

TRADE SPECIFICATION

ROADS & SEWERS TO BINDER COURSE & ROADS, SEWERS & FOOTPATH STAGE 2 WORKS.

GENERAL

- a) This Trade Specification gives information regarding the procurement of materials, installation of materials and on-site working methods to ensure the correct standards and compliance is achieved on site. This trade specification is to be read alongside working drawings, BDW Standard Details, manufacturer's literature and the Barratt Construction Best Practice Guide. Any statutory requirement relating to the Trade Specification takes precedent. If any doubts remain regarding the information given or further clarity is required, these concerns must be communicated to the Commercial Department BEFORE proceeding.
- b) **BDW Trading Limited**
Barratt Homes and David Wilson Homes are trading names of BDW Trading Limited "the Company".
- c) **Site Condition**
The Contractor is to examine the drawings, visit the site in order to ascertain position of site office, compound, electricity and water supplies and the local conditions, nature of the soil, extent of wet conditions, etc as no claim for adverse site conditions will be entertained.
- d) **Materials**
The Contractor must ensure that all materials are satisfactory for use and have not been subject to deterioration and confirm to the relevant BSS, if applicable or Agrément Certificates, NHBC and Local Authority requirements. Failure resulting from the Contractor using unsuitable or damaged materials will incur the Contractor the costs of rectifying the same.
- e) **Unloading Materials**
It is the Contractors responsibility for unloading and storing all of their own materials.
- f) **Sub-Contractor**
No work is to be further Sub-Contracted without the prior approval of the Company.
- g) **Defective Workmanship**
All defects arising from bad workmanship by Contractors are to be remedied by the Contractor at no cost to the Company. Failure by the Contractor to carry out this contractual obligation resulting in an alternative contractor carrying out this work will incur the Contractor with the cost thereof.

Should any element of work, undertaken by a preceding trade, be considered deficient and inhibiting progression by this trade, all such defects must be brought to the attention of BDW Site Management for remedy prior to the commencement of the works.

- h) **Clearing**
Contractor is responsible for clearing up and removing waste materials resulting from executing his trade process. Failure to comply with this requirement resulting in the Company's labour performing this task will result in contra charges.
- i) **Contract Conditions**
The Contractors attention is drawn to the Company's Conditions of Contract and General Terms.
- j) **Group Suppliers**
Contractors should be aware that the Company operates an agreed National specification with:

Below Ground Drainage –

Polypipe Limited

Broomhouse Lane
Edlington
Doncaster
DN12 1ES

Merchants –

- All pipe work including fittings (concrete, clay and plastic)
- Manhole rings,
- Cover slabs,
- Road gullies,
- Cast iron covers gully,
- Gratings.
- Concrete slabs,
- Kerbs and edgings,
- Polypipe plot drainage and geotextiles
- Merchants also offer Contractors a full take-off service including Value Engineering

Buildbase Civils and Lintels

Gemini One
5520 Oxford Business Park South
Cowley
Oxford
OX4 2LL

Or

Keyline Builders Merchants

Unit S3, 8 Strathkelvin Place
Kirkintilloch
Glasgow
G66 1XH

No other manufacturers' products are to be specified unless otherwise stated in an addendum to this specification.

1. SCOPE OF WORKS

- 1.1. The basis on which these works are to be placed i.e. all risk, or re-measure shall be indicated within the invitation to tender letter. It is the Contractors responsibility to ascertain this information as no claims based upon want of knowledge will be accepted.
- 1.2. All tenders are to include the schedule of tender rates, which have been used to provide the tender sum, in the standard format [Groundworks Tender Return](#) which is provided by the Company.
- 1.3. This specification covers the Construction of Roads and Sewers up to and including the uppermost layer of tarmac underneath the final surfacing (which should contain sufficient fines to avoid an open texture) and kerbs (which are to be laid on cured concrete kerb

beams which will have been shuttered both sides in accordance with working drawings) where roads are to be finished with block pavers no kerbs are to be laid, instead you should allow for a temporary block restraint.

- 1.4. Contractors pricing this contract must complete the summary schedule in the appendix to this specification.
- 1.5. All materials and work must be in accordance with the specification requirements of the Local highways and sewer adopting authorities.
- 1.6. The use of unauthorised standpipes are strictly prohibited and under no circumstances to be used on any of our developments.
- 1.7. Any mobile plant brought onto site shall meet the requirements laid down in the Provision and Use of Work Equipment Regulations.
- 1.8. Contractors shall include for keeping all existing roads, used for access, clean and free from any mud, debris or other deleterious material for the duration of your construction programme.
- 1.9. Any queries should be directed to the quantity surveyor before submitting your tender, as no claims for want of knowledge will be entertained.

2. GUIDANCE NOTES

- 2.1. A fully inclusive fixed price lump sum for Roads/Sewers (excluding capping layer & service trenches and ducts unless tendered as “all risk” – see scope of works above) is required in accordance with the below specification, tender drawings enclosed and Invitation to tender letter.
- 2.2. The Contractor is to ascertain the nature, character and extent of the proposed work. The Contractor is required to visit the site and to satisfy himself as to the nature of the ground, local conditions and accessibility of the site. The Contractor will acquaint himself with the conditions affecting the supply of labour, materials, Local Highways Authority and relevant local Statutory Authority requirements/specifications and any other matters, as any claim based upon want of knowledge in these respects will not be accepted.
- 2.3. Contractors are deemed to have priced in accordance with the current codes of practice, good standards of workmanship, NHBC “Buildmark”, Water Authority and Local Authority requirements. All work must further conform to local By-laws and other Authorities and bodies.
- 2.4. Adequate and proper supervision of labour is to be maintained throughout the duration of the contract. A competent foreman or charge hand to be kept on site during the works.
- 2.5. Should there be any apparent conflict between the requirements of the contract drawings enclosed and the specification, the situation should be clarified with the Company in writing prior to commencement.
- 2.6. All variations to be agreed in writing prior to commencement of such work. The value of all such variations should be formally agreed with the relevant Job Surveyor prior to execution.
- 2.7. It should be noted that where shown on drawings construction depth of roads, drives and

footpaths are to minimum adopting authority standards and will obviously vary dependent upon the findings of the soil report and site conditions. The contractor is to adopt the LA drawings and specification as per the location of the development.

- 2.8. All works carried out to adoptable areas are to be the relevant adopting authority standards and any failure due to incorrect construction thickness or materials will be corrected by the Contractor at no expense to the Company. The contractor is to works are completed in accordance with the LA specification, testing requirements and Water Authority requirements, specification and testing requirements as per the location of the development.
- 2.9. Roads/Sewers works are deemed to include for all roads, parking areas (excluding private/domestic). Public Open Space works and main drainage runs and laterals (measured to nearest domestic manhole). The balance of the work is deemed to be included within the Groundwork contract (i.e. house/garage foundations, front/rear gardens, domestic drainage, oversite slabs, service entries, domestic paths/patios, drives, etc.). A schedule of rates is required for site development works i.e. screen walls, public footpaths etc.
- 2.10. The Contractor should note that where occupied houses are adjacent to the site noise and vibration nuisance must be kept to a minimum.
- 2.11. The Contractor is to allow for complying with adopting authority specifications for the Layout and Construction of new Estate Roads and carrying out the works to their entire satisfaction. Therefore the regional LA drawings will supersede the constructions drawings for adopted areas on the development.
- 2.12. The Contractor is to allow for complying with Department of Environment specification for Road and Bridge Works and all contract drawings (item 2.6 is to take precedence).
- 2.13. The Contractor is to allow for maintaining the works including remedial works for a period of eighteen months from the certified date of completion (allowance to be made within Roads/Sewers contract). To this end retention will be treated as follows:
 - 2.13.1. Retention of 5% from all Valuations/Claims shall be deducted from payment (unless otherwise agreed to Global limit).
 - 2.13.2. 50% of the retained monies will be released on practical completion.
 - 2.13.3. The balance of retained monies (net of any deductions made under the Housing Grant Regeneration Act 1996) will be released on receipt of the adopting authorities certificate or written confirmation of acceptance by the Clerk of Works, on the status of both roads and sewers.
- 2.14. The Contractors final application must be accompanied by:
 - 2.14.1. Fully marked-up drawings showing the “as-built” locations of all service ducts and positions of branches from manholes measured to known points.
 - 2.14.2. Details of any amendments and/or variations made on site which contradict the working drawings with the original instruction or letter of authorisation from the respective Clerk of Works.
 - 2.14.3. All material laboratory test certificates.

- 2.15. Contractors are to allow for within their tender sum for all costs associated with testing materials provided by them to satisfy Local Authority Highway Officer's requirement. Test certificates for all imported materials shall be provided to BDW at the point of delivery confirming that all materials are supplied in accordance with specification. Should the Company receive any costs from Local Authorities/County Councils in respect of the above, these costs will be charged to the Contractor. Where CBR tests are required on road formations, plate tests on capping and sub-base and plate tests on drainage trench backfill, these shall be allowed in accordance with LA requirements and the results shall be provided to BDW for inspection prior to any stage payments. In the absence of LA guidance this shall be carried out at 20m intervals.
- 2.16. Should the Contractor or persons either acting as his Sub-Contractor or Supplier cause damage to Statutory Authority plant or Local Authority property then the full costs will be charged to the Contractor.
- 2.17. Contractors are to price strictly in accordance with the pricing notes using headings and schedule provided. A full bill of quantities showing all measurements, provide a fully marked-up drawing showing all areas included and provide a full schedule of rates at the time of tender submission.
- 2.18. Variations to contract will not be accepted unless agreed in writing before work commences with the site surveyor or engineer.
- 2.19. You will be deemed to have included for excavating in whatever ground conditions may be encountered with the exception of rock, as per the detailed site investigation (unless all risk). Rock is defined as that material which requires the use of specialist plant to be removed, either a pneumatic compact hammer or by blasting.
- 2.20. Your tender must also be accompanied by a schedule of daywork rates for both labour and materials, if applicable.

