DATED 29 May **2024**

THE COUNCIL OF THE BOROUGH OF SOUTH TYNESIDE

AND

TELMAC DEVELOPMENTS LIMITED

AGREEMENT

pursuant to section 278 of the Highways Act 1980
and section 111 of the Local Government Act 1972 relating to works on the existing highway at North Road, West Boldon

JOHN RUMNEY
Corporate Lead – Legal & Governance
Town Hall and Civic Offices
South Shields

Ref: BB/L/17406

THIS AGREEMENT is made on 29 May 2024

BETWEEN

1) **THE COUNCIL OF THE BOROUGH OF SOUTH TYNESIDE** of Town Hall and Civic Offices, Westoe Road, South Shields NE33 2RL ("the Council"); and

2) **TELMAC DEVELOPMENTS LIMITED** (company number 12913817) whose registered office is at 5a Station Terrace, East Boldon, Tyne & Wear, England, NE36 0LJ ("the Developer").

WHEREAS

1) The Council is the highway authority for the area.

2) On 13 July 2023 the Council granted planning permission carrying reference ST/0139/22/FUL for residential development of land Vacant Formerly Boldon CE Primary School, Rectory Bank, North Road, West Boldon, NE36 0QE consisting of five dwellings with associated access, amenity space, landscaping and car parking in association with the playing field ('the Development').

3) The Works to the existing highway North Road, West Boldon are required to enable the Development to be carried out. The Council has agreed to the Developer carrying out the Works for and on behalf of the Council subject to the terms of this Agreement.

4) The Council is satisfied that the Works will be of benefit to the public.

NOW in pursuance of section 278 of the Highways Act 1980 (and section 305 shall apply to any expenses recoverable by the Council), section 111 of the Local Government Act 1972, and all other powers enabling the Council

1. DEFINITIONS

In this Agreement:

1.1. 'Event of Default' means any of the circumstances in clauses 11.1.1 to 11.1.6

1.2. 'the Existing Roads' means the existing highway maintainable at public expense known as North Road, West Boldon shown on the Plan coloured brown;

1.3. 'the Final Certificate' means the certificate issued under clause 10 of this Agreement;

1.4. 'the Maintenance Period' means the period of 12 months;

1.5. 'the Provisional Certificate' means the certificate to be issued by the Proper Officer to the Developer in accordance with clause 8;

1.6. 'the Plan' means the drawing number 2017021 007-01 Rev C annexed to this Agreement which has been approved by the Proper Officer;

1.7. 'the Proper Officer' means the Council's highway engineer or other officer for the time being acting through its Corporate Director, Economic Regeneration;

1.8. 'the Specifications' means:

1.8.1. in relation to the Works or any part of them the specifications set out in Schedule 2 and engineering drawings numbered 2017021 004-01 revision B and BOL-NORR-YY-00-DR-A-90-001 revision B copies of which have been deposited with the Council; and

1.8.2. in relation to the Street Lighting or any part of them the specifications set out in Schedule 3;

1.9. 'the Street Lighting' means the street lighting facilities to be erected on the Existing Roads comprising one street lighting column the position of which is indicated on the Plan and all ancillary apparatus;

1.10. 'Service Undertaker' means any authorised or licensed person or body providing or supplying gas electricity water telecommunications or sewerage facilities or services;

1.11. 'the Works' means the improvements, alterations and additions to the Existing Roads as identified on the Plan including:

1.11.1. the construction of a new junction access to serve the Development;

1.11.2. the relocation of a bus stop in the location shown with black hatching on the Plan;

1.11.3. alterations to pedestrian guardrail and road markings;

1.11.4. the provision of such other traffic signs and street furniture as the Proper Officer may direct;

1.11.5. the provision of any necessary alteration to the apparatus necessitated by the Service Undertakers; and

1.11.6. the removal of one existing street lighting column and the erection of the Street Lighting in its place, complete in all respects and connected to appropriate cables or mains.

2. INTERPRETATION

In this Agreement where the context so admits:

2.1. words importing one gender shall be construed as importing any other gender;

2.2. words importing the singular shall be construed as importing the plural and vice versa;

2.3. words importing persons shall be construed as importing a corporate body or a partnership and vice versa;

2.4. where any party comprises more than one person the obligations and liabilities of that party under this agreement shall be joint and several obligations and liabilities of those persons;

2.5. the clause headings do not form part of this Agreement and shall not be taken into account in its construction or interpretation;

2.6. reference to any recital, clause, sub-clause or schedule without further designation is a reference to the recital, clause, sub-clause or schedule of this Agreement so numbered; and

2.7. reference to any statute or statutory provision includes a reference to that statute or statutory provision as from time to time amended re-enacted or consolidated and all statutory instruments or orders made pursuant to it.

3. THE WORKS

3.1. The Developer shall:

3.1.1. give the Council at least one month's written notice of the Developer's intention to commence the Works on behalf of the Council and thereafter diligently proceed with the Works at no cost to the Council in accordance in all respects with the Plan, the Specifications and the requirements of Schedule 1 and without prejudice to the foregoing to keep to a minimum the period of occupation of the public highway so as to ensure the safety of traffic and pedestrians and the minimum disruption to users of and traffic flow on the public highway;

3.1.2. before commencing the Works and at no expense to the Council obtain such consents licences permissions and legal orders and or notices as may be required for the purposes of carrying out the Works and comply with the same and keep the Council indemnified from and against all liabilities costs claims actions demands or expenses which may arise from the Developer's failure to obtain or to comply with such consents licences permissions legal orders or notices; and

3.1.3. complete the Works as soon as is practicable and in any case not later than 24 months from the date of this Agreement.

3.2. The Council hereby licenses the Developer acting through its employees contractors or agents (with or without workmen plant and machinery) to enter upon the public highway and any adjoining land of the Council as is reasonably necessary so that the Developer is able to carry out and maintain the Works as required by the terms of this Agreement.

4. STANDARD OF WORKS AND APPROVED MATERIALS

4.1. The Developer shall execute the Works and carry out all subsequent maintenance as required by this Agreement with due diligence and with all reasonable care and skill.

4.2. No materials shall be used by the Developer unless they comply with the Specifications or are approved by the Proper Officer.

5. ACCESS TO WORKS AND REMEDIAL ACTION

The Developer shall:

5.1. during the progress of the Works and until the issue of the Final Certificate give to the Proper Officer and any person or persons duly authorised by him at all reasonable times free access to any part of the Works;

5.2. permit him or them to inspect the Works and all materials used or intended to be used in the Works;

5.3. give effect to any requirements made or instructions given by the Proper Officer or any person duly authorised by him including the removal of specimens for analysis at the sole expense of the Developer and at a testing laboratory approved by the Proper Officer, for securing that the Works conform to the Plan and Specifications and both are executed to the satisfaction of the Proper Officer; and

5.4. if so required remove any work or materials which in the opinion of the Proper Officer is or are badly or improperly carried out or defective or not in accordance with the Specifications and at the Developer's own expense re-execute any such work and substitute proper and suitable materials to the satisfaction of the Proper Officer.

6. COSTS

6.1. The Developer shall pay to the Council:

6.1.1. £1,000.00 (one thousand pounds) representing the expense to be incurred by the Council in supervising and inspecting the construction of the Works, prior receipt of which the Council hereby acknowledges;

6.1.2. on the date of this Agreement £400.00 (four hundred pounds) towards the Council's legal fees incurred in connection with this Agreement;

6.1.3. any costs (including legal and administrative process) incurred by the Council in making and implementing any traffic regulation order(s) and / or notice(s) (as defined in the Road Traffic Regulation Act 1984 and any other statute) which the Proper Officer deems necessary because of the Works and whether made or implemented before during or after completion of the Works; and

6.1.4. within 14 days of a written demand from the Council any other costs incurred by the Council in connection with the construction of the Works or their maintenance under the terms of this Agreement.

6.2. Receipt by the Council of sums due under this Agreement shall not create any contractual relationship between the Council and the Developer, nor absolve the Developer from any liability or obligation imposed upon them by the terms of this Agreement or by statute or at common law and the Council will not be liable for any loss, damage or injury which the Developer may sustain by reason of insufficient or faulty inspection of the Works by the Council.

7. SERVICE UNDERTAKERS

7.1. This Agreement does not authorise interference with Service Undertakers' apparatus or works in on or under the Existing Roads without their consent.

7.2. The Developer shall pay all charges that may be levied on the Council or the Developer by any Service Undertaker or any other person in respect of removal, protection or alteration of any of their apparatus necessitated by the Works.

7.3. The Developer shall on completion of the Works provide the Council with a plan showing the positions, size and depth of all pipes, cables, sewers or other apparatus under the Existing Roads.

8. PROVISIONAL CERTIFICATE

8.1. On completion of the Works to the satisfaction of the Proper Officer in all respects the Proper Officer shall issue the Provisional Certificate to the Developer.

8.2. Upon the issue of the Provisional Certificate the Maintenance Period shall begin.

9. MAINTENANCE PERIOD

During the Maintenance Period:

9.1. the Developer shall at its own expense undertake any repair or reconstruction of and correct all defects and imperfections to the Works and any other faults required to be corrected howsoever caused including those:

9.1.1. to the road surface drainage system;

9.1.2. caused by any connection to equipment or apparatus of any Service Undertaker in upon or under an existing highway or highways; and

9.1.3. which are notified in writing to the Developer by the Proper Officer;

9.2. the Developer shall at his own expense maintain the Works to enable safe use by vehicles and pedestrians to the satisfaction of the Proper Officer including the maintenance of all grassed and planted areas the removal of all abandoned vehicles rubbish or other unauthorised materials as may be necessary to facilitate use by vehicles pedestrians and other users and the carrying out of routine maintenance such as

sweeping gully emptying and snow clearance and any illuminated traffic signs.

10.FINAL CERTIFICATE

If at the expiration of the Maintenance Period the Proper Officer is satisfied that:

10.1. the Works have been properly maintained and are not then subject to any defects;

10.2. the Developer has carried out any necessary reinstatement or other works have been completed to the satisfaction in all respects of the Proper Officer;

10.3. all other obligations under this Agreement have been performed,

they shall issue the Final Certificate to the Developer and shall release the Developer from all liability under this Agreement.

