

## Design and Access Statement

for the

### Provision of New Sub-Station to the Newland Development

#### Justification for the Requirement for Sub-Station

The wider scheme is for the provision of 116 new replacement homes due to works required for the provision of HS2 complete with a Replacement Community Centre, Replacement Public House, and the provision of 3No. New Commercial Spaces, and also 3 Mitigation Sites to replace green space lost due to the development.

Upon applications for new Electricity supplies for the above homes and commercial spaces, UKPN who are the owners of the infrastructure, advised that the network in this area was nearing full capacity. UKPN confirmed that it was not possible to supply the new building from the existing substation adjacent to Cartmel House. This advice is referenced in the email correspondence between Lovell's and UKPN (submitted alongside this DAS).

From the outset of Lovell's enquiries with UKPN this issue was vigorously pursued, with UKPN advising that to meet the demand expected sub-stations would be required to add capacity back into the network at the Newlands and Rydal Open Water (Former One Stop Shop) Sites.

All options to reduce the loadings to avoid the need for new sub-stations were explored, this exercise reduced the requirement to one sub-station at the Newlands Site, with UKPN advising that there were no other options available, and therefore to provide the required services for the development a sub-station was unavoidable.

#### Justification for Proposed Sub-Station Location

Several Locations were considered as follows:

- Option 1: Upgrade of Existing Sub-Station to the North of the Site
- Option 2: Internal to the Plant Room of the Newlands Block
- Option 3: External Adjacent Existing Sub-Station to North of the Site
- Option 4: External as per the Application Drawings

#### Option 1

This option was not taken forward for the following reasons (See Option 1 Mark Up):

- UKPN confirmed that the existing sub-station was at capacity
- The existing Transformer is the largest size for residential use and cannot be replaced with a larger one
- Under the latest guidance on the provision of sub-stations the access for maintenance would not be acceptable to UKPN, it should also be noted that works to form a new bridge in Hampstead Road will raise the level of the road in this area closing off the current poor access to the existing sub-station, it was noted that Hampstead Road is a Red Route and access from this road would not meet the latest requirements for sub-stations accessed from a main road.
- Alternative access routes were explored as per the Option 1 Mark Up

# LOVELL

- Alternative Route 1 was not considered viable due to the impact on Mitigations Site 3 of the Approved Landscape Scheme, drawings 114 RPE M3 100 Rev A and 114 RPE M3 101 Rev A are attached for reference
- Alternative Route 2 was not considered viable due to the impact on the Approved Landscaping Scheme, the reduction in Green Space and the quality of the overall scheme.
- UKPN have advised that they may decommission this sub-station as part of the HS2 works and provide capacity from an alternative location outside the scope of this application.

## Option 2

This option was not taken forward for the following reasons (see Option 2 Mark Up):

- UKPN generally only consider the possible siting of a transformer inside the building curtilage when there is no other option of locating it externally (see clause 2.2.1 page 5 of 'UKPN' Secondary Substation Design: FAQ which is submitted alongside this DAS).
- Lovell's met with UKPN on site in March 2016 where they reiterated this position. Any internal location would have to comply with UKPN's requirements in relation to access and ventilation, which would therefore involve some fairly major changes to the proposed scheme.
- Attached as an appendix is the Site Plan (drawing no: *NL-IW-XX-00-DR-M-27.30-Communal Mechanical Services Level 00*) which demonstrates that no room is available in the proposed plant room. Further explanation of this is provided by the explanations below:
- Various locations within the building footprint were considered before the option of the Plant Room was considered
  - Location 1: To area of bin stores, this option would require the re-location of the bin stores and the need for access for collection of waste, also this option would not comply to Building Regulations due to travel distances being exceeded
  - Location 2: In the Commercial space with Direct Access from Varndell Street, this option was not taken forward due to the impact on the prominent South Elevation with views from Mitigation Site 3
- The proposed plant room is not large enough to accommodate the size requirements from UKPN, the proposed CHP Boilers and the additional space for future expansion required by Condition 40 of the Shadow 106 Agreement. To incorporate these requirements would greatly reduce the size of the Commercial Unit.
- Access for maintenance would be a major issue for the following reasons
  - Due to HS2 works access from Hampstead Road would not be possible
  - Alternative route 1 would Impact on the Open Space Mitigation Site 3, see attached mark up and proposed Mitigation Site 3 Agreed and Approved Drawings
  - Alternative route 2 to sub-station by extending existing service route was not considered viable due to the impact on the Approved Landscaping Scheme, the reduction in Green Space and the quality of the overall scheme

## Option 3

This option was not taken forward for the following reasons:

- Access routes have the same impact as Option 1 as follows

- Alternative Route 1 was not considered viable due to the impact on Mitigations Site 3 of the Approved Landscape Scheme, drawings 114 RPE M3 100 Rev A and 114 RPE M3 101 Rev A are attached for reference
- Alternative Route 2 was not considered viable due to the impact on the Approved Landscaping Scheme, the reduction in Green Space and the quality of the overall scheme.