3. PRE-START SITE INVESTIGATION

- 3.1. The Contractor shall be deemed to have full knowledge of all matters appertaining to the execution of the works. He is required to visit the site and acquaint himself with all the features thereof including the nature of the ground and subsoil as no claim will be authorised due to lack of knowledge in any respects.
- 3.2. Subsoil information (soils report) is attached for information. The Contractor should make their own judgments on the offered information to ensure that the details are adequate for tender purposes. Contractors are deemed to have allowed for any de-watering that may be necessary and to have made provision for all attendance's including suitable acoustics baffles where construction adjoins occupied properties. Contractors should make provision for all necessary trench supports in accordance with recognised guidelines. The contractor will make full allowances for the contamination strategy & topsoil depths for the development.
- 3.3. Should Contractors feel it necessary, they may carry out, at their own expense, additional trial holes. However, arrangements must be made with the Company prior to these works being carried out.
- 3.4. Although whilst submitting a price for the scheme the contractor can work to the storm and foul sewers and road area as contained with the enclosed design drawings. Prior to

accepting the contract the contractor is to visit the site to ensure that the invert levels of any existing manholes that are required to be tied into are in accordance with the documents priced, and to ensure that the positions both horizontally and vertically accord with the price submitted, (i.e. we would not expect for a claim to be made for an extra 4m of road or sewers due to the tie in point being different from the design drawing.) It is for the Contractor to ascertain this prior to being awarded the contract, as no future claims will be considered in this respect.

- 3.5. The Contractor shall review the proposed timeline and estimated quantities for any earthworks operations ensure that any foreseen requirements for double handing of materials or shortfall in requirements are raised with BDW to enable appropriate mitigation steps to be agreed. The Contractor shall also provide on request a detailed cost analysis of the impact of any potential adjustments to site levels and provide BDW with detailed analysis of costs for value engineering opportunities and participate in a pre-start value engineering review with BDW.
- 3.6. The Contractor will be required to attend on site pre-start meetings with, as a minimum not limited to: the Highways Authority, Water Authority and all service providers and a documented record of such meetings kept and provided to BDW upon request. The Contractor shall also ensure phased inspections of the works are arranged with the adopting authority in accordance with the adopting authority requirements. The Contractor shall ensure that BDW's Appropriately Qualified Person (AQP) and the Site Manager are informed of all site inspection meetings.

4. PRELIMINARIES

- 4.1. All attendance's on Main Contractor BDW Trading Limited.
- 4.2. Preliminary costs & profit are to be included within your rates and not as separate item(s), as additional works will be paid on "rates" basis only and no claim for additional preliminary costs and or plant/labour/material inefficiencies will be accepted. Detailed and broken down into the relevant stages.
- 4.3. The Contractor should include for within their tender offer, means of cleaning vehicle wheels associated with their works prior to egress from the site, for the duration of works (by means of mechanical sweeper if necessary), to clean all site roads and public highways adjoining the development to the Local Authority's satisfaction and site roads to the Company's satisfaction (to be allowed for within Roads/Sewers).
- 4.4. The Company may provide, from time to time, a mechanical road sweeper to attend site to clean site roads, during the duration of the contract this does not negate the contractor's responsibility.
- 4.5. Contractors will be provided FOC by the Company the use of the following:-
 - 4.5.1. Water for the works at certain points.
 - 4.5.2. Shared welfare facilities.
- 4.6. The Contractor is to allow for the off-loading, storing and protecting within the compound, as necessary, of any groundwork's materials supplied either by him or by the Company. Contractor will be responsible for any deterioration in materials and the cost of replacement due to inadequate storage.

4.7. The Contractor is responsible for maintaining general site tidiness; including clearance and placing any debris created by the Contractor, in skip containers for disposal by the Contractor as and when instructed by the Company's site representative.

4.8. Attendance on all Sub-Contractors working under the Contractor's authority such as PCC floor beam installers (to include for storage areas, temporary roads, hard-standings, access points etc.).

5. SETTING OUT

5.1. The Contractor is to include for all costs associated with detailed setting out from co-ordinates provided by the Company's engineers. It is the responsibility of the Contractor to check all setting out co-ordinates and levels given to him by the Company's engineers. Should any discrepancies be noted, these should be advised to the Company in writing prior to commencement. Failure to comply will result in the Contractor being deemed to have accepted the details provided and made them liable for the costs associated with any subsequent abortive groundwork costs. An "As Built" survey will be commissioned by the Company's engineers to ensure that the roads/houses have been set out in accordance with the co-ordinates provided. All setting-out must be carried out by a qualified, competent engineer.

5.2. The Contractor is required to confirm the required local scale factor for the site and the local stations to be used for setting out the site. The Contractor shall ensure all existing ground levels are in accordance with the survey provided paying particular attention to highway tie in points and any boundary points of interest. Any discrepancies must be raised with BDW prior to commencement of works. Failure to comply will result in the Contractor being deemed to have accepted the details provided and made them liable for the costs associated with any subsequent abortive groundwork costs.

6. EXISTING ROADS & SEWERS

6.1. The Contractor shall include for making all connections & alterations into existing sewers & manholes and maintaining flow as necessary. The Contractor should satisfy himself of their position and condition prior to the submission of the tender. All remedial work to these manholes (if required) shall be deemed to be included within your tender sum.

6.2. The Contractor shall include for making good connections to existing roads and footpaths together with the provision of all notices and the obtaining of all licenses necessary from any relevant Authority prior to commencing the works

7. OFF-SITE WORKS

7.1. Include for all foul and storm outfalls (if applicable), together with road opening notices and / or connection to public sewer notices. Contractor is to allow for connecting into existing sewers and marrying roads and pavements including necessary reinstatement.

8. SITE CLEARANCE

8.1. Allow for general site clearance of the whole working areas of whatever nature including cutting down brushwood, hedges, fencing, shrubs and mechanical debris. Allow for disposal costs as no burning on site will be allowed). Allow for all temporary fencing/tree protection to Local Authority necessary requirements.

8.2. You will be responsible for clearing away your own debris at the end of each day, to your spoil heap and the off-site. Road clean will be included in your price for the duration of the build, not just spoil or topsoil removal.

9. TOPSOIL SITE STRIP

9.1. Contractor to excavate and remove topsoil to levels indicated in the site investigation report/detail drawings. The contractor is place excavated topsoil into heaps in positions agreed by the Company's site manager and then remove from site within 7 (seven) days unless otherwise agreed in writing.

9.2. It should be assumed that the whole area of work is to be stripped at the same time, although this area and other areas designated for site strip will be at the discretion of the Site Manager/Contracts Manager and shall be valued in accordance with the contract rates.

10. DRAINAGE

10.1. The Contractor is to provide all manholes, and appropriate diameter pipe runs as per drawing details.

10.2. All manhole frames must be suitably haunched and secured to chambers (this is most easily achieved by using manufacturer's clips).

10.3. Provide all first off manholes (see specification below), in accordance with co-ordinates provided.

10.4. Main drain runs to include for all lateral connections, road gullies, P1's etc. up to but excluding first manhole finishing behind footpath edging (taken in groundwork's package) to include for jetting and testing on completion.

10.5. Laterals shall be laid at a minimum fall of 1:80, unless otherwise dictated by the working drawings, site conditions or adopting authority specification ready for connection from plot drainage at a depth of 1.00m. Should the fall dictate that backdrops will be required into the manholes concerned, these will be included within your tender and qualified accordingly. Your tender shall also include for the requisite specified bed and surround, backfill and additional disposal of spoil offsite to and from lateral runs.

10.6. All manhole types and chamber sizes (C1.2.1.12.3) are to be taken from the latest edition of the Water Authorities Association Sewers for adoption. C1.21.12.5 states that the sizes quoted are a minimum and if two (or more) pipes enter the manhole the chamber size must be sufficient to accommodate adequate benching. It is the contractor's responsibility to ensure that ring sizes quoted in their tender are sufficient to suit site conditions and the adopting Water Authority requirements.

10.7. All manholes to comply with the latest edition of the Water Authorities Association sewers for adoption incorporating step rings Polypropylene encapsulated to comply with W/S 4-33-01 in place of step irons or ladders where required.

10.8. Where works include, or are, associated with pumping stations all works are to be in accordance with the adopting authority's sewage pumping stations specification.

- 10.9. The contractor shall include for periodic cleaning of main sewer runs and lateral connections as necessary to prevent build-up of waste or debris until the adoption of the sewers or the end of any defects period as required under the relevant latest edition of the Water Authorities Association Sewers for Adoption.
- 10.10. The Contractor shall ensure an appropriate quality of works check is carried out on all drainage, manholes and inspection chambers. Documented evidence of this shall be provided to BDW prior to laying of base course and shall include as a minimum that manholes are built to the specified details, CCTV of drainage runs has been reviewed and any defects or damaged items have been removed and rectified.
- 10.11. The Contractor shall be responsible for any remedial costs, as required to be completed to the adoptable sewers either by the Contractor or completed by the adopting Water Authority.