11.DEFAULT

11.1. If the Developer:

11.1.1. fails to perform or observe any of the conditions covenants agreements or obligations on its part contained in this Agreement or described or referred to on the Plan or the Specifications; or

11.1.2. fails to proceed with the Works to the satisfaction of the Proper Officer; or

11.1.3. fails to complete the Works within the time limits set out in this Agreement; or

11.1.4. being a company, is wound up either voluntarily (except for the purpose of reconstruction or amalgamation) or compulsorily, or being an individual becomes bankrupt, or in either case enters into composition with its or his creditors, or

11.1.5. becomes subject to any procedure for the taking of control of its or his goods by another or suffers execution to be levied against its or his goods, or

11.1.6. has an administrative receiver or receiver appointed over the whole or part of its assets or suffers the appointment of an administrator,

then without prejudice to the other rights remedies and powers of the Council whether by reason of this Agreement or by Statute:

11.1.7. the Council may by notice in writing to the Developer determine this Agreement (except for clauses 12 and 13)

11.1.8. whether or not the Agreement is determined under the sub-clause 11.1.7, the Council may (after giving not less than 28 days' notice in writing to the Developer) enter and complete the Works or such part or parts thereof as the Council may at

its absolute discretion think fit and in such manner as the Council in its absolute discretion thinks fit and the cost thereof together with the cost of maintaining the Works prior to their adoption as certified by the Proper Officer shall be a debt due to the Council from the Developer.

12. BOND

12.1. The Developer has agreed to provide security for the due performance of its obligations contained in this Agreement by depositing monies with the Council in the terms set out in clause 12.2.

12.2. The Developer has agreed to indemnify the Council in respect of any expenditure up to but not exceeding £5,300.00 (five thousand three hundred pounds) (the "**Bond Sum**") which the Council may incur in accordance with this Agreement whether or not this Agreement has been determined or disclaimed and for these purposes the Developer shall deposit with the Council upon the completion of this Agreement the Bond Sum which sum shall be held in the Council's General Fund Account and may be used by the Council to indemnify itself as aforesaid if an Event of Default occurs or in respect of any other breach of the Agreement the amount of such expenditure being that certified by the Proper Officer whose certificate shall be final and any part of the said sum deposited with the Council and not used pursuant to this Clause shall be returned to the Developer (together with interest thereon from the date of deposit calculated at the rate fixed by the Treasury for the time being under the National Loans Act 1968) when the Works have been fully completed in accordance with this Agreement, no later than 5 working days following the issue of the Final Certificate.

12.3. For the avoidance of doubt, if an Event of Default occurs the Council shall be entitled in its absolute discretion to decide whether to exercise its rights under Clause 12.2 and any use of any part of the monies deposited pursuant to Clause 12.2 shall be without prejudice to the right of the Council to use any further part of the monies deposited in accordance with Clause 12.2 against further expenditure incurred by the Council until all of the obligations of the Developer under the Agreement have been satisfied in full.

13. FURTHER SURETY

If at any time after 24 months from the date of this Agreement any part or parts of the Works have not been completed the Council may (but not more frequently than once every two years) review the amount then secured under this Agreement and if in the Council's absolute discretion it considers it desirable to do so the Developer shall on the written request of the Council enter into a further bond in favour of the Council with such surety as is acceptable to the Council in such sum as the Proper Officer thinks fit having regard to the amount of the Works outstanding to guarantee further the terms and conditions contained in this Agreement.

14.INDEMNITY

The Developer hereby indemnifies the Council in respect of all costs, charges, actions, claims, demands, expenses and proceedings arising or in connection with or incidental to the carrying out of the Works (including claims relating to

infringement or destruction of any right, easement or privilege and claims under the Land Compensation Act 1973) or anything done or omitted to be done before issue of the Final Certificate other than those arising out of or in consequence of any negligent act, default or omission on the part of the Council.

15.INSURANCE

15.1. The Developer shall before the Works are commenced at its own expense effect a suitable policy of insurance against:

15.1.1. any liability, costs, claims or proceedings in respect of personal injury to or the death of any person (including workmen) arising out of, in the course of or caused by the execution of the Works (save where due to the negligent act, default or omission of the Council); and

15.1.2. any liability, costs, claims or proceedings for injury or damage to any real or personal property of the Council or any person arising out of, in the course of or caused by the execution of the Works (save where due to the negligent act, default or omission of the Council).

15.2. The Council may at any time before the issue of the Final Certificate require the Developer to produce within seven days of a request in writing a copy of the insurance policy referred to in Clause 15.1 together with a receipt for the current premium.

15.3. If the Developer at any time fails to comply with its obligations in Clause 15.1, or fails to pay all premiums in respect of such insurance, the Council may insure against any risk in respect of which the default has occurred, or pay such premiums, and recover the cost of doing so from the Developer.

16.SERVICE OF NOTICES

All notices to be given under this Agreement shall be:

16.1. in writing,

16.2. delivered personally or sent by pre-paid recorded delivery post addressed to the party to be served at the address set out in this Agreement (and in the case of the Council addressed for the attention of the Corporate Lead – Legal & Governance) or such other address as may from time to time be notified for the purpose, by notice in writing, and

16.3. deemed to have been served in the case of a notice delivered personally at the time of delivery or in the case of a notice sent by pre-paid recorded delivery post at the expiration of 48 hours after the notice was delivered into the custody of the postal authorities.

17.CONTRACTS (RIGHTS OF THIRD PARTIES) ACT 1999

A person who is not a party to this Agreement has no rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any terms of this Agreement but this

does not affect any right or remedy of a third party which exists or is available apart from such Act.

18.ASSIGNMENT

This Agreement may not be assigned by the Developer without the written consent of the Council.

IN WITNESS whereof this Deed has been executed on the day and year first before mentioned

SCHEDULE 1

Carrying out the Works

1. Before commencing any part of the Works the Developer shall submit (in so far as that shall not at the time already have been done) to the Proper Officer for his approval:

   1.1. (insofar only as any works are not adequately defined on the Plan or the Specifications) detailed drawings plans and specifications of the Works proposed;

   1.2. the name and address of the person or company who the Developer proposes to employ for carrying out the Works;

   1.3. a programme and method statement for carrying them out;

   1.4. a scheme of traffic management for use during the period of construction of the Works;

   1.5. insurance policies covering the works concerned and complying with clause 15 of this Agreement;

   1.6. health and safety plans as required by the Construction (Design and Management) Regulations 2015 (together with any further regulations from time to time amending or replacing them);

   and shall make all necessary arrangements for carrying out the Works including the service of any necessary notices in particular in relation to Service Undertakers' apparatus and all other equipment over or under the highway for enabling it to comply with the provisions of this Agreement.

2. Where it is necessary to build retaining walls and other structures to support the Works or any part of them no work shall be carried out on these sections of the Works until the details of construction have been submitted to the Proper Officer by the Developer and approved by the Proper Officer and construction thereof shall be carried out in accordance with the approved details.

3. The Proper Officer shall set a date for completion of the Works having due regard to the programme supplied to him pursuant to paragraph 1.3 of this Schedule and shall confirm such date in writing to the Developer at the same time as approving that programme.

4. The Developer shall:

4.1. employ the contractor approved under paragraph 1 of this Schedule for the Works or such other contractor as the Proper Officer shall approve;

4.2. if and to the extent required by the Proper Officer provide temporary traffic signal controls of a type which meet Department for Transport requirements;

4.3. if and to the extent required by the Proper Officer from the commencement of the Works until they become subject to the Provisional Certificate (or such later date as the Proper Officer shall require) ensure that:

4.3.1. adequate warning signs lights and cones are provided and maintained in good working order in accordance with Chapter 8 of the Traffic Signs Manual published by Her Majesty's Stationary Office; and

4.3.2. any temporary traffic signal controls required by the Proper Officer in paragraph 4.3.1 of this Schedule are maintained in proper working order.

4.4. not (without the written consent of the Proper Officer) carry out or permit any of the Works within (or so as to necessitate the movement of plant or equipment on) the highway maintainable at the public expense to be carried out on:

4.4.1. a Sunday or bank holiday; or

4.4.2. before 8-00 hours or after 18-00 hours Monday to Friday; or

4.4.3. before 8-00 hours or after 14-00 hours on a Saturday.

4.5. If at any time during the periods specified in paragraph 4.4 of this Schedule the Developer fails to provide adequate warning signs lights or cones or any such provided are not in good working order or mud is deposited on the highway maintainable at public expense and not immediately removed the Proper Officer may take such action as he considers necessary to remedy the failure and shall charge the Developer the cost of doing so including materials plant labour and administrative costs.

4.6 The Developer shall observe such requirements as the Proper Officer may reasonably stipulate in the interests of highway users as to the manner and execution of the Works or as to the precautions to be taken in connection therewith.

4.7 Prior to the issue of the Final Certificate to provide to the Proper Officer such documents as are reasonably required in accordance with the Construction (Design and Management) Regulations 2015.

SCHEDULE 2

Specifications for the Works

General specification for the

Construction of roads and footpaths

In residential developments





South Tyneside Council

General Specification for the Construction of Roads and Footpaths in new Residential Development

Layout plans for inclusion in a streetworks adoption agreement must be provided at a scale of 1:500 with plot numbers indicated and North identified.

The Road Construction shall be designed in accordance with this Specification. The layout of the development shall be designed in accordance with the Guidance Notes for New Developments – 2012. Design period to be 40 years with 4% growth rate. The minimum gradient is 1/150 for asphalt-paved roads, 1/100 for block-paved courts and the maximum is 1/20. For roads designed with a camber, minimum cross road gradient is 1/80, maximum is 1/40. For roads designed with a crossfall, minimum cross road gradient is 1/40, maximum is 1/25.

Details of the proposed road construction, together with soil test results, traffic figures and design procedure, must be submitted to the Highways and Transport Design Manager, or their representative, for approval.

The Specification for roadworks shall be the current edition of the Highways Agency's 'Design Manual for Roads and Bridges', modified and supplemented by the special clauses indicated below. (S)

Private utility service boxes; e.g. water stop taps and private utility service feeds are not permitted in any adoptable area.

Roadworks

Clause 907 (S) – Rolled Asphalt Surface Course for Residential Roads

40mm HRA 35/14 F surf 40/60 - 40mm thickness surfacing and pre-coated chippings

Hot rolled asphalt to BS EN 13108:4 2006, Table 4, design type 35/14F, 35% 0/14 coarse aggregate content; paving grade bitumen binder, 40/60 pen, to Table 16.