## **Option 4**

This option was taken forward for the following reasons:

- UKPN preferred location meets all their requirements for access and maintenance
- Least impact on Mitigation Site 3
- Least Impact on the Approved Landscape Scheme

## **Impact on Approved Landscape Scheme**

As per the above statements Option 4 will have least impact on the Planning Approved Landscape Scheme, the other options would reduce the quality and overall appearance of the landscaped areas. A substation in the other areas would also cause potential disruption to the root protection areas, and therefore the substation has been proposed in a location that will have the least sensitive impact on all considerations.

## **Impact on Proposed New Trees**

Our Landscape Consultant ACD Environmental have confirmed that the proposed location of the new Sub-Station has no impact on any existing trees. They have also positioned new trees at a distance where there is no impact on the root zones. The trees proposed are the same species as the Approved Landscape scheme.

## **Design and Materials for Proposed Sub-Station**

The proposed sub-station will be designed with the following features to reduce the overall impact:

- The building will be brick built with bricks to match the proposed Newlands Block
- The Louvered doors will be finished to match the windows and doors to the Proposed Newlands Block
- Planting beds will be provided to reduce the impact and screen the sub-station
- New trees have been positioned to offer further screening to the sub-station from Hampstead Road and the proposed Newlands Block
- The proposed roof will be flat Sedum Blanket Green Roof, this is proposed to reduce the impact on views from above and also to replace green space lost to the foot print of the building and also reduce rain water run-off from the roof
- The access area to the front of the sub-station will be a reinforced grassed area, again to replace lost green space

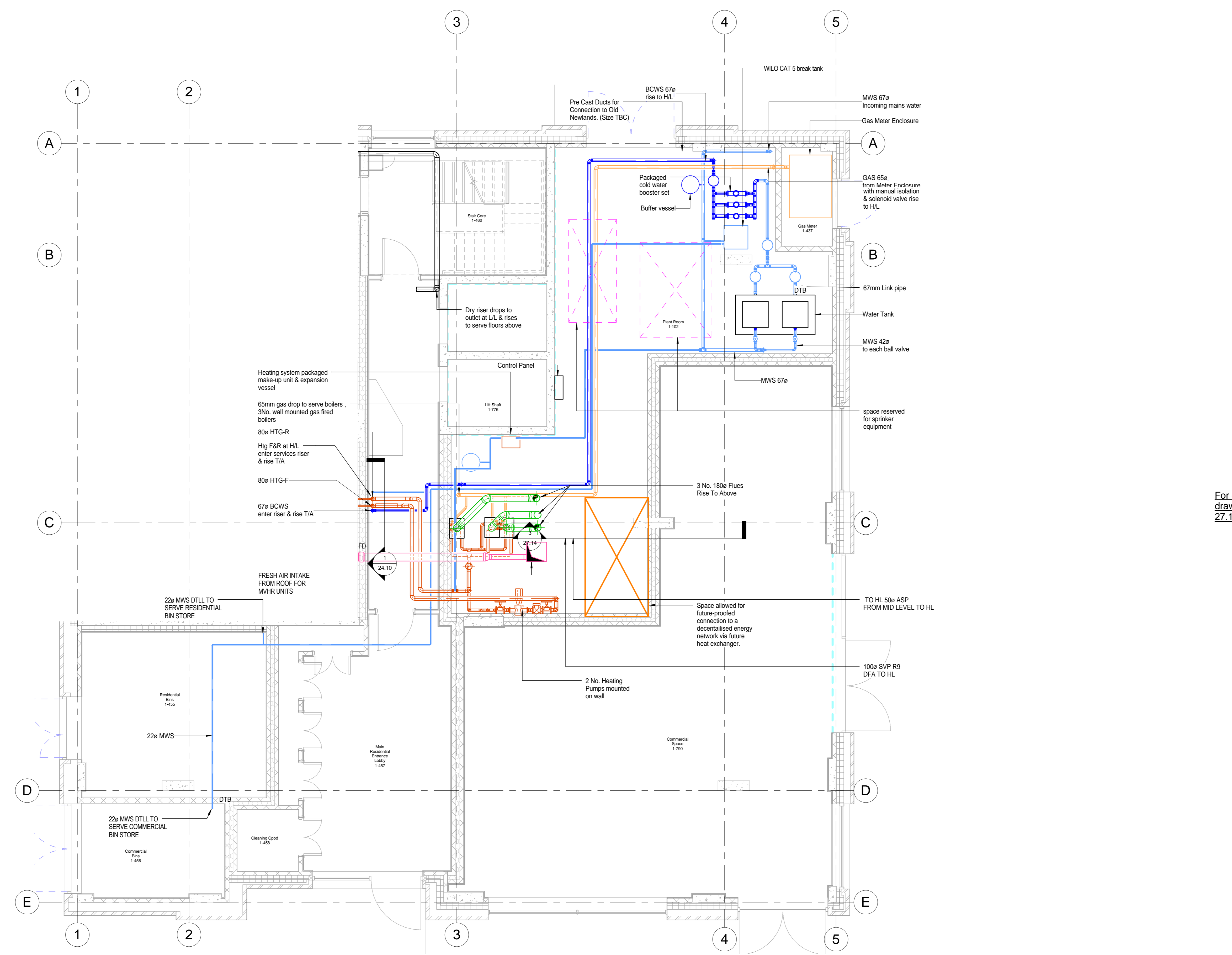
All dimensions to be verified on site by Main Contractor before the start of any shop drawings or work whatsoever either on their own behalf or that of sub-contractors.  
 Report any discrepancies to the Contract Administrator at once.  
 This drawing is to be read with all relevant Architect's and Engineer's drawings and other relevant information.  
 © Ingleton Wood LLP