11. GULLEYS

- 11.1. All gully gratings are to be positioned at the necessary level to allow for the surface water to drain whilst the roads are at the uppermost level of tarmac prior to finishes, not finished level as this is specified under separate enquiry (Roads & Sewers Stage 2 Roadworks).
- 11.2. **Gully gratings are to be wrapped in Hessian. The contractor shall install a proprietary re-usable silt trap system that is effective in preventing blocked gullies, surface flooding and watercourse contamination due to silt and debris build up. The contractor shall allow for supply and installation, removal and re-use on the site in accordance with the construction programme. The proprietary silt traps should be inspected regularly and replaced periodically as necessary to ensure gullies remain in working order.**

12. DUCT CROSSINGS

- 12.1. Where adequate drawings are not available, duct crossings shall be remeasured and monies due calculated on a unit rate basis. Accordingly please indicate within your tender your rates for the following duct sizes.

100mm diameter, concrete bed and surround	£	per m
150mm diameter, concrete bed and surround	£	per m
225mm diameter, concrete bed and surround	£	per m
300mm diameter, concrete bed and surround	£	per m

Assume 750mm depth for 100mm and 150mm diameter ducts and 1000mm for 225mm and 300mm ducts.

13. CCTV & AS BUILT SURVEYS

- 13.1. Prior to completion of any works including the construction of sewers and drains or adoptable works and as a condition of payment the Contractor shall carry out and supply to the Company a CCTV survey of all sewer and drain runs forming part of the works. Surveys must be carried out and any drainage remedial works completed prior to the completion of each parcel or section of road as agreed with BDW. The CCTV survey shall be deemed to include gully connections and lateral pipes if required by the Adopting Authority. No claims for costs of additional surveys or additional visits shall be entertained by BDW in respect of the above. The Contractor is to provide 2 copies of video and report to the Company.

- 13.2. On completion of the works and the construction of sewers, drains and adopted works and as a condition precedent to the release of any retention the Contractor shall supply to the Company 1 hard copy and 1 copy on disc in a format to be agreed of an "as-built" survey of the works identifying but not limited to position and level of levels manholes, drain and sewer runs, street furniture and kerb & edging alignment and level. As built surveys shall be provided upon completion of each phase or defined stage of works as agreed with BDW.
- 13.3. On completion of the site a comprehensive information pack is to be completed by the Contractor and issued to BDW. This shall include:
- Roads / Sewers / Footpaths / POS / S278 / S38 Site inspection reports and records including safety audit review and including the pre-maintenance inspection with the Adopting Authority.
 - Manhole certificates for each manhole.
 - Records / CCTV of gullies jetted and CCTV's upon request of client or Adopting Authority.
 - CCTV survey of all sewers confirming no remaining defects.
 - Visual inspection survey and as built survey of all attenuation features and headwalls.
 - Full as built survey including but not limited to; position and levels of manholes, drain and sewer runs, services line and level, street furniture and kerb & edging line and level.
 - GPS records shall be provided to BDW where available.
 - Testing and sample results and certificates.
 - Any other information as requested by BDW AQP.

14. CAPPING LAYER (RATE ONLY IF NOT ALL-RISK)

- 14.1. Your tender shall be based upon construction thickness as stipulated within the road construction drawings and in accordance with the Local Authority standard construction details. Should site conditions dictate that additional sub-base or capping layer is required, then this shall be remeasured with any due monies calculated from unit rates, payment of such monies is conditional upon receipt of written instruction from the relevant Local Authority representative being provided and suitable substantiation provided by the Contractor. Accordingly please include within your tender additional rates as detailed below.
- 14.2. Where site conditions dictate the requirement of an additional sub-base or capping layer the additional depths of sub-base or capping layer shall be deemed to be included within any filling or making up of levels from the existing site levels to the underside of the required road construction. The Contractor should allow for filling or making up in suitable material to satisfy this requirement and in accordance with Local Authority requirements including allowance for any testing that may be required.

Excavate, dispose of spoil offsite, fill with approved capping	£	per m ³
Supply and Lay MOT type 1 (Add or Omit)	£	per m ³
Additional trim operation to capping layer	£	per m ²
Terram	£	per m ²
Weed killer/herbicide application	£	per m ²

15. ROADS/PARKING AREAS/SHARED ACCESS

- 15.1. The Contractor is to allow for any costs involved in setting out from co-ordinates supplied by the Company's engineers. The Contractor is to satisfy himself that co-ordinates are correct, as he will be liable for any errors emanating from incorrect data being used.
- 15.2. The Contractor is to allow for topsoil strip, excavate to reduce levels/make up levels as necessary with approved fill, excavate to formation and construct road to standard detailed. Sub base to suit site conditions. Allowances for additional sub-base and capping layers to be clearly indicated within the Contractors price.
- 15.3. Dense bitumen macadam road base and binder course shall be laid to comply with design drawings, levels and thicknesses and in accordance with the adopting authority specifications and requirements
- 15.4. Where work is required to existing areas of Highways, the Contractor is deemed to have included for all/any costs associated with obtaining Road Opening Licences and the like. The Contractor is to ensure that he possesses adequate cover to comply with Local Authority requirements where contract works are executed outside the site boundaries. Provision is to be made for the sealing off of and breaking out of any existing drains/services as required by the Local or Statutory Authorities. The Contractor is deemed to have included all costs associated with Traffic Management, Traffic Diversions or any other costs involved with obtaining suitable Licences or Permissions to carry out the works.
- 15.5. The Contractor will agree final levels with our final surfacing contractor as we will not pay for any regulating tarmac. The Contractor shall supply to the Company "as built" drawings detailing the line and level of the base course and or binder course and also of all kerbs and edgings installed by the Contractor.
- 15.6. Laying records for base, binder & surface course shall be provided by the Contractor for each visit and must be provided prior to stage payment. The records shall include as a minimum: Temperature of materials on arrival to site and when laid, binder & grading of material and Nuclear Density Meter (NDM) test results.
- 15.7. The Contractor is deemed to have included for bonding coats where required and shall be provided in accordance with LA requirements.
- 15.8. The Contractor shall include for cores on road constructions comprising a minimum 3 pairs per 1000m² of road or every 200m chainage. Tests to include thickness of bound layers, binder, grading and voids shall be carried out and results to be provided to BDW for inspection prior to stage payment.
- 15.9. The Contractor shall provide a survey of levels or "dips" upon completion of any section of binder course. Any deviances in the levels compared to the design and outside of the tolerances required by the LA or BDW AQP shall be highlighted and any remedial work required shall be undertaken at the Contractor's expense.
- 15.10. Photographic records demonstrating the construction of the road in accordance with the specification shall be provided to BDW prior to any payment for each stage. The photos shall be taken at maximum 100m intervals of the length of the road and shall include clear

demonstration of the construction thicknesses placed for filling, capping, sub base and / or any other constructions where a specified depth of material is required.

16. CONCRETE KERB RACE

- 16.1. The Contractor is to provide a concrete kerb race in accordance with details provided and temporary block or concrete upstand/sacrificial kerbs or permanent kerbs, as indicated within the tender enquiry letter and/or addendum page. The contractor is to make due allowance for dropped kerb positions at driveway entrances and pram crossings.
- 16.2. The contractor is to lay a brick or ducting offcuts into the kerb race at the ends of each service duct road crossing to assist future identification. Alternatively fully co-ordinated as built survey shall be provided to the BDW Site Manager prior to stage payment.

17. LOCAL AUTHORITY REQUIREMENTS

- 17.1. The contractor shall be deemed to have included within his price for all items required by the Local Authority in the execution of the works to completion, whether or not the same are particularly referred to in this specification, working drawings or enquiry package.

18. NEW ROAD AND STREET WORKS ACT

- 18.1. The contractor is to comply with all the requirements of this Act. With special attention to The Street Works (Qualifications of Supervisors and Operatives) Regulations.
- 18.2. The contractor shall furnish the Company with a copy of their supervisors and operatives licenses for works in connection with the above Act prior to commencement of any works.
- 18.3. The Contractor is to ensure that the tender includes for all the necessary temporary works, haul routes, pumping and any protective measures to trees etc., that may be required by the Local Authority, Environment Agency or any other Statutory Body. The contractor must arrange for the rapid disposal of water from any source and must provide, where necessary, temporary water courses, ditches, drains, pumping or other means of maintaining the works free from water whilst ensuring all existing watercourses and outfalls remain protected from the ingress of deleterious substances. The Contractor shall ensure appropriate costs are included for these protective works.
- 18.4. The Contractor is to take careful note of all existing services and take all appropriate action to work around them so as not to damage the service. Any costs resulting from damaged services are to be borne by the contractor and his insurance.
- 18.5. The Contractor will be responsible for complying with Police regulations and the provisions of the Road and Traffic Act with particular regard to Chapter 3 and all notices, warning signs, statutory compliance etc., in connection with this work.
- 18.6. All instructions are to be taken from the Company's Site Manager/Engineer and not the Local Authority's representatives.
- 18.7. Any assumption made by yourselves in pricing the works must be clearly stated in a covering letter.

- 18.8. In the event of any discrepancies between drawings and/or specifications, the Local Authority Specification is to take precedence. The prices for roads and sewers are to include for the specification required by the Local Authority with regard to all items including fill, backfill over sewers, sewer material specifications, bollards and street furniture etc.
- 18.9. Any breaking out and reinstatement of the existing paving, roadworks and kerblines at the junctions with existing roads is to be included in the lump sum prices for the respective new roads. The Contractor is deemed to have included suitable provision for tying in any new Road, Footpath or other completed surface to the Local Authority requirements and approved details.

The contractor should satisfy himself of the existing levels and ground conditions and the extent and location of existing services and drainage prior to submitting his tender, as no claims for variations in existing conditions will be entertained subsequent to the tender being accepted.

