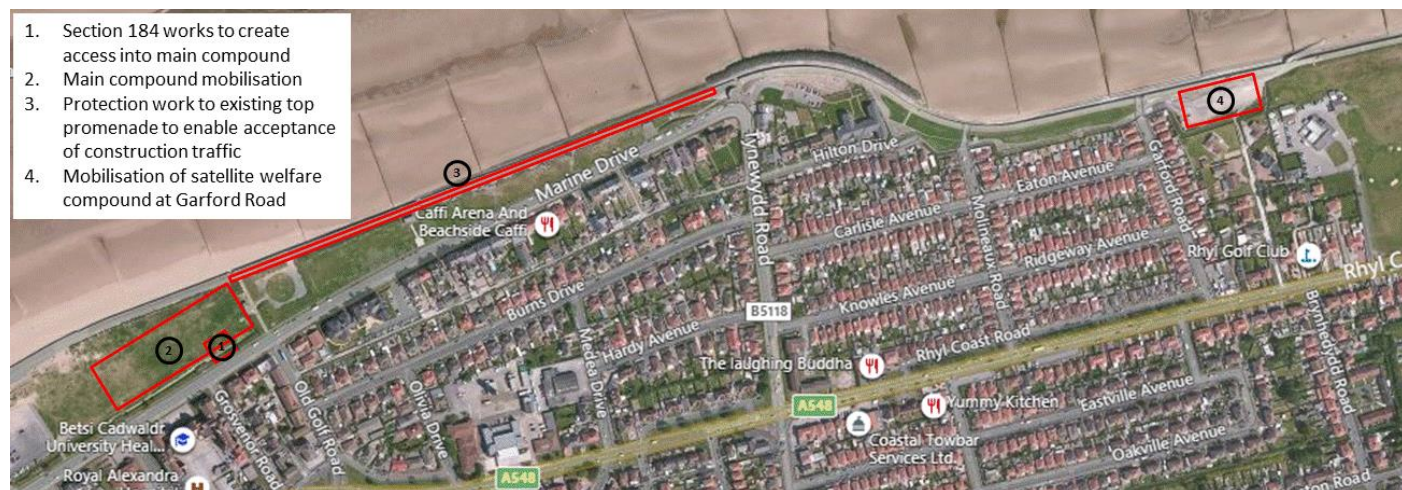


Figure 3- Work scope during mobilisation phase

3.6.2 Main construction phase

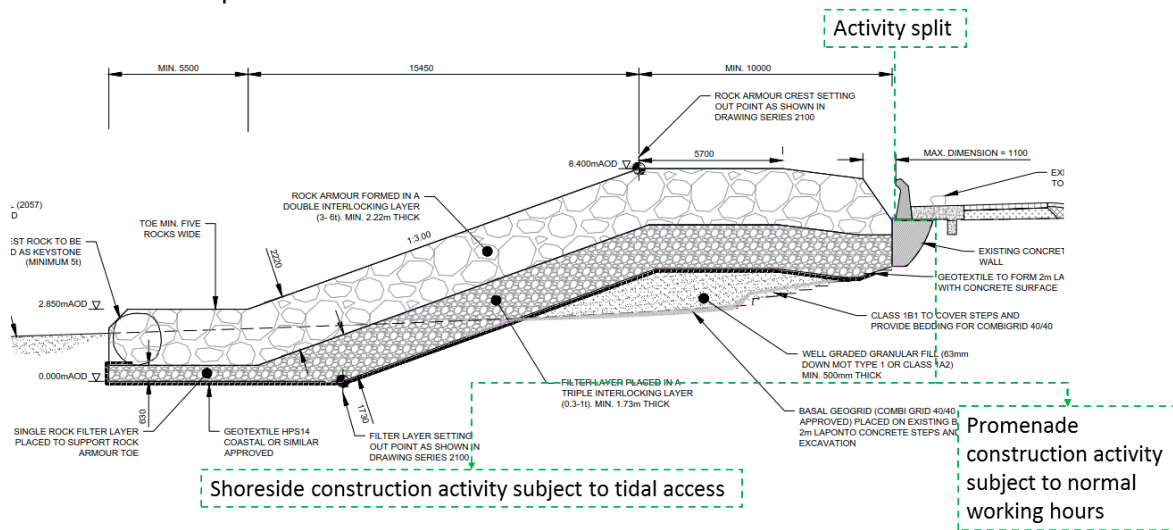


Figure 4- Typical sea defence section

The main construction phase consists of two distinct permanent works construction sections. A revetment consisting of a bottom filter layer (0.3 to 1t) and primary rock armour layer (3 to 6t) forms the typical sea defence section (figure 4). This revetment leans itself towards a tidal working cycle due to exposure from the incoming tide. The typical promenade section (figure 5) is completely above the tideline and construction works in this area will be subject to a regular work cycle. These work elements are made up of a wave return wall at 8m AOD founded on a mass concrete buttress and retained by a wall base slab; with extended concrete pavement area.

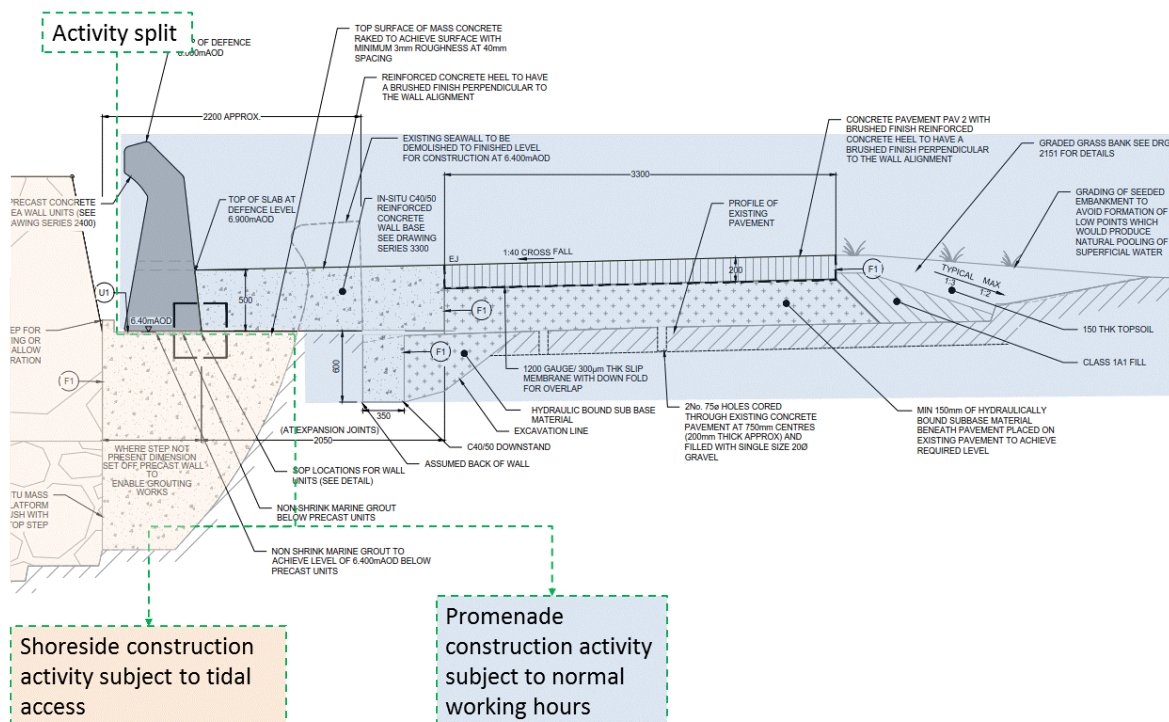


Figure 5- Typical promenade section and illustration of different working times per location restriction

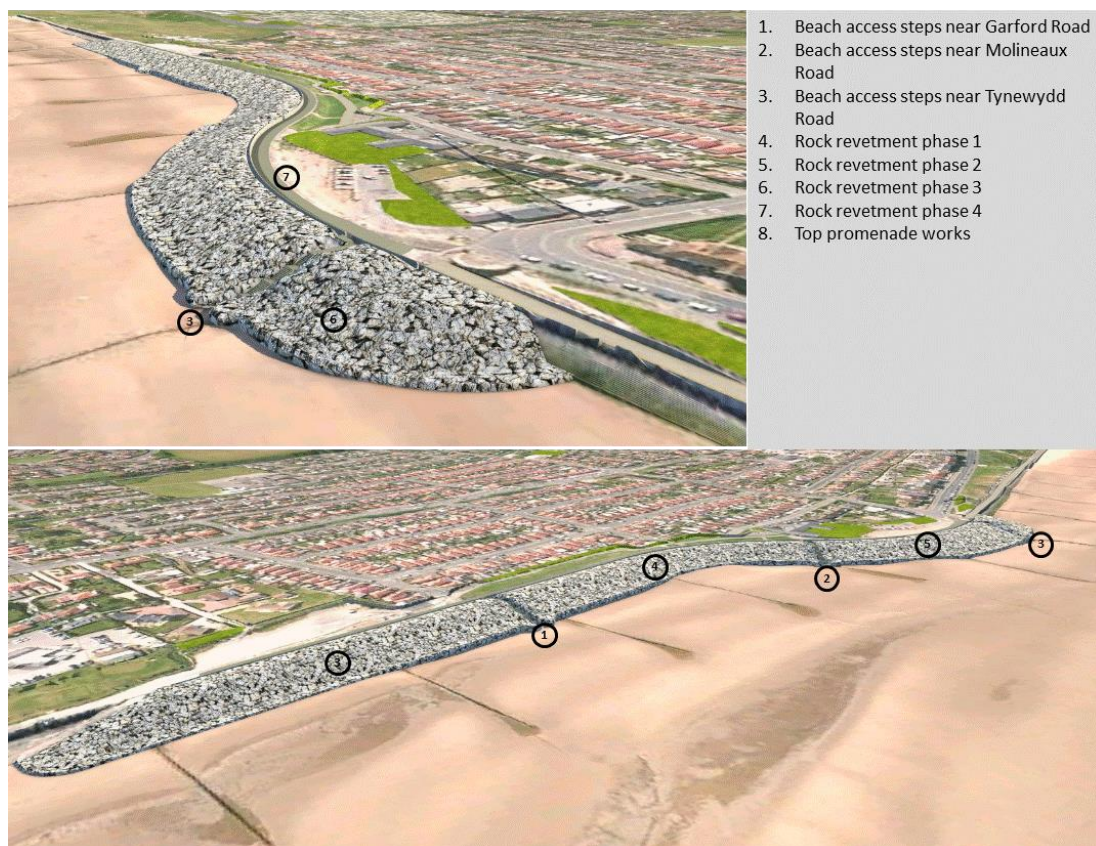


Figure 6- Scope of works viewed from shore

4. Construction

4.1 Sequence of work

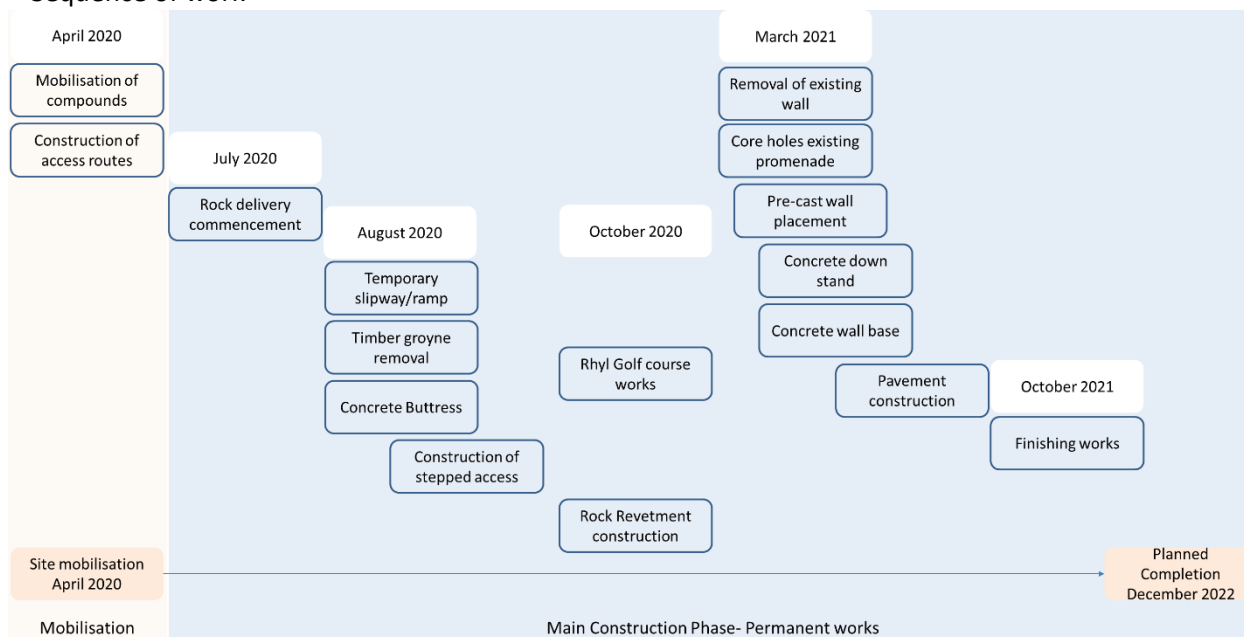


Figure 7- Sequence of work based on likely start of activity

The construction programme included in Appendix 1 provides a detail overview of the sequence as indicated in figure 7.

4.2 Mobilisation of site compounds

Site hoarding will be established around each compound perimeter. This hoarding design (appendix 5) considers the use of the compounds and potential exposure and nuisance minimisation concerning our neighbours.

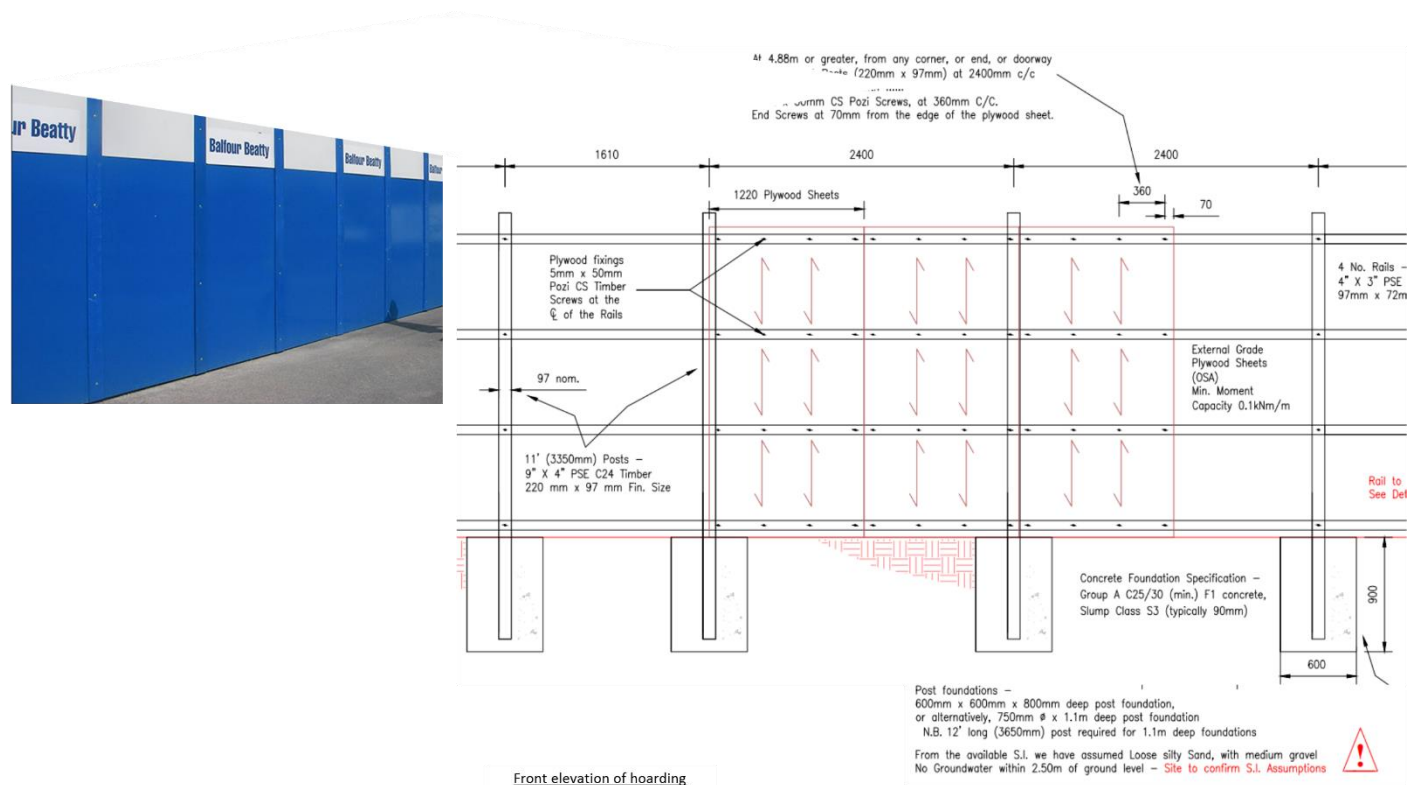


Figure 8- Typical solid hoarding, intended for compounds where specified

To minimise noise, dust nuisance and improve site safety, the two compound perimeters will generally consist of solid hoarding on the landward facing sides (3 sides) and heras panels on the seaward facing side. The outward facing sides of the hoarding could dually be used as a project information canvas. Regular maintenance and inspection of the hoarding will take place throughout the duration of the project.

The two locations identified to serve as site office accommodation is indicated in figure 9. Location 1 (Main office compound) will be used as the principal site office base and main transit area into site. All material and plant import will take place through this compound. The main compound will house the construction staff and serve as the delivery area for all construction materials and plant into site. Location 2 (Garford Road compound) will serve as a satellite compound and mainly provide welfare for the workforce during their breaks from the workplace, as this is of closest proximity to the workplace. BB will enforce a policy that no access will be permitted from Garford road into site for the duration of the project. To this end; BB will ensure that the existing flood gate at the end of Graford road remains closed for the duration of the project, with exclusion of access by emergency services as required.



Figure 9- Compound locations

The two compounds locations will be set up such that the welfare and accommodation is suitably sized appropriate to the activity at each location. There will be a small car park provision for site operatives and staff in order to minimise the effect of potential nuisance parking on the nearby public roads by the work force. The work activities anticipated in setting this compound up is summarised in figure 10.



1. Site Office and welfare
2. Car parking area
3. Stores
4. Main site access from Marine drive-subject to section 184 application
5. Hardstanding area- used for main materials delivery and processing
6. Exit onto top promenade to site supply route
7. Perimeter fence

Activities intended for mobilisation site cabins at Compound 1

- Main access off east parade Marine Drive
 - Set-up designated site routes including signage
 - Locate existing services
 - Removal of existing hedgerow- provision of road access into compound
 - Relocate existing street furniture and fixings
 - Profile/excavate existing surface at entrance
 - Drop kerb line
 - Import and place sub-base
 - Import and place base
 - Pave/concrete entrance
- Compound and perimeter
 - Set up perimeter fence
 - Strip and bund topsoil
 - Import and place hardstanding
- Welfare and stores
 - Level and preparation locally for cabins
 - Establish and fit-out welfare and stores
 - Connect water to mains
 - Connect electricity to mains
 - Services to site cabins- connection and testing

Figure 10- Materials compound mobilisation activity

All vehicles will use the existing promenade as access (coming from the main compound). Staff will be transported to the satellite compound along the top promenade using site transport provision.

Due to the long duration of the project, both compounds will be sustained by mains power and water connections. Connection applications will be made accordingly in advanced of site mobilisation. The work activities involved in setting up this compound is summarised in figures 10 and 11.

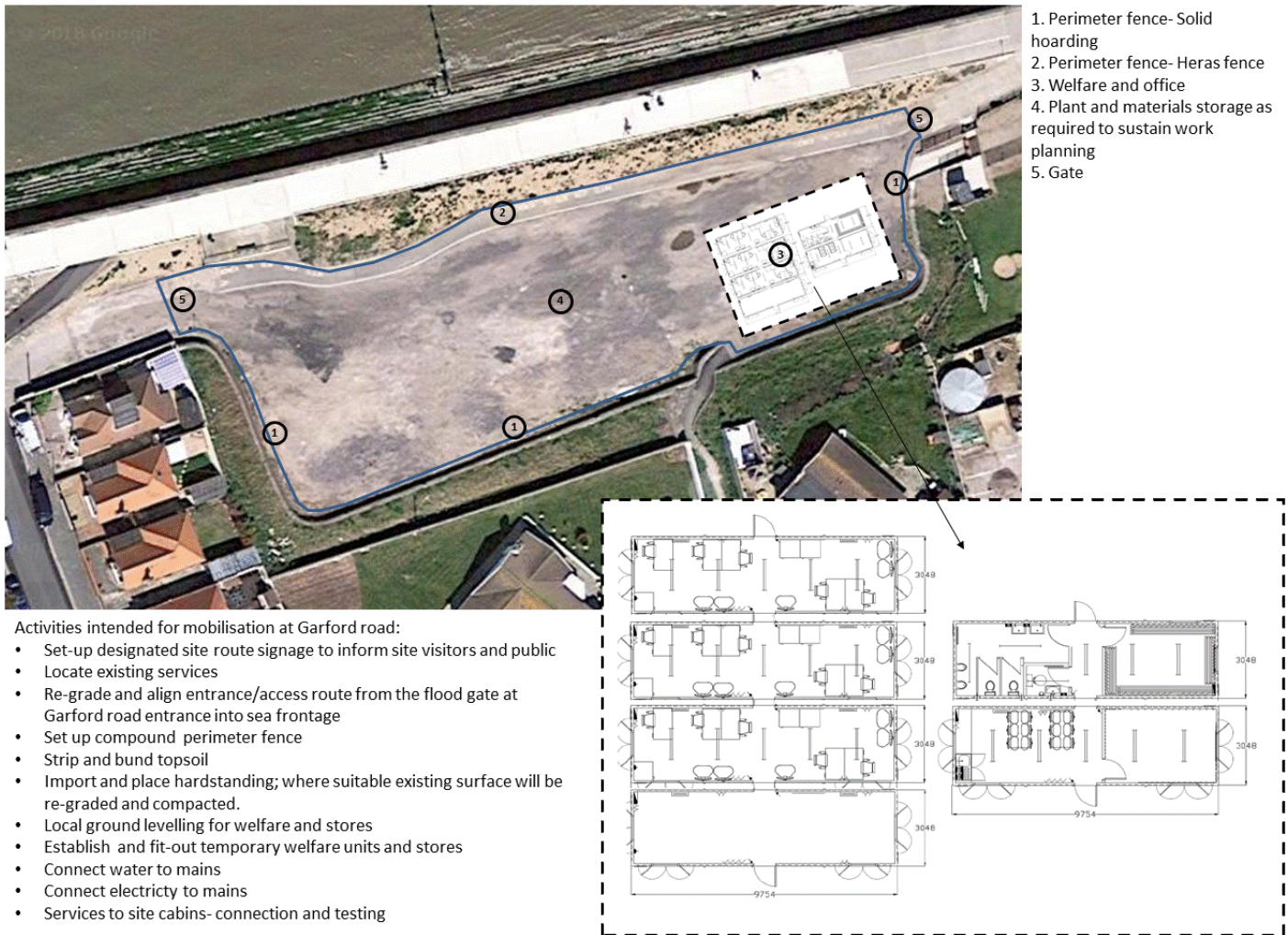


Figure 11- Outline compound set-up at Garford Road

In combination with the compound hoarding detail as described above; all internal site routes will be fenced off by means of heras fencing panels one in use. This will prevent unauthorised entry when these internal site routes are in operation. All fencing will be maintained and inspected at weekly intervals as a minimum.

4.3 Construction of access routes and existing promenade protection

Two compounds will be established as noted above. The main compound (location 1) will be the start of the internal transport route for servicing the project. Access points and proposed travel route is indicated in figure 12.



Figure 12- Access points from materials storage compound location and associated routes to works face

4.3.1 *The road access from Marine Drive into the main compound will be located as indicated in figure 13. The citing, design and construction detail of this access has been subject to a Section 184 application which has now been approved, see appendix 5.*

Advance road signage will be erected to warn the public of construction entrance and construction vehicles turning. All existing services in this area has been confirmed by validation ground investigation exercise. These will be re-confirmed and marked out against the documented information before works commence. All existing services once located will be protected as required by the design information for this access.

The existing topsoil shall be stripped and banded for future rehabilitation work. Removal of hedgerow plants to enable access to compound 1 will be kept to a minimum, with measures taken through screening and fencing to protect those remaining. The section of hedgerow removed will be reinstated with like for like planting, and all activities may impact on trees or hedgerows will be informed by a tree and hedgerow protection plan.

The new entrance profile will be cut and filled to formation. The existing kerbline will be altered and the road layers constructed in accordance with the section 184 design proposal. This entrance shall be gated and will be pedestrian friendly, to this end pedestrian right of way will be enforced here.



Granular material will be imported to form hardstanding in the compound. The outline proposal for the compound is enclosed in appendix 6. The main vehicle traffic routes of the compound will receive asphalt wearing course to minimise dust nuisance.

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4.3.4 *Protection work to existing top promenade to enable acceptance of construction traffic* will consist of a concrete slab overlaying the existing promenade. In addition, 2 passing places will be created to allow safe passing of construction vehicles on the promenade. The protection slab will consist of a minimum 250mm thick concrete slab, which will be removed on completion of construction. Any damage caused during to this part of the promenade will be repaired in line with pre-agreed standard with DCC. This route will be inaccessible to the public during construction. Heras fencing panels will be used to section the route perimeter off in its entirety. As an alternative measure to above protection works approach; BB will explore the potential to improve the current promenade surface by removing the top surface to a depth of maximum 250mm. Compact and improve the existing layer works then cap this with reinforced concrete of maximum 200mm, with a view to add the remaining 50mm running surface at the end of the construction process.

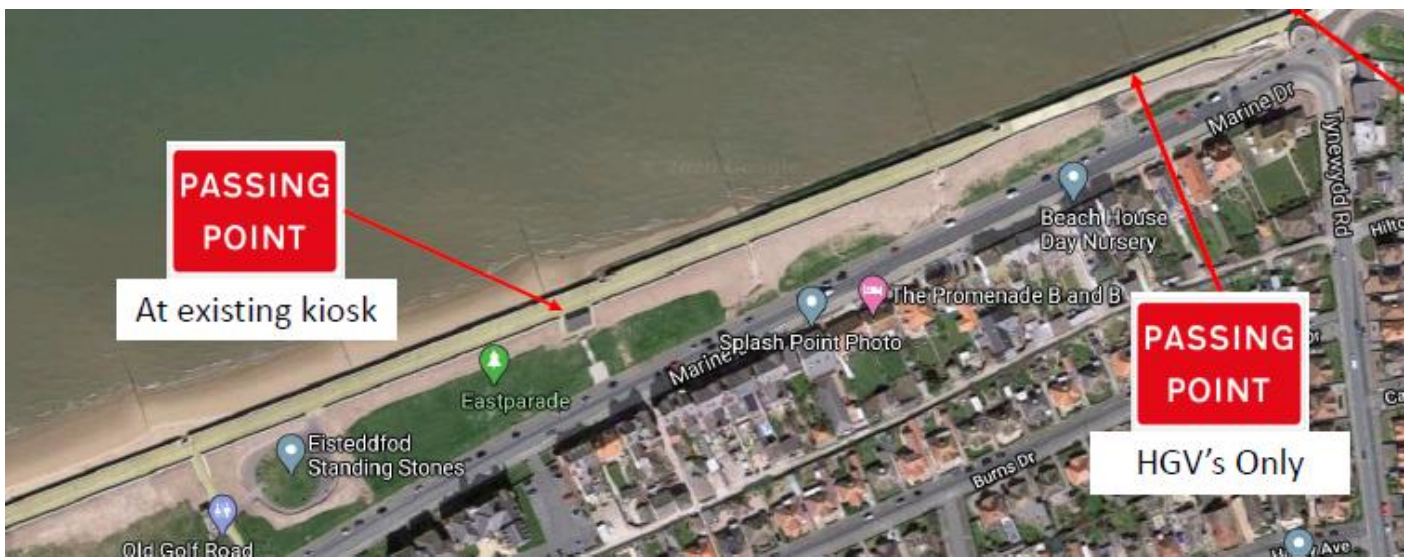


Figure 14- Indicative promenade passing places

4.4 **Main construction phase – Access ramp from top promenade onto beach at splashpoint**
A third construction plant access is required from the top promenade level down to the beach, this access will be located near splashpoint (figure 15) and within the CDM area of the site. A temporary slipway access will be constructed here to accommodate the height difference between the top promenade and the lower steps to the beach. Subject to temporary works design evolution; this will be constructed from filter rock (grading 0.3t to 1t) and capped with granular material to form a suitable running surface for construction plant accessing the beach. The rock used here will be absorbed in into the revetment as the shoreside work is completed. Once onto the beach level and where identified, beach sand depth will be managed as required by using beach won material to maintain a passable beach access way.