Pre-coated chippings graded 14/20 with a 70% spread. BS 594-2:2003 cl 7.1.3

* NOTE Where the estate road will become a bus route, then crushed rock with an aggregate abrasion value of 10 maximum and PSV of 60 minimum must be used.

Clause 917 (S) - Regulating Course (if required)

HRA 50/20 reg 40/60 – varying thickness

Rolled asphalt regulating course to BS EN 13108:4 2006, Table 1, columns 50/11, 50/16 or 50/22, in layers no thicker than 80mm each.

50% coarse aggregate content; paving grade bitumen binder, 40/60 pen to Table 16.

Clause 903 – Binder Course

40mm AC 20 dense bin 100/150
Dense Bitumen Macadam binder course, 20mm nominal size to BS EN 13108-1:2006, Table 2 with 100-pen bitumen binder.

Clause 811 – Base Course

80mm AC 32 dense base 100/150
Dense Bitumen Macadam base course, 32mm nominal size to BS EN 13108-1:2006, Table 2 with 100-pen bitumen binder.

Clause 810 (S) – CONCRETE BLOCK PAVING IN CARRIAGEWAYS AND VEHICULAR CROSSINGS and

Clause 1107 (S) – CONCRETE BLOCK PAVING IN FOOTWAYS, FOOTPATHS, PAVED AREAS AND CYCLEWAYS

1. General

i. Concrete block paving shall be manufactured in accordance with BS EN 1338:2003 and laid in accordance with BS 7533-3:2005.

ii. All the requirements of the Highways Agency's 'Design Manual for Roads and Bridges' shall apply except where the requirements of this supplementary clause supersedes them.

2. Surface levels of pavement courses

i. The formation and sub-base shall not deviate from true level by more than: -

	+ 20mm		
formation	- 30mm	sub-base	± 20mm

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ii. The finished wearing surface level shall not deviate vertically at any point from the true pavement surface by more than ± 6mm. Immediately adjacent to gullies and manholes, the tolerance shall be +3mm to 0mm.

iii. The maximum deformation within the completed surface, measured by a 3m straight edge placed parallel to the centre line of the road, should not exceed 6mm except in parts of the carriageway where vertical curves necessitate a greater deviation.

iv. The levels of any two adjacent blocks shall not differ by more than 2mm.

3. Edge Restraint

i. Unless otherwise described in the Works Agreement or agreed in writing by the Engineer, the edge restraint shall be provided in advance of the laying of paving blocks.

ii. Edge restraint is deemed to include kerbs in accordance with clauses 1101 and 1103. (The term kerb includes flush kerbs.) Where an alternative form of edge restraint is proposed, the Engineer's approval shall be obtained in writing.

4. Laying Course

i. The laying course shall consist of a compacted thickness of 30mm graded sharp sand (or recycled glass material) to BS EN 12620:2002, Table 2, containing not more than 3% of silt and clay by weight.

ii. The sand shall be struck off to such a level that, when blocks have been vibrated, the upper face of the blocks shall be true to the finished level. Before the blocks are laid, the laying course shall not be subjected to any form of trafficking, including pedestrian trafficking, before, after or during screeding.

Surcharge Vibration of blocks shall be completed as soon as possible to ensure that the sand surcharge is correct and if not, alterations made.

5. Selection and Laying of Blocks

i. Unless otherwise described in the Works Agreement, herringbone pattern shall be used for all types of blocks.

ii. Unless otherwise described in the Works Agreement, blocks with a nominal thickness of 80mm shall be used for roads and paved areas subject to vehicular traffic and blocks with a nominal thickness of 60mm shall be used for areas used exclusively by pedestrian traffic.

iii. Blocks shall be placed firmly together without disturbance to the laying course and the order of placing the blocks shall ensure this.

iv. Blocks shall be cut to exactly fit all obstructions and edges. The laying pattern shall be altered at edges in order that no block less than half size shall be used. Cutting of blocks shall be carried out using a hydraulic splitter or a mechanical saw. Mortar fillets may not be used.

6. Vibration

i. The surface course shall be subject to passes of a vibrating plate compactor which shall have a centrifugal force of approximately 16-20 kN and a frequency of approximately 75-100 Hz and a plate area of between 0.35 and 0.5m2 shall be used on 80mm thick blocks. On 60mm thick blocks the vibrating plate compactor shall have a vibrating force of 7-16 kN and a plate area of 0.2 to 0.4m2 and a frequency of 75-100 Hz. Sufficient passes shall be made to compact the laying course and produce an even surface.

ii. Vibration shall not be carried out within one metre of an unrestrained edge.

iii. After initial vibration, bagged dry fine sand shall be brushed into the joint and further passes of the vibrating plate compactor made to fill the joints, more bagged dry fine sand being spread over the surface to completely fill the joints.

Sanding of the blocks is to be completed before any traffic is allowed onto the area.

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Clause 803 (S) – TYPE 1 UNBOUND MIXTURES

300mm thickness of sub-base material laid on a sub-grade material of not less than 3% CBR value. The sub-base shall extend to 450mm beyond the road face of the kerbs. Where the CBR is less than 3% the sub-base must be increased to a depth agreed with the Engineer.

Sub-base material will be subject to testing at the discretion of the Engineer. The Contractor may lay the sub-base material before the test results are known at his own risk. Test results are normally available within 3 working days of delivery.

Clause 1025 (S) - Concrete Carriageway (150mm minimum depth on 150mm minimum depth of sub-base)

a. The weight of cement incorporated in each cubic metre of fully compacted concrete shall be not less than 325 kg and not more than 500 kg. Concrete grade C32/40

b. The concrete road slab shall be laid on an underlay of approved 1000 grade impermeable plastic sheeting. 125 microns thick. Where more than one sheet is required, they should overlap by 300mm. [Clause 1007.]

c. Steel fabric reinforcement shall comply with the requirements of BS 4483: 2005 table 1, C385 and shall be delivered to the site in flat mats weighing not less than 3.41 kg per square metre.

d. Expansion joints shall be formed in the carriageway not more than 60 metres apart.

e. Contraction joints shall be formed in the carriageway at 20 metre intervals and placed equidistant between expansion joints.

f. The restrictions on the use of newly constructed pavements imposed by Clause 1048 should be strictly adhered to.

Kerbs and footways

Utility verges and their construction
a. Backfilling to Trenches

All trenches (including Public Utility trenches) in proposed carriageway areas are to be backfilled above the approved bedding with Type 1 D.Tp. sub-base material up to formation level and compacted in 100mm layers.

b.Compaction of Trenches in Proposed Footways/Footpaths

All trenches (including Public Utility trenches) are to be individually compacted at the formation level of the footway/ footpath and topped up as necessary, prior to general rolling of the formation.

Construction

c. Formation

Prior to laying the sub-base, the formation shall be treated with a residual herbicide approved under current pesticide legislation, applied in accordance with the manufacturer's instructions. This must also comply with the current COSHH Regulations.

If the weed problem is excessive, a 'weed barrier' must be laid prior to the sub-base. Invasive weeds (such as Japanese Knotweed) should be treated for a minimum of 2 growing seasons, prior to laying the sub-base.

d. Crossfall

Crossfall to footway/footpath is to be 1 in 32.

e. Where public utility services are situated under any footway/ footpath under construction, all work on laying the services, providing connections etc., must be completed prior to the final surfacing being laid.

f. Footpath Drainage

Footpaths must be positively drained. Absorption of run off into planted areas is not acceptable.

i. Footpaths must have a longitudinal gradient between 1 in 100 (1%) and 1 in 20 (5%).

ii. Footpath gullies connected in to the adoptable drainage system must be provided at low points.

iii. Footpaths must have a crossfall of 1 in 32 and fall away from buildings.

iv. Dished drainage channels are not permitted within the footpath.

Clause 1104 (S) Footways (Concrete Flags)

1. The area to be flagged shall be properly levelled and compacted and covered with not less than 150mm of compacted sub-base of Clause 803 Type 1 granular material upon which shall be laid an even bedding of sand of 30mm

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thickness. No sand shall be spread until the base has been levelled and compacted to true lines and levels.

2. The flagging shall be 63mm precast concrete slabs, laid in courses at right angles to the line of footway, with a crossfall of 1 in 32 where practicable. Joints shall be properly bonded with a minimum of 150mm overlap and each flag shall be driven into place with a mallet to give a firm bedding. A straight edge shall be used to ensure that adjacent flags are flush across the joints, which shall not be greater than 3mm wide and completely filled by brushing in a dry mix of 1:3 cement:sand mortar after laying.

3. At curves and road junctions, flags shall be cut to line and radii. Where the radius is 12m or less, all flags shall be radially cut on both edges to the required line. Where obstructions such as steps, valve boxes, lamp standards etc. are encountered in the flagged area, the flagging shall be cut to fit neatly around such obstructions and only where this is impractical shall insitu mortar fillets be used.

4. Making up at the back of footway, against garden walls etc. must be kept to a minimum width and will in no case exceed 50mm width. This 'heading' shall be filled with a 3:1 sand:cement mortar.

5. Crossings of the flagged footway will be treated as detailed below.

   a. Vehicular Crossing Entrances
   The kerbs at each side of the crossing, which is to be a minimum width of 2500mm, shall be sloped down to a 20mm check at toe of the ramp, extending along the full width of the crossing. The concrete ramp must extend to the full width of the crossing, plus the sloped kerbs.

   A 150mm thick ramp of concrete mix 'PAV 2' shall be constructed, extending 600mm behind the kerb if the footpath width exceeds 2000mm and 450mm behind the kerb if the width is less than 2000mm. The gradient of the ramp shall be constant and not curved.

   The remaining area of flagging shall be laid directly on a 100mm thickness bed of concrete mix ST5 for the full width of the crossing. The line and level of the footway shall continue without any deviation which would indicate the presence of the crossing.

   b. Pedestrian Crossing Points

   The kerbs at each side of a pedestrian crossing point which is to be a minimum width of 1200mm (normally 1800mm) shall be sloped down (maximum slope 1 in 12) to a maximum 6 mm check at the toe of the ramp, extending the full width of the crossing. It is permissible to drop the footway over its full width in order to achieve a maximum gradient of 1 in 12.

