

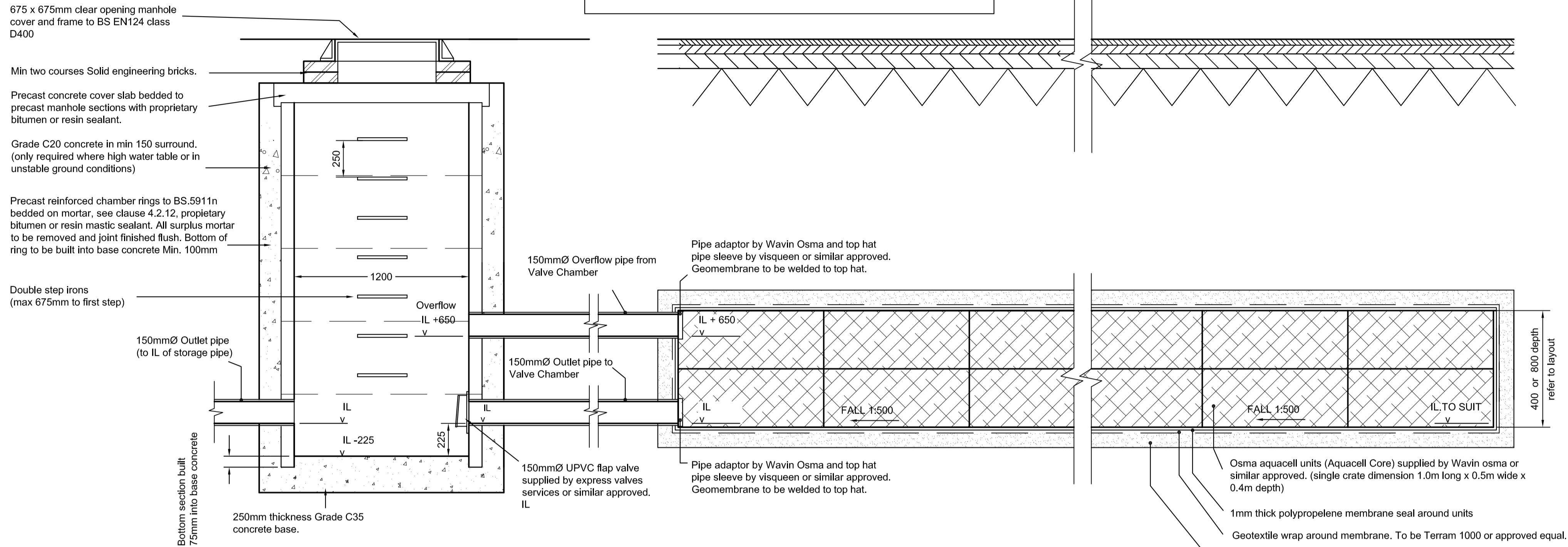
**SURFACE WATER STORAGE SYSTEM NOTES**

STORAGE SYSTEM DETAIL SHOWN ON THIS DRAWING IS SUBJECT TO A FULL DESIGN BY THE MANUFACTURER.

AQUACELL, GEOMEMBRANE AND GEOTEXTILE TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS

FOLLOWING THE INSTALLATION ALL CONNECTING INSPECTION CHAMBERS AND CATCHPITS ARE TO BE INSPECTED TO ENSURE THEY ARE FREE OF SILT AND CONSTRUCTION DEBRIS

VENTING REQUIREMENTS TO BE AGREED WITH MANUFACTURER PRIOR TO CONSTRUCTION



**Valve Chamber (VC)**

**Aquacell Private Cellular Attenuation Tank**

NB: Specification for socket fittings, adaptors, connectors and venting requirements to be advised and fitted in accordance with manufacturers instructions.

The Contractor is to check and verify in conjunction with the Architects details all setting out points, building and site dimensions, levels and sewer invert levels at connection points and ensure that they are fully compliant with the contents and of requirements in the Investigation report below work starts.

The Contractor is to comply in all respects with current building legislation, British Standard Specifications, Building Regulations etc. whether or not specifically stated on this drawing.