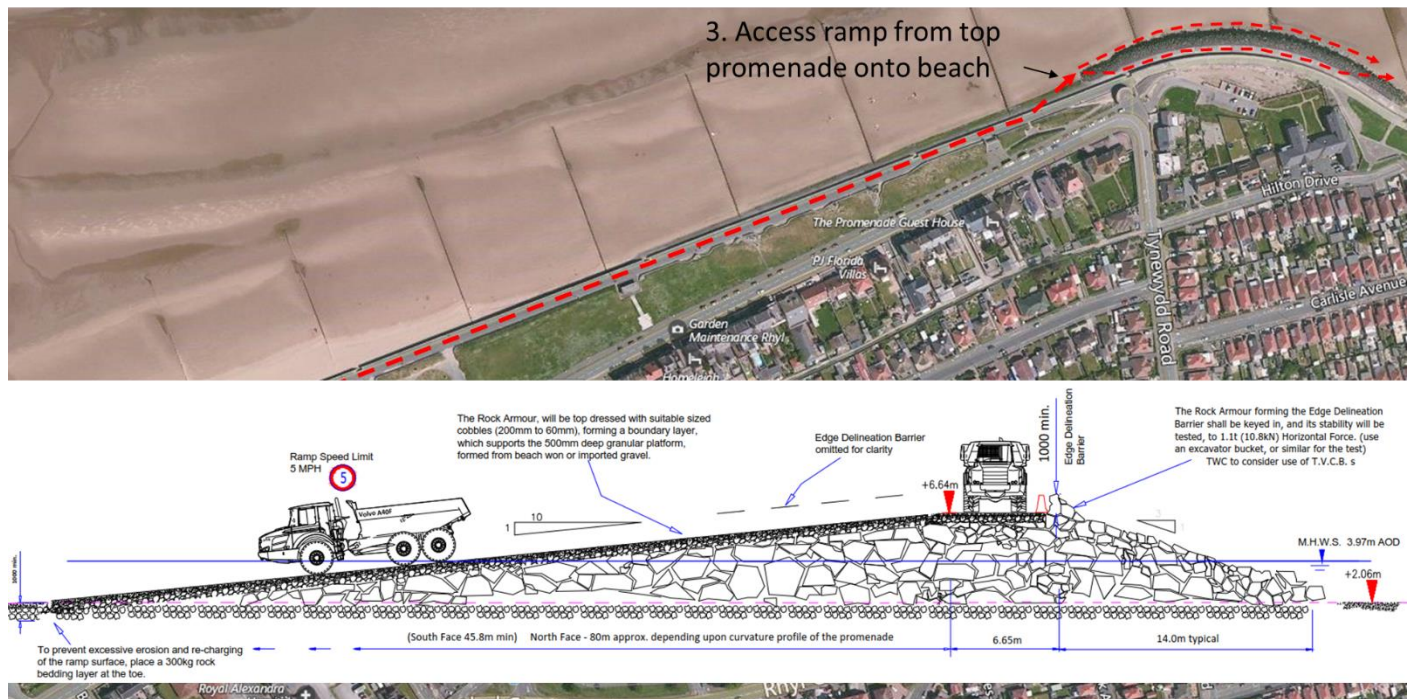


Figure 15- Temporary slipway access near splashpoint

4.5 Main construction phase – Rock delivery

It is anticipated that the initial rock supply will be established at the main compound at Marine Drive, though the large proportion of the rock will be delivered and stored near the work face on the beach (see fig 16) and the general revetment construction will commence.



Typical temporary sorting and storage of rock armour near the work face, before placement in correct formation/density. This allows work efficiency as the stockpiles are sorted in the correct packing/density order such that it makes for ease of placement and minimal re-work once rock is placed in final revetment formation

Figure 16- Typical rock armour storage near work face

Stockpiling in the main compound will be 4 weeks ahead the revetment construction commencement to ensure construction progress unhindered once this activity commence. It is the intention that the majority of the rock will be imported into site and transported to the actual workface as tidal access permits during the daytime delivery

window. The primary rock armour and rock filter layer material is intended to be delivered by road and the transport routes as agreed with DCC highways, noted in section 3.4 will be used.

Rock will be loaded directly onto wagons after being selected and graded at the quarry and will therefore, be deemed as a clean product, free from fines and contaminants. However; should any of the rock become contaminated, it will be washed down prior to delivery and/or placement to prevent any possible pollution to the marine environment. Upon arrival to site, the rock will be offloaded by means of a suitably sized tracked excavator fitted with a hydraulic grab positioned at the compound and temporarily stored.

4.6 Main construction phase – Removal of existing groynes

Existing groyne construction resembles a typical king pile and plank arrangement, with most of the planks above sand level missing due to wear over the years. Some of these existing timber goynes extend beyond the proposed footprint of the new revetment works. Consequently, these groynes require removal to revetment formation level (see figure 17 below). It is envisaged that this operation will take place as part of the preparatory work ahead of filter layer and quarry run construction.

Excavate and reduce the existing beach level immediate to the designated groyne until it is exposed to formation level of the new revetment. All material will be cast to one side so that it can be used to reinstate the beach to the level it was before works commenced.

All visible existing groyne planks will be removed as the excavation around the groyne position progress. As the groyne posts remain standing these posts shall be saw cut where appropriate or removed by means of excavator with specialist grab attachment. All off cuts will be placed in the timber skip provided on site away from the tidal zone. Work will take place in manageable sections according to the available tidal window.

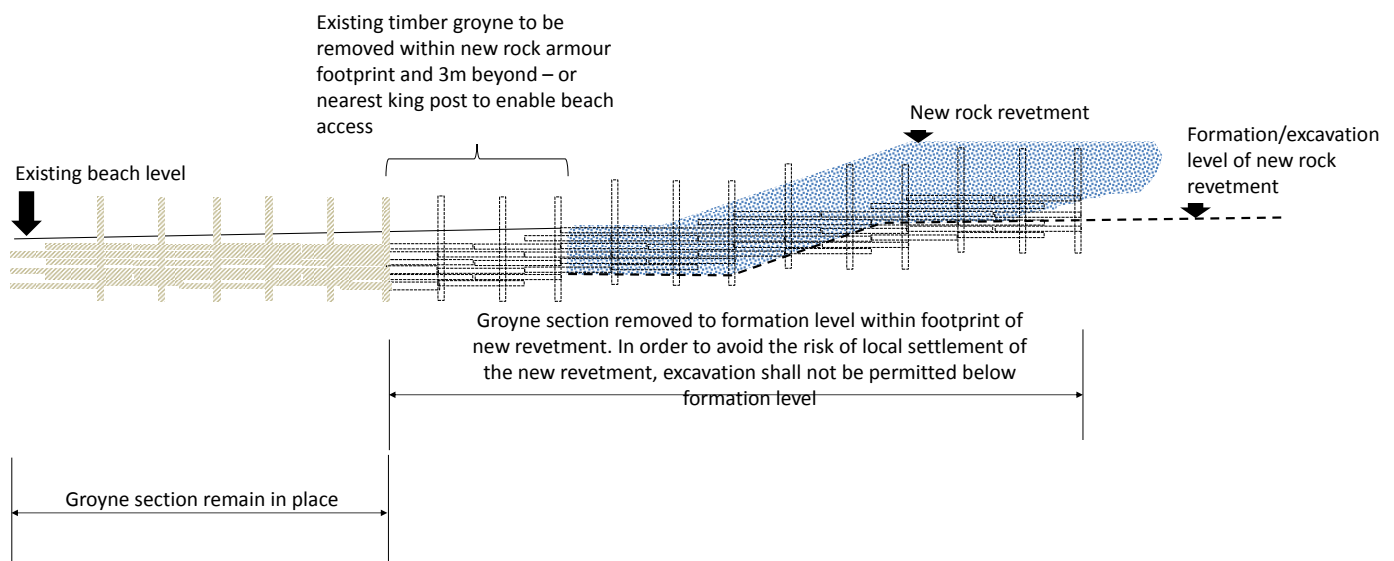


Figure 17- Removal of existing groynes

4.7 Main construction phase – Concrete buttress

The concrete buttress will be progressed ahead of the rock revetment works. It is assumed that minimal to no work is required to the existing re-curve wall face prior to concreting. Formwork shall be made manufactured to an agreed temporary works design such it can be installed and removed as single components in the tidal zone. This approach will aid optimum installation and removal time when working in the tidal zone. Several formwork units will be fabricated to facilitate the repetitive nature of this operation, these formwork panels will be lifted and handled by machine only.

After the formwork has been erected (see figure 17), the formwork will be filled by utilising a concrete skip or by pumping the concrete into place. The means of placement will be dictated by the access and volume to be placed on the day. Access to the works will be via the existing top promenade area.

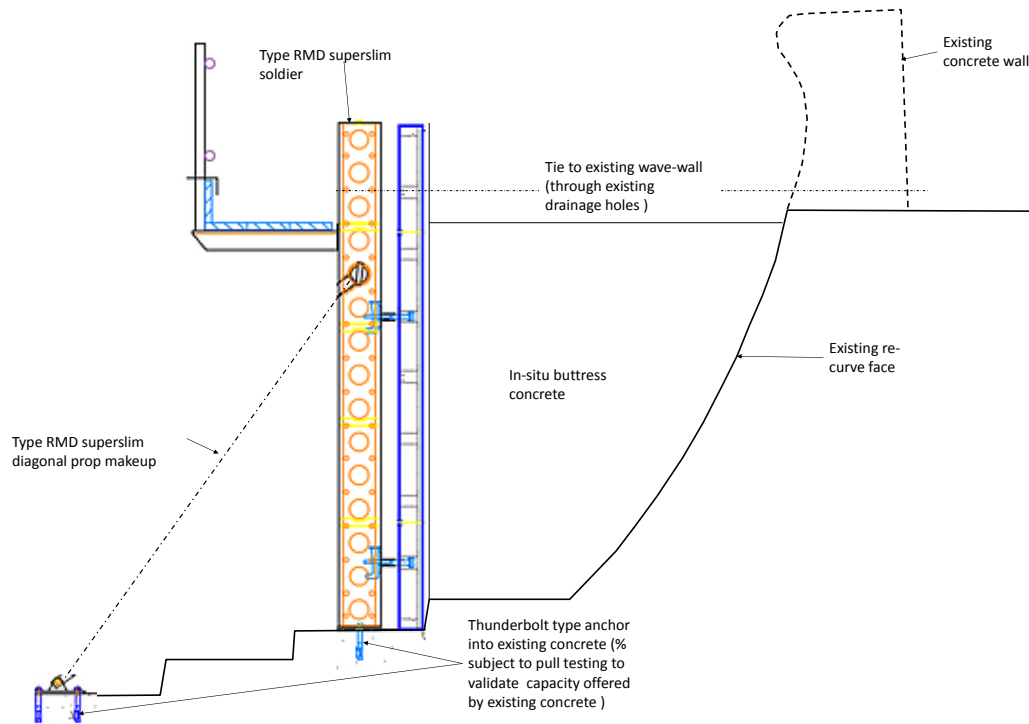


Figure 17- Typical formwork for buttress concrete

4.8 Main construction phase – Construction of beach access steps

Three access beach access steps are required. Two of these access steps are located within the existing revetment which envelopes splashpoint and one near Garford is true to the presentation of the current drawings. The construction approach is to develop the temporary works such that the beach access steps is not entirely tidally constrained, yet access is still required from the intertidal zone. This in principle will require a sheet piled cofferdam structure starting from the beach access step design toe, up to the existing revetment. A platform will be required for the plant to enable excavation and installation. In this case, the platform and sheet piles will be above MHWS spring level to a maximum of 5.00 mAOD.

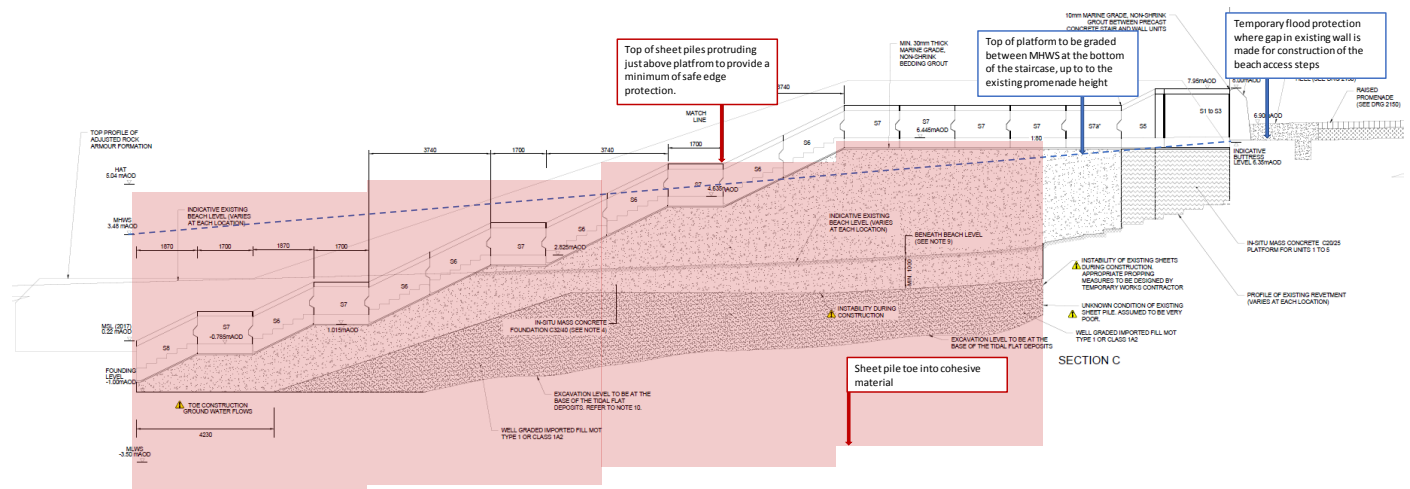


Figure 18- Profile of sheet piles and working platform (see appendix 7 for clarity)

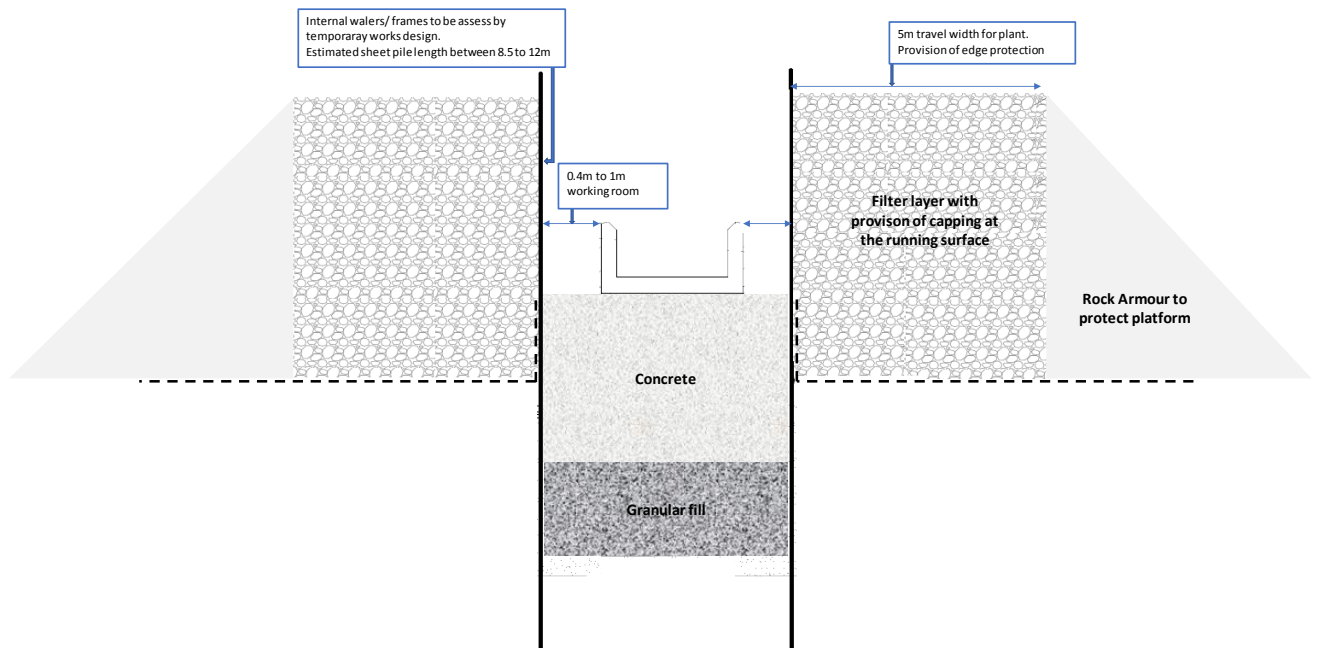


Figure 19- section through proposed cofferdam (see appendix 7 for clarity)

The extent of the piling required is suited to the use of a Telescopic Leader Piling Rig (ABI TM 13/16 to ABI TM 14/17). A view of the ground conditions expected on the beach (sand to 6m depth with firm to stiff clay below) suggest suitability for vibratory piling as assumed. The majority of the noise generated through the use of the vibratory hammer is generally the sheet piles 'rattling' when initially driven. With the nearest property being 25m away we estimate that noise levels would be below 80 DbA at this position. See appendix 8 for data sheet of TM 14/17 telescopic leader rig, recorded noise levels are detailed on page 4.

All work shall be carried out will comply with the general recommendations of British Standard BS 5228 'Code of Practice for Noise Control on Construction and Demolition Sites'. Noise and vibration monitoring will take place throughout the duration of the project. To this end, monitoring of vibration levels will be set at a limit in line with the recommendation within the British Standard at the nearest property. Noise and vibration monitoring equipment will be spread such is captures the entire site; location of these vibration monitors will be confirmed and established before commencement of the main construction programme.

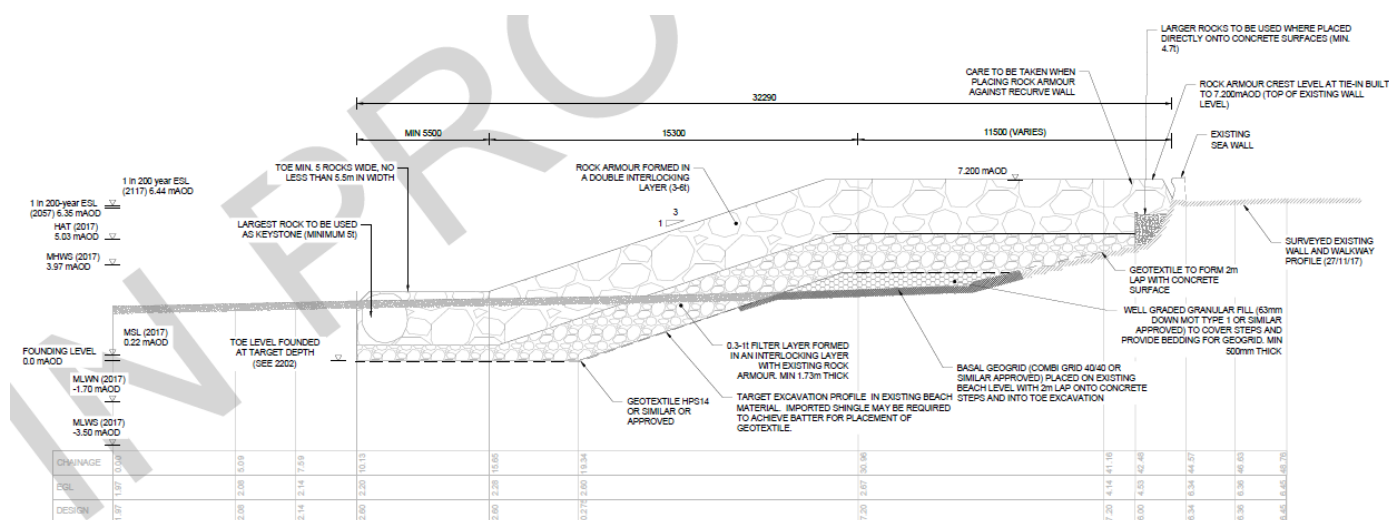
The noise and vibration due to this specific piling activity will not be continuous and is assigned to specific period based on the works programme proposed in appendix 1. Therefore, the combined duration dedicated to piling activity when considering installation and extraction of the sheet piling will have a total duration circa 8 weeks, which will be 5 weeks for pile installation and 3 weeks for removal of sheet piles on the project.

In summary; the outline construction sequence for the beach access steps will be as follows:

- Install sheet piles (to 5m AOD (HAT)), using the beach as access
- Complete working platform, using beach access via lower promenade access at splashpoint onto beach.
- Install initial cofferdam bracing frames as working platform is progressed.
- Excavate inside cofferdam to formation. Further adjustment and installation to cofferdam bracing to continue as excavation progress.
- Once formation level has been reached inside cofferdam; place 200mm-300mm concrete along formation profile.
- Adjust cofferdam bracing accordingly
- Pour mass fill concrete at regulated intervals and rise within cofferdam with formation to suit construction drawings

- #### 4.9 Main construction phase - Rock revetment construction

It will also be used to ensure beach levels are maintained such that the beach remains accessible to construction plant during construction of the revetment works.



The textile will be laid directly onto the formation and once the intended excavation extent has been covered the roll will be cut using an appropriate cutting tool. Lap widths will be sprayed onto the geotextile showing the 1m lap. To ensure that the geotextile can be recovered for the following shift rock/sand will be loosely placed onto the lap section at the end of each shift to protect and enable the recovery of the end to continue.



Figure 21- Typical geotextile placement

The filter layer will be transported to the work area either by dump trucks and tipped onto the beach and then placed using the excavator bucket onto the geotextile. The filter layer will be placed such to achieve an even distribution of rock sizes, thus avoiding uneven concentrations of smaller sections of rock sizes. The under layer will be surveyed to ensure that the layer has been placed as the correct tolerances regarding density and minimum thickness and final height.

Graded piles of armour stone will be stockpiled on the beach near the work face in the correct grading and known weight of material. Rocks will be moved from the stockpiles and placed one at a time onto the recently placed filter layer stone using an excavator with grab attachment or bucket. The toe profile will be constructed first, ensuring that the largest rock of at least 5.5t is placed at the front face. Once formed the final rock level shall be accurately surveyed using GPS excavator or total station.

On confirmation that the as built profile is within the tolerances set out in the specification and sufficient measurements have been taken to calculate accurate volumes, the as dug beach material will be used to cover the toe up to existing beach level. Once the armour has been covered by a minimum thickness of material, the excavator will be positioned onto the toe and will continue to place armour stone to the crest.

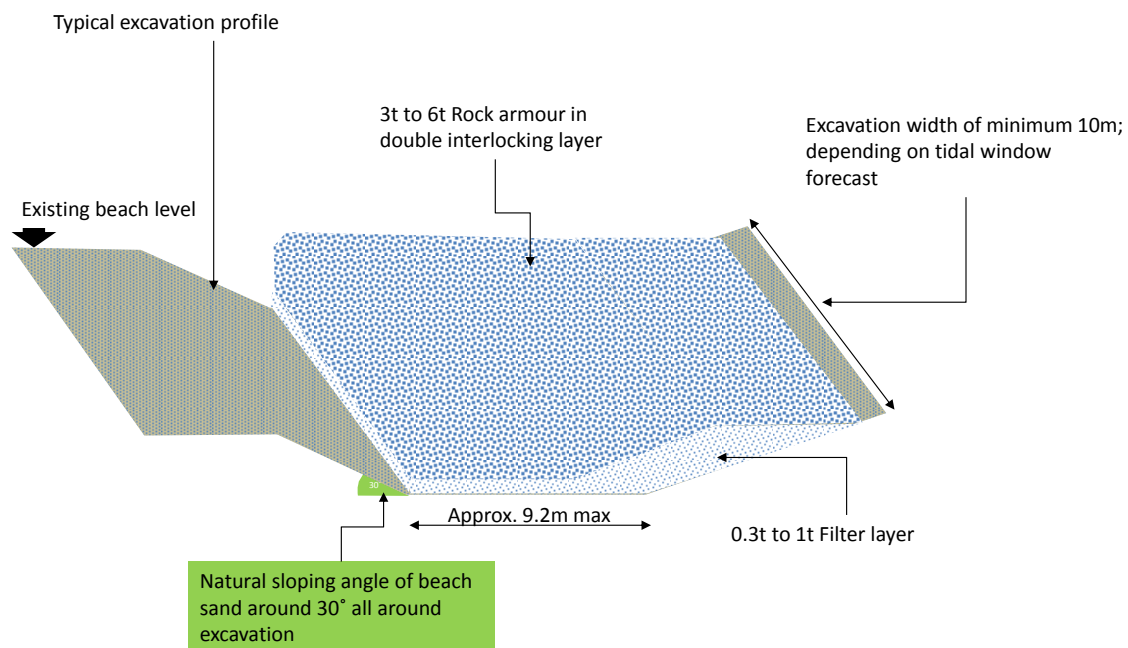


Figure 22- Typical excavation profile/section of work when constructing the toe

The final completed section of revetment once sufficient armour stone has been placed will be surveyed to confirm the actual packing density for acceptance. Any areas of works which do not meet the required finish or are found to

be outside of the tolerances set out in the specification will be reworked until they have found to be satisfactory. All broken or damaged rocks be broken down and used as filter material where possible; otherwise this will be picked from the revetment or left within the stockpile and on completion will be loaded into a dump truck and tipped in the main rock storage area.

Machine equipped with GPS shall be calibrated regularly. The data model profile of the typical revetment construction layers (figures 20, 22, 23) will be uploaded to digging and placement excavators and the operators' cab display will indicate the applicable cross section to build to. Plan and traffic light tolerance envelopes shall be pre-set and can be viewed live as the revetment is built up.

Further confirmation and compliance shall be sought by recording as-builts of placed volumes using high resolution drone images referenced to known points. These digital images will be inspected to visually check specification compliance (e.g. broken rocks) and void size and remedial actions will be carried where required. On completion, a final drone survey creates an as built record.

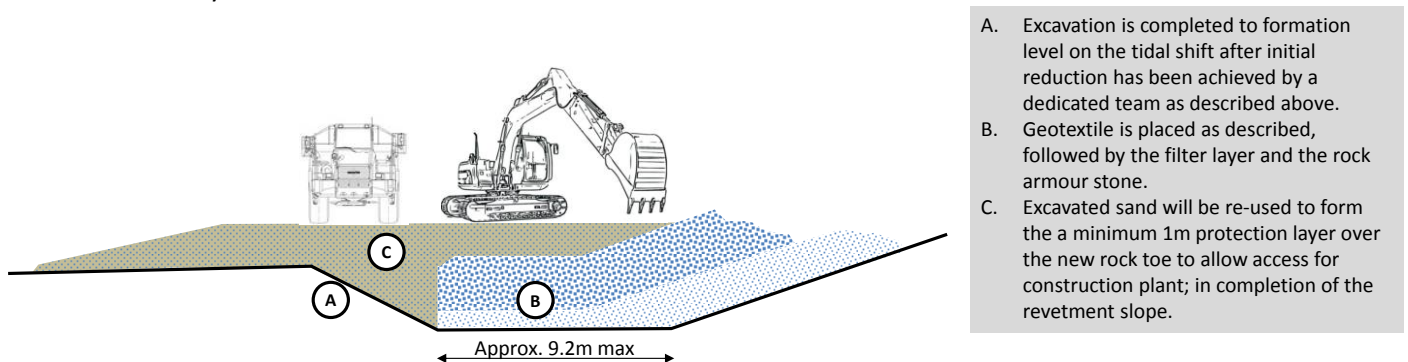


Figure 23- Re-use of the excavated material and protection of the new rock toe during construction

4.10 Main construction phase – Removal of existing sea wall

The removal of the existing wall will be undertaken as the new pre-cast wall is placed. This shall be done in such a means as to maintain the standard of protection provided by the existing wall throughout the construction phase. Two methods have been identified for removal of this wall and would be used interchangeably.

Method 1: Diamond track saw cutting has been identified as one of the methods for cutting the existing wave-wall down to formation level. Once positioned the track mounted wall saw head travels along horizontally to suit desired cut line. The diamond saw blade is attached to a saw head mechanism and rotated at high speed to form the cut. The saw blade cuts the concrete in small increments, using a series of passes until the entire section width has been cut through successfully. The cut is wedged as it is formed to prevent the blade getting stuck during the cutting and removal process. The track saw is over-viewed and controlled remotely by the operator. The blade is kept irrigated at all times during the curing process to eliminate dust nuisance.