- 18.10. **Note: The contractor is responsible for ensuring that all ironwork differences in level with existing roads or kerbs and surfaces are suitably constructed to ensure that where practicable there are no tripping hazards.**

19. STAGE 2 ROADWORKS (INCLUDING FINAL SURFACING)

- 19.1. The basis on which these works are to be placed i.e. all risk, or re-measure shall be indicated within the invitation to tender letter. It is the Contractors responsibility to ascertain this information, as no claims based upon want of knowledge will be accepted.
- 19.2. Tenderers pricing this contract must follow the headings below and complete the summary schedule as indicated, any Contractors not adhering to this will be automatically excluded from the tender selection.
- 19.3. **All materials and work must be in accordance with the specification requirements of the Local highways and sewer adopting authorities.**

20. KERBS/EDGINGS

- 20.1. The Contractor is to provide pre-cast concrete kerbs to previously formed kerb race and remove temporary up-stand if applicable. Contractor to provide concrete bed and haunch to receive pre-cast concrete edgings, forming footpath. Provide continuous bed, haunch and pre-cast concrete edging to mark service strip highway verges. Provide pram crossing as appropriate.

21. FOOTPATH MAKE UP

- 21.1. Provide Type 2 sub-base and dense base course macadam to footpath areas. Due allowances should be made for additional thickness to sub-base where vehicular crossings occur.
- 21.2. Under this section also allow for forming highway verges, providing 100mm of clean topsoil, turfing by others.

22. BLOCK PAVING

- 22.1. Provide sand and blocks in accordance with the details provided. The Contractor is to clean base tarmac and puncture the surface to allow water passage to the satisfaction of the Highways Authority prior to sand bed being laid.

23. CLEAN AND TACK (ROAD AND FOOTPATHS)

- 23.1. The Contractor is to sweep loose materials away and jet wash clean prior to tack base course to roads and footpaths ready to receive wearing course to avoid debonding in accordance with LA highway standards.

24. WEARING COURSE

- 24.1. The Contractor shall allow for adjustment of all ironworks to the required finished levels prior to laying surfacing. The Contractor shall also make due allowance for any temporary ramps or fillets to the perimeter of all ironworks that may be required prior to completion of the surfacing works. The Contractor shall install all ironworks in accordance with adopting authority requirements and shall allow for any remedial works as necessary to repair or replace any damaged or defective works prior to final surfacing.
- 24.2. Road 1 – the contractor is to provide 30 mm dense bitumen macadam (or local adopting authority specification) finished to the highest standards.
- 24.3. Footpaths – the contractor is to provide 6 nominal size medium graded wearing course, laid and compacted to 20 mm thick, (or local adopting authority specification) finished to the highest standards.
- 24.4. Where sites are completed and there is no presence from the Company on site, all legislative obligations are deemed to be the Contractors responsibility.

25. ROAD RAMPS

- 25.1. The Contractor is to provide road ramps, types HRDO2, unless otherwise stated, (or local adopting authority specification) to locations indicated (if applicable.)

26. SIGNING

- 26.1. The Contractor is to provide traffic signing together with bollards and to arrange for electrical connections as appropriate.

27. WHITE LINING

- 27.1. Contractor to allow for all white lining works.

30. SAFETY, HEALTH AND ENVIRONMENTAL

- 30.1 Safety Health and Environmental Code of Practice for Subcontractors (SHE Form 09)

The Company has a Safety Health and Environmental Code of Practice for all Contractors which outlines the key requirements when working on its sites. This section provides additional requirements applicable to Groundworks and must be applied to all work by the Contractor.

30.2 Safe System of work

The Contractor must ensure that all relevant risk assessments and or method statements are in place for all elements of work and these are presented to the Company's Site Management team for evaluation prior to any work commencing. The Contractor must ensure that all relevant members of workforce are fully briefed on the safe systems of work and that a record is maintained of those who have attended the briefing.

The Contractor must maintain and make available all statutory inspections and monitoring reports and present these weekly to the Company's Site Management for review.

30.3 Contractors Appointed as Principal Contractor

Where the Contractor is engaged as the Principal Contractor, they must provide the company with a Construction Phase Health and Safety Plan for review prior to commencing works; ensure appropriate welfare provision is in place prior to commencement of work and throughout the duration of the works; control access and egress to the site (including perimeter fencing and gates) and ensure appropriate monitoring of the works is undertaken.

The Contractor must also ensure that a traffic/pedestrian management plan is in place which is regularly updated as this works progress.

The Company may visit the site at periodic intervals to monitor SHE performance and any items identified must be actioned by the Contractor.

The Contractor must have a suitable and sufficient induction process in place for all persons attending the site, the scope of the induction must be referenced in the Contractors Construction phase Plan.

An appropriately developed Surface Water Management Plan must in place prior to works commencing.

30.4 Personal Protective Equipment

The Contractor must ensure that all operatives wear the following PPE whilst working on site, which must be in good condition and not modified in any way

- A safety helmet to BS EN397 (no bump caps). Only integrated beanie hats must be worn beneath head protection. The Contractor must ensure that hoodies or other hats are not worn under head protection.
- A hi-visibility vest, jacket or coat (shirts must be worn beneath hi-visibility vests) to BS EN 471, class 2
- Protective footwear complete with steel toe caps and mid-sole protection (S3)
- All other PPE appropriate to the task upon which employees are engaged, e.g. eye protection, gloves etc.

30.5 Respiratory Protective Equipment (RPE)

Contractors must ensure all operatives, who may be exposed to dust and are required to wear RPE, be face-fit tested for the protection to be utilised. Records of face fit testing must be held on site for relevant operatives.

All Respiratory Protection Equipment (RPE) to be filtering face piece FFP3 type and must be provided by the Contractor for all workers.

Operatives who have facial hair will normally not be able to satisfy the requirements of face-fit testing as a seal will not be able to be achieved. Therefore, those with facial hair must not be permitted to undertake works where exposure to dust is likely unless they wear an appropriate positive pressure respirator.

30.6 Operative Competency

The Contractor must ensure that all persons working on the site are competent and hold a valid certification card for the work they are undertaking i.e. CSCS.

The Contractor is required to provide evidence of training and competence of all persons at the site induction and when requested by the Company's Site Management.

All plant operators must be over the age of 18 and must hold a Construction Plant Competence Scheme (CPCS) or National Plant Operators Registration (NPORS) card for the plant being operated.

Operators of any plant that will operate on roads where the Road Traffic Act applies must hold a full and valid UK/EU equivalent driving licence. Licences are required for all telehandler operators and copies are to be stored in a secure location.

All plant that will operate on roads where the Road Traffic Act applies must be licensed accordingly.

All persons undertaking loading or unloading operations must hold a current CPCS/NPORS A49 / A50 Loader/Securer STGO qualification depending on the size of plant being transported.

Operators of lorry mounted cranes (i.e. Hiab) must hold a competency card issued by the Association of Lorry Loader Manufacturers and Importers (ALLMI). A copy of the operators training and risk assessment for operating the HIAB must be reviewed.

Contractors must in addition to a recognised competency card, carry out a practical assessment of the operator's level of competency by observation and record the results as evidence of continual assessment.

Contractors must take reasonable steps to ensure that only competent and authorised operatives operate plant and equipment. Competency cards must be displayed in arm bands worn by the operators or within pockets on their high visibility vest. Plant operators must wear orange high visibility vests with 'Plant Operator' marked on the rear.

All plant operators must have completed medical screening within the last 3 years and records must be maintained by the Contractor for review if required by Company Site Management.

30.7 Contractors Supervision

Supervisors are defined as those persons directly supervising work activities. They are the front line supervisors (i.e. Supervisor, Ganger, Foreman, Charge-hand etc.) with direct responsibility for putting people to work, who will typically brief their workers on how to undertake their work, and ensure that they are undertaking their work safely.

Contractors must provide details of the nominated competent supervisor(s) prior to work commencing and there must always be supervision on site when groundworks are being undertaken.

Supervisors must wear **black hard hats** to identify them as a nominated Supervisor.

The Supervisors must undertake constant monitoring of the work activities and weekly record the results of their monitoring on a checklist or similar that is controlled and provided by the Contractor. The weekly monitoring record must be provided to Company's Site Management.

The Contractor must also ensure that monthly reviews of work activities are undertaken by a competent person as defined by the Management of Health and Safety at Work regulations and the results provided to Site Management.

The Contractor must undertake a risk assessment to determine the ratio of supervisors to workers on a site.

All supervisors must have sufficient knowledge of health and safety gained at a construction specific course of at least two days duration, in addition to any requirement to being accredited to CSCS or other affiliated schemes. Approved training courses are as follows:

- Construction Skills Site Safety Supervisors Training Scheme (SSSTS)
- Construction Sills Site Management Safety Training Scheme (SMSTS)
- Institution of Occupational Safety & Health (IOSH) 'Managing Safely in Construction'
- CPCS A62 Crane Supervisor
- Construction Health and Safety Group (CHSG) 'Health & Safety Site Management cert' (Modules 1-3)
- NEBOSH National Certificate in Construction Health & Safety

30.8 Coordination and Cooperation

The Contractor's Supervisor must attend sub-contractor review meetings on all sites at intervals as specified by the Company's Site Management.

The Contractor must ensure that full cooperation is given to matters of Safety, Health and Environmental and any actions from review meetings or monitoring visits by the Contractor's competent person or by the Company are closed out in good time.

"No digging is permitted within 500mm or greater if specified by the service provider of High Voltage power supplies or High/Medium Pressure gas pipes", only non-impact excavating is permitted.

30.9 Non-Conformance reports

Where the Company identifies non-conformance with the requirements in this specification, the Company's sub-contractor code of practice or any statutory provisions, the Contractor must deal with these issues immediately and positively take steps to prevent a recurrence.

30.10 Drug/Alcohol Testing

The Company reserves the right to test any persons on our sites for alcohol and drugs. Anyone who refuses to participate in any sampling being undertaken on site, will be asked to leave the site immediately and prohibited from working on any of the Company's sites until non-negative tests have been provided.