   Tactile paving laid in accordance with Department of Transport 'Disability Unit Circular 1/91', will normally be provided adjacent to an estate entrance.

   Any proposed kerb system must be capable of achieving a 6mm check at crossing points and dropping from 100mm kerb face to 6mm at a maximum gradient of 1 in 12.

6. **Any concrete with an exposed surface, i.e. insitu concrete fill to splitter islands, to be 'PAV 2' mix.**

Clause 1105 (S) Footways (Flexible)

Note
Prior to application of tack coat or wearing course, treat base course with a residual herbicide approved under current pesticide legislation applied. This must also comply with the current COSHH Regulations.

1. **Flexible Surfacing – AC 6 dense surf 100/150** shall be 25mm consolidated thickness of dense wearing course macadam, 6mm nominal size to BS EN 13108:1 2006.

2. **Basecourse – AC 20 open bin 100/150** shall be laid to a 50mm consolidated thickness of 20mm nominal size, open graded base course macadam to BS EN 13108:1.

3. **Sub-base** The granular sub-base shall consist of Clause 803, Type 1 granular material. It should be laid to the same crossfall as the surfacing, to a consolidated thickness of 150mm where no vehicular traffic is envisaged and a thickness of 200mm over vehicular crossings and minor accesses for light vehicles.

   Sub-base material will be subject to testing at the discretion of the Engineer. The Contractor may lay sub-base material before the test results are known at his own risk. Test results are normally available within 3 working days of delivery.

4. Where the side(s) of the flexible footpaths abut a verge or a landscaped area, the edge of the pavement shall be supported by 50x150mm flat topped precast concrete kerbs. The kerbs shall be set on a 200x100mm concrete mix ST4 base and haunches both sides.

Clause 1106 (S) Kerb Foundation

Kerbs shall be laid on a foundation of concrete mix ST4, not less than 150mm thick and extending beyond the rear of the kerb for a distance not less than 150mm. The kerbs shall be backed by a concrete haunch to a distance of 75mm below the top of the kerb.

Clause 1101 (S) Laying the Kerbs, Channels and Safeticurb

The kerb, channels and safeticurb shall be bedded as specified by Clause 1101, Highways Agency Specification, using 1:3 cement:sand mortar. On all radius work, the end of the last kerb laid is to be buttered up with mortar before laying the next kerb and any surplus mortar is to be trowelled off. On straight sections, kerbs are to be butt jointed with a dry joint not more than 2mm wide. Expansion joints are to be provided at expansion joints in the concrete carriageway.

NOTE If kerb joints are pointed after laying, an approved epoxy resin mortar shall be used.

Proof Only

Drainage

Clause 508 (S) – Gullies and Service Ducts

Clause 2617

a. Road Gullies (Cast Iron Gratings and Pots)

Gullies shall be as supplied by Jennings Winch & Foundry Co. Ltd., Sunderland or similar approved. They shall be of cast iron, of South Shields Corporation pattern, with a weight of 203kg and a 150mm trapped outlet. Gullies are to be bedded and surrounded with 150mm thick concrete mix ST4.

b. Road Gullies (Precast Concrete or Plastic Gully Pots)

Precast concrete road gully pots shall comply with BS 5911-4:2002 and be 450mm diameter, 750mm deep with 150mm diameter outlet. The gully pot shall be bedded and surrounded with 150mm concrete mix ST4.

Alternatively, a suitable 450mm diameter plastic pot may be used with 150mm thick concrete mix ST4 surround

c. Road Gullies (Gratings and Frames)

Road gully gratings and frames shall be PAM 'Waterflow' (C250) 29kg (75mm), PAM 'Watergate' (C250) 29kg (100mm) , PAM 'Watershed' (D400) 39kg (100mm) or similar approved and shall be bedded on 2 courses of 225mm class 'B' engineering brickwork in 2:1 sand:cement mortar. Grating must include locking pins within hinge and a locking device to inhibit unauthorised opening.

d. Footpath Gullies (Vitrified Clay)

Footpath gully gratings shall be similar to the Stanton 'Pedestrian' ref HY813 1, including locking spring clip and the pot shall be 300mm diameter with 150mm trapped outlet and rodding eye with a lift out bucket. The gully pot shall be bedded and surrounded with 150mm concrete mix ST4.

Note
All gully pipe connections within the carriageway or parking areas are to be surrounded with 150mm of concrete mix ST4, where the cover from formation level is less than 900mm. A flexible joint is required at the junction of gully pot and the pipe connection.

e. Service Ducts

Service ducts across carriageway areas are to be surrounded with 150mm concrete mix ST4 if clayware pipes are used.

The concrete surround must be below formation level of the carriageway.

Special sewer and drain works clauses

1. Manhole covers and frames shall be of ductile iron and shall comply with BS EN 124: 1994. Group 4 (minimum class D400) covers and frames shall be used in carriageways and Group 2 (minimum class B125) circular covers and frames used elsewhere. (Note: Manhole covers on private drains in adopted areas shall be group 2, 60/45 rectangular.)
2. Where sewers or drains lie under a carriageway or footpaths, the trench must be backfilled above the approved bedding with Type 1 D.Tp. sub-base material up to formation level and compacted in 100mm layers. Minimum pipe size under highway is 150mm, including private drains.
3. Where drains lie under the carriageway or any areas which carry vehicular or construction traffic and the excavated formation level will be less than 0.9m during construction above the crown of the pipe, then the pipe shall be laid in 150mm thick concrete mix ST4 surround with the flexible joints maintained through the concrete surround. (Note: Flexible joints at 2000mm centres are required in surrounds to plastic pipes or alternatively provide 150mm deep, reinforced, concrete mix ST4 slab. Width of slab equal to trench width +600mm. Slab to be positioned below formation level. Reinforcement to be B1131 mesh.)
4. Where drains lie under fields, gardens or other traffic-free areas and the cover to the crown of the pipe is less than 0.9m, then the sewer shall be surrounded with not less than 150mm of concrete mix ST4, with the flexible joints being maintained throughout the concrete surround. (Note: Flexible joints at 2000mm centres are required in surrounds to plastic pipes or alternatively provide 150mm deep, reinforced, concrete mix ST4 slab. Width of slab equal to trench width +600mm. Slab to be positioned below formation level. Reinforcement to be B1131 mesh.) This clause also applies to private drains under public areas.

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Traffic Signs

Clause 1202 – Requirements for Permanent Traffic Signs

1. All traffic signs and fittings shall be manufactured in compliance with BS EN 12899-1:2007 and BS EN ISO 1463:2004 and shall conform to the current Highways
   Agency circulars.

In addition, the sign plate shall be made of a material known to be suitable for the sheeting material to be applied.

2. The manufacturer's instructions shall be strictly followed in respect of the preparation of sign plates, application of sheet material to the sign plate, including clear lacquer finish and the edge sealing of cut-out letters, symbols and borders.

3. A written guarantee against faulty workmanship, for at least five years, shall also be provided by the manufacturer.

Street Name Plates

The street name plates are to be in position before the first property is occupied.

Manufacture
Street name plates shall be manufactured from 11 SWG Aluminium with die pressed letters and border. Lettering shall be black, 88mm 'Kindersley' style and the plate shall have a 12mm black border. Heat activated non-reflective white coloured backing applied. The back of the plate shall be painted and finished with 'Traffic Grey' gloss. Lettering and borders shall not be vinyl adhesive types.

South Tyneside Council logo shall be located at the left hand edge of the plate, 90mm height, in line with the first line of wording.

In conservation areas, plates shall be cast metal with raised lettering and borders.

The inclusion of either the wording 'culs de sac' or no through road sign 816.1 (from 'The Traffic Signs and Regulations and General Directions 2002') where appropriate.

Mounting
WHERE POSSIBLE, THE STREET NAME PLATE SHALL BE MOUNTED AT FIRST FLOOR HEIGHT ON APPROPRIATE BUILDINGS.

Where the sign must be post mounted, 12mm square aluminium channels shall be fitted to top and bottom. Post mounted vehicle access boards shall have 25mm square aluminium channel.

Mounting posts shall be 50mm diameter galvanised steel, sunk 600mm into earth, with 300x 300x 450mm concrete footings. Normal mounting height of access board is 1.0m.

Locations of street name plates are to be agreed with the Engineer.

Maintenance of highways

(Please also see the Council's Policy document 'Environmental Guidelines for Contractors working on the Highway' – copy attached.)

1. The Contractor shall take all necessary steps to ensure that: -

a. No mud, clay, soil, dust or similar material is deposited from any vehicle leaving the site onto any highway or other part of any route used by such vehicle for purposes connected with the performance of this Contract;

b. All vehicles leaving the site are so loaded that spillage therefrom is prevented;

c. Any material deposited in contravention of this clause is to be removed by the Contractor from all roads, footways, verges, working areas, gullies etc. affected by his operations, including any material deposited outside the limits of the Site, in a manner approved by and to the satisfaction of the Engineer;

d. Any damage caused to the highways or other parts of the routes used by such vehicles or to services therein, by the deposit or removal of any such materials, shall be made good to the satisfaction of the Engineer.

2. The Contractor is responsible for the compliance with this Clause, of his suppliers, sub-contractors and any other party connected with this Contract and shall indemnify the Employer against and expense, liability, loss, claim costs or proceedings in respect of any injury or damage whatsoever to any property, real or personal, which is attributable to non-compliance with this Clause.

3. The Engineer may direct that any vehicle, which in his opinion is likely to cause a breach of the obligations contained in this Clause, shall not leave the site until suitable remedial works have been carried out to his satisfaction.

4. Compliance with the Clause does not relieve the Contractor from fulfilling the requirements of any District Council By-Law relating to mud, etc. on highways.

5. All the above provisions shall apply throughout the Contract Period and the Period of Maintenance.

Proof copy

Environmental guidelines for contractors working on the highway

The Council attaches great importance to Environmental and Road Safety issues associated with Highway Works. Contained within our contract documentation are references to legislation and Council requirements that all contractors are obliged to follow.

With ever increasing traffic densities it is very important that clear and early warning of any obstructions on the road must be provided in accordance with the Traffic Signs Manual Chapter 8.

The following list of **PLEASE REMEMBER** activities highlight construction practices that adversely affect the environmental and safety aspects of our highway network and as such will be carefully monitored during the period of your works.