Set up track for saw at desired level of cut



Fix motor and blade



Fix cover to blade

Figure 24- Simplified explanation for track saw set up

Method 2: The section of the wall and promenade surface to be profiled to desired formation will be identified. The existing primary wall can be broken down by mechanical means where identified. This will be in the form of attachments to the excavator in use. This will function on the principle of grinding or pinching the concrete gradually to the desired profile. As this is essentially breaking of existing hard standing and concrete to desired formation, control measures for dust and noise will be in place. The works area will be an exclusion zone accessible to authorised personnel only.

The wall and existing surface will be broken down as required and the resulting spoil stockpiled. This will be transported away to temporary storage or used as backfill/hardstanding in the compound maintenance. Road wagons or dumpers will be used to cart the spoil away.

4.11 Main construction phase – Core holes to existing promenade

There is a requirement for 75 ϕ holes to be cored through the existing pavement concrete at 750mm centres (figure 25). This will be achieved by means of diamond drilling. This is quieter solution and offers minimal vibrations when compared to breaking and other destructive methods. The rig also reduces the amount of vibration which you would get when hand drilling.

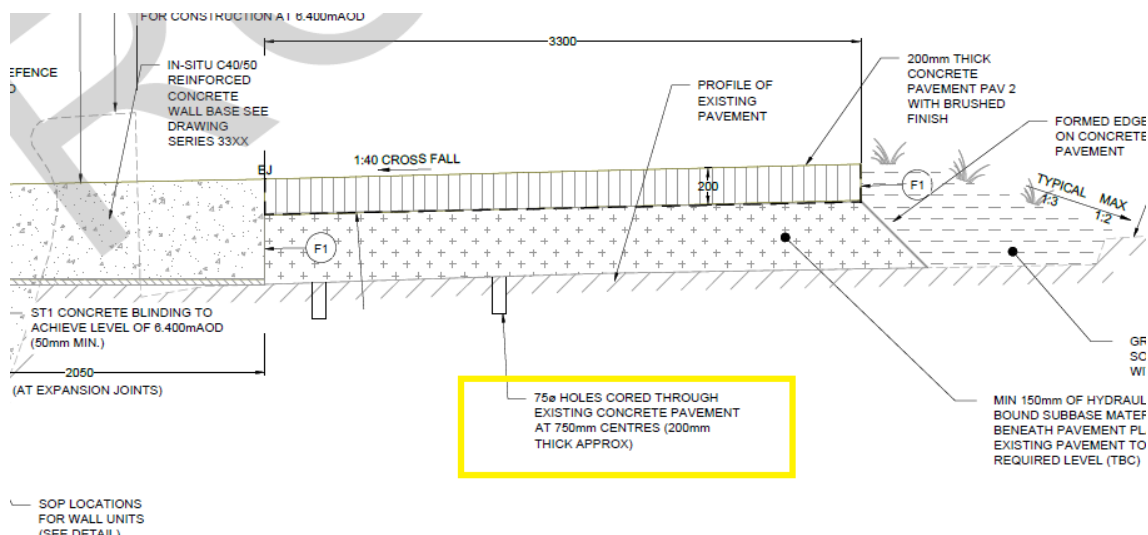


Figure 25- Pavement section with 75 ϕ holes to be cored



The drill rig will be set up at the designated drill location and fixed vertically with the required drill attachments. The equipment will be set up complete with in-line dust suppression.

Figure 26- Diamond drill rig set-up and coring

4.12 Main construction phase – Pre-cast wall placement

All pre-cast elements will be produced off-site and transported into site either to Garford Road compound or Main materials compound and transported along the internal site to the Garford road compound. A minimal number of pre-cast units will be stored on site to ensure at least a full week's production of units is available to place at any time.

Pre-cast units will be installed by means of excavator or crawler crane with the use of a bespoke lifting frame which will be attached to the hook of the crane resource in use on the day. All lifting operations will require a lift plan completed by trained and competent person before any works involving lifting can take place. Once the designated means of crane is set up in accordance with manufacturer's instructions, the crane resource will be located at the position shown on the lift plan and designated exclusion zones set-up accordingly.

Tag lines will be attached to the frame for ease of control whilst unloading or placing units. Delivery wagons (or tractor and trailer) will bring the requested units to the designated work area.

As per lift plan, the delivery wagon will pull into the correct position for the crane to receive the pre-cast unit and disengage its engine. Using a set of podium steps, the slinger/signaller will access the back of the wagon and then slowly bank the crane ready to lift the pre-cast unit from the delivery wagon.

Once the load has been secured to the crane and verified, the slinger/signaller will then dismount the frame and trailer and move to a position of safety before he begins to manoeuvre the crane and place the unit. The crane will slew the load to the required location and lower the load until just clear off the ground at which point the placement team operatives time are operatives allowed to position themselves around the unit ready for final manoeuvre and adjustment.

Nylon packers are set to the correct position and height as dictated by the setting out drawings. The pre-cast unit will be lowered onto these packers and checked for line and level, if adjustment is required the unit is lifted slightly and the operatives, using a hooked road pin, will remove the shims, alter as required and replace in the original location. The unit will then be lowered back down and re-checked. Once the unit is within tolerance the frame or lifter will be removed. Temporary works will then be installed according to accepted design.

This operation will be repeated until a sufficient section for the shift is completed.

Formwork will be set up around the base footprint of the units placed for that shift and consequently allow the pre-cast units to be grouted in place by filling the void underneath the units.

The grout skip will be attached to the crane or excavator and filled from ready mixed concrete trucks.

As per all lifting activities, operatives will remain outside the exclusion zone whilst the skip is being slewed into position. Only when the skip has been lowered to a safe height above ground shall the operative emptying the skip enter the exclusion zone.

Pour grout from the grout skip filling any voids or gaps under the unit

Once the skip has been emptied, under the control of the slinger/signaller, return back to the ready mix wagon and re-fill.

4.13 Main construction phase – Concrete wall base

Site delivery access and egress will be via Garford road onto the top promenade where required.

Where excavation is required to form a foundation or the like, an excavator or digger shall be used to dig it. The sides of the excavation shall be neatly excavated to provide adequate working space.

Where large slabs are constructed, a blinding layer will be cast to provide a clean and level working platform.

The re-bar shall be pre-fabricated in the designated compound closest to the work area. This shall be pre-fabricated on frames to ensure safe lifting during transport. Some in-situ steel fixing will be required.

Manual handling risk shall be considered at all time and reinforcement will be handled by mechanical means.

Formwork will be made up on site or proprietary shutters will be procured. In both cases, the formwork should be built to ensure that the concrete is formed to the requisite dimensions as well as providing the required surface finish. Formwork should be securely fixed and all fixings needed for erecting subsequent formwork should be included.

Where proprietary formwork are in use this will be fixed in accordance with the manufacturers recommendations. Heavy formwork shall be handled by machine.

Concrete will be placed by; discharge directly from the wagon to the structure, dumper transport from wagon to structure, concrete skip or pumping into position. All transport routes shall be clear and safe for access.

The correct surface finish will applied in accordance with contract specifications. Where electric floats are used, these will be in good working order and used by experienced operatives. The fresh concrete will be over-sprayed with a curing agent after initial settlement.

4.14 Main construction phase – Pavement construction

Concrete to the pavement areas will take place in the same way as in section xx.

4.15 Main construction phase – Finishing works

The finishing work consist largely of grassing and seeing of the grass verge behind the promenade pavement area. All public footpaths where the works encroached due to access required will be reinstated.

The 6A1 fill will be imported; though the BB will explore an option to re-use the materials arising from demolition of the existing sea wall in this area.

The 6A1 will then be covered with topsoil of minimum 150mm. Topsoil banded during the initial stages of the operation will be used. Re-seeding (of the same grass species) will take place to assist re-establishment of the grass verge.

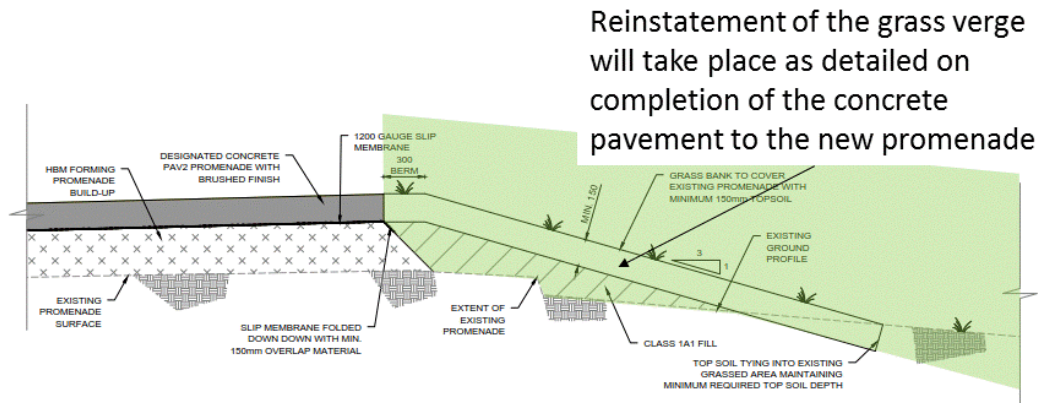


Figure 27- Finishing works

4.16 Main construction phase – Maintenance of standard of protection (SoP)

The removal of the old pre-cast wall and placement of the new wall will be sequenced such that the height of new rock revetment offers protection before this activity commence. The rock revetment construction will precede the wall installation activity by 47 weeks, thus providing the SoP before the old wall is removed.

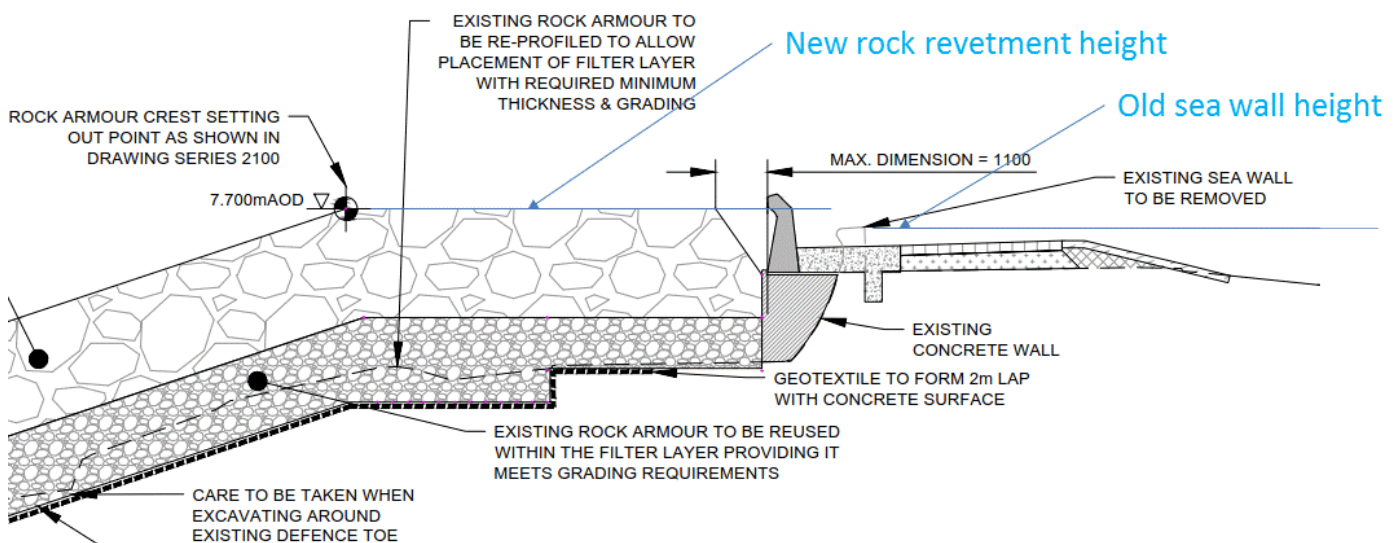
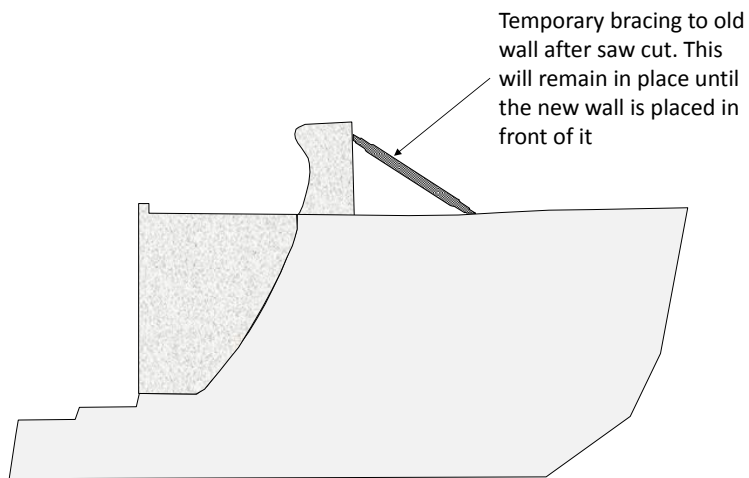


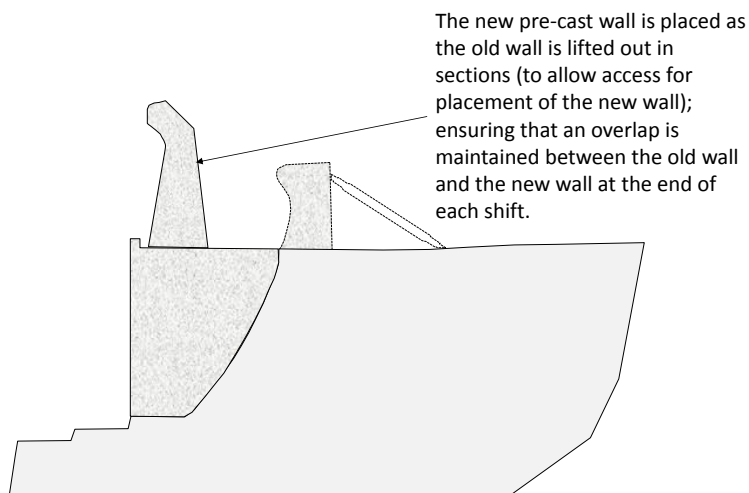
Figure 28- Illustration of new rock revetment height against the old sea wall

Where the sequence of the revetment do not provide the required SoP, the following sequence shall be maintained.

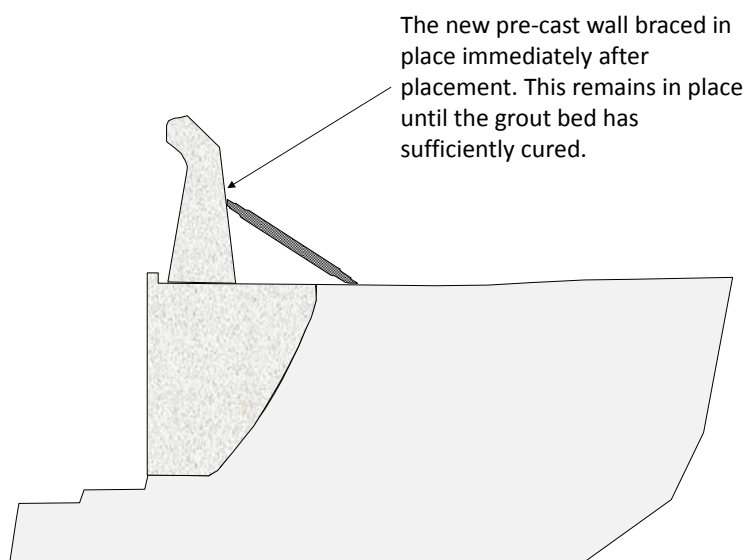
Stages explained below:



As the existing wall is cut in small work sections it is left in place and braced to ensure that it remains a viable means of maintaining SoP until the new wall is placed. Cutting of the existing wall shall mirror the new wall placement sequence and thus be ahead by 4 shifts at most.



As placement of the new wave-wall occur, the existing wall and temporary bracing is removed just in time ahead of the new wall placement.



Once placed, the new wall is braced in place until the grout bed is sufficiently cured to allow the wall to function on its own as temporary flood protection. There will always be an overlap between the new wall and the remainder of the old wall to ensure that there is no break in the SoP at the end of each shift.

Figure 28- Sequence for cutting of old wall and placement of new wave-wall

4.17 Main construction phase – Site demobilisation and rehabilitation on completion of construction
All land areas and roadways earmarked for temporary use during the construction phase will be re-habilitated and restored to original or pre-agreed condition with the Denbighshire County Council (DCC). Precondition surveys will

be conducted as required and photo records kept as record prior to commencement of work in any area subject to temporary use and to be returned on completion of construction.

The end result of all restoration shall be in line with the pre-condition surveys and photographic records or as otherwise agreed between BB and DCC.

An arboricultural assessment has been undertaken in relation to protection of the ornamental hedgerow and three trees adjacent to the southern boundary of the proposed site compound, off Marine Drive.

A 15-20m section of the hedgerow will need to be removed for the access into the compound. Visually, the implications of the hedgerow removal are temporary and minimal.

Replacement planting with like for like replacement (in agreement with the council) will be undertaken on completion of the works.

No trees will be affected by this work.

There is an existing pre-cast concrete panel fence between the hedge and the proposed compound that will act as an existing physical barrier between the hedge and the site.

In addition, security fence will be erected around the peripheries of the site compound. At the southern boundary, the security fence will be set at a minimum distance 3m from the hedge. This will provide adequate protection to the hedgerow and the adjacent trees for the duration of the work.

Replacement planting:

Species	Privet (to be agreed with Council)
Size	30-45cm
Root	Bare root
Planting	Tone to be removed Hedge planting line to be forked over incorporating compost Notch plant bare root transplants into existing soil setting out in double staggered row, 450mm apart
Protection	50mm x 600mm high biodegradable tubing & bamboo cane.
Mulch	75mm depth of amenity grade mulch to base of hedge.
Maintenance	Formative pruning to be carried out as required to encourage to knit together to thicken up

Table 4- Replacement planting

Removal of hedgerow plants to enable access to materials handling compound will be kept to a minimum, with measures taken through screening and fencing to protect those remaining. The section of hedgerow removed will be reinstated with like for like planting and all activities that may impact on trees of hedgerows will be informed by a tree and hedgerow protection plan.

5. Health, Safety, Quality and Environment (HSQE)

5.1 General HSQE arrangements

A project management plan (PMP) will be produced for the project this PMP and its appendices are a mandatory requirement which between them discharges our statutory, contractual and company responsibilities for the production of a Construction Phase Plan, a Project Quality Plan and a Project Sustainability Plan.

The PMP provides high levels controls required on the project and unless contractual obligations dictate otherwise, it will always be accompanied by the following plans as a minimum; Construction Phase Plan, Project Quality Plan and Project Sustainability Plan which form part of appendices to the PMP.

Construction Phase plan: Is required under CDM. BB will use this document to identify the hazards and assess the risks relating to the construction phase of this project. The CPP is developed for managing health and safety during the build. The CPP is the foundation for good management and clarifies; who does what, who is responsible for what, the hazards and risks which have been identified and how the works are controlled. Construction will not commence until the CPP is completed and accepted. For all but the simplest of projects the plan may not be sufficiently developed to cover all of the work

The CPP is a live document and will be reviewed at regular intervals and, where necessary, amended to reflect changes in the scope of work or programme changes where the planned interface of trades may alter.

The project quality plan: The aim of the project quality plan is to define our specific approach to quality management and defect-free delivery on this project. It details the quality controls to be implemented throughout the project in order to provide assurance that our work meets the agreed company, statutory, regulatory and contractual requirements and is delivered defect free.

The PQP is a core appendix to the Project Management Plan (PMP). It is updated and controlled as part of the PMP and requires completion and control across the Balfour Beatty Gated Business Lifecycle.

Project sustainability plan: The purpose of this document is to define the project specific approach to the management of sustainability, environmental compliance and delivery social value outcomes of project activities. The plan details the sustainability and environmental control measures applied to operational activities to ensure that risks are mitigated and opportunities realised.

Safe access and egress will be part for each risk assessments for each activity. Unauthorised entry to work areas will be of high priority at all times.

5.2 Noise and vibration monitoring

Advance noise and vibration monitoring will be established as a means to baseline the natural seasonal noise and vibration patterns. This monitoring will continue through the construction process to assess any adverse impact. We will record noise and vibration patterns at source where this becomes a necessity by risk assessment to prevent any negative impact.

Best Practicable Means (as defined in S72 of the Control of Pollution Act 1974) shall be used to reduce noise levels at all locations at all times.

5.3 Air quality management

Dust suppression of all operations shall take place throughout the works. Each activity shall be risk assessed before commencement. A road sweeper shall be used to clean public access routes on-, and immediately off-site. Mobile water bowsers shall be used on elsewhere on site as a means of irrigation/dust suppression where required.

5.4 Waste management

Waste management will take place in line with BB procedure. Chain of custody of any waste stream must be recorded at all times. All waste materials to be either placed into the relevant storage disposal container situated within the main site compound or removed from site by the individual sub-contractor and disposed of in the appropriate manner.

5.5 Fuel/chemical storage

Site storage of fuel and chemicals shall be above any flood water level and where possible away from high-risk locations, such as 10m of a water course or 50m of a well. Refuelling of plant and equipment will only be permitted at designated refuelling areas. Fuel shall be pumped into machines to minimise the risk of spillage. No refuelling shall take place on the beach area at any time. Small plant will be taken from the works face (when on the beach) and refuelled at a designated fuel area established above the mean high water level.

All refuelling and bulk deliveries shall be supervised at all times.

The relevant emergency prevention oil spill kits will be available at the following locations and operatives shall be trained in the correct use thereof. Care will be taken not to refuel plant close to any watercourse.

Any spillages shall be contained and reported to the Foreman and Environmental Department.

Biodegradable oils shall be used in construction plant where practicable and possible.

Alternatives to COSHH substances will always be sought before proposing any harmful substances to be used in construction. Operatives involved in works subjected to COSHH must receive a COSHH briefing and correct PPE and training (if required) before commencing work. COSHH substances shall be stored in a locked container and kept in a well ventilated area. Best practice and company guidelines must be followed regarding storing of different COSHH substances together.

6. General

6.1 Safe working around tidal patterns

The working hours and construction elements undertaken are detailed in section 3.2.

Non tidal work: 7.00 to 19.00- Monday to Friday and weekend by prior agreement.

Tidal work: All tidal work schedules will be assessed 2 weeks in advanced and the operatives notified of the working times. Working times/windows will be briefed to all personnel prior to commencement of works allowing for weather conditions, tide height and tide times. It is anticipated that works will be continued until 3 hours before the anticipated high tide times dependant on which section of the structure is being worked on at the time.

Lone working will not be permitted on any tidal working shift.

Beach work areas will be cordoned off using rope and pins and temporary signs. The promenade and work area on the beach is closed to the members of the public however the perimeter must be by BB operatives due to the public nature of the environment. Site vehicle will be positioned on the beach outside the perimeter during the works and in the event that members of the public approach the operation the site personnel will turn them away. In the event that people persist in entering the work area the patrol vehicle will radio to all plant operators to stop work until the member of the public has safely left the area.

There will be no public access along the top promenade. Pedestrians interface will only be on the beach. Gated access control will be enforced at plant crossing and public interface. Plant to be escorted to and from the work locations whilst in a public area.

All personnel must be briefed and understand the constraints set out within the site PMP

6.5 Community engagement

BB will seek to register the project under the Considerate Constructors Scheme (CCS). We will strive to uphold our record in meeting and exceeding the CCS standards regarding; Care about appearance, Respect the Community, Protect the Environment, Secure Everyone's safety and Value our workforce.

We will keep the public informed through regular community engagement sessions. In addition, a project website has been created to provide local residents, businesses and interest groups with real-time news about the East Rhyl coastal defence scheme, as well as project information and key contacts for the development. The website will be regularly updated with relevant project news. Our recent news can be found on the Project Updates page and the latest news feeds on this page.

6.6 Public interface

As a coastal contractor operating within the domain of public beach areas like the East Rhyl sea front; public interface becomes a crucial part of our daily operations. We share our construction site with locals a seasonal visitors, resulting in direct exposure to public scrutiny.

Dealing with the public and public safety during construction and keeping a safe site out of working hours becomes crucially important aspects to our business when undertaking works of this nature.

Mitigation against risks

- Signage shall be placed at site accesses to indicate different site access accurately to delivery drivers
- Signage shall be posted in accordance with the Highway Code
- Deliveries to the site areas shall be supervised by a banksman at all times
- Work on beach- All work areas shall be excluded by means of rope and pins. This will be placed around the work perimeter. Warning signs will be placed around this area to inform the public of any dangers. A banksman will be in place at all times to supervise plant movement. All operatives shall be aware of the safe working window allowed for each tidal shift. This shall be communicated to them by the supervisor
- All shared access and interface points between construction plant and public shall be regulated by banksman at all times
- All work areas shall be left in a safe, clean and tidy state after completion of each shift
- Operatives shall always be kind towards the public
- Where members of the public require any project specific information; they should be referred to our available information centres/public liaison officer
- Operatives will report to their supervisor;
 - Unsafe actions
 - Near misses- no matter how minor the incident
 - Complaint from the public

Project	East Rhyl Coastal Defence
Customer	Denbighshire County Council
Date (last rev)	07 April 2020
Author	Deter Goliath
Subject	Construction methodology

Appendices

1. Works Programme
2. Section 61 application communication
3. Proposed construction plant for core construction activities
4. Evidence of consultation- site access routes (Public Road network)
5. Site hoarding and main site entrance design (Section 184)
6. Outline proposal for main compound
7. Beach access steps construction
8. Piling rig details
9. Project drawing register
10. Dust management
11. Noise management
12. Nuisance (including light)
13. Footpath closure notification

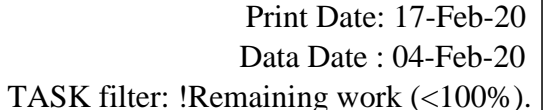
Project Title	East Rhyl Coastal Defence	Project Number	CRMMS020
Programme Submission	Clause 32	Programme Reference No	Rev 05.04
Issued in response to Client Communication No	N/A		
Issued in response to Subcontractor Communication No	N/A		
From	Deter Goliath	To	Wayne Hope
Address	Balfour Beatty 13 th Floor 111 Piccadilly Ducie Street Manchester M1 2HY	Address	Denbighshire County Council Smithfield Road Denbigh LL16 3RJ
Title	CRMMS020 Construction programme rev 05.04, 17.02.20		
Document Ref	CRMMS020 Construction programme rev 05.04, 17.02.20		
Attachments	Yes		
1	CRMMS 020 Construction Programme rev 05.04, 17.02.20		

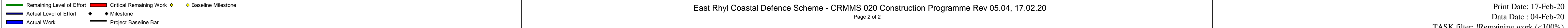
Item	Description	Action By
1	Further to the last submitted programme Rev 04.03, please find attached programme Rev 05.04 for your review. Once accepted, this programme will form the revised baseline for assessment of any future progress and change.	
	Recent programme submission history: <ul style="list-style-type: none"> Revised Contractors' Proposal submitted to DCC on 24 October 2019, which contained the new baseline programme (Appendix 5) Notice to proceed (NTP) to construction phase received 17 December 2019 Programme issued for review by e-mail to DCC 18 December 2019 	
2.	BB committed shoreside contractor (Jones Brothers) by means of subcontract execution on 19 February 2020. Which allowed this element of the works programme to be fixed.	
3	Promenade subcontractor not committed; though final negotiations are taking place.	
4	Date quoted in section 4 below is compared with the Contractors' Proposal Programme.	

Item	Description			Action By
5	Key Dates	Baseline Dates	Revised Dates	
	Data Date	12 October 2019	04 February 2020	
	Planned Completion	23 December 2022	23 December 2022	
	Completion Date	3 March 2023	03 March 2023	
6	Contractual communications during this period since last programme submission: <ul style="list-style-type: none"> EWN 21 (0431) - Delay to notice to Proceed (NTP) EWN 001(020) – Novel Coronavirus (COVID-19) 			
7	A meeting is schedule for Wednesday, 25 March 2020 to welcome DCC's contract team. We would like to request time on the agenda for review to discuss and clarify details within programme submission in attempt to get acceptance.			
8				
9				
10				

Signed for and on behalf of Balfour Beatty CSUK		Date	19 March 2020
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Distribution	Wayne Hope (DCC) Will Singleton (BB) Simon Williams (BB) John Greensmith (BB) Chris Hull (BB)
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Goliath, Deter (02)

From: Wayne Hope <wayne.hope@denbighshire.gov.uk>
Sent: 01 April 2020 17:16
To: Goliath, Deter (02)
Cc: Williams, Simon (02); Singleton, Will; Greensmith, John; Hull, Chris; 'Parry Dylan Rhys (YGC)'
Subject: RE: East Rhyl Coastal Defence CL32 programme, March 2020
Attachments: East Rhyl Coastal Defence Programme CL32 19.03.20.pdf

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Deter,

I hereby confirm my Acceptance of your Programme Rev.05.04, submitted On 19th March 2020 in accordance with Clause 32 of the Contract.