The Contractor must have an appropriate policy in place and have a programme of sampling of their workforce. From the 1 July 2020, 25% of the Contractors workforce on the Company's sites must be randomly tested every 6 months. The Contractor is to make reference to SHE form 09 for policy on those individuals who provide non-negative samples.

30.11 Manual Handling

The Contractor must undertake manual handling assessments of their work activities and detail the controls which will be applied.

The assessment must consider how material will be distributed and handled on site.

The Contractor must have a process in place for mechanically lifting and placing material such as kerbs and slabs.

The Contractor must ensure that all workers are fully briefed and have been provided training in safe manual handling techniques.

30.12 Hand Arm Vibration

The Contractor must ensure that an assessment has been undertaken to prevent exposure to hand arm vibration from the use of tools and equipment.

The Contractor must carry out monitoring of exposure and implement suitable controls so that workers do not exceed threshold limits. Records must be maintained on site.

30.13 Pedestrian and Traffic Management

The Contractor must consider their work areas and implement suitable controls to segregate workers from plant movements.

The controls must be detailed in the site-specific safe system of work and be regularly reviewed as work progresses. Key elements to consider as part of the assessment process are:

- Plant operating zones must be protected with suitable 1m high physical barriers (supplied by the Contractor) which prevent unauthorised access. Only plant operators

should be permitted to work within the protected zones and signage provided accordingly.

- Where localised fixed segregation cannot be achieved due to site constraints (i.e. tight working areas and access requirements through the plant working area and the need for plant to move frequently or continually), then the zone must be clearly demarcated by the Contractor. Access to the area must be controlled by a traffic marshal who stands outside the segregated area. They can open up the zone to allow workers to pass but only after plant is stood down.
- Where operatives are required to work within the segregated zones to assist with works or to assist plant operators, they must be appropriately trained to understand the risks and controls that are required where there is an interface with plant. Only these operatives are permitted within the segregated zones and all visitors, Directors or other workers must be prohibited during any live working activity.
- Where transfer of materials is required, the plant operators can work within the segregated zones but unless a cab is fitted on the dumper, operators must alight the plant whilst it is being loaded and stand well back at a safe point from the plant. They must not return to the plant until clearly instructed by the excavator operator.

Note: Lengths of chain/bunting tape slung between posts or steel pins or timber stakes do not meet the requirements for segregation of plant.

Any vehicle or plant access routes under the control of the Contractor, must be protected from drops, steep edges and excessive rough/uneven terrain where practicable. Where required, suitable 1m high physical barriers must be provided to clearly identify the hazard.

If pedestrian routes cross over open excavations, the Contractor must ensure the excavation is covered with proprietary matting, steel plate or platform designed to support the load imposed by pedestrians, and barriers provided at all sides. Protection is to be provided by the Contractor.

Where pedestrian routes cross traffic routes, the Contractor must ensure the crossing point is clearly demarcated with a proprietary crossing point barrier, which is coloured red and secured to adjacent fencing, or with feet provided to prevent collapse. Where the pedestrian routes cross traffic routes, gates must be incorporated in the frame of the crossing point.

All protruding manhole covers/inspection chambers, during the construction phase, must be clearly highlighted with proprietary yellow covers by the Contractor.

Any works in occupied areas must be discussed and control measures agreed during Supervisor coordination meetings with the Company.

30.14 Confined Spaces

Within the Contractors safe systems of work, confined spaces work must be identified into a classification of low, medium and high risk. The Company has detailed requirements for the control of work within confined spaces and the Contractor must familiarise themselves with the controls required.

Confined Space Definition

Any place which is substantially, though not always entirely enclosed, but not a space of an enclosed nature, where there is a risk of death or serious injury from hazardous substances or dangerous conditions within the space or nearby (e.g. lack of oxygen).

Typical confined spaces

- Storage vessels
- Enclosed drains
- Silos
- Sewers and manholes
- Ductwork
- Unventilated or poorly ventilated rooms such as enclosed basements
- Excavations In excess of 2m with restricted access
- Danger of displaced normal air due to the reaction of groundwater and limestone/chalk.
- Potential leaks into the trench in contaminated land
- Where plant and machinery are used and there is a risk of exhaust fumes or fumes from the process

Confined Space Classification

Class A – Low Risk

A confined space where there is a possibility that a harmful or dangerous atmosphere could exist but where the atmosphere is clear on entry and the conditions are unlikely to change and where access/egress is not difficult i.e. shallow inspection chambers or similar.

Operatives entering Class A confined spaces must have received training and assessment to a standard equivalent to 'Working in low risk' confined spaces as specified by Energy and Utility Skills.

A safety attendant/top person, positioned outside the confined space, must always be available during work.

Class B – Medium Risk

A confined space where it is likely that a harmful or dangerous atmosphere could exist and where it is possible that the atmosphere condition may change suddenly and/or where the access is difficult. i.e. deep inspection chambers, tanks, tunnel in use and not under construction or similar.

Operatives entering Class B confined spaces must have received training and assessment to a standard equivalent to 'Working in medium risk' confined spaces as specified by Energy and Utility Skills.

A safety attendant/top person, who will not enter the confined space, must be available. The duties include controlling pre-entry procedures, entry into and out of the confined space, maintaining communications and initiating and controlling emergency procedures.

The safety attendant/top person must have received training and assessment to a standard equivalent to 'Overseeing work in confined spaces' as specified by Energy and Utility Skills.

Class C – High Risk

A confined space where it is known that the atmosphere contains dangerous gasses or is highly likely to contain gasses which will remain present during the work operation and/or where the nature of the operations is particularly difficult and rescue via a life line would not be possible.

The safety attendant/top person must have received training and assessment to a standard equivalent to 'Overseeing work' in confined spaces as specified by Energy and Utility Skills.

Operatives entering Class C confined spaces must have received training and assessment to a standard equivalent to 'Working in high risk' confined spaces as specified by Energy and Utility Skills. They will also require training in emergency rescue and recovery of casualties from confined spaces.

Training

The Contractor must ensure that anyone entering a confined space is appropriately trained in the required precautions including the use emergency breathing apparatus. The training must contain the rescue procedures in event of an incident.

Confined Spaces – Permit to Enter

The Company operates a permit system to enter confined spaces (SHE Form 48) and the Contractor must not allow persons to enter a confined space until the permit has been issued. The Contractor must ensure that all persons involved in the work are familiar with the controls detailed in the permit and the safe system of work.

Once the works are complete the Contractor must ensure that the work area is left in a safe condition and that the permit is returned to the Site Manager so that it can be closed out.

30.15 Temporary Works

The Contractor must identify and manage all work activities where temporary works is required.

Temporary Works Definition

Temporary works are defined as parts of the works that allow and enable construction of, protect, support or provide access to, the permanent works and which might or might not remain in place at the completion of the works. These can include; engineered solutions to support or protect an existing structure or the permanent works during construction, support an item of plant or equipment, or the sides of an excavation.

Temporary Works Classifications

An assessment of temporary works required on a project/development must be undertaken by the Contractor. This assessment will take into consideration all aspects of temporary works and should be maintained and reviewed throughout the duration of the works.

The initial assessment of temporary works requirements and classification should be completed by the Contractor who will review pre-construction details and information provided during the planning phase of the project/development.

Class 1: Temporary works where an *experienced* and competent supervisor would be capable of assessing all relevant factors and making suitable allowances for them using standard solutions/systems.

- Formwork less than 1.2 high
- Hoarding or Fencing up to 2.4m high where a manufactures installation guide is utilised
- Excavations <2m deep (battered or supported by proprietary systems) in good ground
- Foundations for mobile cranes up to 80t capacity
- Standard silo foundation where the group approved design(s) are utilised
- Working platforms for piling rigs on good ground not supported by structures

Class 2 – Temporary works classified as medium risk which may or may not have a direct interface with the public

- Haul roads <200m long and constructed on good ground (CBR>2.5%).
- Excavations 2m deep or greater
- Hoarding and Fencing > 2.4m high
- Protection or support to the following services:
 - Water mains >75mm
 - All Gas mains
 - Electric Cables >1kV
 - Multi-core telecommunications cables
 - Sewers or drains >450mm
- Formwork > 1.2m but no more than 3m high
- Excavations greater >2m deep and no more than 3m

Class 3: Temporary Works that may involve the fabrication of materials and equipment to produce a non-standard solution where the risk of failure would be significant and have a major impact on the safety of workers and/or the general public.

- Tower crane foundations
- Excavations likely to affect the stability of adjacent buildings
- Excavations in ground with ground water levels that vary on a daily basis
- Excavations >3m deep
- Ground anchoring or soil nailing
- Temporary underpinning of structures
- Hauls roads in excess of 200m long or constructed on poor ground (CBR<2%)
- All bored pile walls, cofferdams and associated framing
- Temporary pedestrian or vehicle bridges
- Dead shoring with prop loads
- Thrust walls for jacking systems
- Headings
- Cofferdams/Caisons
- Falsework and Formwork >3m high
- Basement wall pile supports

Control and Management of Temporary Works on Site

Specific and adequate control documentation (Method Statement) must be provided by the Contractor for the erection use and maintenance of temporary works. The control documentation must be supplied by the Contractor or persons undertaking the works and incorporate any guidance on the implementation of the design provided.

Supervision of Temporary Works Construction

Competent Temporary Works Coordinators (TWC) and or Supervisor(s) (TWS) must be appointed by the Contractor and their details contained within the control documentation for the temporary works. These individuals will be responsible for managing and checking of temporary works during erection, use and dismantling.