This drawing is not intended to show details of ground conditions or ground constraints. Each area of ground referred upon to support any structure depicted (including drainage) must be investigated by the Contractor any areas or formations for each structure which do not accord with the anticipated conditions as described in the site investigation report are to be immediately notified to the Engineer, where applicable. Any suspect fill ground or ground constraints on or within the ground should be further investigated by a suitable report. Any earthworks shown indicate typical slopes for guidance only and should be investigated further by a suitable geotechnical expert.

Where existing trees are shown to be retained they should be subject to a full Arboricultural Inspection for safety. All trees are to be preserved so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and sewers, where applicable. A foundation is to be provided to accommodate the proposed tree planting, where applicable.

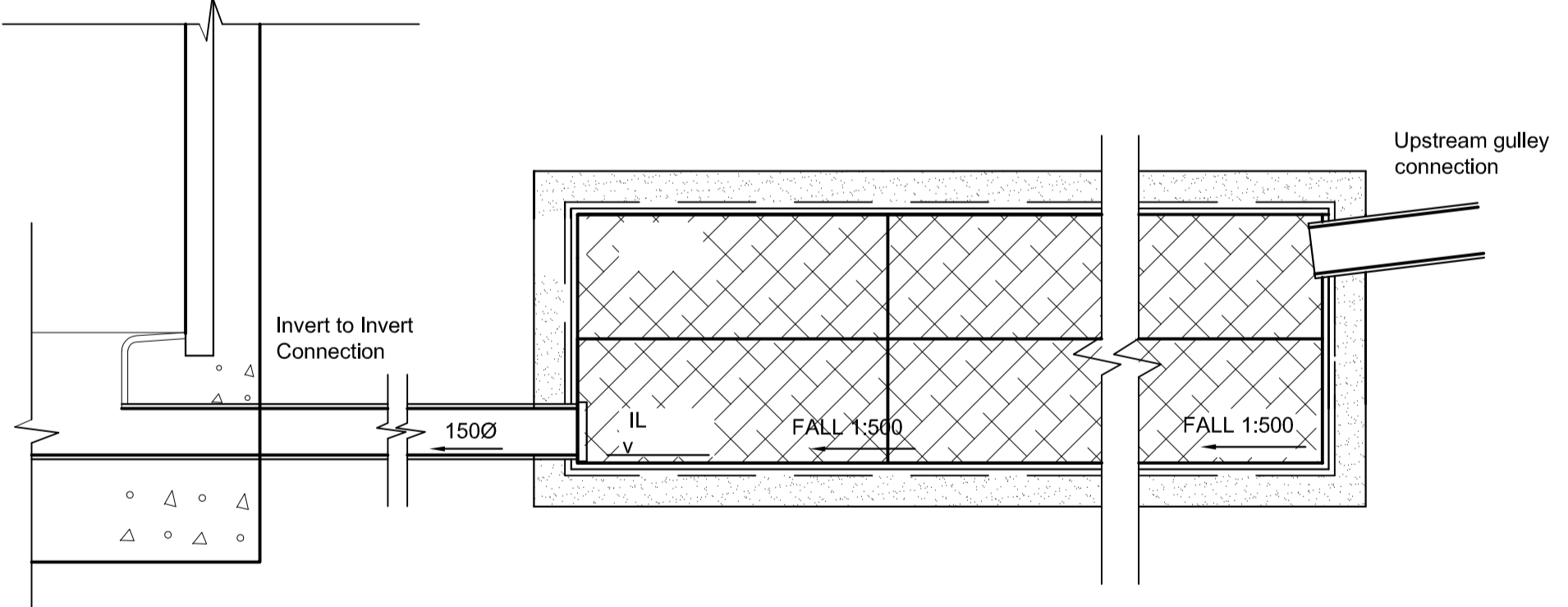
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- GENERAL NOTES**
- All sewerage to be offered for adoption under Section 104 of the Water Industry Act 1991 shall be constructed in accordance with Sewers for Adoption 6th Edition & Thames Water requirements.
  - Pipes to have a Class S bed and surround where depths from cover to pipe soffit are greater than 1.2m.
  - Where the manhole cover to pipe soffit is less than 1.2m then concrete protection is to be provided.
  - To be read in conjunction with relevant layout drawings and details.