Regards,

Wayne Hope
Rheolwr Risg Llifogydd / Flood Risk Manager
Prifffyrdd, Cyfleusterau a Gwasanaethau Amgylcheddol/Highways, Facilities & Environmental Services
Ffon / Tel: 01824 706901
Symudol / Mobile: 07776 161612
e-bost: wayne.hope@sirddinbych.gov.uk
e-mail: wayne.hope@denbighshire.gov.uk
www.sirddinbych.gov.uk / www.denbighshire.gov.uk

Rydym yn croesawu gohebiaeth yn Gymraeg. Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

We welcome correspondence in Welsh. We will respond to any correspondence in Welsh which will not lead to a delay.

From: Goliath, Deter (02) [mailto:Deter.Goliath@balfourbeatty.com]
Sent: 19 March 2020 12:14
To: Wayne Hope <wayne.hope@denbighshire.gov.uk>
Cc: Williams, Simon (02) <Simon.Williams3@balfourbeatty.com>; Singleton, Will <Will.Singleton@balfourbeatty.com>; Greensmith, John <John.Greensmith@balfourbeatty.com>; Hull, Chris <Chris.Hull@balfourbeatty.com>
Subject: East Rhyl Coastal Defence CL32 programme, March 2020

Good afternoon Wayne

Please find attached Programme for Acceptance.

As we have meeting scheduled with your incoming team on Wednesday, 25 March; could we use this as an opportunity to review the programme?

Kind Regards

Deter Goliath

Project Manager | Regional | Balfour Beatty Construction Services UK

t: +44 (0)16 1-741-6137 | m: +44 (0)7783 149378 | e: deter.goliath@balfourbeatty.com

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Roberts, Chris (03)

From: Roberts, Chris (03)
Sent: 25 February 2020 12:17
To: Philip Caldwell
Subject: RE: East Rhyl Coastal Defences - Section 61

Hello Phil,

Will we receive any official confirmation for our section 61 application?

Regards,

Chris Roberts

Senior Engineer | Regional | Balfour Beatty Construction Services UK
t: +44 (0)16 1-741-6137 | **m:** +44 (0)7521195712 | **e:** chris.roberts2@balfourbeatty.com
balfourbeatty.co.uk | follow us [@bbcsuk](https://twitter.com/bbcsuk)
Chaddock Lane, Worsley, Manchester, M28 1XW

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From: Roberts, Chris (03)
Sent: 04 February 2020 10:35
To: Philip Caldwell <Philip.Caldwell@denbighshire.gov.uk>
Cc: Goliath, Deter (02) <Deter.Goliath@balfourbeatty.com>
Subject: RE: East Rhyl Coastal Defences - Section 61

OK Thanks.

We will have a Public Liaison Officer who will keep the local population informed of ongoing works, and who will act as a point of contact for the public.

Regards,

Chris Roberts

Senior Engineer | Regional | Balfour Beatty Construction Services UK
t: +44 (0)16 1-741-6137 | **m:** +44 (0)7521195712 | **e:** chris.roberts2@balfourbeatty.com
balfourbeatty.co.uk | follow us [@bbcsuk](https://twitter.com/bbcsuk)
Chaddock Lane, Worsley, Manchester, M28 1XW

From: Philip Caldwell <Philip.Caldwell@denbighshire.gov.uk>
Sent: 04 February 2020 10:29
To: Roberts, Chris (03) <Chris.Roberts2@balfourbeatty.com>
Subject: RE: East Rhyl Coastal Defences - Section 61

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Hi Chris.

Thank you for the sending the info through. It all looks satisfactory.

I would like to point out that in this area we do complaints when driven piling occurring, the ground transmits the vibrations very well. When you start piling a letter drop to the houses within 100meters of the piling location so they are aware of the potential impacts.