The key attributes and requirements for the TWC are:

- Received a minimum of two-day training which provides a clear understanding of the TWC role and the requirements of BS 5975
- Be fully conversant with the contractors standards for the control of temporary works
- Have relevant experience of the types of temporary works to be dealt with
- Hold a relevant professional qualification such as HND in Civil or Structural engineering

The key attributes and requirements for the TWS are:

- Received a minimum of one-day training which provides a clear understanding of the TWS role.
- Experienced in the management of temporary works and conversant with the Contractors standards on the control of temporary works
- Attended a minimum of the two-day SSMTS course.

Permits to Load/Use

Where identified as a control measure on the temporary works register, a permit to load must be in place. This can be the Company standard form, or a similar document provided by the Contractor as part of their management systems.

Before issuing a Permit to load/use, the TWS will carry out a thorough check on the temporary works to confirm it has been constructed in accordance with the design and it complies with the relevant drawings or sketches. Where checks of elements of the temporary works may no longer be accessible when a permit is being issued, periodic inspections must be undertaken during construction and a record kept.

Inspection of Temporary Works

Whilst in use the temporary works will need to be inspected by a competent person at intervals as specified in the control documentation or the temporary works register. Any inspection reports must be provided to the Company's Site Management.

Permit to Unload/Dismantle

Where identified in the temporary works register, a permit to unload/dismantle must be issued by the TWS, specifying sequence requirements and back propping requirements etc.

Before issuing the permit the TWS will ensure that all checks and tests required to confirm the temporary works is no longer required have been carried out. The permit will remain open until the required period for back-propping has been reached and permission to remove the propping has been issued

Concrete cube samples confirming that the minimum strength has been achieved will be required prior to striking falsework.

30.16 Plant and Equipment

All ride-on plant must be inspected by the Contractor prior to being used on site to ensure it meets the required standards and is safe to operate. The Contractor (where the the Company is the Principal Contractor) must request a Permit to operate the plant (SHE Form 55) from the Company's Site Management.

All plant on site must have full visibility for the driver to see a 1m high object 1m from any point of the vehicle.

All ride on plant must be fitted with a retractable seat belt that must be worn at all times by the operator when the plant is in use.

All ride-on plant must have a green seat belt indicator light which clearly indicates if an operator has engaged the seat belt.

Plant Risk Assessment

The Contractor prior to commencing work must compile a Plant Risk Assessment for the development. The assessment will detail:

- size and type of plant that can be used in specific areas of the development.
- Plant restrictions may result from ground gradient, fixed obstacles, proximity of overhead cables and machine work in dense pedestrian areas etc.
- A schematic plan with colour coded zone relating to the item of plant allowed to operate in that zone.
- Provision of a competent vehicle Banksman when plant in being operated on a live development spine road, where a risk of that item of plant striking passing vehicles or people.
- A formal review of the assessment must be undertaken at intervals not exceeding 3 months.

Plant Deliveries

A risk assessment must be provided by the organisation being contracted to undertake the delivery or removal of plant or equipment. Key elements of the assessment must be the identification of suitably trained operatives, liaison with the Site Management and the contractor receiving or releasing the item of plant or equipment to determine a safe place for the operation. Supervisory arrangements must be clearly identified in the assessment.

Locations for unloading must be clearly defined, and where practicable must be on firm, level ground. Unloading must only be undertaken if appropriate segregation is in place, to prevent unauthorised pedestrians from accessing the location.

Vehicle Marshall(s) should be available at a safe distance to assist with off-loading, especially where reversing of plant is required, and to ensure that others do not enter the protected zone.

Forklifts/Telehandlers

The Contractor must ensure that all telehandlers/forklifts used on site meet the Company's minimum requirements (SHE Form 68) and a specific lifting plan must be compiled for their operations on site.

Integrated platforms (man baskets) on the forks of a telehandler are prohibited on all the Company's sites.

All forklift/telehandler operators must have completed an approved medical screening prior to operating the plant for the first time and every 3 years thereafter.

Telehandler operators must complete a telehandler weekly inspection.

Excavators (Quick Hitch)

Excavators above 5 tonnes must have a fully automated quick hitch system. It is recognised that those below 5 tonnes may not have quick hitch systems and the below applies:

- The safety pin must be available on the machine.
- Operator instruction must include detailed assessment of the operation of the quick hitch device.
- The area around the safety pin insertion hole and the safety pin must be painted to improve visibility for monitoring.
- Signage must be in a prominent position inside the cab and the excavator arm to stipulate that safety pins are required.
- Ad-Hoc replacement of pins with large bolts, wire or other substitutes is prohibited in all circumstances.
- Safe systems of work must be in place to ensure that others are not exposed to risk by working below the bucket i.e ground workers in excavations.
- All operators must be trained in the use of quick hitch devices.
- Devices must be regularly maintained to ensure they operate correctly.

Excavator Attachments Storage/Changing Areas

A designated location which is protected by 2m high fencing and signed with 'Bucket Changing Area', must be provided by the Contractor to enable the safe changing and storage of excavator attachments on all developments, and at all locations where plant is operating.

Excavators used as a crane

A lifting plan completed by the Contractor must be available for all operations where an excavator is used as a crane.

Any operators must have the appropriate endorsement on their competency card to confirm that they have received appropriate instruction and training

Any earth-moving machine designed for object handling must have a rated object handling capacity table available inside the cab. If a rated object handling capacity table is not available, then the machine must not be used for object handling.

An earth-moving machine used for lifting operations must be fitted with a load hooking device. This may be mounted on the dipper, the quick hitch or the bucket. If the load hooking device is a hook, then this must have a clip or another device which prevents a sling slipping off the hook. Many quick hitches provide a load hooking device in the design of the hitch.

If the rated lifting capacity for an excavator or the backhoe portion of a backhoe-loader is greater than 1 tonne (or the overturning moment is greater than 40000Nm) then the machine must be fitted with:

- a boom lowering control device on the raising (main) boom cylinder(s) and which meets the requirements of ISO 8643:1997 *and*
- an acoustic or visual warning device which indicates to the operator when the object handling capacity or corresponding load moment is reached

The excavator operator must ensure that the acoustic/visual warning device indicating the load moment, is switched on prior to any lifting operation.

Where the hooking device (the point on the machine designed for connection of the load) is not part of the bucket, the bucket must (where possible, and unless the operator instructions specify otherwise) be removed in order to improve visibility and reduce the weight being lifted. If the bucket is retained, then the weight of both the bucket and quick hitch has to be added to the load when determining whether the load is within the rated capacity.

Contractors who utilise excavators as a crane must ensure that those who attach loads to the excavator have attended a Slinger/Signaller training course.

Forward Tipping Dumpers

The latest Civil Engineering Contractors Association (CECA) and the Construction Products Association (CPA) should be referenced regarding the identification of hazards and associated controls required for the safe use of dumpers.

Contractor must ensure that forward tipping dumpers do not access spoil heaps but must instead deposit their load at the base of the spoil heap, from where it can be distributed by an excavator.

Contractors must only allow suitably trained operatives to operate dumpers. The dumper operator must ensure that there are no defects before operating the dumper. Seat belts must be worn, and rollover protection provided in order to protect the operator in the event of the dumper turning over.

Flashing warning beacons and seat belt light indicators must be used when the dumper is in motion and the operator must ensure that they have clear, unobstructed vision. Passengers must not be carried on the dumper and the operator must dismount the dumper and stand well clear when the dumper is being loaded (see below for cabbed dumper exemptions).

When travelling around site the dumper operator must follow the manufactures guidance for the safe use of the dumper and must ensure that he does not drive on a slope which is in excess of 1:5 or 20%.

The heavy end of the dumper must always be uphill when travelling. The operator must also avoid driving across slopes which could cause instability. When tipping into excavations, the dumper wheels must be choked or stop blocks must be provided.

The Company encourages the Contractor to use cabbed dumpers with immediate effect and along with an approved risk assessment allows the loading of cabbed dumpers while still mounted.

From the 1 July 2022, all dumpers designated at 6 tonne and above must have an integral cab fitted, Any dumper not meeting this requirement after this date will be prohibited from being used on the Company's sites.

When the dumper is no longer being used then the operator must ensure that it is taken out of gear, the handbrake is on and the keys are removed.

Inspection and Maintenance of Plant

Contractors will be responsible for ensuring that all work equipment and lifting equipment is suitably maintained and defective items are removed from service.

Contractors are responsible for ensuring that any statutory inspection reports are maintained in date. Contractors must ensure that where certification has expired that the item of work equipment or lifting equipment is taken out of service.

Plant operators, prior to undertaking their daily pre-user check and recorded weekly inspection, must ensure that the plant is positioned on firm level ground. This is especially important for telehandler operators who must ensure that outriggers are fully deployed, and the cab is level when extending or retracting the hydraulic boom and forks.

Fuel used in Plant

The contractor must review all plant being operated on a site and implement a strategy that reduces the carbon emissions from their operations. The hierarchy to be adopted on the Company's sites is:

- Battery powered plant
- Hybrid plant
- Use of biodiesel or other low emissions alternative fuel approved by Barratt
- Diesel Engines compliant with EU Stage V emission standards
- Other diesel engines but these must be phased out in accordance with the Company's carbon emissions reduction strategy.

Non-Road Mobile Machinery

All plant utilised on site shall be compliant with Non-Road Mobile Machinery regulations, and any other air quality requirements that may be enforced locally.

30.17 Prevention of falls from height

The Contractor must ensure that edge protection is provided on all access equipment and/or work areas where there is a potential fall distance in excess of 500mm. Guardrails must be provided which are at least 950mm high, with gaps not exceeding 470mm.