This list is not meant to be exhaustive, think of it as a 'Good Practice Guide' for working on our highways and help us to keep the Borough as a safe and pleasant place to live, work and play.

- PLEASE REMEMBER TO -

- Refer to your obligations under the Contract/Specification - Note that your sub-contractors are **YOUR** responsibility;
- Provide and maintain the required signs and barriers, promptly removing them at the appropriate time – any unauthorised signs and road markings will be immediately removed –
  Note that the requirements of the Traffic Signs Manual Chapter 8 will be strictly enforced;
- Make adequate provision for pedestrians, prams and the disabled, paying particular attention to the needs of those with visual and mobility handicaps;
- Park vehicles sensibly on the carriageway, not on the footway or verge, or where they will force other road users to run over the footway or verge;
- Agree storage areas for your cabins, materials, plants, etc. with me before they arrive on site, and make good the areas to my satisfaction before you leave the site;
- Make adequate and secure provision for the storage of rubbish, you can now be fined for litter;
- Protect the carriageway, footways and verges from staining or damage due to mixing concrete, oil and fuel spills from plant, outriggers, etc. – all damage will be repaired to my satisfaction within 48 hours;
- Prevent cement washings, landscape soil spillage and the like from entering the drainage system;
- Obtain a permit for the placement of skips and the erection of scaffolding and hoardings within the highway.

Thank you
(Executive Director Economic Regeneration)

Proof copy

Economic Regeneration

Town Hall and Civic Offices
Westoe Road
South Shields
Tyne and Wear
NE33 2RL

AUGUST 2012

If you know someone who would like this information in a different format contact the communications team on 0191 424 7385

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Designed and printed by South Tyneside Council

Schedule 3

Specifications for the Street Lighting

Specification for Street Lighting Works on Private Developments

Version 2 January 2014)

South Tyneside Council

Light it

Contents

	Page
Section 1 - General	04
Section 2 - Equipment	05
Section 3 - Installation	10

List of Appendices

Appendix A – Schedule of Attachments	14
Appendix B – Lighting Column Foundation Detail	15
Appendix C – Test and Inspection Certificate	16
Appendix D – Criteria for Adoption	17

Street Lighting General Specification

Section 1 – General

1.1 Design

The street lighting scheme shall be designed in accordance with the current editions of the British Standard for Road Lighting BS EN 13201 and the Code of Practice for the Design of Road Lighting BS 5489-1, and this specification.

The minimum design parameters shall generally be:

Distributor Roads S3 (7.5 lux average and 1.5 lux minimum)
All Other Areas S4 (5.0 lux average and 1.0 lux minimum)

Balfour Beatty Power Networks offer a design and build service for all street lighting on Private Developments, and can be contacted on the details listed below.

1.2 Standard

Before design has commenced, the Developer shall consult with Balfour Beatty Power Networks, who are responsible for the Street Lighting and Highway Signs in South Tyneside, as to the particular requirements for their development, i.e. lighting levels, column heights, lamp sources and type of equipment to be used. The contact details are as follows:

Balfour Beatty Power Networks Limited
Street Lighting PFI Division
Unit 14, Brooklands Way
Boldon Business Park
Boldon Colliery
Tyne and Wear
NE35 9LZ

Tel: 0191 519 6070
Fax: 0191 519 6080
www.lightit.co.uk

1.3 Approval

Assuming the Developer prepares the design, it shall be submitted to the Local Authority who will forward to Balfour Beatty Power Networks for approval, and there may be a charge for this service. A table of costs relating to the approval process is available on request from Balfour Beatty Power Networks. The design submission must include the following information, otherwise the design may be rejected:

(i) A plan (1:500 scale or larger) showing:

a) The positions and type of any immediately adjacent lighting columns either existing or proposed, on other roads, phases or adjoining developments.

b) The positions of roads, shared surfaces, footways, footpaths, houses, boundaries and driveways.

c) The positions, types and heights of the proposed street lighting columns and bracket arm lengths.

d) The lantern and lamp types and wattages.

e) Where the distribution network operator (DNO) within South Tyneside, service is to be installed into a column, the plan shall clearly show the route of DNO's low voltage cable network in the vicinity of the column.

f) Where the Developer intends to use an Independent Distribution Network Operator (IDNO) to own, operate and maintain the electricity network throughout the development, details of the IDNO must be submitted to the autority at the start of the approval process. The plan shall clearly show the route of all cables and ducts, together with the types and sizes of cables used.

(ii) Lighting design calculations showing, according to the category of the road, the luminance, uniformities, threshold increment, surround ratio, average illuminance and minimum illuminance, in accordance with the method required by the above standards listed in section 1.1 Design.

(iii) Any other relevant information that the Developer wishes to provide to support his design.

1.4 Quality of Labour

Installation of lighting columns and control equipment within lighting columns, feeder pillars, etc., shall be carried out by competent persons with respect to the type of work they are engaged on and shall, where applicable, be certified in accordance with the requirements of ASLEC, with the appropriate registration card.

Section 2 – Equipment

2.1 Lighting Columns (Tubular Steel)

All lighting columns shall be manufactured by Stainton Metal Company Limited or equivalent in accordance with BS EN 40 for Lighting Columns, complete with a 30 year warranty from the column manufacturer, and the particular requirements as follows:

(i) All lighting columns should be designed in accordance with the guidance contained within PD 6547:2004. The manufacturer should satisfy themselves that the columns comply with the requirements of BS EN 40 at the installation location.

(ii) Design of lighting columns to facilitate Attachments shall be as specified in Appendix A.

(iii) Fatigue calculations shall be in accordance with BD 94/07, and shall be applied to columns over 8m in height and the design life shall be taken as 50 years for the purposes of this calculation.

(iv) All columns before leaving the factory are to be protected in accordance with BS 5493 as follows:

(a) Hot dip galvanizing with zinc in accordance with BS 729 with an average minimum coating of not less than 610g/m² on both internal and external surfaces.

(b) The galvanised surface to be degreased.

(c) External surfaces overall and internal to 250mm above finished ground level including bracket arm and door internal/external:

1st Coat – 'T' wash
2nd Coat – Primer of Amercoat 71TC

(d) External surfaces overall including any bracket arm and door internal/external to receive Ameron PSX 700. Colours as following:

5/6M	BS 4800 14 C 39	(Alhambra)
8/10/12M	BS 4800 12 B 21	(Catkin)
Heritage	BS 4800 00 E 53	(Black)

(e) Additional coat to base section internal and external to 250mm above finished ground level to be Ameron Steelguard Root Treatment

(f) Columns should not be installed in a galvanised state

2.2 Lighting Columns (Tubular Steel Raise and Lower)

When required, raise and lower columns shall be installed at such locations where vehicular access is limited or where the presence of a maintenance vehicle may impede the free flow of traffic, in full accordance with the following.

All tubular steel raise and lower columns shall comply with the requirements of Section 2.1 Lighting Columns (Tubular Steel).

All columns shall be erected in accordance with the manufacturer's instructions and the oiling point provided for the lubrication of the hinged cam shall be attended to during erection.

Any special equipment required to raise and lower columns, shall be provided by the Developer, and used in full accordance with the manufacturer's instructions.

2.3 Lighting Columns (non-standard)

In some exceptional circumstances, non-standard lighting columns may be used within a development and be considered for adoption, however they must satisfy certain criteria.

The number of columns in the scheme that are non-standard must be 15 columns as a minimum, for the purposes of visual impact.

The non-standard columns should not be a manufacturers 'end of line' range and some assurance should be sought from the manufacturer that these columns will be available for the foreseeable future.

Lastly, either a commuted sum will be applied to each column to cover the additional cost to Balfour Beatty upon adoption of the columns or a number of strategic spares will need to be purchased (at a rate of 1 for every 10 number of columns in the scheme). This will be at the developer's expense.

2.4 Lanterns (pre 1st January 2014)

In general all lanterns shall be Philips Lighting Iridium Range (SGS252/3/4). For residential streets all lanterns shall be fitted with Philips Cosmopolis White lamp. For Principal and Other Classified roads, lanterns shall be fitted with high pressure sodium lamps.

Where other lanterns are submitted for approval, in areas other than residential areas, they must comply with BS EN 60598 and be fully sealed for both lamps and gear compartments to IP66. In general the lantern should be fitted with a glass bowl and comply with the installed luminous intensity (G) class. The lantern should also have a ULOR not exceeding 0.03.

All lanterns shall be fitted with an insulated terminal block, earth terminal cable clamp, photo-electric cell unit and lamp holder ready wired to the connector block with flexible cable with not less than 0.75 sq. mm copper conductors insulated with non-hygroscopic heat resisting material.

All lanterns shall be provided with a 12 year warranty from the lantern manufacturer, which can be transferred to Balfour Beatty Power Networks Limited.

All Cosmopolis lanterns are to be fitted with Philips dimmable Dyna Vision Prog Xt CPO xx type ballasts (where xx is applicable to the Cosmopolis type lantern). Provision should also be made for the installation of a designated node to facilitate the remote dimming of the lantern via the Philips City Touch CMS system. This system will be managed by South Tyneside Councils PFI partner Balfour Beatty. The developer is required to contact Balfour Beatty to obtain the relevant programming data for the Philips City Touch node on site.

2.5 Lanterns (LED units) (Post 1st January 2014)

From 1st January 2014 all new developments shall comprise of a suitable Philips City Touch enabled LED unit from the Philips range of units which should be selected following consultation with South Tyneside Councils PFI provider, Balfour Beatty.

2.6 Lanterns (non-standard)

In some exceptional circumstances, non-standard lanterns may be used within a development and be considered for adoption, however they must satisfy certain criteria.

The number of lanterns in the scheme that are non-standard must be 15 minimum, for the purposes of visual impact.

The non-standard lanterns should not be a manufacturers 'end of line' range and some assurance should be sought from the manufacturer that these lanterns will be available for the foreseeable future.

Lastly, either a commuted sum will be applied to each lantern to cover the additional cost to Balfour Beatty upon adoption (including additional energy consumption) or a number of strategic spares will need to be purchased (at a rate of 1 for every 10 number of lanterns in the scheme). This will be at the developer's expense.

2.7 Traffic Signs

Traffic Signs will be provided to the recommendation of prEN 12899-1 Road equipment. Fixed, vertical road traffic signs. Part 1.