Kind Regards
 Phil

~~~~~  
 Philip Caldwell  
 Uwch Swyddog Technegol (Iechyd Amgylchedd)/Senior Technical Officer (Environmental Health)  
 Gwasanaethau Cynllunio a Gwarchod y Cyhoedd / Planning and Public Protection Services  
 Cyngor Sir Ddinbych, Blwch Post 62, Rhuthun, Sir Ddinbych, LL15 9AZ/ Denbighshire County Council, PO Box 62,  
 Ruthin, Denbighshire, LL15 9AZ  
 Ffon / Telephone: 01824 706056  
 Ffacs / Fax: 01824 706051  
 Ebost / email: [philip.caldwell@sirddinbych.gov.uk](mailto:philip.caldwell@sirddinbych.gov.uk) / [philip.caldwell@denbighshire.gov.uk](mailto:philip.caldwell@denbighshire.gov.uk)  
 Gwefan / Website: [www.sirddinbych.gov.uk](http://www.sirddinbych.gov.uk) / <http://www.denbighshire.gov.uk/>

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**From:** Roberts, Chris (03) [<mailto:Chris.Roberts2@balfourbeatty.com>]  
**Sent:** 31 January 2020 13:57  
**To:** Philip Caldwell <[Philip.Caldwell@denbighshire.gov.uk](mailto:Philip.Caldwell@denbighshire.gov.uk)>  
**Subject:** East Rhyl Coastal Defences - Section 61

Hello Phil,

Is there any feedback on the Section 61 application?

Thanks,

**Chris Roberts**

**Senior Engineer** | Regional | Balfour Beatty Construction Services UK  
**t:** +44 (0)16 1-741-6137 | **m:** +44 (0)7521195712 | **e:** [chris.roberts2@balfourbeatty.com](mailto:chris.roberts2@balfourbeatty.com)  
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# Appendix 3

| Appendix 3- Proposed plant in use                    |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
|------------------------------------------------------|----------------------------|----------------------------|------------------------------------------|---------------------------------------|---------------------------------------------------|---------------------------------------------------------|----------------------------------------------|-----------------|----------------------------|-------------------|-----------------------------|------------------------------|-------------------------|---------------------------------------|--------------------|----------------------------------|
|                                                      | Construction Activity      |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
|                                                      | Mobilisation of compound 1 | Mobilisation of compound 2 | Rock stockpiling and storage in compound | Rock stockpiling and storage on beach | Construction of                                   |                                                         |                                              |                 | Removal of existing groyne | Concrete buttress | Rock revetment construction | Removal of existing sea wall | Pre-cast wall placement | Construction of stepped access points | Concrete wall base | Core holes to existing promenade |
|                                                      |                            |                            |                                          |                                       | 1. Access from marine drive in materials compound | 2. Access ramp from materials compound to top promenade | 3. Access ramp from top promenade onto beach | Beach haul road |                            |                   |                             |                              |                         |                                       |                    |                                  |
| <b>Backhoe/digger loaders</b>                        |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 8t to 10t Digger loader                              |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       | 1                  | 1                                |
| <b>Wheel loaders</b>                                 |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 20t Wheel loader                                     |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| <b>Tracked excavators</b>                            |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 14t Racked excavator                                 |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 20t Tracked excavator                                | 1                          |                            |                                          |                                       | 1                                                 | 1                                                       | 1                                            |                 | 1                          |                   | 2                           |                              |                         | 2                                     |                    |                                  |
| 30t Tracked excavator                                | 1                          |                            | 1                                        | 1                                     |                                                   |                                                         |                                              |                 |                            | 1                 | 1                           |                              | 1                       |                                       |                    |                                  |
| 35t Tracked excavator                                |                            |                            |                                          | 1                                     |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 50t Tracked excavator                                |                            |                            | 1                                        | 1                                     |                                                   |                                                         |                                              |                 |                            |                   | 1                           |                              |                         |                                       |                    |                                  |
| <b>Wheeled Excavators</b>                            |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 14t Wheeled excavator                                |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 17t Wheeled excavator                                |                            | 1                          |                                          |                                       | 1                                                 | 1                                                       | 1                                            |                 |                            | 1                 |                             | 1                            |                         |                                       | 1                  |                                  |
| <b>Excavator attachments</b>                         |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| Excavator mounted vibratory hammer- for sheet piling |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         | 1                                     |                    |                                  |
| Rock wheel (fitment up to 22t excavator)             |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| Rock grab (suited to 6t rock armour)                 |                            |                            | 1                                        | 2                                     |                                                   |                                                         |                                              |                 |                            |                   | 1                           |                              |                         |                                       |                    |                                  |
| Selector grab                                        |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 | 1                          |                   |                             | 1                            |                         |                                       |                    |                                  |
| Hydraulic hammer (pecker)                            |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             | 1                            |                         |                                       |                    |                                  |
| Plate compactor                                      |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| Muncher                                              |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             | 1                            |                         |                                       |                    |                                  |
| <b>Bulldozers</b>                                    |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| Bulldozer 16 to 18t (D61 type)                       |                            |                            |                                          |                                       |                                                   |                                                         |                                              | 1               |                            |                   | 1                           |                              |                         |                                       |                    |                                  |
| <b>Site dumpers</b>                                  |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 3t Site dumper                                       |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 6t Site dumper                                       | 1                          | 1                          |                                          |                                       | 1                                                 | 1                                                       | 1                                            |                 | 1                          | 1                 | 1                           | 1                            |                         | 1                                     |                    | 1                                |
| <b>Dump trucks</b>                                   |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 28t Articulated dump truck                           |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 40t Articulated dump truck                           |                            |                            |                                          | 4                                     |                                                   |                                                         | 1                                            | 1               |                            |                   | 3                           |                              |                         |                                       |                    |                                  |
| <b>Telescopic handlers</b>                           |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 2.5t Telehandler                                     |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 4t Telehandler                                       |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| <b>Compaction equipment</b>                          |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| Double drum walk behind loader                       |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| 2t twin drum sit on roller                           |                            |                            |                                          |                                       | 1                                                 | 1                                                       |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |
| <b>Piling rigs</b>                                   |                            |                            |                                          |                                       |                                                   |                                                         |                                              |                 |                            |                   |                             |                              |                         |                                       |                    |                                  |



## Appendix 3

|                                                      |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------------------------|-------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Construction plant                                   | Telescopic leader rig (24 to 35m leader length)                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Crawler Cranes</b>                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 50t lattice boom crawler crane                                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 80t lattice boom crawler crane                                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 100t lattice boom crawler crane                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Mobile cranes</b>                                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 50t All terrain mobile crane                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Pumps</b>                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | Hydraulic submersible pump (trailer mounted)                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 | 1 | 2 | 1 |   |   |   |   |   |   |   |   |   |   |
|                                                      | Hydraulic submersible pump                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Concrete pumps</b>                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 30m concrete pump                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 1 |   | 1 | 1 |   |   |   |   |   |   |   |   |   |
|                                                      | 40m concrete pump                                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Lighting towers</b>                                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | VT2 lighting tower 7m                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 2 | 2 | 1 | 3 | 2 |   |   |   |   |   |   |   |   |   |
|                                                      | VT Hybrid LED lighting tower                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Tractors</b>                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 120 to 200HP Tractor                                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |   |   |   |   |
|                                                      | <b>Trailers</b>                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | > 10t carry capacity                                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |   |   |   |   |
|                                                      | <b>Track saws (complete with dust seppression)</b>                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | 1000 to 1.8m diamond blade track saw                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |
|                                                      | <b>Road Sweeper</b>                                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                                                      | <b>Trailer mounted water bowzers and dust seppression systems</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                                      | Water bowser                                                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   | 1 | 1 |   |   | 1 |   |   | 1 |   |   |   |   |   |   |
| Water bowser with dust supression (e.g. Mist Cannon) |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Fuel tanks</b>                                    |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Static fuel tank- red diesel                         |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mobile fuel tank- red diesel                         |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Concrete coring</b>                               |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Rig mounted diamond drill (Typical to Hilti DD120,   |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |
| <b>Small tools</b>                                   |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Concrete skip                                        |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | 1 |   | 1 |   | 1 |   | 1 |   |   |   |   |   |   |
| Electric concrete screed                             |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Petrol generator                                     |                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   | 1 |   |   | 1 |   |   |   |   |   |   |   |

## Roberts, Chris (03)

---

**From:** Roberts, Chris (03)  
**Sent:** 20 January 2020 10:06  
**To:** Manners, Graham  
**Subject:** FW: East Rhyl Coastal Defences - Mostyn Dock Route  
**Attachments:** Route from Mostyn Docks.pdf

Graham,

FYI

Proposed route from Mostyn Dock to Rhyl, and comment from Denbighshire Highways.

Regards,

**Chris Roberts**

**Senior Engineer** | Regional | Balfour Beatty Construction Services UK  
**t:** +44 (0)16 1-741-6137 | **m:** +44 (0)7521195712 | **e:** [chris.roberts2@balfourbeatty.com](mailto:chris.roberts2@balfourbeatty.com)  
[balfourbeatty.co.uk](http://balfourbeatty.co.uk) | follow us [@bbcsuk](https://www.facebook.com/bbcsuk)  
Chaddock Lane, Worsley, Manchester, M28 1XW

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---

**From:** Joseph Baker <joseph.baker@denbighshire.gov.uk>  
**Sent:** 20 January 2020 09:51  
**To:** Roberts, Chris (03) <Chris.Roberts2@balfourbeatty.com>  
**Cc:** Goliath, Deter (02) <Deter.Goliath@balfourbeatty.com>  
**Subject:** RE: East Rhyl Coastal Defences - Mostyn Dock Route

**CAUTION:** This email originated from outside of **Balfour Beatty**. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Thanks Chris

The proposed route looks fine.

Regards

Joe Baker  
Peiriannydd Rheoli Datblygiad Priffyrdd / Highways Development Control Engineer  
Gwasanaeth Cynllunio a Gwarchod y Cyhoedd / Planning and Public Protection  
Symudol / Mobile: 07827984611  
E-bost: [joseph.baker@sirddinbych.gov.uk](mailto:joseph.baker@sirddinbych.gov.uk) / E-mail: [joseph.baker@denbighshire.gov.uk](mailto:joseph.baker@denbighshire.gov.uk)

Gwefan: <http://www.sirddinbych.gov.uk> / Website: <http://www.denbighshire.gov.uk>

Rydym yn croesawu gohebiaeth yn Gymraeg. Ni fydd unrhyw oedi wrth ymateb i ohebiaeth a dderbyniwyd yn Gymraeg .

We welcome correspondence in Welsh. There will be no delay in responding to correspondence received in Welsh.

---

**From:** Roberts, Chris (03) <[Chris.Roberts2@balfourbeatty.com](mailto:Chris.Roberts2@balfourbeatty.com)>

**Sent:** 20 January 2020 09:47

**To:** Joseph Baker <[joseph.baker@denbighshire.gov.uk](mailto:joseph.baker@denbighshire.gov.uk)>

**Cc:** Goliath, Deter (02) <[Deter.Goliath@balfourbeatty.com](mailto:Deter.Goliath@balfourbeatty.com)>

**Subject:** East Rhyl Coastal Defences - Mostyn Dock Route

Joe,

As we discussed earlier please find attached the proposed route from Mostyn Dock to Marine Drive Rhyl for delivery of Rock Armour.

There is approximately 99600t of rock to be delivered over 6 months which averages about 38 loads per day (Monday to Friday).

What is your view of this route?

Regards,

**Chris Roberts**

**Senior Engineer** | Regional | Balfour Beatty Construction Services UK

**t:** +44 (0)16 1-741-6137 | **m:** +44 (0)7521195712 | **e:** [chris.roberts2@balfourbeatty.com](mailto:chris.roberts2@balfourbeatty.com)

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<http://twitter.com/DenbighshireCC>

Ymwelwch a ni ar-lein ar <http://www.sirddinbych.gov.uk> - Visit us online at

<http://www.denbighshire.gov.uk>

Mae'r wybodaeth a gynhwysir yn yr e-bost hwn ac unrhyw ffeiliau a drosglwyddir gydag o wedi eu bwriadu yn unig ar gyfer pwy bynnag y cyfeirir ef ato neu atynt. Os ydych wedi derbyn yr e-bost hwn drwy

gamgymeriad, hysbyswch yr anfonwr ar unwaith os gwelwch yn dda. Mae cynnwys yr e-bost yn cynrychioli barn yr unigolyn(ion) a enwir uchod ac nid yw o angenrheidrwydd yn cynrychioli barn Cyngor Sir Ddinbych. Serch hynny, fel Corff Cyhoeddus, efallai y bydd angen i Gyngor Sir Ddinbych ddatgelu'r e-bost hwn [neu unrhyw ymateb iddo] dan ddarpariaethau deddfwriaethol.

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Eich cyf / Your ref:

Ein cyf / Our ref

Dyddiad / Date

Rhif union / Direct dial

H/DC/GMM/VC184

2<sup>nd</sup> February 2020

01824 706840



FAO: Chris Roberts

Dear Sir,

**Highways Act 1980 – Section 184**  
**Vehicular Crossing over Footway/Verge**  
**At: East Parade, Rhyl.**

Please find enclosed consent form for a vehicular crossing at the above location.

The enclosed "Part N" notice should be completed and returned to Highways Development Control at least 7 days prior to works commencing.

***Can you advise your contractor to contact Highways Development Control via email [joseph.baker@denbighshire.gov.uk](mailto:joseph.baker@denbighshire.gov.uk) when the works start to arrange an appropriate inspection.***

The enclosed "Part R1" form should be completed and returned to Highways Development Control on completion of the works.

At this juncture I would remind you of your obligations under Condition 3 of the consent to approach any Statutory Undertakers affected by your works.

***Access to be constructed in accordance with the approved plan CRMM0431-BBR-00-XX-DR-W-104-C2.***

Yours faithfully

Joe Baker

For Head of Planning, Public Protection and Countryside Services

**Joe Baker**

**Rheoli Datblygiad Priffyrdd**  
**Highways Development Control**

Cyngor Sir Ddinbych  
 PO Box 62  
 Rhuthun  
 LL15 9AZ

Ffôn: 01824 706889

01824 706882

E-bost: [traffic@sirddinbych.gov.uk](mailto:traffic@sirddinbych.gov.uk)Gwefan: [www.sirddinbych.gov.uk](http://www.sirddinbych.gov.uk)

Denbighshire County Council  
 PO Box 62  
 Ruthin  
 LL15 9AZ

Phone: 01824 706889

01824 706882

E-mail: [traffic@denbighshire.gov.uk](mailto:traffic@denbighshire.gov.uk)Website: [www.denbighshire.gov.uk](http://www.denbighshire.gov.uk)

## **HIGHWAYS ACT 1980 SECTION 184:**

### **Consent to reconstruct the footway for the passage and re-passage of vehicular traffic**

The Denbighshire County Council, as Highways Authority, hereby gives notice that consent is granted in accordance with Section 184(9) of the Highways Act 1980

To: Chris Roberts

To: Form a temporary site access

at: East Parade, Rhyl

in the position shown on the plan CRMM0431-BBR-00-XX-DR-W-104-C2 which has been approved by the Highway Authority.

### **Such consent is subject to the conditions set out below:-**

- 1** The works must be carried out strictly in accordance with the plans attached to this consent as approved by the local authority.
- 2** All the works to which the consent refers must be completed to base course level in the carriageway and wearing course in the footway areas within the street, to the satisfaction of the Highway Authority, prior to any works being carried out in the development site.
- 3** For the purpose of Sections 86 of the New Roads and Street Works Act 1991, works carried out in exercise of the powers conferred by Section 184 of the Highways Act 1980 are regarded as "major highway works". Thus the applicant must notify the Statutory Undertakers of the proposed works in accordance with Sections 84 and 85 of the New Road and Street Works Act 1991 and to comply with any conditions or requirements imposed by them. The procedures are prescribed in the 'Highway Authority and Utilities Committee' (HAUC): Code of Practice for Diversionary Works which is available from HMSO book shops. It should be noted that these procedures can take up to a maximum of 12 weeks depending on the complexity of the works envisaged.
- 4** Notice must be given of the intended starting date to the Street Works and Safety Manager using the enclosed FORM N notice. Where the work is to take place in a Street subject to 'special conditions', the applicant must comply with the directions given by the Highway Authority (Note: the Highway Authority will advise on 'Street Status').
- 5** In accordance with the Traffic Regulations and General Directions, 1994, the use of Portable Traffic Signals must be notified to the Highway Authority at least 14 days prior to commencement of works but one month if the site is on a highway designated as "Traffic Sensitive".

- 6** Where portable traffic signal control is to be used at a site which contains a junction, it is a statutory requirement for the Highway Authority to issue written site approval for the operations of those signals. A minimum time of 14 days should be allowed for County Roads but one month for Trunk Roads.
- 7** Where it is proposed to use Portable Traffic Signals as described in 5 and 6 above, the applicant must submit the enclosed PORTABLE TRAFFIC SIGNALS FORM as prescribed.
- 8** The works shall be carried out under the supervision of a named 'Certified Supervisor' as required by the New Roads and Streets Works Act 1991. Documentary evidence of certification will be required.
- 9** The applicant will be required to comply fully with the requirements of Chapter 8 of the Traffic Signs Manual and the Code of Practice "Safety of Street Works and Road Works" as regards the signing, lighting of materials and/or excavation on site (Note: The afore-mentioned Code of Practice is issued under the New Roads and street Works Act 1991.
- 10** The attention of the application is drawn to the requirements of Health and Safety at Work etc., Act 1974. All excavation work carried out under this consent must comply with the safe digging practices detailed in the Health and Safety Executive's Guidance Note "HS(G)47 Avoiding danger from underground services". A copy of the applicant's intended Contractors written Safety Policy and statement shall be submitted on request.
- 11** The applicant will be responsible for ascertaining and locating any apparatus prior to carrying out any excavations on site. Any information given by the Highway Authority is given by way of general guidance only on the understanding that it is based on the best information available and the applicant should not rely upon its accuracy where excavation or other works are to be made in the vicinity of the apparatus in the Street.
- 12** The applicant shall take full responsibility for the setting out of the works and for the accuracy, stability and the safety of his operation.
- 13** The applicant will indemnify and keep indemnified the Council against all distress, actions, proceedings, claims, demands, costs, damages and expenses which may be levied brought or made against it by reasons of any matter which is carried out under this consent. Such indemnity to be for a minimum of £5 million for any new claim. The applicant shall produce a valid Insurance Certificate with his application and retain such for inspection by the Highway Authority at any time.
- 14** The applicant must ensure that surplus material from the site for which the consent relates, is so deposited at sited licensed under current

waste disposal legislation and subject to the terms and conditions imposed in that licensing. The applicant is to produce a list of licensed sites where he intends to deposit waste material, copies of transfer tickets, etc., if so required by the Highway at any time.

- 15 Mud and other material must not be allowed to spread from the working site onto the road or footway. Any contamination must be cleared immediately. Failure to comply with any notice served may result in the Highway Authority carrying out the necessary remedial works and the costs incurred charged to the applicant.
- 16 No material should be placed so as to block to the flow of water to a gully or drainage channel or obstruct access to any manhole or the apparatus of any Statutory Undertaker. Any material which enters the highway drainage system must be cleared within 24 hours or otherwise the Highway Authority will arrange for any remedial works to be undertaken and the costs incurred charged to the applicant.
- 17 The applicant is to allow the Highway Authority at all times the opportunity to inspect, make revision and/or alter the method of operation where such is deemed to adversely affect the highway.
- 18 The consent does not dispense with the requirement for the applicant to obtain any other consent, license or permission which may be required.
- 19 The applicant must complete and submit FORM R1 to the Street Works and Safety Manager within seven days of completion of the works and clearing the site.
- 20 The applicant is to maintain, at his own expense the whole completed surfaced area of the works for a minimum of 2 years to the satisfaction of the Highway Authority This two year period to commence as stipulated on FORM R1.

Dated the **05/02/2020**

Signed on behalf  
of the Authority.....Joe Baker.....

p.p. **Head of Planning, Public Protection and Countryside Services**

All correspondence concerning this consent should be addressed to:-

**FAO JOE BAKER  
HIGHWAYS DEVELOPMENT CONTROL  
DENBIGHSHIRE COUNTY COUNCIL  
DENBIGH  
LL163RJ**



### Highways Development Control

Denbighshire County Council, PO Box 62, Ruthin, LL15 9AZ

01824 706889 / 01824 706882

[traffic@denbighshire.gov.uk](mailto:traffic@denbighshire.gov.uk)

### PART N FORM

### New Roads and Street Works Act 1991, Notice of Works Including Responses

|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| To: Highways Development Control<br>Denbighshire County Council, PO BOX 62<br>Ruthin, LL15 9AZ                                                                                                                                                                                    | From: _____<br>_____<br>_____                                                         |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Works Reference</b>                                                                                                                                                                                                                                                            |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Works Reference: _____                                                                                                                                                                                                                                                            |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Streetworks Reference: _____                                                                                                                                                                                                                                                      |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Notice Period</b>                                                                                                                                                                                                                                                              |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Initial Notice <input type="checkbox"/> Confirmation Notice <input type="checkbox"/> Cancellation <input type="checkbox"/> Start Notice <input type="checkbox"/><br>Stop Notice <input type="checkbox"/> Revised Duration <input type="checkbox"/> Other <input type="checkbox"/> |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Works Category</b>                                                                                                                                                                                                                                                             |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Emergency/Urgent <input type="checkbox"/> Minor <input type="checkbox"/> Standard <input type="checkbox"/> Major <input type="checkbox"/><br><i>(2hrs after)</i> <i>(3 days)</i> <i>(4-10 days)</i> <i>(11+ days or a Road Closure)</i>                                           |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Remedial Reinstatement:    Dangerous <input type="checkbox"/> Not Dangerous <input type="checkbox"/>                                                                                                                                                                              |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Timings</b>                                                                                                                                                                                                                                                                    |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Date of Issue<br>Expected Start Date<br>Actual Start Date<br>Actual Stop Date                                                                                                                                                                                                     | Time of Issue (immediate only)<br>Expected Completion Date<br>Revised Completion Date |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Location of Works</b>                                                                                                                                                                                                                                                          |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Number/Name: _____                                                                                                                                                                                                                                                                |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Street, Town: _____                                                                                                                                                                                                                                                               |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| Post Code: _____                                                                                                                                                                                                                                                                  |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| USRN: _____ Co-ordinates: _____                                                                                                                                                                                                                                                   |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Description on Works</b>                                                                                                                                                                                                                                                       |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| To include, construction methods, traffic management and any special engineering difficulties                                                                                                                                                                                     |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| _____<br>_____<br>_____                                                                                                                                                                                                                                                           |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Street Authority Comments</b>                                                                                                                                                                                                                                                  |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |
| _____<br>_____<br>_____                                                                                                                                                                                                                                                           |                                                                                       |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  |  |  |  |

### Highways Development Control

Denbighshire County Council, PO Box 62, Ruthin, LL15 9AZ

01824 706889 / 01824 706882

[traffic@denbighshire.gov.uk](mailto:traffic@denbighshire.gov.uk)

### PART R1 FORM

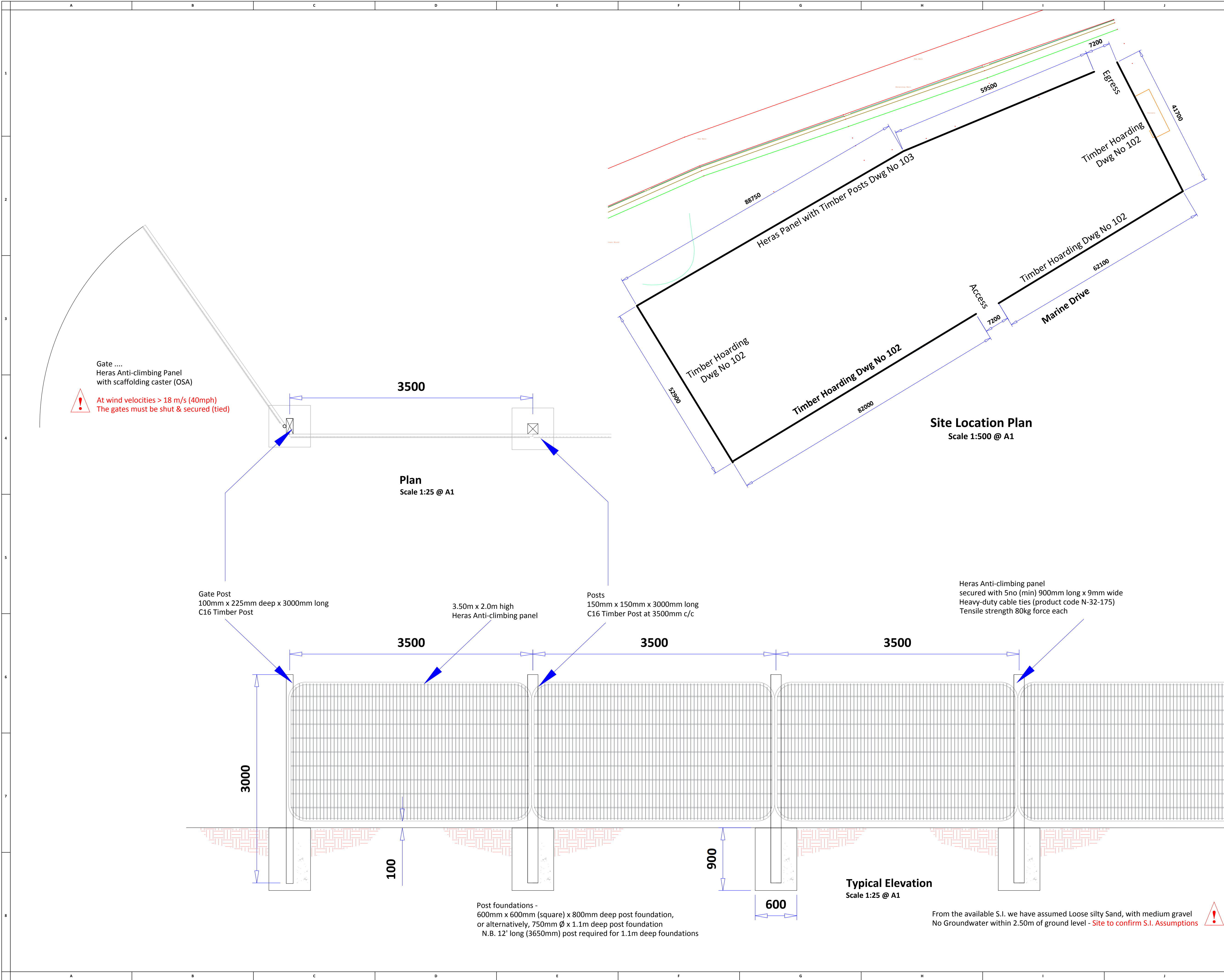
### New Roads and Street Works Act 1991, Notice of Works Including Responses

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|-------------------------------------|--------------------------------------|---|--------------|---|---|----------------|---|
| To: Highways Development Control<br>Denbighshire County Council<br>PO Box 62<br>Ruthin<br>LL15 9AZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | From: _____<br>_____<br>_____<br>_____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Works Reference</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Works Reference: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Streetworks Reference: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Location of Works</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Number/Name: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Street, Town: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Post Code: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| USRN: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Co-ordinates: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Description on Works</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| To include, construction methods, traffic management and any special engineering difficulties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Timing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Start Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Actual End Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black;"></div> </div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black;"></div> </div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> |            |           |                                     |                                      |   |              |   |   |                |   |
| Are all works on this notice Complete?    Yes <input type="checkbox"/> No <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Barholes / Core Drills</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| No. of barholes / core drills plugged? _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Reinstatement Closing Details</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| <b>Location of Reinstatement    Closing Dimensions    Excavation Details    Works Interim or Permanent Date</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Location                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Length (M) | Width (M) | Carriageway,<br>Footway or<br>Verge | Excavation<br>depth over 1.5M<br>Y/N | D | Interim<br>M | Y | D | Permanent<br>M | Y |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |                                     |                                      |   |              |   |   |                |   |









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Location Plan

Health, Safety and Environmental Risks

| Risk Assessment Number | BY SITE |
|------------------------|---------|
| Risk No                | Risk    |
| XX                     | XX      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |
| --                     | --      |

ZEROHARM

MAKE SAFETY PERSONAL

SUSTAINABILITY

a collective responsibility

Notes

Notes: -

Read in conjunction with drawing No. CRMM0431-BBR-00-XX-DR-W-102

Read in conjunction with drawing No. CRMM0431-BBR-00-XX-DR-W-104

Design Life < 2 Years

The hoarding has been designed for a maximum velocity of 35.5m/second, approx. 80mph

If wind speeds in excess of 75mph are forecast, please contact TWD Dept. ASAP

Document History

| Revision | Description  | Date     | Des | Chk |
|----------|--------------|----------|-----|-----|
| P1       | Preliminary  | 20/11/19 | KM  | --  |
| P2       | Preliminary  | 26/11/19 | --  | --  |
| C1       | Construction | 21/02/20 | KM  | Rr  |
| --       | --           | --       | --  | --  |
| --       | --           | --       | --  | --  |
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Designer

Balfour Beatty

"Driving Innovative Temporary Works Design and Engineering Excellence"

Client

CYNGOR

Sir Ddinbych

Denbighshire

COUNTY COUNCIL

Page Size

Scale

Designer

Checker

A1

As Shown

K Myers

R Cherry

Project

East Rhyl Coastal Defence Scheme

Drawing Title

Heras Hoarding Detail

Status

Construction

Client Drawing Number

Revision

Drawing Number

Revision

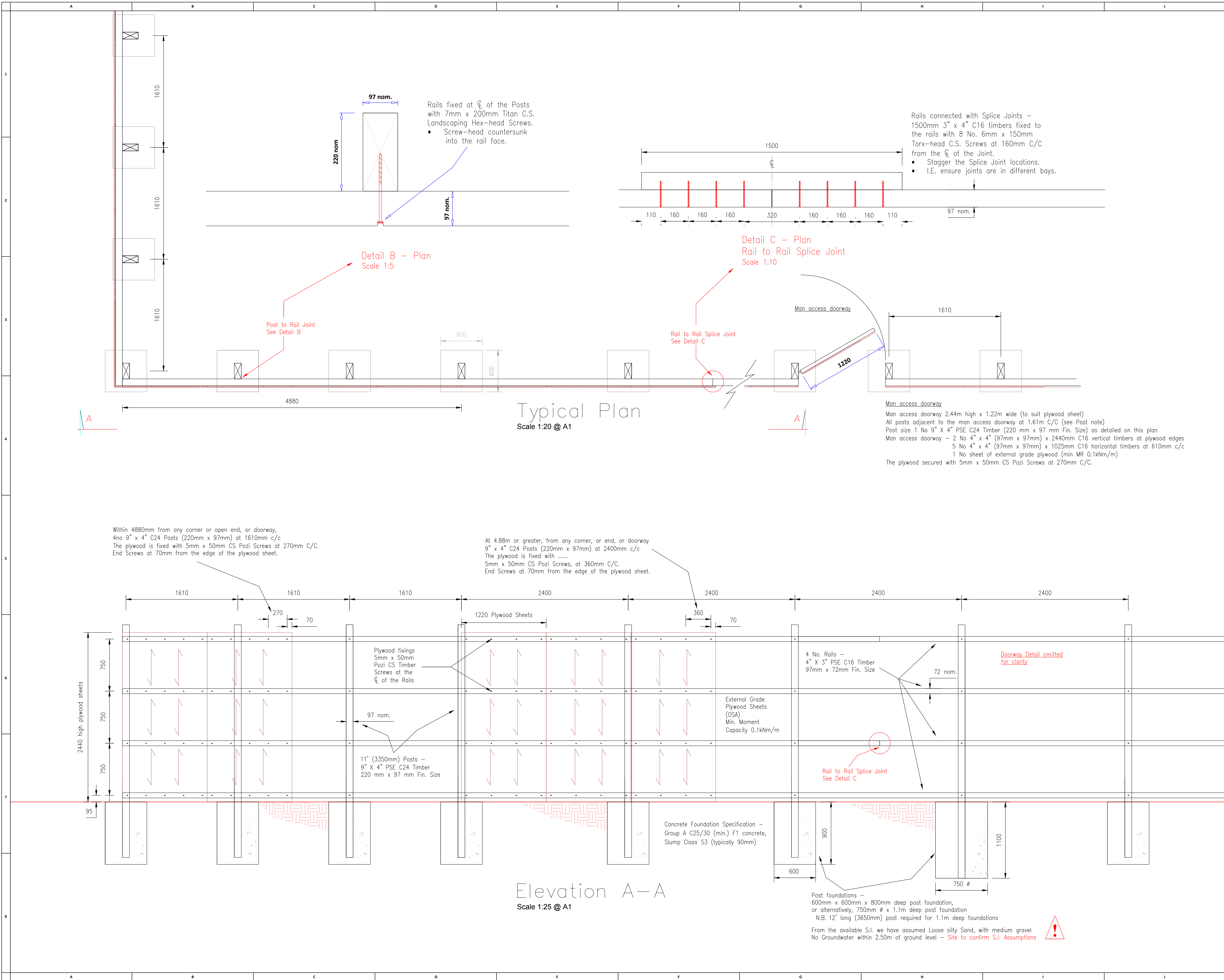
CRMM0431-BBR-00-XX-DR-W-103

C1

From the available S.I. we have assumed Loose silty Sand, with medium gravel No Groundwater within 2.50m of ground level - Site to confirm S.I. Assumptions

Page 60 of 101





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Location Plan

Health, Safety and Environmental Risks

| Risk Assessment Number | BY SITE |
|------------------------|---------|
| Risk No                | Risk    |
| XX                     | XX      |
| --                     | --      |
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Notes:-

Read in conjunction with drawing No. CRMM0431-BBR-00-XX-DR-W-103 & 104

Design Life < 2-years

The hoarding has been designed for a maximum velocity of 35.5m/second, approx. 80mph

If wind speeds in excess of 75mph are forecast, please contact TWD Dept. ASAP

Document History

| Revision | Description  | Date     | Des | Chk |
|----------|--------------|----------|-----|-----|
| P1       | Preliminary  | 20/11/19 | KM  | --  |
| P2       | Preliminary  | 26/11/19 | --  | --  |
| C1       | Construction | 21/02/20 | KM  | BC  |
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Designer

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Client

| Paper Size | Scale    | Designer | Checker  |
|------------|----------|----------|----------|
| A1         | As Shown | K Myers  | R Cherry |

Project

East Rhyl Coastal Defence Scheme

Drawing Title

Timber Hoarding

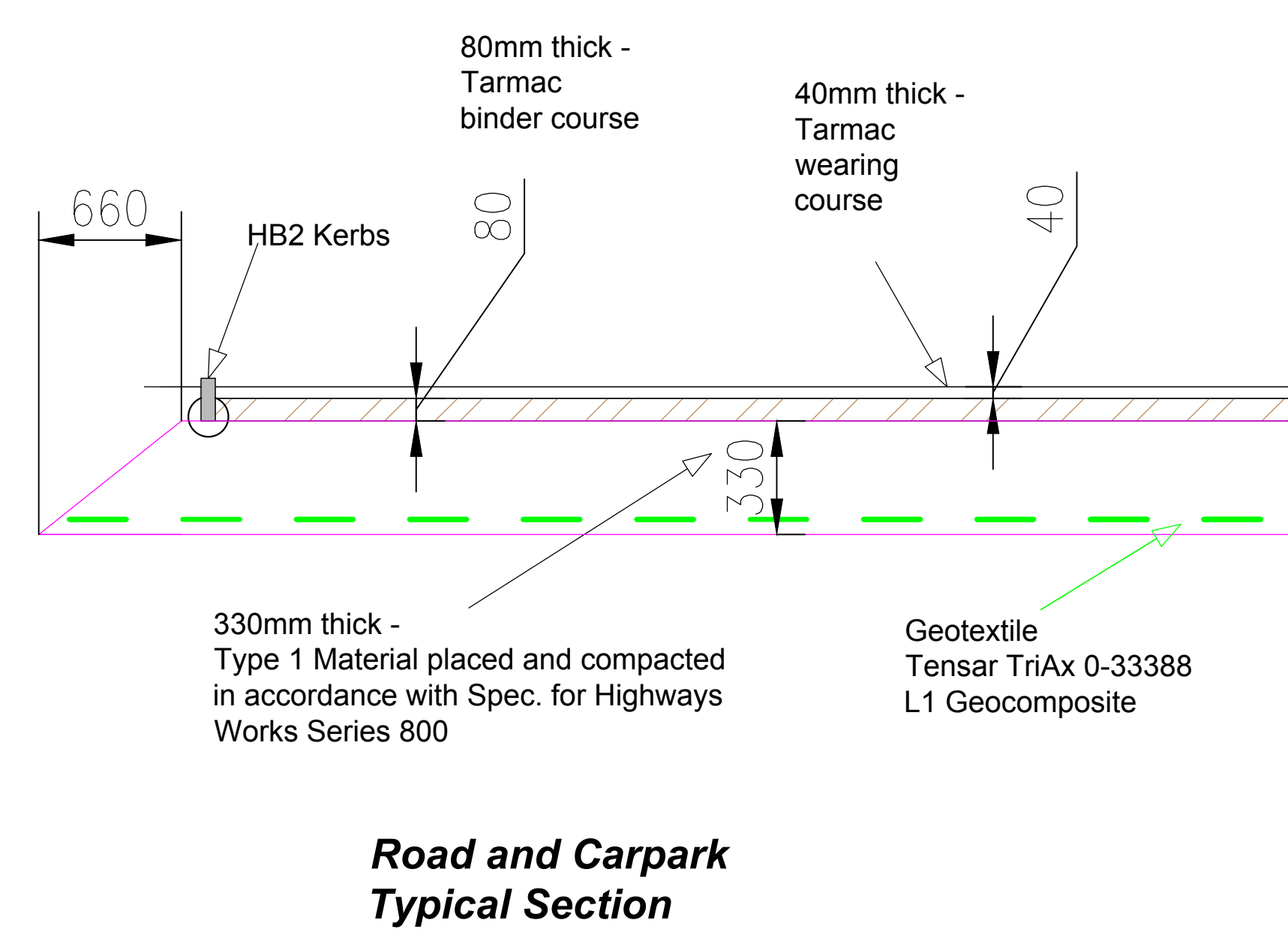
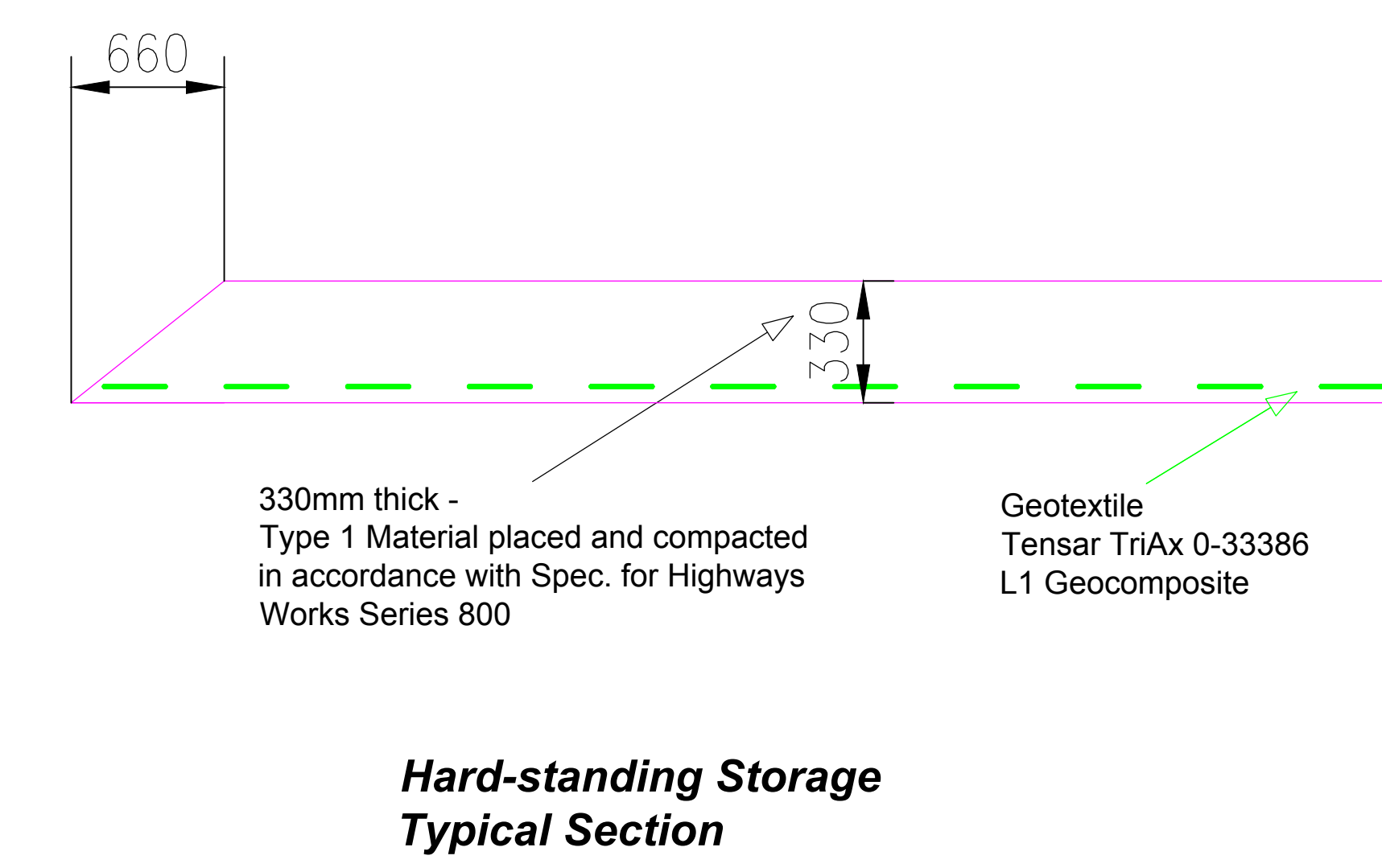
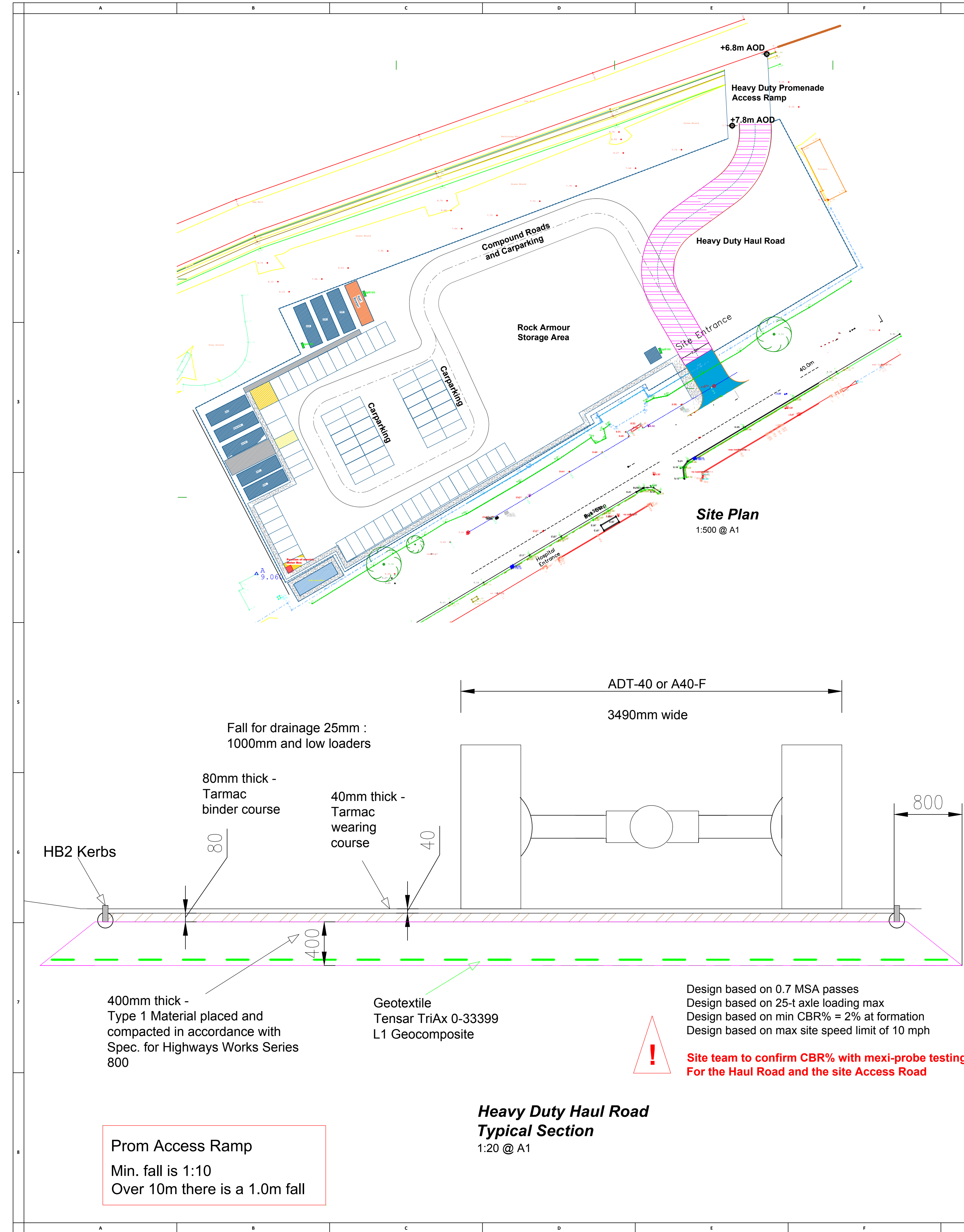
Status

CONSTRUCTION

| Client Drawing Number | Revision |
|-----------------------|----------|
|                       |          |

| Drawing Number              | Revision |
|-----------------------------|----------|
| CRMM0431-BBR-00-XX-DR-W-102 | C1       |





**Geotechnical Testing**

The design CBR% have been derived from the available window sample logs.

The site team should establish the average CBR% of the formation strata, for all three designs.

If the recorded average CBR is 3% the depth of the Type 1 material can be reduced to 330mm

We estimate 500 to 600 tests should be conducted to establish the average CBR% beneath the heavy duty haul road

The TW Design Dept. has Mexi-probe, and if we have spare capacity at the time, we are willing to undertake testing for the site team.  
OR .... Train the site team to undertake the testing themselves

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Location Plan

Health, Safety and Environmental Risks

| Risk Assessment Number | BY SITE |
|------------------------|---------|
| Risk No                | Risk    |
| XX                     | XX      |
| --                     | --      |
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Notes

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Document History

| Revision | Description  | Date     | Des | Chk |
|----------|--------------|----------|-----|-----|
| --       | --           | --       | --  | --  |
| --       | --           | --       | --  | --  |
| C1       | Construction | 21/12/18 | KM  | --  |
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Project

East Rhyl Coastal Defence Scheme

Drawing Title

Marine Road Site Compound

Status

Construction

Client Drawing Number

Revision

--

Drawing Number

Revision

CRMCB0431-BBR-00-XX-DR-W-113

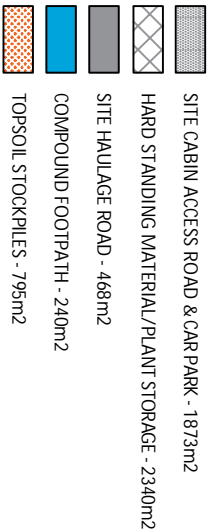
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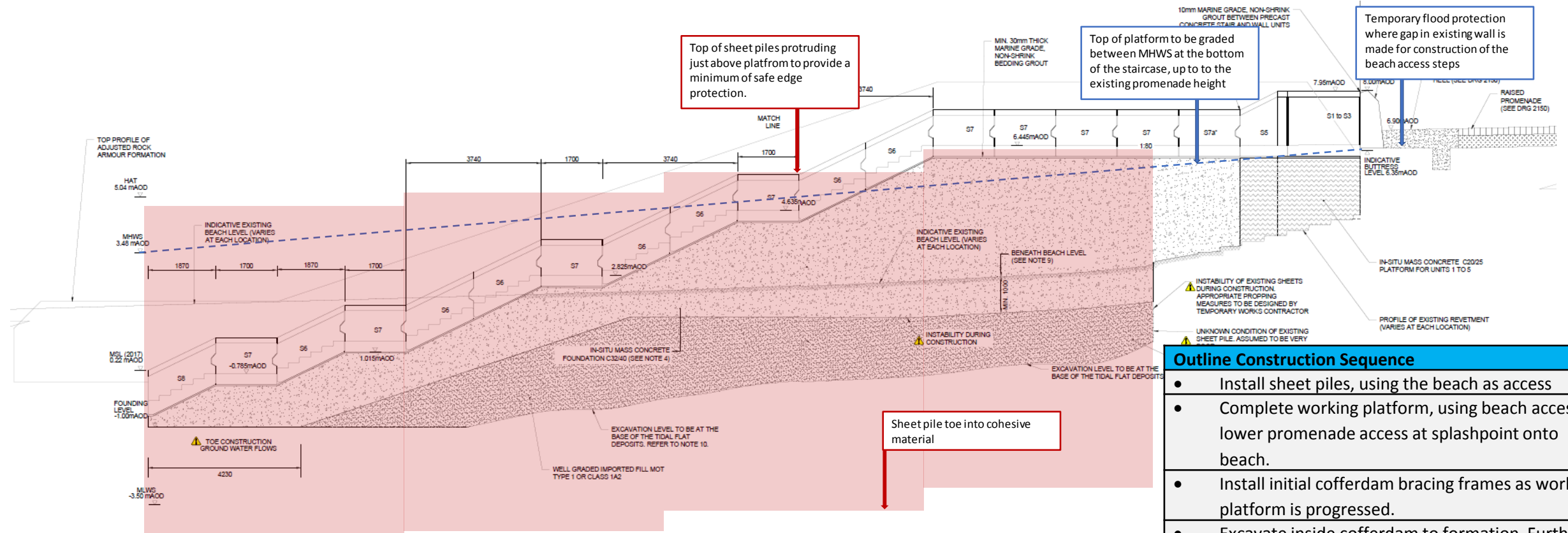
Scale 1:1

Scale 1:1

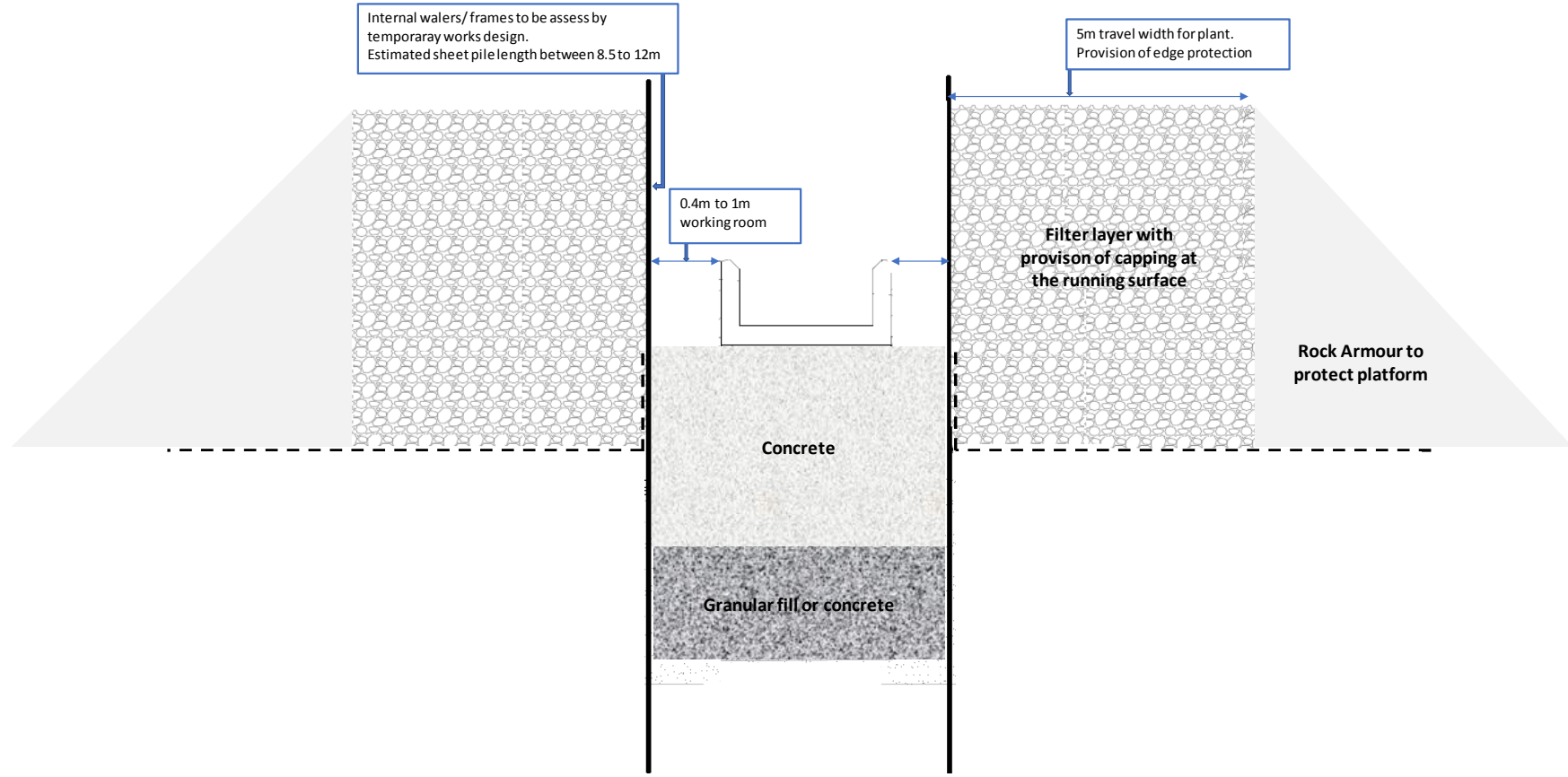








| Outline Construction Sequence |                                                                                                                                                                                |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| •                             | Install sheet piles, using the beach as access                                                                                                                                 |
| •                             | Complete working platform, using beach access via lower promenade access at splashpoint onto beach.                                                                            |
| •                             | Install initial cofferdam bracing frames as working platform is progressed.                                                                                                    |
| •                             | Excavate inside cofferdam to formation. Further adjustment and installation to cofferdam bracing to continue as excavation progress.                                           |
| •                             | Once formation level has been reached inside cofferdam; place 200mm-300mm concrete along formation profile.                                                                    |
| •                             | Adjust cofferdam bracing accordingly                                                                                                                                           |
| •                             | Pour mass fill concrete at regulated intervals and rise within cofferdam with formation to suit construction drawings                                                          |
| •                             | Install pre-cast access steps; these will be grouted in place and all joints finished off with marine gout.                                                                    |
| •                             | Remove sheet piles                                                                                                                                                             |
| •                             | Note: Where access discreet openings in existing wave wall is required; temporary flood protection will be put in place to maintain stand of protection as the works progress. |



\* do not scale

|                                                |             |               |
|------------------------------------------------|-------------|---------------|
| Title: Beach access steps construction outline |             |               |
| Sketch/Drawing No: DG26.03.2020.1 rev 1        |             |               |
| Contract: East Rhyl Coastal Defence            |             |               |
| <b>Balfour Beatty</b>                          | Contract No | CRMMS 020     |
|                                                | Date        | 02 April 2020 |
|                                                | Drawn By    | DG            |





**STEEL PILE INSTALLATIONS LTD**

---

**ABI TM 14/17 Telescopic Leader Rig**  
**details c/w MRZV 20S 1000Kn**  
**Vibratory Hammer**



## **ABI TM 14/17 TELESCOPIC LEADER RIG**



### **SPECIFICATIONS**

|                                                     |                                               |
|-----------------------------------------------------|-----------------------------------------------|
| <b>Rig Weight:</b>                                  | 56.7 Tonnes (with MRZV 20S Vibratory Hammer). |
| <b>Carrier:</b>                                     | SR35T-C.                                      |
| <b>Width of Tracks (Retracted):</b>                 | 3.30 Metres (Transport Mode).                 |
| <b>Width of Tracks (Extended)</b>                   | 4.20 Metres.                                  |
| <b>Transport Height (from underside of tracks):</b> | 3.40 Metres.                                  |
| <b>Length of Tracks:</b>                            | 5.10 Metres.                                  |
| <b>Tail Swing:</b>                                  | 3.71 Metres.                                  |

### **WORKING LIMITS**

|                                                                             |              |
|-----------------------------------------------------------------------------|--------------|
| <b>Maximum Pile Length (with MRZ 20S Vibratory Hammer):</b>                 | 17.3 Metres. |
| <b>Maximum Auger Length (with MDBA 3000 Auger Drive attachment):</b>        | 17.2 Metres. |
| <b>Maximum Driver Pile Length (with HPH 2400 Impact Hammer attachment):</b> | 16.0 Metres. |
| <b>Maximum Winch Capacity:</b>                                              | 5.0 Tonnes.  |
| <b>Maximum Pile Weight (on single pitching chain):</b>                      | 3.2 Tonnes   |

### **OPTIONAL ATTACHMENTS**

- ◆ HPH 2400 2.0 Tonne Hydraulic Impact Hammer. (5.9 Tonnes).
- ◆ MDBA 3000 3.0 Tonnes/Metre Auger Drive (2.1 Tonnes).
- ◆ MDBA 6000 6.0 Tonnes/Metre Auger Drive (2.0 Tonnes).

### **SUITABLE APPLICATIONS**

- ◆ Driving/Extracting Sheet Piles up to 17m in length (as singles or in pairs).
- ◆ Pre-Augering.
- ◆ Impact Driving.
- ◆ Driving Steel Bearing/Tubular Piles/H Piles.

**FOR FURTHER INFORMATION OR TO HIRE ANY OF THIS EQUIPMENT CALL  
0845 450 7475**

## Telescopic leader TM







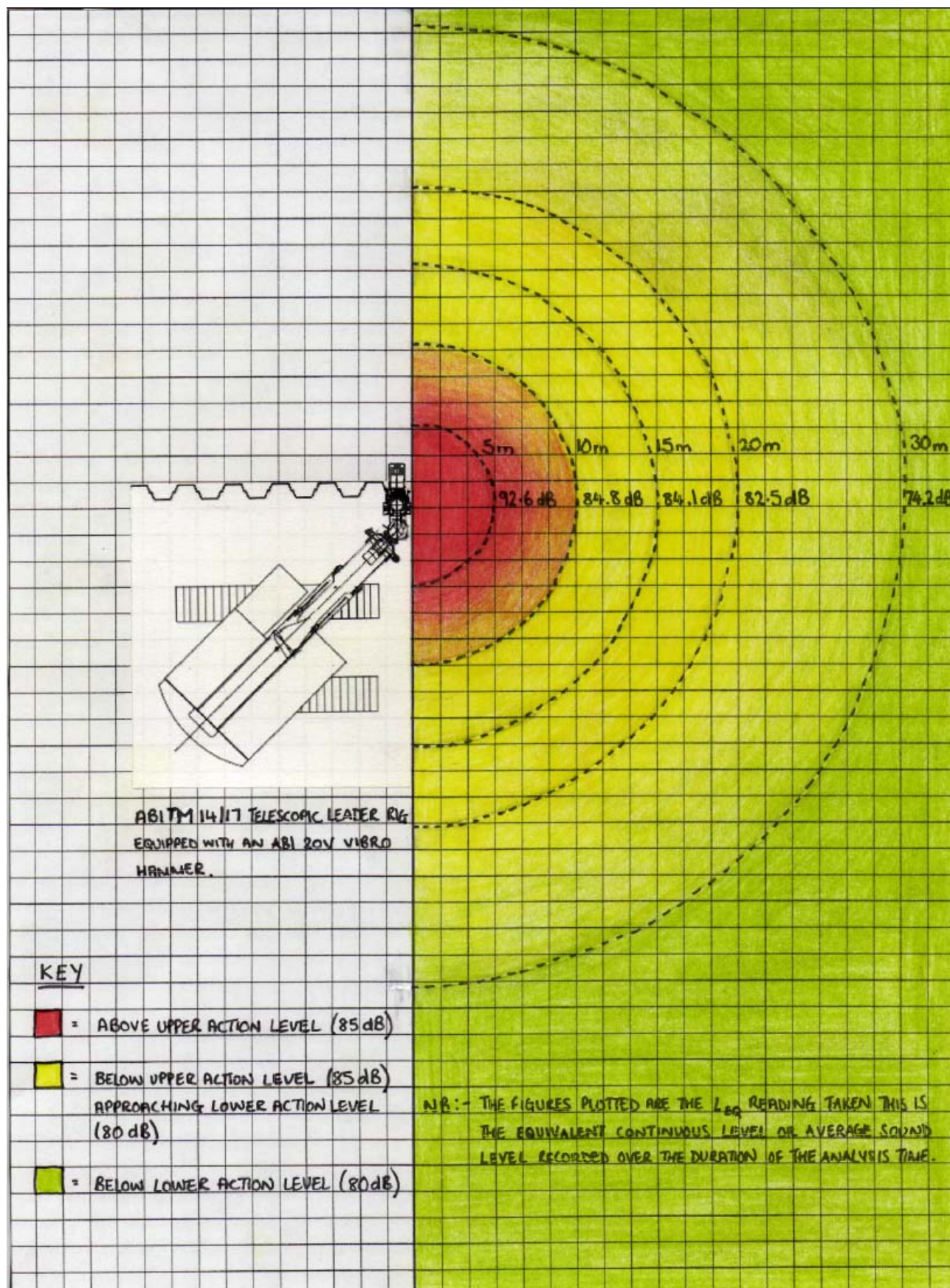
Steel Pile Installations Ltd  
Bessemer Suite, Ironworks House, Warton Road, Carnforth, LA5 9EX

Tel: 0845 450 7475

Fax: 0845 450 7476



Figure 4 - Diagrammatical Representation of the Noise Level Results at the Rossendale UID Scheme



ABI MOBILRAM TM12/14 RIG PRESSURES TO BRE 470

| Pressure Summary for Platform Design (unfactored) |                          |            |           |                    |
|---------------------------------------------------|--------------------------|------------|-----------|--------------------|
| MODE                                              | BRE LOAD CASE ( 1 or 2 ) | Length (m) | Width (m) | UDL Pressure (kPa) |
| Standing                                          | 1                        | 2.95       | 0.6       | 140                |
| Travelling                                        | 1                        | 2.95       | 0.6       | 140                |
| Handling                                          | 1                        | 1.76       | 0.6       | 255                |
| Penetrating                                       | 2                        | 3.14       | 0.6       | 97                 |
| Extracting                                        | 2                        | 1.43       | 0.6       | 334                |
| Augering                                          | 2                        | 2.34       | 0.6       | 206                |

ABI MOBILRAM TM13/16 RIG PRESSURES TO BRE 470

| Pressure Summary for Platform Design (unfactored) |                          |            |           |                    |
|---------------------------------------------------|--------------------------|------------|-----------|--------------------|
| MODE                                              | BRE LOAD CASE ( 1 or 2 ) | Length (m) | Width (m) | UDL Pressure (kPa) |
| Standing                                          | 1                        | 2.78       | 0.9       | 143                |
| Travelling                                        | 1                        | 2.78       | 0.9       | 143                |
| Handling                                          | 1                        | 2.21       | 0.9       | 181                |
| Penetrating                                       | 2                        | 1.74       | 0.9       | 179                |
| Extracting                                        | 2                        | 1.75       | 0.9       | 258                |
| Augering                                          | 2                        | 1.84       | 0.9       | 239                |

ABI MOBILRAM TM14/17 RIG PRESSURES TO BRE 470

| Pressure Summary for Platform Design (unfactored) |                          |            |           |                    |
|---------------------------------------------------|--------------------------|------------|-----------|--------------------|
| MODE                                              | BRE LOAD CASE ( 1 or 2 ) | Length (m) | Width (m) | UDL Pressure (kPa) |
| Standing                                          | 1                        | 3.38       | 0.9       | 114                |
| Travelling                                        | 1                        | 3.38       | 0.9       | 114                |
| Handling                                          | 1                        | 2.41       | 0.9       | 181                |
| Penetrating                                       | 2                        | 3.42       | 0.9       | 89                 |
| Extracting                                        | 2                        | 1.12       | 0.9       | 423                |
| Augering                                          | 2                        | 2.41       | 0.9       | 182                |

ABI MOBILRAM TM16/20 RIG PRESSURES TO BRE 470

| Pressure Summary for Platform Design (unfactored) |                          |            |           |                    |
|---------------------------------------------------|--------------------------|------------|-----------|--------------------|
| MODE                                              | BRE LOAD CASE ( 1 or 2 ) | Length (m) | Width (m) | UDL Pressure (kPa) |
| Standing                                          | 1                        | 2.51       | 0.9       | 171                |
| Travelling                                        | 1                        | 2.51       | 0.9       | 171                |
| Handling                                          | 1                        | 3.59       | 0.9       | 122                |
| Penetrating                                       | 2                        | 4.30       | 0.9       | 66                 |
| Extracting                                        | 2                        | 1.22       | 0.9       | 381                |
| Augering                                          | 2                        | 3.71       | 0.9       | 116                |





| DRAWING REGISTER                                                                |  | ER-JBA-00-00-RE-C-0000-A4-C05-Project_Drawing_Register                                                       |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
|---------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|--|----|----------------|----|----|----|----|----|----|----|----|----|----|--|--|
| Project Details                                                                 |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| Project Title:                                                                  |  | East Rhyl Coastal Defence Scheme                                                                             |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| Project No.:                                                                    |  | 2016s5126                                                                                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| Client:                                                                         |  | Denbighshire County Council                                                                                  |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| Drawing Number:                                                                 |  | Revision Status ('IP' = in progress, 'PC' = Published for Costing, 'Or' = original, 'CO' = for construction) |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| 3D model files                                                                  |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-00-00-M3-C-0001-D1-P05-3d_model                                          |  | IP                                                                                                           |    |    |    |    |    |    | IP |    |    |    |    |    |    |  | PC |                | PC |    | PC |    |    | CO |    |    |    |    |  |  |
| 0000 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-00-00-RE-C-2000-A4-C01-Drawing_Register                                  |  | IP                                                                                                           | IP | IP | IP | IP |    |    | IP | IP |    | IP | IP | IP | IP |  | PC | PC             |    |    | PC | PC |    |    | CO |    |    |    |  |  |
| ER-JBA-00-00-DR-C-0001-D1-P07-Site_Boundary                                     |  |                                                                                                              |    |    |    |    |    |    |    |    | IP |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| 1000 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-00-DR-C-1000-A4-C01-General_notes                                     |  |                                                                                                              |    | IP | IP |    |    |    | IP |    |    |    | IP | IP |    |  | IP | PC             |    |    |    | PC | PC |    |    | CO |    |    |  |  |
| ER-JBA-04-00-DR-GT-1005-D1-P02-Proposed_Trial_Pit_Locations                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    | PC |    | PC |    |    |    |    |    |  |  |
| ER-JBA-04-00-DR-GT-1006-D1-P02-Proposed_Trial_Pit_Locations                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    | PC |    |    |    |    |    |  |  |
| 2000 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-00-DR-C-2000-A4-C01-Scheme_Overview                                   |  | IP                                                                                                           | IP |    |    |    |    |    | IP |    |    |    |    |    |    |  |    | IP             |    |    |    | PC | PC |    |    |    | CO |    |  |  |
| 2100 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-00-DR-C-2100-A4-C01-Site_plans_plan_1_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2101-A4-C01-Site_plans_plan_2_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2102-A4-C01-Site_plans_plan_3_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2103-A4-C01-Site_plans_plan_4_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2104-A4-C01-Site_plans_plan_5_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2105-A4-C01-Site_plans_plan_6_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2106-A4-C01-Site_plans_plan_7_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2107-A4-C01-Site_plans_plan_8_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2108-A4-C01-Site_plans_plan_9_of_12                           |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2109-A4-C01-Site_plans_plan_10_of_12                          |  |                                                                                                              | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2110-A4-C01-Site_plans_plan_11_of_12                          |  |                                                                                                              |    |    | IP | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
|                                                                                 |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2120-A4-C01-Beach_access_steps_plan_and_sections              |  |                                                                                                              |    | IP | IP | IP |    |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC | PC | PC | PC | CO |  |  |
| ER-JBA-01-00-DR-C-2121-A4-C01-Beach_access_steps_long_section_and_toe_section   |  |                                                                                                              |    | IP | IP | IP |    |    |    |    |    |    | IP | IP |    |  |    | PC             |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| ER-JBA-01-00-DR-C-2150-A4-C01-Typical_defence_section                           |  | IP                                                                                                           | IP |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-00-DR-C-2151-A4-C01-Typical_construction_details                      |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| 2200 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-01-DR-C-2200-A4-C01-Rock_armour_sections_sections_A_&_B               |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-01-DR-C-2201-A4-C01-Rock_armour_sections_sections_C_&_D               |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-01-DR-C-2202-A4-C01-Target_rock_armour_toe_detail                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    | IP |    |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-01-DR-C-2203-A4-C01-Rock_armour_sections_F_&_G                        |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| 2300 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-05-DR-C-2300-A4-C01-Western_promenade_tie-in (1 of 2)                 |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2301-A4-C01-Western_promenade_tie-in (2 of 2)                 |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2305-A4-C01-Tynnewydd_Road_footpath_tie-in                    |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2306-A4-C01-Tynnewydd_Road_Footpath_Tie-in_Details            |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2310-A4-C01-Splash_point_apartments_footpath_tie-in (1 of 2)  |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2311-A4-C01-Splash_point_apartments_footpath_tie-in (2 of 2)  |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2315-A4-C01-Promenade_access_steps (1 of 2)                   |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2316-A4-C01-Promenade_access_steps (2 of 2)                   |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2320-A4-C01-Garford_Road_ramp_tie-in (1 of 2)                 |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2321-A4-C01-Garford_Road_ramp_tie-in (2 of 2)                 |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2325-A4-C01-Eastern_promenade_tie-in                          |  |                                                                                                              |    |    |    | IP | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2330-A4-C01-Seating_Area                                      |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP | IP |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| 2400 Series                                                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-03-DR-C-2400-A4-C01-W1_units                                          |  |                                                                                                              | IP |    |    |    | IP |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-03-DR-C-2401-A4-C01-W2_units                                          |  |                                                                                                              |    |    |    | IP |    |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-03-DR-C-2402-A4-C01-W3_units                                          |  |                                                                                                              |    |    |    | IP |    |    |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC |    |    | CO |    |  |  |
| ER-JBA-01-03-DR-C-2403-A4-C01-W3_units (2 of 2)                                 |  |                                                                                                              |    |    |    | IP |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    | PC | PC |    |    | CO |  |  |
| ER-JBA-01-03-DR-C-2404-A4-C01-W4_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    | NO LONGER USED |    |    |    |    |    | PC | PC |    |    | CO |  |  |
| ER-JBA-01-03-DR-C-2420-A4-C01-S1_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC | PC | PC | PC | CO |  |  |
| ER-JBA-01-03-DR-C-2421-A4-C01-S2_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| ER-JBA-01-03-DR-C-2422-A4-C01-S3_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    | PC             |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| ER-JBA-01-03-DR-C-2423-A4-C01-S4_units                                          |  |                                                                                                              |    |    |    | IP |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-03-DR-C-2424-A4-C01-S5_units                                          |  |                                                                                                              |    |    |    | IP |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-03-DR-C-2425-A4-C01-S6_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    |                |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| ER-JBA-01-03-DR-C-2426-A4-C01-S7_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    |                |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| ER-JBA-01-03-DR-C-2427-A4-C01-S8_units                                          |  |                                                                                                              |    |    |    | IP |    | IP |    |    |    |    | IP |    |    |  |    |                |    |    |    |    | PC | PC | PC | PC | CO |    |  |  |
| 2500 Series - Street furniture and signage                                      |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    |    |    |    |    |    |  |  |
| ER-JBA-01-05-DR-C-2500-A4-C01-Glasdon_Phoenix_Seal_Bench                        |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    | PC             | PC |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2501-A4-C01-Glasdon_Guardian_Throw_Ring                       |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2502-A4-C01-Glasdon_Jubilee_Litter_Bin                        |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                | PC | PC |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2503-A4-C01-Traffic_Signage                                   |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                | PC | PC |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2504-A4-C01-Information_Panels                                |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC | PC |    |    | CO |  |  |
| ER-JBA-01-05-DR-C-2510-A4-C01-Benches (1 of 2)                                  |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                | PC | PC |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2511-A4-C01-Benches (2 of 2)                                  |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2512-A4-C01-Throw_Rings                                       |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                | PC | PC |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2513-A4-C01-Litter_Bins                                       |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2514-A4-C01-Signage (1 of 2)                                  |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2515-A4-C01-Signage (2 of 2)                                  |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2516-A4-C01-Beach_Information_Panels (1 of 2)                 |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2517-A4-C01-Beach_Information_Panels (2 of 2)                 |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP | IP |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2520-A4-C01-Sign_schedule                                     |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    |    |    |    |  |    |                |    |    |    |    |    | PC |    |    | CO |    |  |  |
| ER-JBA-01-05-DR-C-2521-A4-C01-Signage_and_Street_Furniture_Site_Plans (1 of 12) |  |                                                                                                              |    |    |    |    |    |    |    |    |    |    | IP |    |    |  |    |                | PC |    |    |    |    | PC |    |    | CO |    |  |  |



ER-JBA-00-00-RE-C-0000-S0-P0X-Project\_Drawing\_Register.xlsx



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|-----------------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|----|--|
| Date Issued:          |  | 13/04/2018 |  | 27/04/2018 |  | 25/06/2018 |  | 13/07/2018 |  | 27/07/2018 |  | 30/07/2018 |  | 17/09/2018 |  | 28/09/2018 |  | 01/10/2018 |  | 18/10/2018 |  | 19/11/2018 |  | 10/12/2018 |  | 18/12/2018 |  | 18/01/2019 |  | 20/01/2019 |  | 19/02/2019 |  | 01/04/2019 |  | 15/04/2019 |  | 03/05/2019 |  | 31/10/2019 |  | 12/11/2019 |  | 25/11/2019 |  | 12/12/2019 |  | 24/01/2020 |  | 11/03/2020 |  | 12/03/2020 |  | 13/03/2020 |  | AF |  |
| Issued By: (Initials) |  | SW         |  | SW         |  | SW         |  | SW         |  | DP         |  | AT         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | SW         |  | UP         |  | UP         |  | UP         |  | UP         |  | AF         |  | AF         |  | AF         |  |            |  |    |  |

## Introduction

The purpose of this reference material is to provide guidance for employees planning activities that require consideration of risks to air quality and activities that may lead to the generation of dust emissions from Balfour Beatty activities. It sets out the legislative and regulative framework that needs to be observed when planning such activities.

The guidance provides management actions to be followed by the Company and its subcontractors to prevent disruption to project programme and cost by enabling the identification of practices that need to be adopted to prevent, or minimize, risks to air quality and activities that may lead to the generation of dust emissions.

Activities can require authorisation to be gained from a local authority meaning that permit requirements have to be met or if suitable management controls are not adopted or followed these environmental risks can cause a statutory nuisance and pose a health hazard and pollution risk.

## Abbreviations / Definitions

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Air Quality</b>          | Air quality can be impacted by dusts, emissions and odours arising from work activities may cause nuisance to neighbours and may lead to environmental and safety incidents. Emissions may arise from haul routes usage, plant & fleet usage, lime/cement stabilisation, cement batching plants, cutting operations, local exhaust ventilation (LEV) units, welding fumes, solvents, smoke, dust, air conditioning and refrigeration systems, chimneys serving furnaces, fixed boilers or industrial plant as well as fumes or vapours from processes or material use                                          |
| <b>Nuisance</b>             | The prevention of the use or enjoyment of your property and land                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Statutory Nuisance</b>   | A Local Authorities determination that an activity can or has had a local environmental impact that creates an unreasonable interference with the use and enjoyment of adjacent or nearby sites / premises                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Local Authorities</b>    | UK local government and their councils environmental health departments responsible for the implementation, management and monitoring of compliance to environmental law                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Consents</b>             | Consents issued and approved by Local Authorities for activities that can be completed within specific requirements based on their location and potential for local environmental impact                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Permit</b>               | Within this document permit means the authorisation from a regulator to carry out an activity within set criteria to eliminate or minimise the potential for local air quality to be impacted or dust generated by an activity to be viewed as a nuisance.                                                                                                                                                                                                                                                                                                                                                     |