- BUILDING DRAINAGE**
- Building drainage shall comply with BS EN 752 2008 and the Building Regulations 2002 part H.
  - All SVP, RWP and BIG are indicative and must be confirmed on site using latest architectural plans. Any discrepancies must be reported to Engineer prior to commencement on site.
  - All building drainage shall be 100mm diameter unless shown otherwise.
  - All connections to adoptable sewers shall be 150mm diameter.
  - All building drainage shall be clayware to BS EN 295 or uPVC to BS 4660 and BS EN 1401-1 with Class B or Class S bedding unless shown otherwise.
  - All pipes under buildings without suspended floors shall have Class S bedding.
  - Concrete protection shall be provided to all pipes with less than 300mm cover in pedestrian areas, to all pipes with less than 600mm cover in private driveways not used by commercial vehicles, and to all pipes with less than 1200mm cover in roads or private driveways used by commercial vehicles. Where concrete surround is specified flexibility of joints is to be maintained by using compressible bitumen impregnated fibreboard at each joint.
  - Where a pipe passes through a wall an opening is to be formed to give at least 50mm clearance around the pipe. Brickwork over shall be supported by a lintel. The opening is to be masked each side with rigid sheet material. Pipes embedded in walls shall have a joint formed within 150mm of each wall face. A rocker pipe of maximum 600mm length shall be used to continue the pipework.
  - Where a pipe trench is within 1m of a building, the pipe is to be provided with concrete protection and the trench filled with concrete up to a level below the building equal to the distance from the building less 150mm.
  - Where the formation of a pipe trench is above original ground level areas are to be made up with well compacted DTp Type 2 material or better.
  - Inspection chambers located within garages are to have double seal bolt down covers.
  - All private drives which fall towards a public highway and exceed two parking bays in area are to be provided with a suitable gully or drainage channel to prevent water discharging onto the highway.
  - Where a driveway falls towards a dwelling it shall be provide with a suitable gully or drainage channel to prevent water damaging the building.
  - The invert level of an access chamber on a foul drain from a building is to be set 600mm below finished ground level unless otherwise shown.
  - The invert level of a rodding eye at the head of a surface water drain is to be set 450mm below finished ground level unless shown otherwise.

**PRELIMINARY  
DRAWING**

SUBJECT TO APPROVAL



**Type 1B or Type X Manhole**

**Aquacell Private Cellular Attenuation Tank**

Construction Details & Notes as above. Please Refer to Private Drainage Layouts for Invert Levels