Fall protection must be provided by the Contractor to the perimeter of any foundations or slabs where there is a fall in excess of 500mm. Protection may be required at heights below this for example, where rebar is protruding in the adjacent area.

The Contractor must provide suitable and sufficient edge protection other locations, with exposed edges, holes or shafts where persons or materials could fall.

Guarding must be robust and fit for purpose. Regular inspections are needed to ensure continued suitability for safe use.

Edge protection must be of continuous construction and are to be erected, dismantled and inspected by competent persons.

Falls from delivery vehicles

The Contractor must ensure that where deliveries of their materials are provided to site, that controls are in place to prevent persons falling from the rear of the delivery vehicle.

30.18 Excavating/Digging

The Contractor must have a safe system of work in place for the work which involves but is not limited to:

- Correct use of accurate plans to aid the location of services
- Use of cable avoidance tools by competent persons
- Use of safe digging or drilling techniques
- Permit control documentation
- Support of adjacent structures
- Safe means of access into an excavation
- Preventing collapse by support or battering sides of excavation
- Suitable barriers at ground level to prevent falls of persons and materials
- Maintaining fresh air and suitable lighting where required
- Potential contaminated land
- Consideration for the management of water ingress.

Services drawings must be consulted prior to any work taking place. These drawings must be updated by the Contractor when any new services are identified or installed.

Prior to any work involving the breaking of the ground, a survey must be undertaken by the Contractor using a cable avoidance tool (CAT) by a suitably trained person. A copy of the cable locating device 12 Monthly calibration must be available on site. Cables may not be detected if not there is no electrical draw, are pot-ended, or are low voltage cables and therefore radio detection mode may be required. Recorded CAT surveys must continue during the excavation works.

The position of any services must be clearly marked on the ground using waterproof spray paint or by erecting suitable signs.

Work must be controlled by a Permit to dig/ excavate/ drive piles issued by the Company (or Contractor where they are Principal Contractor) and a copy of the service drawing for the dig area must be available for review in the excavator or be held by the operatives in the work area.

The hierarchy for ensuring safe digging for plot connections is as follows:

- Sand/gravel bags placed upon laid services to negate the need for digging in close proximity.
- Vacuum/suction extraction plant where practicable but be utilised around any high pressure or high power services.

If due to circumstances excavating around newly laid services is required, the following controls must be applied:

- When digging near cables, insulated hand tools i.e. spades and shovels with wooden or fibreglass handles must be used
- Mechanical excavator / Power tools must not be used within 0.5m of electric, gas or communication services.
- Road pins or metal stakes must not be driven into the ground in the vicinity of any service routes.
- Before using a mechanical excavator, trial holes must first be dug using hand tools, to confirm the depth and position of services.

The Contractor must ensure that traffic routes are maintained at a safe distance from the edge of an excavation, with barriers erected when necessary.

Where plant movements across the site have the potential to damage underground services the Contractor must provide exclusion zones or grillage protection, in order to distribute the weight of the plant.

An assessment of the support system required for the prevention of a collapse of the sides of an excavation must be provided by the Contractor.

The Contractor must ensure that barriers are placed at ground level in order to prevent the falls of persons, materials or plant into the proposed excavation i.e. minimum of 950mm and double guardrails. Barriers can be removed in order to allow access for the excavator, but must be replaced once the machine moves away from the dig area.

Stepping the sides of the excavation is an alternative to battering with the depth and width of the steps determined using the angle of repose guidance below, however the vertical distance must not exceed 1.0m.

The Contractor must ensure spoil heaps and material are at least 1.5 m from the edge of any excavation or further away when required by the depth of the trench and the angle of repose in order to prevent potential collapse of the trench.

If plant and equipment is used to tip back filling materials into trenches, the Contractor must ensure stop blocks are placed and secured.

The Contractor must ensure that no blocks are stored on islands between foundations which will undermine the stability of the excavations.

30.19 Overhead Services

Risk Controls

If the overhead lines cannot be diverted or switched off, and there is no alternative to undertaking the work near it, the Contractor will need to consider the following:

- The voltage and height above ground of the wires. Their height should be measured by a suitably trained person using non-contact measuring devices.
- The nature of the work and whether it will be carried out close to or underneath the overhead line, including whether access is needed underneath the wires.
- The size and reach of any machinery or equipment to be used near the overhead line.
- The safe clearance distance needed between the wires and the machinery or equipment and any structures being erected.
- The owner of the overhead line will be able to give advice on safe clearance distances.
- The site conditions, e.g. undulating terrain may affect stability of plant etc.
- The competence, supervision and training of people working at this site.
- “Caution Overhead Cables” signage must be provided.

The Use of Barriers

Where there will be no work or passage of machinery or equipment under the line, the Contractor must reduce the risk of accidental contact by erecting ground-level barriers to establish a safety zone to keep people and machinery away from the wires. This area should not be used to store materials or machinery. Suitable barriers can be constructed out of large steel drums filled with rubble, concrete blocks, wire fence earthed at both ends, or earth banks marked with posts.

- If steel drums are used, highlight them by painting them with red and white horizontal stripes.
- If a wire fence is used, put red and white flags on the fence wire
- Make sure the barriers can be seen at night, by using white or fluorescent paint or attaching reflective strips.

The safety zone should extend a minimum of 6 metres horizontally from the nearest wire on either side of the overhead line. Where plant, such as a crane, is operating in the area, additional high-level indication must be erected to warn the operators. A line of coloured plastic flags or 'bunting' mounted 3-6 metres above ground level over the barriers, is suitable.

Passing underneath Overhead Lines

If equipment or machinery capable of breaching the safety clearance distance has to pass underneath the overhead line, the Contractor must ensure a passageway through the barriers is erected with the following controls:

- Keep the number of passageways to a minimum.
- Define the route of the passageway using fences and erect goalposts at each end to act as gateways, using a rigid, non-conducting material, e.g. timber or plastic pipe for the goalposts, highlighted with red and white stripes.
- If the passageway is too wide to be spanned by a rigid non-conducting goalpost it may be necessary to use tensioned steel wire, earthed at each end, or plastic ropes with bunting attached. These should be positioned further away from the overhead line to prevent them being stretched and the safety clearances being reduced by plant moving towards the line.
- Ensure the surface of the passageway is levelled, formed-up and well maintained, to prevent undue tilting or bouncing of the equipment.
- Put warning notices at either side of the passageway, on or near the goalposts and on approaches to the crossing, giving the crossbar clearance height and instructing drivers to lower jibs, booms, tipper bodies etc., and to keep below this height while crossing.
- If necessary, illuminate the notices and crossbar at night, or in poor weather conditions, to make sure they are visible.
- Ensure barriers and goalposts are maintained.

Emergencies

If contact is made with an overhead line, the immediate area must be vacated, and all work suspended within 50m of the damaged line. All plant operators working in the vicinity of power lines must be provided with a full briefing on what to do in the event of contact with the line and these procedures must be detailed in the method statement for the work & the emergency contact details.

30.20 Storage of Diesel or Oil

Static Oil Storage Containers

Where the Contractor provides oil storage containers, they must conform to the following;

- Where possible be stored in 'integrally bunded tanks' which have a primary container manufactured with an integral secondary containment that can hold a minimum of 110% of the volume of fuel in the inner tank. Ancillary equipment will also be positioned within the secondary containment. These tanks should be fitted with an overfill prevention device and where possible, secondary containment sensors that detect if fuel has collected in the bund from an incorrect delivery, overfill or inner tank problem.
- If the above tanks are not available 'double skinned tanks' can be utilised. These tanks have two layers of steel or plastic with a small space between them, which would normally not have the capacity to contain 110% of the fuel the tank can hold. If a double skinned tank is used, it will not be compliant unless it is installed in a constructed secondary containment system capable of containing the content of the

tank. Any ancillary equipment is usually positioned outside the second skin and therefore locking of the supply is essential.

- Must be positioned so that they are not vulnerable to impact from vehicles.
- Tanks must not be positioned within 10 metres of any direct pathways to watercourses such as surface water drains or land drains.
- Hoses and fittings for filling vehicles etc. must have an automatic valve or tap which closes automatically when not in use. This must not be able to be fixed in the open position.

Mobile Bowsers

Where mobile bowsers are provided by the Contractor, they must conform to the following;

- Where possible be stored in 'integrally bunded tanks' which have a primary container manufactured with an integral secondary containment that can hold a minimum of 110% of the volume of fuel in the inner tank. Ancillary equipment will also be positioned within the secondary containment. These tanks must be fitted with an overfill prevention device and where possible, secondary containment sensors that detect if fuel has collected in the bund from an incorrect delivery, overfill or inner tank problem.
- Drip trays must be provided to contain any leak/spills during refuelling.
- Must be positioned so that they are not vulnerable to impact from vehicles.
- Must not be positioned within 10 metres of any watercourse.
- Must not be positioned within 5 metres of any tree protection zone.
- Valves and other ancillary equipment must lock and be kept within the Bowser when not in use.
- Hoses and fittings for filling vehicles etc. must have an automatic valve or tap which closes automatically when not in use. This must not be able to be fixed in the open position.
- All rainwater accumulating in the Bowser/Drip tray must be removed. This waste will need to be treated as hazardous if contaminated with oil.

Dealing with Spills

- For static tanks located in compounds or other semi- permanent locations a tank with capacity of 1000 litres to 2000 litres a spill kit capacity of 340 litres shall be provided.
- For static tanks located in compounds or other semi-permanent locations a tank with capacity of >2000 litres to 3000 litres a spill kit capacity of 600 litres shall be provided.