| <b>Abatement notices</b>    | Issued by local authorities to control activities that are deemed to be causing a statutory nuisance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Best Practical Means</b> | Management controls used and set to control activities that can generate statutory nuisances should consider the following points to determine their applicability and effectiveness: <ul style="list-style-type: none"> <li>• Regard to the current state of technical knowledge</li> <li>• The local conditions and circumstances</li> <li>• The financial implications</li> <li>• The means to be employed including the design, installation, maintenance and manner and periods of operation and plant and machinery, and the design, construction and maintenance of buildings and structures</li> </ul> |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | So far as compatible with any duty imposed by law and has to be compatible with safety and safe working conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Best Available Technology</b> | <p>Best available techniques not entailing excessive costs (BATNEEC), sometimes referred to as best available technology.</p> <p>Best Available Techniques - means the most effective method to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole.</p> <p>Techniques - includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;</p> <p>Available – techniques that are developed on a scale to allow implementation in a relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages as long as they are reasonably accessible to an operator;</p> <p>Best - means most effective in achieving a high general level of protection of the environment as a whole</p> |

## Legislation and Regulation

England, Wales, Scotland and Northern Ireland (EN) (W) (S) (NI)

Environment Act 1995 and Air Quality (England) Regulations / Air Quality (Scotland) Regulations / Air Quality (Wales) Regulations 2002 - Any vehicles operated Balfour Beatty or contractors need to comply with all relevant vehicle emission standards and respond to Air Quality Management Areas (AQMAS) requirements.

Environmental Protection Act, 1990 amended 2006: Requirement that certain “prescribed processes” obtain authorisation to operate as either Part A processes (requiring Integrated Pollution Prevention & Control).

Part B processes (requiring Local Air Pollution Control) - Authorisations are required for the following processes that may form part of Balfour Beatty activities:

- Mobile crushers / screening plant
- Mobile road stone coating plants
- Note: Mobile or site based concrete batching plants do not require authorisation.

Authorisations provided under this legislation are gradually being replaced with those required under Pollution Prevention and Control and environmental permitting legislation.

The Pollution Prevention and Control Regulations 2000 (England & Wales / Northern Ireland / Scotland) amended some of the regulations:

- Schedule 1 to the Regulations specifies the activities covered & describes three tiers of control (dependant on the nature & size of the activities):
  - Part A1: Regulated by the EA
  - Part A2: Local Authority will apply Integrated Pollution Prevention & Control
  - Part B: Local Authority Pollution Prevention & Control
- Section 6.4 to Schedule 1 defines the activities requiring a permit

Solvent Emissions (England and Wales) Regulations and Integrated Pollution Prevention & Control, (Designation of Solvent Emissions Directive) (Scotland) Order, 2004 -These Regulations limit emissions of volatile organic compounds from the use of organic solvents.

The majority of activities regulated under Integrated Pollution Prevention & Control / Environmental Permitting legislation with new conditions on solvent emissions being applied. The regulations may make some painting / bonding systems redundant that impact Balfour Beatty activities such as paint spray booths.



Some industrial processes and activities must operate under a permit and some permits may restrict emissions to air, water and land. Activities are divided into Part A, B and C processes and activities. Mobile plant activities such as crushing and screening are covered by these regulations and permit for this process is required.

Pollution control requirements apply to any industrial or trade premises (including construction sites), manufacturing facilities or any site owned or leased.

Air pollution control is regulated by Scottish Environmental Protection Agency / Environment Agency / Natural Resources Wales and UK Local Authorities.

The Local Authority can apply limits on emissions of smoke, grit and dust produced. Breaching these limits may be committing an offence and could lead to prosecution. If this is a requirement, then the application, fees and renewal of any authorisations is the responsibility of the project lead to ensure that this need is addressed within project activities. Any restrictions or control requirements laid down by such an authorisation from the Local Authority need to be followed at all times to minimise and control emissions.

For example: The regulations mean an environmental permit may be required for certain Balfour Beatty activities such as paint spray booths.

#### England, Wales Scotland and Northern Ireland (EN) (W) (S) (NI)

Clean Neighbourhoods and Environment Act, 2005: Encompasses many areas of the law affecting local environmental quality. Provisions of this Act cover the following areas: crime and disorder, vehicles, litter and refuse, graffiti and defacements, waste, noise, dogs, and architecture and the built environment.

The Act classifies statutory nuisances (noise, vibration, artificial light, dust, odours, litter etc.) and provides local authorities, parish and community councils and the Environment Agency with more effective powers and tools to tackle poor environmental quality and anti-social behaviour.

Clean Air (Northern Ireland) Order 1981 / Clean Air Act 1993 Regulated by Scottish Environmental Protection Agency / Environment Agency / Natural Resources Wales / Smoke Control Areas (Authorised Fuels) (England) Regulations (as amended) / Scotland Regulations 2010 / Wales Regulations 2008 (as amended) / – Regulated by Local Authorities sets out the requirements that no burning of waste allowed and Vehicles / Plant to be adequately maintained and not left idling.

#### **What you need to do**

The Environmental Risks and Opportunities ([ENV-PR-0001](#)) must be followed to determine the likely environmental impact from site activities.

This includes an assessment of the impact of air quality and dust arising from site activities. The assessment provides detailed control measures to reduce the impact, ensure permit requirements are identified and prevent statutory nuisance. The control measures must be reviewed to ensure they include sufficient detail to effective control of site specific activities.

The Project lead is responsible for ensuring that the assessment is complete and that appropriate roles and responsibilities for ensuring the implementation and effectiveness of management control is assigned within the project team responsibilities that they addressed in risk assessments, work package plans method statements.

Best Practicable Means and Best Available Technology should be considered in the planning of work to ensure that when the works are undertaken they are done so to prevent or reduce the impact on air quality and the environment as a whole due to the Company's activities.

### **Permitted Industrial processes and activities**

The outcome of implementing the Environmental Risks and Opportunities ([ENV-PR-0001](#)) should ensure that any of the Company's activities that meet the description of "prescribed processes" under Schedule 1 of The Pollution Prevention and Control Regulations 2000 are identified and the authorisation to operate gained.

Once gained the requirements of the permit need to be documented and operational requirements for operating the permit set as part of the company's management controls for the activity. An example of this can be found within in the Balfour Beatty Plant and Fleet procedure - Control of VOC Emissions (Raynesway, Derby) ENV-PR-211-PFS

### **Refrigerant Gases**

The management of refrigerant gases can contribute to the wider and national air quality issues but can also have a local environmental impact. Please refer to Fluorinated Greenhouse Gas Regulations 2015 ([ENV-RM-0024a](#)).

### **Plant, Vehicle and Equipment Emissions**

The issue of plant, vehicle and equipment emissions impacting air quality because of fossil fuel usage is now being addressed in a number of different ways.

To understand how Balfour Beatty targeting and addressing the company's direct carbon emission please refer to Sustainability Reporting Procedure [SUS-PR-0001](#).

An example of the regulation that is being introduced to further control emissions air quality can be understood by referring to London Projects Non-Road Mobile Machinery (NRMM) Emissions Regulations ([ENV-RM-0011a](#)).

Where emission controls such as local exhaust ventilation (LEV) units are in place, they shall be maintained and monitored in accordance with the Control of Substances Hazardous to Health Regulations. Please refer to procedure COSHH ([HSF-PR-0021](#)). Two useful tools to support the potential impact of this issue are the Exhaust Emission Exposure Risk Assessment Questionnaire ([ENV-SF-0014a](#)) and the LEV Test Record Sheet ([HSF-TF-0021b](#)).

The following points should always be considered when assessing management controls for Plant, Vehicle and Equipment emissions:

- All plant and vehicles must be regularly maintained and serviced
- Any plant or vehicles that are emitting fumes (e.g. dark, blue, thick white and possibly grey) must be reported immediately and taken out of service for checking and maintenance
- All plant and vehicles must be switched off when not in use
- Vehicle and plant engine – should when possible meet the highest Euro standard available and at a least the minimum Euro standard required at the time.

**Haul Routes**

Haul routes should be planned with the consideration that emissions of dust could be generated by their use. The following points should always be considered when planning and managing haul routes:

- Haul routes must be located away from sensitive receptors wherever practicable
- Surfacing must be provided on medium and heavily used haul routes and car parking areas, wherever possible and appropriate
- Haul routes must be maintained so that they are clear of mud deposits and dusty materials
- Large areas of paving within the site, and on public roads affected by site traffic, should be regularly vacuum swept, wherever possible and appropriate
- Water or other means of suppression must be used to prevent dust generation (preferably non-potable, uncontaminated site-won water, for example from constructed ponds)
- Water must be applied to haul roads using a mobile bowser or other suitable method as frequently as required to effectively suppress dust
- Where appropriate a vehicle wash area or wheel wash for vehicles leaving the site must be provided
- Site speed limits must be imposed
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations.

**Materials Handling and Storage**

Materials Handling and Storage should be planned with the consideration that emissions of dust could be generated if they are not controlled and managed appropriately. The following points should always be considered when planning and managing materials handling and storage:

- Stockpiles of materials must be located away from sensitive locations and the site boundary, wherever practicable
- Materials must be stored in areas with adequate protection from the wind and, where practicable, within stores or buildings
- Stockpiles must be kept to the minimum practicable height and slopes at a shallow gradient
- Stockpile surfaces must be compacted where appropriate. Long-term stockpiles, for example topsoil stores, must be seeded or covered, i.e. tarpaulin.
- Water or other means of suppression must be used to prevent dust generation (preferably non-potable, uncontaminated site-won water, for example from constructed ponds)
- The surface of stockpiles and earthworks must be dampened during the summer/dry/windy conditions if dust is being generated
- The drop heights of materials into haulage vehicles and onto conveyors must be minimised
- Conveyor transfer points must be enclosed and loads that are dry and liable to generate dust must be dampened
- Wagons must be sheeted where they are delivering or carrying friable materials off-site or within site, where appropriate
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations.

**Demolition**

Demolition should be planned with the consideration that emissions of dust that be generated if they are not controlled and managed appropriately it is fundamental that all hazardous materials must be identified, removed and disposed of before starting any demolition. The following points should always be considered

when planning and managing demolition to minimise the impact of activities on air quality and emissions of dust:

- Where necessary, water sprays must be used to damp down structures prior to, and during demolition; and or debris screens/sheets provided
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations
- Loads of loose and dusty demolition waste must be covered prior to removal from site by either rigid vehicles or skips

### Earthworks and Excavations

Earthworks and Excavations should be planned with the consideration that emissions of dust could be generated if they are not controlled and managed appropriately. The following points should always be considered when planning and managing Earthworks and Excavations:

- The potential for the discovery of Contaminated Land increases during earthworks and excavations is increased the Excavation Procedure ([HSF-PR-0016](#)) should be followed and the consideration that dust from contaminated land can impact air quality. Testing of contaminated land may be needed to ensure that the appropriate control measure are implement to mitigate the risk of emission impacting air quality
- Water or other means of suppression must be used to prevent dust generation (preferably non-potable, uncontaminated site-won water, for example from constructed ponds)
- Completed earthworks must be top-soiled, seeded and where appropriate planted as soon as practicable
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations

### Cutting, grinding and drilling

Cutting, grinding and drilling should be planned with the consideration that emissions of dust could be generated if they are not controlled and managed appropriately. The following points should always be considered when planning and managing Cutting, grinding and drilling activities:

- The potential dust generated from cutting, grinding or drilling activities should consider the material to ensure that the appropriate control measure are implement to mitigate the risk of emission impacting air quality. In some cases testing of the chemical composition of a material may be required to ensure that the appropriate control measure are implement
- Works involving cutting, grinding or similar must be enclosed shielded or, where appropriate, the equipment must be fitted with dust suppression, extractors or filters
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations
- Water or other means of suppression must be used to prevent dust generation (preferably non-potable, uncontaminated site-won water, for example from constructed ponds)

### Bulk powder deliveries such as lime, cement and bentonite

Bulk powder deliveries and activities such as concrete batching should be planned with the consideration that emissions of dust could be generated if they are not controlled and managed appropriately. The following points should always be considered when planning and managing these activities:

- Powders supplied and delivered in bulk must be delivered by tanker and stored in silos fitted with exhaust filters
- Silos and stockpiles must be positioned away from residential areas and watercourses
- Large scale mixing of powders must be mixed in enclosed or shielded areas

- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations
- Where batching plants are installed on site they must include Best Available Technology to prevent and control dust emissions including audible and visual alarm systems to alert the operator in the event of a system failure. If the plant is supplied by a subcontractor a copy of their permit must be obtained prior to operating on site. Checks made, during operation, to ensure compliance to the permit must be made
- Any batching plant used on site must be registered under an environment permit. A copy of the permit must be held on site

### Processing of Materials

Processing of materials should be planned with the consideration that emissions of dust could be generated if they are not controlled and managed appropriately. The following points should always be considered when planning and managing activities that require the processing of materials:

- Crushers must be located as far as practicable from site boundaries and sensitive receptors
- Any crushing or screening plant used on-site must be registered under an environment permit. A copy of the permit must be held on-site. If the plant is supplied by a subcontractor a copy of their permit must be obtained prior to operating on site. Checks made, during operation, to ensure compliance to the permit must be made
- Where appropriate suitable fences must be erected, to reduce dust emissions from working areas and to screen sensitive locations

### Odours

The storage of materials, waste and welfare facilities have the potential for impacting local air quality due to emissions of odour if they are not planned, controlled and managed appropriately. The following points should always be considered when planning and managing these activities:

- Skips shall be enclosed or covered wherever possible and shall be regularly emptied to prevent escape of odours and waste to the environment. Long term storage of odour producing waste should be avoided. Please refer to Waste Management ([ENV-RM-0035a](#))
- Where portable toilet facilities are provided on site then ensure they are positioned away from public areas and that arrangements are made for regular disposal of the effluent. Please refer to Project Welfare Facilities (HSF-PR-0062)
- When planning the storage of fuels, oils, liquids and chemicals take account of Control of Substances Hazardous to Health Regulation details of the material and liquids. Consider the potential impact on both on site personnel and the general public. Please refer to COSHH ([HSF-PR-0021](#)) and Storage of Fuels Oils and Liquids ([ENV-RM-0007a](#))
- Take account of the wind conditions when arranging activities that are likely to emit odours

**Fires** - The burning of any materials on site is prohibited.

### Monitoring

Visual monitoring should be carried out as part of site inspection schedules to ensure dust emissions from activities are assessed and the effectiveness of management control measures implemented are regularly monitoring for compliance. Records of the outcomes of the inspections documented to include at a minimum:

- Time & date;
- Confirmation of any visible dust emissions;
- Remedial actions taken if emissions observed; and



- Wind direction and strength (a weather station, wind sock or knowledge of the Beaufort Scale would assist the reading of the UK's National Meteorological Service – The Met office web page <http://www.metoffice.gov.uk/>).

More detailed monitoring may be required under planning and/or contractual conditions or through agreement with the local authority. The types of sites for which monitoring is particularly likely can include large or long term sites in sensitive areas (e.g. residential), contaminated sites, and sites in sensitive air quality areas, such as Air Quality Management Areas (AQMAs) and monitoring such as Passive Dust Deposition Rate (DDR) Monitoring by Frisbee Gauges may be specified.

Monitoring regimes for detailed monitoring can range from real time, continuous monitoring to the visual assessment of dust generation. Simple and inexpensive monitoring of construction impacts may be conducted by means of a number of techniques, including the diffusion tubes for gaseous pollutants (NO<sub>2</sub>, SO<sub>2</sub> etc.), dust deposition monitoring (e.g. by 'Frisbee' dust deposit gauge), and optical real-time continuous particle monitors (e.g. Nephelometers).

Remember the companies golden rules 1) be fit for work 2) always receive a briefing before starting work 3) report all unsafe events and conditions 4) stop work if anything changes.

If the control measures fail follow the emergency arrangements set for the activity if needed and stop the works to review risk assessment and control measures and/or agreement and conditions of the consent or permit.

### Reporting Incidents

Any incidents must be reported and notified as set out in [HSES-PR-0005](#) Incident Reporting and Investigation and as per business unit reporting requirements.

### UK Documentation

| Reference                    | Type         | Title                                                   |
|------------------------------|--------------|---------------------------------------------------------|
| <a href="#">ENV-SF-0014a</a> | Form         | Exhaust Emission Exposure Risk Assessment Questionnaire |
| <a href="#">HSF-TF-0021b</a> | Form         | LEV Test Record Sheet                                   |
| <a href="#">ENV-TB-0014a</a> | Toolbox Talk | Air Quality and Dust                                    |

|                 |                                                                                     |
|-----------------|-------------------------------------------------------------------------------------|
| Project         | East Rhyl Coastal Defence                                                           |
| Customer        | Denbighshire County Council                                                         |
| Date (last rev) | 06 April 2020                                                                       |
| Author          | Deter Goliath                                                                       |
| Subject         | Air quality and dust management man site activities (Contractors' note- Jones Bros) |

### 1. Location and Introduction

This Air Quality and Dust Management Plan describes how the site will manage the dust and air pollution generated by the work, including work undertaken by subcontractors, during the construction of Rock Revetment and Re-curve Wall. This document is 'live' and will be reviewed on a regular basis to discuss its content and relevance to the scheme. All changes will be amended immediately.

### 2. Operations

If high winds are measured, then operations will be managed accordingly to reduce the likelihood of dust pollution to receptors.

### 3. Dust and Air Pollution Management

Activities with the potential to give rise to dust emissions on this Scheme have been identified as follows:

- Site preparation and establishment;
- Excavation of the sand;
- Storage/use of cement or other fine particulate materials;
- Wind-blown material from areas with no vegetation cover;
- Material transfer to and from trucks/lorries;
- Material spills during transportation and handling;
- Vehicle/plant movements on unpaved haul routes and sites

Though best practicable means will be adopted to prevent statutory nuisance occurring, the following dust control measures will be used as standard:

- Roads will be swept as required to remove loose material
- Vehicles to be limited to designated routes.
- Dust suppression measures e.g. all dust arising shall be damped down with water, site haul roads will be regularly dampened down.
- Adherence to site speed limit
- Plant and equipment will not be left running unnecessarily;
- Regular inspection and maintenance of plant and equipment with regular servicing and report any dark smoke coming from vehicle/plant exhausts;
- Covering waste skips if there is a likelihood of dusts escaping;
- Cutting of concrete will be undertaken using water to dampen down dust or vacuum collectors will be fitted to cutting apparatus;
- Delivery of materials that are likely to give rise to wind-blown dust (sand, aggregates etc.) will be sheeted;
- Monitor establishment of vegetation cover and reinstate if where required to reduce surface dust movement.

The prevailing wind direction is a West South Westerly one and site will be mindful on those days when there is a change in wind direction that different receptors will need to be monitored.

Water Bowsers will focus on any areas that could give potential to dust. Caution will need to be taken as to where water on site will suppress dust to, as this could lead to water pollution problems.

Should bowsers prove ineffective then a load of wetted inert material will be laid down on top of the area to provide daily cover. This can subsequently be sheeted with suitably sized plastic sheets if still the wetted inert material is proving to be inadequate in mitigating dust.

A daily checklist will be carried out by site operatives and will include any observations of dust.

|                 |                                                                                     |
|-----------------|-------------------------------------------------------------------------------------|
| Project         | East Rhyl Coastal Defence                                                           |
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| Subject         | Air quality and dust management man site activities (Contractors' note- Jones Bros) |

Any complaints will be logged and an investigation carried out. Records of these will be kept and any associated findings for inspection.

#### 4. Toolbox Talks and Daily Check Sheets

Toolbox talks will be provided to site operatives to re-enforce the importance of the dust management plan on site. The site manager will be responsible for ensuring regular checklists are undertaken by staff to cover the following example points.

| Check              | Management                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weather forecast   | <ul style="list-style-type: none"> <li>Check the local weather forecast at start of working day to identify likely daily weather conditions.</li> <li>Monitoring: Wind Direction</li> </ul>                                                                                                                                                                                                                |
| Sensitive receptor | <ul style="list-style-type: none"> <li>Identify which sensitive receptors may be affected by dust pollution from the site.</li> </ul>                                                                                                                                                                                                                                                                      |
| Dry weather        | <ul style="list-style-type: none"> <li>Apply water bowsers to excavations, haul roads and lay down areas regularly throughout the day.</li> <li>Undertake regular visual checks throughout the day to ensure dust at the above locations is being suppressed.</li> </ul>                                                                                                                                   |
| Windy              | <ul style="list-style-type: none"> <li>Cover laid down areas with wetted material where wind-blown dust is an issue.</li> <li>In the event that dust is being blown off-site, cease dust-generating activities until wind conditions improve or dust is suitably managed.</li> </ul>                                                                                                                       |
| On-site activities | <ul style="list-style-type: none"> <li>Throughout the day, undertake regular visual checks of dust management during regular movement of HGVs on haul roads.</li> <li>Site daily diary maintained at the site offices for inspection.</li> <li>Focus water bowsers on areas where dust is being generated.</li> </ul>                                                                                      |
| Complaints         | <ul style="list-style-type: none"> <li>A record will be kept on site of all dust related complaints and remedial actions taken.</li> <li>Complaints will be logged and, where required, a review of the dust management procedures will be undertaken by Environmental Officer.</li> <li>Staff will be briefed on changes required to working practices to ensure the incident is not repeated.</li> </ul> |

## Introduction

The purpose of this reference material is to provide guidance for employees planning activities that may lead to the generation of noise. It sets out the legislative and regulative framework that needs to be observed when planning such activities.

The guidance provides management actions to be followed by the Company and its subcontractors to prevent disruption to project programme and cost by enabling the identification of practices that need to be adopted to prevent, or minimize, the risk of to the generation of noise.

Activities can require authorisation to be gained from a local authority meaning that permit requirements have to be met or if suitable management controls are not adopted or followed these environmental risks can cause a statutory nuisance and pose a risk of causing environmental pollution.

## Abbreviations / Definitions

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Noise</b>                | <p>The UK does not set a legislative maximum level of noise must not be exceeded by a specific activity before it is classified as a statutory nuisance. This means that noise from an activity can be deemed a statutory nuisance based on an individuals or communities perception of the level of noise. People experience back ground noise levels on a daily basis and view this level as 'normal' for that location that specific time of day.</p> <p>People can view changes to this perceived 'normal' background level of noise depending on the time of day, the type of activity and period of time that they are exposed to the change in noise level. If after assessment this change is deemed to significantly change the usual back ground noise level then a local authority can classify the activity as a statutory nuisance.</p> |
| <b>Nuisance</b>             | The prevention of the use or enjoyment of your property and land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Statutory Nuisance</b>   | A Local Authorities determination that an activity can or has had a local environmental impact that creates an unreasonable interference with the use and enjoyment of adjacent or nearby sites / premises.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Local Authorities</b>    | UK local government and their councils environmental health departments responsible for the implementation, management and monitoring of compliance to environmental law.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Consents</b>             | Consents issued and approved by Local Authorities for activities that can be completed within specific requirements based on their location and potential for local environmental impact.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Permit</b>               | Within this document permit means the authorisation from a regulator to carry out an activity within set criteria to eliminate or minimise the potential for noise generated by an activity to be viewed as a nuisance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Abatement notices</b>    | Issued by local authorities to control activities that are deemed to be causing a statutory nuisance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Best Practical Means</b> | <p>Management controls used and set to control activities that can generate statutory nuisances should consider the following points to determine their applicability and effectiveness:</p> <ul style="list-style-type: none"> <li>• Regard to the current state of technical knowledge</li> <li>• The local conditions and circumstances</li> <li>• The financial implications</li> <li>• The means to be employed including the design, installation, maintenance and manner and periods of operation and plant and machinery, and the design, construction and maintenance of buildings and structures</li> </ul>                                                                                                                                                                                                                                |



|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | So far as they are compatible with any duty imposed by law and has to be compatible with safety and safe working conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Best Available Technology</b> | <p>Best available techniques not entailing excessive costs (BATNEEC), sometimes referred to as best available technology.</p> <p>Best Available Techniques - means the most effective method to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole.</p> <p>Techniques - includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;</p> <p>Available – techniques that are developed on a scale to allow implementation in a relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages as long as they are reasonably accessible to an operator;</p> <p>Best - means most effective in achieving a high general level of protection of the environment as a whole.</p> |

### Legislation and Regulation

England, Wales Scotland and Northern Ireland (EN) (W) (S) (NI)

Environmental Protection Act, 1990: The Act recognises that activities from a site or premises can have local environmental impacts that can be deemed a statutory nuisance.

The Act provides Local Authorities with powers and duties to manage issues determined as a statutory nuisance through either remedial or preventative action, by the issue of consents or abatement notices that set out the requirements that have to be met by the approved activities.

Commercial activities, including construction, may have requirements set out in consents that are granted as part of the Local Authority planning process.

However a Local Authority can also place activities under consents retrospectively or issue abatement notices if they believe that commercial activities are generating a local environmental impact that causes a statutory nuisance. Non-compliance can result in prosecution, prohibition or improvement sanctions as well as the potential for compensation claims from the local community.

Local Authorities set general operating hours and minimum requirements for the management of noisy activities and details can be gained by review of the relevant local authority web page. The following provides general parameters for activities that should consider and engage with the local authority for the need to apply for consent:

1. Sites in operation for over 28 days
2. Significant number of local residents or businesses in a heavily urbanised area
3. Sensitive local receptors such as schools or hospitals that may be affected for a significant time
4. Any other site where it is highly likely the activity may lead to complaints

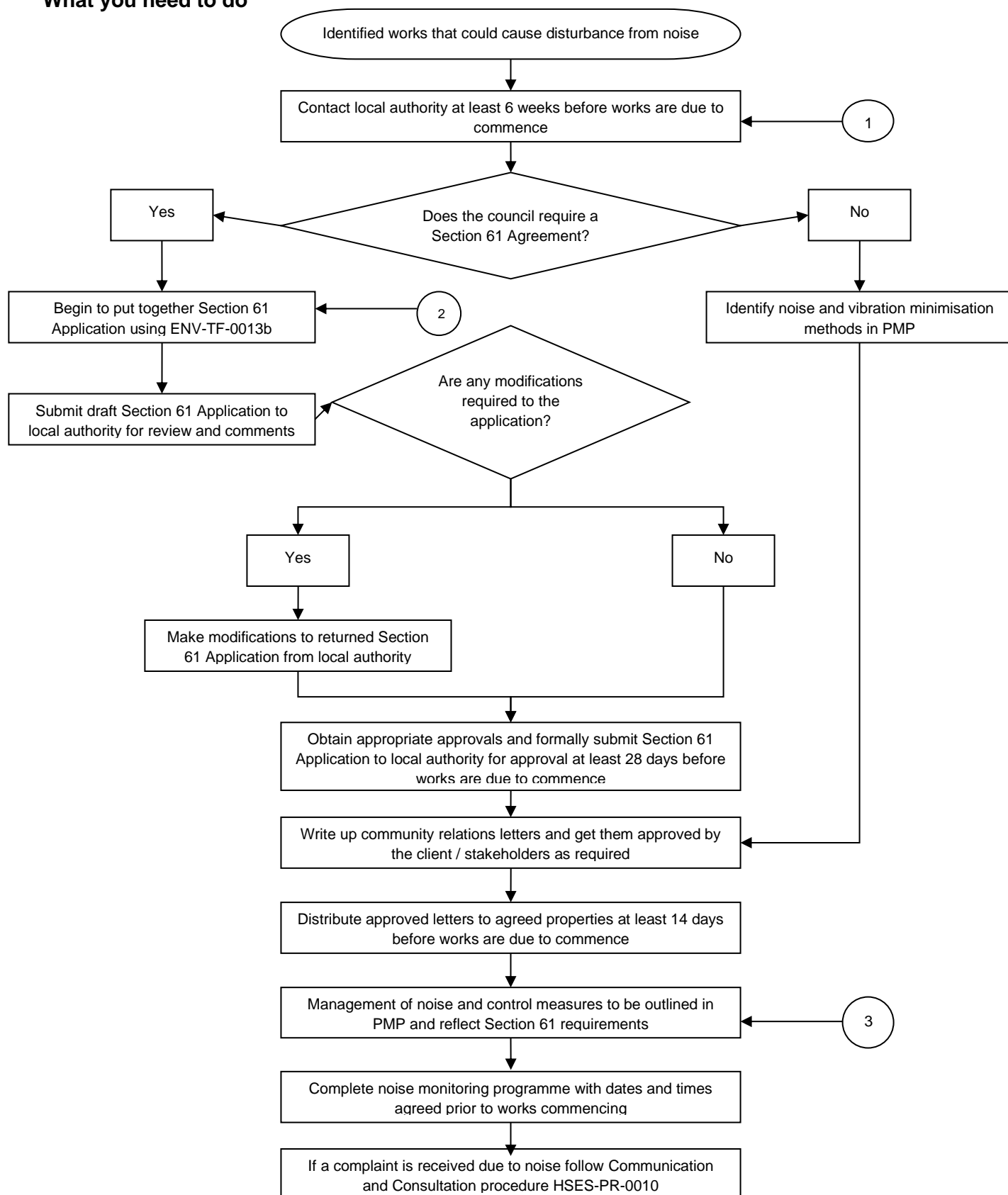
The Environmental Protection Act, 1990 also defines Best Practical Means as a framework for assessing the acceptability of the management controls applied to an activity to minimise and reduce the local environmental impact of the activity.

The main regulatory mechanism for the management of noise is Control of Pollution Act 1974, Section 61. Obtaining a Section 61 consent means that there is an agreement in place between Balfour Beatty and the local authority to allow an agreed level of noise disturbance to occur including the extent of noise, the hours of work when the noise will be generate, the control measures implemented to control the noise and the monitoring controls put in place to ensure the consent requirements are met.

Clean Neighbourhoods and Environment Act, 2005: Encompasses many areas of the law affecting local environmental quality. Provisions of this Act cover the following areas: crime and disorder, vehicles, litter and refuse, graffiti and defacements, waste, noise, dogs, and architecture and the built environment.

The Act classifies statutory nuisances (noise, vibration, artificial light, dust, odours, litter etc.) and provides local authorities, parish and community councils and the Environment Agency with more effective powers and tools to tackle poor environmental quality and anti-social behaviour. Local authorities have the power to issue a Section 60 for activities that exceed their minimum requirements and prosecute and fine if noise from the activity is defined as a statutory nuisance.

## What you need to do



**Note 1 – Contact with local authority**

Contact should be made with the local authority. Initial contact should be made with the local authority at least 6 weeks before works are due to commence but ideally as soon as possible.