**Alternative Connection Detail**

**Diameters of manholes**

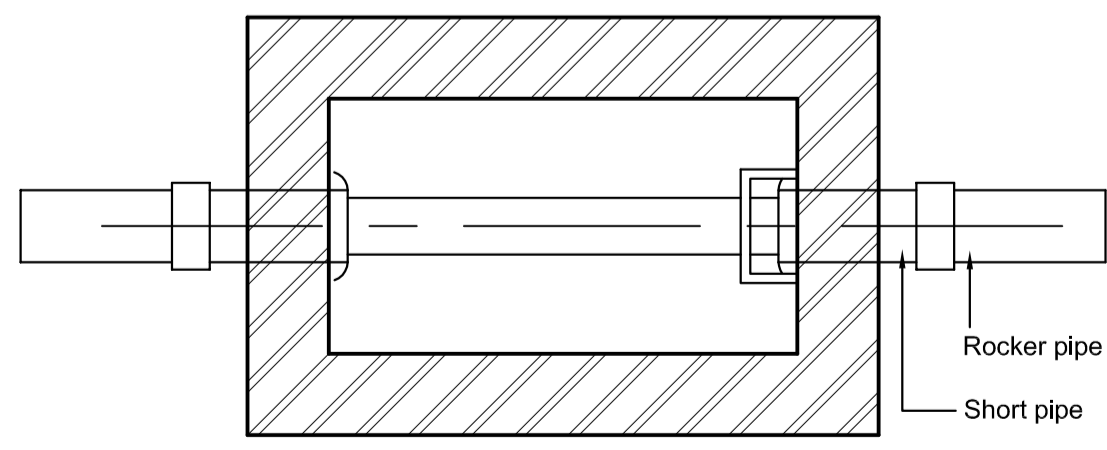
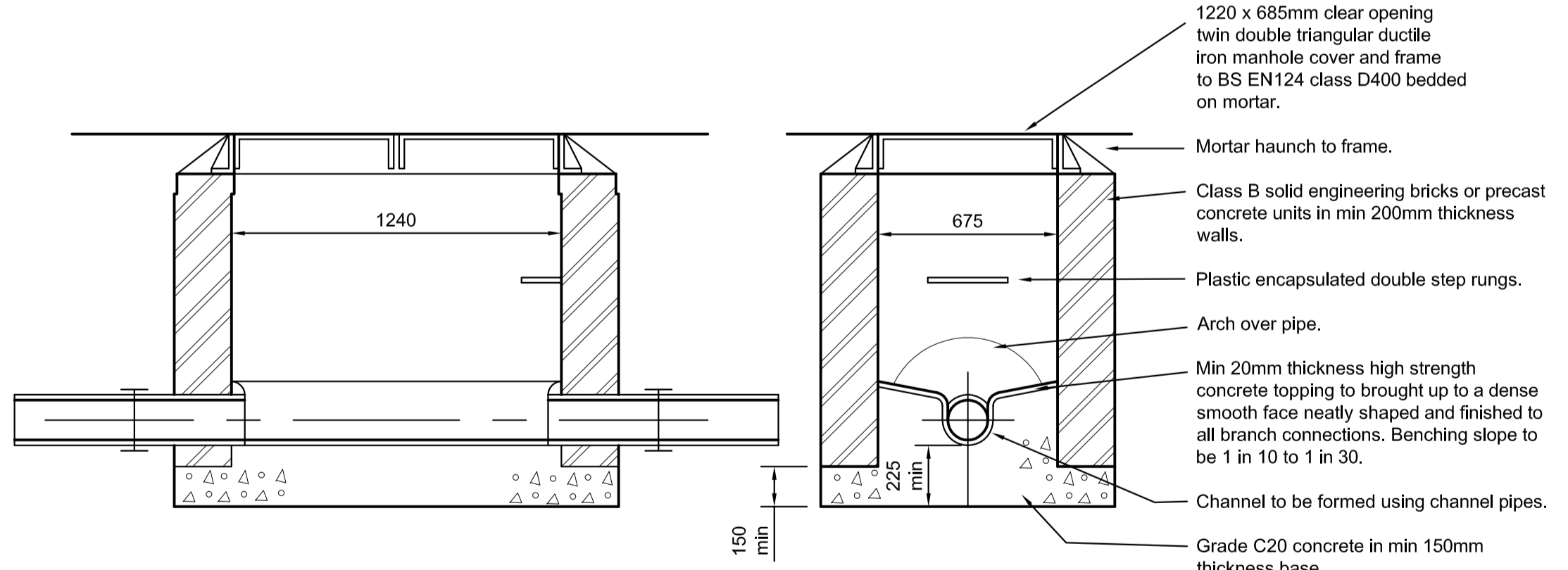
Diameter of largest pipe in manhole (mm)	Internal diameter of manhole (mm)
Less than 375	1200
375-700	1500
750-900	1800
Greater than 900	Consult Undertaker

**Rocker Pipes**

Pipe diameter (mm)	Effective length (m)
150-600	0.60m
601-750	1.00m
750 and over	1.25m

**Cover Slab Access**

Sewer Diameter (mm)	Standard Access (mm)
150-874	675 x 675
875-1074	675 x 675
1074 or greater	675 x 675



**Type C Manhole**

Depth from ground level to soffit of pipe 1.0m to 1.5m

P/2014/01663  
Received 23/12/14

Rev.	Description	Date	By



**Project**  
Pennycroft Lane  
Uttoxeter

**Title**  
Construction Details  
Cellular Storage

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Scale	Drawn
NTS @ A1	LH
Date	Checked
November 2014	SCM
File	Drawing
14102/dwgs/civils	14102 / 313