- For mobile tanks, located around the development up to 2000 litres capacity a 120 litres spill kit must be provided and within the kit a “Dammit” or other suitable paste must be provided for plugging potential holes in the tank and restricting fluid loss.
- Where the development is at the execution stage and full compound facility is lost, then 340 litres & 600 litres spill kits can be replaced with 120 litres kits with plugging paste.
- Used spill kits must be disposed as hazardous waste and the contractor must receive Consignment Notes for any contaminated removal.

The Contractor must provide spill kits which can contain any the full quantity of oil stored. The spill kits must be stored in yellow wheelie bins supplied and controlled by the Contractor. Used spill kits must be disposed as hazardous waste by the Contractor

Prevention of contamination of rivers and streams

The Contractor must take all reasonable steps to prevent sediment run-off from entering any watercourse.

The Contractor must provide protection within all gullies on site to prevent contamination to watercourses. These must be proprietary re-usable silts trap approved by the Company.

- Excavations

Where possible prevent water from entering excavations. Use cut-off ditches to prevent entry of surface water and well point dewatering or cut-off walls for ground water. Use the corner of the excavation as a pump sump and avoid disturbing that corner. Do not allow personnel or plant to disturb water in the excavation.

- Exposed ground and stockpiles

Minimise the amount of exposed ground and stockpiles. Stockpiles can be seeded or covered and silt fences constructed from a suitable geotextile may be useful.

- Plant and wheel washing

Wheel washes and plant washing facilities should be securely constructed with no overflow and the effluent should be contained for proper treatment and disposal.

- Temporary Dewatering from Excavations to Surface Water

A permit to discharge rainwater from an excavation is not required where the below applies. A permit will be required if groundwater is contaminated or the below cannot be compiled with:

- Discharge is clean rainwater or infiltrated groundwater which has collected in the bottom of the trench
- It will not result in suspended solids entering the surface water

- Discharge lasts no more than 3 consecutive months (the activity may stop and restart but the clock does not restart). If it is likely to go over 3mths then a permit will be required
- Discharge is to surface water such as a river or stream
- The controls are detailed in a method statement for the operation
- Discharge cannot take place within or less than 500m upstream of; Sites of Scientific Interest, Special Areas of Conservation, Special Protection Areas and other nature conservation areas such as nature reserve.

Records of the above must be maintained for a minimum of 2yrs

Further information can be found at:

<https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water/temporary-dewatering-from-excavations-to-surface-water>

30.21 Waste Management

The contractor must ensure that waste from their work activities is minimised and materials are reused where practicable.

Waste Carriers Licence

Where waste materials are unavoidable this should be removed from site by the contractor where required. All Contractors removing waste from site must hold a valid Waste Carriers Licence (WCL) which must be available on site at all times. This includes WCL for any sub-contractors removing waste from site and also contractors removing soil, portable toilet waste and road sweepings.

Environmental Permits - England and Wales/Waste Management Licensing (WML) - Scotland

The Contractor must ensure that all waste disposal companies engaged by them are permitted or licensed by the EA and SEPA respectively. In England and Wales they will be covered by an Environmental Permit or an Exemption and in Scotland they will be covered by a WML or an Exemption.

An Environmental Permit, WML or Exemption will be required for the actual site where waste materials are treated for recycling or re-use. The following exemptions may apply where applicable:

- Mobile crushers must have a Part B Permit to operate issued by the Local Authority (LA), which must be kept with the machine. The LA must be notified each time a machine is moved into their local area or to a new location.
- Site gained concrete, bricks, tiles or other materials can be crushed and reused as sub –base or fill. In this case a T7 Permit exemption (England and Wales) or a Paragraph 24 exemption (Scotland) can be registered. In England and Wales. This is registered with the LA and in Scotland with SEPA. The total waste stored must not exceed 20,000 tonnes at any time and any movement of the material to other locations will be subject to waste transfer documentation and waste carriers licensing.

- Treatment or screening of soils or wastes (other than concrete, bricks or tiles) will be subject to a T5 exemption (England and Wales) but the maximum quantities that can be stored or treated is 5000 tonnes over a 3 year period.
- A U1 exemption (England and Wales) can be obtained to allow use of suitable wastes for small scale construction. Example activities include:
 - Using crushed bricks, concrete, rocks and aggregate to create a noise bund around a new development and then using soil to landscape it to enable grass to grow.
 - Using road planings and rubble to build a track, road or car park.
 - Using wood-chip to construct a track, path or bridleway.
 - Bringing in some soil from another place for use in landscaping at a housing development.

Construction activities undertaken for the purpose of producing a suitably engineered soil would not be regarded as a waste management activity (i.e. lime stabilisation and piling) and a permit/licence would not be required.

Where **uncontaminated materials** are produced on site during construction work and are then stored and re-used on the same site, in accordance with planning permission, there is no requirement for a Permit/WML/Exemption provided: they are suitable for that use and require no further treatment; only the quantity necessary for the works is used; and their use is not a mere possibility but a certainty.

Relevant activities involving uncontaminated materials produced on site and then reused on the same site may include cut and fill; simple foundation excavations with arisings spread evenly under the ground floor slab and the combination of soils to create a retaining structure.

On multi-phase developments, if arisings are put to use on site and it is done in accordance with planning permission (for the whole development) then a permit or exemption will not generally be required. This can also be the case where different developers are involved in a consortium agreement for a development and a formal agreement is in place which identifies levels of responsibility.

Where clean waste material is transferred from one development to another or imported from a third party source, an exemption from a Permit/WML can be granted by the EA/SEPA respectively. These exemptions must be applied for prior to the work commencing (25 days in England and Wales and 21 days in Scotland).

Where contaminated materials produced on site during construction works (including excavated soils) are used on site in accordance with the planning permission these may not be regarded as waste and a permit/license not required. This can include activities such as site re-grading and use of materials beneath cover or capping layers, buildings and hard standing. In this case an assessment will need to be made to ensure that materials will not pose a risk to the environment. This will need to be detailed in a remediation strategy for the site, which meets EA/SEPA requirements.

Duty of Care – Waste Materials

The Contractor must ensure all appropriate measures are taken to ensure anyone who is involved in the chain of custody for waste is appropriately permitted/licensed. (Waste could include clean soil from site being deposited off site or imported clean soil to site).

All waste must be appropriately identified and stored on site and covered to prevent uncontrolled release. Skips must not be allowed to overspill and disposal areas kept clean and tidy.

Waste must only be transferred to an authorised person capable and permitted/licensed to deal with the type of waste produced.

The Contractor must undertake periodic reviews to ensure that waste from site is being handled correctly and transferred to the final point of disposal or recovery.

Waste Transfer Notes (WTN)

The contractor shall provide to the company an itemised summary of all exported materials from site on a monthly basis or on a frequency as requested by the company. The summary must include the quantity in cubic metres of all made ground materials removed from site to a licenced tipping facility along with the quantity of all naturally occurring ground materials removed from site to either a licenced tipping facility or to a permitted receiving site. The contractor shall also include within the itemised summary all waste materials removed from site in their own designated waste skips, this shall identify the quantity in tonnes. The summary must include as a minimum the date, tip or receiving site name, environmental permit references, haulier names, haulier license details and quantity in the units as previously described. The contractor shall retain copies of all transfer notes for inspection if required by the company

A waste transfer note must be created for each load of waste that leaves site. Copies of waste transfer notes are to be provided to BDW and a reporting requirement of total tonnes removed in a quarter period reported back to BDW.

For repetitive transfers of non-hazardous waste, a season ticket can be utilised for up to 12 months. They can only be used where the parties involved in each transfer are the same and where the description of waste transferred remains the same.

All plots, garages and scaffolds must be cleaned by the contractor upon completion of the works and left free of materials or debris created by the works. Failure to do so will result in contra charges being applied

Upon completion of the contract (or defined sections thereof), the Contractor will clear from site all stored materials, equipment, site accommodation, etc, no longer required, without delay.

Waste removal and disposal must be in accordance with all current UK legislation.

Tender Summary

Heading	Price £
1 Preliminaries	
1 Setting out/Supervision/As-Built survey	
2 Signage/Lighting	
3 Test, Clean, Jetting and CCTV Survey all Sewers	
2 Off Site Enabling Works	
3 Site Strip	
4 Road/Sewer Works to Binder & stage 2	
Stage 1 & 2	
a) Excavate to formation levels (Roads & Footpaths)	
b) Fill to make up levels	
c) Load and Cart Surplus arisings off site	
d) Sub Base (Roads only)	
c) Base Course (Roads Only)	
d) Binder Course (Roads Only)	
e) Concrete Kerb Race & Temporary restraint	
5 Main Sewers	
a) Foul Sewers and Manholes	
b) Foul Pumping Stations, Rising Main & associated works	
c) Storm Sewers and Manholes	
d) Gullies and Connections	
e) Storm Attenuation and all Associated Work	
6 Other site specific items:	
a) Section 185 Sewer Diversion Works	
b) Section 278 Works	
c) Earthworks	
d) Structures and Ponds	
e) Principal Contractor Items	
7 Services (Mains Only)	
Rate Only (Provide separate sheet)	
TOTAL CONTRACT SUM	

TRADE SPECIFICATION**ROADS & SEWERS TO BINDER COURSE & ROADS,
SEWERS & FOOTPATH STAGE 2 WORKS.**

This Specification Agreement relates specifically to the Company's development at

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I confirm that I have read and understood the foregoing Specification and any necessary associated documentation referenced, such as standard specifications, drawings or quoted details and that my prices include for all items contained therein and will "Remain Fixed" for a period of: as outlined in the Enquiry letter.

SIGNED:

FOR AND ON BEHALF OF:

.....

DATE:

N.B. The contractor is to sign this Agreement and return it with their Quotation. Any prices received without this Agreement will be excluded from consideration.

Revised: Rev T – 1 January 2025