The proposed manufacturer for traffic sign luminaire construction is Simmonsigns Limited. - Die- cast aluminium body incorporating outreach bracket finished in polyester powder coated 150mm min. with 3mm polycarbonate lens. Mounting can be either post top or clip fixing. Sealed to IP56. Lighting unit to be LED with integral driver and PEC. Light output to BS873 Part 5.
Traffic Sign faces to be of aluminium construction with Retro Reflective Micro Prismatic sign faces to Traffic Sign Regulations and General Directions 2002. Fixing will be by standard sign fixing channel clips.

Traffic signposts will be manufactured to similar standard and quality finish to the lighting columns.
Sign Pole Colour BS 381 693 Aircraft Grey

2.8 Traffic Bollards

Simmonsigns Limited or similar quality, manufactured to the recommendations of prEN 12899-2 Road equipment. Fixed, vertical road signs. Part 2. Transilluminated traffic bollards. Base box constructed from cast aluminium with hinged frame and domed polycarbonate lens with lighting unit consisting of LED light source with integral driver. Lid sealed to IP67. Bollard top to be manufactured from flexible material with sign faces with inlaid graphics.

Non illuminated bollards will be the TMP flecta type where appropriate.

2.9 Belisha Beacons

These will be manufactured to BS 873 for Belisha Beacons and centre island beacons.
Belisha/Centre island beacon galleries to be aluminium "anti vandal" style with bowls manufactured from one-piece polythene or two-piece polycarbonate. Posts to be manufactured to the same standard as traffic signposts above. The use of internally illuminated Belisha posts will be limited to the replacement of existing apparatus only.

2.10 Feeder pillars

These will be manufactured from sheet steel and fully galvanised to ISO/FDIS 1461 and have a door entry to a minimum of IP54. The pillars will be of adequate size to house the necessary switchgear and service termination unit on a backboard of non-hygroscopic material. Foundations will be of concrete with a duct entry for the cables.

2.11 Photo Electric Cell Control Units

Photo electric cell control units shall conform to BS 5972 and be of one piece construction, either plug-in or miniature supplied by Royce Thompson.

The unit shall be factory calibrated to provide a switch on level of 70 lux +/- 10% with a ratio of 1;0.5, resulting in a switch off setting of 35 lux. The manufacturer shall provide a certificate of calibration and compliance.

2.12 Fuse Junction Units

Except for those fuse junction units which are the property of the DNO/IDNO all fuse junction units in street lighting installations shall be as manufactured by Tofco-SMK Limited or approved equivalent.

The fuse junction units shall be rated at a minimum of 32 amps and be of the double pole switched isolator type complete with integral fuse carrier(s) suitable for cartridge type fuses to BS 88 as Lawson type MD or equivalent. The switched isolators shall comply with, and be approved to BS 5419, and shall be provided with an interlocking facility such that the fuses cannot be removed until the isolator is in the 'off' position which shall be clearly indicated.

The fuse junction units shall be provided with a locking off facility capable of accepting a padlock to facilitate safe electrical/ mechanical maintenance.

Fuse junction units shall be provided with a pre-wired internal earthing system from top to bottom of the unit. The units shall also be provided with cast brass gland plates to suit the termination requirements complete with suitable terminals and brass nuts/lock washers for bonding to the column earth terminal. Where gland plates have unused cable entries these shall be securely blanked with purpose made plugs to maintain electrical safety. Where wire armoured cabled are to be terminated at a gland plate the steel wire armour shall be securely fixed with stainless steel armour clamps of the 'Jubilee' type.

The fuse junction units shall be as follows dependent on the type of installation involved:

(i) Columns with DNO/IDNO service and street lighting loop out: to be fitted with a DPI enclosure system complete with 32amp double pole isolator, two BS 88 fuse carriers for lantern and spurring and two way extension box, one way being fitted with a stuffing gland for interconnecting 'tails' and one way for looping out with wire armoured cables.

(ii) Street lighting looped columns: to be fitted with a DPI enclosure system complete with 32amp double pole isolator, single BS 88 fuse carrier for lantern and two way extension box for looping steel wire armoured cables.

Dependent on the installation type involved fuses in compliance with BS 88 shall be provided as follows:

- Fuses used in street lighting units shall be of the cartridge type (as Lawson MD)
- Fuses used in DNO/IDNO units shall be of the LST type

2.13 Cables

Underground cables shall consist of standard copper conductors, XLPE insulated, XLPE extruded bedding, a concentric layer of steel wire armour overall XLPE sheathing suitable for operation in an earthed system and of rated voltage 600/1000 volts at 50Hz, all in accordance with BS 6346 for metric cable, and BASEC approved.
All cores of the cable shall be of equal cross sectional area and shall be of such size that the volt drop at the terminals in lamp columns shall not exceed 4% of the voltage at the supply point.

The minimum size of cables shall be 6 sq. mm.

2.14 Cable Identification

All cables entering columns shall be fitted with proprietary manufactured identification tags, or cable markers, fixed in an approved manner.

The identification tags shall incorporate water proof covers.

Identifying descriptions on the tags shall be made in indelible ink.

Descriptions shall state:

(i) IF the cable belongs to DNO or IDNO; or
(ii) IF the cable belongs to the Local Authority together with its source, i.e. the identification number of the column to which it is connected.

2.15 Plastic Tape for Cable Marking

Plastic tape shall be laid above all cable runs, and shall be at least 150mm wide yellow self-coloured PVC or polyethylene not less than 0.1mm thick printed 'STREET LIGHTING CABLE' along its full length. The wording shall occur at least at 1m intervals and shall occupy not less than 75% of the available length.

2.16 Service Connections and Development MPAN's

The service connections shall be to the requirements of the DNO.

No single service street lighting circuit connection from a direct connection to an underground or pole mounted mains supply shall exceed 500watt in power consumption.

Street lighting columns installed in private areas not subject to adoption by the authority shall be supplied from an DNO/ IDNO service point which shall not be the responsibility of the authority for maintainance or energy payment.

The developer shall ensure that each development shall have its own Meter Point Account Number for the duration of the construction phase of the development. The MPAN will remain the responsibility of the developer up till the point of adoption by South Tyneside Council, when the relevant adopted highway street lighting units will be accrued into the PFI contract.

Payment for all energy consumption by street lighting recorded against the MPAN within the development boundary up until the point of adoption, will be the responsibility of the developer.

2.17 Terminations and Joints

Joints shall not be allowed, all cables shall terminate in a cable cut out in the base of the column.

Earthing of the cable armouring shall be in accordance with section 3.8.

2.18 Wiring

Wiring within the lighting column between the terminal block in the lantern and the components in the base unit shall be PVC insulated and sheathed, two core and earth cable 600/1,000 volt grade having copper conductors of cross sectional area not less than 2.5 sq. mm. All cores shall be correctly colour coded in accordance with the current edition of the ILE 'Code of Practice for Electrical Safety in Public Lighting Operations'. Unsupported lengths of wiring shall be kept to a minimum and not be allowed to come into contact with components by their freedom of movement.

Circuit protective wiring shall have copper conductors and green/yellow PVC insulation or green/yellow PVC insulation sleeving, 600 volt grade conforming to BS 6004. Except for twin core and earth cable, as detailed above, and bonding to column doors as detailed in section 3.8 all circuit protective conducts shall have a cross sectional area not less than 4 sq. mm.

Any other wiring in the column except 'tails' as detailed in section 2.12, shall have copper conductors of cross sectional area not less than 2.5 sq. mm and be PVC insulated single core cable 600 volt grade conforming to BS 6004.

All wiring within the lighting column shall be terminated with insulated crimp terminals as appropriate.

2.19 Specification for Column Handling / On-Site Painting

The contractor shall take stringent precautions to protect galvanised and painted surfaces from damage during off-loading, storage and erection.

Columns shall be stored well clear of the ground. Suitable packing shall be placed between columns to prevent damage to galvanised or painted coatings.

Any damage caused shall be made good by, and at the expense of, the contractor.

Particular attention shall be made to the protection of the column root and no column shall be erected until damage to this area has been made good to the satisfaction of the Balfour Beatty Power Networks, and in strict accordance with manufacturer's instructions.

Assuming a column or any part of the column is damaged, paint shall be applied in accordance with the following instructions:

- Preparation and painting shall be carried out in accordance with the paint manufacturer's instructions.
- After removal of soilage/washing down the galvanised surface shall be degreased using white spirits with swabs made from clean dry cloth. Swabs must be changed frequently to ensure thorough degreasing.
- The surface shall be allowed to dry before applying the paint system.
- Particular attention shall be paid to the paint manufacturer's instructions concerning the correct procedure for applying the Ameron paints specified.
- Each coat of paint shall be applied by brush and allowed to dry thoroughly before the next is applied.
- The finished paint system shall have an even and uniform appearance.
- Paint shall not be applied under the following conditions:

  (i) In rain or fog/mist conditions.
  (ii) When the surface to be painted is wet or damp.
  (iii) When the temperature falls below 5°C.

Finished colour: 5/6m lighting columns BS 4800 14 C 39 (Alambra)

8/10/12m lighting columns BS 4800 12 B 21 (Catkin)

2.20 Column Identification

Columns shall be identified by letters/numbers in accordance with a schedule which shall be provided by Balfour Beatty Power Networks.

The appliance numbers shall be attached to columns at a height of 1.8m from ground level, by the use of self adhesive labels, utilising a yellow background and black numbers / letters / symbols. The size of the characters shall be as follows:

- Numbering System A – feeder pillars, lighting columns of 8m and above and wall brackets or structure mounted lighting units on classified roads – 75mm in height.
- Numbering System B – Lighting columns of below 8m, illuminated traffic signposts and wall brackets or structure mounted lighting units on unclassified roads – 50mm in height.

Where an existing column is to have its number changed or re-applied, the number on the column shall be obliterated before applying the new number.

If the column/unit contains:

(i) A live DNO/IDNO Service, the appliance number shall be suffixed with a diamond (40 x 25mm).

or

(ii) A live public lighting service, the appliance number shall be suffixed with a circle (50mm dia).

NB: Columns/units with dusk to dawn services have no suffix.

The letters/numbers shall read down the column unit, beginning with the area prefix and attached to the column/ unit such that it faces into the highway.

Double arm lighting columns shall have the appliance number applied to the column twice, such that they face oncoming traffic at an angle of 45°. One appliance number shall suffixed with an 'A' and the other 'B', this refers to each lantern. If not already on the column, a schedule will be provided by Balfour Beatty Power Networks.