**Note 2 – Putting together the Section 61 Application**

ENV-TF-0013b Section 61 Prior Consent application template provides key headings for the information usually required by a local authority for such an application.

It is important that the application clearly details the scope of the works, methodologies, working times, proposed mitigation and management measures as well as reliable data for plant sound levels, baseline noise levels, and predicted noise levels.

If the required information is not provided in sufficient detail it may delay the application process and ultimately the timing of a signed-off agreement from the local authority.

**Note 3 – Management of noise and control measures**

The following pages of this reference material provide further guidance for management of noise and details of control measure that can be applied depending on the activity and its location.

**Back ground noise levels**

It should be noted the level of noise considered to be a nuisance is significantly lower than the level required for personal hearing protection for health and safety. The noise level which is considered to cause a nuisance is subjective.

The British Standards Institute (Bsi) Code of practice for noise and vibration control on construction and open sites (BS 5228-1:2009). Provides the following guidance:

*Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut.*

*Noise levels, between say 07.00 and 19.00 hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:*

- 70 decibels (dBA) in rural, suburban and urban areas away from main road traffic and industrial noise;
- 75 decibels (dBA) in urban areas near main roads in heavy industrial areas.

*These limits are for daytime working outside living rooms and office. When working outside the normal hours say between 19.00 and 22.00 hours – the allowable noise levels from building sites will be less (a reduction of 10 dB(A) may often be appropriate).*

*Noisy work likely to cause annoyance locally should not be permitted between 22.00 hours and 07.00 hours.*

The standard also includes useful reference material in Annex C of what to expect from various piling operations. This includes “Large rotary bored piling rig” 83 dB LAeq at 10m and “Bauer BG36 coring reinforced concrete pile” 72 to 87 dB LAeq at 10m”.

Most Local authorities have stated standard expectation and requirements for noisy works and an example of how the British Standards Institute (Bsi) Code of practice for noise and vibration control on construction and open sites (BS 5228-1:2009) can be applied to create a set of minimum requirements is the City of London Code of Practice for deconstruction and construction which states:

*Noise should be restricted to hours outside the normal working day of 09.00 – 17.00 hours.*

*Contractors will adhere to these quiet hours at all times unless agreed advance negotiation with all parties and the Pollution Team.*

*The quiet hours are:*

- 10:00 - 12:00 (Monday to Friday);



- 14:00 - 16:00 (Monday to Friday).

*These periods may be subject to variation in particular circumstances, for example during lunchtimes adjacent to eating places or businesses where the majority of trade is carried out at lunchtimes.*

*During these quiet periods the following activities cannot be carried out:*

- Cutting using power tools;
- breaking or dismantling using power tools/machines/plant;
- the use of impact fasteners;
- the loading of heavy materials;
- other noisy activities, depending on the specific location of site and neighbours, deemed unacceptable by Environmental Health Officers.

### Measurement of Noise levels

If activities are going to fall outside of these generally expected levels in terms of:

- noise level
- hours of the day or;
- in close proximity to a sensitive location / member of the local community

The need to monitor background noise is often required to ensure that the planning of the noise that will be generated from the activities can be assessed and understood. This enables an understanding of the potential change in noise levels that may be experienced due to the planned activities.

This requirement can form part of the planning approval process or while gaining Section 61 consent approval.

It should be noted the level of noise considered to be a nuisance is significantly lower than the level required for personal hearing protection for health and safety. The noise level which is considered to cause a nuisance is subjective.

### Noise control measures

1) Noise can be caused by a number of factors, including:

- Plant and equipment use
- Vehicle reversing alarms or engine idling
- Radios
- Employees shouting

2) Noise can have a number of impacts, including:

- Interrupted sleep
- Annoyance and nuisance
- interfering with people's enjoyment of their property

Some land uses are generally regarded as being more sensitive to noise than others due to the types of population groups or activities involved. Noise-sensitive receptors in the project area include, but are not limited to:

- Residential Properties
- Commercial Properties
- Schools
- Hospital/Medical Facilities
- Churches
- Recreational Areas

Best Practicable Means and Best Available Technology should be considered in the planning of work to ensure that when the works are undertaken they are done so to prevent or reduce the impact on air quality and the environment as a whole due to the Company's activities.

The following pages provide guidance as to how company activities can seek to reduce noise to as low a level as practicable, particularly for emergency works and other works outside of normal working hours.

Minimum methods to be adopted should include:

- All plant will be operated with covers closed and where available silencers fitted on equipment
- All plant will be fully maintained
- Plant and vehicles not in use will be switched off – implementation of a no idling policy
- A quiet night-time working ethic will be employed to ensure that all operatives have consideration for nearby residents
- The use of radios and shouting when entering, leaving and working on site will be minimised
- Where practicable, materials will be handled in a manner that reduces noise & vibration to an acceptable level
- Static plant will be shielded or provided with screens or enclosures where practicable
- Where possible, working hours will be planned to minimise impact on local residents and buildings

### **Depot best practice**

Effective management of the depot can control the impact of noise levels on the surrounding area. Consideration should be given to the following:

- Working methods should be changed to include equipment or modes of operation that produce less noise (i.e. use of methods other than percussive piling in urban areas)
- Ensure workforce is informed of noise restrictions/requirements via toolbox talks and inclusion in Risk Assessment/Work Package Plans (Method Statements).
- Ensure that the workforce is informed of the sensitive neighbours and reminded to be sensitive when working or walking adjacent to the site boundaries
- Times of deliveries to suit the area.(i.e. restricting deliveries to during normal working hours (i.e. 9-5) in residential areas)
- Working practises that restrict noisy activities to certain periods of the day should be adopted.
- Loud equipment is placed in a position to minimise the impact.
- Consideration should be given to the position of welfare units and access routes for getting to and from welfare to work areas
- Those neighbouring the site will be kept informed of any specific activity likely to cause disruption or in the case of construction, inform the public how long the construction is likely to continue

### **Working hours Monday – Friday**

- Where possible depot work activities should be planned to take place between 7.30am and 6.00pm in order to minimise nuisance complaints
- These hours may vary depending on the area being worked in and local council i.e. busy roads may require short working hours to reduce impacts on traffic congestion
- Where councils require reduced working hours, these should be requested in writing and included in method statements

**Working hours Saturday**

- Reasonable working hours are reduced on a Saturday to between 8.00am to 4.00pm
- These hours may vary depending on the area being worked in and local council
- Where councils require reduced working hours, these should be requested in writing and included in method statements

**Working hours Sunday**

- Working hours on a Sunday should always be checked with the local authority, as they may not allow any work on a Sunday without a specific permit
- Due to the increased likelihood on impact on people, reasonable Sunday hours are reduced further to between 9.00am and 4.00pm
- These hours may vary depending on the area being worked in and local council

**Council Consultation**

It is advised where work may be required out of normal hours the local council is consulted for advice and where possible a Section 61 Consent obtained. Where this consent is granted the conditions of the consent should be adhered to and incorporated into method statements. Copies of the consent should be retained on site at all times.

**Project best practice**

Effective management of the site can control the impact of noise levels on the surrounding area. Consideration should be given to the following:

- Working methods should be changed to include equipment or modes of operation that produce less noise (i.e. use of methods other than percussive piling in urban areas)
- Ensure workforce is informed of noise restrictions/requirements via toolbox talks and inclusion in Risk Assessment/Work Package Plans (Method Statements).
- Ensure that the workforce is informed of the sensitive neighbours and reminded to be sensitive when working or walking adjacent to the site boundaries
- Times of deliveries to suit the area.(i.e. restricting deliveries to during normal working hours (i.e. 9-5) in residential areas)
- Working practises that restrict noisy activities to certain periods of the day should be adopted.
- Loud equipment is placed in a position to minimise the impact.
- Consideration should be given to the position of welfare units and access routes for getting to and from welfare to work areas
- Those neighbouring the site will be kept informed of any specific activity likely to cause disruption or in the case of construction, inform the public how long the activity is likely to continue.

**Selection of Equipment**

The correct selection and usage of equipment and machinery, in combination with the proper maintenance can reduce the impact of the activity with regard to the amount of noise emitted.

- Where practicable use electrically powered machinery rather than diesel or petrol driven particular when working adjacent to sensitive receptors
- Operate plant properly so that it does not create excessive noise, and shut it down when not in use
- Provide adequate silencers mufflers or other control measures for plant i.e. percussive tools
- Rotating or impacting machinery must be fixed on rotating or impacting machines on anti-vibration mountings

**Screening**

If designed and used correctly screening can considerably reduce the noise levels emitted from an establishment. Acoustic enclosures or screens can be used where plant and equipment are in continuous operation and or close to sensitive receptors

- Factors affecting the efficiency of a screen include the distance between the source and the receiver of the noise, the density of the material being used as a screen, the position of the screen relative to noise reflecting surfaces
- The screen may be purpose built or can consist of an existing feature
- When screening an individual item from a receptor, position the screen around three sides of the source on the sides nearest the receptor, place it as near as possible to the noise source; and ensure it is built approximately 1m above the highest sight line

**Plant Use**

Static plant must be positioned as far as practicable from site boundaries, sensitive receptors and public areas where they have potential to cause a nuisance:

- Quiet and low or reduced vibration plant, equipment and working methods must be used where possible e.g. super-silenced generators
- When operating equipment, use noise control devices such as jackets, covers and shrouds. Ensure that all hoods and doors are closed and well fitted / sealed
- Acoustic doors, hoods and covers must be kept shut when plant and equipment are in use
- Plant with potential to generate vibration from the transfer medium and place must be isolated on a heavy base where practicable
- All plant and equipment must be turned off when not in use
- All plant must be maintained in accordance with the manufacturer's instructions
- Drop heights into hoppers, lorries or other plant must be minimised

**Piling**

Typical mitigation measures for piling operations include:

- Using modern, quiet and well maintained equipment
- Using fully silenced modern piling rigs with engines to highest Euro Standard
- Careful operation of the rig so there is no reversing of the Kelly/auger bars
- Off-site preparation of as many materials as possible
- Avoidance of unnecessary noise (such as engines idling between operations, shouting, loud radios or excessive revving of engines) by effective site management

**Monitoring**

The checking of all noise control measures should be documented in the management plan and should include the ongoing review of the effectiveness of the control measures.

More detailed monitoring may be required under planning and/or contractual conditions or through agreement with the local authority.

The following forms should be used to generate records of any noise monitoring requirements:

| Business Unit | Document Reference           | Document Title          |
|---------------|------------------------------|-------------------------|
| BBUK          | <a href="#">ENV-SF-0015a</a> | Noise Monitoring Record |



|         |             |                                    |
|---------|-------------|------------------------------------|
| BB Rail | R-ENV014-01 | Noise Monitoring and Exposure Form |
| BB Rail | R-ENV016-01 | Noise Monitoring Programme         |
| BBLP    | EN-SF-666   | Noise Assessment Summary           |

Remember the companies golden rules 1) be fit for work 2) always receive a briefing before starting work 3) report all unsafe events and conditions 4) stop work if anything changes.

If the control measures fail follow the emergency arrangements set for the activity if needed and stop the works to review risk assessment and control measures and/or agreement and conditions of the consent or permit.

### **Reporting Incidents**

Any incidents must be reported and notified as set out in [HSES-PR-0005](#) Incident Reporting and Investigation and as per business unit reporting requirements.

### **Supplementary Information**

- The British Standards Institute (Bsi) Code of practice for noise and vibration control on construction and open sites (BS 5228-1:2009)
- City of London Code of Practice for deconstruction and construction (May, 2013)

### **UK Documentation**

| Reference                    | Type         | Title                                         |
|------------------------------|--------------|-----------------------------------------------|
| <a href="#">ENV-TF-0015b</a> | Template     | Section 61 Prior Consent application template |
| <a href="#">ENV-SF-0015a</a> | Form         | Noise Monitoring Record                       |
| <a href="#">ENV-TB-0015a</a> | Toolbox Talk | Noise and Vibration (detailed)                |
| <a href="#">ENV-TB-0015b</a> | Toolbox Talk | Noise and Vibration (summary)                 |
| <a href="#">ENV-AD-0015a</a> | Advice Note  | Section 60 Notices                            |

### **Existing forms**

| Business Unit | Document Reference | Document Title                     |
|---------------|--------------------|------------------------------------|
| BB Rail       | R-ENV005-02        | Section 61 Application             |
| BB Rail       | R-ENV014-01        | Noise Monitoring and Exposure Form |
| BB Rail       | R-ENV016-01        | Noise Monitoring Programme         |
| BBLP          | EN-SF-666          | Noise Assessment Summary           |

## Introduction

The nature of Balfour Beatty's operational activities means that the potential for causing an impact to the local communities in which the company works always needs to be considered and carefully planned.

Local Authorities have a duty to manage activities that can impact a local community and determine if an act is categorised as a statutory nuisance. They have the power and authority to prosecute a company or person if found to be responsible for causing a statutory nuisance. Further to this the potential impacts of the company's operational activities can be viewed as a nuisance and an inconvenience to the different members of the communities in which the company works.

This document sets out the process that all operational activities need to follow to ensure that the potential impacts of the company's activities on local communities are considered, local authority requirements are identified and adequate management controls implemented.

## Abbreviations / Definitions

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nuisance</b>             | The prevention of the use or enjoyment of your property and land                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Statutory Nuisance</b>   | A Local Authorities determination that an activity can or has had a local environmental impact that creates an unreasonable interference with the use and enjoyment of adjacent or nearby sites / premises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Local Authorities</b>    | UK local government and their councils environmental health departments responsible for the implementation, management and monitoring of compliance to environmental law                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Consents</b>             | Consents issued and approved by Local Authorities for activities that can be completed within specific requirements based on their location and potential for local environmental impact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Abatement notices</b>    | Issued by local authorities to control activities that are deemed to be causing a statutory nuisance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Best Practical Means</b> | <p>Management controls used and set to control activities that can generate statutory nuisances should consider the following points to determine their applicability and effectiveness:</p> <ul style="list-style-type: none"> <li>• Regard to the current state of technical knowledge</li> <li>• The local conditions and circumstances</li> <li>• The financial implications</li> <li>• The means to be employed including the design, installation, maintenance and manner and periods of operation and plant and machinery, and the design, construction and maintenance of buildings and structures</li> </ul> <p>So far as compatible with any duty imposed by law and has to be compatible with safety and safe working conditions</p> |

## Legislation and Regulation

England, Wales, Scotland and Northern Ireland (EN) (W) (S) (NI)

Environmental Protection Act, 1990: The Act recognises that activities from a site or premises can have local environmental impacts that can be deemed a statutory nuisance.

The Act provides Local Authorities with powers and duties to manage issues determined as a statutory nuisance through either remedial or preventative action, by the issue of consents or abatement notices that set out the requirements that have to be met by the approved activities.

Commercial activities, including construction, may have requirements set out in consents that are granted as part of the Local Authority planning process.

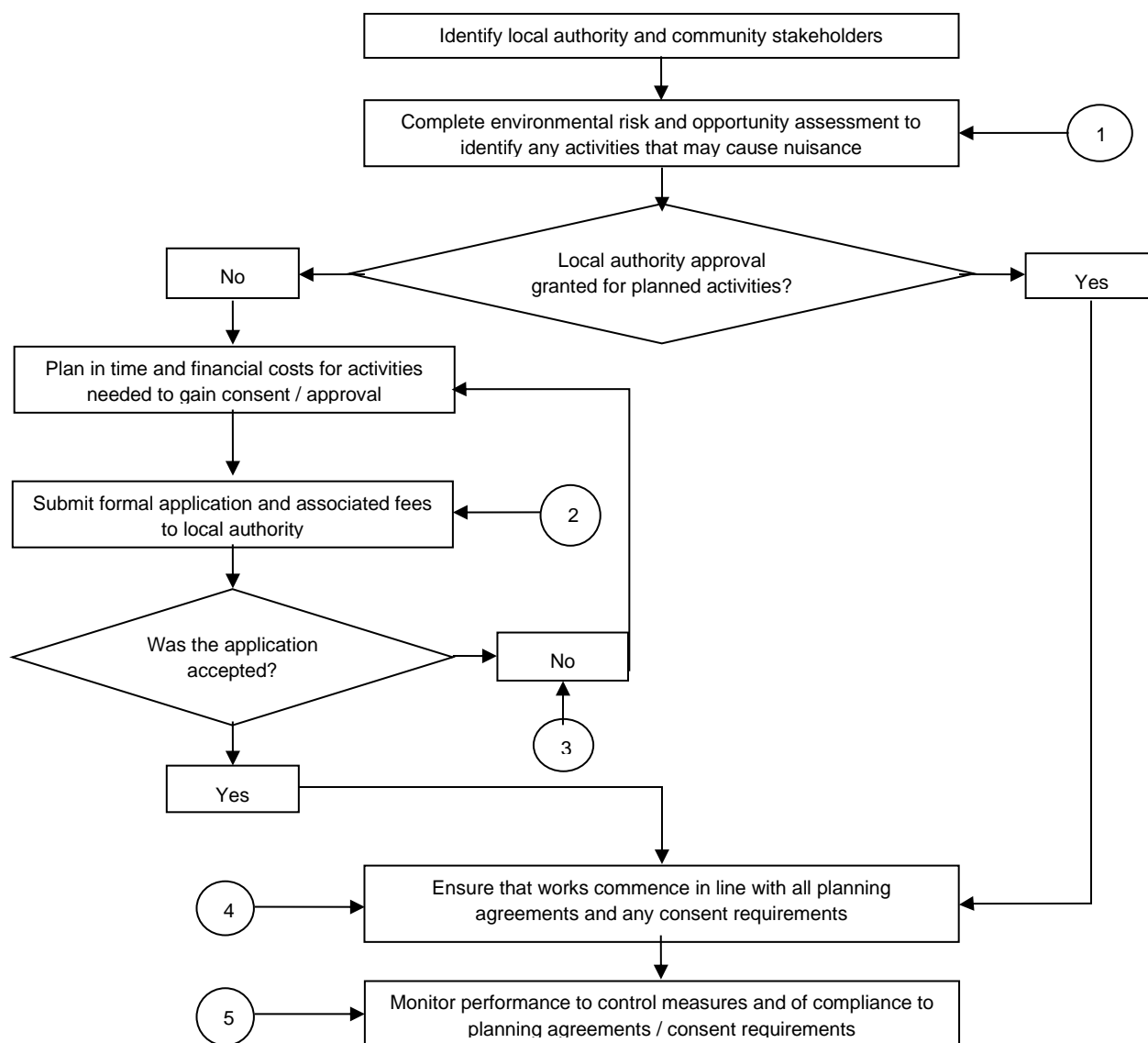
However a Local Authority can also place activities under consents retrospectively or issue abatement notices if they believe that commercial activities are generating a local environmental impact that causes a statutory nuisance. Non-compliance can result in prosecution, prohibition or improvement sanctions as well as the potential for compensation claims from the local community.

The act also defines Best Practical Means as a framework for assessing the acceptability of the management controls applied to an activity to minimise and reduce the local environmental impact of the activity.

Clean Neighbourhoods and Environment Act, 2005: Encompasses many areas of the law affecting local environmental quality. Provisions of this Act cover the following areas: crime and disorder, vehicles, litter and refuse, graffiti and defacements, waste, noise, dogs, and architecture and the built environment.

The Act classifies statutory nuisances (noise, vibration, artificial light, dust, odours, litter etc.) and provides local authorities, parish and community councils and the Environment Agency with more effective powers and tools to tackle poor environmental quality and anti-social behaviour.

### What you need to do



**Note 1 – Complete environmental risk and opportunity register**

The planning of activities is vital so that clear communication can be provided to the local community well in advance of activities starting.

The different concerns and considerations of the local authority and community stakeholders need to be considered in terms of the potential impacts our activities could have on them.

Contact the Local Authority to ensure that they are notified of the works and to provide them with contact details of the project management team including the number for the public to request information or log a complaint.

**Note 2 – Submit application to Local Authority**

If a specific application is required this is usually completed as part of the planning approval process. However if this is not the case contact your local authority planning department for guidance. Note: Any assessment activities required can be completed across an 8 week period while it can take up to 14 weeks to gain the required local authority approvals and this is just for the application.

**Note 3 – Application refused**

The letter issued regarding the application and its refusal will set out how an appeal against the decision can be made.

**Note 4 – Carry out works in line with planning agreements and any consent requirements**

Document activities that can generate local environmental impacts which can create nuisance to the local community if not mitigated or managed.

Risks and the control measures to mitigate or manage them need to be identified and clearly documented in project documentation - Management Plan, Work Package Plans, Risk Assessments and Task Briefing Sheets:

- How they will be managed?
- How any specific consent requirements are addressed?
- Specific working restrictions stated within the consents
- Details and information of receptors in the Emergency/Incident Response Plan and any other specific plans required such as noise and vibration management plans
- Is the local authority aware of the work and do they have contact details for the project management team including the number for the public to request information or log a complaint?
- Is the project registered as part of the Considerate Constructors Scheme?

**Note 5 – Monitor performance to control measures and compliance**

Remember the companies golden rules 1) be fit for work 2) always receive a briefing before starting work 3) report all unsafe events and conditions 4) stop work if anything changes

If the control measures fail follow the emergency arrangements set for the activity if needed and stop the works to review risk assessment and control measures and/or agreement and conditions of the consent or permit.

Note: The local authority needs to be notified of any proposed changes to the agreed methodology/process as part of the meeting the requirement of regulatory consent approval process under the Control of Pollution Act 1974.

**Planning**

The planning of activities and consideration of the potential impact on the local community is fundamental in ensuring that the local authority and community stakeholders can be kept informed in advance of activities starting as to the potential impact of an activity as well as its start and finish date.



The following points provide some general considerations when planning of activities:

- **Inform** local residents about the works you are doing, be polite and try to alleviate their concerns.
- **Plan** all noisy works inside local typical working hours (Each local authority has specific typically working hours based on the activity type and its location, check with the local authority)
- **Minimise** all noise when working outside of typical working hours
- **Question** whether any works during unsociable hours are ESSENTIAL
- Switch **vehicles and plant off** when not in use, do not leave them running idle
- **Avoid** playing loud music or radios when in residential areas
- **Never** use powered cutting equipment without water suppression
- **Cover or dampen** down piles of materials which have the potential to cause dust
- **Always** direct floodlights and traffic lights towards the work area – take care that the light is directed away from residential properties
- **Limit speed** to 5 or 10mph to reduce increased risk of dust emission from vehicle movements
- **Stop works** if a complaint from a member of public or a regulator is received and follow the HSES incident reporting process

### Local Community Engagement

A key opportunity when planning activities that can have a local environmental impact is using the mitigation and management of them as a tool to plan and complete local community engagement.

Balfour Beatty addresses this in two ways and that is through the implementation of Involved and the registration of our projects to the Considerate Constructors Scheme as per the Balfour Beatty Enablon Data Requirements ([SUS-RM-0001a](#)).

Details of Involved can be gained from the 360 page here:

<https://home360.balfourbeatty.com/Involved/Pages/Default.aspx>

Details of the Considerate Constructors Scheme can be gained from the 360 page here:

<https://home360.balfourbeatty.com/bbcsuk/home/OurEnablingFunctions/Sustainability/ConsiderateConstructors/Pages/Default.aspx>

Good House Keeping is fundamental to good neighbour relations and for ensuring that Balfour Beatty's work in communities does not lead to experiences of nuisance by the local community. Vital to this is ensuring that a site is established right from the start please refer to the HSES procedure Site Establishment (HSES-PR-0056) for further details.

### Light Pollution:

Light pollution can be considered a nuisance under law if it impacts a person's enjoyment or use of their property and light pollution can be generated by any artificially created light if the area of its illumination is not carefully considered areas leading to such issues as:

- Permanent lights encroaching on local homes or private buildings
- Temporary lights pointing towards local homes or private buildings
- Lights from plant and fleet flashing into local homes or private buildings

The nature of the company's activities and the locations of its sites, offices and depots mean that the use of temporary and permanent lights is a necessity. The following offers some points for consideration when

planning the installation of permanent lighting, the use of temporary lighting or the impact that plant and fleeting lighting can have on the local community

In order to maintain security then lighting will be required at depots. When positioning lighting, it should be set in such a way to:

- Not shine on any private residences
- Not shine on any occupied property (residential home, hospitals etc.)
- Be the lowest reasonable level of brightness (Lux)

Operations require lighting to ensure safe working conditions, ensure that

- Lights are positioned to prevent light shining directly into any private residences
- Wherever possible use lights with collars or shades that ensure the light is focused in the correct area

Where the company is required to perform emergency works make every attempt to follow the requirements of planned work. Where light pollution cannot be avoided, and within reasonable working hours, site teams should inform the people who will be impacted by the pollution and explain the nature of the emergency works.

### **Air Quality:**

Local Environmental impacts that can have an impact on local air quality are an area of continued legislative and regulative focus from the UK Government. Consideration for the mitigation of such potential impacts needs to be considered in the planning of activities (i.e. road traffic management) as well as the specification and procurement of the plant and fleet used within Balfour Beatty's operational activities.

Please refer to the following procedures and reference materials for further details of specific areas that need consideration:

- Air Quality and Dust ([ENV-RM-0014a](#))
- Non-Road Mobile Machinery Emissions Regulations ([ENV-RM-0011a](#)) for activities in London

### **Vibration:**

Vibration can be caused by a number different activities including:

- Excavations
- Piling
- Building construction
- Plant and fleet use

The local environmental impacts that vibration can have, include:

- Structural damage to the built environment
- Interrupted sleep
- Annoyance and nuisance

If the planned activities have the potential to generate vibration that could lead to damage to the built environment or impact the local community then the requirement to mitigate the impact of vibration and monitor the success of the mitigation measure may be required.

Prior to work activities commencing an evaluation of those areas sensitive to vibration may need to be completed and a monitoring system implemented to ensure that the vibration effects are monitored and mitigated to acceptable levels.

When needing to consider the potential impact of vibration of existing structures then the need to create a base line of the existing built environment quality is vital to ensure that an accurate picture of any vibration damage can be directly attributed to the activities that caused it.

When planning works the evaluation of the potential for vibration generated by activities should consider:

- Identification of sensitive structures
- Completion of monitoring and condition surveying of sensitive structures to create a baseline of existing condition of structures
- Agreement of the condition survey report results with the owner of the structure
- Adequate monitoring during the works
- Post activities complete monitoring and condition surveying of sensitive structures for agreement with owner of structure

When planning works that can impact the local community due to vibration generated by activities then consider the following:

- The substitution of plant and/or operations with a low frequency vibrational output with that of a high frequency output
- Traffic movements to be minimised when close to sensitive locations / public interfaces
- Plant and fleet with vibration reduction designs
- The positioning of plant on vibration mats or a heavy single layered base
- The use of noise / vibration barriers to protect sensitive locations / public interfaces
- Ensuring all plant and fleet is maintained in accordance with the manufacturer's instructions

## Noise

Balfour Beatty activities due to their nature generate noise and depending on the location of the activities may need to follow specific consent requirements set out by a Local Authority as part of the planning process or follow client requirements that are part of their operating requirements.

Please refer to the following reference material for further details:

- Noise [ENV-RM-0013b](#)

## Supplementary Information

- Through our involvement in the [Supply Chain School](#), we have now added 15 new one hour e-learning courses on specific sustainability topics. These courses are primarily designed for project managers, quantity surveyors, supply chain and procurement staff, buyers, sustainability advisors, environmental advisors, commercial teams and internal audit.

However, they may also be useful for other members of staff. They can be accessed via our [Learning Portal](#) Please refer to:

- Introduction to Sustainable Construction
  - Introduction to Economy and Community
  - Introduction to Environmental Management
- Vibration technical guidance can be gained via the Balfour Beatty CIRA membership. Details can be found here on 360 <https://home360.balfourbeatty.com/sustainability/UKEMT/Pages/CIRIA.aspx> Please refer to: Ground borne vibrations arising from piling, CIRIA Technical Notes 142, 1992

## UK Documentation

| Reference                    | Type                        | Title                                            |
|------------------------------|-----------------------------|--------------------------------------------------|
| <a href="#">ENV-RM-0013b</a> | Reference Material          | Nuisance Training                                |
| <a href="#">ENV-RM-0013c</a> | Reference Material – poster | 10 Questions about Environmental Nuisance Poster |
| <a href="#">ENV-RM-0013d</a> | Reference Material - poster | Environmental Nuisance Posters                   |
| <a href="#">ENV-RM-0013e</a> | Reference Material - poster | Considerate Constructors Poster                  |
| <a href="#">ENV-TB-0013a</a> | Toolbox Talk                | Nuisance                                         |
| <a href="#">ENV-TB-0013b</a> | Toolbox Talk                | Light Pollution                                  |



# NOTICE OF TEMPORARY TRAFFIC ORDER

## Denbighshire County Council

### Various Rights of Way – Rhyl Community

### Notice of Temporary Prohibition of Pedestrians Order

### Road Traffic Regulation Act 1984 - Section 14

Denbighshire County Council intends not sooner than 7 days from 26<sup>th</sup> February, 2020 to make an Order prohibiting pedestrians, for reasons of public safety, from using the rights of way stated in the Schedule below.

The reason for the closures is to allow for the construction of the Rhyl East Coastal Defence Works, which will involve movement of heavy plant and materials along the Promenade.

On site the closed sections will be shown on the plan accompanying this notice. There will be no alternative routes available.

The Order comes into force on 16<sup>th</sup> March 2020 for a six-month period, although it is anticipated the works will take more than 6 months to complete, requiring extensions to the order up until approximately July 2022 to allow for completion of the works.

### Schedule of Rights of Way to be Closed at Rhyl Denbighshire.

| Right of way       | Section                                                                           |
|--------------------|-----------------------------------------------------------------------------------|
| Public Footpath 10 | which runs from the end of Hilton Drive to the Promenade                          |
| Public Footpath 11 | which runs from the end of Garford Road and to the Promenade by Rhyl Golf Course. |

Dated 26<sup>th</sup> February 2020.

*Gary Williams*

Gary Williams, Head of Legal HR and Democratic Services,  
Denbighshire County Council, County Hall, Wynnstay Road, Ruthin. Denbighshire

# RHYBUDD O ORCHYMYN TRAFFIG DROS DRO

## Cyngor Sir Ddinbych

### Hawliau Tramwy Amrywiol - Cymuned y Rhyl

### Rhybudd o Orchymyn Gwahardd Cerddwyr Dros Dro

### Deddf Rheoleiddio Traffig Ffyrdd 1984 - Adran 14

Mae Cyngor Sir Ddinbych yn bwriadu gwneud Gorchymyn ddim cynt na 7 diwrnod o 26 Chwefror, 2020 a fydd yn gwahardd unrhyw gerddwr, am resymau diogelwch y cyhoedd, rhag defnyddio'r hawliau tramwy y cyfeirir atynt yn yr Atodlen isod.

Y rheswm dros y cau yw caniatáu ar gyfer adeiladu Gwaith Amddiffyniad Arfordirol Dwyrain y Rhyl, a fydd yn golygu symud peiriannau trwm a deunyddiau ar hyd Y Promenâd.

Ar y safle, bydd yr adrannau caeedig yn cael eu dangos ar y cynllun sy'n cyd-fynd â'r rhybudd hwn.


Ni fydd llwybrau eraill ar gael.

Bydd y Gorchymyn yn dod i rym ar 16 Mawrth 2020 am gyfnod o chwe mis, er y rhagwelir y bydd y gwaith yn cymryd mwy na 6 mis i'w gwblhau, bydd angen estyniadau i'r Gorchymyn hyd oddeutu Gorffennaf 2022 i ganiatáu i'r gwaith gael ei gwblhau.

### Atodlen o Hawliau Tramwy sydd i'w cau yn y Rhyl, Sir Ddinbych.

| Hawl tramwy         | Adran                                                                  |
|---------------------|------------------------------------------------------------------------|
| Llwybr Cyhoeddus 10 | sy'n mynd o ddiwedd Hilton Drive i'r Promenâd                          |
| Llwybr Cyhoeddus 11 | sy'n mynd o ddiwedd Garford Road ac i'r Promenâd ger Cwrs Golf y Rhyl. |

Dyddiedig 26 Chwefror 2020.



Gary Williams, Pennaeth y Gwasanaethau Cyfreithiol, AD a Democrataidd,  
Cyngor Sir Ddinbych, Neuadd y Sir, Ffordd Wynnstay, Rhuthun, Sir Ddinbych