LEGEND: DO NOT SCALE

- Notes:
- Do not scale this drawing (printed or electronic versions).
  - This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings. Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
  - This drawing is copyright and is for use on this site only.
  - All structural & architectural elements, where indicated, have been imported from the engineer's drawings and reference should be made to the individual structural / architectural drawings for exact dimensions. This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
  - Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to the Ingleton Wood for clarification before proceeding.
  - All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
  - Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
  - Graphical representations of equipment on this drawing have been coordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
  - All business work associated with the mechanical and electrical services installation must be included for.
  - Contractor to review site Asbestos register prior to commencing works.
  - All necessary decommissioning, isolation, draining down, refilling and water treatment etc. associated with the existing heating and domestic water systems in order to facilitate the works shall be included for.
  - Stripping out and alterations to domestic water services shall not leave any dead legs on pipe work, however short.
  - All pipe work located within ceiling/roof/service voids, ducts, enclosures, plant rooms, or externally shall be insulated in accordance with the mechanical services specification.
  - All supply and extract ductwork located within ceiling/roof/service voids, ducts, enclosures, plant rooms, or externally shall be insulated in accordance with the mechanical services specification.
  - All pipe work/outlet services located externally shall also be waterproofed in addition to being fitted with thermal insulation.

- Soil & Waste Notes
- 1000a SVP, at L/L (with Durgoo valve), from above or high level with rodding eye & access hatch. Use Stub Stack instead of SVP if present
  - 1000a Soil pipe from WC
  - 300a WHB waste with anti-siphon trap to drop in 40 dia to SVP/ISS
  - 400a Shower waste to run to SVP/ISS
  - 400a Bath waste to run to SVP/ISS
  - 400a Sink waste to drop in 400a to run to SVP/ISS. To be fitted with capped connection if adjacent to Washing machine/Dishwasher to run in 400a if run of pipework over 3m in length
  - 400a Stand pipe for Washing machine/Dishwasher waste to run to SVP/ISS

For details of pipework and sizes refer to drawing No. 27.10 Cold Water Schematic & 27.12 for Heating and Water Schematic



1 Level 00 Communal Mechanical Services  
 1:50

Rev	Date	Description	CHK	APP
D	30.09.16	Contract Issue	AA	AH
C	03.03.16	Issue For Planning	AA	JC
B	12.02.16	Updated Preliminary Issue	IS	AH
A	20.11.15	Preliminary Issue	JC	DT

**Ingleton Wood**  
 Vision, form and function

London  
 1 Alle Street  
 London E1 8DE

Billericoy  
 Colchester  
 London  
 Norwich

T: 020 7680 4400  
 www.ingletonwood.co.uk

Project No:  
**84922**

Project:  
**Regents Park Estate  
 Plot 4 - Newlands**

Drawing Title:  
**Communal Mechanical Services Level 00**

Client:  
**Lovell Partnership Ltd.**

File Ref:	Revision:		
NL - IW - XX - 00 - DR - M - 27.30	D		
Status:	Purpose of Issue:	Scale:	Size:
B	CONTRACT	As indicated	A1