Section 3 - Installation

3.1 Excavation of Cable Trenches

Trenches shall be to the full depth, straight, cleanly cut and free from loose soil or stones before the cable bed is laid. The depth of cover shall be measured from the level of the finished surface to the top of the cable. Excavation taken out to a greater depth than necessary shall be filled in to the required level with suitable excavated material rammed in 150mm layers to provide a firm bedding.

Trenches shall be of sufficient width to allow the cables to be properly laid. The bottom of the trench shall be levelled and, where instructed, rammed. In rocky or stony soils, suitable excavated material shall be spread over the bottom of the trench and rammed.

Excavation in solid rock shall mean excavation in rock found in ledges or masses in its original position which would normally have to be loosened either by blasting or by pneumatic tools or if excavated by hand, by wedges and sledge hammers. All solid boulders or detached pieces of rock exceeding 0.1 cu. m in size of trenches shall be regarded as solid rock.

Common excavation shall mean excavation in any materials which are not solid rock as defined above and shall include rock fill embankments, sub-base and gravel filter material, etc. which shall be carefully timbered against to prevent runs.

Suitable excavated material shall mean soil free from undecayed vegetation and hard materials such as flints, stones and solid rock, etc.

Particular care shall be taken not to damage or dislodge any adjacent pipes or ducts and the Contractor shall satisfy himself of the ground conditions and the presence of underground service pipes, etc. for any damage to which during or in consequence of excavation he will be held responsible.

Where public utility services are situated under any footway/ footpath under construction all work on laying the services, providing connections, etc. must be completed prior to the final surfacing being laid.

3.2 Rock Cutting in Trenches

Where rock as previously defined, is met with in trenches, it shall be cut out to a depth of 150mm below the intended level of the cable.

3.3 Cabling

The procedure for laying a single cable in a footway/footpath, grassed service verge, or areas not subject to vehicular access shall be as follows:

(a) Excavate trench to a 525mm minimum depth and prepare bedding as Section 3.1. Trench width to be nominally 300mm to allow for cable 'snaking'.

(b) Place a 75mm bed of sand at the bottom of the prepared trench and lay the cable on the bed so that the final cover to the cable will be 450mm. The snaking of cable shall be such that it maintains a minimum 50mm clearance from the trench walls.

(c) Surround the cable with sand to a minimum thickness of 75mm to form the cable bedding and backfill with Type 1 sub-base material up to formation level and compact in 100m layers.

Where a cable is to be laid through a grassed or planted area suitable excavated material may be used above the cable bedding in place of Type 1 sub-base material.

(d) Lay a yellow marker tape, as specified in section 2.18 along the line of the cable below the formation level and 150-250mm below the final surface level.

(e) Remove surplus materials to tip.

Where it is required to lay more than one cable in the same trench then the nominal width of the trench shall be increased such that all of the above requirements are met and at least 50mm is maintained between the outer sheaths of the cables laid side by side in the trench. No cables shall cross each other except for access to and termination at street lighting equipment.

Cables shall not be laid in a frozen state or where the ambient temperature is 0°C or below. Where cable is bent, the internal radius of the bend shall not be less than the appropriate value set out in BS 7671.

All cables shall be kept well clear of gas or water mains, service pipes, sewers, manholes and joint boxes belonging to the other statutory undertakers. At least 150mm clearance shall be given. In the case of telephone cables the minimum clearance shall be 300mm.

The Contractor shall provide suitable jacks for each cable drum to enable the cable to be withdrawn and laid in a proper manner.

3.4 Cable Ducts

Cables shall be installed in ducts under all carriageways, vehicular crossings, private drives and planted areas incorporating shrubs, bushes, trees, etc.

Cable ducts across private drives and planted areas as above shall have an internal diameter of not less than 50mm and a minimum wall thickness of 5mm and be manufactured from polythene.

Cable ducts across carriageways, vehicular crossings or other areas subject to use by heavy vehicles shall have an internal diameter of not less than 100mm and a mean wall thickness of 2.5mm and be manufactured from UPVC.

All ducts used for the installation of public lighting cables shall be through-coloured orange and have the legend 'STREET LIGHTING' printed or embossed along its length at intervals not greater than 1m.

Where more than one duct is to be installed in a trench the clearance between ducts shall be as the manufacturer's recommendation.

Where ducts are required under any footway/footpath or carriageway under construction all work on laying the duct and installing such public utility services as may be required must be completed prior to the final surfacing being laid.

Where 100mm cross road ducts and 50mm ducts across private drives (footway ducts), are installed they shall extend 600mm beyond each kerb face, and either side of the drive respectively. A suitable draw wire shall be installed and each duct shall be stoppered until the cables are drawn in.

The position of 100mm cross road ducts shall be indicated with permanent markers set in the kerb backings immediately over the centre line of the duct on each side of the carriageway under which they are constructed. The markers shall be identified with the distinguishing letter 'L'.

The procedure for laying 50mm ducts shall be as follows:

(a) Excavate trench to a 575mm minimum and prepare bedding as section 3.1.

(b) Place a 75mm bed of sand at the bottom of the prepared trench and lay the duct on the bed so that the final cover to the duct will be 450mm.

(c) Surround the duct with sand to a minimum thickness of 75mm to form the duct bedding

and backfill with Type 1 sub-base material up to formation level and compact in 100mm layers.

Where the duct is to be laid through planted areas incorporating shrubs, bushes, trees, etc. suitable excavated material as specified in section 3.1 may be used in the place of Type 1 sub-base material.

(d) Lay a yellow marker tape as specified in section 2.15 along the line of the duct.

Where the duct is located in a footway/footpath the tape shall be laid below the formation level and 150-250mm below the final surface level. Where ducts are located in planted areas the tape shall be laid directly above the sand bedding.

(e) Remove surplus to tip.

The procedure for laying 100mm (cross road) ducts shall be as follows:

(a) Excavate trench to a minimum depth of 950mm and prepare bedding as section 3.1

(b) Place a 150mm bed of Class 22.5/20 concrete on the bottom of the trench and lay duct on the bed so that the final cover to the duct will be 700mm.

(c) Surround duct with concrete as (b) to a minimum thickness of 150mm.

Refer section 3.5 for reinstatement above concrete surround.

3.5 Reinstatement

Refer to the General Specification for the Construction of Roads and Footpaths in new Residential Development for Highway Construction details. Trenching in newly laid surfacing requires full width reinstatement in footpaths. Where trenches enter the carriageway, the extent of reinstatement is to be agreed with the highways engineer.

3.6 Cable Termination in Fused Termination Units

All underground cables directly entering fuse termination units in column base compartments shall terminate in the protection chamber and the cable cores made off in the fuse and neutral connector blocks.

Links between independent fuses and the outgoing terminals of DNO/IDNO fused termination units shall be 6 sq. mm PVC insulated cables as specified.

3.7 Fixing of the Photo Cell Unit

The photo cell unit shall be fixed to the lantern and connected according to the manufacturer's instructions.

3.8 Earthing

The Contractor shall liaise with the DNO/IDNO regarding the type of earthing system to be utilised on the project, in the event of a PME system being used the Contractor shall comply with the DNO/IDNO instructions.

The DNO/IDNO will make a system earth available on the incoming cable armouring at the supply point. This point shall be defined as the EARTH ELECTRODE.

The earthing clamps of the cables entering the column shall be suitably bonded together. The Contractor shall (subject to DNO/IDNO requirements for PME installations) install an EARTHING CONDUCTOR from the EARTH ELECTRODE to the earthing stud on the column. This point shall be defined as the MAIN EARTHING TERMINAL.

The Contractor shall install circuit protective conductors from the main earthing terminal to all items of electrical equipment to provide an equipotential bonding system.

The earthing conductor shall be of size not less than 6 sq. mm csa. The cable armouring shall be secured by means of a non-ferrous sleeve fitted below the armouring and earthing clamp making a positive grip on the armour wires. Earthing clamps shall be of the stainless steel 'jubilee' type or similar approved.

Column doors to be bonded to the column earth terminal with 6 sq. mm (84/0.3) copper yellow/green PVC insulated single core flexible cable of 600 volt grade conforming to BS 6004. The cable shall be of sufficient length to allow the door to be placed on the ground during maintenance, etc.

Bonding of armouring at terminations must be made without significant increase in resistance as compared to that of straight cable run.

Earthing shall be carried out in accordance with British Standard BS 7430 where applicable.

3.9 Erection of Columns

Refer to Appendix B, for foundation detail.

Lighting shall be positioned at the back of, and within the footway/footpath 100mm clear of the rear pin kerbing or footpath edge as applicable. Wherever special features such as verges exist the columns shall be erected 1.4m from the kerb edge as measured to the centre line of the column.

Columns in verges will be set on a 450 x 450mm flagstone and surrounded with concrete up to ground level. Finished concrete surface to be sloped away from column to shed water. Suitable duct(s) to be included for cable(s) entry.

Excavation for columns shall not be by mechanical means unless agreed by Balfour Beatty Power Networks.

Columns when erected shall have the base compartment door positioned at right angles to the carriageway so that anyone opening the door is facing oncoming traffic.

Any column which is not truly vertical will be taken down and re-erected vertically at the expense of the Contractor.

All brackets will be tightly fitted to the columns according to the manufacturer's instructions.

3.10 Work on Northern Power Grid Network Poles

All work on Northern Power Grid network poles must be carried out by Northern Power Grid.

3.11 Fixing of Lanterns, Lamps and Auxiliaries

The lanterns, lamps and auxiliaries shall be fitted in accordance with the manufacturer's instructions and to the satisfaction of Balfour Beatty Power Networks.

All wiring internally shall be installed with cable as specified in a neat and workmanlike manner. Cables shall be cut to proper lengths so as to prevent any loose cables fouling equipment and column doors. Any cable liable to cause fouling when cut to the correct length shall be clipped to the backboard. HRC fuses shall be fitted to the cut outs rated as required.

3.12 Operation of Lighting

It is important that wherever practicable the road lighting old and new should be left in working order each night.

The Contractor shall programme the work so that the new columns are erected and in operation before the existing columns are disconnected.

3.13 Testing

The installation shall be tested in accordance with BS 7671 and this specification. The Contractor shall provide all the necessary instruments for testing of the installation on completion or at any other time when requested to do so, and any extra tests called for in this specification. The Contractor shall ensure that all faults found in preliminary testing shall be made good before final witnessed tests. Final tests shall be carried out in the presence of Balfour Beatty Power Networks, and three copies of test results supplied for approval. The results shall be in a form as required by the above mentioned BS7671 and shall also include copies of the duly completed test sheet as shown in Appendix C to this specification.

The works will not be accepted or a certificate of completion issued until such tests have been approved by Balfour Beatty Power Networks. The Contractor shall produce certificates of the accuracy of the test instruments used.

3.14 Record Drawings

The Contractor immediately upon completion shall provide South Tyneside Council and Balfour Beatty Power Networks with 'As Fitted' drawings in 1/500 scale for final inspection of the works. These drawings will be in the form of 4No. paper prints of the completed installation.

'As Fitted' drawings shall clearly show details of the street lighting installation including:

(i) Actual column positions.

(ii) Public lighting cable loops, including the cable size, depth and distance in the horizontal plane from fixed points of reference.

(iii) Service types and connections to DNO/IDNO mains cables including the origin of supply of installations composed of public lighting cable loops.

(iv) Actual lighting equipment installed and the manufacturer's reference number of identification mark, e.g.

'All columns' – 6m M Ht tubular steel galvanised with 0.75m projection bracket arm. BSC – type 'Larch': 5PT6L + PLS 1190.

'All lanterns' – 60W SON, Post Top with integral control gear, NEMA socket, refractor, clear bowl, large canopy and SONXL-T lamp. THORN – Type 'Gamma 6': QG6YPNB1070.4 + QC6M + QG6W.

(v) Cable ducts and their size, depth and location as (ii) above. The inclusion of duct markers for cross road ducts, and any other duct as may be specified shall also be indicated.

(vi) Any non-standard works as approved by Balfour Beatty Power Networks prior to the installation, e.g. if columns are flange-mounted; if a crank root is fitted; the direction of fall of a raise and lower column, etc.

3.15 Acceptance Criteria for Adoption

Due to the mechanism that exists between Balfour Beatty Power Networks and South Tyneside Council for the adoption of street lighting on new developments, there is a strict criteria for adoption over and above that which is described in 3.13.and 3.14 above.

As well as providing the required test results and as-fitted drawings, the Developer may be required to provide a schedule of all installed street lighting and highway signs, in accordance with the data that is required to be collected, as detailed in Appendix D.

Lighting column data sheets will be required to evidence that the columns installed are in accordance with this specification.

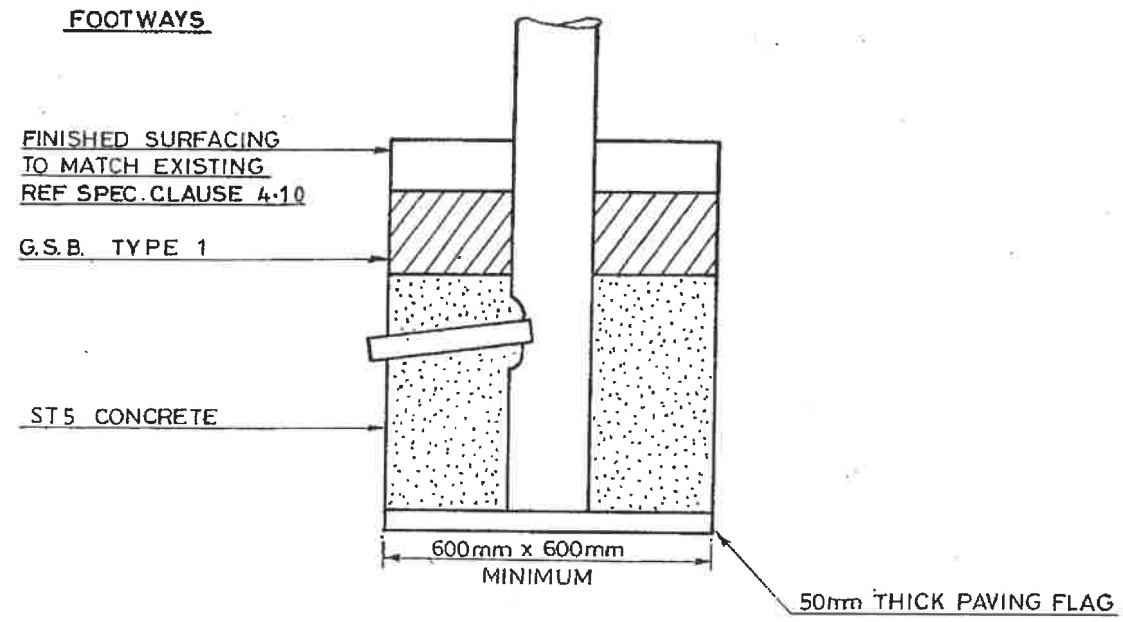
Appendix A – Schedule of Attachments

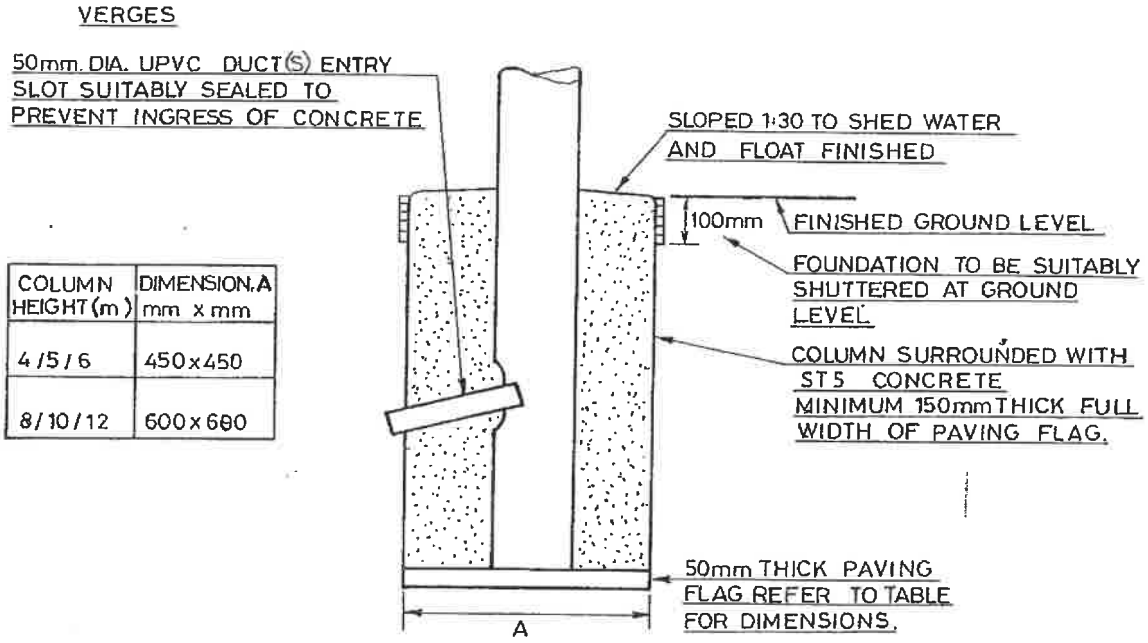
Signs and other Attachments to new Lighting Columns (not required to carry festive and decorative attachments)

Column height	Attachment Type	Attachment area	Attachment position
1. All Lighting Columns	No-waiting plate	0.10m²	Symmetrical 2.4m above ground level
2. All Lighting Columns	Neighbourhood Watch sign	0.15m²	Symmetrical 2.5m above ground level
3. All Lighting Columns	Litter bin	600mm h x 400mm w	Top 900mm above ground level
4(a) Lighting Columns up to and including 6m	Other signs and attachments	0.3m²	Symmetrical
4(b) Lighting Columns over 6m (the most onerous condition to apply)	Other signs and attachments	0.3m² 0.6m²	Offset Symmetrical

The height of all signs except no waiting plates shall be taken as 2.5m above ground level to the centre of the sign.
The position of offset signs shall be taken as 300mm from the centre of the shaft to the centre of the Attachment.
All Attachment loads shall be taken at the most onerous position in relation to door opening and bracket or luminaire orientation.

Appendix B – Lighting Column Reinstatement Detail





COLUMN HEIGHT (m)	DIMENSION A mm x mm
4/5/6	450x450
8/10/12	600x600

ALL CLAUSES REFER TO THE ROAD & BRIDGE SPECIFICATION

Appendix C – Test and Inspection Certificate

Street Lighting Test & Inspection Record

ADDRESS / LOCATION:	

Complete all sections where relevant

UNIT No.	VISUAL INSPECT SATISF'Y √/ X	SYSTEM EARTHING TYPE	SYSTEM TYPE CONDUCTOR SIZE		CIRCUIT PROTECTION			INSULATION RESISTANCE M. Ohms				CONTINUITY SATISF'Y	POLARITY SATISF'Y	PHASE / EARTH FAULT LOOP IMP'CE Ze (11.28 Ω on DNO SUPPLY)	COMMENTS
			U/G Cable	Lant Cable	FUSE BS No.	CUT OUT TYPE No.	RATIN (Amps)	PHASE TO PROTECTIVE	NEUTRAL TO PROTECTIVE	PHASE TO NEUTRAL	R1 + R2	√/ X	√/ X		

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE ELECTRICAL INSTALLATION(S) LISTED ABOVE HAVE BEEN INSPECTED AND TESTED IN ACCORDANCE WITH BS 7671AND THAT THE RESULTS, EXCEPT WHERE INDICATED, ARE SATISFACTORY WITH RESPECT TO THOSE REGULATIONS.

SIGNED:		PRINT NAME:		DATE:	

If you know someone who would like this information in a different format contact the communications team on 0191 424 7385

8317

EXECUTED as a DEED)
by affixing the **COMMON**)
SEAL of **THE COUNCIL**)
OF THE BOROUGH OF)
SOUTH TYNESIDE)
in the presence of:)



Mayor / Authorised Signatory

[redacted]

Corporate Lead – Legal & Governance / Authorised Signatory

[redacted]

EXECUTED as a DEED by)
TELMAC DEVELOPMENTS)
LIMITED)
Acting by a Director and its)
Secretary or two Directors)

Director [redacted]

Director/Secretar[redacted]